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Preliminary Report on the ‘Ayn Ghazāl Rescue Excavations: October and December 2011 / January 2012

Introduction

Prelude: Bulldozing of the Site in Early 2011

In March 2011 the co-directors of the ‘Ayn Ghazāl excavations revisited the site to check on a few things and, to their astonishment, noticed that an area adjacent to the highway in the Central Field, containing Middle Pre-Pottery Neolithic B (MPPNB; *ca* 8,200 - 7,500 BC) houses, had been bulldozed with the nearby remaining features being threatened with destruction. As a consequence, a report describing the situation at the site was written by one of us (GR) and delivered to the Department of Antiquities (DoA). Despite the fact that there were good intentions behind this bulldozing, which aimed to beautify the roadway, one of the MPPNB houses exposed in 1982 - 1983 was completely demolished. It seems that, on this occasion, the Greater Amman Municipality did not consult the DoA.

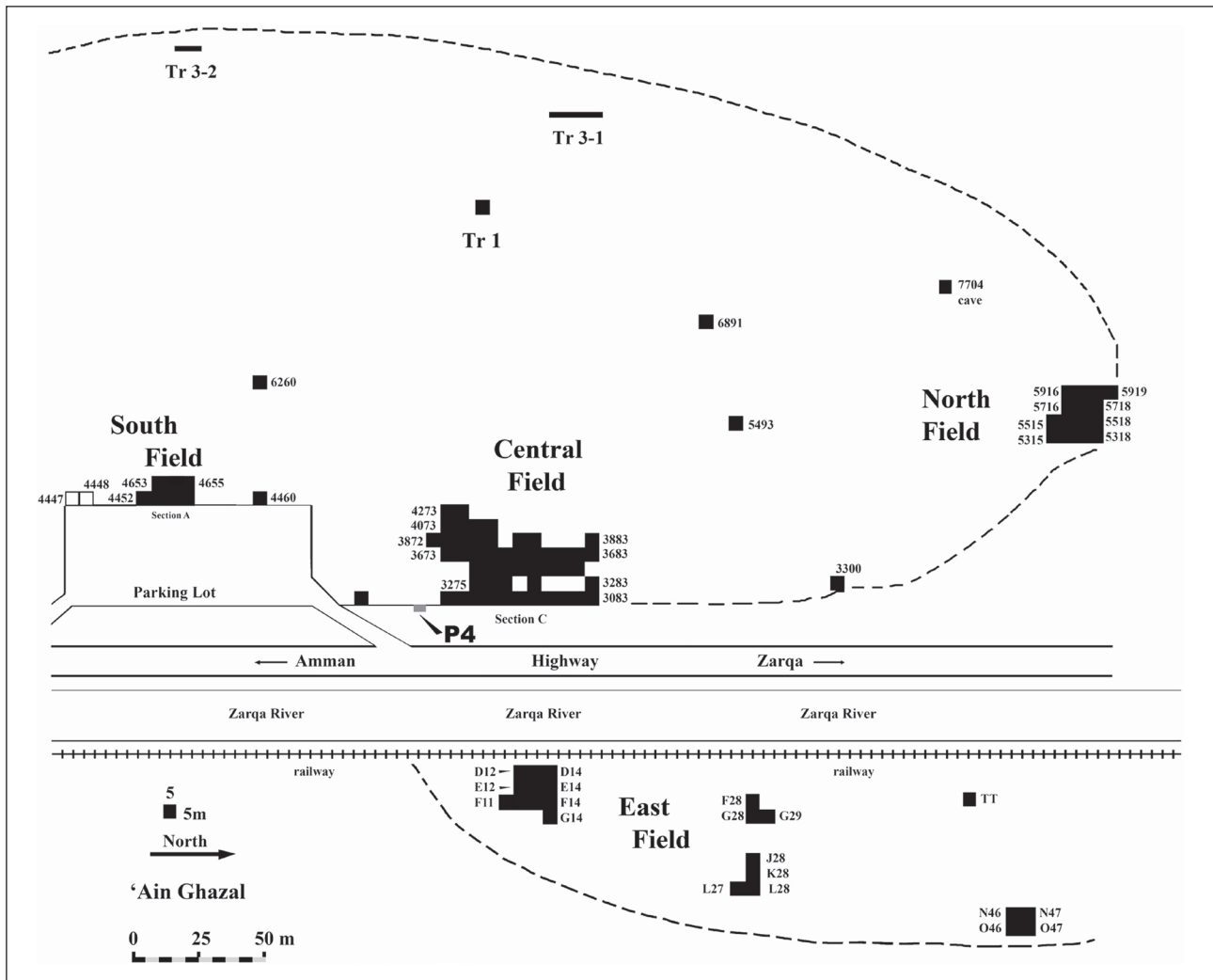
Sequel: Bulldozing of the Site in June 2011

Unfortunately, the Ministry of Education decided to construct a school on the western part of the Neolithic site of ‘Ayn Ghazāl (FIG. 1) and purchased part of the site from private landowners for this purpose. In late June the contractor started bulldozing this area. Four long north - south bulldozer cuts were

made, each profile being approximately 50 m long. In total, approximately two hectares were affected. Three of the cuts (Nos 1 - 3) were between 3 and 5 m high, with one (No. 4) being about 1 - 2 m high (FIGS. 1 and 2).

In September 2011 the Department of Antiquities convened an urgent meeting between representatives of the Department of Antiquities, Yarmouk University and the American Center of Oriental Research (ACOR). A recommendation was made to halt the building operation at the site immediately and start a rescue excavation along the exposed bulldozer cuts. On 1 October, a team consisting of Zeidan Kafafi (director), Khaled Douglas (Hashemite University), Ahmad Lash (Department of Antiquities) and eight MA students started three weeks of rescue excavation at the site.

The principal aim of this urgent operation was to register and document archaeological material exposed in the bulldozer sections and to study the stratigraphic sequence in this western part of the site. To achieve this goal, the team decided to examine three areas (designated 1.1, 3.1 and 3.2) in two bulldozer sections (Nos 1 and 3) in which architectural remains were visible (FIG. 2). Additionally, it was agreed that the rescue excavation would resume in December 2011.



1. Schematic site-map of 'Ayn Ghazāl (drawing: G. Rollefson).

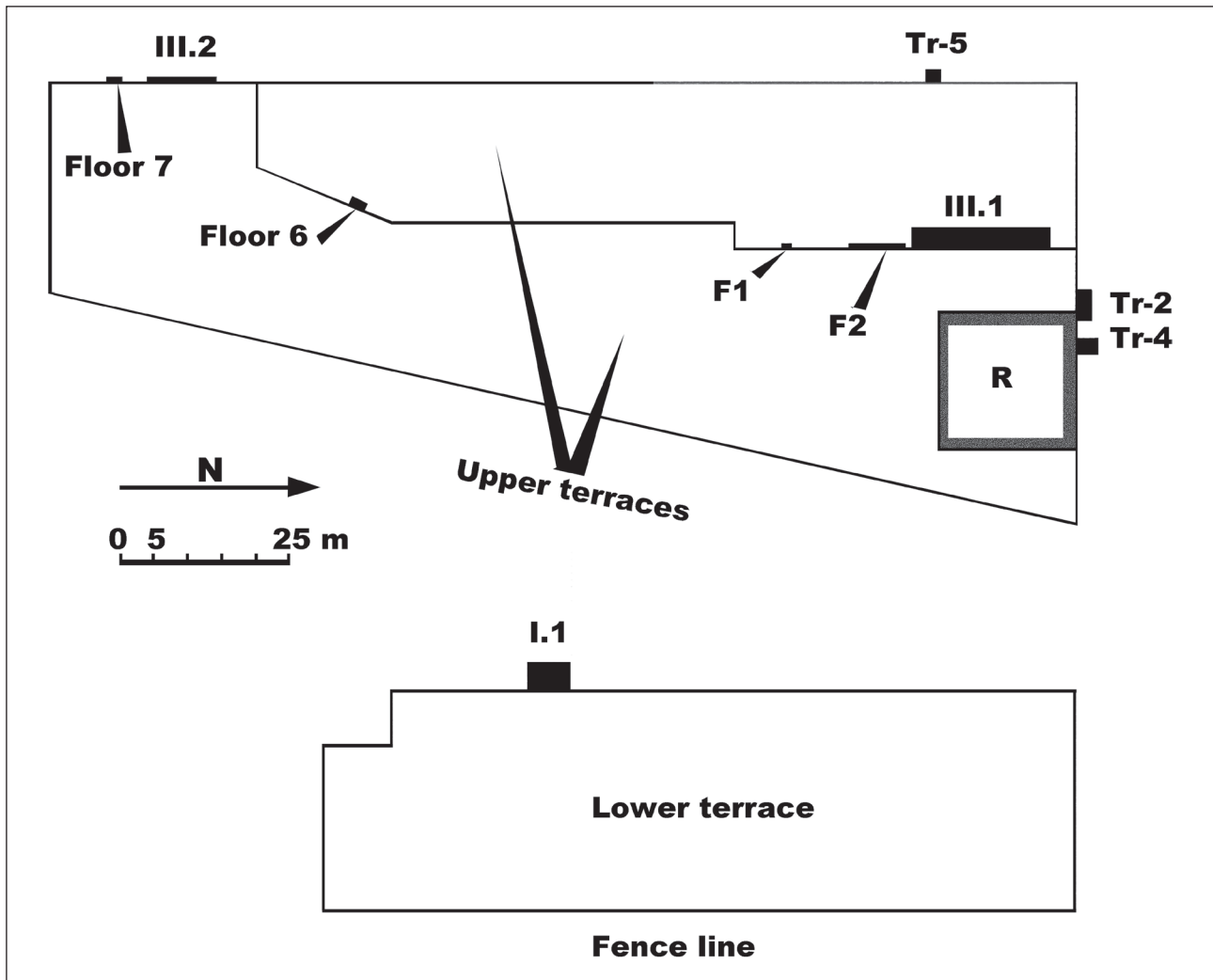
Results

Section 1.1

This section is located at the easternmost and lowest side of the bulldozed area; it measures 4.5 m in length and 2.5 - 3 m in height. No virgin soil was reached in this area of the site, but 39 loci were recorded, including surfaces, *huwwar*-plaster floors, lenses and walls (FIG. 3). The stratigraphy was interpreted as 18 architectural stages divided into five strata. Based on the presence of Yarmoukian pottery, Strata I - III belong to the Yarmoukian Culture, whereas Strata IV - V were identified as Pre-Pottery Neolithic C (PPNC).

The main architectural feature of this section was an east - west row of three upright stones (Wall 1) (FIG. 4). The height of these stones

ranged from 70 cm to 86 cm, with widths of 33 to 36 cm; the wall was excavated *ca* 2.5 m into the western face of the bulldozer section. The stones constituted the northern part of a two-row wall, with its southern face being built of medium-sized boulders; it is possible that the southern part of the wall was a later addition. Unfortunately, the eastern end of the wall was bulldozed, so its original length is unknown. Nevertheless, the archaeological evidence investigated in front of and behind the wall suggests that it may have been part of an important structure. This type of construction has some similarity with upright stones placed against the east wall of a Late PPNB (LPPNB) ritual building excavated in the East Field of the site (Kafafi 2011). It is therefore possible



2. Detailed view of the relative location of the trenches discussed in the text. (G. Rollefson).

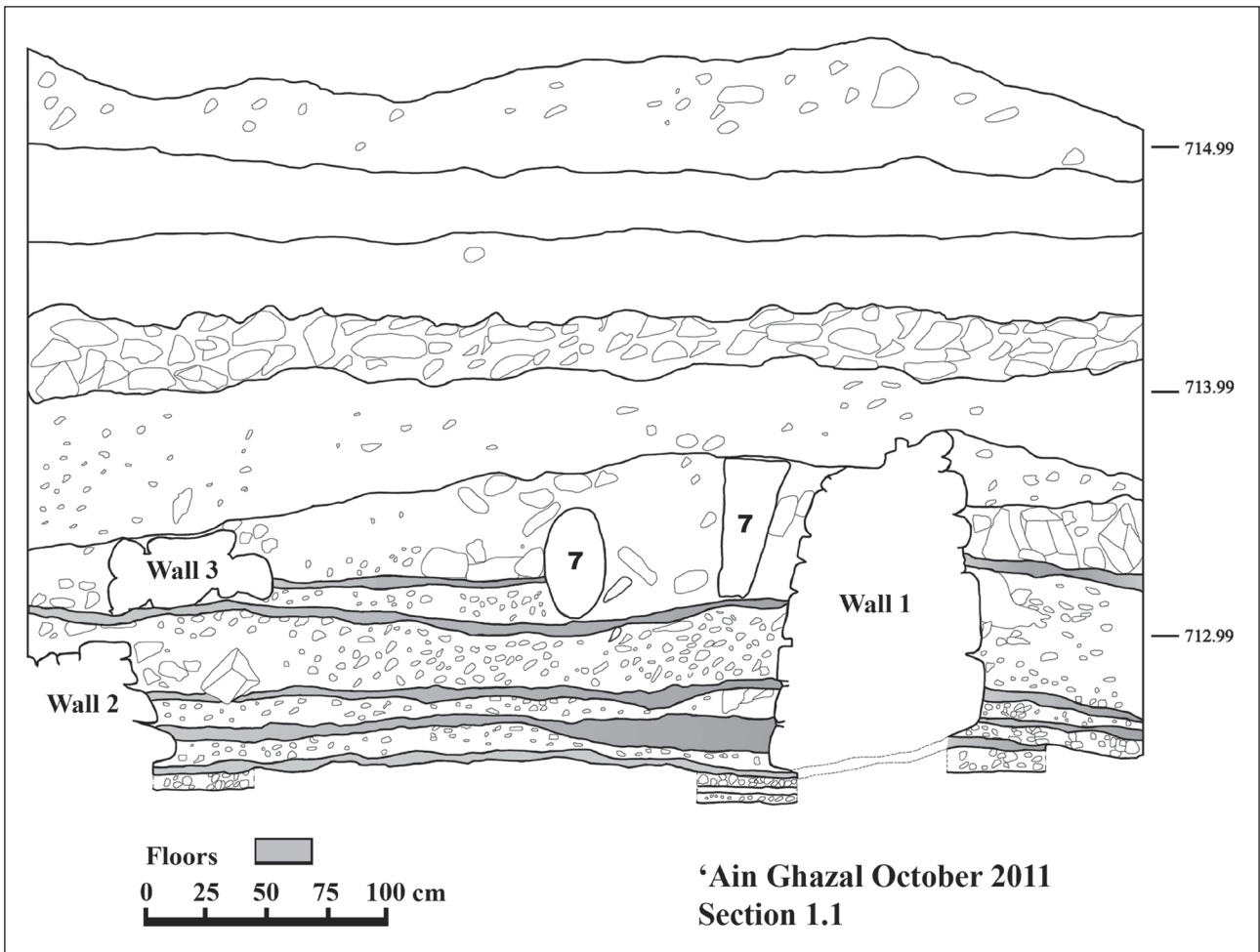
that this wall might originally have been built during the LPPNB and continued in use into the Yarmoukian. Notably, Yarmoukian pottery did not appear until well above the original surface on which the wall was built.

To the south of Wall 1, another wall (Wall 2) was visible, on the same alignment but constructed of smaller stones than Wall 1. The excavators argue that Wall 2 is not associated with Wall 1, even though they were founded on the same surface. It is suggested that Wall 1 might be associated with a building to the north.

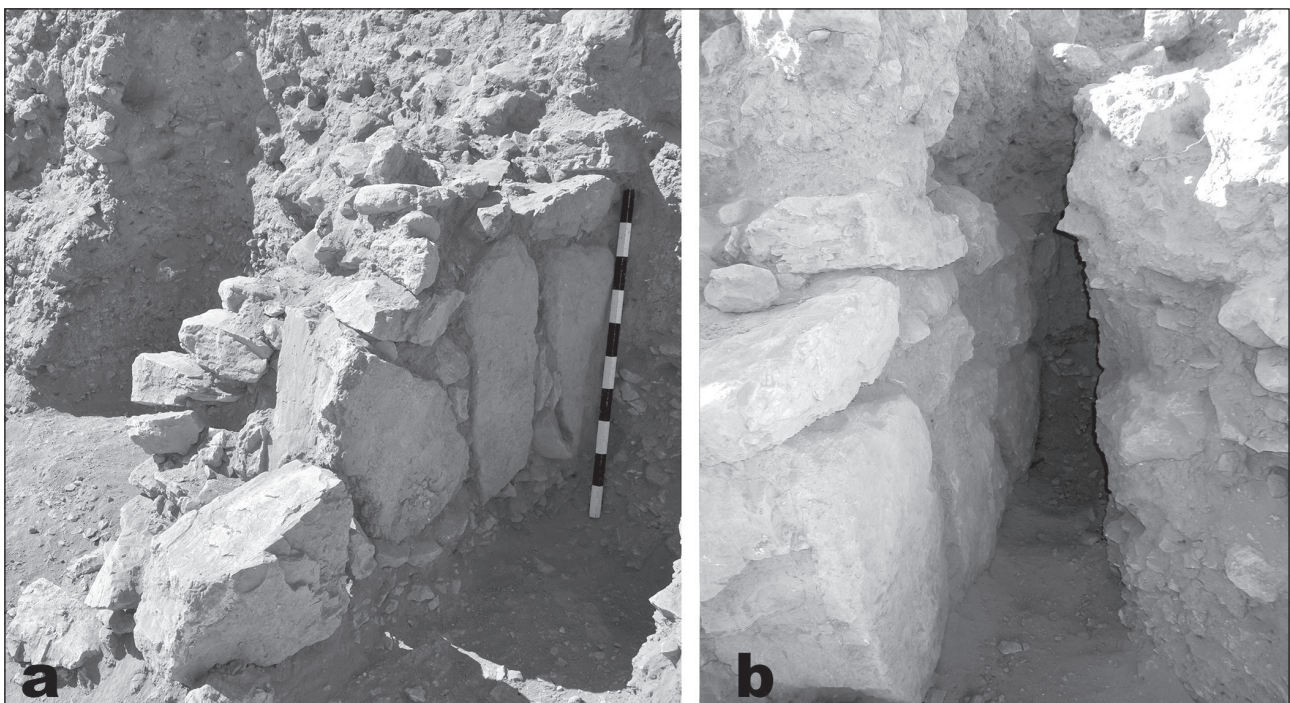
Section 3.1

Section 3.1 is located around 65 m west and uphill of Section 1. In front of the section, a reservoir intended to serve the future school

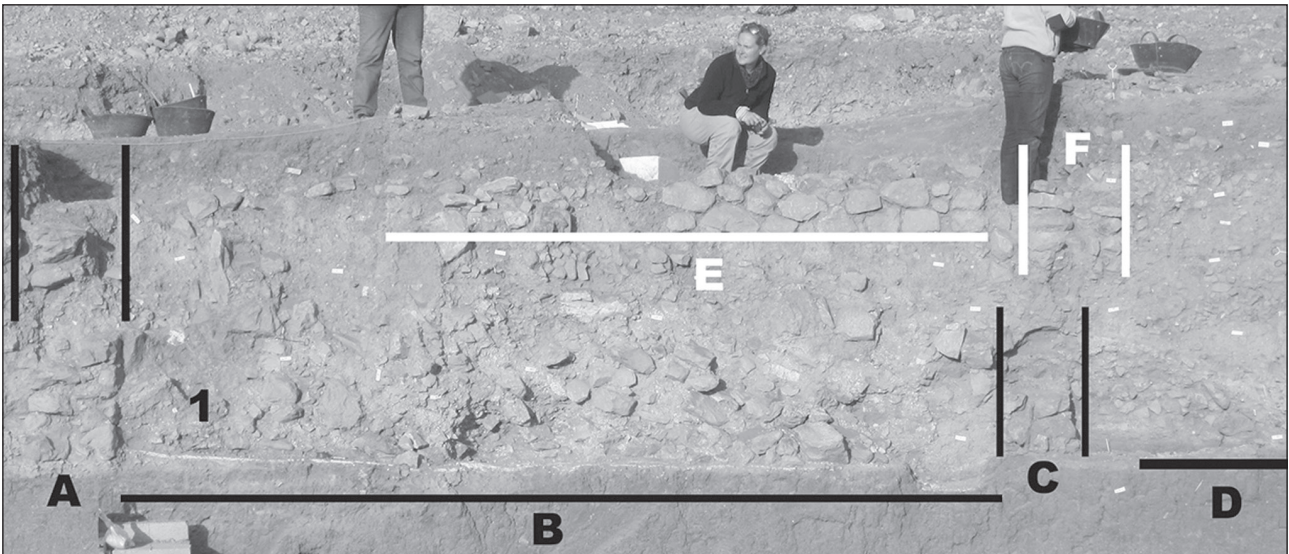
had been dug to a depth of 5 m into the *terra rossa* soil. The sampled section measures 6.75 m in length and ranged in height from 2.8 m to 3.2 m (FIG. 5). The cleaning of this section started with a trial trench measuring 6 m north - south by 20 cm east - west. The trial trench and section cleaning exposed two main walls built of uncut stone that were connected with each other by a plaster / crushed chalk floor 4.8 m in length. The room between the two walls was full of rubble and plaster chunks, probably associated with a fallen ceiling / floor of an upper storey. The method of construction, the nature of the fill and the plaster floor suggest a PPNC date for the building. Inside the room along the southern wall was a storage container of unfired yellow clay, plastered at the base, *ca*



3. Stratigraphy in the west section of Trench 1 (drawing: Kh. Douglas).



4. Composite photo of Wall 1 exposed in Trench 1 as excavated (a) in October 2011 and (b) in January 2012. The part of the wall in (a) collapsed one weekend during the latter excavation season (photos: Kh. Douglas and G. Rollefson).

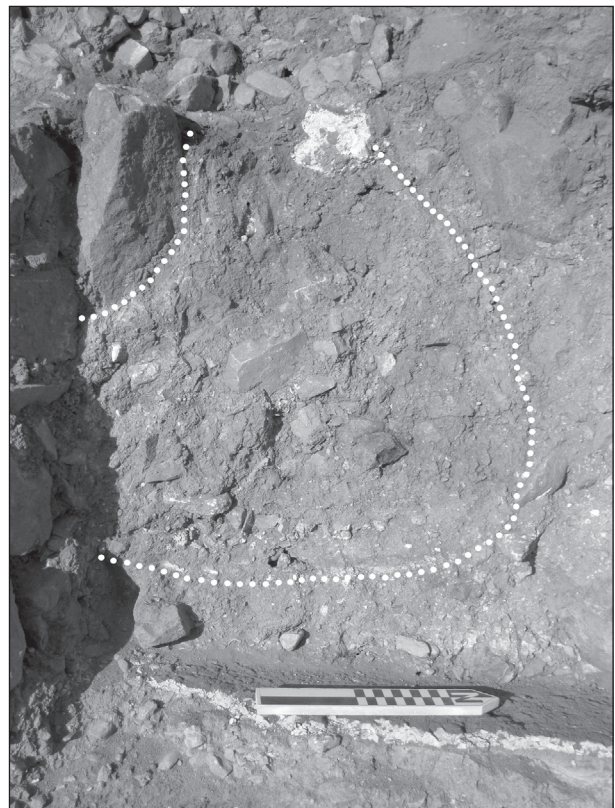


5. Exposed stratigraphy in Trench 3.1: A and C are the southern and northern walls; B is the floor of the PPNC house; D is an exterior PPNC surface; E is the eastern wall of a Yarmoukian house, with two Yarmoukian walls to the right. (G. Rollefson).

70 cm high (but broken by the ceiling collapse) and 75 cm in diameter (FIG. 6). At the northern end of the room was a 15 cm-deep ‘trough’ about 30 cm wide that ran along the northern wall into the section (FIG. 7).

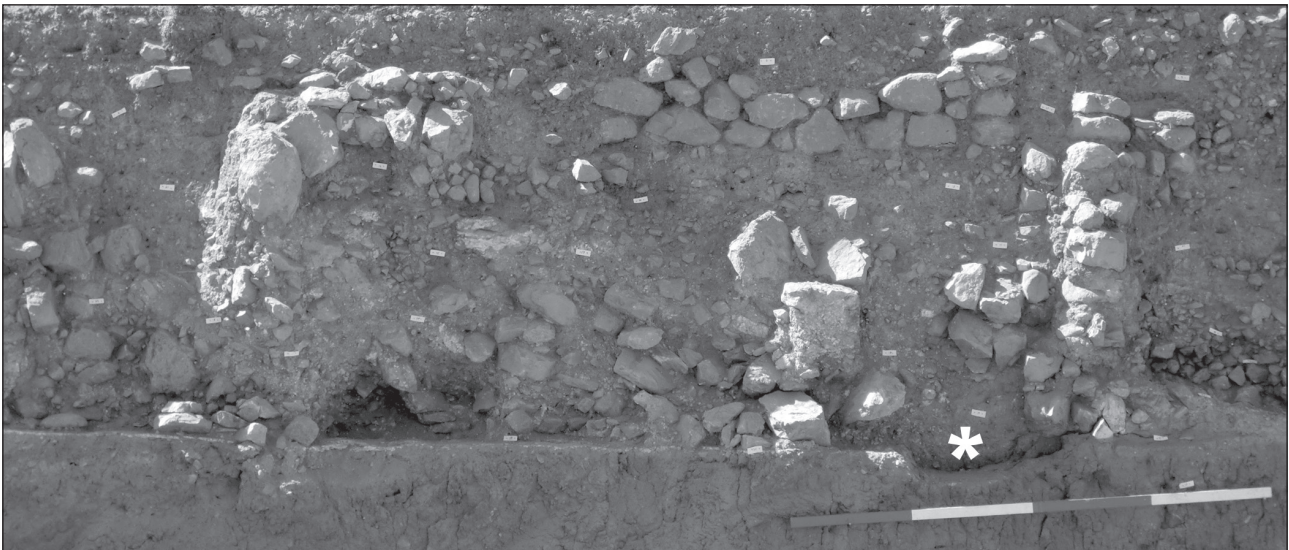
Another architectural feature was visible in the strata overlying the PPNC building. It consists of a small room with a two-row north-south aligned east wall (*ca* 4 m in preserved length) constructed of medium-sized boulders, truncated to the west (uphill) and south by agricultural ploughing and dating, on the basis of recovered pottery, to the Yarmoukian period. An east-west return wall running uphill to the west was traced for just under a meter. In addition to this room, the southern wall of another Yarmoukian building occurred less than a meter to the north, but there was no evidence of an eastern wall preserved in the section (FIG. 5).

Inside the southern room, tucked into its north-east corner, a near-complete human skeleton was excavated. It was lying on its right side, partially flexed, and was clearly interred after the abandonment of the building (FIG. 8). The skeletal material is currently under analysis by Dr Abdul Halim al-Shiyab (Yarmouk University). This is the first Yarmoukian



6. Dried clay storage vessel, indicated by white dots, against the southern wall of the PPNC house; scale is 35 cm long (G. Rollefson).

skeleton to be recovered from ‘Ain Ghazal and represents a major addition to the very small corpus of Ceramic Neolithic human skeletal material from the southern Levant.



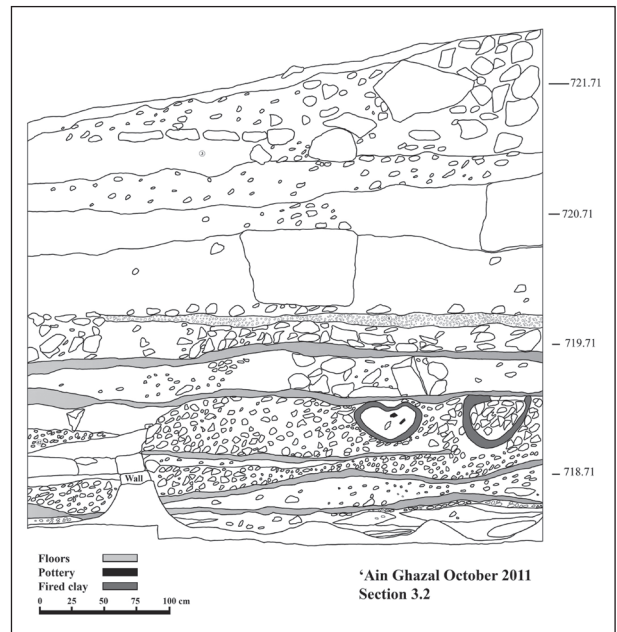
7. Plastered 'trough' along the northern wall of the PPNC house, indicated by an asterisk just above the meter stick (photo: A. Lash).



8. Yarmoukian burial in the north-east corner of the Yarmoukian house in Trench 3.1 (G. Rollefson).

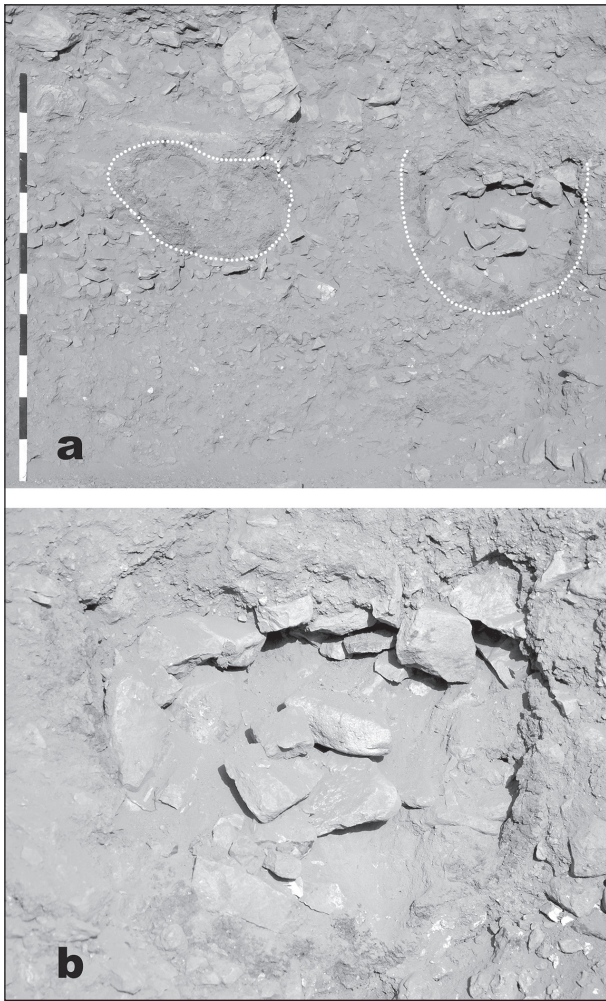
Section 3.2

This section is located at the southern end of Section 3 and measures approximately 4 m



9. Stratigraphy revealed in Trench 3.2 in the south-west part of the bulldozed area (See FIG. 2; drawing: Kh. Douglas).

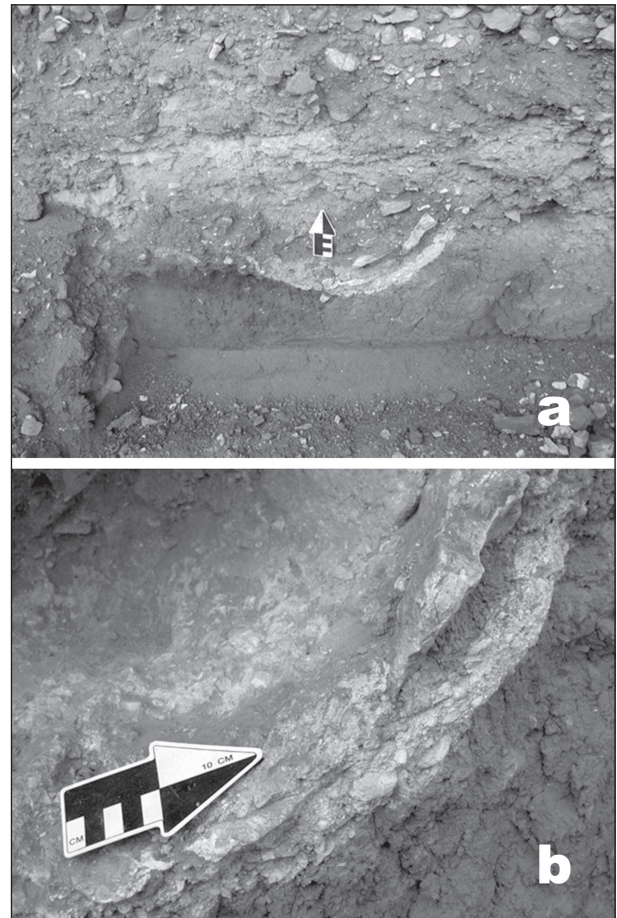
in length, with its highest point reaching *ca* 4 m above ground level (FIG. 9). On the basis of recovered pottery, the upper third to one-half of the section is Byzantine (*cf.* Kafafi *et al.* 1990: 11-12), while the remainder is Yarmoukian. Of particular note in Section 3.2 are two sub-spherical bag-like features constructed of burned reddish clay, situated directly under the Yarmoukian floor (FIG. 10). The southern example is 47 cm in diameter



10. Subfloor burned clay storage features in Trench 3.2 (G. Rollefson).

and approximately 30 cm high; the northern example is 43 cm in diameter and 40 cm high. The fill of both consisted of ash, fist-sized stones and Yarmoukian pottery sherds; the contents are currently undergoing careful analysis. A radiocarbon date of $5,772 \pm 64$ calBC was obtained from the northern feature (Locus 17) and is the first Yarmoukian C14 date to be obtained from 'Ayn Ghazāl.

Several floors were identified, with the lowest being different in terms of the material of its construction. The lowest layer was cut into the basal *terra rossa*, with an associated wall constructed partially of mud-brick. In addition to the architecture, ash deposits, stone layers, gravel layers, Yarmoukian pottery and flint debitage were found. One notable aspect was a very thin, fluvial deposit of pea gravel



11. Feature 1, a plastered basin associated with intense burning. (G. Rollefson).

throughout the length of the section. Further studies are however needed to explain the different archaeological and geomorphological phenomena at the site.

Exposed Features and Test Trenches

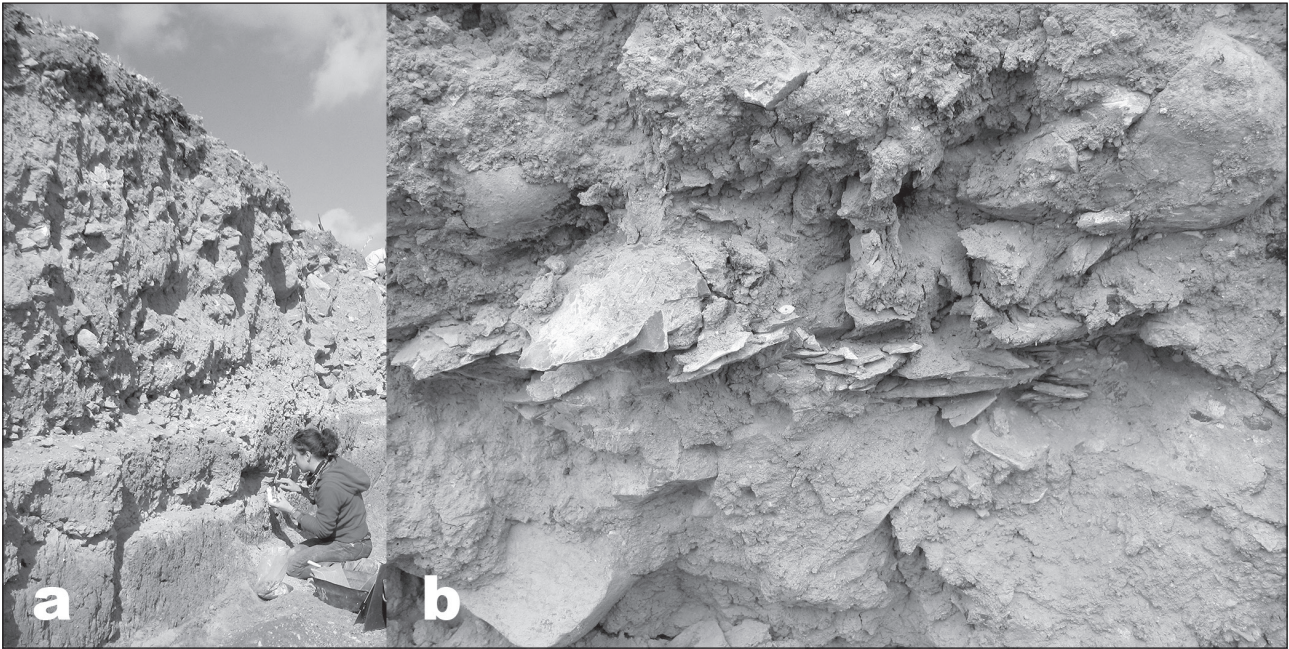
In addition to cleaning and drawing the bulldozer cuts, several test trenches were excavated to inspect buried cultural materials. Feature 1 is a plaster basin, 50 cm in diameter and 25 cm deep, cut into the *terra rossa* soil. It is located approximately 9 m south of the Yarmoukian house. This feature is not associated with any other installation, but has been affected by a fierce fire at its southern edge (FIG. 11). Stratigraphic relationships indicate a LPPNB date for the feature. The contents of this basin have been collected for further analysis.

Feature 2 is an ashy lens about 15 - 30 cm thick; it was also located south of Trench 3.1,

directly over the *terra rossa*. It is not associated with any structural feature. It might be that this ash accumulation was an open-air dump. Within the lens was a knapping area densely packed with a large quantity of LPPNB debitage (FIG. 12), characterized by a concentration of biface trimming flakes and naviform debris (Theresa Barket, pers. comm.). A radiocarbon

sample (AA98396) yielded a date of $6,981 \pm 112$ calBC, which is indicative of the latest phase of the LPPNB period.

Trenches 2 and 4 were located at the eastern edge of Trench 3 (FIG. 2). Here the stratigraphy showed thin floors of *huwwar* plaster located just above a deep and compacted deposit of angular limestone and chalk rubble (FIG. 13).



12. Feature 2, an extensive ash lens with a LPPNB chipping floor (G. Rollefson).



13. Trenches 2 and 4 above Yarmoukian / PPNC rubble deposits. (G. Rollefson).

Such deposits are characteristic of the PPNC and Yarmoukian periods elsewhere at 'Ayn Ghazāl, but reach their greatest abundance in this part of the site (FIG. 14; *cf.* Rollefson and Kafafi 1996: 15-17; Zielhofer *et al.* 2012). Samples of the floor material and rubble were collected for more detailed analysis. Trench 5 sampled Yarmoukian sediments above a *huwwar* plaster floor in the north-west part of the upper terrace (FIG. 2). Samples were also obtained from Yarmoukian floors in the south-west parts of the upper and middle terraces.

Finally, a red-painted MPPNB lime plaster floor in Square 3073 just outside the site fence along the Amman - Zarqa highway, with two depressions in it that suggested a possible double burial, was in a vulnerable location. One of the depressions was investigated, but no burial was found. Instead, the depression

appears to represent subfloor subsidence into an earlier stone-lined fire pit.

Concluding Remarks

These rescue excavations have revealed new information about the Neolithic village of 'Ayn Ghazāl. Perhaps the most surprising discovery is that settlement at the site was much more extensive during the PPNC and Yarmoukian periods than previously assumed (though still much smaller than 'Ayn Ghazāl during its period as a megasite). In view of the large gaps between residential buildings, population in both the PPNC and Yarmoukian periods was likely small compared to the population during the LPPNB. The architectural features of the PPNC house exposed in Section 3 show a clear transition in terms of complexity and size from the LPPNB to the PPNC, compared to several



14. Southern and eastern sections of the recent reservoir pit, showing dense ashy limestone and chalk rubble; depth of deposits is *ca* 2 m above basal clay (G. Rollefson).

centuries later as the PPNC slowly transitioned into the Yarmoukian period (cf. small dirt floored examples in Rollefson 1997: 294-296).

Another aspect of the new exposures is the industrial scale of rubble accumulation in western and northern parts of 'Ayn Ghazāl during both the PPNC and Yarmoukian periods. There is a clear association of burning with the deep and extensive rubble pits, though the reasons behind these features remain impenetrably obscure; one hopes that additional analysis on the collected samples will provide answers.

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