

# WADI AL-QAṬṬAR SALVAGE EXCAVATION 1989

by

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## Introduction

A salvage excavation was conducted by the excavations section of the Department of Antiquities between June 17th and July 12th, 1989, at a site on Wadi al-Qaṭṭar (Jordan 1:50,000 map reference: 3253 IV, K737, 3rd ed: BR 185 366; 3253 IV, Palestine Grid, 2nd ed, AMS: 2468 1488). The site lies approximately 5km to the northeast of Amman, at the edge of an area of numerous modern gravel and stone quarries. The threat to the site was reported by Mr Salem Da'jeh, a photographer at the Department, as part of the previously unrecorded site was being bulldozed by the landowner for the construction of stone-cutting installations. Preliminary inspection of the site showed that the archaeological remains are spread along the hill slope, going down to the road joining Saḥab and Marka next to the wadi, over an area of over 40 dunums (>10 hectares). Archaeological strata had been almost completely removed over the land owned by the people wishing to construct the stone-cutting installations, except for a small area in the northeast corner. The total land area is approximately 10 dunums, near the fork of the road joining Ṣalḥeit al-'Abed with the Saḥab-Marka road.

## THE EXCAVATION

The archaeological team, consisting of Mohammad Najjar, Khairieh 'Amr, Rula Qusos and Hanan Azar, chose three areas for excavation:

Area A: In the northeast corner of the bulldozed land.

Area B: In the centre of the bulldozed land.

Area C: Approximately 30m to the north and up slope of Area A, outside the

boundaries of the bulldozed land.

All excavation squares were laid out according to the cardinal points. Each square measured 5 x 5m with 1m balks at the north and east square lines.

The excavations revealed two phases of occupation at the site, both dated to the Chalcolithic period<sup>1</sup> (see Najjar and 'Amr 1989; 1992).

## Area A

### *Square A1*

This square was opened to include the bulldozer cut at the northern edge of the land boundary (which diverted around 30 degrees from the cardinal orientations). The cut showed some stones which were thought to be 'slightly disturbed' ancient walls as well as some pottery sherds and flints. The removal of the fresh bulldozer debris showed a somewhat ordered stone line. However, the removal of the top soil layer revealed another layer which sloped sharply to the east, going under these stones, the top of which was covered with dry grasses. It became obvious that these layers and ordered stones were the result of earlier bulldozer activity, cutting into the natural soil that showed in the cut just west of the square boundary. Due to the depth of the disturbance (over 120cm), the square was abandoned.

### *Square A2 (Fig. 1)*

This square was opened within the bulldozed area, in order to determine the depth of the remaining archaeological strata. It lies directly to the south of Sq. A1. Removal of the top bulldozer rubble revealed the same situation of earlier bulldozing found

1. We thank Drs Zeidan Kafafi and Gary Rollefson for their comments on the finds.

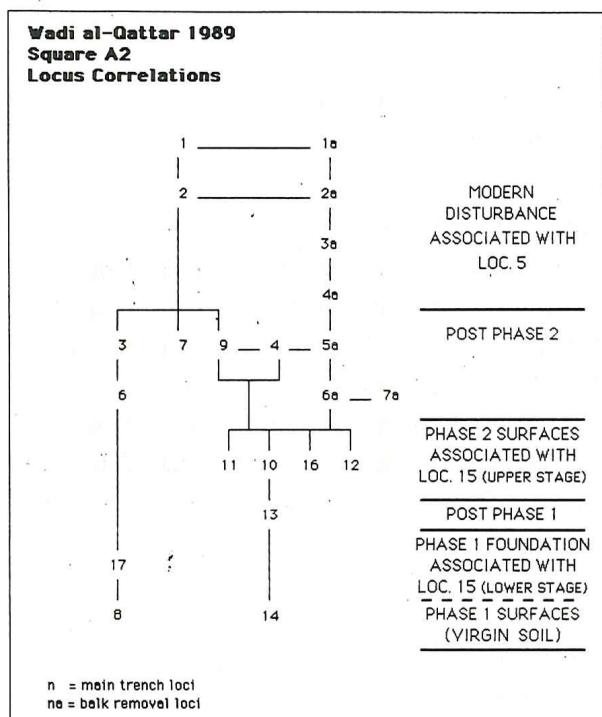


Fig. 1. Wadi al-Qattar. Square A2 locus correlations.

in Sq. A1, but much less deep. Removal of the earlier bulldozing phase revealed some stones that made up the north-south running wall Loc. 15, 4.1m in length, 40-70 cm in width with a maximum preserved height of 1m. The wall is of dry laid field stones. Small stones were used between the larger stones to provide support as well as to preserve a somewhat uniform height for each course (Pl. I, 1).

It seems that this wall was part of a large building set onto the natural soil, which sloped to the east. The natural soil was dug into at the western side for the construction of this building (the depth being around 30cm below the preserved surface after the bulldozer activity, the original depth may not have been much greater due to the sheer slope of the natural soil). Thus the lower part of the building was below the original surface. The lowest 'living surface' found east of the wall, where the original floor of the room is expected to be, was the cut into the natural soil, on which a stone mortar and pestle were found (Pl. I, 2). This wall and 'floor' constitute the first (earlier)

phase of settlement in the area, followed by the second phase when the building was reused by the addition of a flagstone pavement, the stones of which vary between 20-40cm in width and 6-12cm in depth (Pl. I, 1). Around 7.5m<sup>2</sup> of this were uncovered after the removal of the east balk.

## Area B

### Square B1

This square was opened in the centre of the bulldozed land to confirm that no archaeological remains were left there. After the clearance of the top bulldozer rubble, 35cm of clayey natural *terra rossa* were removed over the 4 x 4m area. The area was closed at that depth.

## Area C

### Square C1 (Fig. 2)

This area was chosen due to the presence of what seemed to be wall lines at the surface, in an area close to the bulldozed land originally thought to be undisturbed. However, clearance of the surface and the top strata which varied in depth from 35cm in the east to 50cm in the west, revealed that the surface was modern 'earlier phase' bulldozer rubble again, with the 'wall lines' being the product of skilled scraping operations.

Removal of the top disturbance revealed ancient walls (Pl. II, 1). Wall Loc. 5 in the southwestern sector of the square is of large field stones (25-75cm wide), similar in construction to wall Loc. 15 of Sq. A2. It runs roughly east-west for approximately 1m, being 30-40cm wide with a maximum preserved height of 40cm. Wall Loc. 5 forms a right angle with wall Loc. 6 to the south-east, which is built using large stones with more small stones fill than wall Loc. 5 and with mud as binding material. Wall Loc. 6 is almost 1m long from north to south with a maximum width of 87cm and preserved height of 18-30cm. Wall Loc. 14 to the north is in line with wall Loc. 6. It was



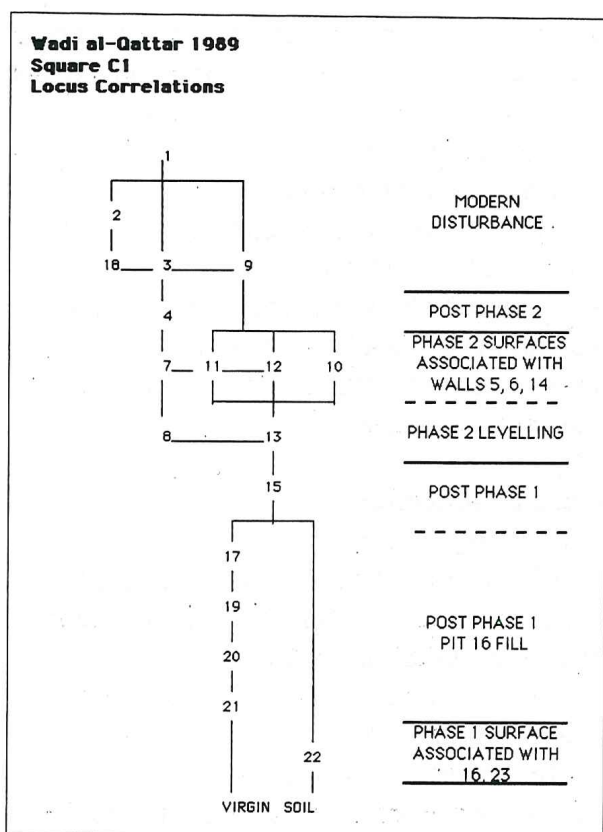


Fig. 2. Wadi al-Qattar. Square C1 locus correlations.

found very badly preserved with only one course of small stones and pebbles, and mud mortar to bind them. Stones found to the east may have been pushed off wall Loc. 14 by the weight of the bulldozer. Wall Loc. 14 was exposed at a length of 2.3m, maximum width of 50cm and preserved height of only 10cm. These walls (Loci 5, 6 and 14) are associated with plaster floor Loc. 12, of which only a small patch was preserved in the northwestern sector (where it dips due to the presence of pit Loc. 16 underneath; Figs. 2, 3). This floor seems to have been at least partially destroyed by the bulldozer activity, the associated surface, Loc. 11, is of compressed mud with plaster fragments. At around the same level is Loc. 10, a patch of soil. Loci 10 and 11 may have been created by the weight of the bulldozer. Associated surface Loc. 7 in the southern sector, between walls Loci 5 and 6, has been protected by the

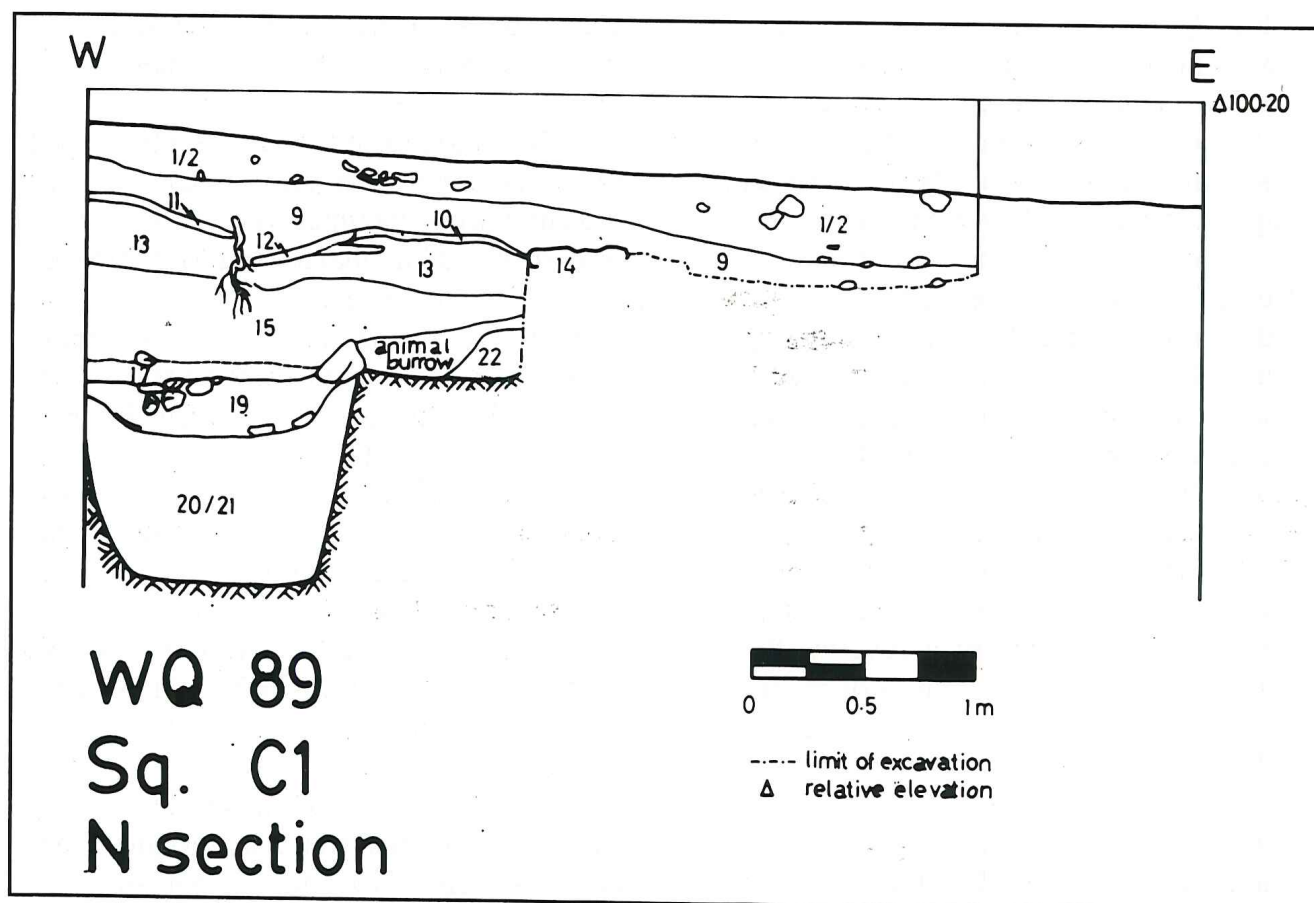


Fig. 3. Wadi al-Qattar. Square C1 north section.

overlying (partially) undisturbed Loc. 4. Walls Loci 5 and 6 are built over a cobble stone fill, Loc. 8 and cobble and soil fill Loc. 13, which may have been placed in order to level the ground surface. The walls Loci 5, 6 and 14 and the associated 'floors' Loci 12, 7, 10 and 11 and levelling fill Loci 8 and 13 form the upper, latest phase of occupation preserved in Area C.

Below the floors, excavation was restricted to the northwestern sector, bound by the north balk, wall Loc. 14, wall Loc. 5 and the western square line. There fill Loc. 15, of loose greyish brown silt, was encountered. Below Loc. 15 a pit outline was distinguished, the fill at the top of which was similar to Loc. 15 in matrix. The pit, Loc. 16, was only half exposed in the square, with the other half being in the north balk just inside the western square line. It is dug into the natural soil, the opening being around 125cm in diameter, narrowing down to around 80cm diameter at the bottom which is 95cm below the level of the natural soil. The fill of the pit (Loci 19-21; Fig. 3) was of fine ash, with pottery sherds and bone but almost no visible charred plant remains. All the fill was 100% screened through a 5mm mesh screen except for some unscreened soil samples that were collected for flotation. The pit Loc. 16 produced two as yet unidentified unfired clay objects (Pl. II, 2). Associated with pit Loc. 16 was thick (max. 20cm) compressed mud and pebble floor Loc. 22/23, together they comprise the first (earliest) occupation of Area C. Although floor Loc. 22 does partially overhang the opening of pit Loc. 16 over a small part next to the western square line, there is no evidence of it covering the pit. The stones and brick chunks of pit fill Loc. 19 do not seem to have belonged to floor Loc. 22/23.

#### THE POTTERY (S. Kerner)

The assemblage from the Wadi al-Qaṭṭar excavation is very homogeneous. Only very

few sherds are much later than Chalcolithic and they are from the disturbed context on top of Square A2 or from Square A1.

Around 910 pottery sherds were collected, which is a rather small number, but consistent with the results from other Chalcolithic sites in the area (the nearby site of Abu Sneshleh shows the same phenomenon). No complete vessels, or even profiles, were found, therefore the analysis of the forms must remain scanty.

#### Ware Description

##### *Red or Grey Wares*

All the following wares are similar and make up nearly two thirds of the whole material from Wadi al-Qaṭṭar.

*Red Common Ware* (3): a relatively coarse but dense ware with greyish red core and red exterior. The clay itself is relatively fine but the ware contains high amounts of temper. The temper consists of reused pottery (grog) and chalk, the size of the particles is between 0.3-3.0mm. The surface is wet smoothed and shows particles of the temper.

A Variation of the ware is white slipped (3a). The slip is thin and streaky. Signs of brushing are sometimes visible. This ware in both variations makes up nearly 50% of the whole assemblage.

*Red Coarse Ware* (1): the next common ware is a coarser version of the first ware. It is generally pale red to soft brownish red. The temper consists of grog and chalk, the chalk material can be very small but also come up to 2.0mm, the grog is usually between 1.0-4.0mm. The clay structure is coarse grained. The pieces are generally thicker than the finer *Red Common Ware*. They are between 1.00-2.00cm thick. This ware makes up about 8% of the whole material.

*Thin Red Ware* (13): this ware is very similar to the first ware. It is orange red, has white and dark mineral temper from very small to nearly 1.0mm size. It is wet



finished but with larger temper particles coming through. The ware is thoroughly coloured red and thinner than the other red wares. It is between 0.4-0.7cm thick.

*Reddish Buff Coarse Ware* (4): this ware is another version of the above described wares. It is buff to weak red with changing colours in the core. It is generally very dense but the clay is not well levigated. The temper is less than in the other coarse ware (1), but has roughly the same size. This ware is about 4% of the assemblage.

*Grey-Red Ware* (7): this ware is very dense and very hard. It has a dark grey core and is bright red on the exterior. Colour changes are very sharp. The temper consists of a whitish mineral material, probably gravel. The size of the temper is less than 0.5mm. The exterior is wet smoothed and brushing marks are visible.

Other *Red Wares* are less frequent and include shell tempered sherds (8), grey pottery with brownish slip (10), soft reddish ware (11) and very light grey ware with black mineral temper (14).

### *Buff Wares*

The *Buff Wares* are much less frequent than the *Red Wares*. They make up to 10% of the whole assemblage. The *Buff Wares* include two generally different versions: one category with gravel temper and some straw, which can be fine (5, 15, 17) and coarse (2, 6) depending on the amount and size of temper and the other category with shell temper (9, 12), which is denser and harder. They are generally coarse with temper up to 1.0mm size, only ware 6 has larger temper particles, which also amounts up to 40% of the actual sherd size material. They are all wet smoothed, only ware 9 seems to have a better finish on the exterior, which has a very even appearance.

There is one sherd of painted buff ware, which comes from the lowest level in C1.

There are no significant differences between Squares A2 and C1 (the disturbed Square A1 produced too little material to reveal anything substantial). Both squares contain in general all described wares apart from wares with only two or three sherds, which show up in either square.<sup>2</sup> The only interesting differences are the large amounts of ware 3/3a in C1 (59%) compared to the much lower percentage in A2 (32%), and the high amount of ware 2 (13%) in A2, which only comes from one locus.

### **Form Description**

*Bowls*: most bowls in A2 have rather straight walls<sup>3</sup> and diameters either above 20cm (Fig. 4:1, 2, 7, 9), or around 10cm (Fig. 4:10, 11), while the bowls in C1 are generally more curved and under 25cm in diameter (Fig. 5:4, 10). Shallow bowls with diameters between 18 and 25cm are more common in C1 (Fig. 4:12; Fig. 5:2, 5, 6). In A2 one nicely rounded small, hemispherical bowl was found (Fig. 4:6). One small bowl has a rolled rim and comes from the uppermost level of C1 (Fig. 5:1). It is most probably much later in date and was slipped.

*Hole-Mouth Jars*: in C1, hole-mouth jars vary in size (between 8 and 27cm diameter) and shape. The larger ones come from the lower levels, but because of the limited range of the assemblage this may not be significant (Fig. 5:3, 8, 11-13). In A2, only one small hole-mouth jar was found (Fig. 4:3).

*Jars*: In A2 are two jars with wide necks and slightly everted rims (Fig. 4:4, 5).

*Bases*: the bases have diameters from 6 to 18cm and are all flat with one exception. The connection between base and wall has

2. Ware 16 shows up only in A2, while wares 17-20 are restricted to C1.

3. Some of the sherds are so short that it is difficult

to define the stance, which might in some cases be more similar to a hole-mouth jar.

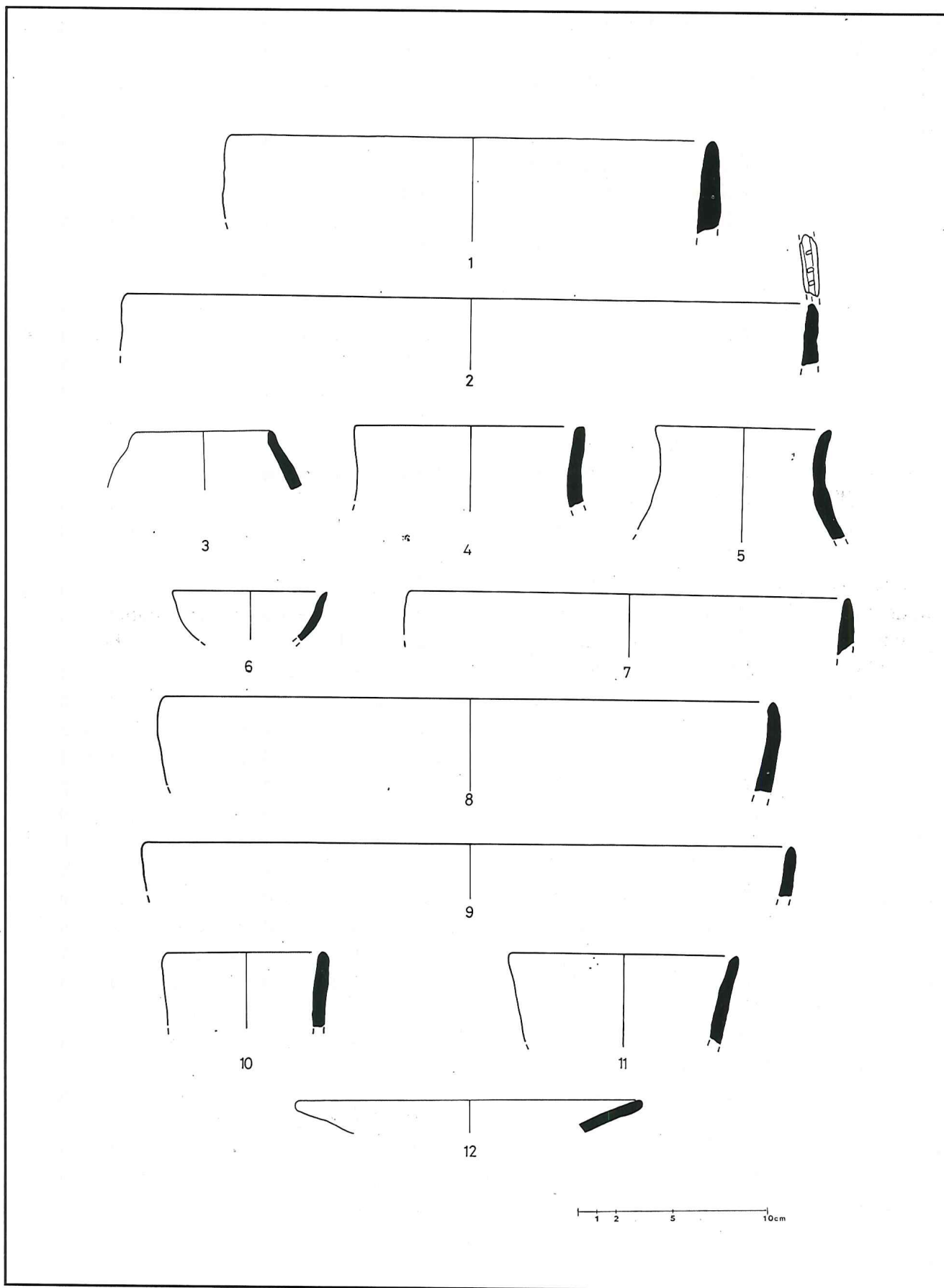


Fig. 4. Pottery from Square A2.



Fig. 4. Pottery from Square A2:

1. A2.1.2.1, diameter 25cm, straight bowl, Red Shell Ware (8).
2. A2.3.4.1, diameter 36cm, straight bowl, Red Common Ware (3).
3. A2.7.11.1, diameter 7cm, hole-mouth jar, Red Common Ware (3).
4. A2.7.10.2, diameter 10cm, jar, Buff Shell Ware (12).
5. A2.7.10.3, diameter 9cm, jar, Buff Shell Ware (9).
6. A2.7.26.1, diameter 8cm, small curved bowl.
7. A2.6.8.1, diameter 23cm, straight bowl, Grey-Red Ware (7).
8. A2.6.6.1, diameter 32cm, straight bowl, Red Coarse Ware (4).
9. A2.7.11.2, diameter 34cm, straight bowl, Red Common Ware (3).
10. A2.13.24.3, diameter 8cm, small straight bowl, Grey Ware (10).
11. A2.13.24.1, diameter 12cm, small straight bowl, Red Common Ware (3).
12. A2.13.24.5, diameter 18cm, shallow bowl, Grey-Red Ware (7).

Fig. 5. Pottery from Square C1:

1. C1.1.1.1, diameter 13cm, small bowl, rolled rim, traces of red slip, later ware.
2. C1.20.16.7, diameter 25cm, shallow bowl, Red Common Ware (3).
3. C1.4.4.1, diameter 9cm, hole-mouth jar, Red Common Ware (3).
4. C1.19.15.2, diameter 24cm, curved bowl, Red Common Ware (3).
5. C1.20.16.5, diameter 19cm, shallow bowl, Thin Red Ware (13).
6. C1.20.16.6, diameter 20cm, Red Common Ware (3).
7. C1.15.12.2, diameter 10cm, hole-mouth jar, Coarse Buff Ware (6)(?).
8. C1.8.6.1, diameter 9cm, hole-mouth jar, Fine Buff Ware (15).
9. C1.19.15.1, diameter 11cm, straight bowl, Buff Shell Ware (12).
10. C1.20.16.4, diameter 13cm, curved bowl, Red Common Ware (3/3a).
11. C1.15.12.1, diameter 27cm, hole-mouth jar, Buff Shell Ware (9).
12. C1.20.16.8, diameter 21cm, hole-mouth jar, Red Common Ware (3).
13. C1.22.18.1, diameter 22cm, hole-mouth jar, Red Common Ware (3).

all variations between an even curve and an angular bend. One rounded base was found in Loc. 13 of A2.

*Handles:* all handles with one exception are loop handles with round or triangular section. The only exception is a horizontal pierced handle, which also seems painted (from the latest undisturbed phase in C2).

## Conclusion

The overwhelming majority of pottery in Late Chalcolithic levels in the Jordan Valley sites, such as Pella (McNicol *et al.* 1992), Abu Hamid (Dollfus *et al.* 1986) and Tuleilat al-Ghassul (Hennessy 1969) is made up of buff wares, which come in the typical forms of V-shaped bowls, hole-mouth jars, pedestaled bowls and jars with thumb impressions at the shoulders. The so-

called typical Ghassulian forms (cornets and churns) are from the latest phases at Tuleilat al-Ghassul and appear mainly in levels A-D there. None of the typical Late Chalcolithic or Ghassulian forms were found in the assemblage of Wadi al-Qaṭṭar, although ware 3/3a is a well known Ghassulian ware. Also the different decoration methods used on Late Chalcolithic pottery (painting and impressing) appear rarely on the Wadi al-Qaṭṭar material.

Therefore, the assemblage from Wadi al-Qaṭṭar cannot be dated to the very end of the Late Chalcolithic period as for example the material from Pella XIV. The material from Wadi al-Qaṭṭar has —considering the forms— more similarity with the earlier levels at Tuleilat al-Ghassul (E-I).<sup>4</sup> That seems to be typical for the highland cul-

4. While the whole Ghassul material still awaits final publication, the later material has found more attention than the material from the lower levels, which in general is not well known.

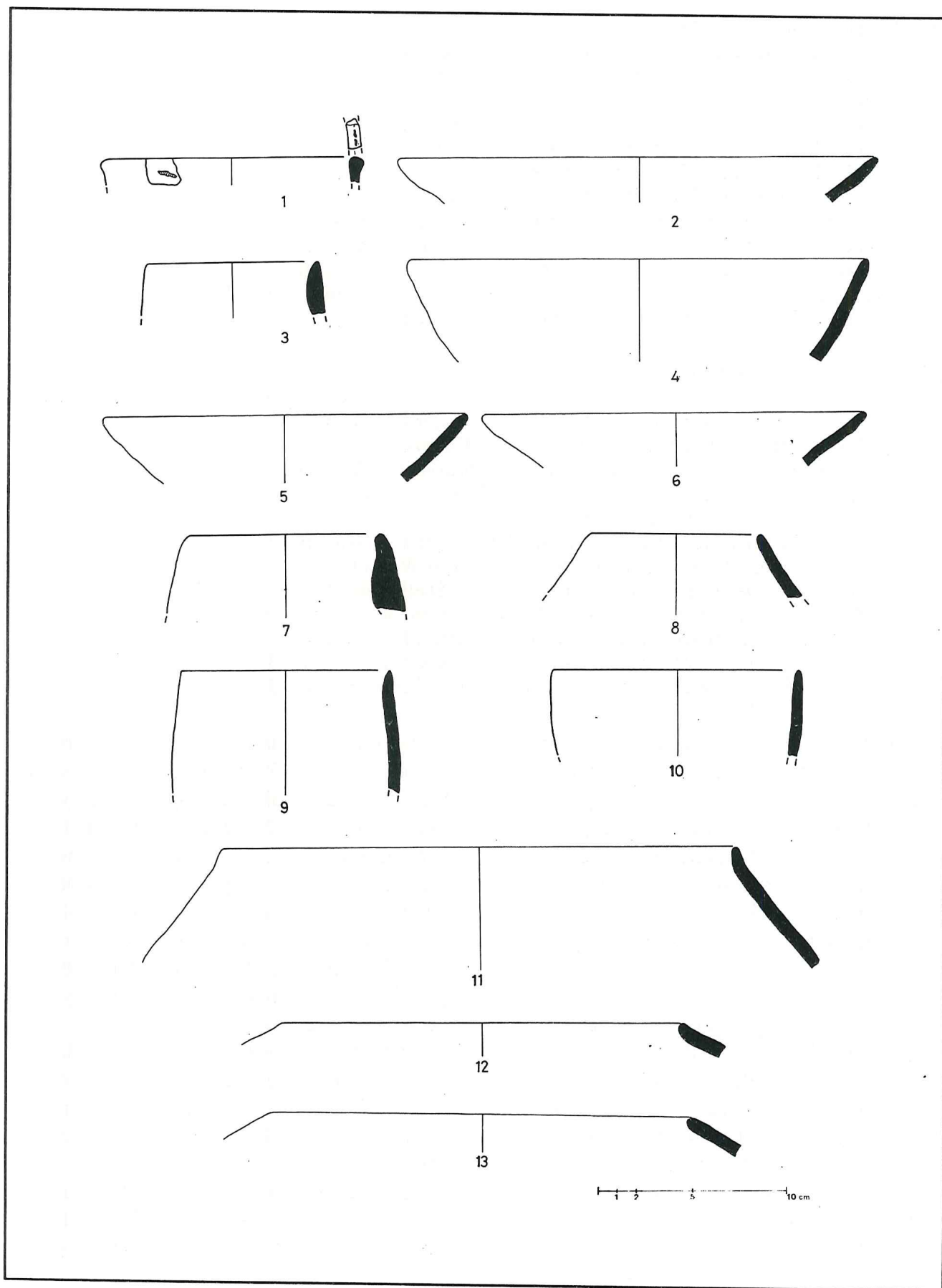


Fig. 5. Pottery from Square C1.



tures, which is shown by material from Sahab, Abu Snesh and Wadi al-Qattar. The important and yet unanswered question is: do highland cultures depict a different variation of Late Chalcolithic culture (a local modification) or do they represent a considerable difference in time? The comparison between the larger assemblages from areas outside the Jordan Valley might generate a more precise picture of that period.

#### THE ANIMAL BONES (K. Rielly)

This report deals with the bones recovered from Squares A2 and C1 only. The deposits excavated from the other two squares (A1 and B1) were either heavily disturbed or non-existent. A total number of 268 bone fragments were recovered from the undisturbed loci of Squares A2 and C1, the majority from Square C1 (229, i.e. 88.9% of the total)—see Table 1. Bone fragments were recovered by hand (trowel and hand pick) with the exception of those from Pit Locus C1.16, where the entire pit contents were dry sieved and around a third wet sieved.

The majority of the bone fragments are in a fairly good condition and fragmenta-

tion is moderate (approximately 50% of the sheep/goat long bone fragments are > 25% of the whole bone in size) though the degree of fresh breakage is high. A number of burnt bones were found in the assemblage, almost exclusively from Pit Locus C1.16 deposits (i.e. 30 burnt bones from the latter deposits out of a total number of 34).

The predominant species throughout the site assemblage are sheep and goat (see Table 1). It is often impossible to distinguish sheep from goat bones, thus these two species are grouped together and designated sheep/goat. However a few bones of both sheep and goat were identified in each phase. As well as sheep/goat, a few cattle and pig bones were also found. The relative proportion of cattle bones is also reflected in the unidentifiable portion of the assemblage (consisting of vertebrae, ribs, indeterminate long bone and other fragments) where no 'large' (i.e. from a cattle sized skeleton) bone fragments were recovered.

The largest sample of bone was recovered from the sieved deposits of Pit Locus C1.16, including a reasonable sheep/goat assemblage. This is compared and then amalgamated with the other post Phase 1 locus in C1 (Locus 15), to show the skeletal

Table 1: Species representation (total fragment count).

Square-Phase	SPECIES			
	Sheep/Goat	Cattle	Pig	Unidentified
A2-post Phase 1	1			2
A2-post Phase 2	11	5	2	9
C1-Phase 1	4			1
C1-post Phase 1*	55	2	3	113
(Pit C1.16 fill)	(39)	(2)		(93)
C1-Phase 2	18		1	33
C1-post Phase 2	2			6
<b>Total</b>	<b>91</b>	<b>7</b>	<b>6</b>	<b>164</b>

\* Total fragments including Pit C1.16 fill.

**Table 2:** Sheep/Goat skeletal part representation (total fragment count) in post Phase 1 Square C1.

	Loci 17, 19, 20, 21 (Pit Locus 16 fill)	Locus 15	Total
Skull	1		1
Jaw	2	6	8
Scapula	2	1	3
Humerus	4		4
Radius		2*	2
Ulna	2		2
Pelvis		2	2
Femur	2		2
Tibia	2	1	3
Tarsals	2		2
Metacarpus	2	1	3
Metatarsus	4	2	6
Metapodial	1		1
Phalanges	10		10
Loose teeth	5	1	6

\* Including one radius/ulna fragment.

**Table 3:** Sheep/goat mandible fragments.

MANDIBLE					
<u>Square</u>	<u>Phase</u>	<u>1st molar</u>	<u>2nd molar</u>	<u>3rd molar</u>	<u>Approx. age</u>
C1	Post Phase 1	g	e	1/2	18-24 mo.
C1	Post Phase 1	m	g	g	> 2 yrs
C1	Phase 2 levelling	m	h	g	> 2 yrs

(Wear states after Grant 1975, tooth eruption ages after Silver 1969).

part representation for sheep/goat in this phase (Table 2). Phalanges were absent from Locus C1.15, while they are well represented in Pit Locus C1.16, no doubt as a consequence of sieving. The majority of skeletal parts are represented (including vertebrae and ribs—not shown in Table 2) in the post Phase 1 deposits indicating that,

during this phase, Area C1 was used as a general dumping area and perhaps shows that the animals these bones represent were slaughtered and butchered in the immediate vicinity of this site. A similar conclusion could be drawn for the other phases, due to a mixture of skeletal parts being found, but the small sample size precludes any definite



**Table 4:** Size of sheep/goat, cattle and pig.

<u>Square-Phase</u>	<u>Species</u>	<u>Skeletal part</u>	<u>Measurements*</u>						
			<u>GLP</u>	<u>LG</u>	<u>BG</u>	<u>SLC</u>			
C1-post Phase 1	Sheep	Scapula	31.2	23.8	19.6	18.4			
			<u>Bp</u>	<u>Dp</u>	<u>SD</u>	<u>Bd</u>	<u>Dd</u>	<u>BT(Hdm)</u>	<u>GL</u>
C1-Phase 1	Sheep	Humerus				31.7		30.3(19.4)	
C1-post Phase 1	Goat	Radius/Ulna	29.2		16.2				127.0(rad)
			(DPA 22.3)						
C1-post Phase 1	Sheep/Goat	Tibia				26.8	21.8		
C1-post Phase 1	Goat	Tibia				24.3	18.6		
C1-Phase 2	Sheep	Calcaneus	(GB 20.3)						
									54.4
C1-post Phase 1	Sheep/Goat	Metacarpus	22.8	15.7	14.4				
C1-Phase 2	Sheep/Goat	Metacarpus	23.3	16.5					
C1-post Phase 1	Sheep	Metatarsus				22.3	12.6		
C1-post Phase 1	Sheep/Goat	Metatarsus	19.0	19.3					
C1-post Phase 1	Sheep/Goat	Metatarsus	20.3	20.4					
A2-post Phase 2	Cattle	Humerus						(43.0)	
C1-post Phase 1	Pig	Ulna	(BPC 19.3)						
C1-post Phase 1	Pig	Tibia				25.8	22.8		
C1-post Phase 1	Pig	Metatarsus IV	14.3						

\* All measurements after v. d. Driesch (1976) and in millimetres.

statement. No comment can be made on the method(s) of butchery employed, as no cut marks were discovered on the sheep/goat bones from Pit C1.16 or indeed on any bone fragment throughout the assemblage. The aging data from Pit C1.16, even including the rest of the post Phase 1 deposits, are very small. However the general trend is for the survival of animals beyond 1½ - 2½ years of age (epiphysis fusion information after Silver 1969), with one animal less than 1 year old (unfused distal humerus) and one older than 3 - 3½ years old (fused proximal ulna). A similar mix can be seen throughout the site bone assemblage. Very few jaw fragments were discovered, as shown in Table 3.

The cattle bones most likely represent mature animals, as the long bone fragments with an epiphyseal ending are fused and the two teeth (both from C1 post Phase 1) are well worn (including a lower third molar with wear state 'k', after Grant 1975)—indicating a minimum age of approximately 3½ to 4 years (i.e. the late fusing group age shown in Silver 1969). While the pig bones represent individuals greater than 2 years of age (epiphysis fusion data after Silver 1969), apart from one animal less than one year old represented by an unfused scapula.

A few measurements could be taken—see Table 4. From this table it can be seen that the pig bones are most likely from domestic rather than wild animals.

Any conclusions must take the small sample size into consideration. Yet from this assemblage it is apparent that sheep/goat were the major contributors to the meat diet of the settlement, with cattle and then pig in descending order of importance. The advanced age of the cattle may show that these animals played another role in the site economy apart from meat production, possibly being used for carrying or pulling (e.g. ploughing).

#### THE BOTANICAL REMAINS (D.W. McCreery)

The areas excavated proved very poor in charred plant remains. The only loci with charred material were the fill loci 19, 20 and 21 of pit C1.16, approximately a third of which were collected for flotation.

The floted samples were small and contained little ash or charcoal, but did yield a few carbonised seeds.

The samples yielded a total of: 3 grains of wild barley, 1 grain of domesticated barley (probably two row barley), 7 fig pips and one *Chenopodium cf. murale* seed.

It seems reasonable to assume that both fig and two row barley were components of the Chalcolithic agricultural system of Wadi al-Qaṭṭar, whereas the wild barley and *Chenopodium* seeds are representatives of the natural flora of the region. It also seems likely that the pit was not used to store agricultural produce and that the carbonised species represented in the samples coincidentally ended up in the pit.

#### GENERAL REMARKS

1. Due to the nature of salvage work, the team had to restrict the excavation to the immediately threatened section of the site. Further up the slope, *definite in situ* wall lines are abundant, with clear plans of large multi room buildings, some with straight walls meeting at right angles and others with semi circular walls. There are also relatively heavy concentrations of

flints and pottery in the vicinity. Near the highest point of the site, there is a cave which had been cleared by treasure hunters. The exact function of the cave cannot be determined due to its complete clearance. However, human bones were found in the resultant dump surrounding the cave. Surface collections from the site were predominantly similar to the excavated material, with few Byzantine sherds, two white stone tesserae and one green glazed sherd. It is highly recommended that the better preserved sections of the site be investigated before further damage is done.

2. The results of a limited preliminary survey of the area indicate that the excavated site is part of a chain of archaeological sites on both sides of Wadi al-Qaṭṭar. Pottery sherds, flints and wall lines of buildings similar in plan and construction to those at the better preserved sector of the excavated site were noted at these other sites, thus pointing to a similar date of occupation.

3. The topography, water resources and flint and stone tools found at the sites in the area strongly support the existence of agricultural activity during the period of occupation of the sites. Other (trade?) activity may have also contributed to the positions, as the old road between Amman and Saḥab goes along Wadi al-Qaṭṭar.

4. Preliminary analysis of the pottery from the excavated site shows a homogeneous assemblage, indicating that the two main phases of occupation were not separated by a long time span. Dr Khaled Abu Ghanimeh of the Institute of Archaeology and Anthropology at Yarmouk University will study the flint tools and debitage.

5. A systematic survey of the area was later done during April 1990, in conjunction with the excavation of Abu Sneisleh on Wadi al-Qaṭṭar by the German Protestant Institute for Archaeology of the Holy Land (Lehmann *et al.* 1991: 59). Part of the east-



ern side of the wadi was included in a survey of the Saḥab area to be published by the Institute of Archaeology and Anthropology of Yarmouk University. Much of the area, however, including the excavated site, lies in a 'gap' between that survey and the Archaeological Survey of Greater Amman (1988) conducted by the Department of Antiquities in cooperation with the CRM project (Abu Dayyah *et al.* 1991).

6. It seems vital that other archaeological excavation be carried out in the area in order that the nature of the archaeological sites there may be clarified. These sites may be small agricultural settlements of the Chalcolithic which were established after the abandonment of 'Ain Ghazal in the Late Neolithic. Up to date, very little is known of the Chalcolithic 'history' of the east Jordanian plateau.

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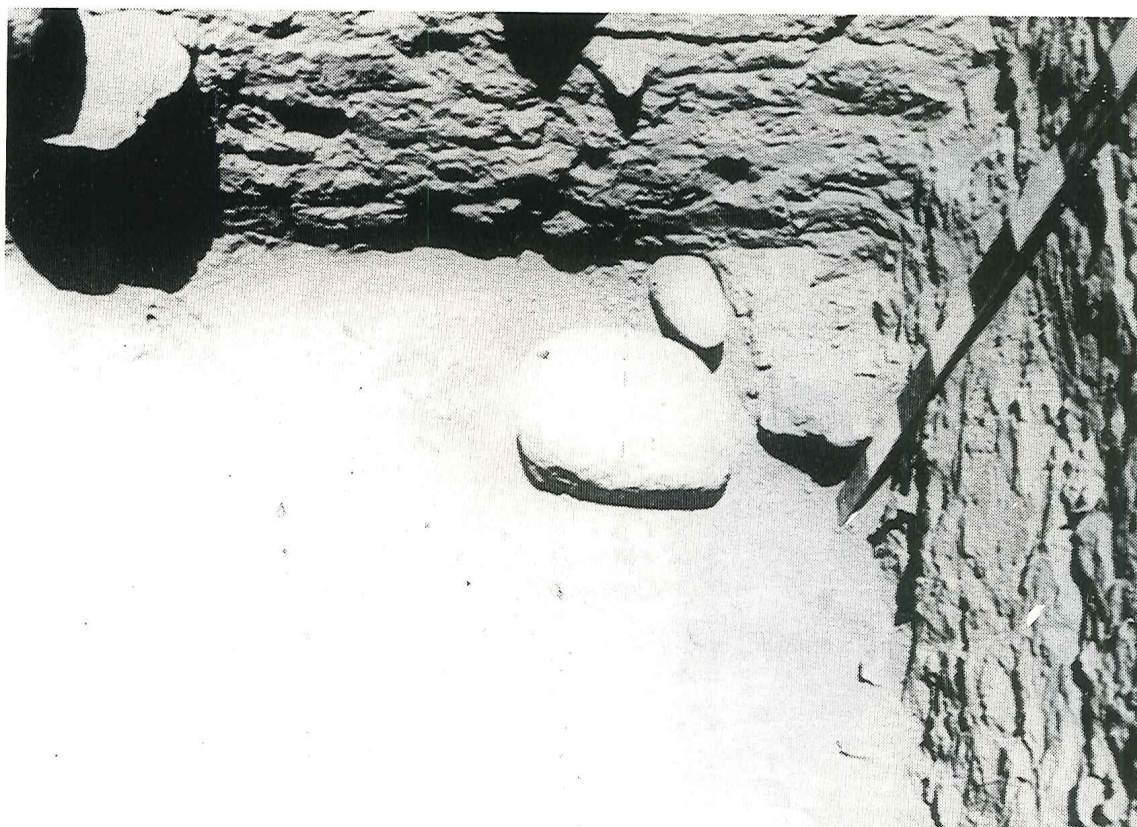
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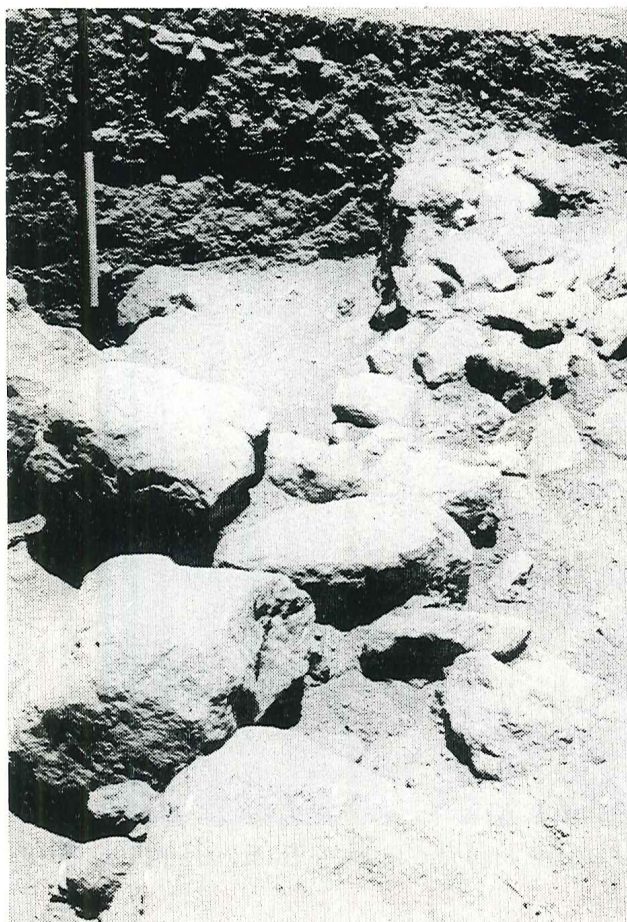


1. Square A2, Wall 15 with the Phase 2 stone pavement (to the left) and Phase 1 floor partially exposed (to the right). View to the east.

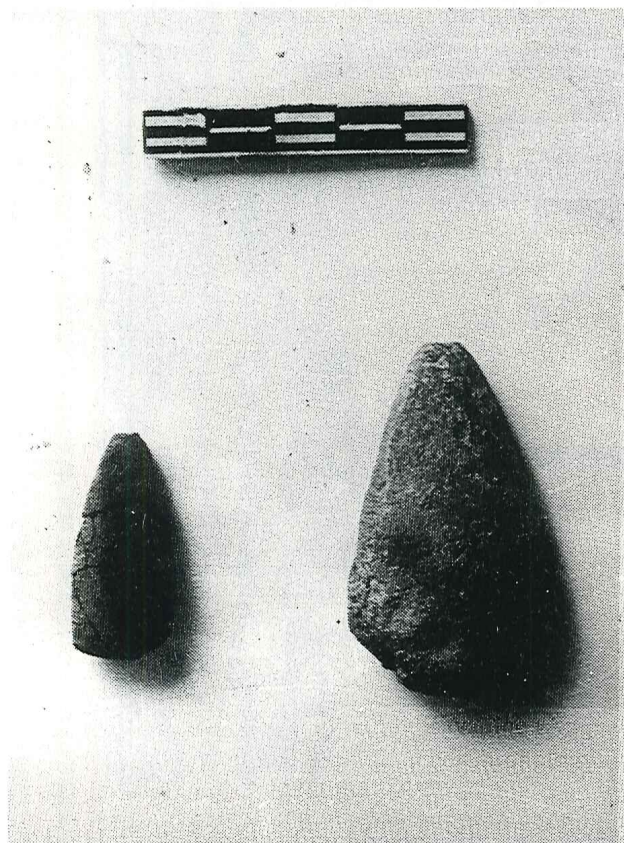


2. Square A2, stone mortar (upside down) and pestle *in situ* on the Phase 1 floor.





1. Square C1, Phase 2 construction. View to the north.



2. Square C1, unfired clay objects.