

Sheikh Diab 2: An Early Bronze Age I Hamlet in the Jordan Valley

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ABSTRACT

An excavation at Sheikh Diab 2 in the lower Jordan Valley exposed an Early Bronze Age IB (henceforth EB IB) site. The site was discovered in 2000 by the Manasseh Hill Country Survey, and excavations directed by the author took place in 2007-2008. This well-preserved hamlet includes up to 12 elliptical residential courtyard houses, separated by alleys, spread densely across a spur next to the Wadi Fazaal. The population would have been about 100, involved in growing grain and raising animals. The site appears to have been abandoned during the later phases of EB IB. The research at the site sheds new light on the rural lifestyle and economy in the Jordan Valley in EB I.

INTRODUCTION

During February, March and September 2007 and April 2008 excavations were conducted at the site of Sheikh Diab 2¹ (Israel grid ref. 1904/1616), located in the Jordan Valley, on a spur

1 The excavation was directed by Shay Bar, with assistance from Adam Zertal (scientific guidance), Yehudit Dekel and Hagar Ben-Bassat (drafting), Ziv Leiba, Hagar Ben-Bassat, Barak Verker and Eyal Dan (area supervision), Ophir Dror-Katz and Ella Yalon (administration), Yonatan Liberzon

along the edge of Wadi Fazael, about 20 km north of Jericho (Fig. 1) and 1 km west of the settlement of Fazael.

The site was discovered in 2000, within the framework of the Manasseh Hill Country Survey, and has not yet been published. The site's name derives from the nearby Tell es-Sheikh Diab.

This report presents the results of the excavation, and analyses the main archaeological finds, putting them into the broader geographical and cultural framework of the period.

The ancient remains cover a presumed area of 1.5 hectares. The buildings are spread across the middle of the site and on the slopes of a steep sloping spur (see Section A-A' below), formed of chalky limestone belonging to the Mount Scopus group, and desert travertine soil. The hilltop at trig point E.P. -86 overlooks the site from the southwest, as does the top of the spur on which the site is located (Fig. 2). The perennial Wadi Fazael flows by the northern slope of the site, and Fazael Springs are located about 2 km to the west. A large area on both sides of the wadi channel east of the site is flat, which allows agriculture and grazing.

The site includes a large number of building remains, walls and courtyards scattered across the slopes, and covered with alluvium. The eastern part of the site has been damaged by construction activity.

Sites attributed to EB I are common in the lower Jordan Valley and include Jericho, 20 km to the south of the site (*e.g.*, Kenyon and Holland 1982), Tell Um Hammad, 15 km to the north-east (Helms *et al.* 1992), Tell el-Far'ah North, 25 km to the north (*e.g.*, de Vaux 1949), and more than 50 newly discovered unexcavated sites (Bar 2008).

During the two excavation seasons it was decided to open four different areas (F, G, H, I; Fig. 3):

Area F, in the upper (western) part of the site, where the remains of a building are located on the surface level.

Area G, the main area of excavations, in a region where the slope of the spur diminishes and the remains of many walls are visible.

Area H, building remains located in the northeastern part of the site.

Area I, remains of other residential complexes situated west and northwest of Area G.

(surveying), Haim Winter (flint tools), Guy Bar Oz and Noa Raban-Gerstel (fauna), Dror Ben-Yosef (ground stone tools), Sapir Haad and Inbal Bar (plans, sections and illustration of artifacts), Michael Eisenberg and the Zinman Institute of Archaeology (scientific and logistic support), the Manasseh Hill Country Survey (scientific and logistic support), the Kinneret College on the Sea of Galilee, and the Jordan Valley Regional Council (volunteers and logistical support).

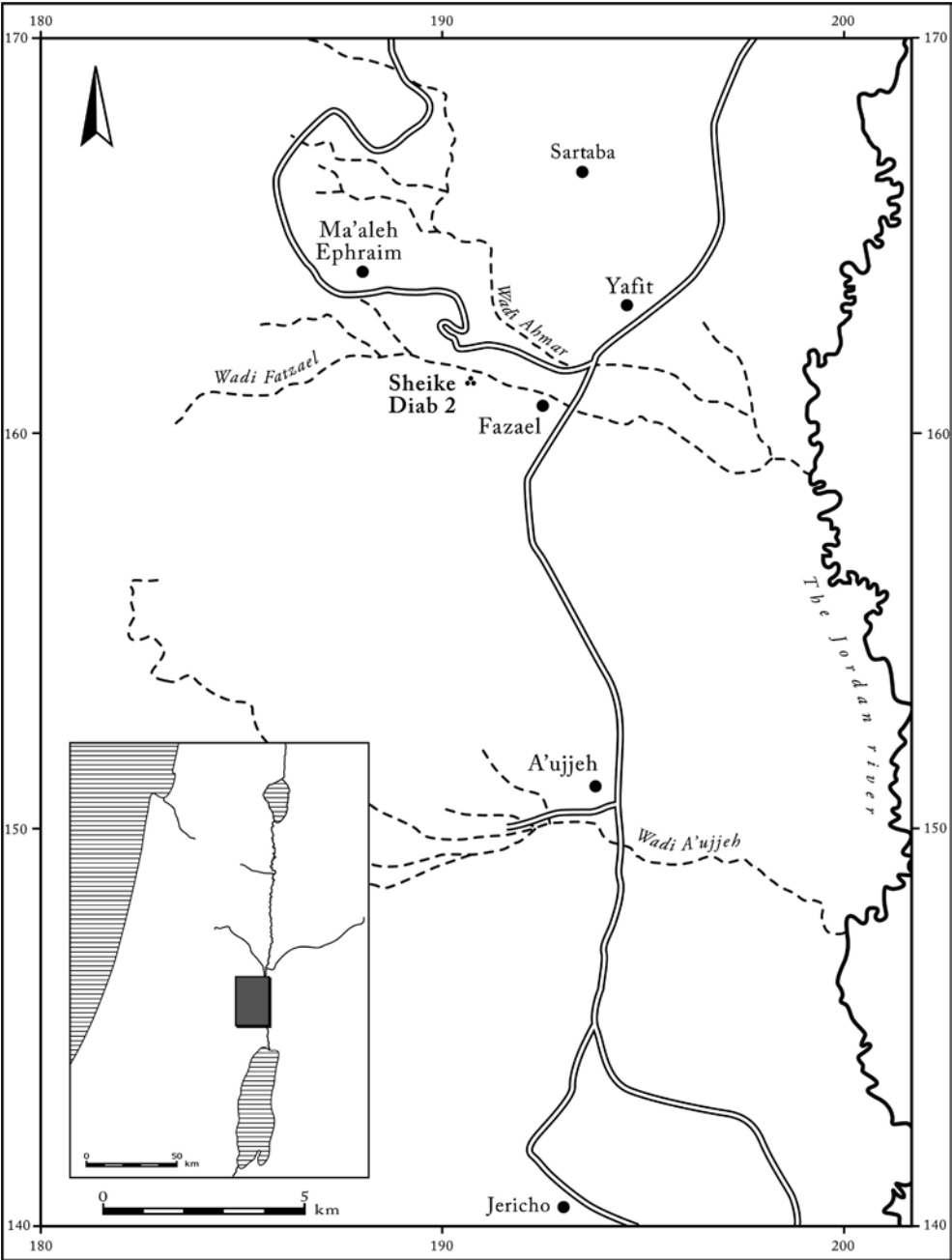


Fig. 1: General location



Fig. 2: Photograph of the site looking southeast. Note the gradient of the slope, the topographical difference, and the locations of the different excavation areas

EXCAVATION METHODOLOGY

The site was divided into a grid network of 5X5 quadrants (Fig. 4). Excavations were carried out using a standard balk/debris method with standard hand tools. All pottery, flint, bone, stone and other objects were collected, washed and registered, and a subset was stored for further study in the University of Haifa archives. Finds not chosen for additional study² were discarded in a designated burial spot on-site. Loci and walls were registered in a consecutive running sequence for each area separately.³ Surface and topsoil loci were not sieved; 5 mm mesh sieving took place only in loci exhibiting clear stratigraphic context, where 10% of the excavated debris (by volume) was dry sieved and 2.5% was wet sieved.

² These were mainly body sherds and finds that originate from poor contexts.

³ Loci list and additional data are found in Bar 2008, 463-465.

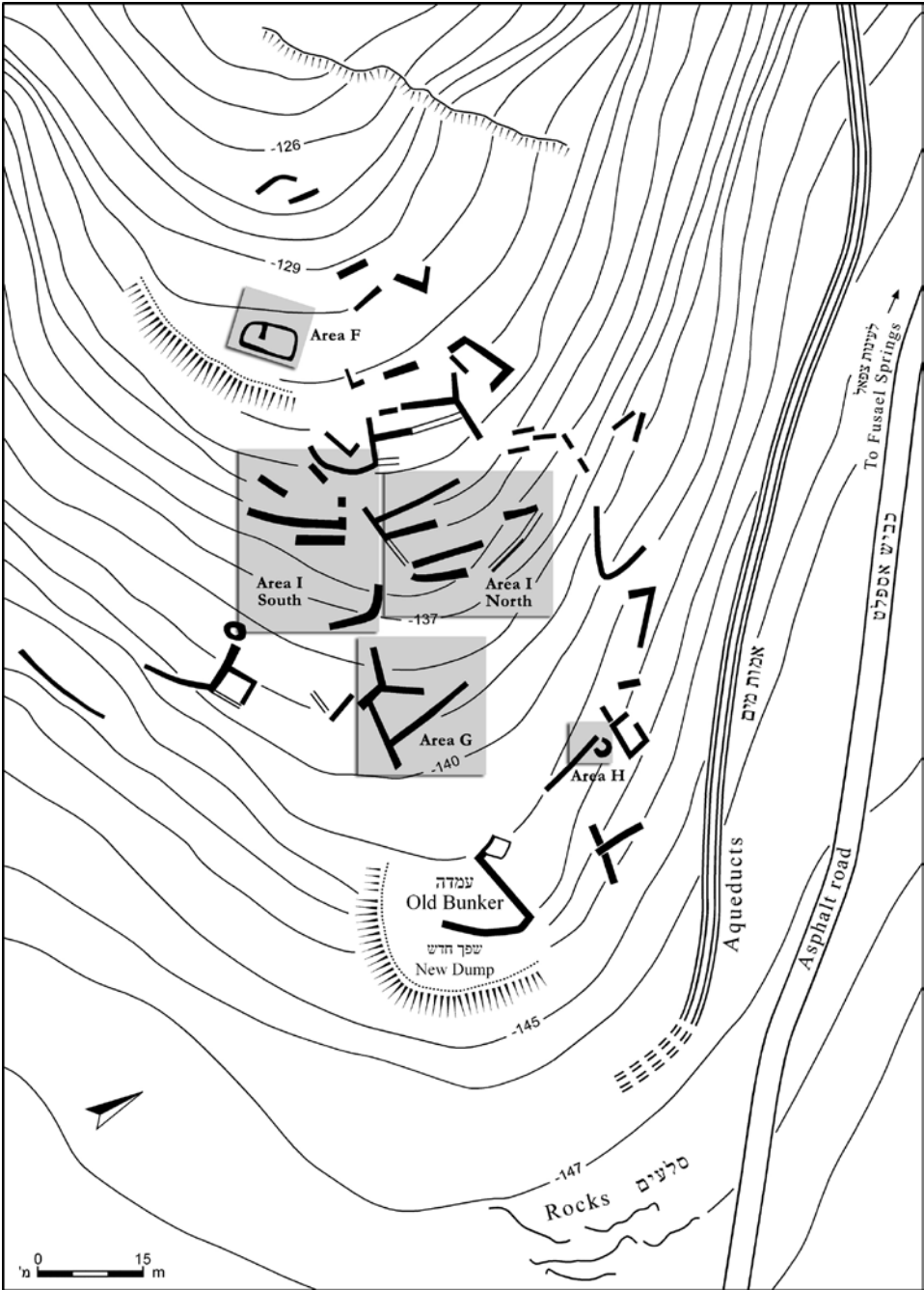


Fig. 3: Survey plan of the site, overlaid with a schematic of the excavation areas (based on the Manasseh Hill Country Survey unpublished map)

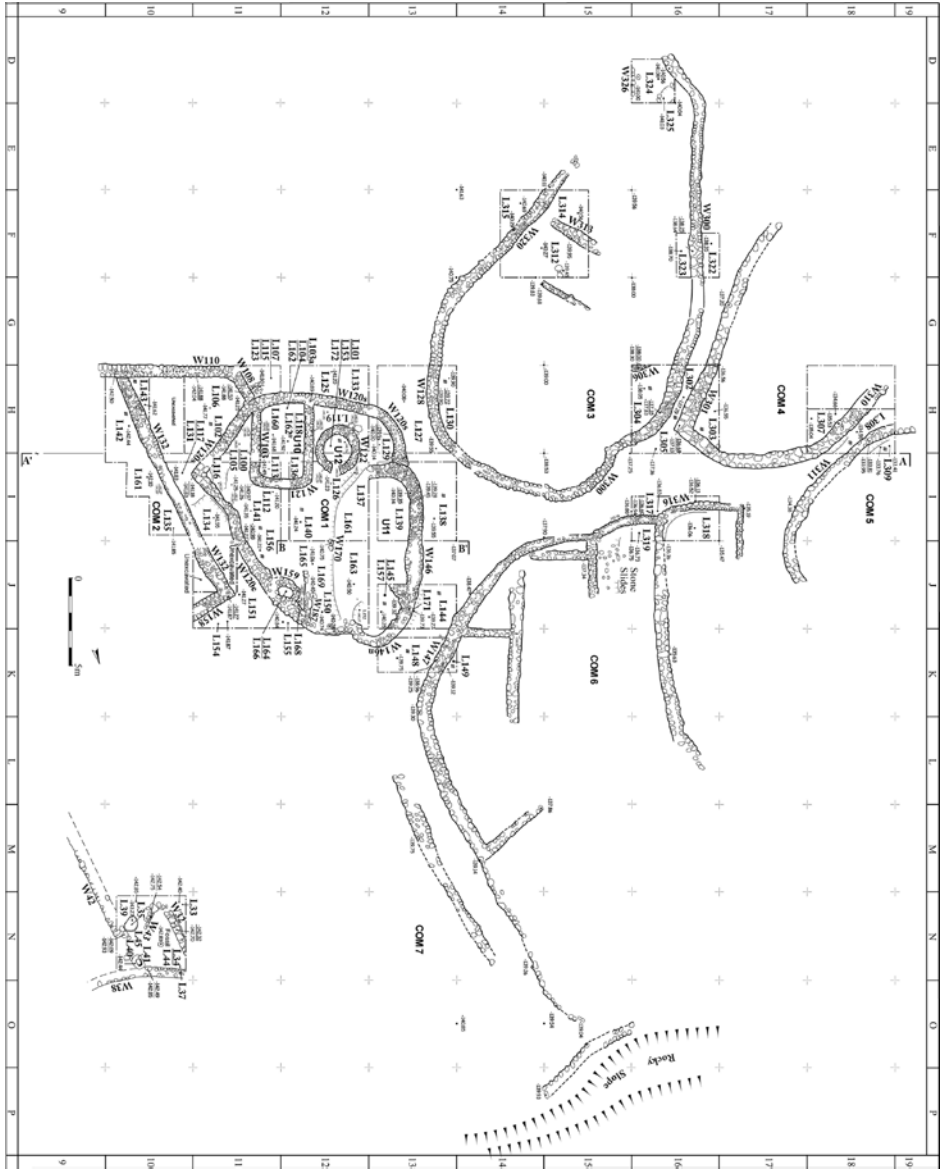


Fig. 4: Plan of the excavation areas and the secondary units in the center of the site (Areas G, H, I)

STRATIGRAPHY AND ARCHITECTURE

So far about 425 m² have been excavated in the four areas of the site. The entire middle of the site was also cleared of sundry stone collapses (in the area shown in Fig. 4) in order to sketch the walls visible on the surface. The tops of the walls were cleaned so that they could be drawn, and in order to better understand their outline.

The site was settled during the first part of the EB IB. Even so, other architectural phases were identified within this period:

1. In Area G (Complex 1) it seems that an elliptical, sausage-shaped structure (more characteristic of the EB IA in the north of the country (Braun 1997)) predated the construction of the residential complex that dates to the EB IB.
2. In Area I layers of fill were found below the first course of the interior walls inside Complex 3.
3. In several other places, particularly in Area G, it seems that there were additions and changes that belonged to the last habitation phase of the site.

It is important to note that all indicative finds within these architectural phases were dated to within the span of the EB I, and no *in situ* material predating the onset of the EB IB period was found.

Area G

In the main excavation area at the site (Plan in Fig. 6, Sections in Figs. 5 and 7) 250 m² were excavated. The area is located in the center of the site, in a spot where the slope is moderate and numerous wall remains are visible at the surface level. A residential complex (Complex 1) consisting of four built units (Units 10-14) was entirely excavated. The western part of another building (Complex 2) was also excavated, as were an alley that links them, and sections of alleys between Complex 1, Complex 3 and Complex 6. All of the ceramic artifacts recovered from Area G date to EB I (see below).

The following is a description of the various architectural units:

Complex 1 (Figs. 6-14, 16)

This is a roughly circular residential complex and courtyard. It extends over about 140 m², and was completely excavated (except for 4 m² in Unit 11 in Square J13 left for future research). This complex constitutes a fine example of a residential unit at the site in EB IB. Complex 1 was divided into four secondary units with open areas between them:

Unit 10 (Fig. 9) – This unit consists of a room c. 3.7 m wide, c. 4.5 m long, covering an overall area of c. 16 m². It is located in the southern part of Complex 1, and is delimited by Walls 103, 121 and 120s. Its northern corners are curved similarly to the corners of the buildings of Early Bronze Age IB in the north of Israel. W 103 is bonded into the wall of

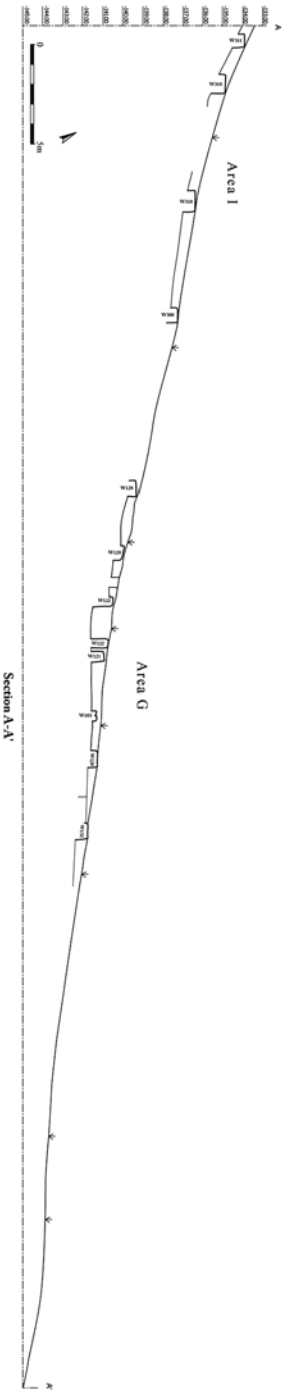


Fig. 5: Section A-A' in the center of the site. Note the differences in elevation along the slope of the spur

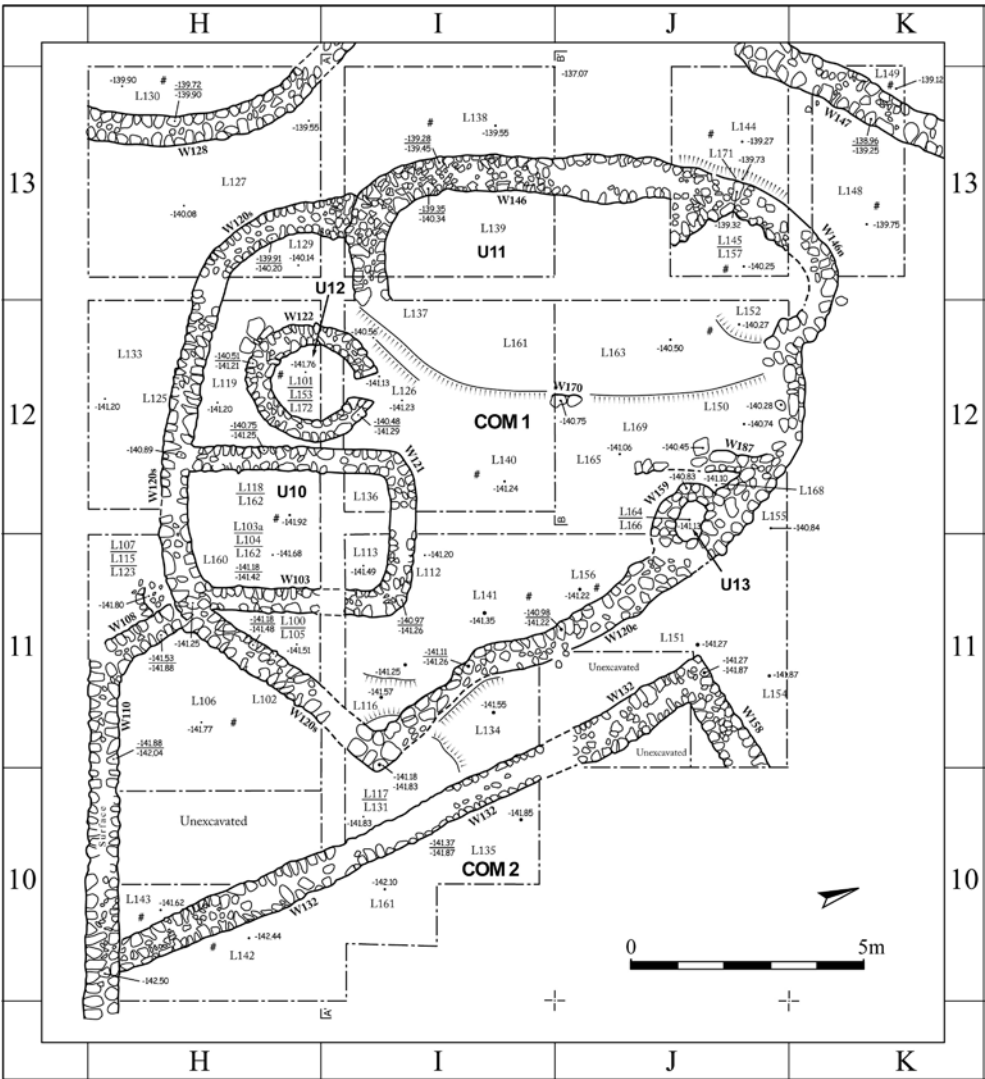


Fig. 6: Plan of Area G

the complex (W 120s), and it seems that they are contemporary. Three different occupation levels were found in this unit:

1. In the late phase the habitation level in the room consisted of tamped earth, and a large hole-mouth jar and animal bones were found on it *in situ*.
2. In an earlier occupation phase of the building the southern part was paved with flagstones (see L 162 in Fig. 9). No distinct habitation level of this phase was discerned in the northern part of the building.

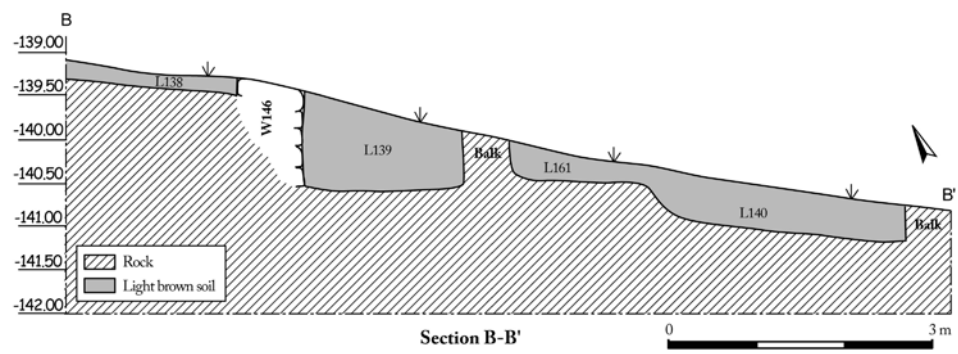


Fig. 7: Area G: Section B-B' (see location in Fig. 6)

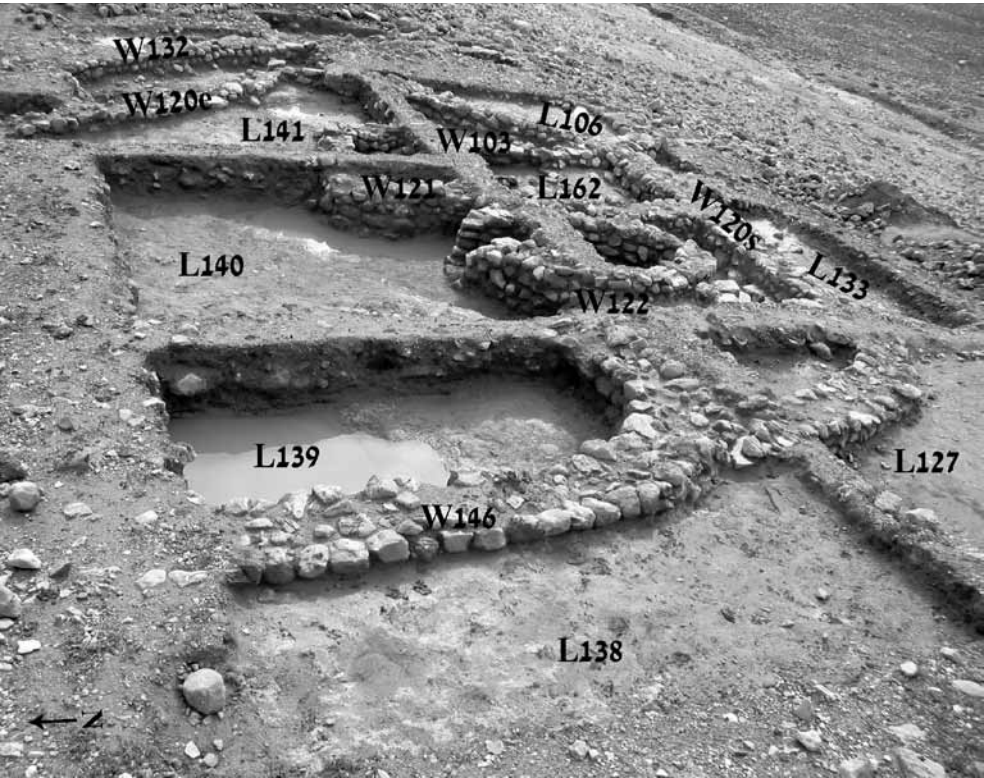


Fig. 8: Area G: General view from the west (Winter 2007, between the two excavation seasons)

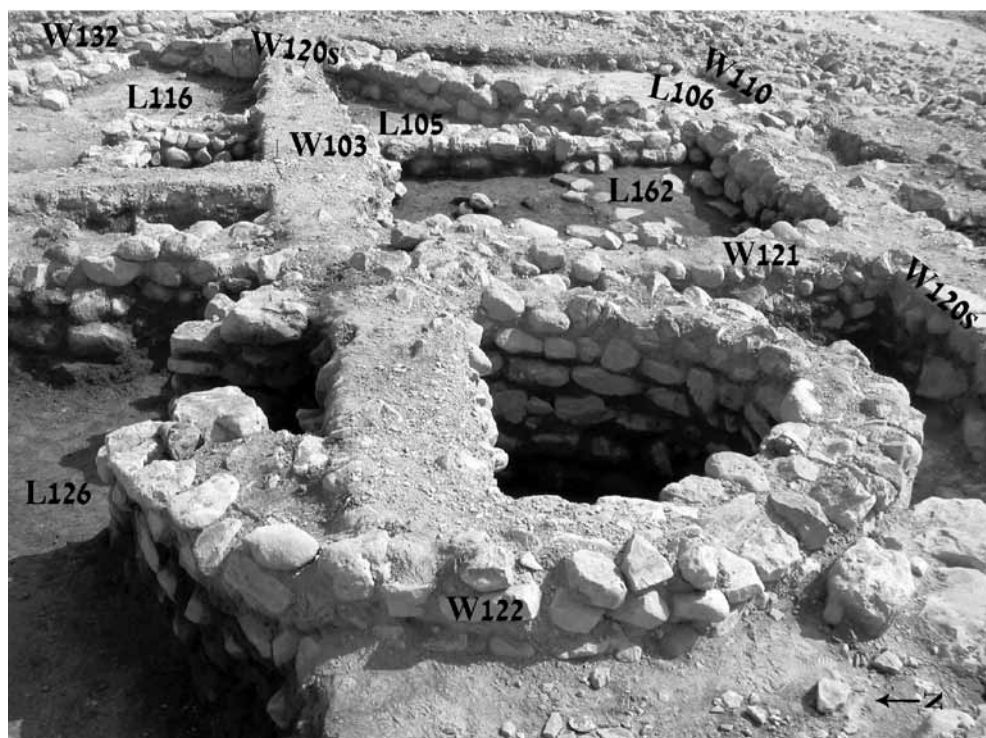


Fig. 9: Area G: General view of the southern part of the excavation area, including Units 10 and 12 and part of the area between them

3. In the earliest phase of the building a few pottery shards and flint items were found on the level of the natural bedrock (this phase is possibly contemporary with the early phase [2]).

This is the only place in Complex 1 where different habitation levels were identified within the same unit. This unit, which was likely roofed, may have functioned as a sleeping and storage room in the complex.

Unit 11 (Figs. 8, 10) – This unit consists of the remains of a room (Walls 146, 146n) at least 10 m wide; its exact width is not known as its eastern wall did not survive. This is an elliptical, “sausage-shaped” residential unit, which is more characteristic of EB IA in the north of Israel. It is abutted from the south by the courtyard’s peripheral wall (W 120s), which postdates the first construction phase of the unit (see Fig. 8). The courtyard’s peripheral wall (W 120e) abuts this unit from the east near the entrance to Complex 1. It seems that at first an elliptical structure stood there, which went out of use at some point, and whose eastern walls were dismantled when the courtyard wall was constructed (the western wall of the building became part of the courtyard wall). The outline of the early building probably ran the length

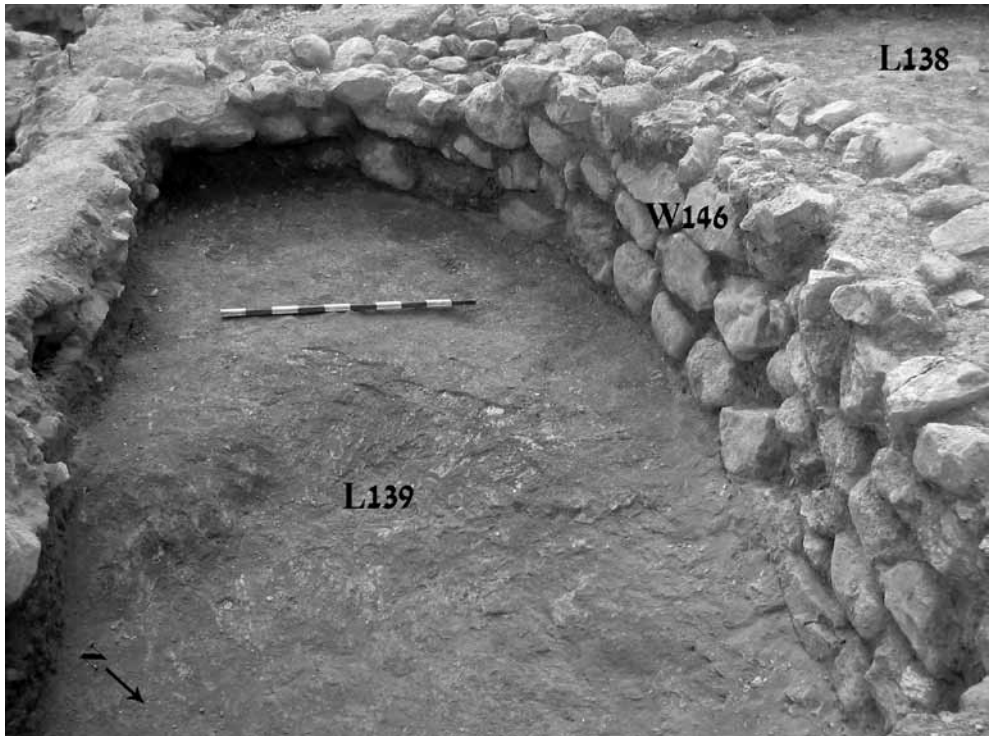


Fig. 10: Area G: Unit 11 – note the differences in elevation between the alley (L 138) and the habitation level (L 139), and the preservation of the walls to a height of approximately 1 m

of the bedrock terrace in the center of Complex 1, and Wall Stump 170 is probably part of this eastern wall. For some reason the southern part of W 146 was not dismantled. This apparently served as a kind of niche or partition, the function of which is unclear, on the bedrock terrace inside the complex.

The artifacts from this unit found on the bedrock belong to the latest use phase of the unit, during the EB IB, when it was part of the courtyard in the western part of Complex 1. No datable material was found that can be associated with the earlier phase of this unit. The walls in this unit were preserved to a height of more than 1 m (up to seven courses in some places), and the large quantity of stone collapse attests that the walls, which rose to an even greater height, were built of stone to their entire height. The builders cut deep foundation trenches in the chalk bedrock for the walls. It should be noted that this construction method is very unusual for masonry of the EB I in the Southern Levant. It was probably used because of the soft easily carved rock at the site. The northwestern part of Wall 146n collapsed (see Fig. 5, 10), and the foundation trench (L 171) was exposed to a depth of at least 30 cm. The



Fig. 11: Area G: Unit 12 – the entrance to the silo during and after excavation

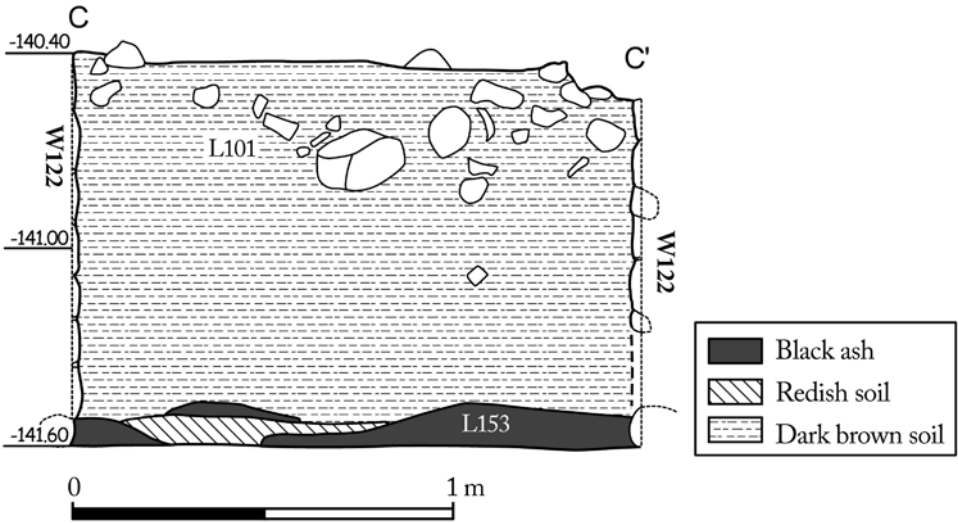


Fig. 12: Area G: Section C-C' – inside the silo in Unit 12

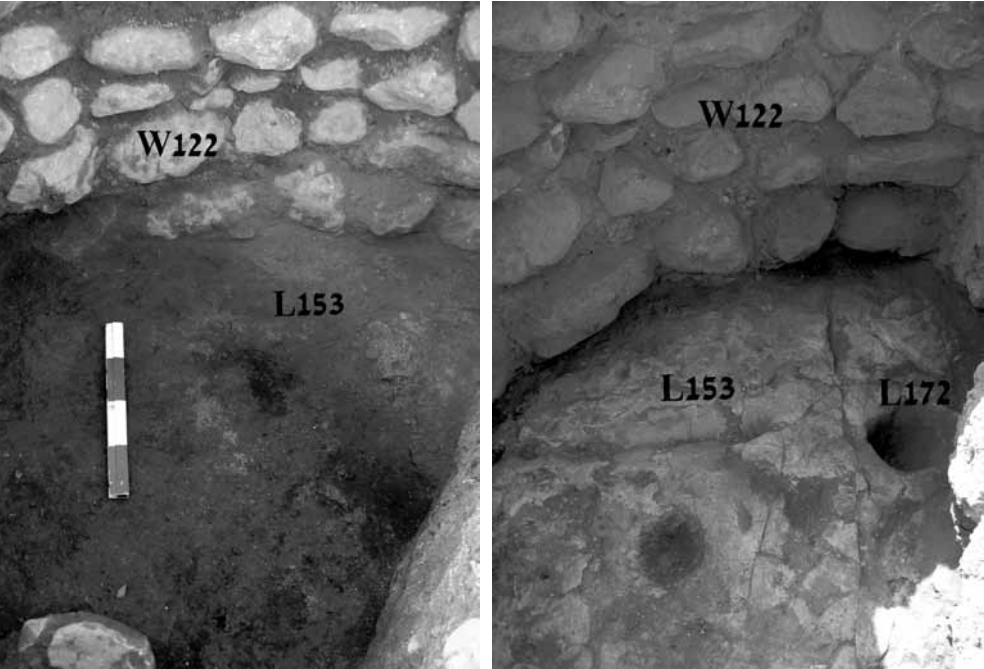


Fig. 13: Area G: Note the organic material on the bottom of the silo (to the left) and the shallow cup-marks in the chalk bedrock (to the right)

habitation level in Unit 11 was more than a meter lower than the habitation level in Alley 138 to its west (see the section in Fig. 7).

Unit 11 is an example of two different architectural phases. These suggest an earlier stratum whose remains have not yet been exposed in the rest of the excavation areas.

Unit 12 (Figs. 9, 11-13) – This unit consists of the remains of a round building (W 122) about 2.5 m in diameter (outer dimensions), which was probably used for storage (silo). It was located in a depression in the natural bedrock south of the high terrace of Unit 11 and west of the covered room of Unit 10 (see location in Fig. 6, 8). The structure, which was not hewn into the bedrock, but was erected on the surface level, was preserved to a height of 1.2 m (seven stone courses), and it seems it was built of stone to its entire height. An opening was located in its northern part (see Fig. 11), and its bottom was filled with an accumulation of more than 5 cm of powdered charcoal (L 153), indicating that it contained organic material (Fig. 13 – left and the section in Fig. 12). When the organic material was cleared away two

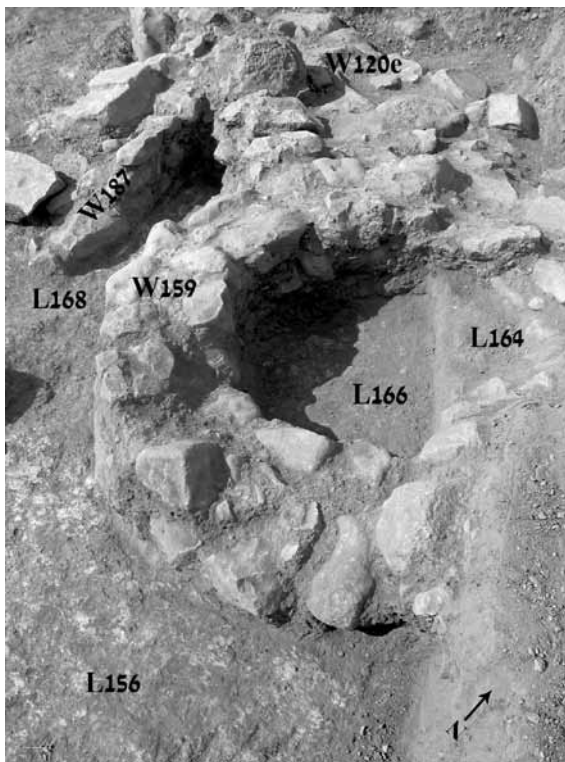


Fig. 14: Area G: The silo in Unit 13

shallow cup-marks were found on the bedrock floor (L 172; on the right in Fig. 13). It is unclear whether they were used together with the round building, or they predate it.

Unit 13 (Fig. 14) – This unit consists of the remains of a round structure (W 159), reminiscent of unit 12 and 0.5 m in diameter, which was apparently also used for storage. It was built in a depression in the natural bedrock next to the wall of the complex (W 120e), in its northeastern part. The structure was only preserved to a height of two stone courses. Its bottom and walls were set on the natural chalk bedrock.

The Courtyard (Fig. 8) – A few architectural elements were found in the open area between the different units: W 170, which was probably part of the elliptical structure of Unit 11, Wall Stump 187 in the northern part of Complex 1, and the entrance to the complex (see the section below on the wall of the complex). The courtyard constitutes more than 75% of the area of Complex 1, and likely served a number of purposes, including storage, animal keeping, and

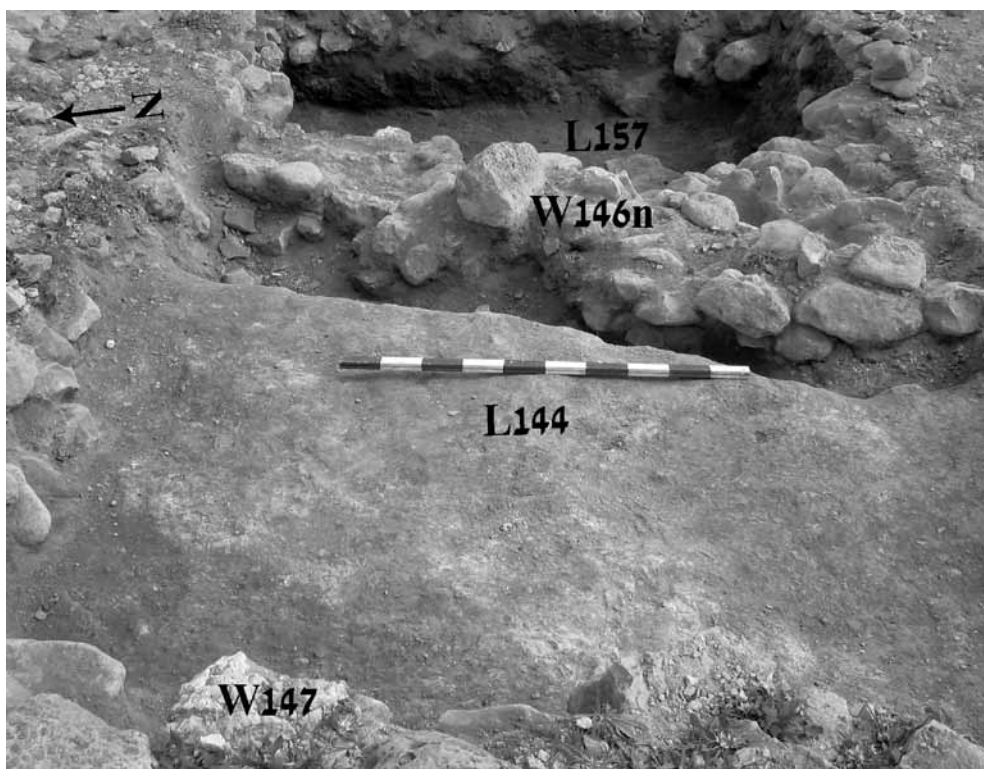


Fig. 15: Area G: The alley between Complex 1 and Complex 6. Note the caved-in wall (W 146n), east of its foundation trench, which is hewn into the chalk bedrock

household activities. The courtyard did not have a roof, and the habitation level in it was situated on the natural chalk bedrock. Certain areas in the courtyard were lower than others, but unlike the time when the walls of the courtyard were prepared, there is no evidence that the bedrock level was prepared at all. There were no *in situ* finds in this courtyard: thus no specific utilization areas were noted.

The Complex/Courtyard Wall (Figs. 8, 10, 15) – This wall's main purpose was to separate the public areas (alleys, squares and open spaces) from the individual holdings (private spaces and property) of the residents of Complex 1. The wall was built identically to the walls of the site: two rows of medium-size fieldstones, and fill consisting of smaller stones with mud between them. The wall was 70-90 cm wide, and was preserved to a maximum height of seven courses. The original height of the wall is not known, but it presumably stood to a height of at least 1 m above the level of the alleys (This supposition stems from the extent of the stone collapse in the vicinity of the walls, and from a comparison with the height of animal corrals in the Bedouin camps in the vicinity of the site today).⁴ Its general outline was

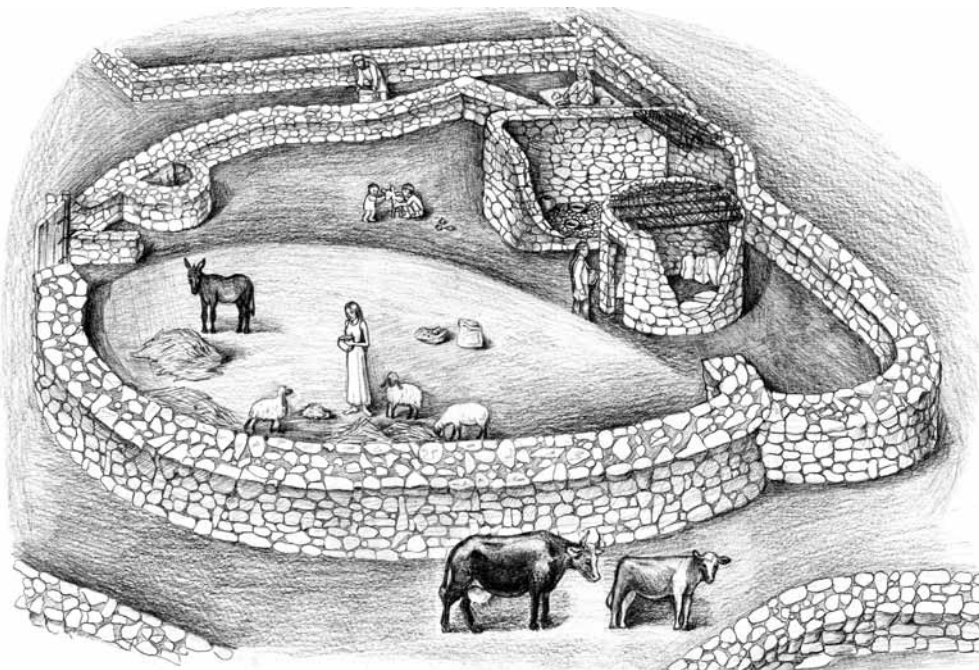


Fig. 16: Area G: Reconstruction (drawn by Vera Damov)

4 This height does not allow the sheep or cattle to get over the top of the animal pen.

curved, and it had one perpendicular corner for which there is no structural explanation. The wall was not built as a single homogeneous unit; instead it was a collection of segments that are described below.

1. W 120s. The southern and southwestern section of the wall was well preserved. Its western part abutted W 146. W 108, which was later than the first construction phase of the complex, abutted it on the outside.
2. W 146 and W 146n. The western and northwestern section of the wall was also well-preserved. This segment was part of Unit 11 (see above), a relatively early phase in the site. In Square J13 the wall collapsed from its foundation trench, which was hewn into the chalk bedrock, and toppled into Unit 11.
3. W 120e. The northeastern section of the wall was rather poorly preserved, and most of it did not survive above the height of a single course. In the area of L 134 (the alley separating Complex 1 from Complex 2) the main part of the wall collapsed into the alley. This wall apparently abutted W 146n from the east. It was in this part of the wall that the outer opening to Complex 1 and the stone socket were located.

Complex 2 (Fig. 6)

These are the remains of a unit that was probably another residential complex. It extends east of Complex 1, and its function is still unclear. It is composed of a western wall (W 132), which forms a corner with a northern wall (W 158). W 132 abuts W 10 in the southeastern part of the building. The limited area that was excavated, probably an open courtyard, contained a very large quantity of artifacts found *in situ* on the surface of the bedrock, particularly large storage vessels.

Alley and Courtyard between Complex 1 and Complex 2

An alley (L 131, 134, 151) and a closed courtyard (L 106, 143) were exposed in the area between Complex 1 and Complex 2. The level of the alley was on the chalk bedrock, which was not leveled in this part of the site (even though in the past the large depression in the middle of the alley [L 134] was probably filled with soil to level it). A large quantity of stone collapse that was probably part of W 120e, which had caved in, was found in the alley. The alley continued south, and reached a closed courtyard bounded by W 108 and W 110. It seems that this closure occurred sometime after the initial phase of Complex 1, because W 108 abutted W 120s in the western corner of the courtyard. The stratigraphic connection between W 110, which delimits the courtyard from the south, and Complex 2 is still unclear (Hence the question arises: Is the courtyard earlier than Complex 2, or is it a closure that was made after Complex 2 was built?).

Numerous non-*in situ* finds were recovered from the bedrock surface. Noteworthy among them is a stone vessel, probably part of a limestone tournette, which was found lying upside-down next to W 110.

Alleys between Complex 1 and Complex 3, and between Complex 1 and Complex 6 (Figs. 8, 15)

Alleys and part of the square (L 138), which linked the different complexes in this area, were excavated in the western part of Area G, between Complex 1 and Complex 3, and between Complex 1 and Complex 6. In every instance the living level was situated on the chalky bedrock. It seems that sometimes the bedrock was prepared or leveled to some extent in order to ease the traffic in the alleys, and included part of the courtyard walls as foundation trenches (see Fig. 15 in which W 146n toppled from its foundation trench [L 171] outward on to the chalk bedrock of the alley [L 144]).

The finds in the alleys included a few flint implements and ceramic artifacts that were not *in situ*.

Area I

An area in the center of the site, where the incline of the slope begins (see the location in Figs. 2-3, the general plan in Fig. 17 and a general section which shows the gradient of the slope in Fig. 5). So far only 90 m² of this large area have been excavated in trial squares along the eastern part of the site's slope. The remains of five residential complexes (Complexes 3-7) were found in various states of preservation. The ceramic artifacts from Area I date to EB IB (see below).

The various architectural units of Area I are described below.

Complex 3 (Figs. 17-18)

This is an irregular, elongated residential complex with a curved outline that extends over about 220 m². It is bordered in the west by Complex 4, in the north by Complex 6, and in the east by Complex 1. So far only small areas have been excavated.

This complex, like the others, is divided into a covered building (in the center of the courtyard) and a vast open space. In all of the sections of the excavation it became clear that the activity in the courtyard occurred on the chalk bedrock; whereas in the covered area more than one stratigraphic phase was noted.

In the northwestern part of Complex 3 the wall (W 300) of the complex, the alley (L 302) opposite Complex 4, and the courtyard surface (L 304) on the bedrock inside Complex 4 (Square H16) were excavated. Here too a noticeable difference in elevations was observed between the levels of the alleys and the lower residential complexes (Fig. 18). A few pottery

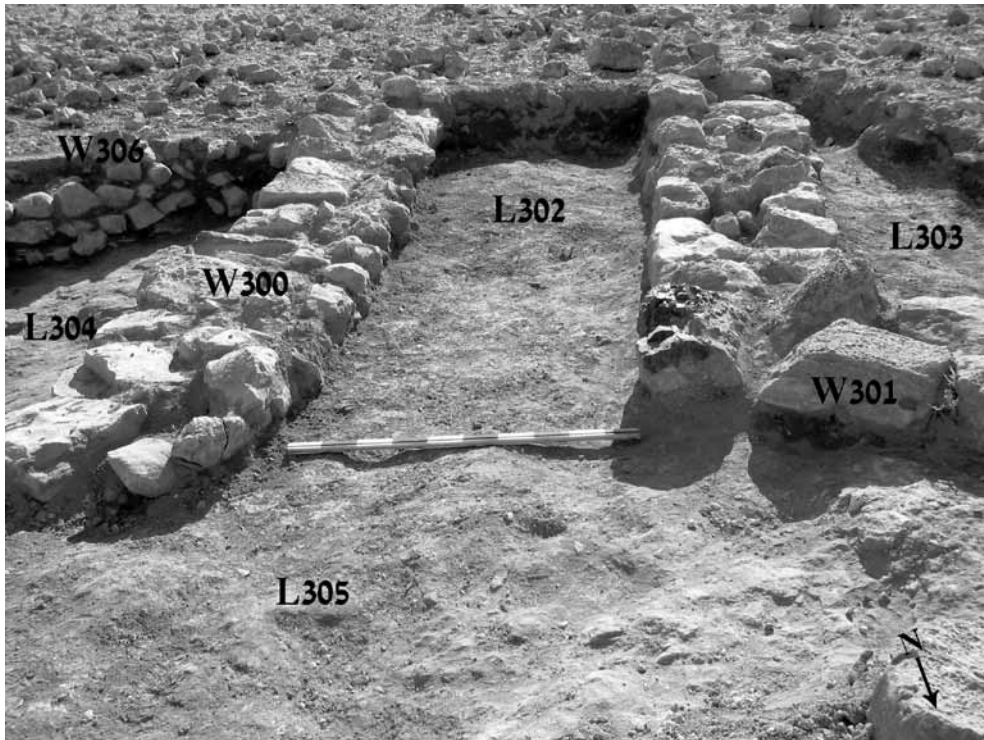


Fig. 18: Area I, south – alley (L 302) between Complex 3 and Complex 4

shards were found *in situ* on the surface of the bedrock; noteworthy among them being a large clay stopper (Fig. 27:12).

Portions of square (F16) were excavated south of this point in order to understand the outline of the wall of the complex (W 300). The wall was exposed here, and occupation levels were revealed in an alley (L 322) and inside of Complex 3 (L 323).

South of this point another quarter square (D16) was excavated in order to understand the course of the courtyard wall. This was identified in the western corner of the square, but its continuation from this point on still remains unclear (particularly the connection with W 320 – the eastern wall of the courtyard). In this section two complete hole-mouth jars were found *in situ*, one of which was inside a hewn recess in the chalk bedrock (L 325; Fig. 24: 1, 2). Another wall stump (W 326) was discovered, and near it was an *in situ* stone door socket.

Another trial square (F14-F15) was excavated in the southeastern part of Complex 3. Remains of a wall (W 313) were discovered here that may be part of a large covered unit (together with an unnamed wall which was located on the surface level to the north). The wall survived to a height of one course only, which was higher than the level of the chalk bedrock.

Hence the artifacts on the bedrock level at this point predate the construction phase of the wall: however, no changes were discerned in the ceramic artifacts between these levels. In this region the wall of the courtyard (W 320) collapsed to the south, in the direction of the natural slope.

Complex 4 (Figs. 17-18)

This is an elongated irregularly-shaped residential complex, the area of which is unknown. It is bordered on the north by Complex 5, on the northeast by Complex 6, and on the east by Complex 3. So far two small sections of it have been excavated (in Squares H16, H18). The complex is surrounded by courtyard walls (W 301, W 310) built identically to the other walls. The general outline of its walls is curved, but there is a right-angled corner in its eastern part. The meager ceramic finds are similar to the artifacts which characterize the site.

Complex 5 (Fig. 17)

Wall 311 is curved, and apparently belongs to another residential complex that has not yet been studied, located on the slope of the site north of Complex 4 and west of Complex 6. In a small section that was excavated in Square H18 a wall (W 311) was noted that was preserved to a height of one course only. It had collapsed from its foundation trench (L 309), which was cut into the chalk bedrock.

Complex 6 (Fig. 17)

Complex 6 is a very complicated residential area situated along the slope of the spur, north of Complex 3, east of Complex 5, and northwest of Complex 1. The area of the complex is not known for certain, but it seems to be approximately 500 m² (the largest complex at the site). Numerous partition walls were observed on the surface level, but without excavation it is difficult to estimate the exact area of the complex and the nature of the internal units. The courtyard wall was clearly identified along the surface level in the southern and eastern parts of the complex, but its location in the north and west is insufficiently clear (it seems that its northern outline extends across the edge of the cliff above Wadi Fazael).

Two small sections of the complex were excavated: the first in Square K13, where W 147 was cleaned, and a small section of the bedrock surface was exposed inside the square (L 149); and the second in Square I16 where two sections of walls (W 316, W 321) were excavated, as well as three surfaces on the bedrock level between them. One surface (L 317) is a square located between this unit and Complexes 3 and 4, and the other two (L 318, L 319) are habitation levels on the chalk bedrock, whose function and location inside the complex are not understood.

This complex has only undergone preliminary study, and it requires further investigation.

Complex 7 (Fig. 17)

This complex consists of the remains of a wall on the other side of the alley, south of Complex 6. Hence, there probably existed another complex on the flat part of the spur, parallel to and northeast of Complex 1. Area H (see below) is probably part of this complex. Neither its area nor its internal units are known.

Area H

This area extends over a single excavation square in the eastern part of the site, towards the end of the spur, and above the Wadi Fazaal escarpment. It is possible that this area is part of Complex 7, but this supposition requires further study. In the flat area on the site in the eastern part of the spur there were probably four adjacent complexes (three Complexes, 1, 2, 7, are discussed above, and another one that remains uninvestigated, east of Complex 7 and north of Complex 2 – compare with the plan in Fig. 4).

Four wall sections were found in Area H (Figs. 19-20): W 42 – a courtyard wall(?) almost 1 m wide that extends along a north-south axis, and continues in a straight line for a further 10 m south of the excavation square; W 38 – a curved wall preserved to a height of two courses above the habitation level to its south; W 32 – a partial inner wall that “disappears” in the southern part of the excavated area; and W 43 – a short section of wall in the center of the square. The nature of this wall is unclear, and it is not stratigraphically connected to the other known walls.

Three other elements were discovered in the excavation (Figs. 19-20): a rock-hewn installation in the northeastern corner of the square (L 41); a 0.3 m deep refuse pit located between W 42 and 43 with a plethora of ceramic material, and a few Canaanite sickle blades within; and habitation Level L 44, apparently an inner courtyard in the center of the square, which includes a tamped soil surface that abuts the surrounding walls. A large ammonite fossil was found sunken as part of the living surface of the courtyard, probably as a decorative element, and two very small hearths were located close by.

These elements reinforce the impression that Area H is part of an inner courtyard of a residential unit.

Area F

This area was excavated because a building was preserved on the surface level, at the highest point of the site. In the excavation an oval building (Figs. 21-22) 10 m² in area was discovered. It was built of several small and medium size stones in an entirely different manner than the rest of the buildings and walls that were discovered at the site. No datable diagnostic material was found.

The building was partitioned into two equal parts. The remains of another wall (W 8), the nature of which is unclear, were located to its north.

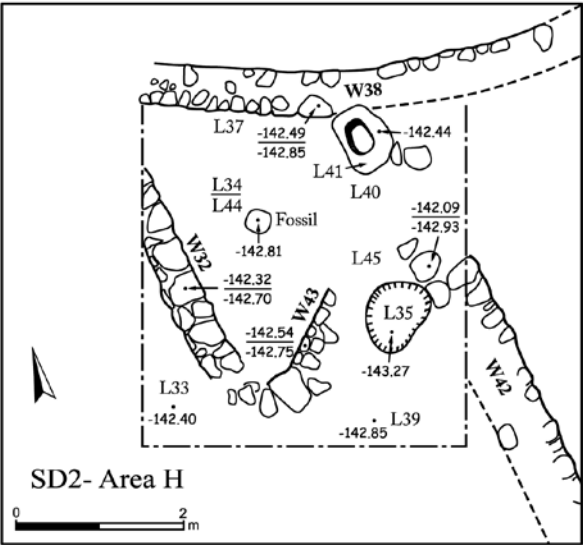


Fig. 19: Plan of Area H

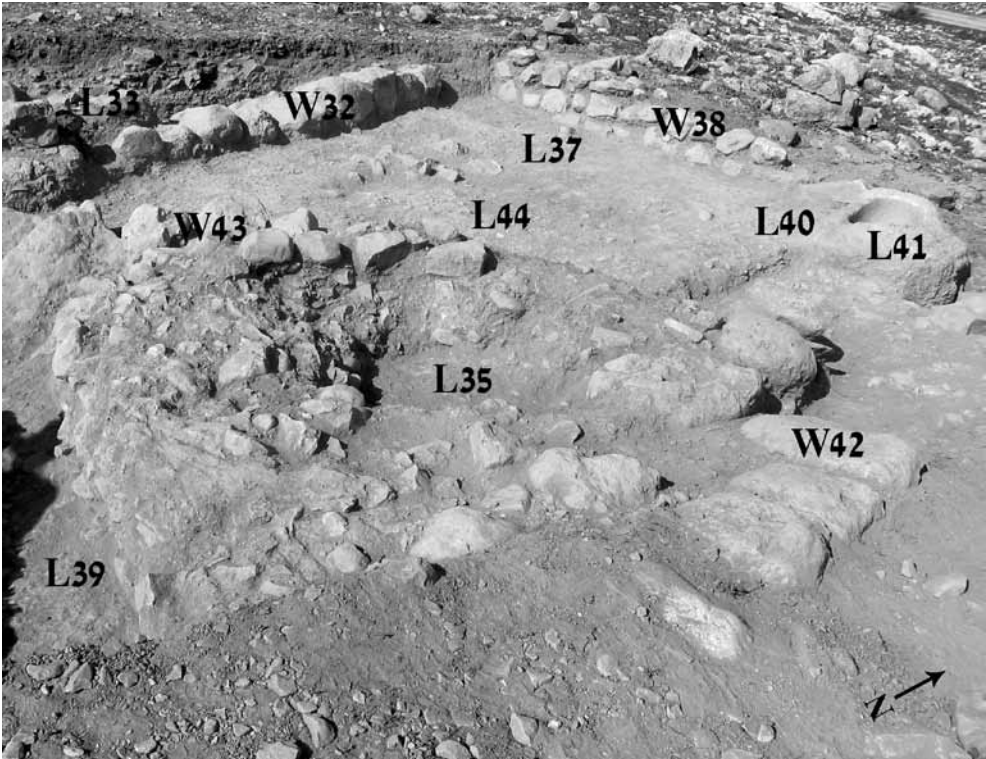


Fig. 20: General view of Area H, looking northwest

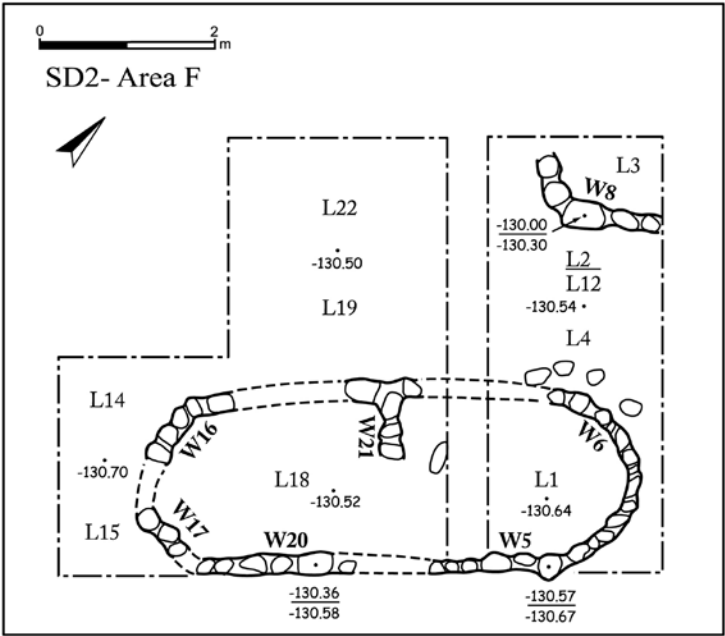


Fig. 21: Plan of Area F

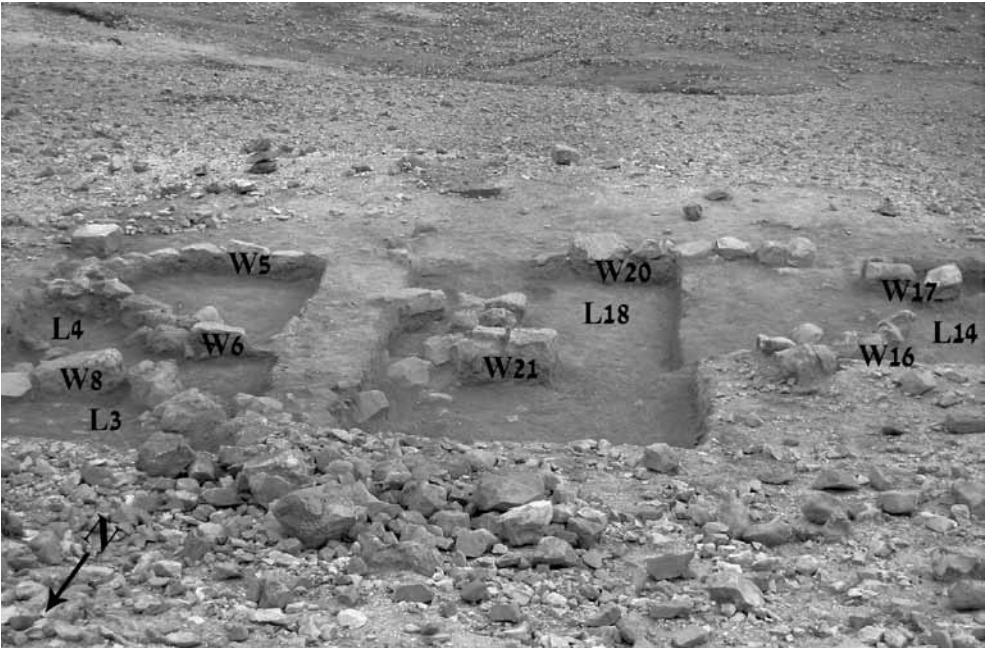


Fig. 22: General view of Area F, looking southeast

No distinct habitation levels were identified in the building: these were probably eroded away because of their proximity to the surface level (the depth of the excavation inside the structure to the base of the stone course of the walls did not exceed 12 cm).

This structure is different from the rest of the structures at the site, and it apparently does not belong to the EB I settlement; instead it should be ascribed to another short episode that was apparently later than the main settlement phase at the site.

GENERAL ARCHITECTURAL CONCLUSIONS

The construction of irregularly-shaped residential complexes is one of features that are characteristic of the site. These consist of large elliptical courtyards that contain one or more covered rooms and a large open area (see Fig. 4). To date, seven complexes of this kind have been identified, and it seems that there are probably a total of 10 to 12. Thus approximately 12 nuclear families resided there; that is to say, between 80 and 100 inhabitants. The complexes occur in different shapes and sizes; the smallest being about 150 m², and the largest about 500 m² (its full extent has still not been uncovered).

Alleys between 1 and 2 m wide separate the residential complexes from one another. This width was sufficient for two people or animals (*e.g.*, a donkey carrying baskets, or a line of sheep or goats) to move easily between the residential units. A main alley, from which secondary alleys branch off between the courtyards, runs through the center of the spur. The floor of the alley is the natural chalk bedrock, which is impervious to water, and very effective in draining rainwater and sewage. A similar phenomenon of erecting complexes with squares and alleys between them dating to EB IB was found in the salvage excavations conducted by the Israel Antiquities Authority in Stratum III at Ashkelon Barnea (Golani 2008).

It is difficult to know at this point in the research if the settlement was planned in advance, or whether the complexes were built one after the other, and the alleys and squares are a result of the few vacant areas that remained between them.

One of the interesting aspects of the site is that the occupation levels were for the most part situated on the chalk bedrock that makes up the spur. Some vessels were found *in situ* on that level, and it seems that it was customary for the inhabitants of the site to clear the earlier occupation levels down to the bedrock. The artifacts found are therefore mostly attributed to the latest habitation phase at the site – EB IB.

The basic residential complex at Sheikh Diab 2 includes some typical principal elements: a roofed room or rooms: square rooms with rounded corners, which are characteristic of EB IB in the north of Israel and earlier phases in the EB I of the Jordan Valley (*e.g.*, at Tell Um Hammad in EB IA, Helms *et al.* 1992, Figs. 38-39). In an earlier phase at the site, one unit was elliptical, similar to units found at sites such as Yiftah'el (Braun 1997) which typify

northern Israel during the EB IA. The rooms have an average width of about 4 m and are 5-6 m long. No internal partitions were identified inside the rooms. The room was probably reserved for sleeping and storage, and occasionally for food preparation, while most of the other household activities were conducted outside in the courtyard.

The courtyards range in size between 115 m² and 350 m², and are a very important component of the residential complex. In Area G, the ratio between the areas of the roofed unit and the courtyard is 1:9, which underscores the centrality of the courtyard in household activity.

Although only a small group of vessels were found *in situ* on the rocky surface of the courtyards, the large size of the courtyards leads us to conclude that they were host to many activities, including animal keeping. The courtyards were floored with the natural chalk bedrock. They contained silos, as well as large ceramic containers (pithoi, kraters and jars) that were probably used by the household for storage. The different sizes of the courtyards at the site and their storage space indicate a society in which different people utilized different areas. This may imply that some people had more property than others, or at least a position or way of life that required the use of a larger area.

The openings of the residential complexes and the inner entrances to the habitation units were not well preserved. However, in Complex 1 there is an external opening, together with its stone socket, that separated the courtyard of the complex from the alley outside.

The walls at Sheikh Diab 2 are built of two rows of medium-sized fieldstones with a fill of smaller stones and mud between them (the walls are 70-90 cm wide). Most of the walls are curved rather than straight (especially the outer walls of the courtyards of the residential complexes), but there is at least one 90° corner in each complex. No structural reason was found for leaving a right-angled corner like this, nor does it stem from topographic considerations. The walls were preserved to a height of up to six courses on the inner face of the residential complexes (more than 1 m; *e.g.*, Fig. 10), and it seems that in light of the large amount of stone collapse encountered during the excavation they were built of stone to their entire height. The width of the walls indicates that the buildings were only a single story high. Some of the wall foundation trenches were hewn into the chalk bedrock (Fig. 15). It seems that on the outside the walls did not stand to a great height (on the outside, in the direction of the alleys, the walls survived to a height of 0.5 m). They were probably just a raised base on which organic roofing material (brambles or a wooden hedge) was placed, as has been observed by the author in many instances in modern Bedouin camps in the Jordan Valley (see Bar 2008 fig. 13.4.7).

The floors in the covered rooms were made of tamped earth, sometimes together with crushed limestone, while certain parts that were apparently used as storage areas or for cooking/work were paved with stone. No artificial pavement was identified in the courtyard, and it seems that the natural bedrock served as the floor there.

There is no doubt that the habitation units in the complexes that were excavated were covered; however, neither remains of organic material used as roofing, nor architectural remains for supporting a roof were found. The fact that the width of the residential rooms is almost uniform (slightly less than 4 m) seems to suggest a form of roofing that utilized beams made of organic material, probably wood.

There are only a handful of EB I sites in the lower Jordan Valley that have been sufficiently excavated to allow for a comparison of their architectural features and settlement patterns with those of Sheikh Diab 2. These include Tell Um Hammad (Helms *et al.* 1992), Jericho (Kenyon and Holland 1982), Tell el-Farah (North) (Vaux de 1949, 1951, Vaux de and Steve 1948), Tell Bet Yerah (Getzov 2006; Greenberg *et al.* 2006), Babe dh-Dhra (Rast and Schaub 2003), Beit Shean (Mazar 2009), Tel Shalem (Eisenberg 1996) and Tel Kitan (Eisenberg 1993). Some of these include public structures (e.g., the Beit Shean public building and the walls excavated at Tel Shalem), while others feature domestic rural dwelling units (e.g., the Tel Kitan rural settlement and the dwelling units of Beit Yerah). None, however, reveal the full layout of a complete village as at Sheikh Diab 2. While the architectural features of the domestic structures during EB IB share common traits such as average unit size, unit width and the externally rounded corners of the rooms, none of the other EB sites display the unique traits found at Shiek Diab: very large courtyards in every complex and their unique spatial distribution throughout the entire site. It is possible that other EB sites in the Jordan Valley exhibit similar traits, but the low level of exposure (minimal strata excavation) at these sites precludes their discovery. The similarities between Sheikh Diab 2 and Ashkelon Barnea (Golani 2008) on the southern coast of Israel certainly reinforce this possibility.

THE POTTERY ASSEMBLAGE

During the excavation, 7,190 pottery shards 4 cm² or larger were collected and counted (Table 1). Only the diagnostic items were examined, primarily the rims. Of these, 360 items were identified. The predominant kind of vessel is the hole-mouth jar (152 fragments, 42.2% of the finds), followed by the jar (91 fragments, 25.3% of the finds) and the bowls (75 fragments, 20.8% of the finds). Also found were 18 pithoi (5% of the finds), 17 amphoriskoi (4.7% of the finds), and 7 kraters (2% of the finds).

From the standpoint of the surface treatment of the 7,190 shards that were counted, only 136 fragments, 1.9% of the finds, were slipped (band slip on jars and amphoriskoi and red slip on bowls are quite predominant).

One hundred forty-nine fragments (2.1% of the finds) were treated with some sort of plastic ornamentation. Noteworthy among these are the diagonal incising in the vicinity of the rim – 73 fragments (49% of the decorated shards), a thickened peripheral band on the

body – 40 fragments (26.9%) and rope ornamentation (plastic) – 30 fragments (20%). A few “piecrust” type decorations appear on the rims of jars and pithoi (3.4%), and there are also round perforations made with a sharp instrument (0.7%).

An examination of the types of handles suggests that the ledge handle is the most common – 132 fragments (77.6% of the finds), followed by the loop handle – 17 fragments (10%), knob handle – 9 fragments (5.3%), lug handle – 7 fragments (4.1%), and high loop handle – 5 fragments (3%).

Table 1. Ceramic statistics according to areas

Area	No.	Hole-mouth jar	Jar	Ampho.	Pithos	Bowl	Krater	Ledge handle	Other handle	Slip	Plastic decoration
G	4777	103	56	7	12	51	4	79	16		
I	1490	35	23	3	3	17	3	40	14		
H	923	14	12	7	3	7		13	8		
Total	7190	152	91	17	18	75	7	132	38	136	149

Bowls (Fig. 23)

The flat bowl with a curved side and inverted rim is the prevailing type at the site (Figs. 23: 1-6). The rim diameters are quite uniform at about 17 cm. These bowls are widespread in EB I in the Jordan Valley (see accompanying table for Fig. 23).⁵ The deep hemispherical bowl with an upright or slightly inverted rim is also common (Figs. 23: 7-9). The rim diameter varies between 14 and 27 cm. These too are widespread throughout the EB I. Bowls of this sort with irregular combing on their bases and sides were noted (Figs. 23: 1, 7). In addition, bowls appear that have gently curved sides and somewhat everted rims (Fig. 23: 10) and an average diameter of 14 cm. These are not widespread at the site, but they do occur in the EB I at other sites in the Jordan Valley.

Types of bowls that exist in the assemblage, but are rare at the site, are:

1. A large deep bowl with a thickened inverted rim (Figs. 23: 11-12), characteristic of the EB IB.
2. A large deep bowl with a folded-in side and a channel on the rim: one such item was found (Fig. 23: 13). A similar type appears in EB IA at Tell Um Hammad (see accompanying table).
3. A shallow flat bowl with a cut rim (Fig. 23: 14) and a rim diameter of 30 cm.
4. A deep bowl with a thickened and cut rim (Fig. 23: 15), and a rim diameter of 37 cm. This type of bowl is common in EB IA at Tell Um Hammad.

5 Parallels for each type appear in the accompanying tables for all of the plates. In selecting the parallels priority was given to those that were discovered at excavated sites with known stratigraphy throughout the Jordan Valley – Tell Um Hammad, Jericho, Tell el-Farah (North), Tell Bet Yerah and Bab edh-Dhra’.

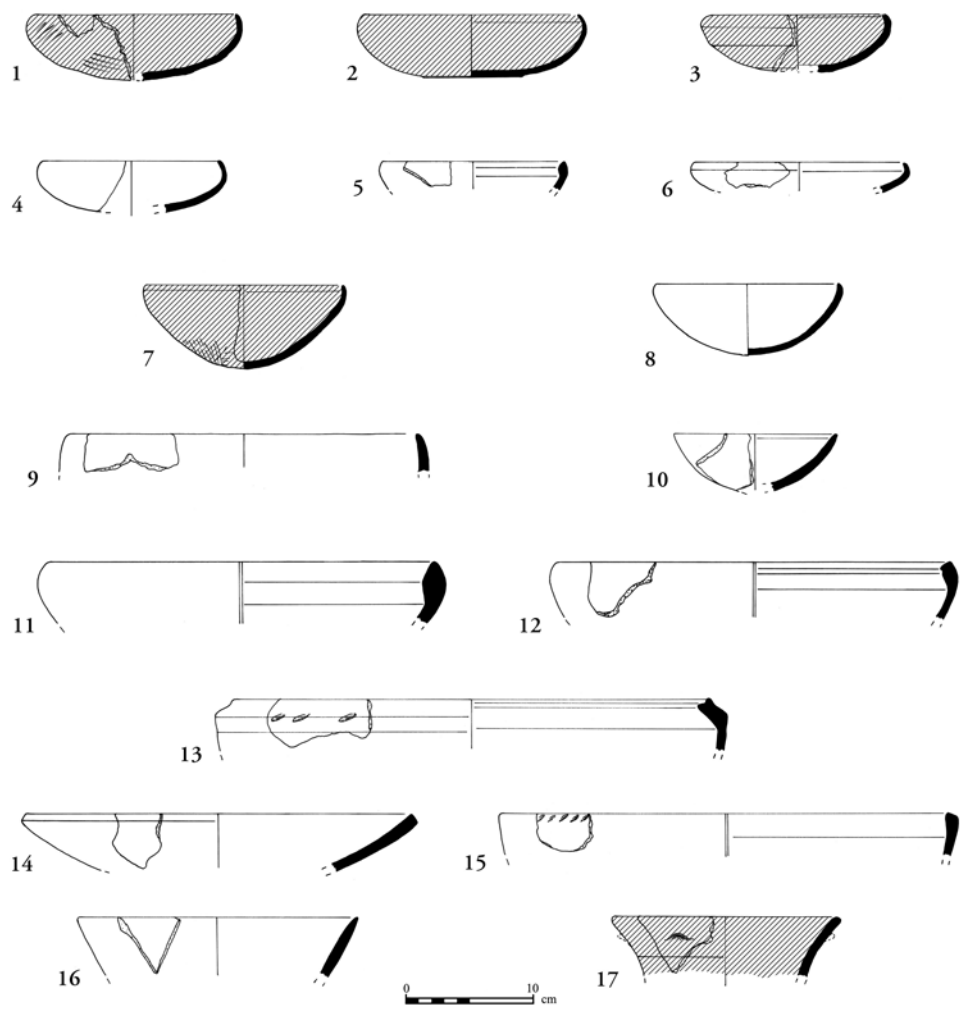


Fig. 23: Bowls

No.	Locus	Description	Parallels
1	142	Light colored clay, pale gray core, gray and white inclusions, red slip inside and outside, well fired.	Tell Um Hammad (Helms <i>et al.</i> 1992, Figs. 211:6-7); Jericho (Kenyon and Holland 1982, Figs. 34:17-18); Tell el-Far'ah North (de Vaux 1949, Fig. 1:1; de Vaux and Steve 1948, Fig. 5:28); Bet Yerah (Greenberg <i>et al.</i> 2006, Fig. 3.39:1); 'Ain Assawir (Yannai <i>et al.</i> 2006, Fig. 4. 52:22).
2	142	Red clay, pale gray core, white inclusions, red slip inside and outside, well fired.	
3	142	Light brown clay, pale gray core, white inclusions, red slip inside and outside, well fired (metallic).	
4	126	Brown clay, gray core, white inclusions, well fired (metallic).	
5	145	Dark clay, pale gray core, numerous white inclusions.	
6	139	Reddish clay and core, white and brown inclusions.	
7	35	Light brown clay, pale gray core, a few white inclusions, red slip inside and outside, very well fired (metallic).	Tell Um Hammad (Helms <i>et al.</i> 1992, Figs. 211:9-12); Jericho (Kenyon and Holland 1982, Figs. 34:9-13); Tell el-Far'ah North (de Vaux 1949, Fig. 1:4); Bab edh-Dhra' (Rast and Schaub 2003, Figs. 7. 3:5-6); Bet Yerah (Getzov 2006, Figs. 2.12:2, 25-26); 'Ain Assawir (Yannai <i>et al.</i> 2006, Figs. 4. 33:11-15).
8	104	Brown clay, pale gray core, white inclusions.	
9	139	Brown clay, pale gray core, white and gray inclusions.	
10	34	Brown clay, pale gray core, white inclusions, remains of soot outside and inside.	Tell Um Hammad (Helms <i>et al.</i> 1992, Figs. 211:24-26; 214:3-4); Jericho (Kenyon and Holland 1982, Fig. 35:8); Tell el-Far'ah North (de Vaux 1949, Fig. 1:2); Bab edh-Dhra' (Rast and Schaub 2003, Fig. 7.3:4); 'Ain Assawir (Yannai <i>et al.</i> 2006, Figs. 4.33:16, 20-23).
11	156	Brown clay, pale gray core, white inclusions.	Tell Um Hammad (Helms <i>et al.</i> 1992, Fig. 232:7); Jericho (Kenyon and Holland 1982, Fig. 35:22); Khirbet et-Tuwal (Eisenberg 1998, Figs. 3:1-2); 'Ain Assawir (Yannai <i>et al.</i> 2006, Fig. 4.54:3).
12	323	Light brown clay, black core, white and gray inclusions (calcite).	
13	35	Reddish clay, gray core, white inclusions (quartz), remains of soot.	Tell Um Hammad (Helms <i>et al.</i> 1992, Fig. 223:12) - not in the Um Hammad style.
14	144	Brown clay, light gray core, white inclusions.	Tell Um Hammad (Helms <i>et al.</i> 1992, Fig. 212:24); Jericho (Kenyon and Holland 1982, Fig. 35:2); 'Ain Assawir (Yannai <i>et al.</i> 2006, Fig. 4.33:25).
15	103	Reddish brown clay, pale gray core, white inclusions.	Tell Um Hammad (Helms <i>et al.</i> 1992, Fig. 212:18-19; 232:2); Jericho (Kenyon and Holland 1982, Fig. 35:16); 'Ain Assawir (Yannai <i>et al.</i> 2006, Figs. 4.32:29-30).
16	33	Light green clay, pale gray core, poorly fired.	Tell Um Hammad (Helms <i>et al.</i> 1992, Fig. 231:2); 'Ain Assawir (Yannai <i>et al.</i> 2006, Fig. 4.75:2).
17	139	Reddish brown clay, reddish brown core, white and red inclusions, dark red slip inside and outside, very well fired (metallic).	

5. A bowl with straight sides (Fig. 23: 16), characteristic of the Chalcolithic period and continuing less frequently in the EB I.
6. A bowl with an everted rim and a decorative element consisting of a tiny ledge handle which is inclined diagonally upward (Fig. 23: 17). The one item that was found at the site is extremely well fired (similar to the metallic items characteristic of the EB II).

The surfaces of the bowls are mainly red-slipped inside and outside. There is no plastic decoration, and very few of the bowls are decorated with diagonal incisions made with a pointed instrument (the most common decoration at the site, which appears mostly on hole-mouth jars).

Hole-mouth jars (Fig. 24)

The hole-mouth jar is the most common type of vessel at the site. The incised diagonal decoration on the rim is prevalent, and appears on more than half of the hole-mouth jars. Nine main types were found:

1. Hole-mouth jar with a flat base, a barrel-shaped body and an inverted horizontal rim. Two complete hole-mouth jars were discovered in Area I (Figs. 24: 1-2), 20 and 30 cm in diameter respectively. No parallels were found in the Jordan Valley.
2. Hole-mouth jar with a flat base, barrel-shaped body and a round folded rim with a ridge below it. A complete hole-mouth jar was discovered in Area G (Fig. 24: 3). It is 20 cm in diameter, and its morphology is characteristic of EB IB. The jar is decorated in the "splash and drip paint" style which is considered more typical of the Chalcolithic and the EB IA in the region. The jar was found *in situ* (L 104) and is probably one of the latest appearances of this style in the EB I within the Jordan Valley.
3. Hole-mouth jar with a ridge (Figs. 24: 4-5) and a diameter that ranges between 14 and 33 cm. It occurs in all phases of the EB I.
4. Large hole-mouth jar with an inverted rim with a horizontal channel (Figs. 24: 6-8) and an average diameter of 35 cm. It appears in the EB I in the Jordan Valley. Most of these vessels are decorated with diagonal incisions on the rim.
5. Large hole-mouth jar with a plain, slightly inverted rim (Figs. 24: 9-10) and an average diameter of 30 cm. Most are decorated with diagonal incisions on the rim. This type of vessel occurs in the EB IA at Tell Um Hammad.
6. Hole-mouth jar with a thickened and inverted rim (Figs. 24: 11-15), with diameter between 14 and 35 cm. The vessel is sometimes decorated with diagonal incisions on the rim. It is common in the EB I within the Jordan Valley.
7. Hole-mouth jar with a plain or round rim (Fig. 24: 16) and an average diameter of 20 cm. Only small fragments of this type of vessel were found, and it is probably a smaller sub-type of the aforementioned Type 5.

8. Small narrow hole-mouth jar with a thickened and inverted rim (Fig. 24: 17) and an average diameter of 14 cm. It is red-slipped outside and inside. The vessel is not common at the site; however, it does occur in the Jordan Valley sites throughout the EB I.
9. Large coarse hole-mouth jar with a narrow body and a thickened rim that is bent slightly outward (Fig. 24: 18). It is 22 cm in diameter and decorated with diagonal incisions. The vessel is common in the Jordan Valley in the EB I.

Jars, Amphoriskoi and Pithoi (Figs. 25-26)

The jar is the second most common type of vessel at the site. In most instances they are undecorated; however, occasionally there are those that are red-slipped and band slipped or treated with diagonal incisions. The two most frequent types are the jar with an acutely flared rim (Figs. 25: 1-6) and the jar with an inverted rim (Figs. 25: 11-12). In both cases these are medium-sized jars with a rim diameter of 12 to 18 cm. Most are undecorated; however, some have a red slip on the outside (and even more rarely on the inside – Fig. 25: 6). Other less common decorations include diagonal incisions and a wavy stripe below the rim. These types are widespread in the Jordan Valley throughout the EB I (see the accompanying table to Fig. 25) and also continue into the EB II.

Less common is the jar/jug with high loop handles which rise above the rim (Figs. 25: 9-10). This is different and larger than the types that are characteristic of burials in Jericho and Tell el-Far'ah (North). It has an average diameter of 10 cm, and the handles are not much higher than the rim.

Another type (Fig. 26: 5) found whole in Area G, is a barrel-shaped jar with a long neck tapering toward the rim. Most of the rims were found broken, but it seems that it belongs to the type that is bent outward (presumed diameter 12 cm). The jar is decorated with a delicate plastic ornamentation and diagonal incisions resembling rope. There are diagonal incisions on the inside of the rim, and there are also two handles located close together. They are of a type that is unknown in the EB, and even though they were found broken, it is clear that they were bent upward similarly to the basket handles of later periods. The vessel's uniqueness is also evidenced in the quality of its firing and the excellent levigation of the clay, unlike the relatively coarse vessels of the site. No whole parallels of this jar were found, except for a rim with a similar profile that was discovered at Tell Um Hammad.

Amphoriskoi (Figs. 25: 7-8) are not particularly common at the site. The types that were found are characterized by a red slip on the outside and an S-shaped profile. They range in size from 5 to 8 cm.

Two kinds of pithoi were found. The most common one has a thickened rim that resembles a circumferential ring (Figs. 26: 1-4), and an average diameter of 25 cm. A complete pithos was found in Area G (Fig. 26: 1) whose dimensions are: rim and base diameter – 26 cm,

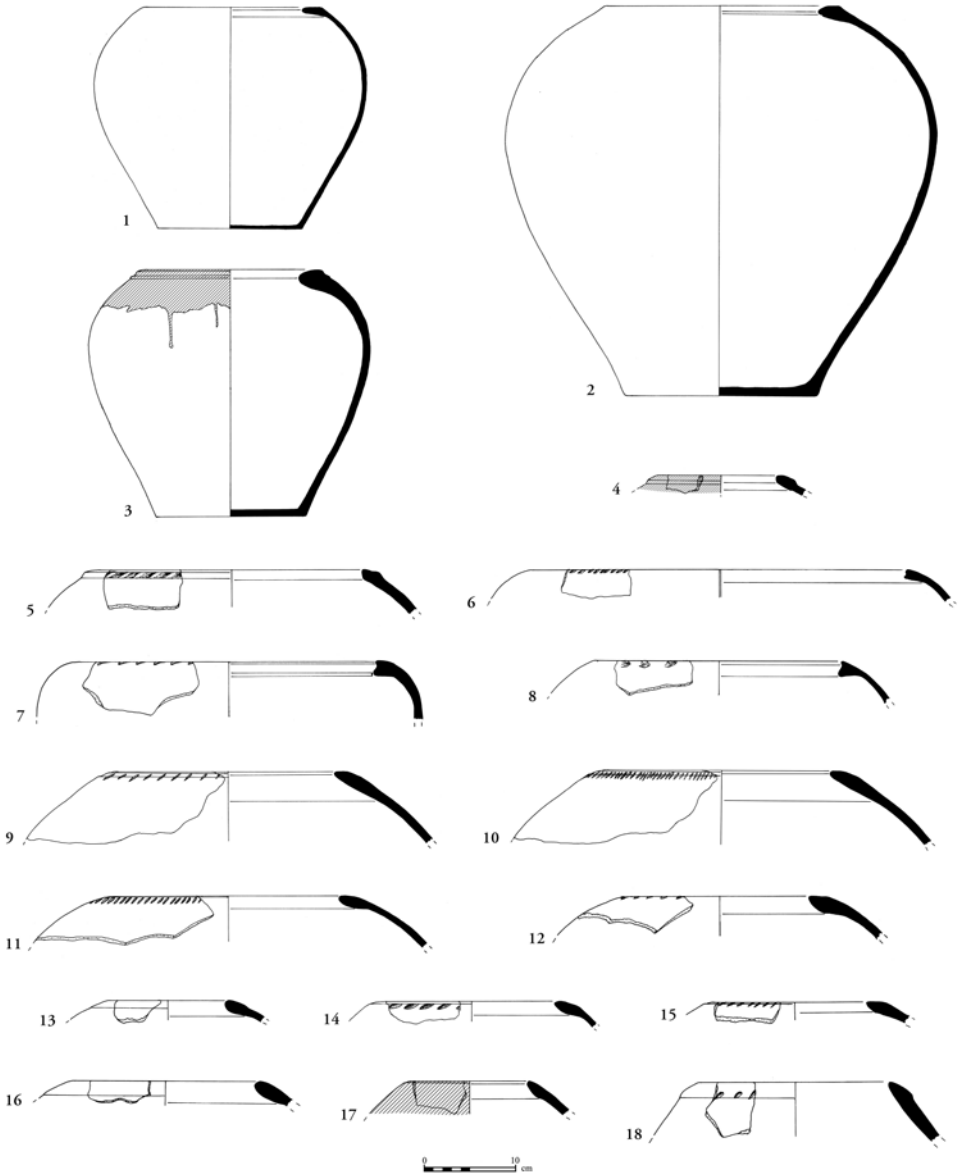


Fig. 24: Hole-mouth jars

No.	Locus	Description	Parallels
1	325	Brown clay and core, numerous white and gray inclusions, poorly fired, remains of soot on outside.	Bet Yerah (Greenberg <i>et al.</i> 2006, Fig. 8.46:3); Khirbet et-Tuwal (Eisenberg 1998, Fig. 3:13) – on these items the rim is not as deep as the examples from Sheikh Diab 2; ‘Ain Assawir (Yannai <i>et al.</i> 2006, Fig. 4.46:5).
2	325	Brown clay and core, white and gray inclusions, remains of soot.	
3	104	Light-colored (cream) clay, pale gray core, numerous black white and gray inclusions, poorly fired, dark red slip on outside of upper part of vessel (including paint runs on sides).	Tell Um Hammad (Helms <i>et al.</i> 1992, Figs. 161:1-3); Jericho (Kenyon and Holland 1982, Fig. 40:25)
4	162	Light-colored clay, pale red core, gray inclusions, red slip on outside.	Tell Um Hammad (Helms <i>et al.</i> 1992, Figs. 147:3-4; 154:3; 159:1); Jericho (Kenyon and Holland 1982, Fig. 39:25); ‘Ain Assawir (Yannai <i>et al.</i> 2006, Fig. 4.65:10)
5	34	Reddish brown clay, brown core, black and gray inclusions, well fired, remains of soot.	
6	302	Reddish brown clay, black core, white inclusions, well fired, remains of soot on outside.	Tell Um Hammad (Helms <i>et al.</i> 1992, Figs. 148:10-11; 149); Jericho (Kenyon and Holland 1982, Figs. 40:8-10); Bet Yerah (Greenberg <i>et al.</i> 2006, Fig. 5.75:5)
7	119	Light brown clay, pale gray core, white inclusions, well fired.	
8	119	Light brown clay, pale gray core, white and gray inclusions, well fired.	
9	35	Brown clay and core, white and gray inclusions, remains of soot.	Tell Um Hammad (Helms <i>et al.</i> 1992, Fig. 146:3); Bet Yerah (Getzov 2006, Figs. 2.13:1)
10	35	Brown clay and core, white and gray inclusions, remains of soot.	
11	35	Brown clay, pale gray core, white and gray inclusions, remains of soot on the outside.	Tell Um Hammad (Helms <i>et al.</i> 1992, Figs. 147:6; 167:6); Jericho (Kenyon and Holland 1982, Fig. 33:23); Bet Yerah (Greenberg <i>et al.</i> 2006, Fig. 5.26:5); Tell el-Shuna (Contenson 1960, Figs. 11:3-4); Khirbet et-Tuwal (Eisenberg 1998, Fig. 4:5); ‘Ain Assawir (Yannai <i>et al.</i> 2006, Figs. 4.56:3-4, 10-11)
12	104	Light-colored clay, reddish brown core, white and gray inclusions, well fired.	
13	139	Light-colored (cream) clay, gray core, white, gray and glittering inclusions, poorly fired, remains of slip on outside.	
14	304	Light-colored clay and core, gray inclusions, poorly fired, remains of soot on outside.	
15	35	Brown clay and core, gray and black inclusions.	
16	140	Light brown clay, light-colored core, white, gray and glittering inclusions, poorly fired.	Tell Um Hammad (Helms <i>et al.</i> 1992, Figs. 145:11; 168:6; 172: 8); Jericho (Kenyon and Holland 1982, Figs. 39:4, 15); Bet Yerah (Greenberg <i>et al.</i> 2006, Fig. 3.39:4)
17	139	Light-colored (cream) clay, gray core, white, gray and glittering inclusions, remains of red slip on outside.	Tell Um Hammad (Helms <i>et al.</i> 1992, Figs. 146:6; 168:3); Jericho (Kenyon and Holland 1982, Fig. 39:18); Bet Yerah (Greenberg <i>et al.</i> 2006, Figs. 5.75:1; 7.26:1); ‘Ain Assawir (Yannai <i>et al.</i> 2006, Figs. 4.56:8)
18	149	Reddish clay, brown core, white, gray and glittering inclusions, well fired.	Tell Um Hammad (Helms <i>et al.</i> 1992, Figs. 147:8; 169:7); Jericho (Kenyon and Holland 1982, Fig. 40:6); Bet Yerah (Greenberg <i>et al.</i> 2006, Fig. 3.35:10; Getzov 2006, Fig. 2.13:23); Tell el-Shuna (Contenson 1960, Fig. 11:1); Bet Shean (Braun 2004, Fig. 3.11:8); ‘Ain Assawir (Yannai <i>et al.</i> 2006, Fig. 4.47:4)

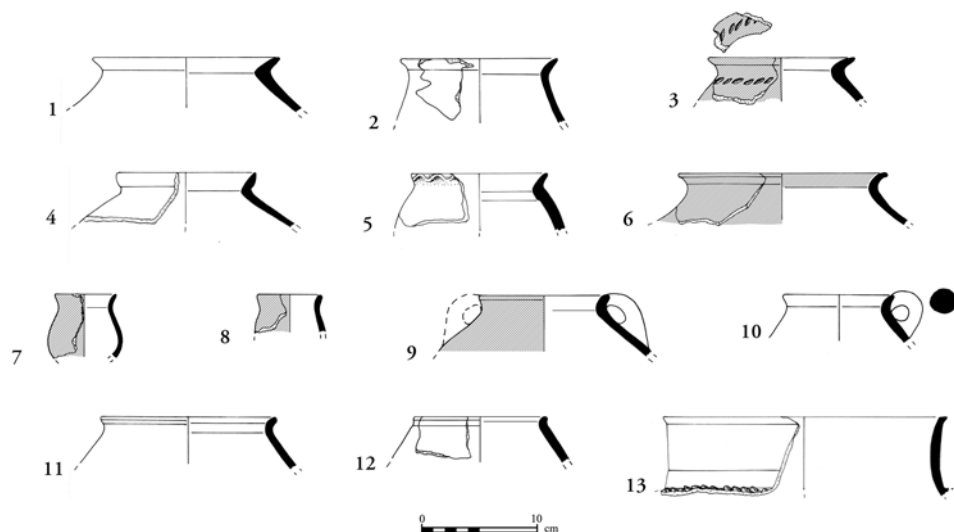


Fig. 25: Jars

height – 70 cm and maximum body diameter – 55 cm. Most of the pithoi are undecorated, with the exception of one item (Fig. 26: 2) red-slipped on the outside (at least on the upper part which was preserved). No whole parallels were found for this type in the Jordan Valley, and a few similar rims were found at Tel Bet Yerah in the EB IB.

Another pithos (Fig. 25: 13) with a long slightly everted neck and an everted rim was also discovered at the site. It has an average rim diameter of 25 cm, and on one of the items there is a plastic rope-like decoration in the vicinity of the neck where it connects to the body of the vessel. This type of pithos is common in the Jordan Valley sites throughout the EB I.

A round ceramic object 22 cm in diameter was also found, probably used as a stopper for a jar (Fig. 27: 12). This object was in secondary use, and it seems that it was originally the base of a pithos, and its edges were rounded and smoothed when it was adapted as a stopper. No other stoppers were found, and it can reasonably be assumed that vessels were sealed using other kinds of stoppers made of organic material (for example wood).

No.	Locus	Description	Parallels
1	140	Brown clay, light brown core, gray and white inclusions.	Tell Um Hammad (Helms <i>et al.</i> 1992, Figs. 183:4; 184:1; 194:2; 198; 199); Jericho (Kenyon and Holland 1982, Fig. 38:23); Bet Yerah (Greenberg <i>et al.</i> 2006, Figs. 4.3:9; 20:12; Getzov 2006, fig. 2.15:8); Tell el-Far'ah North (de Vaux 1949, Fig. 13:19; de Vaux 1951, Fig. 4:4); Tell el-Shuna (Contenson 1960, Fig. 9:9)
2	139	Brown clay, light gray core, red and brown inclusions.	
3	304	Reddish brown clay, light-colored core, gray inclusions, red slip on outside.	
4	162	Very light gray clay, pale gray core, white and gray inclusions (quartz and calcite), remains of soot on outside.	
5	162	Coarse light-colored clay, light-colored core, numerous white and gray inclusions.	
6	35	Reddish brown clay, black core, gray and white inclusions, red slip on outside, red slip on inside of rim, remains of soot on outside.	
7	104	Light brown clay and core, white and gray inclusions, red slip on outside.	Tell Um Hammad (Helms <i>et al.</i> 1992, Figs. 193:12-14, 17); Jericho (Kenyon and Holland 1982, Fig. 38:27); Tell el-Far'ah North (de Vaux 1949, Fig. 1:23); Bab edh-Dhra' (Rast and Schaub 2003, Fig. 5.1:12)
8	126	Red clay and core, white and black inclusions, red slip on outside.	
9	35	Light brown clay and core, white black and red inclusions, red slip on outside.	Jericho – particularly in the tombs (Kenyon and Holland 1982, Fig. 47:10); Tell el-Far'ah North (de Vaux 1949, Fig. 1:22); Bet Shean (Braun 2004, Fig. 3.14:2); 'Ain Assawir (Yannai <i>et al.</i> 2006, Fig. 4.41:2)
10	139	Light brown clay and core, white and black inclusions.	
11	132	Light brown clay, pale gray core, red and white inclusions.	Tell Um Hammad (Helms <i>et al.</i> 1992, Figs. 174:8; 176:1; 182:1); Jericho (Kenyon and Holland 1982, Figs. 37: 4, 10, 17); Bet Yerah (Greenberg <i>et al.</i> 2006, Figs. 5.76:5-6; 7.22:6-7; Getzov 2006, Figs. 2.15:1); Tell el-Far'ah North (de Vaux 1949, Fig. 13:20; de Vaux 1951, Fig. 4:6); Khirbet et-Tuwal (Eisenberg 1998, Fig. 3:11); 'Ain Assawir (Yannai <i>et al.</i> 2006, Figs. 4.37:18-20)
12	33	Reddish brown clay, light-colored core, white inclusions.	
13	162	Reddish brown clay, pale gray core, white inclusions, well fired.	Tell Um Hammad (Helms <i>et al.</i> 1992, Figs. 181:2; 196: 1,5); Jericho (Kenyon and Holland 1982, Figs. 37: 27; 38:3); Bet Yerah (Greenberg <i>et al.</i> 2006, Figs. 4.3:11; 8.48:3)

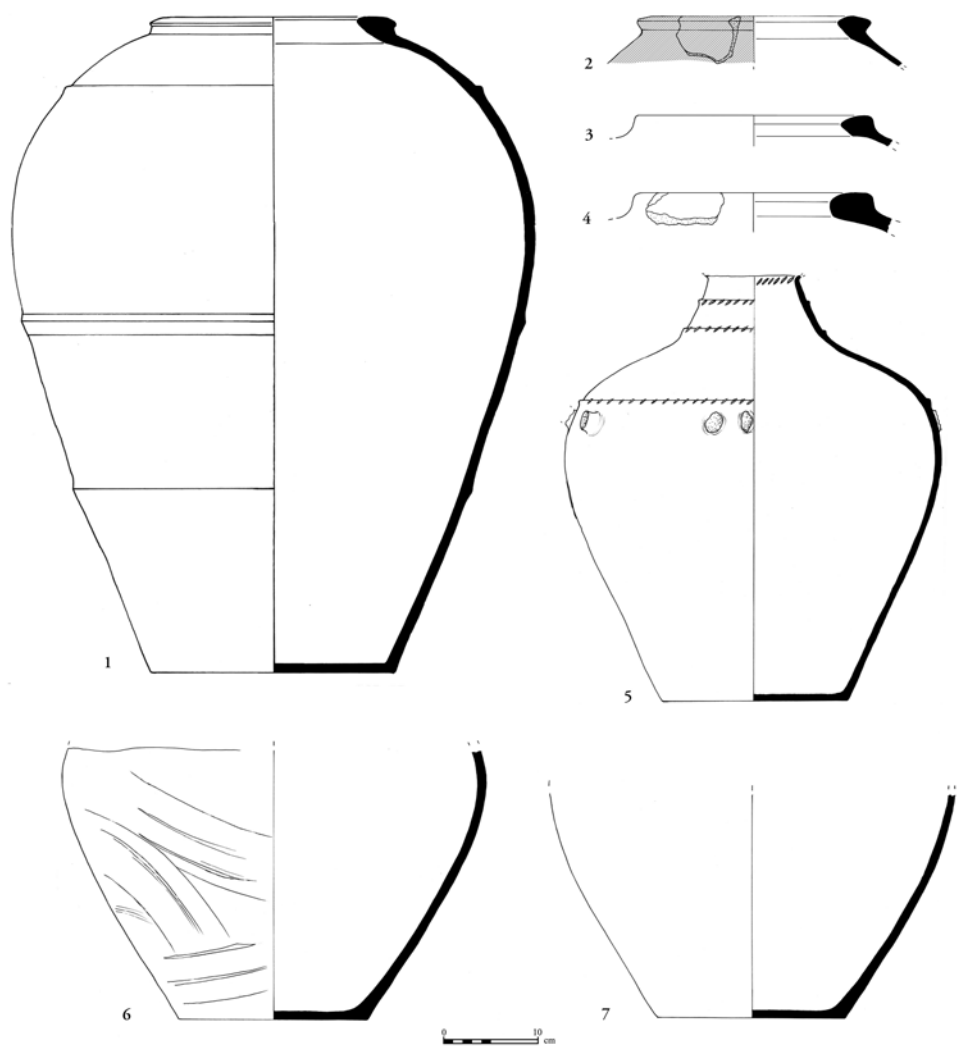


Fig. 26: Jars and Pithoi

No.	Locus	Description	Parallels
1	142	Reddish brown clay, light gray core, white and gray inclusions, poorly fired.	Certain similarity to items from Bet Yerah (Greenberg <i>et al.</i> 2006, Figs. 3.39:7; 7.24:11; Getzov 2006, Figs.2.16:7-8)
2	142	Light brown clay, black core, white, red and gray inclusions, red slip on outside.	
3	39	Reddish light brown clay, light gray core, white and gray inclusions, well fired.	
4	31	Light brown clay, black core, white and gray inclusions, poorly fired.	
5	142	Light-colored clay, light gray core, white inclusions, well fired, remains of soot on outside.	Similar to items from Tel Um Hammad (Helms <i>et al.</i> 1992, Fig. 178:6); Tell el-Shuna (Contenson 1960, Fig. 12:6); 'Ain Assawir (Yannai <i>et al.</i> 2006, Figs. 4.39:8, 16)
6	312	Light-colored clay in core, white and gray inclusions, band slip on outside.	
7	142	Pale yellowish clay, light brown core, white and gray inclusions, well fired, remains of soot on outside.	

Handles (Fig. 27)

Smooth and wavy ledge handles are common at the site, and can be divided into a number of secondary types:

1. Ledge handle with thumb impressions (Figs. 27: 1, 2, 8) – the most common decorated handle at the site. Most have thumb or indented marks across the entire width of the handle, or there are thumb impressions on part of the handle. Both straight and wavy handles of this sort occur in the assemblage.
2. Smooth ledge handle (Figs. 27: 3, 7) – plain and undecorated. They occur very frequently in different sizes. In one instance (a small handle, probably part of a red-slipped amphoriskos) the handle is red-slipped.
3. Handle with a shell-like decoration (Fig. 27: 4) – a wavy ledge handle decorated in the form of an open shell. It is uncommon at the site and in the southern Levant during the EB. It attests to a high level of design on the part of the potter.

The ledge handles are common mainly on the amphoriskoi and hole-mouth jars of the EB I.

Other types of handles found in the assemblage (Figs. 25: 9-10; 27: 5-6) include a few loop handles (mostly on jars), knob handles (mostly on bowls), lug handles (mostly on amphoriskoi) and high loop handles (on amphoriskoi).

Decorations (Fig. 27)

The most common decoration in the assemblage consists of diagonally incised bands that occur mostly on hole-mouth jars (Figs. 24: 6-7, 9-12, 14-15), but also on jars (Figs. 25: 3; 26: 5), and deep bowls (Fig. 23: 15).

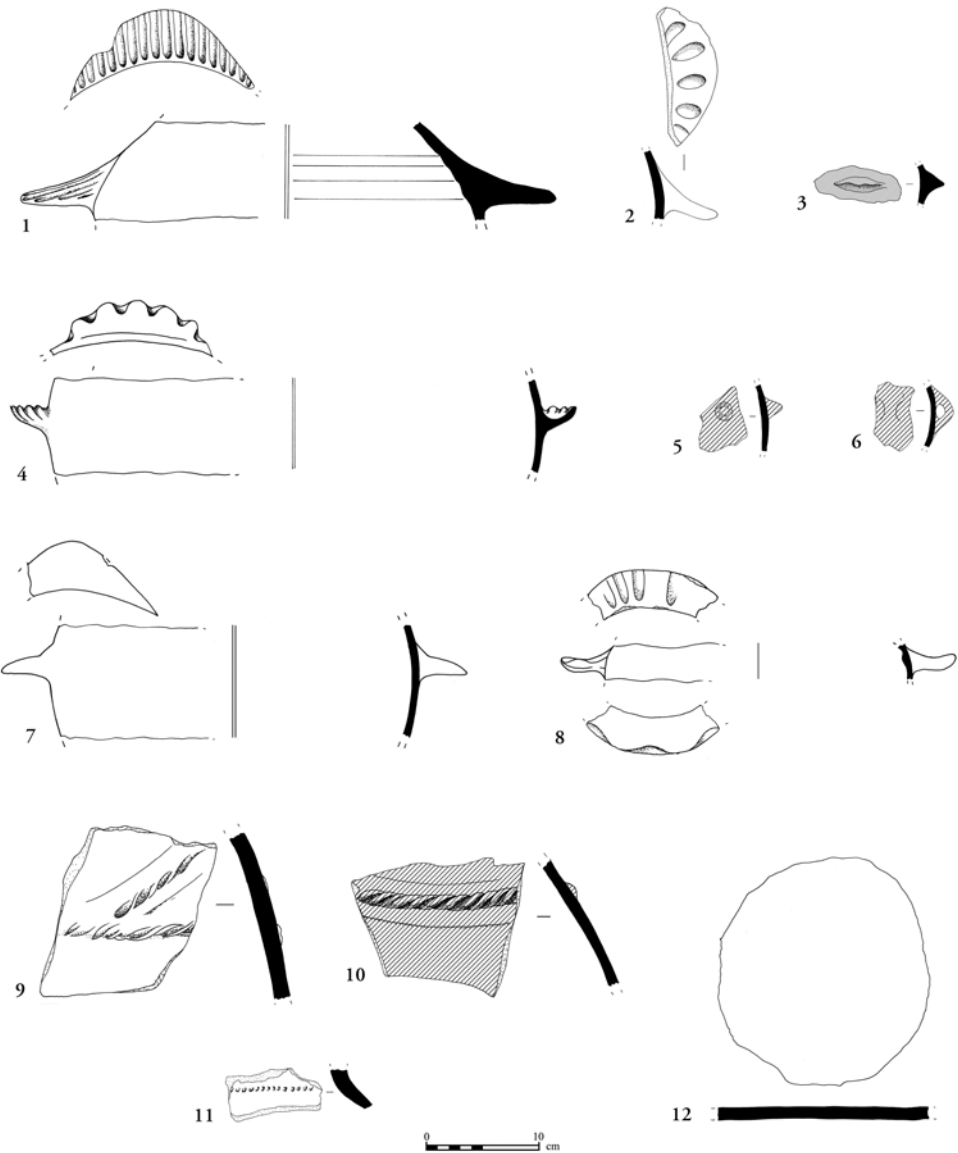


Fig. 27: Handles and Decorations

No.	Locus	Description
1	35	Reddish brown clay, light gray core, white inclusions, well fired.
2	303	Reddish brown clay, light-colored core, brown and gray inclusions.
3	31	Light brown clay and core, white and gray inclusions, red slip on outside.
4	34	Light brown clay, pale gray core, white, gray and glittering inclusions.
5	139	Brown clay, light brown core, white and glittering inclusions, red slip on outside.
6	139	Brown clay, black core, white and gray inclusions, red slip on outside.
7	112	Reddish brown clay, gray core, white and gray inclusions, well fired.
8	126	Light brown clay, pale gray core, gray and glittering inclusions, remains of soot.
9	139	Light brown clay and core, gray (calcite), black and glittering inclusions.
10	139	Reddish brown clay, gray core, red and gray inclusions, red slip on outside.
11	302	Reddish brown clay, light-colored core, white and gray inclusions.
12	304	Light brown clay, great core, white, gray and glittering inclusions.

Also quite widespread is a thickened plastic band on the body of the vessel. It is most common primarily on large storage vessels, particularly the pithoi (Fig. 26: 1), and rarely appears on jars and hole-mouth vessels. The plastic rope ornamentation also occurs on the body (Figs. 26: 5; 27: 9-10), or below the rim or the neck (Figs. 24: 5, 25: 11) on large storage vessels. Uncommon decorations include perforations (Fig. 27: 11) and irregular combing on the sides of bowls (Figs. 23: 1, 7).

Although the nether stone of a tournette was found within area G, all of the pottery found in the excavation was apparently handmade. An important characteristic of a small portion of the assemblage is its “metallic-like” quality.

The ceramic assemblage contains types that are characteristic of EB IA and EB IB in other sites in the lower Jordan Valley region mentioned in the text. The appearance of band slip, unknown in EB IA in the southern Levant, and the “metallic-like” quality of the firing on a small number of the bowls (a technique which usually characterizes EB II assemblages), reinforce the dating of the site to EB IB. The absence of types which are characteristic of the end of this period, particularly the prominent types of the Um Hammad family (see Bar 2010) and the carinated bowls (a possible prototype of the platter), suggests an early date within the EB IB. Such a date might also explain the appearance of EB IA types in the assemblage.

The multitude of large storage vessels, the smaller number of small vessels and the absence of special finds, may possibly indicate that the site was abandoned in an orderly manner.

THE FLINT ASSEMBLAGES (H. Winter)

Background

Only a portion of the site has been excavated so far, and the overall quantity of flint artifacts, 982, is very low. This analysis is based on combined figures of Areas G, H, and I, including Complex 1 in Area G which was excavated completely. At this stage possible conclusions should be considered as preliminary. Future excavations, analyses and experiments could change proportions, perhaps leading to different understandings.

The method introduced by us is not conventional, thus challenging the reader to some extent, but it aims to shed new light on important aspects of the community such as mobility and economy.

Remarks on the method

This study, preliminary as yet, is an initial attempt to introduce a new attitude to the research of early tool assemblages. It aims to present the relations between the tool kit and the way of life of the community according to the relative share of various working activities carried out by the population.

These relative shares are indicated by the percentages of tool groups in the assemblage designated for specific working activities. These groups include all tool categories present in the assemblage. As experiments, use-wear analyses and a detailed discussion of the function of tools were beyond the scope of this study, we had to rely on the morphological similarity of flint tools to modern tools and the activities designated to these, on the function of some tool types which had been studied in detail, e.g., sickles (Rosen 1997: 44-60) and to some extent, on personal experience and ethnographic observations of Bedouin herder-farmers at the Negev Highlands. Even so, is it possible that some other activities and procedures, still not fully understood, utilized flint tools. Furthermore certain tools could be used for a variety of tasks thus complicating the definition of activities. The methodology and the definitions used in this study are identical to those used for the Chalcolithic site of Ein Hilu (Bar *et al.* 2008: 192-193).

Remarks on Raw Materials and Sources

The sources of raw flint have not been studied in detail. The artifacts were not compared to the Munsell chart but most artifacts in all areas were of brown, good quality flint. The same type of flint was used both for the specialized sickle production and simple *ad hoc* tools. Gray, beige, black and coarse- or fine-grained materials were relatively scarce.

The Assemblage (Table 2, Figs. 28-30)

The assemblage from Area G contained cores, primary elements and all other waste products of Group A (waste), all components of Group B (debitage), and most of the tools of Group C (Table 2). In Group C, handicraft tools were dominant (37.1%), most of them being notches and denticulates. Sickles were abundant (29.0%), while scrapers (11.3%) and cutting implements (11.3%) were rather scarce. Most tools of Group C, except sickles, were of rather poor fabric, apparently prepared *ad hoc* from prefabricated blanks of Group B whenever needed. In this area Complex 1 was excavated completely; thus the number of flint artifacts was remarkably higher than in the other, only partly excavated, areas.

The small assemblage from Area H originates from an excavation limited in size, but it contained cores, primary elements and other waste products of Group A, all components of Group B, and some of the tools of Group C. Similarly to Area G, except the Canaanian sickles (42.9% of Group C), the few tools found were of poor fabric. No scrapers, and only a single cutting tool, were found. The extremely low number of retouched tools does not allow drawing any conclusions about the activities carried out at this area.

The rather small assemblage from Area I contained cores, primary elements and other waste products of Group A, components of Group B, and some of the tools of Group C. Again, most tools of this group were of poor fabric. Special attention should be paid to the fact that no cutting tools and only a single scraper were present, while sickles were abundant (42.6%). The single bifacial core tool fragment found in Area I was produced from black, high-quality flint with fine retouch and a biconvex cross-section, and should be attributed to the Neolithic Age.

The assemblage of Area G contributes the main data to the analysis. The summary presented in Table 2 demonstrates a common pattern in all three areas, and allows a preliminary evaluation of the figures. Handicraft (mean 34.9%) and reaping tools (mean 32.5%) are dominant, while scrapers (mean 9.6%) and cutting implements (mean 9.6%) are relatively scarce. The common pattern provides important indications on the economy and way of life at the site.

Table 2: Summary table of the flint assemblage

SD 2–The flint assemblage	Area G		Area H		Area I		Total all areas		Functional Group
Group A - Waste	n	%	n	%	n	%	Total	%	
Core	14		2		7		23		Waste to be discarded 68.3%
Primary flake	43		6		20		69		
C.t.e.	1						1		
Chunk	99		14		41		154		
Chip	374		9		41		424		
Total group A	531	72.4	31	45.6	109	60.2	671	68.3	
Group B - Debitage									Potential blanks for modified tools 23.2%
Flake	104		18		53		175		
Blade	29		8		5		42		
Bladelet	7		4				11		
Total group B	140	19.1	30	44.1	58	32.0	228	23.1	
Group C - Tools									Heavy woodwork Felling, tilling 1.2%
Axe					1		1		
Subtotal heavy woodwork					1	7.1	1	1.2	Handicraft Preparation of artefacts of perishable materials such as wood, bone, hide or even stone. 34.9%
Burin	1		1				2		
Notch	12		1		3		16		
Denticulate	8						8		
Borer	1						1		
Awl	1				1		2		
Subtotal handicraft	23	37.1	2	28.6	4	28.6	29	34.9	Scraping Cleaning of hides, food preparation, cutting 9.6%
End scraper	2						2		
Side scraper	4				1		5		
Fan scraper	1						1		
Subtotal scraping	7	11.3			1	7.1	8	9.6	Reaping 32.5%
Sickle segment	17		3		6		26		
Reaping Knife	1						1		
Subtotal reaping	18	29.0	3	42.9	6	42.6	27	32.5	
Retouched (or backed) blade	2						2		Cutting Butchering, dismembering, food preparation, carving 9.6%
Retouched (or backed) flake	2						2		
Retouched fragment	3						3		
Backed knife			1				1		
Subtotal cutting	7	11.3	1	14.3			8	9.6	
Truncation	2				1		3		
Undefined, multiple, trimmed	5		1		1		7		
Subtotal general purpose	7	11.3	1	14.3	2	14.3	10	12.0	
Total group C	62	8.4	7	10.3	14	7.7	83	8.5	Total of tools 8.5%
Total	733	100	68	100	181	99.9	982	100	

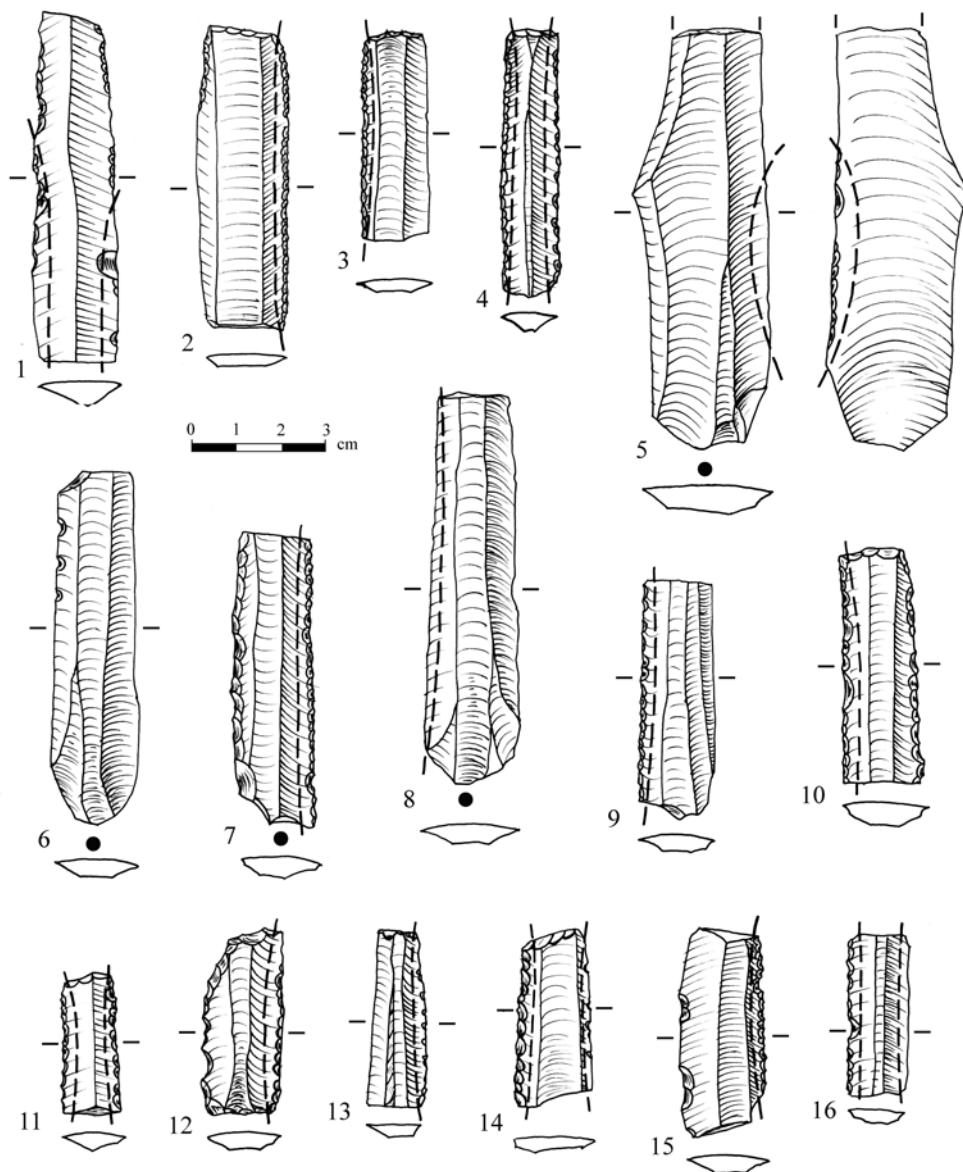


Fig. 28: Sickle elements: Area G: 4 – Bilateral retouch and sheen, truncated; 5 – Reaping knife, unilateral sheen; 6 – Unused; 7, 10 – Backed, unilateral sheen; 8, 9 – Unilateral sheen; 11, 14 – Unilateral retouch, bilateral sheen, truncated; 12, 13, 15 – Unilateral sheen, truncated; 16 – Bilateral sheen. Area H: 2 – Unilateral sheen, truncated; 3 – Unilateral sheen, retouched, truncated. Area I: 1 – Bilateral sheen, truncated

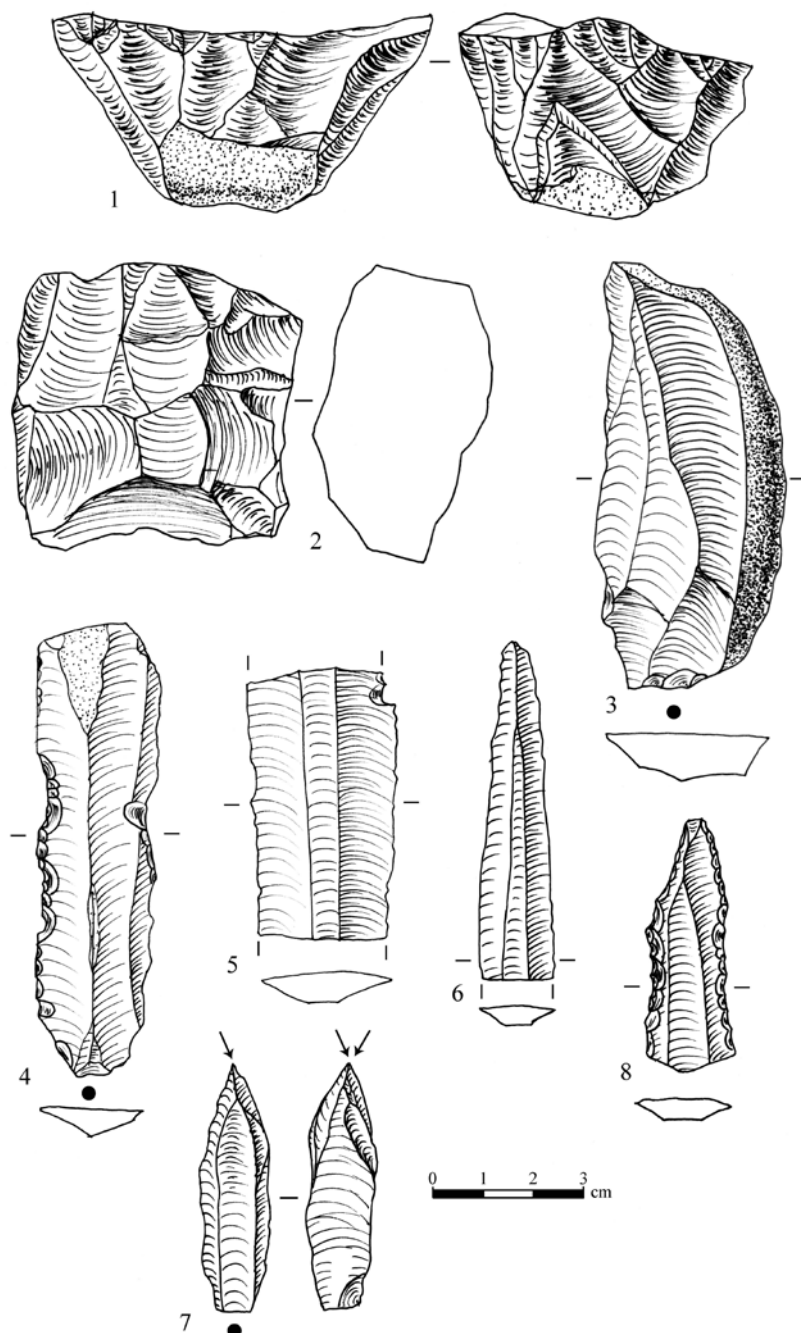


Fig. 29: Area G: 1, 2 – Core; 4 – Retouched Canaanite blade; 5, 6 – Canaanite blade; 8 – Borer. Area H: 3 – Naturally backed knife; 7 – Burin

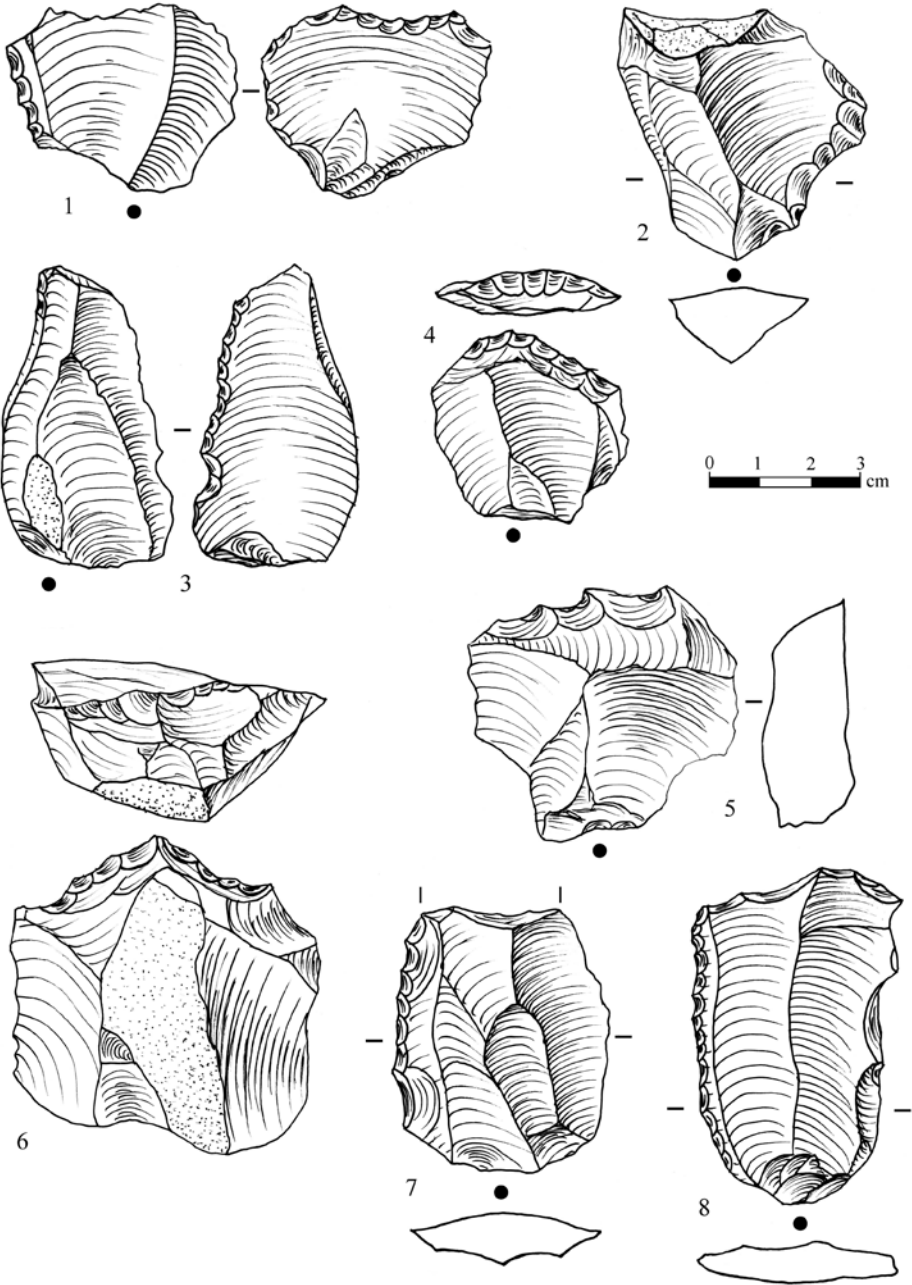


Fig. 30: Area G: 1, 2 – Notch; 3, 5 – Denticulate; 4 – End-scraper on flake; 6 – Coarse end-scraper; 7, 8 – Side-scraper

The sickle elements (Table 3)

With the beginning of the intensive exploitation of wild cereals in the Natufian and later on, during the Neolithic and Chalcolithic periods, of cultivated varieties, sickles are a most important indicator for the economy of the society. Furthermore changes in the technology of the sickle production and the morphology of the segments were inevitable as over time the variety of plants changed and cultivated areas grew, thus needing the development of more efficient tools. These changes are important chronological indicators (Winter 2006).

All sickle elements present were of fine-grained, brown, flint and produced by the Canaanite technology (Table 3). Some 18.5% of the elements were fragments, and three pieces were backed; 37.0% of the segments were reversed in the haft and had sheen on both cutting edges, The retouch of the cutting edge was in most cases just a fine serration, 44.4% on one cutting edge, 11.1% on both edges, and the rest without retouch. No deeper denticulation was found, and 63.0% had one truncation.

Table 3: Sickle blades and Canaanite reaping knives

SD 2 – Canaanite sickles and reaping knives	Area G	Area H	Area I	Total	
	n	n	n	n	%
Complete	15	3	4	22	81.5
Fragment	3		2	5	18.5
Total	18	3	6	27	100
Backing	3			3	11.1
Double truncation	1			1	3.7
Truncation + snap	12	2	3	17	63.0
Proximal end + snap	3		1	4	14.8
Distal end + snap		1		1	3.7
Retouched edge single	9	3		12	44.4
Retouched edge double	3			3	11.1
No sheen	1			1	3.7
Sheen single	10	2	4	16	59.3
Sheen double	7	1	2	10	37.0

DISCUSSION AND CONCLUSIONS

Table 2 presents the characteristics of the assemblage and provides important indications for the economy of the society. Some important points are listed below:

1. Cores and waste from the production of flakes, blades and tools (except sickles) were present in all areas. The cores are poor, and core-trimming elements are almost missing.
2. Most tools, except sickles, were prepared rather carelessly, indicating the decline of flint technology with the onset of the Metal Ages. Besides the decline in flint technology for

general purposes, the presence of the advanced Canaanean technology for sickle and blade production is well attested.

3. Hunting implements and other tool types attributed to the Stone Age, and celt tools such as axes (one exception, see Area I above) abundant during the Neolithic and Chalcolithic periods, were not found.
4. All sickle elements were on Canaanean blades, but to date no cores for the production of these blades have been found on the site.
5. There were few scrapers (especially fan scrapers) and cutting tools.
6. Handicraft tools and sickles were dominant. It should be mentioned that most tools in the handicraft functional group were notches and denticulates. These tools are simple, easily prepared whenever needed, and effective for wood and bone processing. They point to a production of tools or other artifacts from perishable materials.

The presence of all three groups of flint artifacts and in reasonable relative percentages (Table 2 – A, B, C), provides evidence for a local *in situ* flint industry, as opposed to sporadic exploitation of flint.

Canaanean technology needs specialization of the artisans and high quality raw flint. It reached its peak during the Early Bronze Age, and was widely used in the Intermediate Bronze Age. Later, finds become rarer and gradually disappear. Finally, in the Late Bronze Age, it was finally replaced by the geometric sickle technology. As no cores for Canaanean blades were present, it may be assumed that these were produced at a still unknown location, maybe not at the site. Actually, the tools seem to originate from two different industries, a local, *ad hoc* technology for tools intended for everyday use, and a specialized Canaanean blade industry.

The share of the main activity groups in the assemblage (Table 2) demonstrates the dominance of handicraft tools (34.9%) and reaping tools (32.5%). Cutting tools (9.6%) and scraping tools (9.6%) indicate a lesser scope of the activities carried out with these tools.

Despite the small sample, the importance of handicraft tools apparently points to an established permanent settlement, and the high proportion of sickles points to an economy based mainly on grain farming. It also seems that tools serving for meat and hide processing (cutting and scraping implements) played a lesser role, thus indicating that herding was not the major contributor to the economy and the diet of the population.

The flint assemblage confirms the dating of the site to the Early Bronze Age, with no indication of any other or transitional period.

THE GROUND STONE ASSEMBLAGE (D. Ben-Yosef)

A total of 34 stone objects used were discovered during the excavation (breakdown presented in Table 4). The stones were recovered from fills, walls and floors in different areas: Area G – 20 items; Area I – 7 items (including 2 surface finds within the excavation area) and Area H – 6 items. One item was found on the surface near the excavation area.

The items were produced from three kinds of stone: limestone (25 items; 73.5%), basalt (7 items; 20.6%), and Nubian sandstone (2 items, 5.9%).

The stone artifacts are discussed below according to their type, and contemporary parallels are presented.

Grinding Tools

The vast majority of the tools found at the site were grinding tools (26.5% of the assemblage). These were divided according to their general morphology:

Grinding slabs: Six broken items were found, made of hard limestone (Figs. 31: 1, 2). It is apparent that all sides of the slabs were worked, and it seems that they were discarded after they broke. Three of the objects have a slightly concave working surface, and the three others have a slightly convex working surface. These dissimilarities are apparently related to the differences in the kinds and directions of grinding. Parallels were found at Arad (Amiran *et al.* 1978, Pl. 79: 1, 2), Tel Bet Yerah (Getzov 2006, Fig. 3.59: 5) and Qiryat Ata (Rowan 2003, Fig. 6.1: 3-4).

Upper grinding stones: Two complete loaf-shaped items made of limestone were found. One has a flat working surface, while the other has a convex working surface. Parallels were found at Tel Bet Yerah (Getzov 2006, Fig. 3.59: 1) and Arad (Amiran *et al.* 1978, Pl. 80: 8).

Pestle/Upper grinding stone: One finely crafted item was found in Area G. It is made of basalt, is conical, and there are signs of use at both ends (Fig. 31: 3). There are also signs of wear along one side, and it seems that it was also utilized in secondary use as an upper grindstone for delicate grinding. Parallels were found at Tel Bet Yerah (Getzov 2006, Fig. 3.58: 14) and at Qiryat Ata (Rowan 2003, Fig. 6.2: 5).

Basins: Eight basins were found at the site (23.5% of the assemblage). These were divided according to their depressions depth:

Deep basins: Three limestone basins were found. A very large one with a depression 30-35 cm in diameter and 16 cm deep was found in Area H (Fig. 20). This was a stationary vessel used for crushing and grinding. The second basin is portable, and has a depression 16 cm in diameter and 13 cm deep. This was used for crushing together with a pestle. A parallel was found at Arad (Amiran *et al.* 1978, Pl. 78: 7, 10), dated to Early Bronze Age II. The third

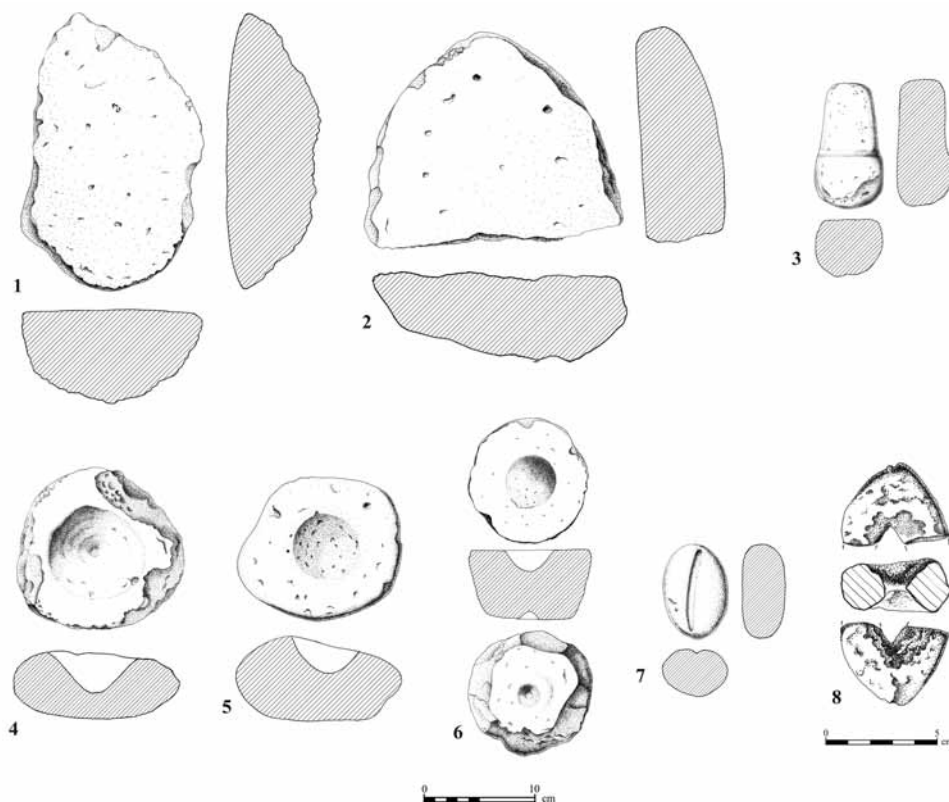


Fig. 31: Ground stone tools

basin, of similar size, was well-worked on all of its sides. A close parallel was found at Tel Bet Yerah (Getzov 2006, Fig. 3.58: 7).

Shallow basins: Five basins of this kind were found in the excavation, all made of limestone. Two are medium-sized (Figs. 31: 4-5), with the basin 7-8 cm in diameter and 3-4 cm deep. It is possible that they were used as small mortars. Parallels were discovered at Tel Bet Yerah (Getzov 2006, Fig. 3.58: 12), Qiryat Ata (Rowan 2003, Fig. 6.2: 11) and Arad (Amiran *et al.* 1978, Pl. 78: 5-6). The other three stones are shallower basins 4-5 cm in diameter and 1.0-1.5 cm deep. These may be very small stone bowls. Parallels were found at Qiryat Ata (Rowan 2003, Fig. 6.2: 4).

Pounders: Three limestone and two sandstone artifacts used for crushing and pounding, probably in the preparation of food, were found. One of the limestone tools is spherical, and the two others are elliptical. Parallels were found at Qiryat Ata (Rowan 2003: Figs. 6.2: 1-3)

and Ashkelon-Afridar (Khalaily 2004, 152). The Sandstone hand tools were found broken. One is rectangular and made of light brown colored sandstone; the other is elliptical and made of reddish sandstone.

Stone rings: Four items were found, three of basalt and one of limestone. The rings are relatively uniform in size, and it is apparent that they were perforated through their center by means of a drill. It is difficult to determine what they were used for, but it is possible that they were loom weights. Parallels were found at Qiryat Ata (Shamir 2003, Fig. 7.5: 5-12) and 'En Shadud (Braun 1985, Pl. XI: A).

Elliptical stones with bi-conical perforations: Two limestone objects of this kind were found in the excavation in Area G (Fig. 31: 8). One item is relatively small, and seems to be elliptical. The other is larger and round. Parallels were found at Tel Bet Yerah (Getzov 2006, Fig. 3.58: 3) and at Qiryat Ata (Rowan 2003, Fig. 6.2: 7).

Basalt bowls with a flared rim: Two objects of well-worked dense basalt. One is a fragment of a pointed and flared rim about 2 cm thick, and the other is a fragment of a side of a bowl about 3.5 cm thick. Parallels were found at Ashkelon-Afridar (Khalaily 2004, Fig. 23: 1-2), 'Ain Assawir (Rowan 2006, Fig. 6.1: 3-4) and Qiryat Ata (Rowan 2003, Fig. 6.4: 3-4).

Various items: One limestone nether stone of a tournette (Fig. 31: 6) was found in Area G. The object consists of two well-worked basins; one opposite the other. The upper basin is deep, and the lower one is shallow. The rim of the upper basin was made extremely smooth so as to allow the upper stone of a tournette to spin in it. A parallel was found at 'En Esur (Rowan 2006, Fig. 6.5: 8), where the item is dated to the Chalcolithic period, and is defined as a pivot or socket. Contemporary tournettes for ceramic production were found at Arad; however these have a single depression.

A worked elliptical stone with a notch along its length was made of limestone (Fig. 31: 7) and has a long slightly curved artificial groove on one side. It may have been used as a female fertility figurine (in the Neolithic period style), for straightening reeds, or some other unknown function. A contemporary parallel was found at 'En Shadud (Braun 1985, Pl. XI: C. Fig. 37: 7).

CONCLUSIONS

The following generalizations can be drawn from the 34 stone tools found in the excavation:

The principal raw material from which the items were produced is limestone (25 objects, 73.5%), followed by basalt (7 objects, 20.6%), and Nubian sandstone (2 objects, 5.9%). The limestone and basalt are obtainable from sources close to the site (the Wadi Far'ah region). The closest source of Nubian sandstone, on the other hand, is across the Jordan, in the vicinity

of the city of Salt and east of the Dead Sea. The presence of this kind of stone at the site might be indicative of relations that existed between the two banks of the Jordan during the EB I.

The stone artifacts that were identified were mainly used for crushing and grinding, probably of cereal, which was one of the principal types of work conducted at the site.

With the exception of four items, most of the artifacts are simple and do not reflect a high level of stone craftsmanship. Finding a tournette indicates that ceramic production was probably part of the activities at the site.

Table 4: Breakdown of the Stone tool Assemblage

Type/Row material	Basalt	Limestone	Sandstone	Total	%
Grinding Stones	1	8		9	26.5
Basins		8		8	23.5
Pounders		3	2	5	14.6
Stone Rings	3	1		4	11.8
Perforated Items		2		2	5.9
Vessels	2			2	5.9
Various Items	1	3		4	11.8
Total	7	25	2	34	
%	20.6	73.5	5.9		100

THE FAUNAL REMAINS (G. Bar-Oz and N. Raban-Gerstel)

Animal bones were collected by hand-picking, while dry and wet sifting through 6 mm mesh was done in selected loci.⁶ Zooarchaeological and taphonomic analysis procedures followed Raban-Gerstel *et al.* (2008). Identified specimens were examined and scanned for preliminary taphonomic observations, and coded anatomically and taxonomically in an electronic database. Morphological markers aided differentiation between closely related species. Separation of sheep (*Ovis aries*) from goat (*Capra hircus*) was based on morphological criteria of selected bones (following Boessneck 1969). Skeletal elements of sheep and goat that could not be identified to species were combined in a sheep/goat category. Separation of aurochs from domestic cattle was based on morphometric analyses. Measurements of fully ossified bones were taken following von den Driesch (1976).

The faunal remains of Sheikh Diab 2 encompass predominantly domesticated livestock, with some presence of wild game. The distribution of identified animal bones is shown in Table 5.

6 The complete research protocol, faunal analysis procedures and dataset for each identified zooarchaeological specimen may be obtained from the authors.

A total of 55 complete and fragmentary identified bones were collected from the different areas of excavation of Sheikh Diab 2. Most of the bones are from Area G, the main area of excavation (NISP = 47). Area I, which is adjacent to Area G, contained an additional 8 identified bones. Of the excavated loci, L 140 was found to contain the most abundant bone assemblage (22 of the identified bones, 40% of total NISP). The remaining loci included only single animal bones. Aside from the abundance of bones in L 140, the spatial patterning of animal bones does not appear to differentiate between the residential and courtyard structures of the areas of excavation. Furthermore, the abundance of the different species of livestock also does not show a distinctive pattern. It seems most likely that the butchered livestock were consumed fresh, and thus their bones were discarded near and inside the hamlet, rather than in the open area.

Analysis of species abundance from additional sites in the region demonstrates that the relative importance of the various livestock animals changed very little over time from the Chalcolithic to Early Bronze Age Ib. As in the nearby Chalcolithic sites of Ein-Hilu (Bar *et al.* 2008) and Fazael 2 (Bar-Oz and Raban-Gerstel *nd*) the subsistence of Ein-Hilu was based predominantly on four livestock ungulates: cattle, sheep, goat and pigs. However, according to these data the importance of pigs increased in the EB IB. However, sheep and goats continued to dominate subsistence at all the sites. At the same time cattle contribution remains a minor factor in the economy, and does not change significantly throughout the periods discussed.

Pig remains also appear to be evenly distributed, and there is no major difference in their spatial abundance. The overall small size of the bones attests that they derive from domestic pig (*Sus scrofa domesticus*) rather than wild boar (*Sus scrofa*). In addition, the bone assemblage contains three post-cranial elements (scapula glenoid-fossa, proximal metacarpus and proximal metatarsus) of an equid. These bones could not be identified to species, and it remains uncertain whether the assemblage represents the remains of ass (*Equus asinus*), horse (*E. caballus*) or onager (*E. hemionus*). Given the context of the finds, i.e., in a rural EB I village, and the absence of additional game animals, it seems most likely that the remains are of an ass, the most common draft animal in the southern Levant during the Early Bronze Age. Only two bones (proximal radius and distal metacarpus) of the sheep and goat category were definitely identified as a sheep (*Ovis aries*). Other species found in Sheikh Diab 2 include a single bone fragment of a Mesopotamian fallow deer (*Dama mesopotamica*). A single example of a freshwater mollusk (*Unio* sp.) was found.

Bone surface modifications appear only on three specimens. These are two specimens with butchering marks (a filleting mark on the proximal radius of fallow deer and an unidentified mark on a femur shaft of a sheep/goat), and a single sheep/goat metacarpal shaft which bore the remains of carnivore tooth-marks. The shape and structure of the tooth-marks suggest that

they were made by a dog/wolf-sized animal. This indicates that some of the remains were discarded soon after their abandonment. The rare occurrence of bone surface modifications does not enable further analysis on the meat consumption behavior of the site occupants. In addition, none of the bones was found to have been burnt.

The bone assemblage is too small to allow detailed analysis of anatomical representation or age structure. However, given their importance, the elements were combined into meat refuse (long bones, scapula and pelvis) and butchery waste (hooves/toes, lower limbs, heads and neck). It appears that the occurrence of skeletal elements of sheep, goats and pigs represents a mixture of both types of refuse, and there is no distinction between gourmet portions (upper limbs and axial skeleton) or less meaty elements (skull, lower limbs and hoof). The anatomical representation at EB I Sheikh Diab 2 is therefore interpreted as reflecting the disposal of butchered carcasses.

The sparse faunal assemblages did not allow the reconstruction of a mortality profile. However, bone epiphysis fusion reveals that most long bones of sheep and goat and cattle derived from adult individuals. These patterns suggest that these animals were raised and exploited primarily for their secondary products. A different trend appears for the pig remains. Of the five identified long bones, one belonged to a young individual under the age of 12 months. It seems reasonable to assume that pigs were culled differently from sheep and goats, and were slaughtered young. Thus, it appears that pig-raising was oriented toward meat, while sheep and goats seem to be more related to a secondary product-based economy (Grigson 1995).

To conclude, the faunal sample from Sheikh Diab 2 is small but significant. The assemblage adds new faunal data to the limited database of Early Bronze Age subsistence strategies in the Jordan Valley. The results of the zooarchaeological study enable the drawing of several broad conclusions regarding the subsistence economy and butchery practices that were carried out at the site:

1. The economy was based primarily on sheep and goats, and includes certain exploitation of pigs. The dominance of sheep and goats indicates their economic importance. It shows that mixed groups of sheep and goats were herded in the vicinity of the site.
2. The presence of pigs suggests that it was a permanent settlement. It also attests to the lush environment that existed in the vicinity of the site.
3. Presence of freshwater mollusks shows that the ecological landscape of the site included freshwater sources in the vicinity. This provided the inhabitants with the optimal conditions to raise cattle and pigs nearby.
4. The diversity of the surrounding landscape is further attested to by the presence of fallow deer, indicating the nearby existence of a somewhat wet environment with forest or woodland habitat.

5. Age profiles and the representation of bone refuse indicate that meat was consumed on the site. The high occurrence of adult sheep and goat individuals indicates that secondary products such as milk and wool were exploited, as well as meat (Grigson 1995: 257).
6. Tooth-marks on one bone suggest that scavengers carnivores (most probably dogs) had some access to refuse.
7. Hunting was practiced by the site's inhabitants, but not on an intensive scale.

Table 5. Number of identified specimens (NISP), minimum number of elements (MNE), and minimum number of individuals (MNI) of each taxon represented

	<i>Bos taurus</i>		<i>Capra/Ovis</i>		<i>Ovis aries</i>		<i>Equus sp.</i>		<i>Sus scrofa</i>		<i>Dama mesopotamica</i>	
	NISP	MNE	NISP	MNE	NISP	MNE	NISP	MNE	NISP	MNE	NISP	MNE
Head:												
Skull Fragment			1	1								
Mandible Teeth			1	1								
Maxilla Teeth	2	1							1	1		
Body:												
Ver: Lumbar									1	1		
Rib Head			1	1								
Rib Proximal Shaft			4	4								
Rib Distal Shaft			1	1								
Forelimb:												
Scapula Glenoid Fossa							1	1				
Scapula Blade			1	1					1	1		
Humerus Shaft	1	1	1	1					2	2		
Humerus Distal			1	1								
Radius Proximal			1	1	1	1						
Radius Shaft			3	2							1	1
Metacarpus Complete									1	1		
Metacarpus Proximal			3	3			1	1	1	1		
Metacarpus Shaft			3	3								
Metacarpus Distal					1	1						

Hindlimb:												
Pelvic acetabulum			1	1								
Pelvic Ilium Shaft								2	2			
Femur Shaft			4	1								
Tibia Proximal			1	1								
Tibia Shaft			1	1								
Metatarsus Proximal			2	2			1	1				
Metatarsus Shaft			2	1								
Metatarsus Distal			1	1								
Toes:												
Phalanx 1								1	1			
Phalanx 2								1	1			
Metapod Shaft			2	1								
NISP	3		35		2		3		11		1	55
%NISP	5%		64%		4%		5%		20%		2%	100%
MNI	1		2		1		1		2		1	8

GENERAL CONCLUSIONS

Sheikh Diab 2 is an example of a well-preserved single-period site that dates to the middle of EB I, probably early in the EB IB. The small village or hamlet includes residential complexes densely spread across a spur next to a perennial stream.

The excavations have disclosed the following characteristics of the site:

1. The hamlet is built of irregular elliptical residential complexes, separated by alleys and squares. Even though it is still not possible to determine if the complexes were constructed at the same time, or if they were added as the site developed, their architectural outline has been preserved, as were the spaces used by people and animals to move between the different units. This is one of the best preserved EB I rural settlements in the southern Levant and a unique example of such a settlement type in the Jordan Valley.
2. There were 10-12 residential complexes in the site, in each of which may have lived a nuclear family. Therefore it can be suggested that the settlement numbered about 100 people.
3. The plan of the residential complexes is in the style of a courtyard house, architectural units and different functions, for living and storage, inside a courtyard surrounded by a wall. The outlines of the courtyards are irregular, with a tendency to be elliptical. Closing

off the unit by means of walls and doors may attest to a desire for maintaining privacy and preventing animal escape. The varying sizes of the different complexes may possibly reflect family size or the owners' assets, thus indicating a society in which some of its population had more resources than others.

4. Based on the architecture and ceramics, it seems that the site dates to the first part of EB IB.
5. The economy was mainly based on growing grain, as well as the grazing of animals.
6. The site was built on the natural chalk bedrock of the spur. Such construction made it possible to exploit the natural drainage of the slope, freeing many areas near the wadi for growing grain. The construction was also located on the spur probably to distance the residential complexes from the floods and the damp flatlands along the banks of the wadi.
7. The ceramic and ground stone assemblages attest to some kind of connection between the two banks of the River Jordan in the period under discussion.
8. The multitude of large storage vessels, the paucity of small vessels, the absence of special finds, and the absence of any signs of destruction, may possibly bear witness to an orderly abandonment of the site during the EB IB. This is consistent with a significant decrease in the scope of settlement which was identified in the Jordan Valley during the transition from EB IB to EB II, together with intensified settlement along the slopes of the central hill country (Bar 2008).

Further research at the site and its surroundings will provide a clearer picture of the rural life in the EB I within the Jordan Valley.

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