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EXCAVATIONS AT THE PRE-POTTERY NEOLITHIC A AND B SITE OF KHURAYSĀN (AZ-ZARQĀ', JORDAN) 2015 AND 2016 FIELDWORK

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Abstract

Khuraysān is a Pre-Pottery Neolithic A (PPNA) and Pre-Pottery Neolithic B (PPNB) site, dated to between the end of the 10th millennium and first half of the 8th millennium cal. BC. Located in the village of al-Qunayyah, by the az-Zarqā' river, it is 25ha in extent. To date, four occupation phases have been discovered, two corresponding to the PPNA and two to the PPNB. In Zone A, in H100, an oval sunken dwelling without internal subdivisions and with earth floors, has been dated to the end of the 10th millennium cal. BC. In IJ100, another sunken dwelling, in transition between an oval and rectangular shape, contains two rooms divided by a mud wall; one of the rooms has a lime-plaster floor displaying the remains of red pigment. It is dated to the beginning of the 9th millennium cal. BC, during the last phase of the PPNA. Towards the south, in Zone B, is an agglomerated ensemble of square houses that are semi-sunken into the slope of the site. These have rounded corners, stone walls and lime-plaster floors, and have been dated to the second half of the 9th millennium BC, during the Early PPNB. The most recent occupation phase has been documented in Zone C and dates to the beginning of the 8th millennium cal. BC, during the Middle PPNB. It is represented by rectangular houses with stone walls and lime-plaster floors (one of them painted), which are arranged parallel to one another. The abundant implements, human, animal and botanical remains, figurines and other objects recovered at Khuraysān make this a key site for understanding the first sedentary villages

and the development of arable and livestock farming in northern Jordan.

Keywords

Neolithic Jordan; agriculture; livestock; first villages.

Introduction and Methodology

The site of Khuraysān (al-Qunayyah, az-Zarqā') was discovered in 1984 by the Hanbury-Tenison team whilst surveying in the Jarash region (Hanbury-Tenison, 1989; Edwards and Thorpe 1986). It was catalogued as a large Pre-Pottery Neolithic B site, about 36ha in size (**Fig. 1**). The present team test-pitted the site in 2014, and carried out a first fieldwork season in 2015 with a second in 2016. This paper presents the results of the two excavation seasons, which have demonstrated that Pre-Pottery Neolithic A and B occupations cover an area of at least 25ha (**Fig. 2**).

The excavation area was divided into 5×5m squares, which were sub-divided internally into 1x1m squares. The excavation followed the natural and constructed strata, which were generally of variable cohesion and composition. All structures were located in three dimensions with a total station (Leica TCRM 1205) and photogrammetric techniques. The 3D models were generated using n4ce (Applications in CADD) and PhotoModeler Scanner 2015. The 3D models of each stratigraphic unit were assembled in a CAD environment (MicroStation). The illustrations of the structures were produced with Adobe Suite. The burials were documented by a physical anthropologist



1. Map showing the location of Khuraysān and some other important Neolithic sites.

following the methodology of archaeothanatology (Duday 2009). Electrical-resistivity-tomography (ERT) geophysical surveying was carried out to identify buried structures.

The Excavated Areas

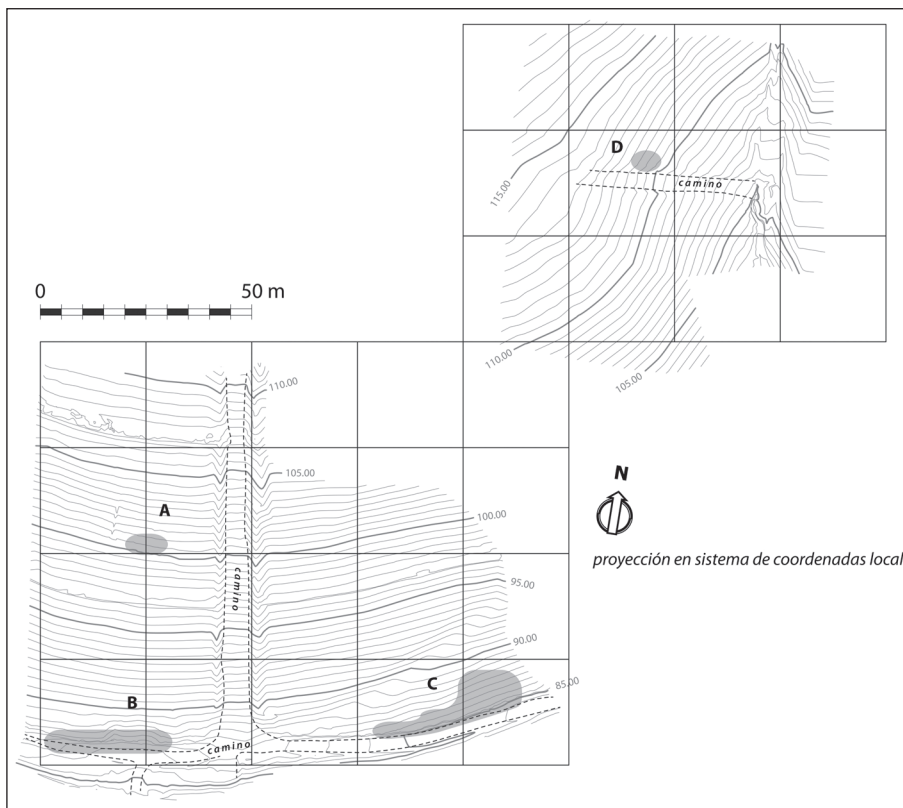
Four zones were excavated in 2015 and 2016: A (Squares H-I-J/95-100-105), B (Squares C-D-E-F-G/55-60-65), C (Squares T-U-V-W-X/60-65) and D (Squares BE-BF/190) (Fig. 3).

ZONE A (H-I-J/95-100-105) (Fig. 4)

In this area, the remains of three huts dated to the Pre-Pottery Neolithic A were documented (Fig. 4). The northern part of the huts is formed by low, stone walls which support the sides of the pits in which the huts were built; the southern side has largely been lost to slope erosion. Two of the huts are superimposed in H100 and are affected by two later round pits, dated to the PPNB (Fig. 5).



2. View of the site from the opposite hillside.

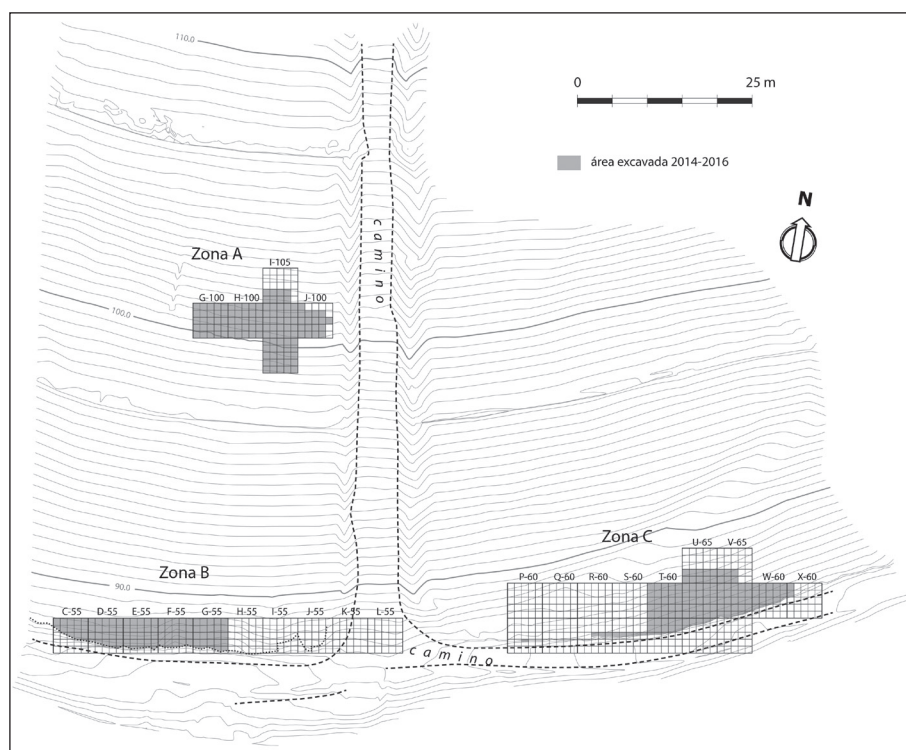


3. Plan of Zones A, B and C as excavated at Khuraysān up to 2016.

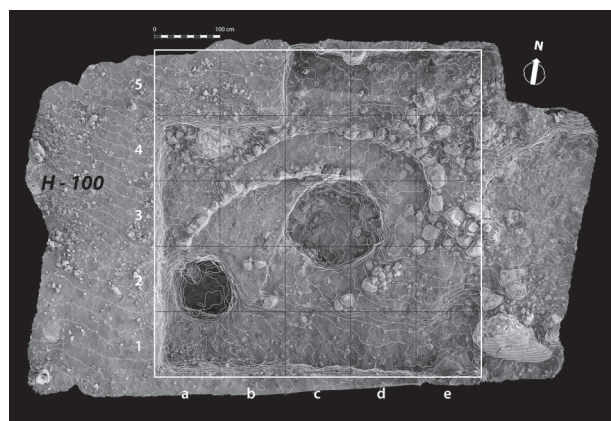
With regard to Hut 1, the most recent example, only the curved wall on its northern side has been preserved owing to disturbance by the two PPNB pits. Some remains of its lime plaster floor were documented, corresponding to its last occupation phase.

Hut 2 is located in H100, beneath Hut 1. It preserves its perimeter walls on the north, east and south-east sides (**Figs. 5 and 6**). This hut has been dated to the late 10th millennium cal. BC, corresponding to the oldest levels known at the site so far.

Hut 3 (**Fig. 7**) was found in IJ100. Most of its perimeter wall has been preserved, with only the south-west side being missing. Its floor plan is oval - almost rectangular - in shape. It is divided into two rooms by a narrow mud wall. The east room has a lime plaster floor that still maintains some red colouring in its southern part. This lime plaster floor connects to the plaster on the northern wall. To the south, the lime plaster floor delimits a circular pit and the lime slightly overlaps its northern side, forming a kind of lip. The floor of the smaller west room



4. Zone A 3D model created with photogrammetry.



5. Huts 1 and 2, affected by two PPNB pits.



6. Another view of the two huts. The supporting wall of the older hut, which is cut by the more recent one, was built with smaller stones.

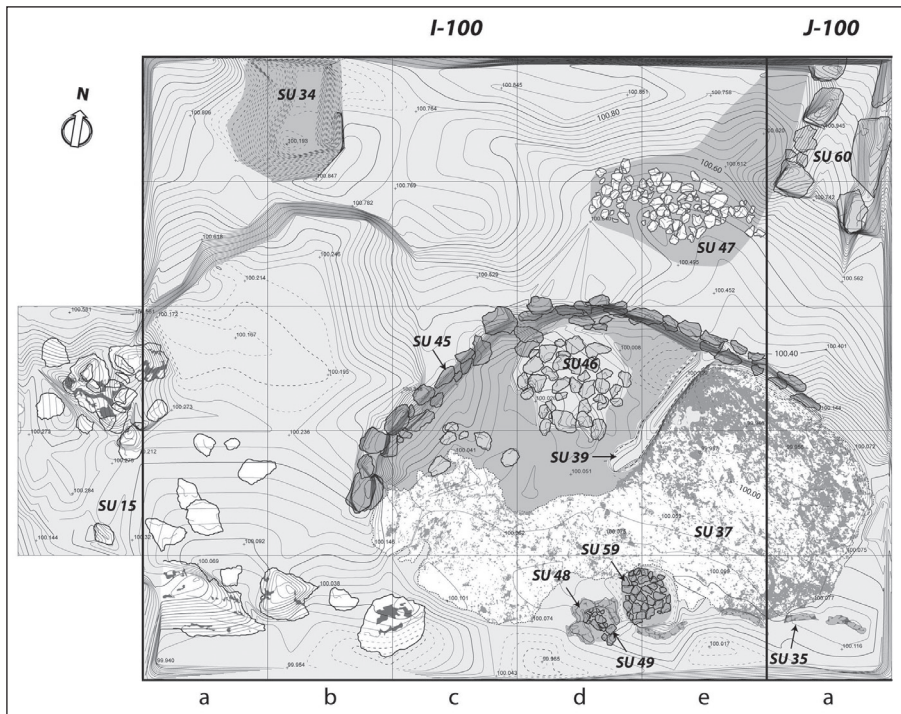
is covered with pebbles. This room was used for fires, as both charcoal and burnt sediment testify. Two radiocarbon dates were obtained from fragments of charred *Quercus* (oak) wood. These came from the level directly covering the lime plaster floor, and indicate that this structure should belong to the late Pre-Pottery Neolithic A, in the early 9th millennium cal. BC.

Zone B (C-D-E-F-G/55-60-65) (Fig. 8)

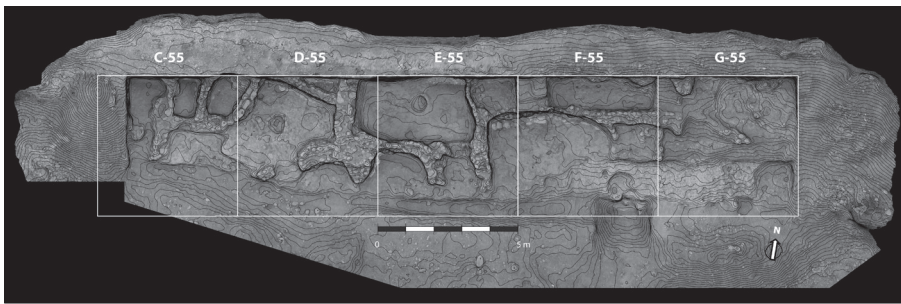
This area was first excavated in 2015 to clean up a section left by a bulldozer when making a track. Several walls associated with lime plaster floors were observed in the cleaned section.

In 2016, the excavated area was extended towards the north, in Squares CDEFG55. This revealed an area of architecture semi-sunken into the hillside. It consisted of several dwellings with rectangular rooms and rounded corners, most of which had lime plaster floors and circular hearths (Fig. 8). This level has been dated to the second half of the 9th millennium cal. BC, during the Early Pre-Pottery Neolithic B.

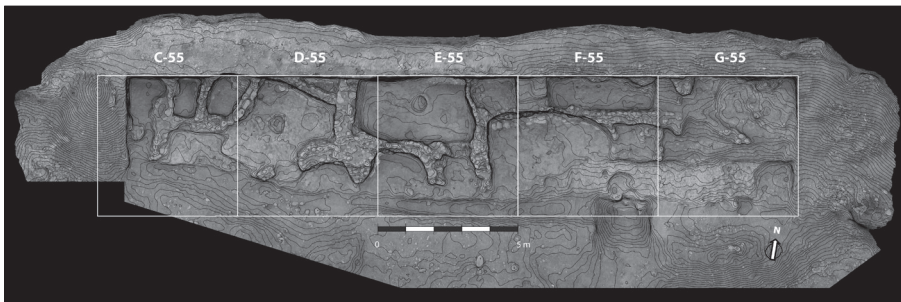
Several lime furnaces were found in Square G55. These take the form of pits with evidence of thermo-alteration and fragments of semi-calcined limestone. These furnaces belong to times both before and after the levels of architecture in this zone.



7. Hut in IJ100.



8. Architecture in Zone B dated to the Pre-Pottery Neolithic B.



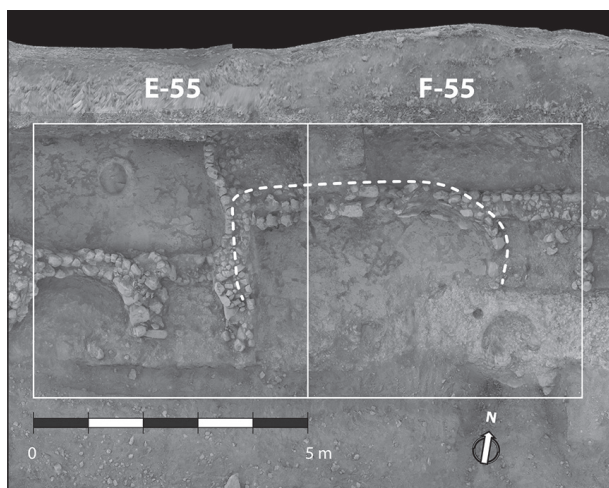
9. Room 1 in Squares EF55.

Room 1 was documented in Squares EF55 (**Fig. 9**). This is a rectangular space with rounded corners, a lime plaster floor and circular hearth pit. It was destroyed by slope erosion in its southern and south-eastern parts, and is delimited to the north by a terrace wall cut into the hillside.

The remains of Room 2, also with a lime plaster floor and circular hearth, were found to the west in Squares DE55 (**Fig. 10**). On its southern side, the room is delimited by a stone wall and the door threshold, which is reached

along a short corridor. It is delimited to the east and west by other walls, while to the north it continues into the unexcavated section.

Room 3, again with a lime plaster floor and circular hearth pit, was documented in Squares CD55 (**Fig. 11**). Its floor plan was approximately rectangular; it preserves all of its perimeter walls except the part in the south-west. The door was on the southern side and was accessed by a high step. The remains of another room that is still mostly unexcavated can be seen to the north-west of this room. Two



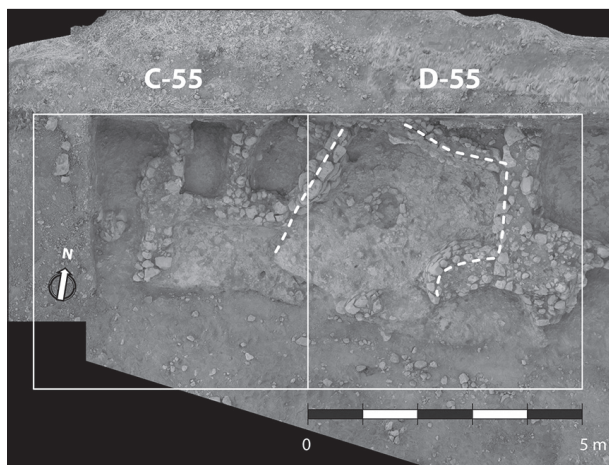
10. Room 2 in Squares DE55.

smaller spaces with oval floor plans and beaten earth floors were excavated in Square C55. The northern sides of both structures were left for future fieldwork seasons.

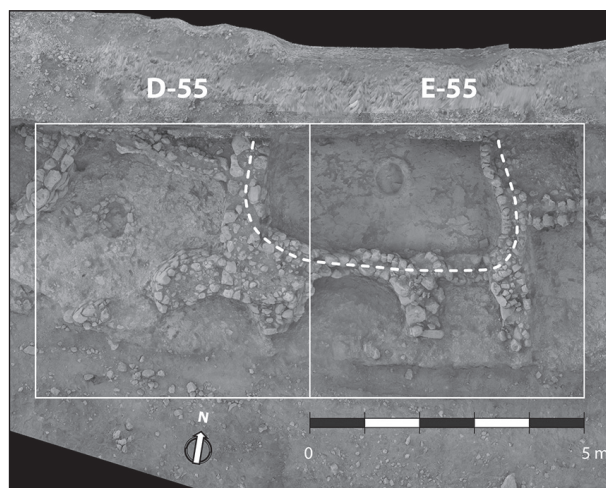
ZONE C (T-U-V-W-X-/55-60-65)

Several architectonic structures were excavated in Squares TUVWX55-60 in 2014 (**Fig. 12**). These include a long terrace wall in Squares TU55, and in Squares VW60 a square dwelling with stone walls built on the ground surface, and lime plaster floors and burials inside it. The dwelling had been cut through on its southern side by the track-making bulldozer; its section was therefore visible at the side of the track.

The 2015 excavation in Square U60 uncovered the remains of a building that was also rectangular and parallel to the previous one. Red paintings were documented on the floor of this house.



12. Zone TUVX60 in 2015.



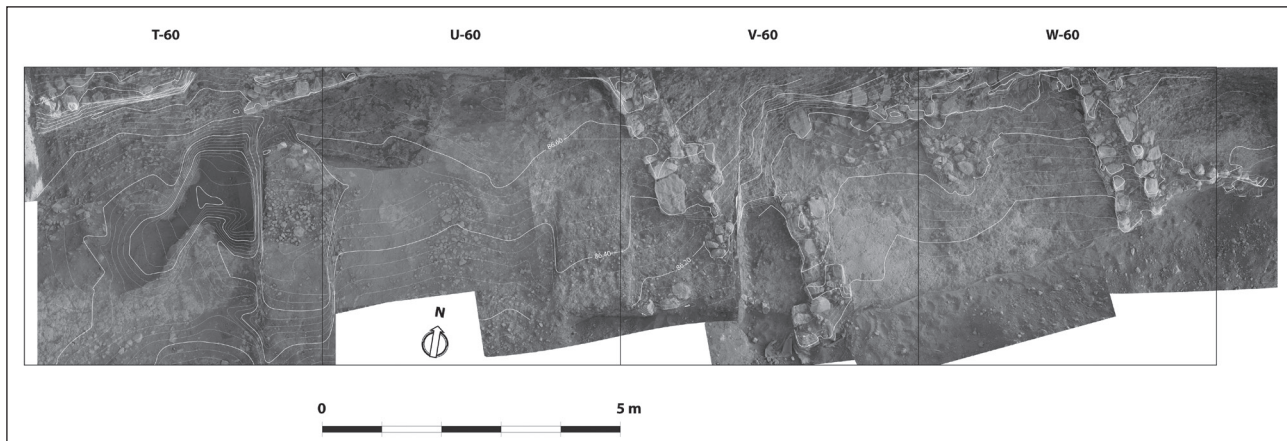
11. Room 3 in Squares CD55.

In 2016, the excavation of Square U60 was extended to the north in order to complete the excavation of the house and fully reveal the painted lime plaster floor. This work documented the terrace wall associated with the northern wall of the house. Thus, the house with the painted floor is delimited by its north and east walls, while its south and west walls are not preserved. The 2016 fieldwork revealed the full extent of the painted lime plaster floor (**Fig. 13**). The paintings were limited to the western room of the house, which was separated from the eastern room by an internal mud wall. This eastern wall had a lime plaster floor that was not painted. The painted floor was consolidated *in situ* and then removed and transported to the excavation headquarters in Amman, where it was conserved. The painted floor is now part of the permanent exposition at the Jordan Archaeological Museum, in the 'Ammān Citadel.

This level of construction - consisting of rectangular houses semi-sunken into the hillside, parallel to one another and with lime plaster floors - has been dated to the early 8th millennium cal. BC, in the Middle Pre-Pottery Neolithic B.

Zone BE 190

A 25m² test pit was excavated in Zone BE 190. A large terrace wall and beaten earth floors were found. One burial with indications of bone cremation is dated in the beginning of the 7th millennium cal BC (Iriarte *et al.* 2020; Santana *et al.*, 2020).



13. Remains of the house with the painted floor.

Geophysical Surveying

Geophysical surveying was carried out in the areas around the excavated zones in 2015 and 2016 (Fig. 14) (Monik *et al.* 2018). The ERT method was used, following the ARES system (GF Instruments, Czech Republic) which had proved to be the most effective for the type of soil and surface being surveyed. The Schlumberger deployment of electrodes, spaced every 0.5m, was used. Individual profiles were drawn, first parallel to one another and then perpendicular to these, to produce a pseudo-3D model of the ground. In this way, two areas of 19.5×15.5m were surveyed in the south-east of the site and a further two (19.5×15.5m and 15.5×7.5m) in the north-east.

The results show that in Zone C the houses extend 10m further uphill from the excavated area, as indicated by the greater electrical resistivity (reddish colours in Fig. 14) of over 150Ωm, which is characteristic of stone buildings. The whole area of the hillside was not built on, however, as shown by the areas of lesser resistivity (bluish colours in Fig. 14). These indicate areas of hillside in which the sediment is intact. In Zone B, the built-up area extends for 20m to the north of the excavated zone. This area is delimited to the north by an area of low resistivity, demonstrating an absence of constructions. On the strength of these results, the settlement appears to have consisted of several groups of houses with spaces between them. The houses were on an east-west alignment, following strips of land with a similar alignment. These were retained by terrace walls in the slope of the hillside.

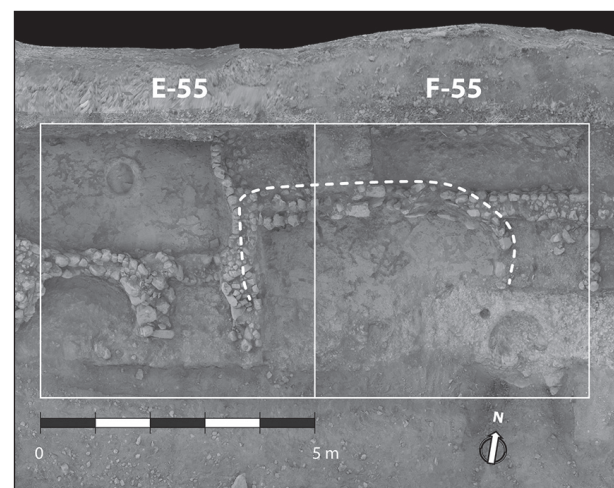
In the north-east part of the site (Zone

D), where the hillside faces south-east, the surveying revealed anomalies of high resistivity. It is probably higher here than in other parts of the site because of a larger proportion of rock in the sediment. The resistivity pattern demonstrates straight and curved structures, which may correspond to terrace walls and oval constructions.

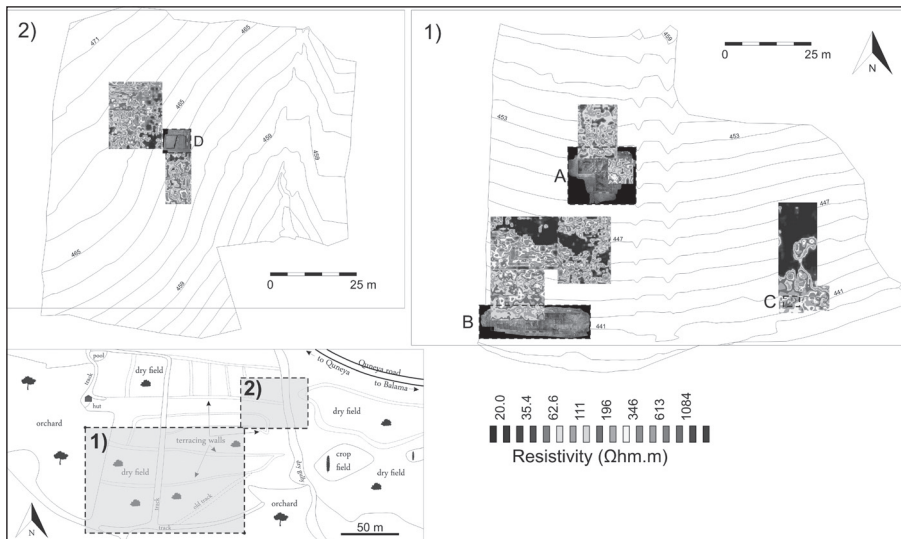
In conclusion, geophysical surveying has shown that stone constructions are probably distributed across most of the surveyed areas, and that therefore the settlement will extend over large areas of the south-west and north-east of the hill.

Chipped Stone Assemblages

A wide range of flint types has been recorded at the site, especially a high-quality violet type (Fig. 15). This is similar to the flint used for



14. Results of geophysical surveying (ERT) at Khuraysān in 2015 and 2016. Probable stone constructions are indicated by greater resistivity (orange and red colours). The profiles indicate depths of 0.25-0.54m.



15. Bipolar core with a cortical back.

the best-quality products at the site of ‘Ayn Ghazāl (Rollefson *et al.* 1992), which was procured in the Wādī Ḥuwayjir formation near that site (Quintero 1996). The same type was used for bipolar products at Qālūnyā (Motza) (Level VI) in Palestine (Khalaily *et al.* 2007). The excavators of that site propose that the flint was obtained from a local outcrop of the same Wādī Ḥuwayjir geological formation. The same may equally apply to the raw material used at Khuraysān, as the abundance of cortical flakes suggests that the source was not too far from the site - although it has not yet been located.

The production of lithic implements in the Pre-Pottery Neolithic A levels is still not well documented. It will therefore be necessary to await new fieldwork to be able to provide

reliable data about that period.

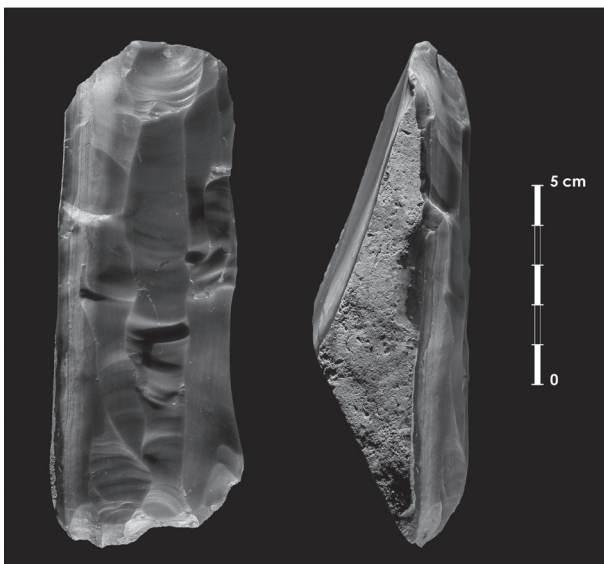
Laminar reduction in the Pre-Pottery Neolithic B levels was aimed at the production of bipolar blades. This reduction took place on-site, as shown by the accumulations of knapping waste that have been found.

The retouched implements consist of notches, denticulates, endscrapers, sidescrapers and more formal tools, the latter including sickle elements, borers, burins and points (Fig. 16). Most of the points are of Jericho type, while some Byblos and Amuq points have also been found. Some of the Jericho points were pressure retouched. The sickle elements are usually quite long (about 10cm) and display a slightly denticulate active edge. A series of flint objects in the form of schematic human figurines are in the course of being studied (Ibáñez *et al.* 2020)

Twenty-four obsidian artefacts have been recorded. These are fragments of bladelets, small flakes and splinters. They are light grey in colour, which is indicative of an origin in the volcanoes of central Anatolia, although this remains to be confirmed by geochemical analysis.

Preliminary Study of the Faunal Remains

Faunal remains from the Pre-Pottery Neolithic B levels have been studied. Nearly 50% of these remains were identified to family or species level. On the basis of these 1,010 identified specimens, the assemblage so far consists of eleven species. Goat remains predominate in all stratigraphic units. The characteristics of the horns and size of the



16. Projectile points; the point on the right was reused as a sickle element to reap cereals.

bones suggest that they are of *Capra aegagrus* type. The Nubian ibex, which is smaller and currently lives in more arid regions, cannot be excluded. No sheep bones have been identified, although some remains are not sufficiently diagnostic to be attributed with certainty to a particular species and have thus been classified as ovicaprids.

The bovids (*cf. Bos primigenius*) and gazelles (*Gazella* spp.) are the next most frequent taxa. The study of these remains suggests that three types of gazelle were probably hunted: mountain gazelle (*G. gazella*), goitered gazelle (*G. subgutturosa*) and Dorcas gazelle (*G. dorcas*). Habitats suited to the three species, viz. hill country, steppe and arid areas, would have existed around the site.

Some remains of pig/boar (*Sus* sp.) have been found in all the stratigraphic units, although in small numbers. The carnivore group includes at least four taxa: a large canid (*Canis* sp.), fox (*Vulpes* sp.), badger (*Meles meles*) and wildcat (*Felis silvestris*). Cape hare (*Lepus capensis*), common tortoise (*Testudo graeca*) and a large bird (possibly a crane) have also been identified.

In sum, goats were the most-consumed animals at Khuraysān, followed by bovids and gazelles, while few small animals were hunted. The question of the wild or domestic status of the goats, sheep (?) and swine is still undetermined.

Use of Plants

Over one hundred archaeobotanical samples with macro-remains (charcoal; seeds), phytoliths and pollen have been collected at Khuraysān. The samples are in the course of being studied, but two key characteristics define the site.

A preliminary analysis of the charcoal at Khuraysān indicates the presence of evergreen (*cf. Q. calliprinos*) and deciduous oak (*cf. Q. ithaburensis*), and *Pistacia* sp. These taxa suggest that at the time the site was occupied, the vegetation in the area was typically Mediterranean with mixed evergreen and deciduous woodland. At present, such woodland is found in regions with a mean annual precipitation of about 300–400mm, which permits the non-irrigated cultivation of cereals and legumes. The use of similar

plant resources to those found at Khuraysān has been documented at Pre-Pottery Neolithic sites in Palestine, where the cultivation and domestication of several legumes is attested (Caracuta *et al.* 2015). This is significant, as legume growing has also been documented at Khuraysān. In particular, hundreds of seeds belonging to the *Vicia* genus have been preserved, including species like broad bean (*Vicia faber*) and bitter vetch (*Vicia ervilia*). To date, most attention in the Near East has been focused on the process of wild-cereal cultivation and domestication, especially involving einkorn (*Triticum boeoticum*), emmer (*T. dicoccoides*) and barley (*Hordeum spontaneum*). In contrast, the domestication of legumes has received less interest. Together with contemporary sites including al-Birwah (Ahihud), Şaffūriah (Nahal Zippori) and Khallat al-Khallidiyyah (Yiftahel) (Caracuta *et al.* 2015), preliminary data from Khuraysān suggest that the consumption of legumes was very likely an integral part of PPNA and PPNB subsistence in the Mediterranean zone.

A full study of the archaeobotanical remains from Khuraysān will doubtless contribute significant information for the reconstruction of natural vegetation and the use of plant resources during the process of crop domestication in the Near East.

The Paintings in U60

In 2015, a series of monochrome paintings were discovered on the lime plaster floor within the building discovered in Square U60 (Fig. 17). The paintings had been drawn with a red pigment. The lime plaster floor and the remains of the building associated with it were completely exposed in 2016. The remains of the floor were then consolidated, both chemically (with an acrylic resin) and structurally (with lime mortar) (Fig. 18). After that, it was protected using several layers of hydrophilic cotton gauze and acrylic resin in a 20% acetone dilution. When this had dried, the floor was divided into two pieces to make it easier to lift, and was separated from the ground with steel spades. The two pieces were turned on to a rigid support and transported to the excavation headquarters in Amman for conservation.

As the pieces lay upside down on the support,



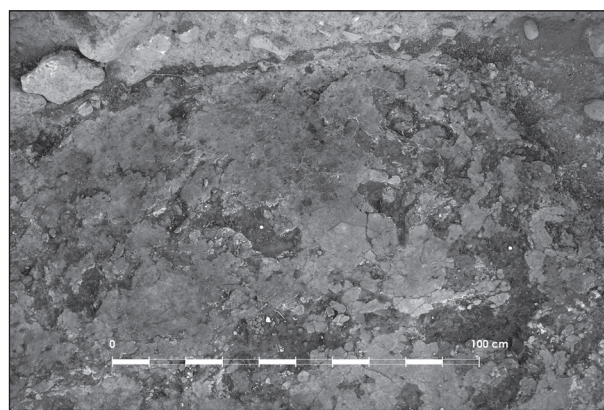
17. Remains of the painted floors.

the mortar on their undersides was visible. Adhered stones, sediment and loose pieces of mortar were removed, and samples taken for future analysis. After the thickness of the floor had been reduced, several layers of lime mortar were applied to level up and unify the surface. It was then glued with an epoxy resin to a stratified inert PGA© support formed by an aluminium beehive structure between two sheets of glass fibre.

When this had dried, the two pieces were turned over so that the top surface could be restored. The protective layers were removed with hydrophilic cotton gauze soaked in acetone and the surface was cleaned with a solution of acetone, water and alcohol (1:1:1). Cracks and missing parts were filled with sediment from the site agglutinated with polyvinyl acetate. Finally, a protective layer was applied, consisting of acrylic resin (Paraloid B72) in a 5% solution in acetone.

Burials and Human Remains

The excavations succeeded in documenting several burials and displaced human remains. In 2015, four primary graves - three individual and one double - were discovered. The minimum number of individuals found was eight, five in the graves and three in a secondary position. In 2016, seven primary graves were found, as were two secondary burials, a skull cache and an indeterminate deposit with human remains.



18. Restoration process of the painted floors.

Several other human remains were found in a secondary position. The minimum number of individuals was 14. In the primary graves, the individuals were in a flexed position against the side of the grave, and some of these burials are double. Secondary burials were carried out after the total or partial decomposition of the bodies. The dispersed human bones are the consequence of intentional (secondary mortuary practices) and unintentional actions (disturbance of graves, recent alterations *etc.*). Some of these burials are described below.

Burial SU 34

This is a primary inhumation in a grave containing two individuals who were buried together on a north-south alignment. This burial was found in Square I100. On top of the burial, in the upper part of the grave, a secondary deposit consisted of bones with post-mortem fractures. Individual 1 is an adult buried in a seated position with the body lying on its right side. The cranium and jaw of this individual had been removed when the grave was reopened. According to the characteristics of the pubic symphysis of the left pelvis and the appearance of the other bones, this was an adult of about 30-40 years of age.

Individual 2 was lying on the left side in the bottom of the grave. The cranium was also absent, but the jaw was preserved. Dental wear corresponded to a person about 25-30 years old at death.

Reconstruction of the mortuary practices indicates that Individual 2 was first deposited in the bottom of the grave. Individual 1 was then deposited, partly on top of Individual 2. Contact between the bones of the two individuals

suggests that the bodies were deposited on the same occasion and were then covered by sediment. Later, when the decomposition of the bodies was complete or very advanced, the grave was opened to remove the cranium of Individual 2 and the cranium and jaw of Individual 1. The grave was then recovered with sediment and, later, a third individual was buried in the same location.

Burial SU 75

This grave was found in Square H100 and contained the incomplete remains of an adult in a secondary position, together with the primary burial of a perinatal individual. The secondary burial consisted mainly of an intentional grouping of several long bones aligned north-south, without anatomical or articular connection - indicating that when they were placed in the grave they were in at least an advanced state of skeletisation. The remains belong to a young adult, of whom the cranium, mandible, arms and vertebrae are missing. Other anatomical regions, such as the ribs, hands, feet and pelvis are also poorly represented. The characteristics of the sciatic notch indicate that the individual was female.

The perinatal individual (age <1 month) was in a primary position, but the remains were badly affected by post-depositional factors.

Burial SU 79

This is the primary burial of a young male found in Square I105 (**Fig. 19**). The body was placed in a flexed decubitus position on his left side, on a north-south alignment with the head towards the south. The upper limbs were folded, with the right arm crossed over the left. The connections at the elbow are in their anatomical position, but the carpal bones and hands of both arms had lost their anatomical connection and were displaced towards the bottom of the grave. This was equally the case with the right ankle and foot, the bones of which had lost their anatomical position and fallen to the south owing to the slope of the grave. In contrast, most of the articular connections of the left foot were in their primary position, as the foot was between two stones at the side of the grave. The anatomical representation of the individual is incomplete, with the particular absence of the



19. Photograph of Burial SU 79, with some remains in primary position and others displaced

cranium and mandible, as well as most of the vertebrae and ribs. It is likely that the cranium and mandible were intentionally removed after burial.

Burial SU 101

This is the double burial of a perinatal individual and an immature goat. It was found in Square I95, near the southern wall of a structure associated with PPNB levels. The child was buried shortly after death as the bones are in a primary position. This individual would have been 40 ± 2 weeks old at death, according to the maximum length of the right femur, and was therefore a foetus at term. The goat was deposited simultaneously with or shortly after the child. The remains of this animal are also in a primary position. This type of burial with an animal is very unusual in the PPNB.

Burial SU 815

This is a secondary, collective burial with the remains of three individuals in Square BE190. The remains correspond to a male, a female and a person of indeterminate sex. It was possible to estimate the age of two individuals, viz. the male (17-25 years) and the indeterminate person (30-39 years).

This burial is unusual because the remains of at least two individuals were affected by fire. The ensemble consists of 324 bone fragments, of which 234 (72%) could be identified: 27 cranial remains; three mandibular remains; one tooth and 203 post-cranial fragments. Of these remains, 127 (54%) display evident signs (colour change; fragmentation; longitudinal fissures) of having being in contact with fire.

Some faunal remains were also identified. Another surprising aspect of this deposit is that the bones were burnt intentionally, which is a practice that has rarely been documented in the Pre-Pottery Neolithic in the Near East. The nearest examples known to date come from PPNC levels at the Palestinian site of Baysamūn, the site with the oldest known Neolithic cremations (Bocquentin, 2020). Several deposits with burnt bone were found there, both *in-situ* cremations and concentrations of burnt remains. This shows that cremation was a practice known to some communities in the Levant. At Khuraysān, no evidence of fire associated with cremation structures (pyres) has been found, and the bones were probably altered by fire when they were deposited.

In sum, the burials at Khuraysān follow patterns observed at other Pre-Pottery Neolithic sites, with abundant primary and secondary burials in the vicinity of dwellings. The intentional removal of skulls has been identified, in accordance with the mortuary practice of that time. Burial SU 101, involving a perinatal child and young goat, is exceptional for this period and likely reflects the proximity of such animals and humans at a time when goats were being domesticated. Burial SU 815 contained some burnt bones, which might indicate the intentional manipulation of human remains by the action of fire, as has been documented elsewhere for later periods.

Conclusions

Khuraysān is a large archaeological site with levels dated to the Pre-Pottery Neolithic A and B. Located in the az-Zarqā' river basin, 30km north of 'Ayn Ghazāl (Rollefson *et al.* 1992), it is a key site for understanding the human sedentarisation process and the development of arable and pastoral farming in northern Jordan.

The remains of three sunken oval huts have been dated to the Pre-Pottery Neolithic A, that is to say the late 10th and early 9th millennia cal. BC. The lime plaster floors of these huts, and the fact that one of the floors was painted with red pigment, were previously unknown in the Near East at such an early date.

In the Early Pre-Pottery Neolithic B - the second half of the 9th millennium cal. BC - new forms of architecture appear, rectangular in

shape with rounded corners and rooms joined together. These structures were built at ground level, although they were semi-sunken into the slope on their north sides, and had stone walls and lime plaster floors. This type of architecture is similar to that documented at the Syrian site of Tall al-Kharsa (Qarassa) North, Suwayda (Ibáñez *et al.* 2010; Santana *et al.* 2015). It is an architectural style that had not been documented in the region previously.

The Middle Pre-Pottery Neolithic B remains date to the early 8th millennium cal. BC. Structures consist of square, ground-level buildings (albeit ones with their north walls semi-sunken into the hillside) with stone walls and lime plaster floors. Burials were found beneath the floors, inside the houses. The lithic industry (bipolar reduction, Jericho and Amuq points, curved sickles, figurines *etc.*) is characteristic of this period.

Geophysical surveying has revealed large areas with architecture, whilst other areas lack any structures. The faunal study shows that in the Pre-Pottery Neolithic B, goat - rather than gazelle or bovids - was the most-consumed animal. The wild or domestic status of goats, bovids and swine remains to be determined. Another aspect of the diet is evidenced by the large quantity of charred legumes found in the Early Pre-Pottery Neolithic B dwellings. Mortuary practices were very complex, with some burials inside the houses and other graves outside them. Skull removal has been documented and, possibly, the earliest cremation of human remains.

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