STRATA

Bulletin of the Anglo-Israel Archaeological Society

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Editorial

This year's collection of articles in *Strata* is as diverse and interesting as usual, and I am grateful to all those who have submitted papers. All articles are peer reviewed before being accepted. After peer review, there is an opportunity for each author to re-submit after making changes, and a new peer review process. There is only so much space in an annual like *Strata*, but the journal continues to thrive, with excellent contributions from highly respected scholars.

It should be noted that, along with new work, this journal also focuses on making articles published in other languages available in English, and so we continue to welcome translated pieces. In this issue there is an article by Amos Kloner which is an updated version of his Hebrew article, 'Amphorae and Urns as Grave Markers in Idumaea, Judaea, and Nabataea', in L. Di Segni, Y. Hirshfeld, Y. Patrich, and R. Talgam (eds.), *Man Near a Roman Arch, Studies presented to Prof. Yoram Tsafrir* (Jerusalem: 2009). Updated articles that have already been published in *English*, however, are not included. Rather, any work that has been originally published about Israel-Palestine in the languages of the region is sought in order to make this available to English-readers: an international readership.

I will not summarise the articles here as abstracts are now found at the head of each piece, for ease of use. This year *Strata* also has the innovation of an archaeological memoir by Shimon Dar. Any other memoirs are welcome, especially if accompanied by unpublished photos as here. It is hoped that such memoirs will serve to contextualise archaeological investigations and provide tributes to the many people that have been involved, not necessarily just those whose names appear on the final publications.

Strata also has a summary of the most interesting discoveries in the region of Israel-Palestine: 'Reports from Jerusalem', provided by Stephen Rosenberg, an edited version of what appears on the AIAS website and in posts to members.

All articles are listed on the website and the full texts of articles are available via Academic Search Premier (EBSCO) via many university libraries. *Strata* is indexed, but not available as a full text, in the ATLA Religion Database.

I would also like to note that this issue is also the last one to appear under the chairmanship of Prof. Hugh Williamson and vice-chairmanship of Ashley Jones. These two much-respected and appreciated colleagues have been very effectively engaged with the work of the Society for many years and have done an enormous amount to further its goals. Hugh Williamson will remain active still as new Vice-Chairman. Included in this issue are votes of thanks from long-standing committee members Sean Kingsley and Barbara Barnett.

I am very grateful to Sandra Jacobs, who initially acted as assistant to Ashley Jones, and then has taken over as Reviews Editor. Her enthusiastic and proactive

efforts have yielded an excellent crop of reviews his year and I am very grateful. I am also grateful to Rupert Chapman and Alison Friend for their careful proof-reading.

The Society's annual grants in 2010 went to Zoe Griffin and Lydia Atubeh, whose reports are included here. The joint grant report from last year's recipients – Ian Cipin and Sevinc Duvarci – appears also. The diverse lectures given in the course of the year are summarised. In the calendar of events there was also an excellent event on Sunday, 25th April 2010, when Dr Jack Green provided a tour of the Ancient Near Eastern gallery of the Ashmolean Museum, Oxford.

The AIAS would like to thank the following people for their very generous donations: Alan Brener, Peter Brett, Helen Egford, Graham Morris, J. Slome, Wilfred Webber, Elaine Middleton, Lily Dicks, Paul Strickland, Yvette A. Rogers, Stephanie Alman, Catherine Todor, Martin Lubowski, R. Grutz, M. Franklin, Irenie Morley, the Polonsky Fund, Alison Friend, Jack Friend and Joe Dwek.

Joan E. Taylor

Contents

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Al-Maghar – An Early Bronze Age Walled Town in the Lower Soreq Valley and the EB IB–II Sequence in the Central Coastal Plain of Israel

RAM GOPHNA, YITZHAK PAZ AND ITAMAR TAXEL

The site of El-Maghar, located in the central coastal plain of Israel was an important settlement during the EBI-EBII, between the late 4th-3rd millennia BCE. During the EBI Egyptian immigrants seem to have resided among the local population, as at sites like Lod and Azor in the same region. The EB settlement at Maghar reached its zenith during EBII, when it was fortified by a brick wall, but was not settled in EBIII.

The site of Al-Maghar (in Arabic: 'the caves') is located at a strategic point between the Early Bronze Age settlements of the northern and southern coastal plain.

It has not been excavated and is now largely destroyed, and its full significance during the Early Bronze Age has not been documented despite its predominance as the sole example of a fortified centre in this region known to date. In this article, we will attempt to reconstruct the history of the site during the Early Bronze Age based on the abundant evidence from numerous surveys. Rich EB IB and EB II finds from both the settlement and the burials collected at the site (including Egyptian and Egyptianised pottery of Naqada IIIb-c1) reveal that the Early Bronze Age settlement's history follows the general trajectory towards urbanisation that took place during EB IB–EB II in the Land of Israel (see Getzov, Paz and Gophna 2001).

Al-Maghar: geography and topography

The site of Al-Maghar is situated 12 km east of the Mediterranean coast (Israel Grid Reference 1297/1387), 18 km south of Azor, 12 km west of Gezer, and 10 km southeast of the late EB I site of Palmahim Quarry (Fig. 1). It lies upon a high kurkar (fossilised sandstone) hill (Fig. 2), part of the easternmost of three kurkar ridges that extend parallel to the Mediterranean coast of Israel. This kurkar ridge is dissected by numerous streams and their tributaries descending from the foothills to the east. Naḥal Soreq, one of the major streams of the central coastal plain, flows c.750 m to the south of Al-Maghar, while Naḥal Eqron, a tributary of Naḥal Soreq, encircles the southwestern fringes of the site and defines its southern boundary. The

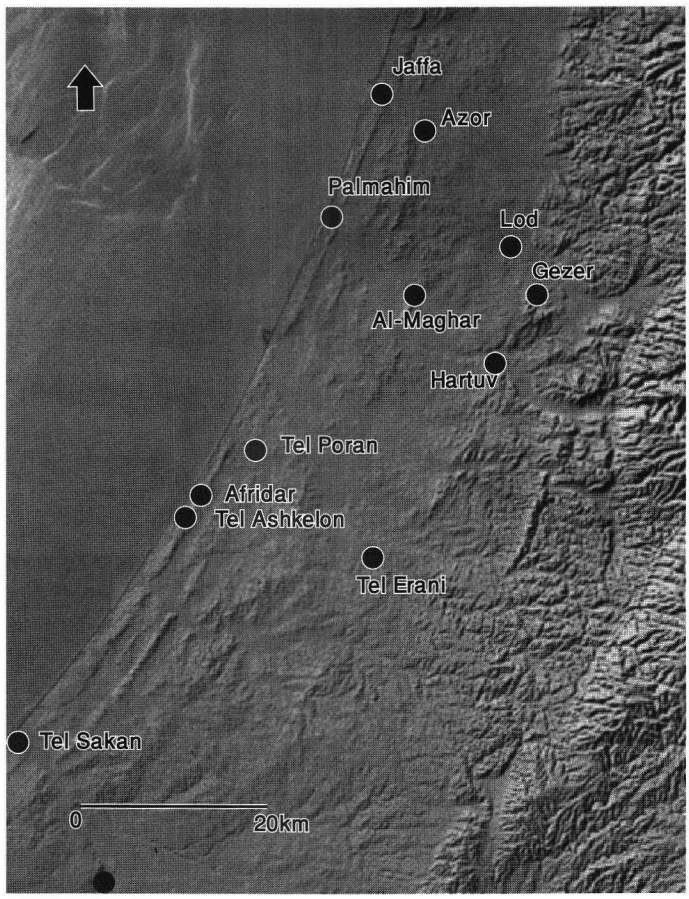


Fig. 1. Al-Maghar: site location in the central coastal plain of Israel

hill on which Al-Maghar is located represents the southern end of a long, undisrupted stretch (2.5 km) of the kurkar ridge, the highest point of which (to the north of the site) is 94 m above sea level. At the southern end are two summits separated by a saddle: the Northern Summit is 85 m above sea level and the Southern Summit is c.10 m lower. The eastern slopes of the summits descend steeply towards the alluvial plain, and the kurkar bedrock is exposed in many locations on these slopes, especially near the summits. The steep, terrace-like topography is a result of the above-mentioned geological characteristics and intensive human activity at the site throughout its history, including during the Early Bronze Age (see below). The southern slope of the hill is much more moderate, with the kurkar bedrock exposed over most of its area. To the south of this slope is a narrow plain through which a local route (most probably used since antiquity) runs from southeast to northwest. To the south of this route is a low, wide hill (c.50 m above sea level)

with relatively moderate slopes. During certain periods, this hill (hereafter the Southern Hill) comprised an integral part of the settlement that existed at Al-Maghar.

The northeastern part of the Early Bronze Age site was located on the saddle between the two summits, where modern-day water reservoirs are found (Fig. 3). The estimated size of the ancient EB site is about 7 ha. At two points along the southwestern side of the site, segments of a brick wall, probably a fortification wall, are still visible today (Fig. 4).

History of research

The site of Al-Maghar was first surveyed during the second half of the 19th century by European researchers, who mainly described the Arab village that existed at the site, in addition to a few ancient remains discovered by accident (see Guérin 1875: 36; Conder and Kitchener 1882: 411–413, 427). It is interesting to note that Ben-Arieh (1987) suggested the possibility that Egyptian immigrants may have settled at Al-Maghar during the 19th century CE, which he believed was one of the reasons for the enlargement of the village at that time.

The first archaeological study of Al-Maghar was undertaken in the 1940s by the late J. Kaplan, who surveyed the site and described the various periods during which the site was occupied and the distribution of the finds within its boundaries. Kaplan was also the first to publish Chalcolithic and EB I finds discovered at the site (Kaplan 1953: 140–41, and see below). In 1946, J. Kaplan purchased from the villagers of Al-Maghar a group of EB I ceramic vessels that had been looted from graves. Additional surveys have since been conducted at the site by Gophna (1974: 51–3), Sasson (2003),

Fig. 2. Al-Maghar: general view of the site, looking north-west (photo taken during the 1960's)

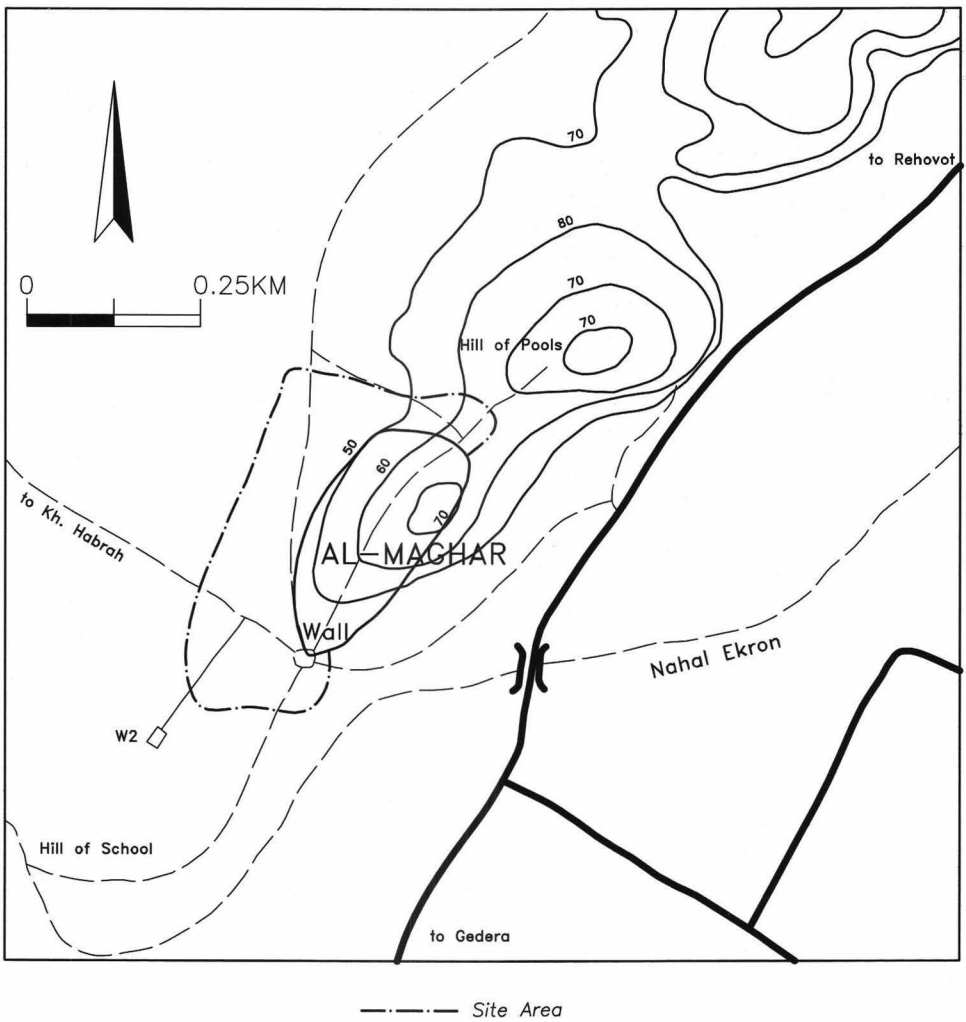


Fig. 3. Al-Maghar: site plan

Barda and Zbenovich (2005; survey of the Map of Gedera [Archaeological Survey of Israel, Map No. 85]) and Taxel (as a supplement to the ongoing survey of the Map of Yavneh [Archaeological Survey of Israel, Map No. 75]).[1]

During the 1960s, following destruction of parts of the site due to quarrying, a number of Chalcolithic burial caves containing ossuaries were discovered and partially excavated by Y. Shapira on behalf of the Israel Department of Antiquities (see Gophna 1974: 52). Also during the 1960s, an orchard was planted on the terrace to the west of the deserted Arab village, resulting in the discovery of the western side of the ancient EB settlement with many finds on the surface (Figs. 5, 6).

Fig. 4. Al-Maghar: a segment of the brick fortification wall, looking east

R. Gophna, during his survey of the site in the late 1960s, was the first to collect EB II pottery at Al-Maghar and to detect remnants of a brick fortification wall on the southwestern flank of the site. He estimated the size of the EB site, which extended over the southern edge of the kurkar ridge and the terraces that descend westward, as at least 7 ha (Gophna 1974: 52). The Early Bronze Age site of Al-Maghar was mentioned several times during the 1970s–80s (see Gophna 1974: 51–3; 1984: 28–9) and has been well known since then.

Al-Maghar was recently resurveyed by the authors in the winter of 2007. The pottery analysis presented here is based mainly upon the finds collected by the authors, including two parts of a basalt tournette, evidence of the existence of a potter's workshop.

The above-mentioned surveys, and especially those conducted by Kaplan in the 1940s and by Taxel in recent years, have yielded much evidence concerning the history of Al-Maghar and its material culture. The finds indicate that throughout its history the nucleus of the settlement alternated between the Northern and Southern summits. The earliest finds from the site, dating to the Chalcolithic period, have been discovered solely on the Southern Summit (Kaplan 1953: 141–2; 1954: 97; Gophna 1974: 52). This summit apparently continued to be the nucleus of settlement also during the Early Bronze Age, even though the settlement then spread to cover

Fig. 5. Al-Maghar: the western terrace of the site, looking north

Fig. 6. Al-Maghar: the western terrace of the site, looking north

parts of the Northern Summit and the Southern Hill (see below). The following phase in the site's history apparently occurred during the Middle Bronze Age II, when it seems that only the Northern Summit was occupied. The Northern Summit continued as the nucleus of settlement also during the Iron Age II and the Roman, Byzantine and Umayyad periods (no finds clearly dating to the Late Bronze Age, Iron Age I, Persian or Hellenistic periods have yet been found at the site). A small number of finds dating to the Iron Age II and the Roman(?) and Byzantine periods were collected on the Southern Hill. The Southern Summit served mainly (if not solely) as the settlement's cemetery, at least during the Roman and Byzantine periods, when many burial caves were hewn into its eastern slope. Based on the finds retrieved from the surveys, the settlement at Al-Maghar was deserted sometime during the Umayyad or early Abbasid period (8th century CE), and refounded – this time on the Southern Summit – only in the Medieval period. This area remained the nucleus of the Arab village of Al-Maghar until its desertion in 1948, although the village had spread to cover parts of the Northern Summit and the Southern Hill (see Kaplan 1953: 140–41; Fischer and Taxel 2008: 18–20; for the remains of the Arab village, see Khalidi 1992: 393–5; Sasson 2003). The overall area covered by ancient remains of all periods (including those of the Arab village) is estimated as at least 23 ha., comprising the Southern Summit (c.12 ha.), the Southern Hill (c.6 ha.) and the southern part of the Northern Summit (c.5 ha; the northern part of this summit is located within a military base and has not yet been surveyed). The almost continuous sequence of human settlement at Al-Maghar, from the 4th millennium BCE until present times, stems, first and foremost, from the strategic advantages of the site's topography and its location alongside the important route that led from the southern coastal plain to Lod (Dorsey 1991: 64, Map 1).

Early Bronze Age finds from Al-Maghar

It should be noted that most of the pottery presented here was collected from the western terrace of the site. The ceramic discussion is divided into two main parts: the assemblages of EB IB and EB II. Noteworthy is the presence of a considerable amount of Egyptian pottery.

EB IB Pottery

Vessels that can be attributed to the EB IB are known from both settlement and burial contexts at Al-Maghar. They represent a phase within the late EB IB horizon that was designated EB IB2 by Yekutieli (2000) and is contemporaneous with the end of Dynasty 0 in Egypt. No 'Erani-C' pottery, which Yekutieli designated as an earlier phase (EB IB1), has been found to date at Al-Maghar (see discussion below).

The six complete vessels that were purchased by J. Kaplan and probably originated in a tomb that was looted by the Arab villagers of Al-Maghar (see photo in Kaplan 1953), include:

Hemispherical bowls with painted band decoration (Fig. 7: 1, 2) – The two bowls presented here are made of medium-fired, buff and brown clays and decorated with red-painted bands. Parallels are found in EB IB burial contexts such as Azor (Ben-Tor 1975: Fig. 5: 6, 7). No. 1 has two adjacent holes just below the rim, probably to facilitate hanging.

Hemispherical bowl (Fig. 7: 3) – Quite similar to the type described above, also bearing two small holes just below the rim, but made of well-levigated, red-brown clay and very well fired. Parallels are found at Azor (Ben-Tor 1975: Fig. 5: 8).

Bowl with in-turned rim (Fig. 7: 4) – This vessel is made of very well fired, red-brown clay and has a small horizontal lug handle and an omphalos base with scratches on it. It was highly burnished and as a result of the firing conditions the surface is mottled in red and black. Though it can be compared to vessels found at Azor (Ben-Tor 1975: Fig. 5: 12), in general appearance it resembles northern bowls, for example from Bet Yerah (Eisenberg and Greenberg 2006: Fig. 8.47: 4).

Amphoriskos (Fig. 7: 5) – A very small, even miniature vessel, made of buff clay. A close parallel is found at Azor (Ben-Tor 1975: Fig. 7: 17).

Egyptian bottle (Fig. 7: 6) – A small vessel made of red-brown clay that has the typical shape of Egyptian bottles, which are well known from EB IB contexts where an Egyptian presence has been detected. The closest parallel comes from Azor (Ben-Tor 1975: Fig. 10: 8). The general shape may also be sought at sites such as En Besor (Gophna 1995: Fig. 8: 18–26), Tel Erani (Yeivin 1960: Pl. 23A), and Tel Halif Terrace (Levy et al. 1995: 29).

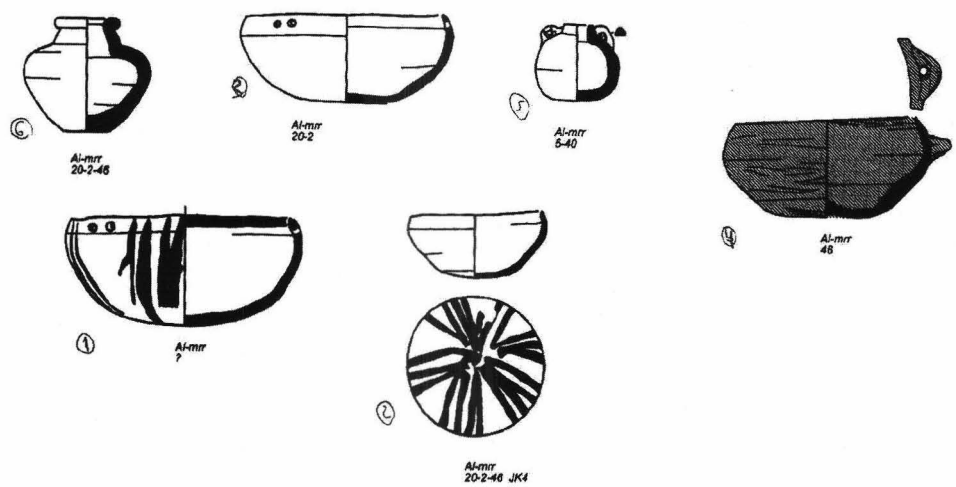


Fig. 7. A group of EB IB vessels from a looted tomb (purchased by J. Kaplan in 1946)

Local EB IB Pottery

The EB IB pottery sherds found during the survey at the settlement site are divided into local and Egyptian types. The vast majority of the pottery sherds collected at Al-Maghar comprises local Canaanite pottery that fits well within the late EB IB ceramic assemblage of the region. Examples of the most common types are presented here.

Plain hemispherical bowl (Fig. 8: 1) – A small vessel made of orange-brown clay. This type was often used as a lamp, and the soot marks visible on the rim confirm this assumption. Plain bowls were common throughout the Land of Israel during the Early Bronze Age. They have been found in EB IB contexts at sites such as Lod (Paz, Rosenberg and Nativ 2005: Fig. 23: 1), Shoham North (Gophna and van den Brink 2005: Fig. 7.3: 2, 3) and Tel Dalit (Gophna 1996: Fig. 39: 3, 4).

Deep straight-sided bowls (Fig. 8: 2, 3) – Two fragments, one with a sharpened rim, the other with a slightly thickened rim, both with ledge handles. Bowls with ledge handles, albeit not straight sided, were found at sites such as Megiddo (Greenberg 2006: Fig. 10.2: 2) and Azor (Ben-Tor 1975: Fig. 5: 11).

Inverted-rim bowls (Fig. 8: 4–8) – Inverted-rim bowls, quite common at Al-Maghar, were generally large hemispherical vessels, sometimes red slipped and burnished. Bowl No. 7 has a slightly concave rim and two lug handles. No. 8 is a deep vessel, also with lug handles. Inverted-rim bowls have been found at various EB IB sites in the central coastal plain, such as Aphek (Beck 2000: Figs. 8.2: 23; 8.3: 3), Tel Dalit (Gophna 1996: Fig. 39: 7, with the slight 'concavity'), Lod (Paz, Rosenberg and Nativ 2005: Fig. 23:7) and Palmahim (Gophna 1974: Pl. 11: 6).

Platters / platter bowls (Fig. 8: 9–11) – The three specimens presented here, all red slipped and burnished, are differentiated by their size, but all of them reflect the early appearance of the platter during late EB I. Such vessels have been found at sites such as Tel Dalit (Gophna 1996: Fig. 39: 13) and Lod (Paz, Rosenberg and Nativ 2005: Fig. 23: 10).

Holemouth jar with furrowed rim (Fig. 8: 12) – The example presented here is a sub-type of one of the most common diagnostic types of EB IB, the holemouth vessel with a pronounced ridge near the rim. It is medium to poorly fired and red washed. The holemouth jar with a pronounced ridge is well known from various regions, from the central Jordan Valley to the southwestern coastal plain. The sub-type presented here has been found at sites such as Lod (Paz, Rosenberg and Nativ 2005: Fig. 25: 7), Tel Dalit (Gophna 1996: Fig. 41: 7, 9), Shoham North (Gophna and van den Brink 2005: Fig. 7.3: 4–6) and Palmahim (Gophna 1974: Pl. 11: 8).

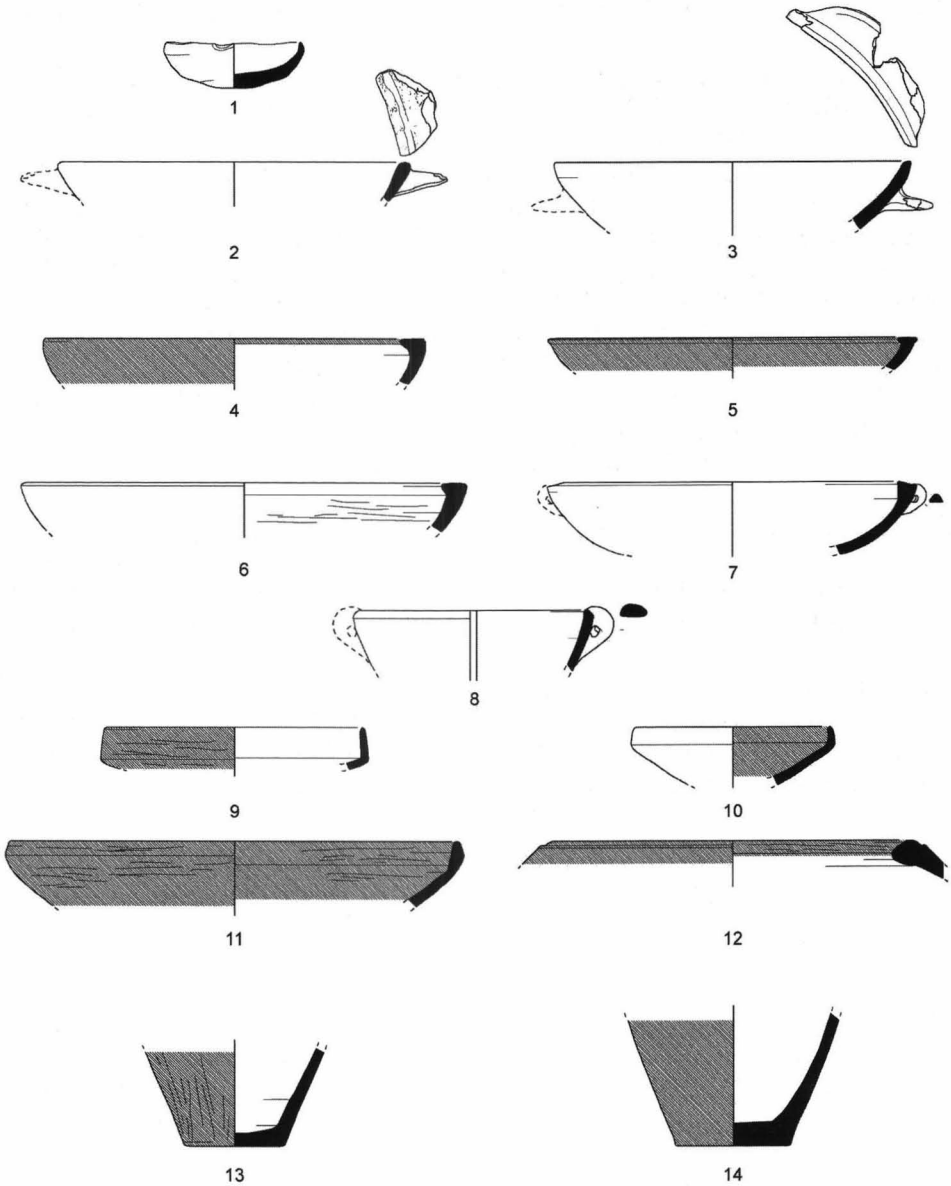


Fig. 8. EB IB pottery from the survey of Al-Maghar

No.	Type	Description
1	Bowl	Brown-orange clay, grey core, soot marks
2	Bowl	Buff clay, grey core, poorly fired
3	Bowl	Buff clay, grey core, medium fired
4	Bowl	Buff clay, grey core, red wash
5	Bowl	Orange clay, grey core, red slip, burnished, soot marks
6	Bowl	Buff clay, burnished (inside)
7	Bowl	Buff clay
8	Bowl	Buff clay
9	Platter	Orange-brown clay, red slip, burnished
10	Platter	Buff clay, red slip, burnished
11	Platter	Buff clay, grey core, red-brown wash, burnished
12	Holemouth jar	Greyish clay, grey core, red wash
13	Jar	Orange clay, grey core, red wash
14	Jar	Orange clay, grey core, red wash

Fig. 8. EB IB pottery from the survey of Al-Maghar

Storage jars (Fig. 8: 13–14) – Two base fragments of medium-sized storage jars are both made of orange clay and red washed.

Pithoi (Fig. 9: 15–19) – Several types of pithoi are presented here, all attributed to late EB IB:

Pithos with high neck and plain everted rim (No. 15): A thin-walled, undecorated vessel. These vessels are found at sites such as Aphek (Beck 2000: Fig. 8.3: 8) and Palmahim (Gophna 1974: Pl. 11: 12).

Pithoi with thickened rim (Nos. 16–18): These large, crude, often red-washed vessels were popular at Al-Maghar. Parallels are found at sites such as Tel Dalit (Gophna 1996: Fig. 43: 4) and Shoham North (Gophna and van den Brink 2005: Fig. 7.4: 10, 12).

Pithos with sharpened, elongated, everted rim (No. 19): A medium-sized pithos. Parallels are found at Tel Dalit (Gophna 1996: Fig. 40: 14) and Shoham North (Gophna and van den Brink 2005: Fig. 7.4: 2).

Jugs (Fig. 9: 20–21) – Jug No. 6 is crude, rather poorly fired and handleless. A general parallel can be seen at Tel Dalit, where it is defined as a jar (Gophna 1996: Fig. 45: 3).

Amphoriskos (Fig. 9: 22) – A complete, tiny amphoriskos was found. This vessel type is very common in EB IB burial contexts throughout the Land of Israel, from sites such as Tell el-Far'ah North (de Vaux and Steve 1949: Fig. 6: 30) and Ai (Amiran 1969: Pl. 11: 13).

Handles (Fig. 9: 23, 24) – These are made of buff clay and probably belong to storage jars.

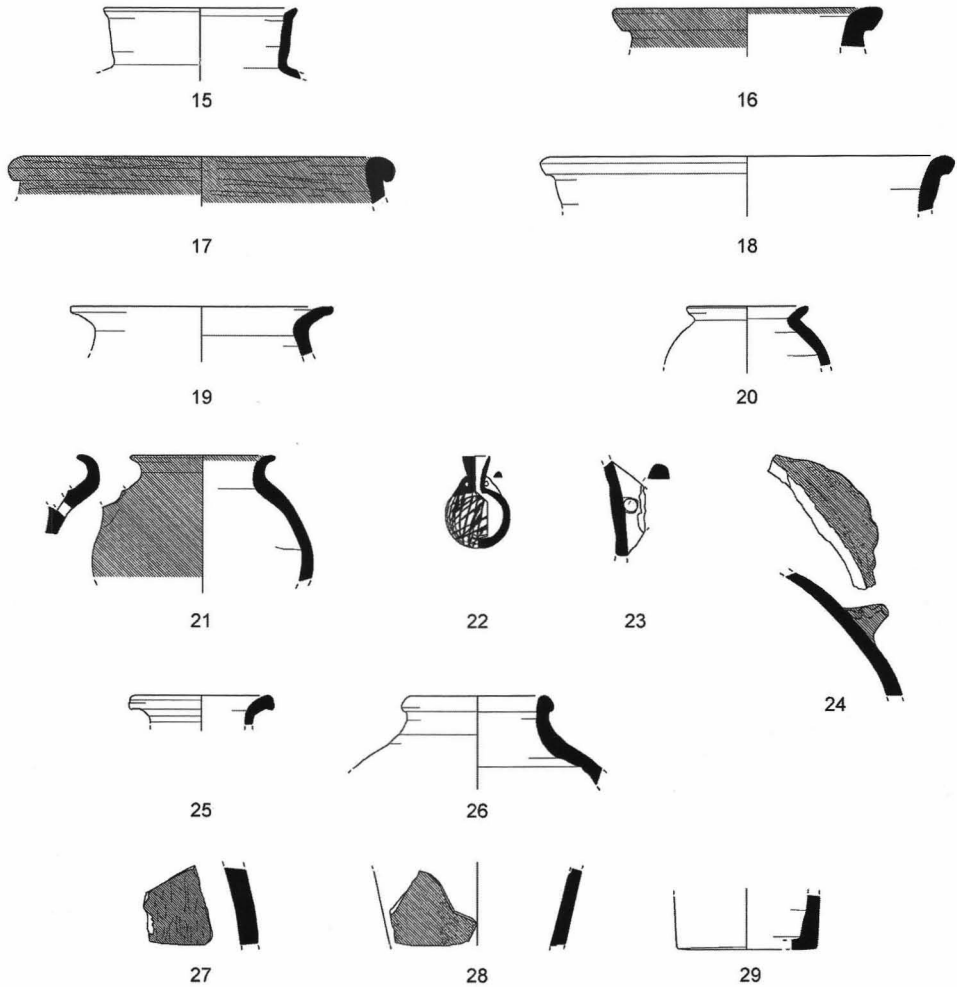


Fig. 9. EB IB pottery from the survey of Al-Maghar

Egyptian Pottery

Five sherds of Egyptian vessels are illustrated here (Fig. 9: 25–29), while at least five additional sherds were not drawn, all fragments of baking bowls/ bread moulds. Such vessels comprise the most common Egyptian pottery finds at sites where an Egyptian presence has been detected: from Tel Sakan and En Besor, the hardcore of Egyptian presence in southern Canaan (Gophna 1995: Fig. 2), to Lod in central Canaan, where Egyptians may have resided side by side with local Canaanites (Paz, Rosenberg and Nativ 2005: Fig. 28: 8–12). Petrographic analysis of three sherds from Al-Maghar, conducted by M. Isserlis, suggests that they were made in the vicinity of Tel Sakan and En Besor, shedding light on the nature of the Egyptian

No.	Type	Description
15	Pithos	Buff clay, white lime wash
16	Pithos	Grey clay, grey core, red wash
17	Pithos	Grey clay, grey core, poorly fired, red wash
18	Pithos	Pink clay, grey core, white lime wash
19	Pithos	Buff clay, grey core
20	Jug	Pink clay, black grits, poorly fired
21	Jug	Pink clay, poorly fired, red slip
22	Amphoriskos	Orange clay, red-painted net design LGPW
23	Handle	Buff clay
24	Handle	Orange clay, grey core, red slip
25	Jar	Red clay, black core
26	Jar	Red-orange clay, well fired
27	Jar	Red clay, red wash
28	Jar	Red clay, grey core, well fired
29	Cylindrical vessel	Orange-red clay, well levigated, well fired, Nilotic?

Fig. 9. EB IB pottery from the survey of Al-Maghar

presence at Al-Maghar as Egyptians residing within a local Canaanite settlement (see Gophna 1972), similar to the situation at Lod (Paz, Rosenberg and Nativ 2005: 148–9).

Jars (Fig. 9: 25–28) – Four jar fragments are presented here, two body sherds, and two rim sherds that represent two sub-types, one with an everted rim, the other an upright rim, both of which are present at En Besor (Gophna 1995: Fig. 9: 4–11) and other sites such as Tel Malhata (Ilan 2002: Fig. 20.6).

Cylindrical jar (Fig. 9: 29) – A base fragment of a cylindrical jar, a common vessel at sites where an Egyptian presence has been detected, such as En Besor (Gophna 1995: Fig. 7), Lod (van den Brink 2002: Fig. 19.13: 13–16) and many others.

EB II Pottery

The majority of the Early Bronze Age pottery collected at Al-Maghar can be attributed to EB II. However, the repertoire of EB II types is relatively restricted, with most of the sherds belonging to several common types. Representative examples of these types are presented below.

Plain hemispherical bowl (Fig. 10: 1) – Similar to plain bowls that were common in EB IB contexts, these small plain bowls are often found in EB II strata at sites such as Tel Dalit (Gophna 1996: Fig. 54: 1–3).

Carinated bowl (Fig. 10: 2) – The thin-walled, carinated bowl made of brown clay is one of the hallmarks of EB II in central Israel (Beck 1985). This type was common at many sites, including Aphek (Beck 2000: Fig. 8.6: 12, 13), Tel Dalit (Gophna

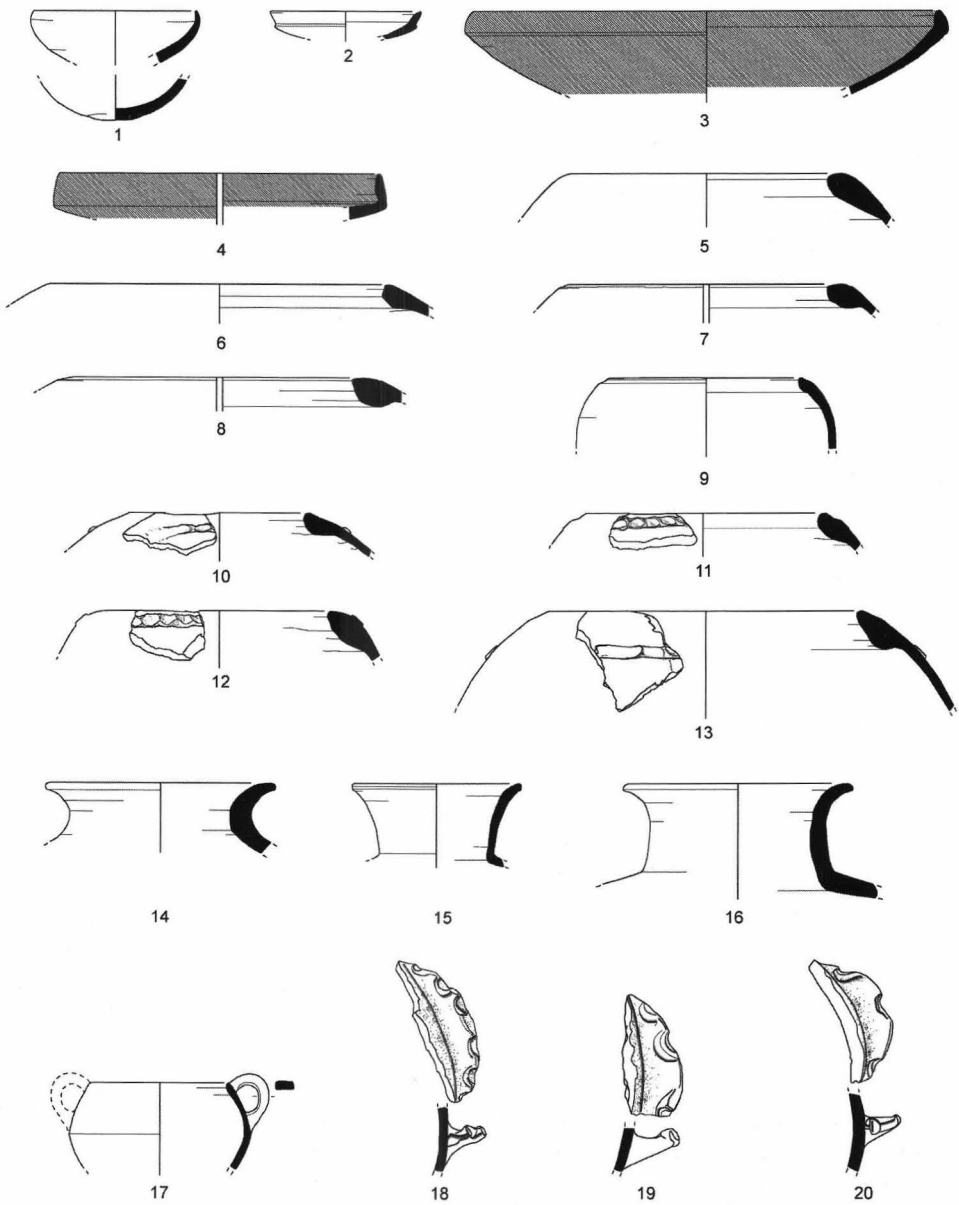


Fig. 10. EB II pottery from the survey of Al-Maghar

No.	Type	Description
1	Bowl	
2	Bowl	Orange clay, medium fired
3	Platter	Orange clay, grey core, medium fired, red wash
4	Platter	Orange clay, orange slip, Metallic Ware
5	Holemouth jar	Brownish clay, many large white and grey grits
6	Holemouth jar	Brownish clay
7	Holemouth jar	Buff-white clay
8	Holemouth jar	Orange clay
9	Holemouth jar	Orange clay, grey core
10	Holemouth jar	Orange clay, plastic decoration, white lime wash
11	Holemouth jar	Pink clay, plastic decoration
12	Holemouth jar	Brown-pink clay, grey core, white lime wash, plastic decoration
13	Holemouth jar	Orange clay, grey core, black/grey grits, plastic decoration
14	Pithos	Buff-orange clay, grey core, well fired
15	Pithos	Grey clay, white lime wash
16	Pithos	Pinkish clay, grey core, white lime wash
17	Jug?	Orange clay
18	Handle	Orange clay, grey core, white lime wash
19	Handle	Pink clay
20	Handle	Orange clay

Fig. 10. EB II pottery from the survey of Al-Maghar

1996: Fig. 46: 1, 2), Tel Bareqet (Paz, forthcoming) and Tel Gerisa (Gophna and Paz, forthcoming).

Platter (Fig. 10: 3) – This vessel, with a triangular inverted rim, is a common type at Al-Maghar and other EB II sites such as Tel Dalit (Gophna 1996: Fig. 50) and Tel Bareqet (Paz, forthcoming).

Metallic-ware platter (Fig. 10: 4) – The example presented here reflects the existence of NCMW pottery (as defined by Greenberg 2002: pp) at Al-Maghar in relatively large quantities, mainly body sherds of storage vessels. The platter presented here has a plain, elongated rim that may hint at an early EB II date. Parallels are found at many sites throughout the Land of Israel. They can be seen, for example, at the site of Ha-Bashan Street in Tel Aviv (Gophna and Paz: forthcoming), Tel Dalit (Gophna 1996: Fig. 50: 7) and Tel Bareqet (Paz, forthcoming).

Holemouth jars – The most common vessel at Early Bronze Age settlement sites appears at Al-Maghar in two main fabrics: brownish clay containing many white-grey grits (crushed calcite?) and orange clay treated with white lime wash and decorated with plastic rope decoration. Detailed petrographic analyses that were conducted on similar types at Tel Bareqet have shown that vessels of the first fabric type were cooking vessels while those of the second (produced and decorated

exactly like storage jars) were probably designed for storage (Amiran 1978:47; Isserlis and Paz, forthcoming). Two main types of holemouths are common at Al-Maghar:

Thickened-rim holemouth jars (Fig. 10: 5–8) – The type made of cooking ware has parallels at Tel Bareqet (Paz, forthcoming), Tel Dalit (Gophna 1996: Figs. 52: 5; 55: 2–4) and Tel Gerisa (Gophna and Paz, forthcoming).

Holemouth jars with lime wash and rope decoration (Fig. 10: 10–13) – These holemouth jars were made of storage-jar fabric. The rope decoration that characterises this type was probably a tradition that continued from EB IB. These EB II holemouth jars are widely distributed, mainly in the central and southern regions of Israel, from Tel Gerisa to Arad, including Tel Dalit, Ai and Yarmouth (respectively: Gophna and Paz, forthcoming; Amiran 1978: Pls. 51: 23; 52: 15; Gophna 1996: Figs. 51: 7; 52: 3, 4; 53: 10; Callaway 1980: Fig. 65: 10, 12; de Miroschedji 1988: Pl. 22:1).

Thin-walled holemouth jar (Fig. 10: 9) – One specimen of a thin-walled vessel, similar to a vessel from Tel Aphek (Beck 2000: Fig. 8.5: 23).

Storage jars and pithoi (Fig. 10: 14–16) – The three vessels presented here all belong to the common type that has a plain, everted rim and an elongated, often rope-decorated body. Parallels are found at sites such as Tel Aphek (Beck 2000: Figs. 8.5: 25; 8: 1) and Tel Dalit (Gophna 1996: Figs. 48: 17, 20; 54: 13).

Jug? (Fig. 10: 17) – A curious, holemouth-like vessel made of orange clay, with thin walls and two high loop handles. Its exact function cannot be determined. An exact parallel was found at Hartuv, in Stratum I, which had no clear date but seems to post-date the Erani-C horizon (Mazar and de Miroschedji 1996: 14–15; Fig. 17: 20).

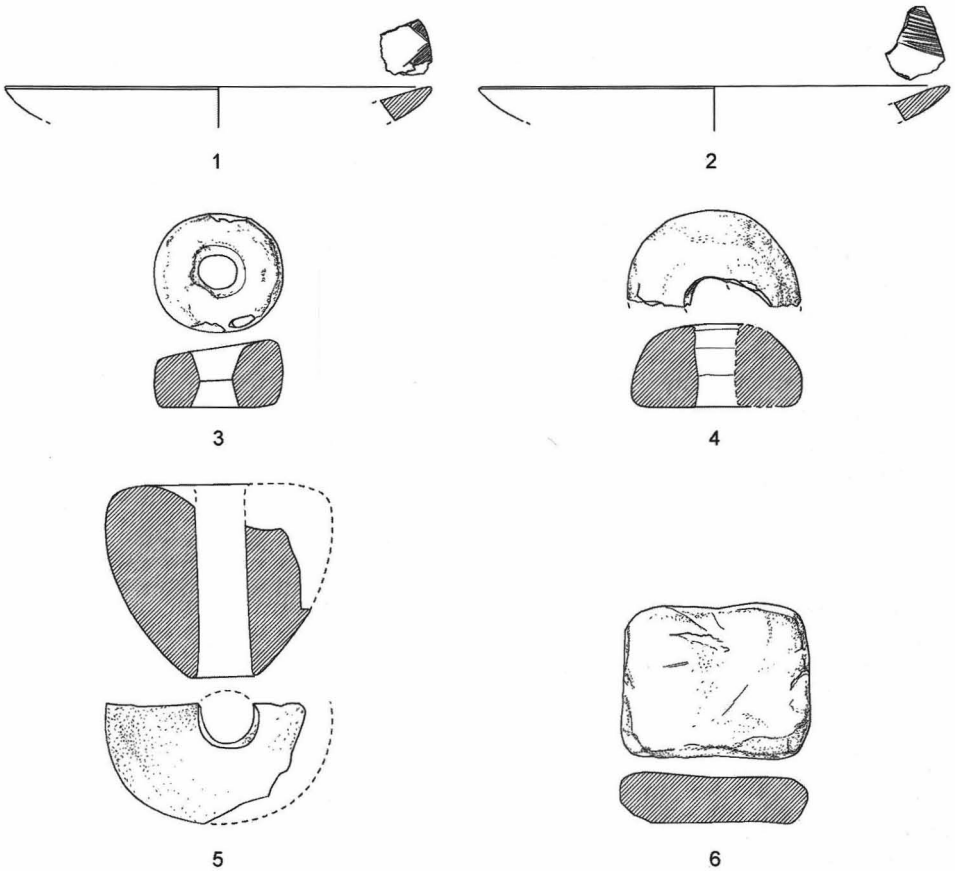
Ledge handles (Fig. 10: 18–20).

Groundstone items

Basalt bowls (Fig. 11: 1, 2) – Two fragments of V-shaped basalt bowls. The geometric incisions on the rims date them to the Chalcolithic period and reflect the existence of a Chalcolithic settlement at Al-Maghar. Such vessels have been found at sites such as Shoham North (Rowan 2005: Fig. 9.9: 1).

Macehead (Fig. 11: 5) – A fragment of a marble/limestone, pear-shaped macehead. Its reconstructed length is 5 cm, its maximum diameter reaches 4 cm and the perforation diameter is 1.5 cm.

Stone plaque (Fig. 11.6) – Made of sandstone, roughly square in shape, its function is unclear.



No.	Type	Description
1	Stand/bowl	Basalt, incised decoration
2	Stand/bowl	Basalt, incised decoration
3	Weight	Basalt
4	Weight	Limestone
5	Macehead	Marble ?
6	Plaque?	Sandstone?

Fig. 11. Groundstone items from the survey of Al-Maghar

Tournette (Figs. 12–17). During the survey of the site conducted by the authors in 2007, the components of a basalt tournette (potter's wheel) were found on the western terrace, c.30 m west of the brick wall described above. The upper disk of the tournette was found first, broken into two. During another visit to the site, the complete lower disk was discovered a few metres from where the upper disk was

located. Accompanying the tournette were many EB II sherds, which probably date the tournette to this period. It was clear that the complete tournette 'set' was brought to the surface due to recent deep-ploughing activities that disturbed what could have been an EB II potter's workshop.

The upper disk of the potter's wheel (see reconstruction in Fig. 15) is 25.5 cm in diameter and 2.5 cm thick. A small round depression, 3 cm in diameter, was found in the centre of its lower surface. The lower component of the tournette is 17 cm in diameter and 3.5 cm thick, with a perforated hole also measuring 3 cm in diameter. The tournette was successfully operated by Rachel Pelta, chief pottery restorer of the Institute of Archaeology of Tel Aviv University, who managed to produce a complete vessel on it.

The operation of an identical tournette is described in detail in a recent article on two complete EB III tournettes that were recovered during the 1997 and 1999 excavation seasons at Tel Yarmouth (Roux and de Miroshedji 2009). An experiment on one of these tournettes was conducted by two people: a professional potter and an assistant who turned the wheel in order to achieve a maximum of 80 rotations per minute. This experiment proved beyond a doubt that it is almost impossible to produce a vessel on the wheel using the throwing technique, and that the only way to create a vessel is by hand-coiling and then thinning/shaping the vessel on the tournette (Roux and de Miroschedji 2009: 164–70). Thus, the tournettes from both EB II Al-Maghar and EB III Yarmouth clearly demonstrate the exact methods with which most vessels were fashioned during the 4th–3rd millennia BCE in the Land

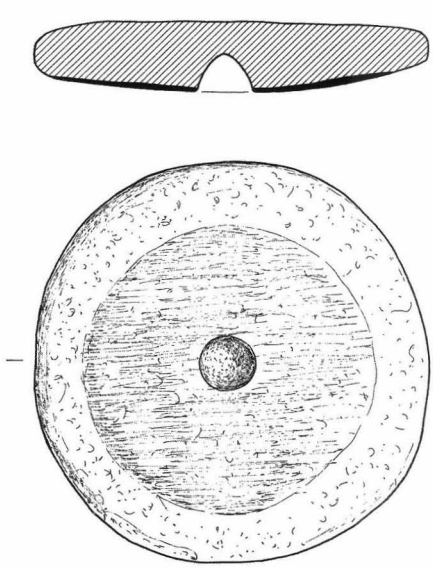


Fig. 12. The upper disk of the tournette

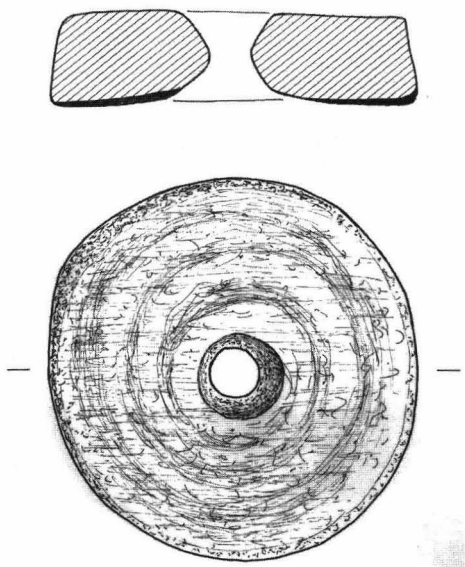


Fig. 13. The lower disk of the tournette

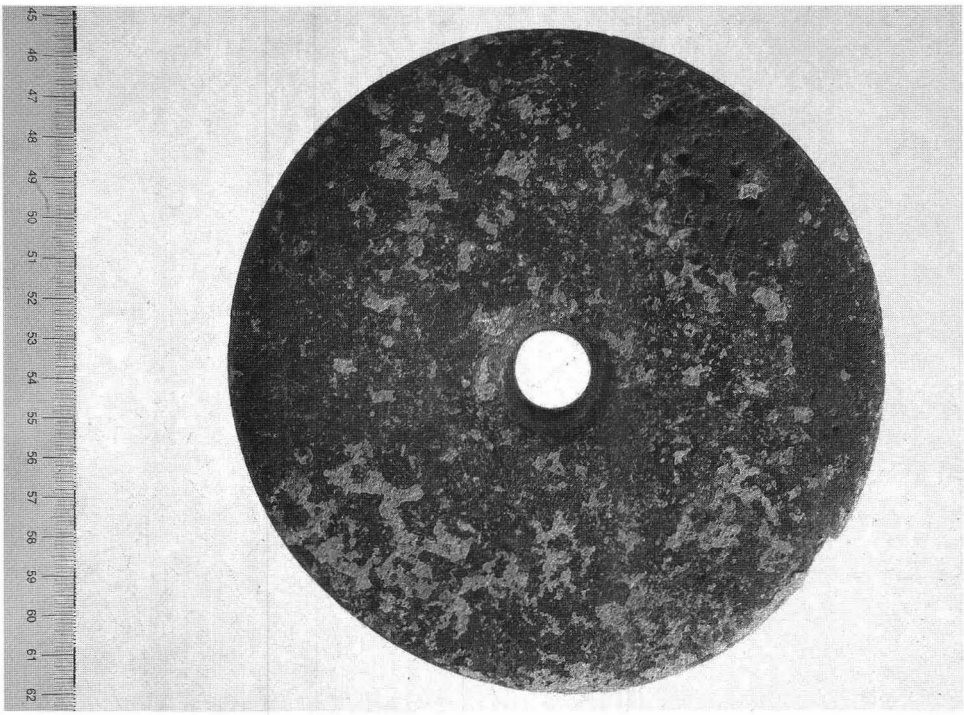


Fig. 14. The lower disk of the tournette

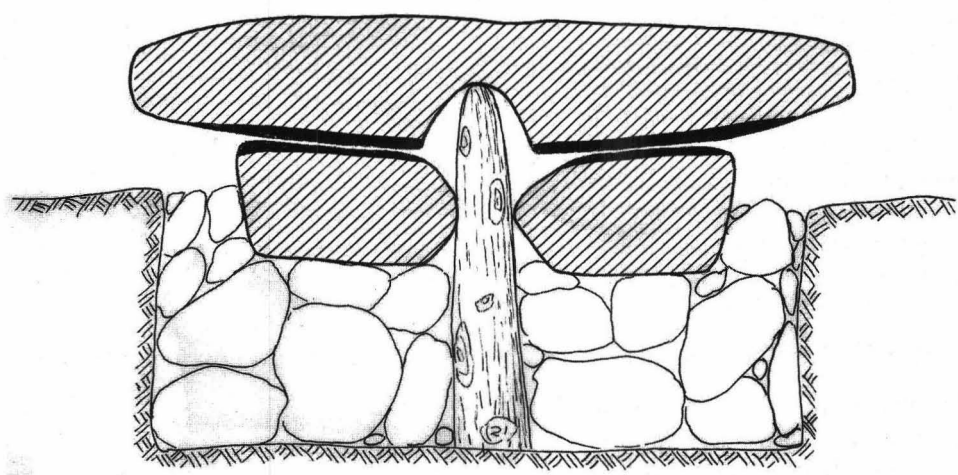


Fig. 15. A reconstruction of the complete tournette

Fig. 16. Both disks with pivot

of Israel (that is, during the Chalcolithic, Early Bronze and Intermediate Bronze Ages). The discovery of a similar tournette at an MB IIA pottery production site in the central coastal plain of Israel, suggests that this type of tournette was still in use at the beginning of the Middle Bronze Age (Gophna and Paz, forthcoming).

The History of Al-Maghar during the Early Bronze Age based on Ceramic Analysis

While the earliest occupation at the site can be dated to the Chalcolithic period, settlement at the site reached its zenith during the EB IB–EB II. It is possible that

Fig. 17. Operation of the tournette by R. Pelta

the fortifications were erected at the very end of EB IB or the beginning of EB II, thus lending an urban character to the settlement, corresponding to the general trend that prevailed in Israel during this period (see Getzov, Paz and Gophna 2001: 24–9). If indeed the defences were erected in EB II, the large extension of the settlement on the western terrace of Al-Maghar may indicate that the town stretched well outside the line of fortifications, thus reaching its maximum size during EB II (a similar EB II zenith in settlement size was noted at Qiryat Ata, see Faust and Golani 2008). It is important to note that the settlement seems to have existed for a relatively short time between the very late phase of EB IB and EB II. No diagnostic sherds of either early EB I (EB IA) or EB III have been detected at Al-Maghar to date.

Regional narratives: Al-Maghar, Palmahim and Azor during EB IB–EB II

In order to elucidate the spatial distribution of EB IB–EB II sites in the central coastal plain, north of the Soreq Valley, one must examine the settlement history of three sites that demonstrate the cultural-chronological characteristics that are relevant to our discussion (from north to south): Azor, Palmahim and Al-Maghar (see Fig. 1; Table 1).

Examination of the pottery from Palmahim Quarry suggests that the site may have existed during the late EB IB, but did not participate in the 'Egyptian tide' that swept the southern coastal plain at this time. The pottery assemblage from the EB IB cemetery at Palmahim Quarry reflects a somewhat contradictory picture. Most of the pottery vessels recovered in the tombs (personal examination of the pottery; see Braun et al. 2004: 3, 7) resemble the latest EB IB assemblages from sites such as Azor, Maghar, Givatayim, Gezer, Ai and Tel Nasbeh. On the other hand, an indication for a slightly earlier horizon may be hinted at by the double-handled jug found at Palmahim, which is present at Egyptian sites such as Qustul and Minshat Abu Omar (Gophna and van den Brink 2002). Most intriguing, however, is the complete lack of any late Dynasty 0 (Naqada IIIb-c1) Egyptian vessels from the Palmahim cemetery, which are abundant in late EB IB mortuary contexts south of Palmahim (e.g., Al-Maghar) and north of it (Azor, Givatayim, etc.). This complicated situation renders it difficult to date the final gasp of the Palmahim cemetery.

The assemblage from Palmahim-Givat Ha-Esev, on the other hand, presents a relatively clear chronological picture. The pottery published to date includes one of the hallmark vessels of late Dynasty 0, the 'drop-shaped' bottle (see Braun et al. 2004: Fig. 4.3: 1; Gophna and Liphshitz 2009), and thus must be dated to the latest EB IB horizon. The enigmatic nature of this site throws into question the occupation at Palmahim Quarry during the reign of Narmer and the period of Egyptian dominance over southern Israel. Two plausible scenarios can be put forth for the occupation of Palmahim Quarry at the end of EB IB: first, that both the settlement and cemetery are contemporaneous with the reign of Narmer, and thus the lack of Egyptian pottery from the cemetery is purely incidental; or second, that the settlement and the cemetery were abandoned slightly prior to full Egyptian domination during the reign of Narmer, leaving Givat Ha-Esev as a lone settled point (perhaps a navigational landmark for mariners, see Gophna and Liphschitz 2009). At any rate, no remains of an EB II occupation have been detected to date at Palmahim.

The situation at Al-Maghar is apparently somewhat different. All the pottery found at the site belongs to the very last EB IB horizon, equivalent to Naqada IIIb1–c1 (the reign of Narmer; see Table 2). The rich repertoire of Egyptian and Egyptianised vessels, including bread moulds, probably reflects the physical presence of Egyptians, as the site was located on the highway leading northward towards Azor. It would appear, therefore, that Al-Maghar may be compared with En Besor (Str. III), Tel Maahaz (Str. I), small Tel Malhata and Lod, where a physical Egyptian presence was evidenced.

Unlike Palmahim, Al-Maghar continued to exist during EB II, when it probably reached its zenith and became a fortified town. The town was abandoned sometime during EB II.

Further north, the site of Azor presents an alternate settlement history. Unlike the first two sites, an EB IA occupation was detected at Azor at several locations near the main tell (see Golani and van den Brink 1999), while the tell proper was first

Table 1. The three chronological horizons of EB IB in south-central Israel

Context	EB IB3 (Naq. IIIb1–c1)	EB IB2 (Naq. IIIa2–b1)	EB IB1 (Naq. IIIa2)	
Mortuary (EF)*	+ + +			Givatayim
Mortuary (EF)	+ + +	?	+	Azor
Canaanite settlement with Egyptian 'colony'	St. V-IV (Paz et.al.2005) St IVa (van den Brink 2002)		Continuous 'late' EB IB horizon	Lod
Mortuary (no EF) (Gophna)	.?	+ +	Continuous 'late' EB IB horizon	Palmahim Quarry
Settlement (Braun)	?	Str. 2–1, Schematic 'serekh' + +		Palmahim Quarry
Small occupation (Gophna)	+ + +			Palmahim Givat Ha-Esev
Survey only – site urbanised in EB II	+ + +			
Settlement and Egyptian 'colony'		Continuous EB IB horizon	Al-Maghar	
Settlement			+	Hartuv
Settlement			+	H. Ptorah
Settlement – Str. IV-III	+ + + Schematic 'serekh'?	?		Horvat Illin Tahtit
Settlement (Gophna 2002)	?	?	+	Ashkelon Afridar
Settlement with Egyptian 'colony'	+ + + Erani-B?	?	+ 'Erani-C' horizon	Tel Erani
Settlement Egyptian 'colony' in Str. I	+ + + St. I	Continuous 'late' EB IB horizon Str. II		Tel Maahaz
Egyptian outpost in Str. III (Gophna 1995)	III	IV?	IV?	En Besor
Settlement with Egyptian 'colony'	+ + +			Tel Halif
Settlement with Egyptian 'colony'	+ + +			Small Tel Malhata
	+ + + Egyptian stronghold	?		Tel Sakan
Large open settlement (IV) and a fortified town (III)	III? Egyptian serekh?	IV? Egyptian serekh?		Arad

* EF = Egyptian finds +: Erani-C pottery was found + +: Egyptian pre-Naq.IIIb1–c1 finds were found
+ + +: Egyptian Naq. IIIb1–c1 pottery and finds were found

Table 2. EB IB horizons compared to Egyptian Chronology

Hendrix 2006**	Hartung 2002*	Gophna and van den Brink 2002	
Naq. IId1–2– IIIa1 (Erani-C; Scorpion)	Naq. IIc-d-IIIa	Erani-C	EB IB1 (Early)
Naq. IIIa2	Naq. IIIa2=UJ	Naq. IIIa2–b1(Ka)	EB IB2 (Middle)
Naq. IIIb-c1(ka)	Naq. IIIa2 late	Naq. IIIb-c (Narmer)	EB IB3 (Late)
Naq. IIIb-c1(Narmer)	Qustul Naq. IIIb		
	Dyn. 0		

* Hartung (2002) is not familiar with the post-Erani-C EB IB2 horizon. He tends to 'stretch' the early phase of EB IB between Naqada IIc-d–IIIa2. He relates Erani-C and Tomb UJ to Naqada IIIa2, while the end of EB IB—the period of Egyptian dominance in southern Israel—is related to late Naqada IIIa2 (2002: 446–448). The Canaanite 'dominance' of trade routes with Egypt is attributed by him to early and middle EB IB (hence Erani-C and UJ are in fact 'middle EB IB'). In his chart, the jugs from Qustul are assigned to Naqada IIIb, just before Dynasty 0 (Fig. 27.8), although this is in contradiction to his attribution of late EB IB to Naqada IIIa2 (p. 448).

** Hendrix (2006: 89–92) relates Tomb UJ to Naqada IIIa1 (Scorpion) and according to him, early EB IB begins in Naqada IId1–2 and continues into Naqada IIIa1 (to 3350 BCE). He identifies a middle EB IB horizon and dates it to 3350–3150, Naqada IIIa2, as do Gophna and van den Brink (2002). Hendrix divides the late EB IB, Naqada IIIb-c1 (3150–3100/3000?), into two phases, the earlier includes the rulers Iry-Hor and Ka, while the later begins with Narmer and reaches Djer. The difference between Hendrix and Gophna and van den Brink lies in the inclusion of Ka in the late EB IB horizon by Hendrix while Gophna and van den Brink tend to assign him to the earlier horizon, namely EB IB2.

inhabited during EB IB (see van den Brink, Gophna and Ovadiah 2007). The pottery from the tombs (see above) probably includes types that belong to both early and late phases of EB IB. Thus, the vessels of the Erani-C horizon, dated by Yekutieli (2002) to early EB IB (EB IB1), are found side by side with vessels of EB IB local wares common in the central coastal plain throughout the period (EB IB1–3), as well as with imported Egyptian pottery and artefacts dating to the late Dynasty 0 (Ben-Tor 1975). The presence of these Erani-C pottery types at the Azor cemetery, alongside a vast majority of local EB IB pottery of the central coastal plain, may indicate that a different cultural sequence took place in two regions.

The early EB IB settlement sites in the region that stretched between Ashkelon and the Beth Shemesh area, including Tel Erani, were defined by a distinct ceramic tradition termed Erani-C. At Tel Erani this tradition had chronological significance, as it was earlier than the horizon characterised by Egyptian Naqada IIIb-c pottery together with local, late EB IB wares. It was later replaced by this common, late EB IB pottery, which was in use throughout the EB IB to the north of this region, in the central coastal plain, where sites such as Azor, Lod and Al-Maghar were located. Thus, the lack of Erani-C ware at sites such as Azor, Lod and Al-Maghar

does not indicate a settlement gap during the early EB IB. Occupation at all three sites in the central coastal plain continued into EB II (although the scope and nature of EB II Azor is unclear).

Al-Maghar and the Urban Settlement Pattern of Southwestern Israel

As described above, Al-Maghar seems to have flourished during EB IB–EB II. As the site of Al-Maghar has not been excavated, several plausible scenarios of its settlement history can be put forth:

A. The settlement reached its maximum size during the late EB IB, extending over the western terrace as well. In this case, the fortifications enclosed only the upper portion of the site, leaving the western 'suburb' unfortified. If the EB II settlement followed the same trajectory, it reflects an urban settlement only partially encircled by a defensive wall.

B. The settlement reached its maximum size during EB II, spreading beyond the boundaries of the earlier EB IB settlement, a scenario similar to that at Qiryat Ata (Faust and Golani 2008). If the fortifications were built during EB IB, they enclosed only the upper mound; if they were initially built during EB II, they may have comprised two construction stages, the earlier one following the EB I outline, while the later EB II wall extended further west.

C. The third alternative is somewhat more complicated. If we apply the 'shrinking site model', which is evident at many sites in the Land of Israel during the transition between EB IB–EBII, such as Tel Qashish, Givat Rabi, Tel Dalit and Arad (Portugali and Gophna 1993; Getzov, Paz and Gophna 2001: 26–9), one may reconstruct three main stages in the settlement history of Al-Maghar: (i) a large, unfortified, late EB IB settlement of 7 ha extending over the upper mound and the western terrace; (ii) the following settlement was a fortified town, built at the beginning of EB II, which encompassed only the upper mound and thus 'shrank' in size; (iii) the latest phase (during the course of EB II) was characterised by a renewed occupation of the western terrace, well beyond the fortifications, again reaching its full size of 7 ha.

Although the above scenarios are speculative since they reflect surveyed data alone, they assist in our evaluation of the role played by Al-Maghar in the settlement history of the central coastal plain between EB IB and EB II.

A close examination of the EB II settlement map in the central coastal plain reveals that Al-Maghar was probably the sole centre ('town') in the western Soreq Valley and the only town between Tel Zafit to the southeast and the Lod Valley towns of Tel Bareqet and Tel Dalit to the north (see Getzov, Paz and Gophna 2001: Fig. 10). Thus, it is a key site in any attempt to reconstruct the EB II urban landscape in southwestern Israel. The site's location on a prominent ridge adjacent to major streams is an additional reason for its predominance in the entire region. It should be emphasised that a number of EB IB settlements in the vicinity of

Maghar—Palmahim, Horvat Illin Tahtit and Hartuv—were abandoned by the end of EB IB and not re-settled during the Early Bronze Age. The EB IB settlement of Al-Maghar, on the other hand, was followed by an EB II fortified town, probably without any hiatus. This pattern accords well with that known in the northeastern Lod Valley, where open EB IB settlements agglomerated into fortified towns by the beginning of EB II (Gophna 1996: 158–162; Getzov, Paz and Gophna 2001: 29). The abandonment of Palmahim may, on the other hand, reflect the desertion of open sites for the sake of one nucleated and fortified centre. This pattern was reflected in the Lod Valley by the abandonment of the EB IB Shoham North settlement and the establishment of the fortified town of Tel Bareqet at the beginning of EB II (Gophna 1989: 103).

The absence of any EB III finds at Al-Maghar also fits well with the settlement pattern that prevailed to the north of the Soreq Valley. In EB II, the Lod Valley towns were apparently abandoned during the course of the first half of the third millennium BCE. In their place, after a long hiatus, an urban revival flourished during EB III in the Judean Shephelah and along the southwestern coastal plain. Thus, Al-Maghar was 'replaced', after a gap in settlement, by sites such as Tel Poran, Ashkelon and Tel Sakan (Getzov, Paz and Gophna 2001: 30–38).

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Notes

1 The survey of the Map of Yavneh has been conducted since 2001 by M. Fischer and I. Taxel on behalf of Tel Aviv University. The surveyed area extends over a defined area of 10 × 10 km, as dictated by the Archaeological Survey of Israel. It is an intensive study, including a systematic foot survey over larger areas and the collection and documention of the finds visible on the surface. In 2006, Taxel conducted a supplementary survey of a further 5 kilometer wide strip bordering the Map of Yavneh on the east, which includes the site of Al-Maghar. So far, some 70 sites representing the Chalcolithic period up to the British Mandate period have been identified within the entire surveyed area. Some of these sites were already known from previous research, while others were discovered during the on-going survey by Taxel and Fischer (see also Barda and Zbenovich 2005; for a preliminary report on the Map of Yavneh survey, see Fischer and Taxel 2006; for additional studies related to this project, see Fischer and Taxel 2007, 2008).

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The Contribution of Khirbet Qeiyafa to our Understanding of the Iron Age Period

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The site of Khirbet Qeiyafa is tremendously important for understanding various aspects of the archaeology and history of the Iron Age, and the biblical tradition. It seems to contradict many assumptions which were strongly advocated by scholars of the 'minimalist' schools for nearly 30 years. This article evaluates the contribution of the site to the study of surveys and reconstructing settlement patterns, chronology and the transition from Iron I to Iron IIA, social organisation of Iron IIA in Judah, city planning, pottery repertoire of the 10th century BCE, preparation and consumption of food, household archaeology and writing.

I. Introduction

Khirbet Qeiyafa is located in the western part of the high Shephelah (Israel map grid 14603–12267), on the summit of a hill that borders the Elah Valley on the north. This is a key strategic location in the Biblical kingdom of Judah, on the main road from Philistia and the Coastal Plain to Jerusalem and Hebron in the hill country (Figs. 1–2). Two km. to the west lies Tell Zakariyeh, commonly identified as Biblical Azekah, and 2.5 km. to the southeast is Khirbat Shuweikah, commonly identified as Biblical Socoh. About 12 km. west of Khirbet Qeiyafa is Tell es-Safi, where the central Philistine city of Gath was located. In the 10th and 9th centuries BCE, Gath was a prominent city-state, over 30 hectares in size. It was the largest and the closest hostile political unit to Judah (Maeir and Uziel 2007).

The history of research of Khirbet Qeiyafa can be divided into four phases:

1. *The Nineteenth Century:* A number of European explorers visited Khirbet Qeiyafa (Guerin 1868: 331–2; Conder and Kitchener 1883: 118). Only a few words were dedicated to the place, without any dating.
2. *Most of the Twentieth Century:* The site was neglected and is not referred to in the works of the leading scholars in the field of Biblical historical geography, such as W.F. Albright, B. Mazar, Y. Aharoni or Z. Kallai.
3. *The End of the Twentieth Century*: After being forgotten for nearly 110 years, Khirbet Qeiyafa was surveyed by Dagan (2003) and Greenhut (Greenhut *et al.* 2001:115–117). While pottery sherds from various periods had been identified, no Iron IIA settlement was recognised.

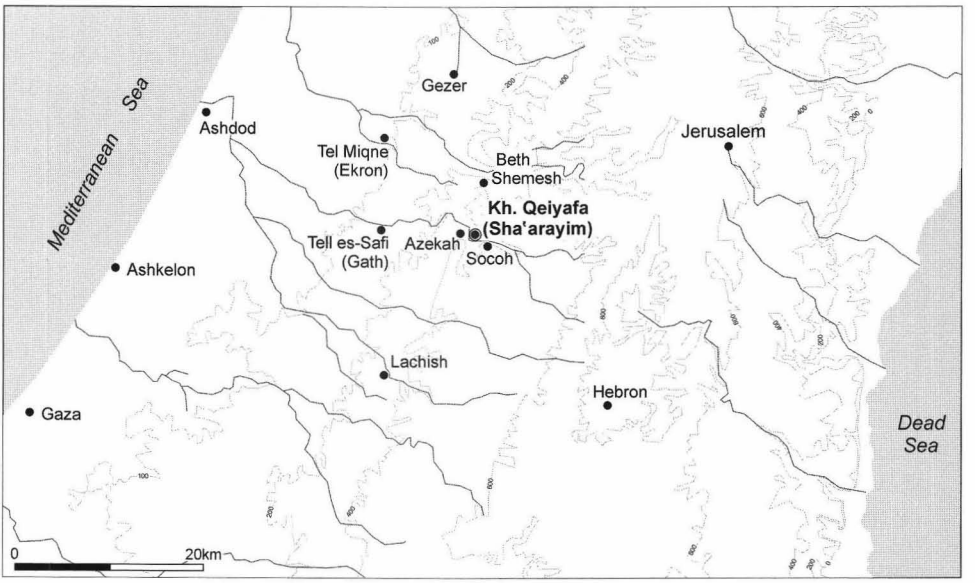

Fig. 1. Map of the southern part of Israel and the location of Khirbet Qeiyafa.

Fig. 2. Aerial photograph of Khirbet Qeiyafa at the end of the 2009 excavation season.

4. *Since 2005*: The site aroused interest in 2005, when Saar Ganor noted impressive Iron Age structures under later remains. Since 2007 three excavation seasons have taken place, on behalf of the Institute of Archaeology at the Hebrew University of Jerusalem. A number of reports have been published (Garfinkel and Ganor 2008a, 2008b, 2008c, 2009; Garfinkel et al. 2009), including a final excavation report for the 2007–2008 excavation seasons (Garfinkel and Ganor 2009).

II. The Iron Age City

While Khirbet Qeiyafa was sporadically used during various periods (Middle Bronze Age, Hellenistic, Roman, and Islamic), the main period of occupation is the very Early Iron IIA. The site of this period was a 2.3 hectare city surrounded by massive fortifications of megalithic stones which still stand to a height of 2–3 m. This city was built on bedrock and was destroyed after a rather short time. Then it was deserted for nearly 700 years, till the early Hellenistic period. Thus, Khirbet Qeiyafa is basically a one period Iron Age site.

About 1000 square metres have been opened, in four different excavation areas (A–D). Areas B–D are located on the site periphery, adjacent to the massive

Fig. 3. The city wall of Khirbet Qeiyafa (Areas B and D).

fortifications. The fortification system includes a casemate city wall and 10 casemates have been excavated so far: four in Area B, four in Area C and two in Area D (Fig. 3). Two identical four-chambered city gates have been uncovered, one in Area B and one on Area C (Fig. 4). Adjacent to the city wall simple dwellings were constructed. Each building used one casemate as the back room of the building (Fig. 5). In each of the four excavation areas, complete pottery vessels were found on floors. Intensive activity took place at the site, as indicated by the large quantities of pottery uncovered in each building and unique finds, including an inscription and various metal objects. The site functioned as a rich urban centre. One would expect mention of a town of such importance in the Biblical records; indeed, we suggest its identification with Sha'arayim, mentioned twice in association with the late 11th century BCE (1 Sam. 17: 52, I Chron. 4: 31–2) (Garfinkel and Ganor 2008b). The Iron IIA city came to a sudden end. Its location on the border between Judah and the Philistine kingdom of Gath suggests that it might have been destroyed during one of the many military clashes that took place in this area.

Khirbet Qeiyafa is tremendously important in terms of various aspects relating to the archaeology and history of the Iron Age and the Biblical tradition. It seems to contradict many assumptions which have been strongly advocated by scholars

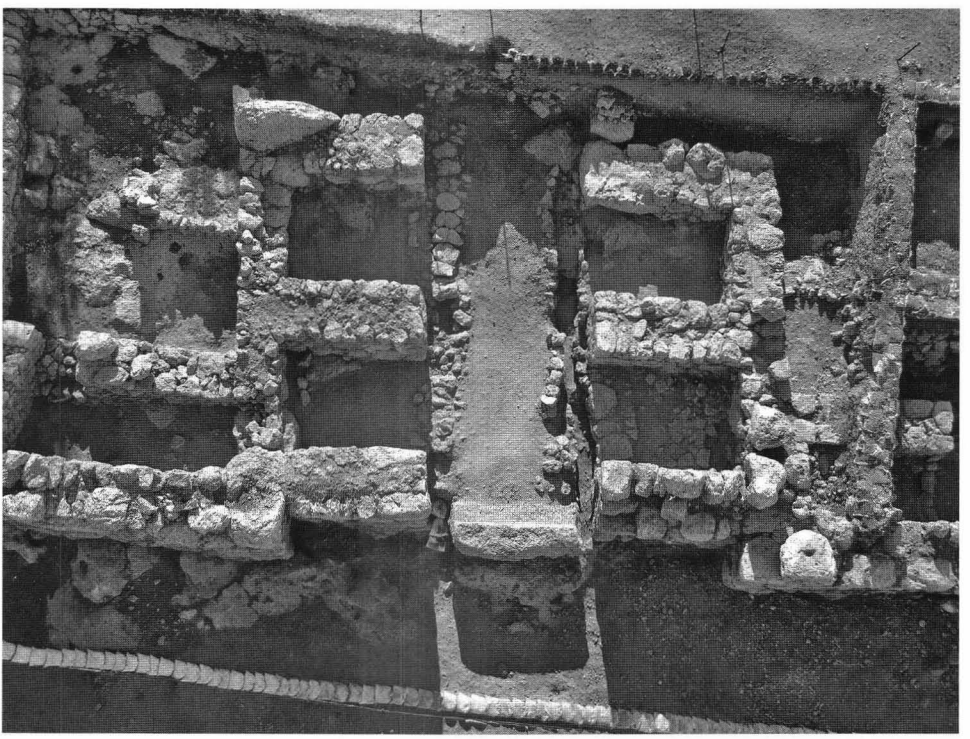

Fig. 4. The city gate in Area B, a typical four-chamber Iron Age gate.

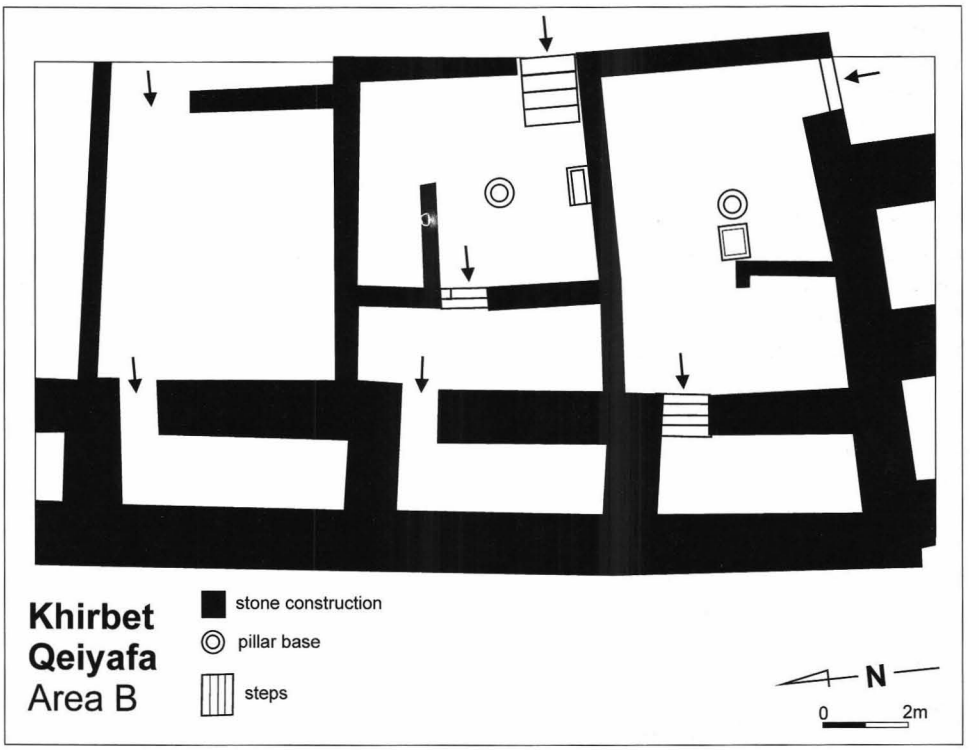

Fig. 5. Schematic plans of the dwelling units in Area B.

of the 'minimalist' schools for nearly 30 years. Thus, while the site has been under excavation only since 2007, already numerous different articles have been written against observations or interpretations made by the current expedition (Na'aman 2008a, 2008b, Dagan 2009; Tubb 2010; Finkelstein 2010; Singer-Avitz 2010). This outstanding phenomenon clearly indicates that Khirbet Qeiyafa is indeed a key site for understanding many crucial aspects of its period.

III. The Contribution of Khirbet Qeiyafa to the Iron Age Period

Since much data on the site has already been published, here we will evaluate the contribution of Khirbet Qeiyafa for understanding various aspects of the Iron Age period.

1. Surveys and Reconstructing Settlement Patterns.

Khirbet Qeiyafa was surveyed by Dagan who identified, based on pottery collected on the site surface, occupation phases from the Iron I and Iron IIB, but no settlement at all from the Iron IIA (Dagan 2008). However, the excavations revealed a different picture: no finds at all from the Iron I, or Iron IIB, but a massive fortified city from

the Iron IIA period. Khirbet Qeiyafa clearly indicates that the surveys completely overlooked the large fortified Iron IIA city at the site (Garfinkel and Ganor 2010). This indicates that Iron Age pottery collected from the site surface should not be dated by centuries, but only to larger chronological units, such as Late Bronze or Iron Age. A further subdivision is apparently wrong and misleading.

In the extensive surveys conducted in the Judaean Shephelah (from Beth Shemesh to Lachish) hardly any sites from the early Iron IIA were noticed (Dagan 2000). The same picture was reported in various other surveys conducted in the hill country and created a false picture of Judah as an empty land during the 10th and 9th centuries BCE, only becoming a full-blown state in the late 8th century BCE. In the words of Finkelstein: 'The Judahite hill country was also relatively empty, inhabited by a small number of people who lived in a limited number of villages' (2001: 106). Khirbet Qeiyafa shows that the surveys in Judah failed to recognise the early Iron IIA period, thus the reconstructed settlement patterns have no solid basis (see, for example, Finkelstein 2001; Lehmann 2003).

2. Iron Age Chronology and the Transition from Iron I to Iron IIA

The transition between Iron I and Iron II is currently under debate. The traditional view of this transition, now designated the 'high chronology', dates this to *c.* 1000 BCE (see, for example, A. Mazar 1990; A. Mazar and Bronk Ramsey 2008). Advocates of a 'low chronology' place the end of the Iron I at *c.*920 BCE (Finkelstein 1996), and an 'ultra-low chronology' dates it as late as *c.* 900 BCE (Boaretto *et al.* 2005; Sharon *et al.* 2007). Four olive pits from the destruction layer of the Iron Age (IIA) city at Khirbet Qeiyafa were sent for dating to Oxford University and when combined, the calibrated average is 1051–969 BCE (77.8% probability) or 963–31 BCE (17.6% probability) (Fig. 6). Overall results indicate that the transition from Iron I to Iron II began in the Judaean area in accordance with the high chronology (Garfinkel and Ganor 2009: 35–38). Another approach looks at the total range obtained by these radiometric datings. This leads to the conclusion that the site was destroyed sometime between *c.*1050 to 915 BCE, so Iron Age I cannot have lasted until 900. In any case the Khirbet Qeiyafa dates clarify that there were fortified cities in Judah during the 10th century BCE (Finkelstein and Piasetzky 2010).

3. The Social Organization of Iron IIA in Judah

One main issue in the debate concerning the early Iron Age IIA is whether it was a centralised urban society or an unfortified rural tribal community. Traditional scholarship ascribes the building of fortified cities like Hazor, Megiddo and Gezer to the time of King Solomon (Yadin 1958; Dever 1993). In the same way, the fortifications of various other sites have been related to the 10th century BCE (see, for example, A. Mazar 1990). Advocates of the low chronology, however, date the same building activities to the Omride dynasty, placing the early Iron Age fortifications of Hazor, Megiddo and Gezer to the 9th century BCE (Finkelstein 1996).

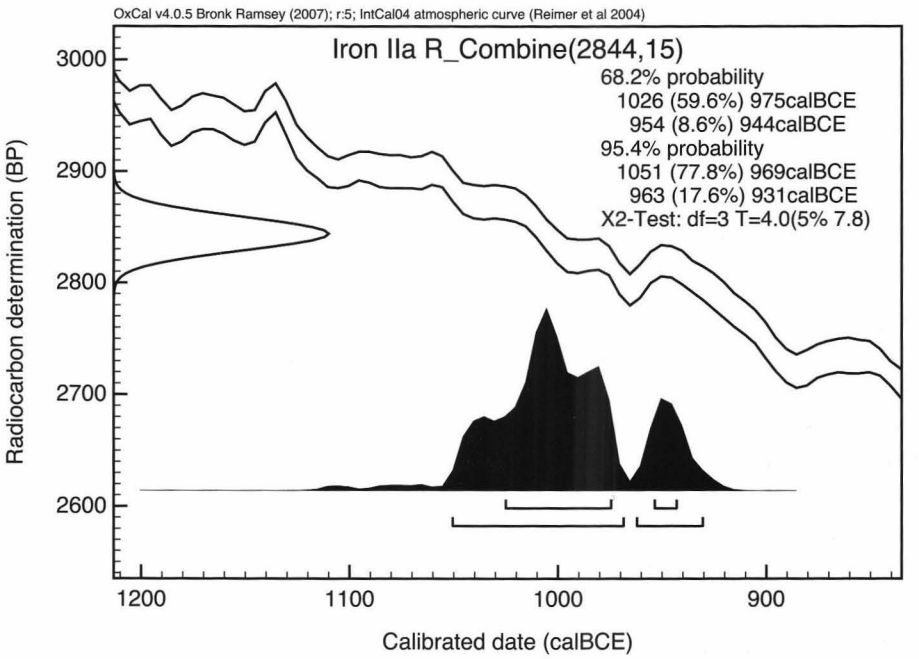

Fig. 6. Radiometric dating of Khirbet Qeiyafa.

In a detailed article, Herzog and Singer-Avitz (2004) have suggested that the Iron Age IIA should be subdivided into two phases in the south. They place several settlements, namely, Arad XII, Beersheba VII, Lachish V, Tel Batash IV and Tel Masos II, in the early Iron Age IIA. These are not fortified cities, but rather enclosures with houses arranged along the periphery of the site. They argue that the first fortified cities were constructed only in the late Iron Age IIA, approximately in the mid-9th century BCE, citing Arad XI, Beersheba VI and Lachish IV in this context. The pottery assemblage of Khirbet Qeiyafa is similar to the earlier group of sites (Kang and Garfinkel 2009a); however, it is associated with a fortified city. Khirbet Qeiyafa, with its massive fortification system built with an estimated 200,000 tons of stone, thus shows that the social organization of early Iron IIA Judah could already have been an urban, centralised society.

4. City Planning in the Iron Age

The planning of Khirbet Qeiyafa includes the casemate city wall and a belt of houses abutting the casemates, incorporating them as part of the construction. This is a typical feature of urban planning in Judaean cities of the 9th and 8th centuries BCE, and is known in the cities of Beersheba, Tell Beit Mirsim, Tell en-Nasbeh and Tel

Beth-Shemesh (Shiloh 1970, 1978; Herzog 1997). Khirbet Qeiyafa is the earliest known example of this city plan and indicates that this pattern had already been developed in the very early Iron IIA period.

5. The Pottery Repertoire of the Early Iron IIA

As Khirbet Qeiyafa was left suddenly, destroyed either by enemies, earthquake, or another reason, large quantities of restorable pottery vessels are found on the floors of each excavated room. This rich assemblage is in contrast to the other published assemblages of this period, which usually include a small number of sherds, but not complete vessels, as can be seen in Arad Stratum XII, Beersheva Stratum VII and Tel Batash Stratum IV. The Khirbet Qeiyafa painted pottery known as 'Ashdod Ware' enables us to subdivide this pottery tradition into two groups, earlier (Ashdod I) and later (Ashdod II) (Kang and Garfinkel 2009b). This situation reveals that a one period site can contribute much more than tell sites to our understanding of a specific short period of time. At the end of the project, when hundreds of restorable vessels will be available, Khirbet Qeiyafa will become the type site for early 10th century BCE pottery.

6. Preparation and Consumption of Food

Khirbet Qeiyafa is different from the nearby Philistine centers of Tel Miqne (Ekron) and Tell es-Safi (Gath) in two main aspects. First, pig bones were entirely absent at Khirbet Qeiyafa, while their presence in these Philistine sites indicates that they were consumed by the Philistine population (Kehati 2009). Second, pottery baking trays which were found at Khirbet Qeiyafa are unknown at Tel Miqne and Tell es-Safi (Kang and Garfinkel 2009a). Khirbet Qeiyafa demonstrates that two different populations co-exist in the Iron Age in the Shephelah, and that the Qeiyafa population is clearly not Philistine.

7. Household Archaeology

Three well preserved dwellings were excavated in Area B. Parts of two other buildings were excavated in Area C. In each house the entire architecture was preserved, which provides a well-defined ground plan for each building. On the floors of each room various installations, large quantities of pottery, and stone tools were found. The excellent state of preservation gives a vivid picture of how the households were organised. The expedition aims to uncover c. 20 complete houses along the city wall. Our models for a large horizontal exposure are the excavations of R. Amiran at Early Bronze Age Arad and Y. Aharoni in Iron Age IIB Beersheba. The Khirbet Qeiyafa excavations will create a database for household archaeology of an early 10th century BCE settlement for the first time in the archaeology of the Iron Age.

Fig. 7. Khirbet Qeiyafa ostracon (Megavision laboratory).

8. Writing

The most prominent find from Khirbet Qeiyafa is an ostracon, an inscription written with ink on a broken pottery sherd (Figs. 7–8) (Misgav et al. 2009a, 2009b; Yardeni 2009a, 2009b, Ahituv 2009; Demsky 2009, Bearman and Christens-Barry 2009a, 2009b). While most inscriptions from this time period are rather short, the Khirbet Qeiyafa ostracon is a five-line inscription with nearly 70 letters. Many of the inscriptions from this period lack provenance or stratigraphic context, yet the Khirbet Qeiyafa ostracon was found directly on the floor of a house and is securely dated to the early 10th century BCE. For these reasons, it is of tremendous importance for understanding the development of both script and language in the Iron Age.

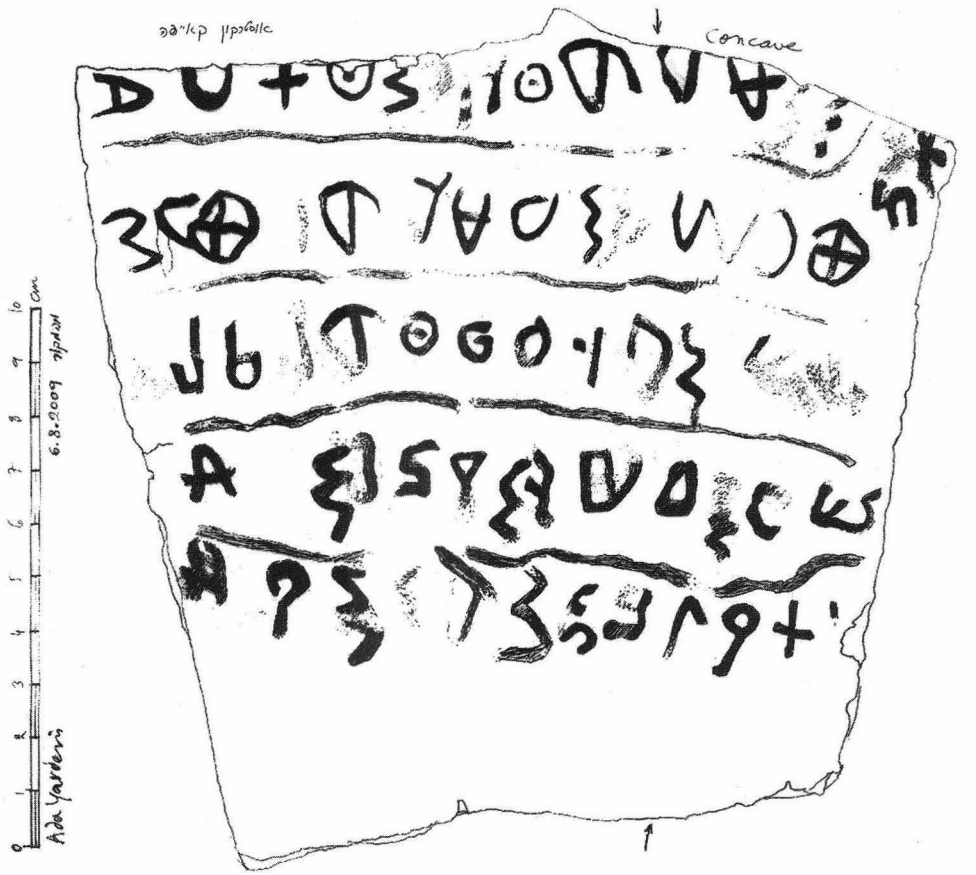

Fig. 8. Khirbet Qeiyafa ostracon (technical drawing by Ada Yardeni).

The script of the ostracon is in the Canaanite tradition (so-called 'Proto-Canaanite'). According the studies of F. M. Cross, this script went out of use during the middle of the 11th century BCE, but the Khirbet Qeiyafa inscription demonstrates that this script was used until the beginning of the 10th century BCE. A comparative study of the script on other inscriptions, like the 'Izbet Sartah ostracon and metal arrowheads, which were traditionally dated to the 12th–11th centuries BCE, now enables us to date these items to the late 11th-early 10th centuries BCE. The language of the inscription is now under dispute. If we accept the reading *'al ta 'aš* (אל תעש = 'do not do/make') in the beginning of the first line, then the language is Hebrew. Other possible languages could be Canaanite, Phoenician, Philistine or an unknown Semitic dialect. According to the expedition interpretation of the site, its location, architecture and diet, it was part of the kingdom of Judah. Thus, the inscription is more likely to represent very early Hebrew.

Now with the publication of the ostracon, scholars from all over the world will be able to reexamine it and improve its reading and its meaning. One article has already been published (Puech 2010) and others have announced that they are currently preparing new publications (C. Rollston, G. Galil, and A. Lemaire). Undoubtedly, the importance of this inscription will generate dozens of articles in years to come. We can only hope that these studies will contribute to a better understanding of this rather enigmatic text.

The existence of writing at such an early stage of the Iron Age is significant for it implies that historical data could have been documented and passed on from the early 10th century BCE until the Biblical narrative was finally formulated.

9. Historical Geography: Is Khirbet Qeiyafa Biblical Sha'arayim?

Another aspect relating to Khirbet Qeiyafa is its ancient name. Do we have enough solid data for the complicated task of site identification? Various suggestions had been proposed in scientific and popular publications (Adams 2009). The current expedition accepted the name Sha'arayim which appears three times in the Biblical tradition. Of these, in two cases it is mentioned in the context of the Elah valley and in two cases in association with King David. In addition Khirbet Qeiyafa has two city gates, and the term Sha'aryaim means 'two gates' in Hebrew (Garfinkel and Ganor 2008b).

10. The Early Kingdom of Judah

According to the Biblical narrative, King David was first a ruler in Hebron for seven years. Later he conquered Jerusalem and moved there to establish a new capitol. The archaeological picture of Jerusalem in the 10th century BCE is obscure and fundamentally different suggestions and interpretations have been raised (A. Mazar 2006; E. Mazar 2007; Finkelstein *et al.* 2007). Hebron is also a difficult site to excavate, and the few expeditions who worked there did not find any meaningful remains from the early 10th century BCE (unlike the description of Chadwick 1992 and Ofer 1993). So far there are no clear archaeological data regarding the period of King David in the two major cities of his kingdom. This lack of data rightly raises serious questions concerning the nature of the political structure in the 10th century BCE. The traditional view points to a single, powerful, centralised authority in Jerusalem that controlled the entire country (see, for example, B. Mazar 1986; A. Mazar 1990; Master 2001; Stager 2003), while others suggest various local, autonomous forms of organization (see, for example, Finkelstein 1996; Herzog and Singer-Avitz 2004).

The Khirbet Qeiyafa excavations have completely altered this situation. Now we have a fortified city in Judah located within one day's walk from Jerusalem and one day's walk from Hebron. The distance between these three cities corresponds well to the expected distance between central cities in a kingdom. Khirbet Qeiyafa probably functioned as the third most important city in the early kingdom of David. Its strategic

importance is not only the relative distance from Jerusalem and Hebron, but also its location on the border between Judah and Philistia, opposite Tell es-Safi (Gath), a very large Philistine city during this specific period (Maier and Uziel 2007). Khirbet Qeiyafa, with its position on the main road leading from the Coastal Plain into the hill country, functioned as a 'gate city' to the kingdom; a check-point on the western border of Judah. In a similar way Khirbet ed-Dawwara (Finkelstein 1990) probably functioned as a border city on the northeastern border of the kingdom in the same period. While Jerusalem and Hebron remain problematic, Khirbet ed-Dawwara and Khirbet Qeiyafa provide significant data for the early kingdom of Judah.

11. Archaeology and the Biblical Narrative

Another debated issue in Iron Age archaeology is the historicity of the Biblical narrative concerning the United Monarchy and the period of Kings David and Solomon. In the early days of research, the Biblical narrative was viewed as an accurate historical account (see, for example, B. Mazar 1986; Yadin 1958). However, serious doubts have been raised about this tradition since the 1980s, suggesting that the Bible is merely a literary compilation dating from centuries later (see, for example, Davies 1992; Thompson 1999; Van Seters 2009). In the latter approach, King David is considered a purely mythological figure. Although the inscription on the Tel Dan stele clearly indicates that David was indeed a historical figure (Biran and Naveh 1995), but it is unclear whether he was the ruler of a large empire or only a small local chieftain.

Khirbet Qeiyafa is located between Khirbet Shuweikah, commonly identified as Biblical Socoh (Hasel 2009) and Tell Zakariyeh, commonly identified as Biblical Azekah (2 km. to the west). In the Biblical narrative, the battle between David and Goliath is located 'between Socoh and Azekah' (I Sam. 17). The chronology and geography of Khirbet Qeiyafa thus enable a convergence of mythology, history, historiography and archaeology. Our suggested identification of Khirbet Qeiyafa as Biblical Sha'arayim, a city that is mentioned in the Bible in a historical context only in the late 11th century BCE, has far reaching implications for the Biblical texts relating to the period of King David. If correct, it shows that the Biblical tradition preserves historical data and cannot be dismissed as a mythological story invented centuries after the relevant period.

Moreover, the ostracon clearly indicates that writing was indeed practiced in Judah during this period and hence, that historical knowledge could have been documented then and preserved for generations.

12. Methodological Aspects

The archaeology of the Iron Age tends to concentrate on large, multi-period tell sites. Currently the main Iron Age excavations in Israel all focus on major tells, listed from north to south; Dan, Hazor, Bethsaida, Dor, Megiddo, Tel Rehov, Beth

Shemesh, Tell es-Safi, Ashkelon, and Tel Zayit. Khirbet Qeiyafa, in contrast, is a one period Iron Age site, built on bedrock. On some parts of it there are later remains, but these cover only a limited part of the site. The advantages of excavating Khirbet Qeiyafa are clear:

(a) Features could be noticed before excavation because they were not covered. The entire city wall and two city gates were noticed before excavations;
(b) A large part of the Iron Age layer can be excavated in a rather short time as there is no over burden from later periods;
(c) The excavation area can be enlarged according to the spread of the architecture, and not in artificial trenches marked on the site surface before the excavations begin.

This points to the need for a paradigm shift in choosing archaeological sites for academic research.

13. Timely Publication

One of the main shortcomings of archaeology is the very slow progress in the publication of excavation reports (Shanks 1996). For example, the important Iron Age remains at Arad and Beersheba which were excavated from the late 1950's and the early 1970's, have still not yet been published to any large extent. The Khirbet Qeiyafa expedition made a decision to publish a final excavation report after every two excavation seasons. One final report has already appeared. This is a volume of 304 pages presenting the 2007–2008 excavation seasons with seventeen chapters written by nineteen scholars (Garfinkel and Ganor 2009). A second volume reporting on the 2009–2010 excavation seasons is currently planned. The fieldwork is planned so that significant architectural units will be exposed for each volume.

IV. Discussion

After only three seasons of excavations Khirbet Qeiyafa has already contributed tremendously to the poorly known transition period of the Iron I to Iron IIA. The results indicate that the previous interpretations of this period must now be re-evaluated based on new data and one cannot continue to assume the myth of an empty land in Judah. The many minimalist assumptions were based on the supposed silence of the archaeological record and the poorly conducted surveys which failed to recognise the existence of this period. If the Iron IIA city was missed in previous surveys at Khirbet Qeiyafa where only a thin Hellenistic layer covered it, one can imagine what was missed at sites with a more extensive burden of later periods.

Several questions remain for future excavations at Khirbet Qeiyafa. Will there be any evidence for public buildings, cultic activities, and burials? What were the trade connections with other regions in the Levant and beyond? Will further inscriptions be found to clarify the issues of script and language? Were there

workshops for the production of metallurgy, pottery, and other objects at the site? What further insights will be gained for centralization and administration?

Whatever future discoveries bring to light, Khirbet Qeiyafa is already a fascinating site from a relatively poorly known period. While most of the data on the kingdom of Judah come from strata dating to the 8th–7th centuries BCE (Lachish, Beth Shemesh, Arad, Tell Beth Mirsim, Jerusalem) little is known about the 10th century BCE. Khirbet Qeiyafa contributes tremendously to this poorly known period in a large variety of aspects, as summarised above.

We can only hope that at the conclusion of the excavations the site will become a park open to the public. The ancient city should be preserved and reconstructed and a management plan should be created and put into practice. This would enable the public to come and see a small but important settlement from the time of King David.

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Amphorae and Urns as Grave Markers in Idumaea, Judaea, and Nabataea

AMOS KLONER

This study explores the use of the funerary symbol of the amphora. It is argued that there is there a connection between *loutrophoroi*, which occur on stelae used as grave markers in Attica during the 5th and early 4th centuries BCE, the pairs of painted amphorae in Tombs I and II at Marisa in western Idumaea, from the first half of the 3rd century BCE, and the three squat urns without handles that adorn the acroteria of triangular pediments on the facades of tombs and triclinia at Petra and Meda'in Saleh, of the 1st century BCE to the 2nd century CE. Such usage informs interpretation of vessels included on funerary monuments and ossuaries in 1st century CE Judaea.

Paintings of amphorae in burial caves at Maresha and depictions of amphorae incised on ossuaries, walls of burial caves, and façades in Jerusalem and on the façades of Nabataean monuments are cultural-religious examples of the use of a funerary symbol common in the southern Levant and northern Arabia in the Hellenistic and early Roman periods. Below we present the finds from Maresha (Idumaea), Jerusalem (Judaea), and Petra and Meda'in Saleh (Nabataea).[1]

Paintings of Amphorae at Maresha (Hellenistic Idumaea)

Paintings of amphorae in Burial Complex I
(551 in the new numbering of the Maresha necropolis; Fig. 1*)*

In Burial Complex I (551), the eastern side of the main burial chamber was a large rectangular niche (Peters and Thiersch 1905: figs. 1–2), with three steps leading to it from the floor of the chamber (D). These steps were not visible when the cave was discovered in 1902 because they were covered by rocks that had fallen from the wall built above the opening of the niche (Peters and Thiersch 1905: frontispiece). The steps were uncovered when the rocks were removed in the early 1920s during the cleaning of the complex by the Antiquities Department of the British Mandatory government. Above the top step of the three that leads to the niche there is a façade which is adorned with a carved relief of two legs of a *klinē* (bed). The *klinē*, a common feature in architecture and burial art from the Classical and Hellenistic periods, is well known from burials in Macedonia and Alexandria.

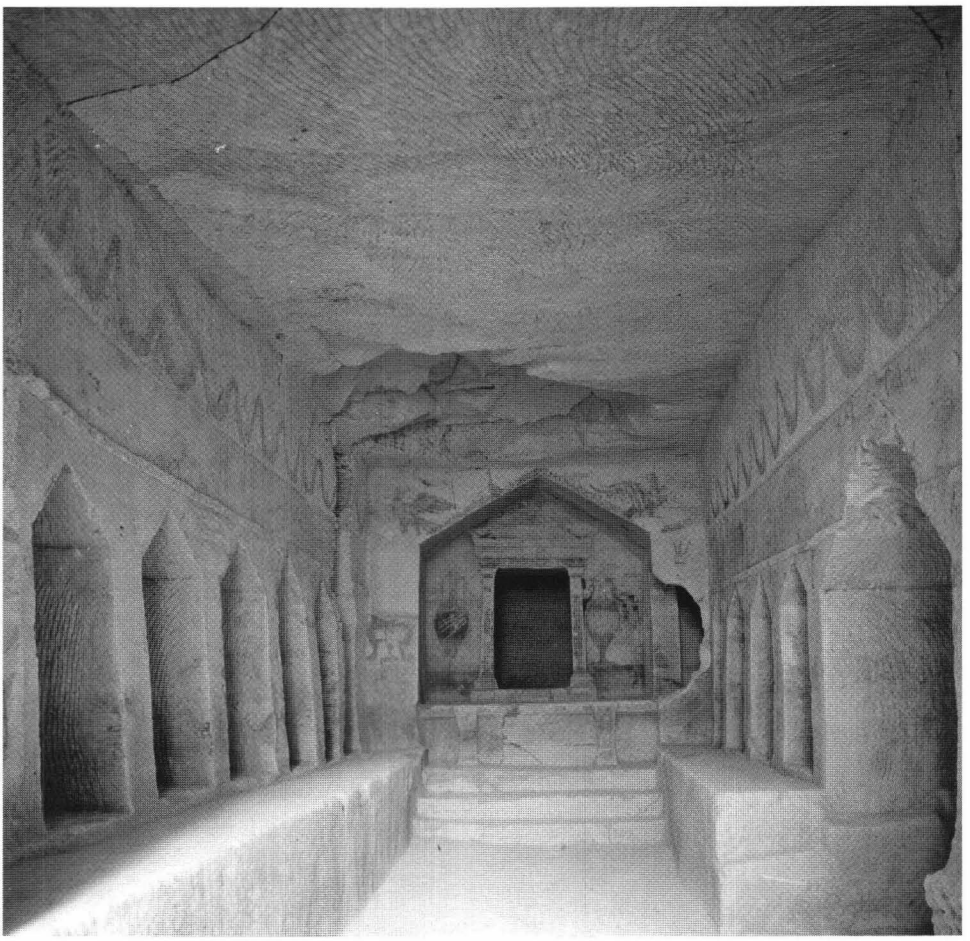

Fig. 1. Burial cave 1 (551) at Maresha: the amphorae (photographed at the beginning of the 1920s Department of Antiquities, Mandate).

A wreath is painted on the walls running the length of the chamber and continues on both sides of the niche above the *klinē*. It adjoins the top gable in the rock and constitutes the upper frame of the large niche that has the *klinē* at the bottom. Painted on either side of the large, triangular, rock-cut gable are two reddish-brown eagles spreading their wings in a heraldic pose and facing the centre of the façade, which is the peak of the gable (Peters and Thiersch 1905: 21).

The eastern wall of the niche features a relief designed to look like the façade of a gabled, Doric-style temple or burial structure, with a Doric frieze of metopes and triglyphs on a smooth red architrave. The architrave rests on two pillars, which are also painted red except for two white panels, one above the other, at the top of each pillar. In the top white panel of each pillar is a painted rosette. The rock-cut pillars, architrave, and gable project out from the rear wall and are painted red, highlighting

the details of the relief. The Doric façade in Tomb I (551) is the oldest in Israel; like all the decorations and other items in the complex where it was placed, its creation and initial use can be dated to sometime before the middle of the 3rd century BCE, i.e., the first half of that century.

At this stage of describing the paintings in the eastern niche of Burial Complex 551 we can already see that the various decorative elements – especially the eagles, Doric frieze, and rosettes – are common patterns on rock façades of burial complexes in Petra and Meda'in Saleh.

Amphorae, with colourful ribbons tied to their handles and blowing in the wind, were painted on the façade on either side of the entrance. Both amphorae rest on square red bases, almost certainly representing burial facilities. The amphorae have conical lids; their bodies are brownish-black; and in the middle of their bodies are broad stripes – red on the left-hand amphora and white on the right-hand one. Peters and Thiersch emphasised the "Greek" appearance of the amphorae (Peters and Thiersch 1905: 22; for colour photographs of the amphorae, see Kloner 1996: 35, 38–40, and cover; Kloner 2000: table 1, figs. 2, 6, 7). Clearly the shape of the painted amphorae at Maresha is common and typical of amphorae from the 4th century BCE.

Amphorae in Burial Complex II (552 in the new numbering of the Maresha necropolis; Fig. 2*)*

Two additional amphorae were painted on the western wall, one on each side of the main entrance to the chamber in the southernmost of the two burial complexes (Peters and Thiersch 1905: 32). These amphorae are larger than ordinary ones, and there is a slight difference between the two. They were described only in general terms when discovered in 1902 (ibid.). A re-examination and re-photographing of the paintings in the late 1980s shows that these vessels had narrow, elongated bases, like the bases of amphorae from the 4th and 3rd centuries BCE. The few paint remnants near the bottom of the paintings show that these amphorae were originally painted dark blue, but the colours changed slightly over time.

Amphorae are usually explained as repositories for the ashes of people who were cremated in accordance with the prevalent Greek custom in the Classical and Hellenistic periods. But cremation was not at all prevalent in the Levant, despite exceptional finds from mounds on the coastal plain, which are associated with the Phoenicians in the Iron Age and Persian period. The Hellenistic-period inhabitants of Maresha – Idumaeans, Sidonians, and others – buried their dead in kokh caves hewn out of the chalk rock in three concentrations of burial caves around the city (Kloner 2003: 21–30). Seven built pit tombs at Maresha, discovered east of the lower city, are attributed to the Persian period; six of them were found empty and one had burial remains inside. It is thus perfectly clear how and where the inhabitants of Maresha were buried and that cremation was not a common practice. The columbaria at Maresha were used as dovecotes and not for the storage of ashes (Kloner 2003: 44–5); the same is true in Petra and elsewhere in the Hellenistic and Roman periods.

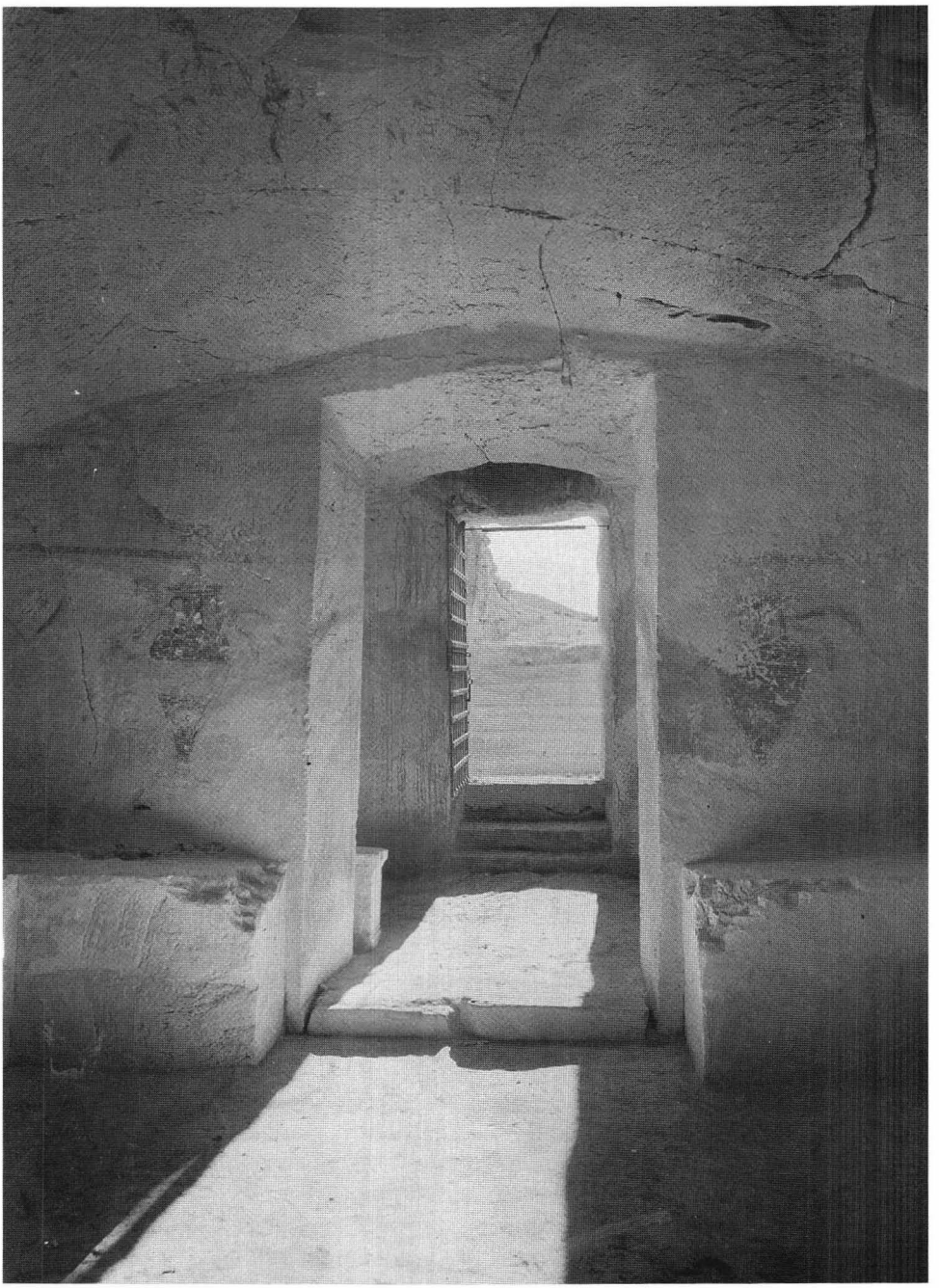

Fig. 2 Burial cave 2 (552) at Maresha: the amphorae on either side of the main entrance (photographed at the beginning of the 1920s Department of Antiquities, Mandate)

The paintings of amphorae in burial caves 551 and 552 at Maresha are paintings of tombstones made of marble or crystalline limestone. We can outline developments in the design of tombstones shaped like large ceramic containers meant to hold liquids. These vessels are mostly categorised as amphorae. Two kinds of large ceramic jugs known as *loutrophoroi* (sing., *loutrophoros*) were put in cemeteries in the Classical period: the three-handled *loutrophoros-hydria* and the two-handled *loutrophoros-amphora*. These vessels served as grave markers in the fifth century BCE (Kurtz and Boardman 1971: 24). The prevalent hypothesis is that they held water for purposes of bathing (*loutron*); hence their name. This is also the source of the conclusion that the loutrophoroi contained water for purifying and washing the deceased before burial. Loutrophoroi held water for initial, basic purification in burial rites and weddings; they were part of the life-cycle ceremonies. Hence the explanation that these vessels, both in their original form as repositories and as grave markers, marked the graves of unmarried people. There are differences of opinion regarding these explanations; some people disagree with them or with some of them (Kurtz and Boardman 1971: 161).

In addition to amphorae, we frequently find depictions of *lekythoi* (sing., *lekythos*) in cemeteries. Lekythoi are ordinarily found on tombstones from the fifth century BCE. They were fashioned in relief on tombstones made of tall, narrow, rectangular stone tablets. The frequency of lekythoi and loutrophoroi is powerful evidence that they were burial symbols and were used on tombstones in Athens, the Attic region in general, and other areas dominated by Greek culture, such as Macedonia (Bergemann 1997).

Tombstones featuring reliefs of vessels or full marble vessels were already a very important part of the cemetery landscape in the Classical period. Reliefs of lekythoi and loutrophoroi on flat tombstones were frequently accompanied by reliefs of family members and relatives saying goodbye to the deceased (Kokula 1984; Clairmont 1993; Bergemann 1996).

In the late fifth century, the loutrophoros-amphora became more prevalent than the lekythos as decorations on steles. In the mid-4th century BCE, marble loutrophoroi – three-dimensional, solid sculptures of amphorae – came into use as tombstones. Sometimes burial scenes were depicted on the outside of a vessel as an additional artistic panel, reinforcing its function as a tombstone.

The loutrophoros is a common tombstone shape in the burial grounds in Kerameikos, Athens (Kloner 2000: 13; Knigge 1991; Figs. 3–5). This graveyard abounded in tombstones of a variety of types, including lekythoi and loutrophoroi, which were placed above the burial platforms along the cemetery streets. Presumably, the landscape of other cemeteries in Athens was very similar. Tall, flat tombstones featuring reliefs of loutrophoros-amphorae and lekythoi are common in Kerameikos (Bergemann 1997: pl. 2, figs. 2.1 [A20], 2.3 [N6]), and there are loutrophoros-amphorae and lekythoi sculpted as freestanding monuments nearby (Bergemann 1997: pl. 1, figs. 1.1 [N5], 1.2 [M3], 1.3 [A1–A3]; pl. 2, fig. 2.5 [N3]). These stone monuments quickly became symbolic of burial, and the Greeks used them as grave markers. The wide reach of these customs is further proof of the

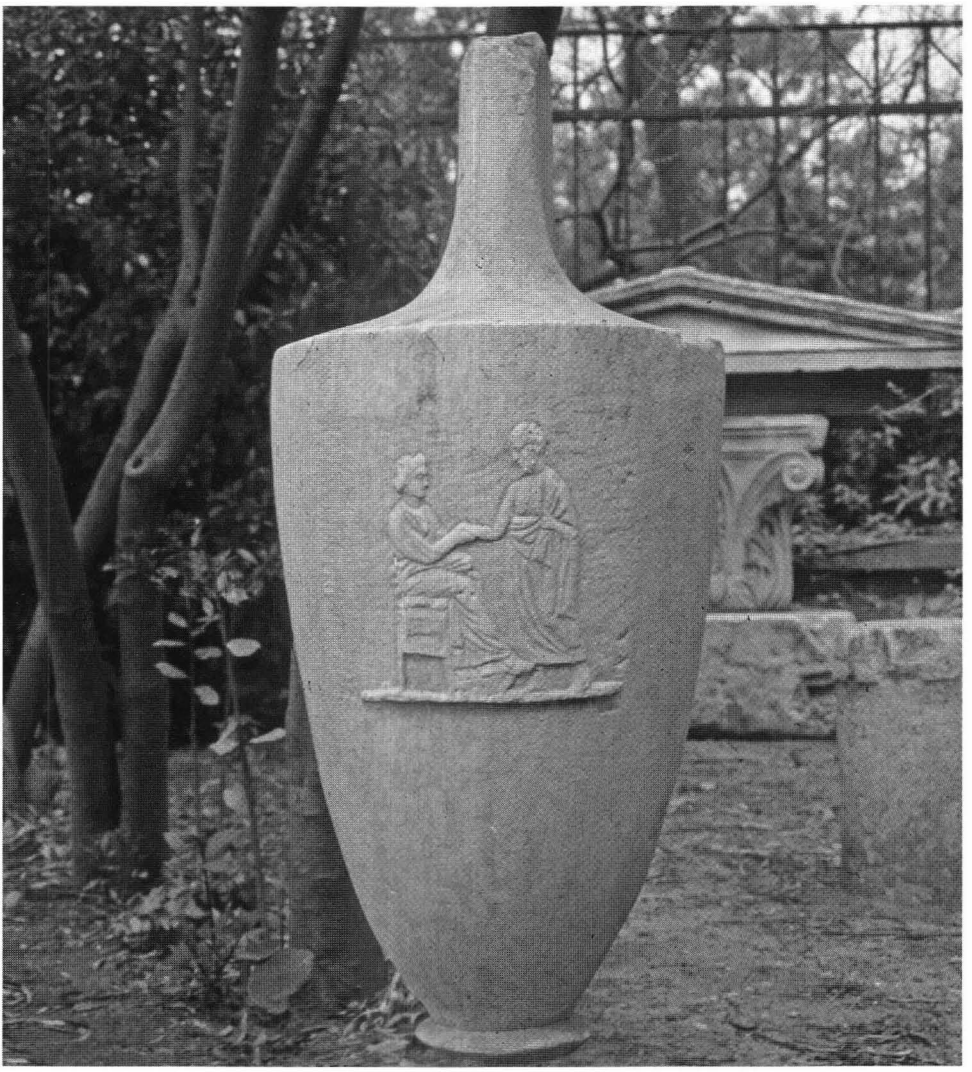

Fig. 3. Loutrophoros/lykthos, Kerameikos Athens

dominance of Greek culture in the Hellenistic world. In Maresha, too, in the first half of the 3rd century BCE, the artists who did the paintings in the two burial caves primarily depicted items that, in their eyes and the eyes of the people who commissioned their work, represented Greek burial. It is virtually certain that the people buried at Maresha were emphasizing their connection to Greek burial practices, thereby showing themselves part of a much broader, more comprehensive culture, namely, Hellenistic culture.[2]

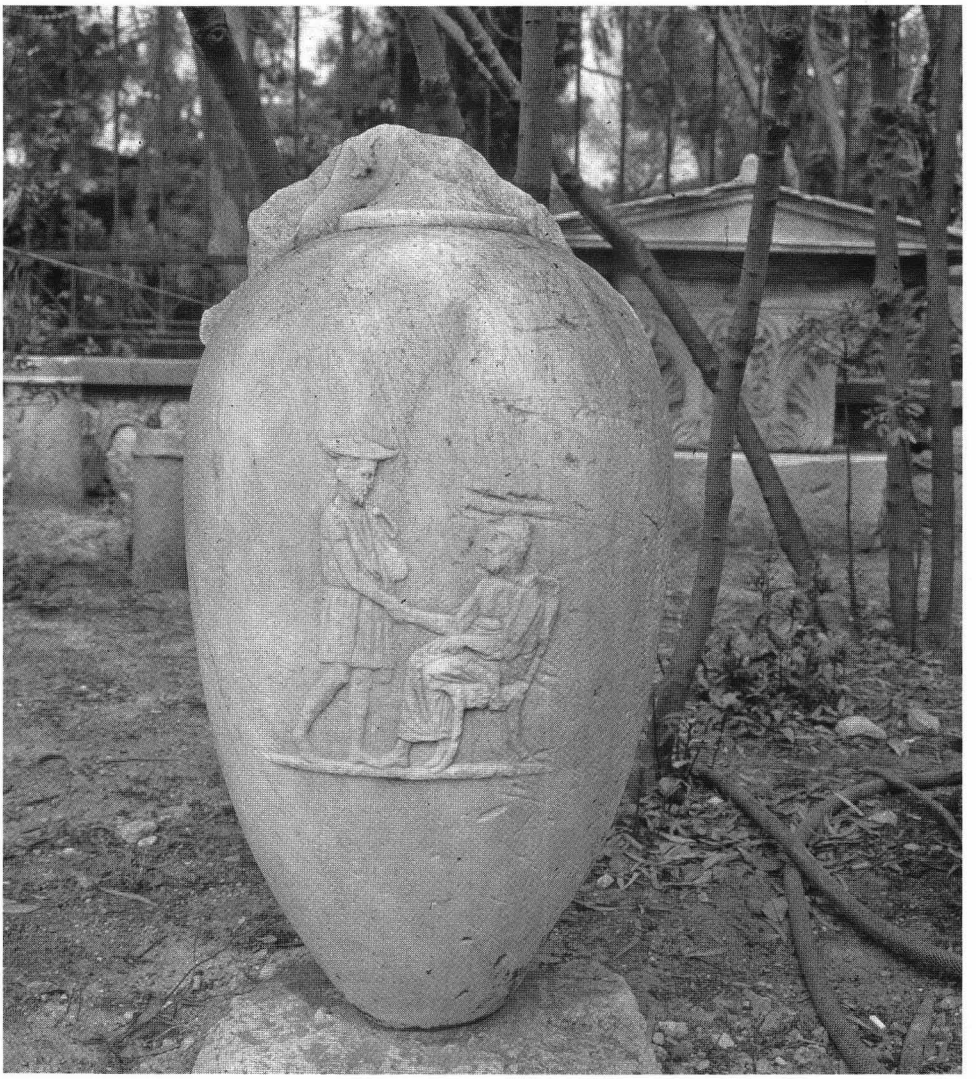

Fig. 4. Loutrophoros/amphora Kerameikos Athens

Loutrophoros-amphorae became clear symbols of burial among the Greeks and ethnic groups influenced by them in the Hellenistic world, including the Idumaeans and Sidonians in Maresha, the capital of Idumaea.

Fig. 5. Burial marker in Kerameikos Athens: the marker on the right has a relief of a lutrophoros/lykthos

Amphorae incised on ossuary façades, walls of burial caves, and monuments in Jerusalem

Amphorae, generally known as urns in tomb architecture, were engraved in stone – on rock façades and burial-related items – by members of other cultures in the southern Levant, especially the inhabitants of Judaea and Nabataea living on either side of the Jordan River and in the Arava. This explains their appearance on 23 stone ossuaries in Jerusalem (Kloner 1999; Rahmani 1994; Figs. 6–7) and on several

Fig. 6. An ossuary from Givat HaMivtar Jerusalem: an amphora is depicted above the *nefesh* monument) (Rahmani 1994: no. 325)

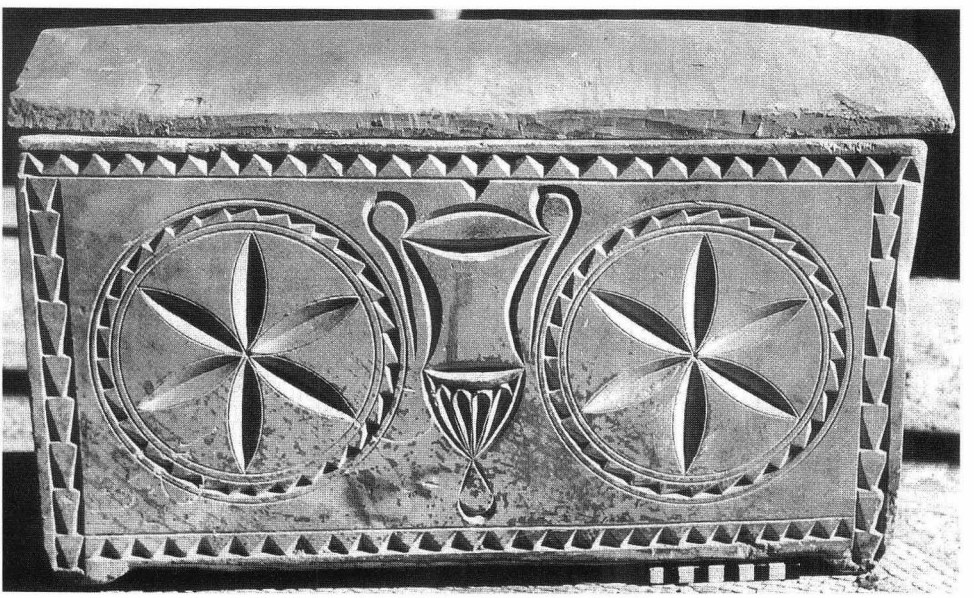

Fig. 7. An ossuary from Romema Jerusalem: an amphora is depicted between two rosettes (Rahmani 1994: no. 183)

other ossuaries (Goodenough 1953 vol. 3: ills. 153, 157). They were also depicted on the façades of tombs in the Jerusalem necropolis. In Rahmani's opinion, amphorae were featured at the centre of mausolea or at their vertex; the Nabataeans in those days used them as capitals for mausolea or for gables above tomb entrances (Rahmani 1994a: 110). According to Rahmani, sculptures of amphorae were almost certainly placed at the top of pyramid-shaped mausolea, as we can see on the façade of Herod's family tomb and at the top of the tholos of Yad Avshalom (Rahmani 1994: 34; on the monument, see also Kloner and Zissu 2007: 242–3).

Avigad suggested that there was space for decorative elements above the lotus on Yad Avshalom but rejected the idea that a burial urn was depicted there because cremation was not commonly practiced by the Jews in the Second Temple period (Avigad 1954: 114–17). Urns were engraved as decoration and grave markers even inside several burial caves in the Jerusalem necropolis in the late Hellenistic and early Roman periods.

In a large burial cave in Wadi Qadum, ornamental architectural elements were carved into the wall of the antechamber (Avigad 1967: 126–9, fig. 10; on the cave, see Kloner and Zissu 2007: 222–5: Fig. 8). The opening from the antechamber to the cave interior is adorned with a gable having three spindle-shaped acroteria (Avigad 1967: fig. 11; Rahmani 1994: 63, ill. 1; Kloner and Zissu 2007: 606, Fig. 115). Despite the spindle shape, the acroteria are clearly meant to represent urns, as commonly depicted on the rock façades of burial caves (see below). These incised spindle-shaped vessels, whose necks come to a point at the top, are similar in design to the vessel at the top of the façade of ossuary 122 in the catalogue of ossuaries (Rahmani 1994: Pl. 17, no. 122). Spindle-shaped vessels were common in the art of the period, including on mosaic floors. Rahmani suggested that the object at the top of the gable on the façade of Burial Complex 14 in Sanhedriya was also urn-shaped (Rahmani 1994: 29, ill. 35; on the cave, see also Kloner and Zissu 2007: 415–17, 516, Fig. 12).

In a burial cave in the Hinnom Valley are two urn-shaped acroteria, one on each side of a gable over an Attic entrance; the gable frames the central kokh in a wall

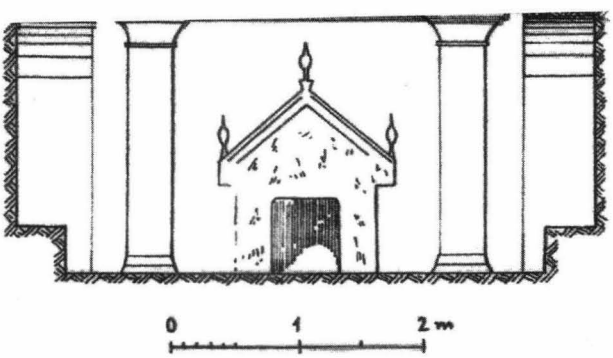

Fig. 8. A gable on which there is an acroteria with a spindle-bottle shape from Wadi Qadum Jerusalem (Avigad 1967: 128)

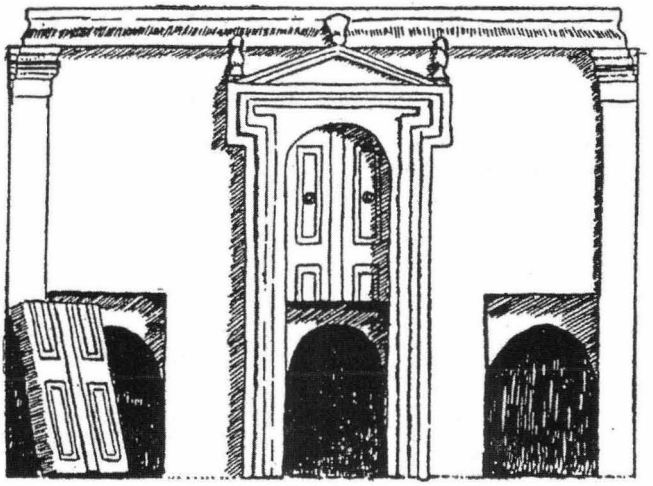

Fig. 9. A gable with three urns from the Ben Hinnom Valley Jerusalem (Dalman 1939)

having three kokhim (Fig. 9; Dalman 1939: fig. 6; Goodenough 1953 vol. 3: ill. 39; Rahmani 1994: 63, fig. 2; Ritmeyer 1989: 52; Kloner and Zissu 2007: 304–6, 678, Fig. 199). Presumably, there used to be a third urn above the gable. The façades and adornments in these caves are further evidence of the use of amphorae as grave markers by the Jews of Jerusalem and Judaea.

In the new excavations at Herodion the podium of a very rich mausoleum and a group of decorated urns were found (Netzer 2007: 62–8, ill. 9). One of the urns was almost complete and pieces of other urns were recovered as well. According to Netzer the mausoleum's lower part was square in plan while the upper part had a round columnar appearance, ornamented with an urn in the centre and four other urns at the corners. It seems that this finding of an almost complete urn and urn fragments are well integrated into the picture of painted amphorae found at Hellenistic Idumaean Maresha, Hasmonean and Herodian Jerusalem and the findings of Nabataean urns, see below.

Goodenough describes the amphora as a prevalent element in Jewish art, but in contrast to the presentation here, he attributes religious and ritual symbolism to it (Goodenough 1953: vol. 1).[3]

Urns in Nabataean burial art and rock façades

The distribution and prevalence of urns on the rock façades of monumental sculptures at Petra and Meda'in Saleh are indicative of a common practice among the Nabataeans. The existence of the urns is mentioned by scholars who have studied these sites.

Urns at Petra

Brünnow and von Domaszewski, in their basic study of the monuments at Petra, mention the urns as a decorative element at the top of the rock façades (Brünnow and von Domaszewski 1904). Dalman also notes the discovery of urns in rock façades and sacramental niches at Petra; in a brief, 11–line summary he stresses the existence of the urns, but without any explanatory information (Dalman 1908: 78).

Jaussen and Savignac carried out a systematic survey of Meda'in Saleh in April 1907 and informed the academic world of the copious information that they had gathered at the site and in its vicinity, including the existence of reliefs of urns on the rock façades and sacramental niches (Jaussen and Savignac 1909: 107–38, 323–436; Jaussen and Savignac 1914, Atlas: pls. XXXVI–LVII).

In 20th-century scholarship, the urns are mentioned only in passing. Judith McKenzie, for instance, does not mention urns or amphorae in the index of her book (McKenzie 1990). Many other publications about Petra and the Nabataeans also lack specific reference to urns.

Urns are common on the façades of Nabataean burial complexes and triclinia. There are four main types on the façades at Petra:

- urns at the top of the upper gable or above the cone of the main tholos
- urns as acroteria at the top of a gable at the entrance to a monument
- urns as acroteria above an arch over the entrance to a monument
- urns as embellishment in a frieze on the façade of a monument

It was found that urns are common on the façades of all types of tombs at Petra according to the standard typology. They are particularly salient on façades of the temple-tomb (*Tempelgrab*) type. Below is an overview of urns found at Petra. The finds are presented in accordance with the numbering of the sites by Brünnow and von Domaszewski; their work is the basic source for the overview, with comments and other information added where relevant. The bibliography for each site is also based on Brünnow and von Domaszewski (1904), with supplementary material taken from McKenzie (1990), Dalman (1908), and other sources as needed. It seems that some of the facilities whose façades were sculpted in the rock, such as the triclinia, were used primarily not for burial, but for other ritual and ceremonial purposes. Similarly, the appearance of urns in sacramental niches indicates that the urns were used for religious purposes in addition to serving as grave markers. The present paper deals only with urns; in order to focus on this specific topic, it ignores other artistic and archaeological elements.

No. 62: El-Khazneh

Urns appear in two places on the façade of the monument: at the top of the cone of the main tholos and in the frieze below the lower pediment. (Fig. 10).

There are seven urns clearly depicting amphorae, in relief in the frieze on the bottom story underneath the gable. The detail on the seven amphorae, including

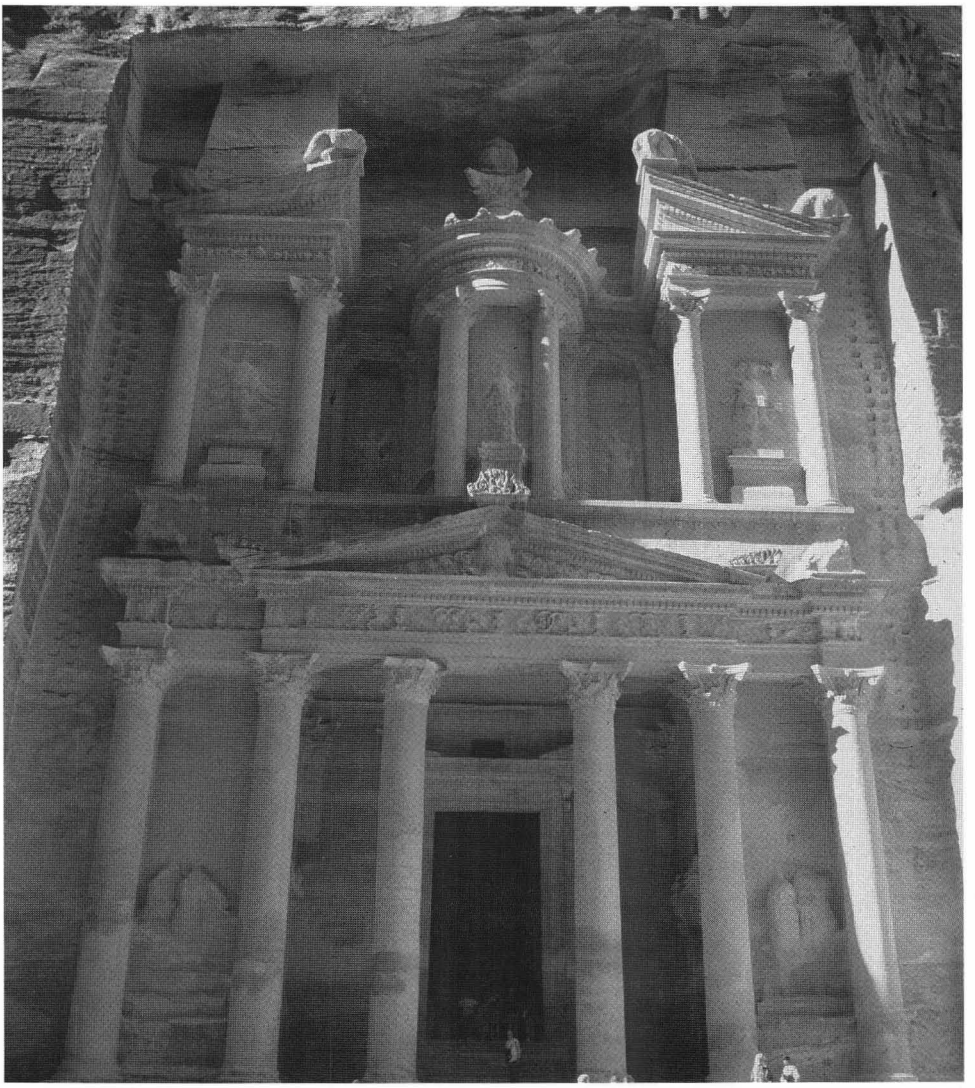

Fig. 10. El-Khazneh at Petra

their handles, was sculpted with precision; this was made possible by the shallow relief in the frieze. The amphorae in the frieze are well preserved relative to the other details, as can be seen from the site itself and from photographs of the façade.

Sources: Brünnow and von Domaszewski 1904: 185–6, pl. II; 223–231, fig. 259; McKenzie 1990: 79–80, pl. 87b–d, 140–3 (plate 87 shows close-up photographs of the urns in the frieze).

No. 70

Two urns as side acroteria above the gable framing the entrance in the façade of a pylon tomb. The middle urn at the top of the gable was destroyed and can no longer be seen. On this façade the outline for an entrance was marked, but no room was hewn.

Sources: Brünnow and von Domaszewski 1904: 145, fig. 145; 233, 235, figs. 264–5; McKenzie 1990: 157, pl. 90.

No. 229: The Renaissance Tomb

The façade of a Roman temple with two sets of three urns each: three urns on the upper gable at the top of the façade; and three urns on the arch above the entrance to the complex. The two side urns above the arch are full-fledged Hellenistic amphorae; the middle one resembles the urns commonly found on the façades of gables in Petra. This monument was almost certainly not used for burial purposes.

Sources: Brünnow and von Domaszewski 1904: 159, fig. 180; 269, 271, fig. 300 (photo); McKenzie 1990: pls. 154–5; Amadasi Guzzo and Schneider 2002: 43; Browning 1973: 93–4, fig. 38a; 195–6, fig. 126.

Nos. 365 and 366

Two adjacent tombs that are similar in design. Each has an arch above the entrance and two urns as side acroteria.

Source: Brünnow and von Domaszewski 1904: 156, fig. 177; 296, fig. 326.

No. 452: The Lion Triclinium (Fig. 11)

The façade of a Roman temple, originally with three urns on the upper gable, and not on the tomb entrance. The urns at the top of the gable and on the right are still there; the left-hand one was destroyed and can no longer be seen.

Sources: Brünnow and von Domaszewski 1904: 164, fig. 190; 328, fig. 362; Browning 1973: fig. 116; McKenzie 1990: 158–9, pl. 135; Amadasi Guzzo and Schneider 2002: 98.

No. 455

The façade of a Roman temple tomb with three urns on the upper gable. This façade belongs to the same type as the façades of tombs 229 and 846.

Source: Brünnow and von Domaszewski 1904: 163, fig 188, 328–9.

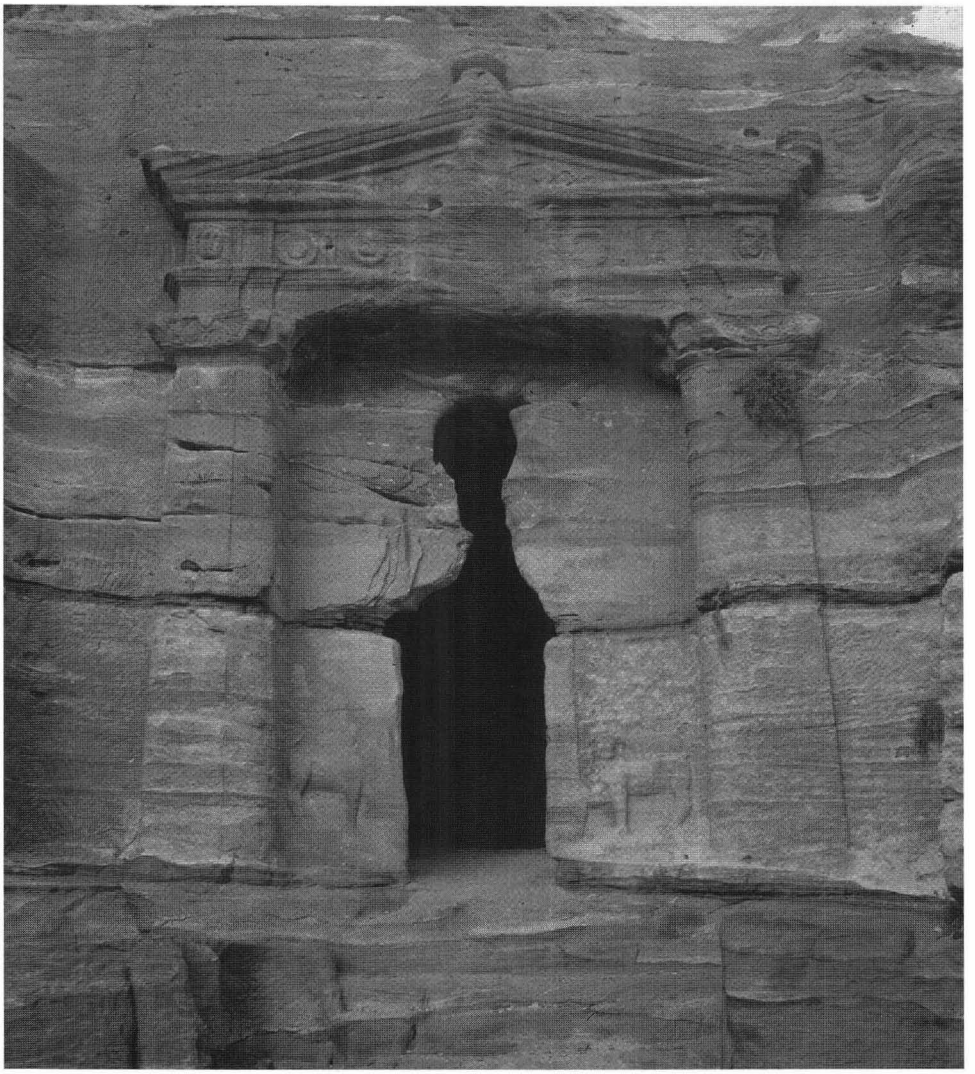

Fig. 11. The Lion Triclinium at Petra

No. 462: ed-Deir (ed-Dejr, ed-Der) (Figs. 12–13)

A large, two-story Roman temple tomb. In the middle of the upper story is a tholos covered with a cone resembling a bell tent. A Nabataean capital (of the second type) was hewn above the conical roof, and above the capital is a round band that serves as a base for a huge urn. The sculpted urn is freestanding, not attached to the rock at all. The urn has a squashed body and no handles. This shape was evidently intended to protect the amphora from being destroyed or falling apart due to erosion of the rock.

Sources: Brünnow and von Domaszewski 1904: 186–8, fig. 220; 331–5, fig. 220, fig. 365 (photo); McKenzie 1990: 159–61, pls.138–9; close-up photo of the urn at ed-Deir; Dalman 1908: 266, fig. 208.

No. 763: The Sextus Florentinus Tomb

A Roman temple tomb. There is a single urn – a typical Petran one – above the upper gable of the monument façade. The lid to this urn is conical, and its relatively good state of preservation attests to one of the common shapes of lids here. There are two side acroteria covered by flat surfaces without urns, and there is an eagle above the arch on the bottom storey of the monument.

Sources: Brünnow and von Domaszewski 1904: 170, figs. 383–4; Browning 1973: 95, fig. 39.

No. 766: The Corinthian Tomb

A Roman temple tomb with a large, two-story façade. The remains of an urn can be seen at the top of the central tholos at the peak of the façade. On the bottom

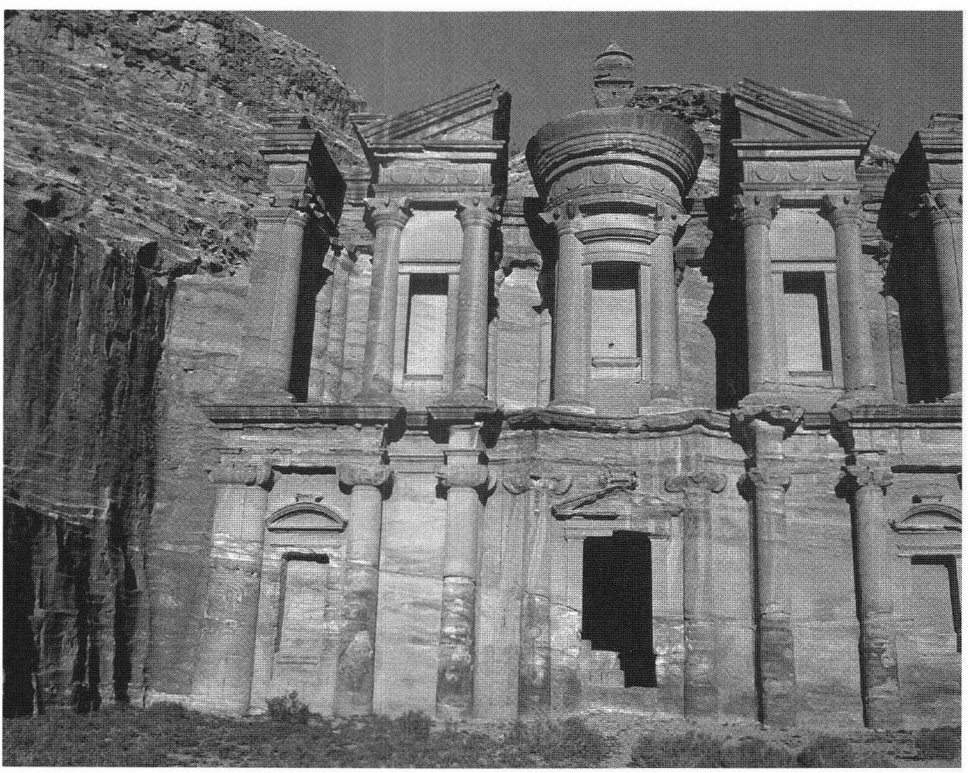

Fig. 12. The façade of ed-Deir at Petra

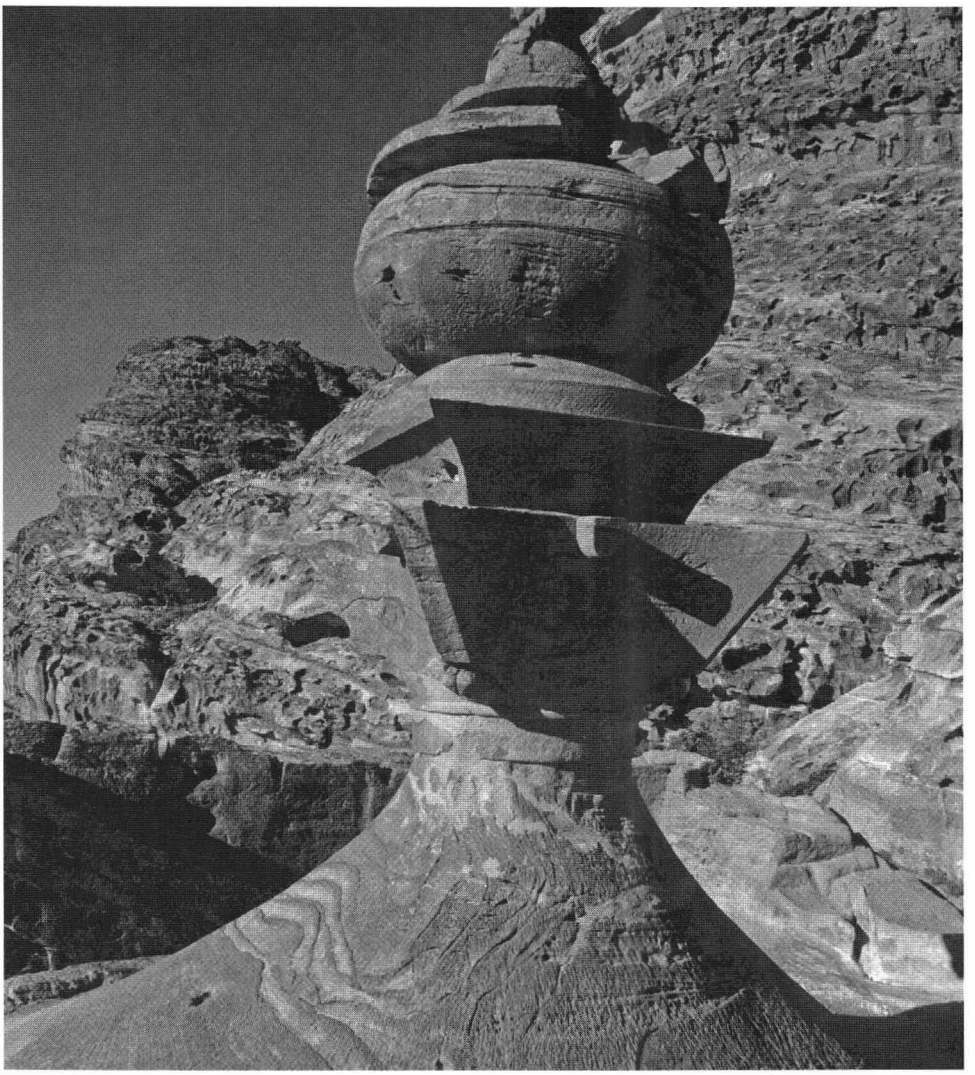

Fig. 13. The urn at the top of ed-Deir at Petra

storey are two large pillars underneath a gable. The top storey has two square structures with side gables and a tholos in the middle under a shared gable. An urn that used to be at the top of the tholos was not preserved, and its shape is now almost unrecognizable. The tomb was dated by McKenzie to 40–70 CE.

Sources: Brünnow and von Domaszewski 1904: 168, fig. 192, 388–9, fig. 435; Browning 1973: 92–3, fig. 37a; McKenzie 1990: 152.

No. 772: The Urn Tomb

A Roman temple tomb with a large urn above the upper gable on the façade. There is one urn at the top of the monument, with no side urns. The tomb was dated by McKenzie to the first half of the 1st century CE.

Sources: Brünnow and von Domaszewski 1904: 167, fig. 191, 393–8, figs. 446, 447; McKenzie 1990: 145–7, pls. 91–2.

No. 846: Urnengrab (Urn Tomb) (Fig. 14)

A Roman temple tomb in el-Beidha (Little Petra). There is a well-preserved amphora at the top of the upper gable on the façade. The amphora, belonging to the Petran type of urn, has a round, squashed body. Tombs 229 and 455 also belong to this façade type.

Sources: Brünnow and von Domaszewski 1904: 412–13; McKenzie 1990: 150, pl. 109.

The Triclinium in Wadi ed-Deir

A Roman temple–type façade. The upper gable has three urns serving as acroteria on flat surfaces. The urns have tall bodies, and their lids point upward like the flame

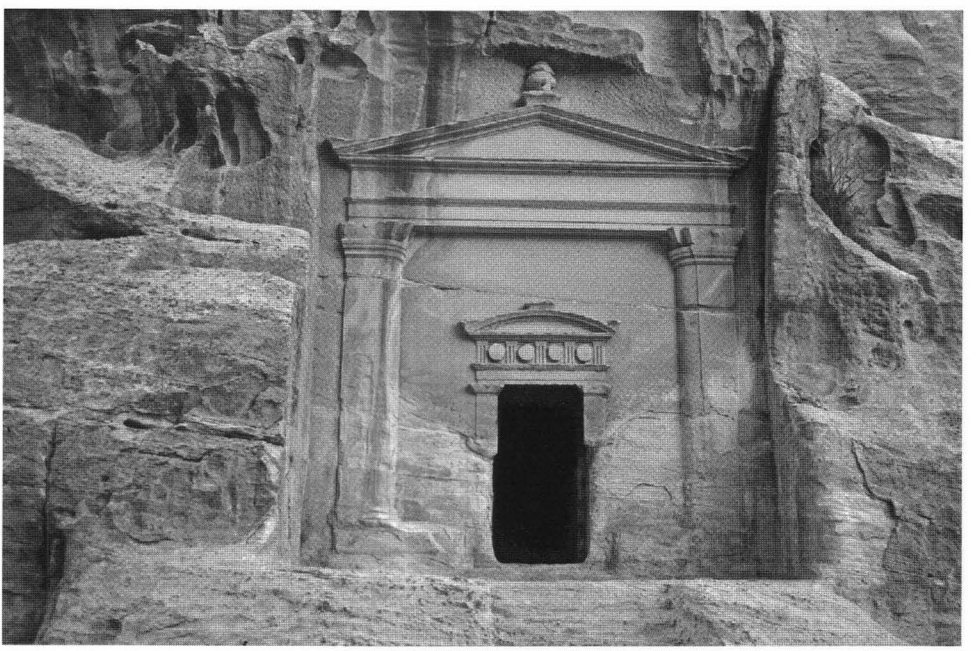

Fig. 14. The façade of a monument in Beidha (*Urn Tomb;* Little Petra)

of a candle. These lids look identical to the lids of urns in Jerusalem burial caves, as described above.

Source: Browning 1973: 186–7, fig. 118.

Most of the large monuments (e.g. el-Khazneh, ed-Deir, and the Corinthian tomb) have a single urn at the top of the façade. In most cases, these urns and the acroterion urns at the bottom entrances in Petra have a squashed body, with their diameter less than their height. Their base is also wide, and their foot, if there is one, is short or low. Apparently, the urns on the façades at Petra were made without feet and necks in an attempt to avoid thin, fragile parts. The urns were deliberately made short and wide so that they would not break or wear out as a result of the ravages of weather and other natural causes. The urns (amphorae) in the frieze on the façade of el-Khazneh is evidence of this idea, as it proves that the Nabataean artists were capable of doing things differently.

The urn lids have several different designs: a conical lid (no. 763); a lid that is spherical at the top (no. 62, el-Khazneh); a spherical lid with a handle on top (no. 462, ed-Deir); a sharpened lid resembling a tall triangle or candle flame (the façade of the triclinium in Wadi ed-Deir); a completely flat lid (on the side urns in the arch of no. 229).

Examination of temple-tomb façades with urns or amphorae at the top, whether they are at the top of an upper gable or at the top of a tholos, shows clearly that these are large vessels that constitute an important part of the conception of the façade (see von Domaszewski's discussion of this subject in Brünnow and von Domaszewski 1904: 137–91).

Dalman (1908), who surveyed the monuments at Petra, added about 150 survey points to the 850 that had been marked by Brünnow and von Domaszewski. In a brief, 11–line summary, Dalman listed the urns discovered on the façades, but without any additional information that would explain the phenomenon (Dalman 1908: 78).

On many of the sculpted rock façades at Petra – both on gables and arches above the entrances to rock-cut chambers and above gables at the tops of façades – there are flat surfaces serving as acroteria. These surfaces are mainly on tombs of the Heger and Roman-temple types, although they are also found in others. The surfaces look as though they were intended for the placement of urns, but the urns were never actually sculpted. Supporting evidence for the suggestion that these acroteria were meant for urns can be seen clearly on façades such as 452 and 455, where there are three urns, each one on a flat surface above the gables. On façade 846, the phenomenon is especially salient: here we find an urn on a flat surface at the top of the gable and two side acroteria consisting of surfaces without urns; on the façade of tomb 772 (the Urn Tomb), too, there is an urn at the centre of the gable and two surfaces serving as side acroteria without urns. This façade has an interesting combination of elements: the central urn at the top rests on a flat surface, the top of which merges with the line at the bottom of a small frieze, at the top of the gable.

On some of the tomb façades, such as façades 239, 258, and 269, these surfaces serve only as the central acroterion at the top of the gable; in most of the gables all three of the acroteria have surfaces for urns. There are many such examples: flat surfaces can be seen on all three acroteria in the gables at the cave entrances in nos. 522, 523, 649, 657, 676, 731, 813, and 825; there are also three surfaces serving as acroteria in the gables of nos. 148, 306, 326, 475, 514, and 693. Roman temple tomb 765 (the Palace Tomb, also known as the Two-Story Tomb [Brünnow and von Domaszewski 1904: 169, fig. 193]) has four openings on the bottom floor: the two side ones topped with arches and the two middle ones with gables. Three flat surfaces were sculpted above each of the four openings (above the two arches and the two gables). Regarding the flat surfaces as well, there is some resemblance to the monuments and ossuaries in Jerusalem.

On some of the rock façades at Petra, it is evident that acroteria were destroyed to the point that they are unidentifiable. Salient examples of this are found on façades 239, 258, and 270 (Brünnow and von Domaszewski 1904: 274, fig. 305, 278, fig. 310, 280, fig. 312, respectively). The rock façades with urns at Petra are generally dated to the 1st century CE (monuments 70, 452, 462, 766, 772, and 846), and the 2nd century CE (monuments 229 and 763). Monument 62 (el-Khazneh) is dated to the 1st century BCE (McKenzie 1990: 127–172).[4]

Urns at Meda'in Saleh

Urns on tomb façades at Meda'in Saleh, which is identified with Heger (el-Heger)

A comprehensive survey of burial sites in ancient Heger was carried out by Jaussen and Savignac in April 1907 (Jaussen and Savignac 1909), followed by additional expeditions in 1909 and 1910 to complete the work (Jaussen and Savignac 1914). Jaussen and Savignac also presented descriptions and information from earlier surveys by other nineteenth-century scholars (Jaussen and Savignac 1909, 1914). McKenzie discussed the subject later and presented a considerable number of photographs that she had collected (McKenzie 1990: 11–33, pls. 2–20; Schmidt-Colinet 1983), references to these photographs are provided here to flesh out the picture.

In other tombs at Meda'in Saleh, flat surfaces were created as acroteria, and no urns or eagles were sculpted. The urns on some of the façades have parallel curved lines on their bodies, indicating that they were designed in accordance with common patterns of Hellenistic amphorae. These lines can be seen on the urns of façades such as B6, B22, and A5.

Three urns on an arch above the entrance to a tomb or chamber can be seen at Meda'in Saleh in tombs C14, B19, and E17. This array resembles the three acroteria above a gable but indicates the local adoption of a similar decorative conception.

Clearly, cremation was not common among the Nabataeans. No cremation tombs have been found in Petra or other Nabataean sites from the same period. The amphora or urn became a common decorative motif on mausolea and monument

Cave/façade no.	Date (year CE)	Description and references
A5	31	Two urns serving as side acroteria above the entrance gable; an eagle at the top of the gable. Sources: Jaussen and Savignac 1909: 357–359, fig. 171; McKenzie 1990: pl. 3a, 5c
B1	31	Two urns serving as side acroteria above the entrance gable; an eagle at the top of the gable. The eagle serving as the central acroterion is on a flat surface. The amphorae have a "squashed" shape – relatively flat and wide. Sources: Jaussen and Savignac 1909: 376–378, fig. 187, pl. XXXVII; McKenzie 1990: pls. 4d, 9a
B4	40–70	Two urns serving as side acroteria above the entrance gable; an eagle at the top of the gable. Sources: Jaussen and Savignac 1909: 378, 382, pl. XXXVIII; McKenzie 1990: pl. 19c
B5	27	Two urns serving as side acroteria above the entrance gable; an eagle at the top of the gable. The urns in the side acroteria have vertically fluted bodies, proof that the design was based on amphorae. Sources: Jaussen and Savignac 1909: 368–372, fig. 181; Jaussen and Savignac 1914, Atlas: pl. XLIII; McKenzie 1990: pls. 4c, 7c
B6	1	Two urns serving as side acroteria above the entrance gable; an eagle at the top of the gable. The urns in the side acroteria have vertically fluted bodies, similar to those on façade B5. Sources: Jaussen and Savignac 1909: 368–372, figs. 181, 182; Jaussen and Savignac 1914, Atlas: pls. XL–XLI; McKenzie 1990: pls. 2a, 4a, 7a
B7	35	Two urns serving as side acroteria above the entrance gable; an eagle at the top of the gable. Vertical grooves on the bodies of the urns clearly identify them as generally Hellenistic amphorae and not specifically Alexandrian amphorae, ordinarily intended as repositories for cremation ashes. Sources: Jaussen and Savignac 1909: 348–351, figs. 163–165; Jaussen and Savignac 1914, Atlas: pl. XLIV; McKenzie 1990: pls. 2b, 7c–d
B19	1	Three urns on the arch above the tomb entrance in an acroterion-like array; an eagle above the lintel and below the peak of the arch. The top urn has vertical grooves. Sources: Jaussen and Savignac 1909: 324–325, figs. 137–139; McKenzie 1990: pl. 11
B21		A façade that originally had two urns serving as side acroteria above the entrance gable and an eagle at the top of the gable. Only the right-hand urn and the eagle in the middle have been preserved. Sources: Jaussen and Savignac 1914: 90–91 and Atlas: pl. XLV 2; McKenzie 1990: pl. 3c

continued on next page

Cave/façade no.	Date (year CE)	Description and references
B22	26	Two urns serving as side acroteria above the entrance gable; an eagle at the top of the gable
		Sources: Jaussen and Savignac 1909: 372–373, fig. 184; McKenzie 1990: pl. 4b, 7b
B23	50	Two urns serving as side acroteria above the entrance gable; an eagle at the top of the gable
		Sources: Jaussen and Savignac 1909: 372–376, figs. 185, 186; McKenzie 1990: pls. 2c, 3d, 6c
C9		Three urns serving as acroteria above the entrance gable
		Sources: Jaussen and Savignac 1909: 340–342; Jaussen and Savignac 1914, Atlas: pl. XXXVI; McKenzie 1990: pl. 16b
C10		Two urns serving as side acroteria above the entrance gable; an eagle at the top of the gable
		Sources: Jaussen and Savignac 1909: 340–341; Jaussen and Savignac 1914, Atlas: pl. XXXVI; McKenzie 1990: pl. 16a
C14		Three urns on an arch above the tomb entrance, arranged similarly to acroteria on a gable. The urn at the top of the arch is vertically fluted, and there is an eagle above the lintel at the entrance and beneath the peak of the arch
		Sources: Jaussen and Savignac 1909: 323, figs. 135–136; McKenzie 1990: pl. 11d
D	75	Two urns serving as side acroteria above the entrance gable; an eagle at the top of the gable
		Sources: Jaussen and Savignac 1909: 341–345, fig 160; McKenzie 1990: pl. 6a, 6d
E17		Three urns on an arch above the entrance to the burial cave. In the middle of the arch is a six-petal rosette made with a compass. The artistry in the amphorae on this façade is definitely somewhat provincial.
		Sources: Jaussen and Savignac 1909: 386–388, figs. 193–194; McKenzie 1990: pl. 9d
E18	31	Two urns serving as side acroteria above the entrance gable; an eagle at the top of the gable
		Sources: Jaussen and Savignac 1909: 347, fig. 162; McKenzie 1990: pls. 3b, 5d
el-Ferid		Two urns serving as side acroteria above the gable on the façade of a monument. The façade is fairly poorly preserved. The urns are vertically fluted, like those on other façades in Meda'in Saleh such as B6, B22, and A5.
		Source: McKenzie 1990: pl. 9c

façades in Nabataean cemeteries and were not representative or symbolic of cremation in any way whatsoever.

It seems that amphorae and urns depicted on rock façades, mausolea, and ossuaries are another manifestation of ties and influences between the culture of the Jews of Jerusalem and Nabataean culture beginning in the last third of the 1st century BCE (Rahmani 1978: 109–110; Kloner 1994; Dalman 1912).

Thus, depictions of amphorae and urns, after having appeared in Maresha in the 3rd century BCE, became solidly entrenched among the Jews and Nabataeans in the time of Herod. The use of the amphora/urn as a common funerary motif among ethnic groups that did not practice cremation, such as the Idumaeans, the Jews, and the Nabataeans, is a clear indication that it served as a grave marker and burial symbol and not as a repository for ashes.

Notes

1 The present article is an updated version of a Hebrew article written by Amos Kloner (Amphorae and Urns as Grave Markers in Idumaea, Judaea, and Nabataea)'. Pp. 71–81 in L. Di Segni, Y. Hirshfeld, J. Patrich, and R. Talgam (eds.), *Man Near a Roman Arch, Studies presented to Prof. Yoram Tsafrir* (Jerusalem, 2009). Thanks to Debby Limmer and Sherry Whetstone for editing.

2 In D. Jacobson's recent publication (2007: 23–4) he objects to my conclusion that these amphorae are grave markers, because the necks are elongated and they are depicted with lids. It is my belief that the artist who drew them was simply emphasising the fact that these vessels are indeed amphorae, by elongating their necks and by adding lids. They are typical of amphorae of the second half of the 4th century BCE, about a half century before the tomb was constructed. To his second objection that a pair of amphorae are depicted rather than a single amphora, I believe they were drawn as a pair simply to provide a symmetric appearance to the façade of the tomb. In this connection see also A. Erlich (2009: 67–8).

3 Many Jewish tombstones in the Monteverde and Vigna Randanini catacombs in Rome feature pictures of amphorae and they definitely served as grave markers. Although these are clearly tombstones, they date from later than the 2nd century CE and therefore will not be discussed here (Goodenough 1953 vol. 3 index 1: 7).

4 The tradition of depicting amphorae in relief on facades of sarcophagi continued in the 2nd through 4th centuries CE on both sides of the Jordan River. An amphora in the centre of a sarcophagus facade is attached to the rock in a burial cave from the late Roman period at Hurvat Itri, in the central Judean Shephelah (Zissu and Ganor 2002: 27). An amphora in the centre of a sarcophagus facade, between altars and wreaths, was found on a sarcophagus in Shilo, near Jama es-Sitin (Dalman 1908: 58, fig. 21). In this context it is worth noting a stone found at Udruh that has a decorative *tabula ansata* on it; on the rectangle in the middle is a relief of an amphora between two altars (Dalman 1912: 52, fig. 53). The origin and function of this stone are not clear, but it depicts the burial symbol that was already associated in local traditions with a religious rite. Almost certainly, the symbol originates in the burial world of the Hellenistic and early Roman periods.

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Flotation Procedures in the Southern Levant: A Summary of 20 Years of Work (Part I)

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In Part I of this report the flotation results for seven archaeological sites are presented sequentially. The collection of samples from one-metre fine grids makes it possible to determine the nature and location of separate activities, as they were deposited in the archaeological record by groups or single individuals. When sites have been sampled massively, it is possible to research the nature of the economy, and how it fits into larger historical periods.

Since 1985 a substantial number of archaeological sites in the southern Levant has been sampled for flotation (Fig. 1), and only two of them have been fully published in the past twenty years. During that time the methodology has gone through several permutations, and has had to be adapted to all the disparate conditions at each new site. A point has been reached in which a summation of results is possible, including global comparisons between sites which may fit them into a larger historical perspective.

Following its introduction by Struever (1968), the flotation method has been used successfully in an increasing number of sites the world over. However, the overwhelming number of studies is focused on paleoethnobotany, and a great number of articles are about various flotation devices and recovery techniques (Struever 1968; Stewart and Robertson 1973; Richardson and McCreery 1978; Hastorf and Popper 1988; Wagner 1988: 17–35; Ucko, Ling, and Hubert 2007; to list only a few). Exceptions are the geoarchaeological studies of several Palestinian tells by Rosen (1986) based on graduated dry-sieving. The description of a methodology which comes closest to the one that was finally worked out for an analysis of the sites described in this report occurs in Wagner (1988: 21–2), where she describes a statistically representative sample of each artefact class from each collecting situation, and these are measured in seeds per litre of fill (1988: 29). Similarly in Hastorf (1996: 470) specimen counts are adjusted to a standardized weight of 6 kg. In the present study a simple statistic, items per kg of soil, has been utilized to its fullest potential, and is hereby recommended. Studies that go beyond a list of plant species can be found in Hastorf 1988: 140–4, a useful bibliography. In the same paper she demonstrates the importance of food in the study of social and gender relations in prehistory, particularly of women in the Andes. Spatial distributions of materials within domestic settings allow a look at gender relations

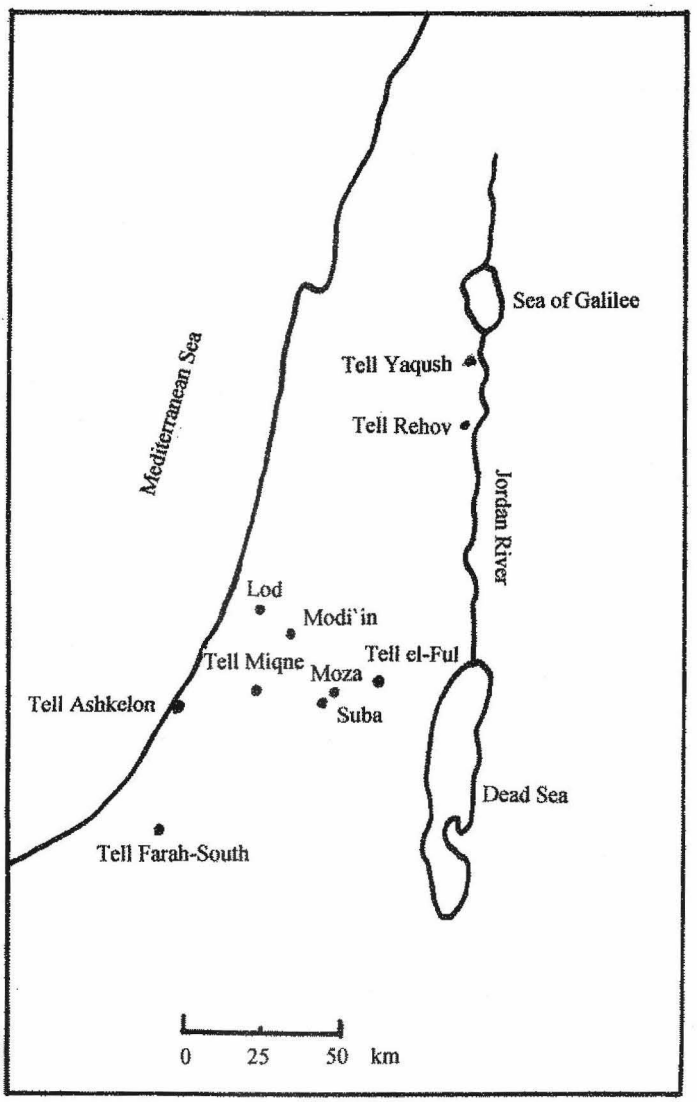

Fig. 1. Location of sites.

through differential access to food (1988: 479), and with the entrance of the Inka into Sausa society, there is a drastic change in diets (1988: 477). Elsewhere in a study of Chaco Canyon, New Mexico, Toll (1988: 41) presents the spatial disposition of food processing activities within the rooms and throughout the site at Pueblo Alto. Another example for the use of flotation can be found in Zohary and Hopf (2002: 5), where the results helped in determining the dates for the domestication of plants.

Methodology

Usually samples are taken from 1 meter fine-grids that are imposed on floors and surfaces, or from designated areas that are thought to contain significant material. The flotation method developed for arid countries by Robert Stewart at Tell el-Hesi (Stewart and Robertson 1973; cf. Richardson and McCreery 1978; Lass 1994) does not utilise any elaborate devices. A round barrel is filled with water, and a round tub having a 1mm mosquito screen for a bottom, is immersed into the barrel. The sample is weighed and poured into the tub, and the botanical remains (light fraction) are skimmed off the top of the water with a 0.5 mm strainer. The silt is then shaken through the mosquito screen at the bottom of the tub, and the resulting heavy fraction is laid out to dry in the sun. The light fraction is taken indoors for a slower drying process. The barrel has to be cleaned out after the processing of approximately 150 kg of soil (Lass 1994: 24; 2001: 399; 2005: 22–23; 2008: 195–196).

This methodology was possible at Ashkelon, but at other sites even this basic equipment was missing. At Yaqush a barrel was supplied by Kibbutz Gesher, but the smaller tub to be immersed in water was missing. In its stead an elongated shopping bag made of wide open plastic webbing and lined with 1.5 mm window screen was used. Because the soil in Yaqush was very dry and full of oxygen, a constant problem was the formation of foam which clogged the light fraction and had to be washed away. At other sites like Lod, Modi'in, Moza, Tell Farah South, Tell el Ful, Tell Rehov, and Suba, flotation procedures were kept to the simplest minimum, involving a mosquito screen and some plastic pails (cf. Lass 2001). After weighing, the soil sample was poured onto the mosquito screen and pulled back and forth in water, thus allowing the silt to escape and retaining anything that had a 1 mm diameter or more. Because of the nature of the soil, samples often had to be washed twice or three times. The heavy fraction of mudbrick sites like Tell Ashkelon, Lod, and Tell Farah (South), is easier to work with, containing a substantial amount of sand, which helps to aerate and dry the soil, though because of the high oxygen content it produces a lot of foam, and the botanical remains have to be washed. The more massive heavy fractions in these sites are usually caused by roof, stone, and fired brick collapses. The highest value, coming from the cave at Suba, was due to waterlogged clayey soil, and the same was true for Tell el-Ful; the soil in these sites was practically impossible to dissolve. Feature 98 at Modi'in consisted of plastered wall and roof collapse, adding immensely to the weight of the heavy fraction, and at Tel Rehov every object, be it stone, bone, or grain of sand, was covered with a coat of travertine.

The dried heavy fraction is weighed and calculated as a percentage of the gross weight. It is manually sorted under low magnification into various categories, which usually include potsherds, bones, fish scales, flint chips, eggshells, and snails, as well as many other finds. Only snails or snail fragments in which the twirl is still intact are included in the count, assuring least number of individuals; all other non-differentiated fragments are discarded. Snails are viewed as a natural phenomenon

that may or may not be influenced by human behaviour. Since human activities produce a lot of organic waste material, they attract algae who feed on those materials. Snails happen to be interested in the photosynthetic energy associated with algae and plants, so long as they are still alive. Snails have a unique mouth structure called a radula, which is used for scraping algae. Hence the association with humans would be related to algae that live in a damp or aquatic environment, feasting on decay products, like nitrogen. Algae and snails are among the cleaners in nature, and in the case of archaeological sites, they cleaned waste products left behind by humans. The algae eat the decay products and the snails eat the algae (My thanks to Jack Winter, who supplied this information on snails and algae). Snails are not particularly interested in the centre of such activities, but more in the periphery, which is probably a safer place to be.

The three kinds of shell are easily distinguished one from the other. Seashells are thicker than snail or eggshells. Snail shells are thin and shiny on both sides. Eggshell is slightly thicker than snail shell and has a smooth outer and a matte inner surface (cf. Mikhailov 1997; Sidell 1993). Since the inner surface has a rougher texture, sometimes the minutely grained *terra rossa* clay will adhere readily to it, giving it a brown stain not found on other kinds of shell.

In spite of a lack of expertise in the identification of botanical remains, an attempt was made to note the presence or absence of certain categories. These included grains such as wheat and barley, olive pits, legumes such as peas and lentils, and grape pips, which were occasionally desiccated instead of carbonised. Botanists are rightfully sensitive about excessive previous handling of botanical remains, hence all of the ones discussed in this report came from the heavy fraction that did not float, but had to be picked out of the sample with tweezers. Botanical remains are one of the main indicators of the economy. In order to asses the importance of each category, it was not so much the quantity found in specific locations, but their presence or absence throughout all of the loci which determined how widely they were distributed within a certain stratum.

Since every sample has a different weight with its own unique cultural content, a system was devised that expressed these relative quantities in a statistically rigorous way. Each cultural category was expressed as items per kg of soil. This was a radical change in methodology from the one used in Lass 1994 and 2008, where weight served as the discriminating quantity. The values of each fine grid were computerised and graphed. When printed out, each separate histogram of each fine grid was cut out and glued into position, as it would have appeared on a top plan. Modern programmes that could accomplish all of this within several seconds were unavailable, and the chosen procedure was slow and cumbersome. With each new project an attempt was made to refine the standardisation of work on flotation, in which descriptions conformed to the same template, so that they were repeatable across many projects; standardisation in the presentation of voluminous organised information. Given the very substantial number of data, the synchronic and diachronic distributions, the number of different categories and their relationship to one another and to those of other sites, it was difficult to represent a global picture

even within a single site. The separate reports did not seek to be a complement to macro-artefactual finds, but to present unique and separate information in their own right (Lass 2001: 100, Dunnell and Stein 1989: 39).

Some of the material culture categories that were sorted from the flotation samples were provisionally thought to represent the activities of food preparation or consumption and flint tool modification, including retouch. This was true of flint chips, eggshells, bones, and fish scales. They were the main indicators for the location and nature of human activity, depending on how their separate distributions could be related to each other. The intrinsic nature of these categories is their small size (the fragmented bones are usually very small). Within the microdebitage, the percentage of microflakes represented evidence of a specific amount of human activity, namely, light tapping and retouch during the process of tool making (Cahen and Keeley 1980: 169). The reason why the study of microchips and flakes is thought to be worthwhile is that the smaller the artefact, the closer it should be to its primary context, the actual location where the activity took place (Simms and Heath 1990: 805; Metcalfe and Heath 1990: 782; Rosen 1986: 94; Stevenson 1985: 67; Clarke 1977: 19). A microflake should have two or more of the following characteristics: a prominent bulb on the ventral side; ripple or radial lines; bulbar scars; some sort of faceted platform (Peacock 1991: 350–52), and most important for retouch flakes: on the dorsal side, the sign of the pressure point, in the form of a negative, where an even smaller microflake has split off.

In this report a microartefact is anything smaller than 1 cm, in contrast to other projects (Fladmark 1982: 205; Hull 1987: 772; Vance 1987: 58: smaller than 1.0 mm; Stein and Teltser 1989: 6; Dunnell and Stein 1989: 35: smaller than 2.0 mm; Simms and Heath, smaller than 4.75 mm [1990: 805] and smaller than 6.4 mm [1990: 800]; Rosen, smaller than 20.0 mm [1993: 141] and smaller than 30.0 mm [1989: 565]).

In order to mean anything statistically, the flotation sort must be thorough. The sample cannot be picked through arbitrarily, but work with the tweezers must begin at one end and proceed through the entire sample, examining every part.

Tell Yaqush

This flotation project was completed and published in memory of the director, Douglas L. Esse and our last season in October-November 1991, at Tell Yaqush, Israel, an Early Bronze Age site south of the Sea of Galilee (Esse 1990: 222–23; 1993: 1502–04).

In Yaqush pottery, bone, snail-shell, flint, and botanical remains were the main categories. Red ochre was also found, an occasional eggshell, and a rare copper fragment. The number of botanical remains was small, and the tiny bone fragments showed the heavy attrition of time. Since pottery was collected during excavation even from the layers which were to be sampled for flotation, a heavy bias was introduced, and pottery was not used for statistical analysis.

Not counting potsherds, which had been biased, botanical remains, or flint fragments larger than 2 cm, from 258 soil samples weighing 1,750.5 kg a total of

192,484 items were recovered, including bone fragments, snail-shell fragments and flint chips. Of the recovered artefact categories the largest by far was microdebitage. The tiny chips were ubiquitous throughout the site, and there was some doubt as to whether they were cultural debris.

Four control samples from a depth of 35 cm under the surface were taken in locations which were beyond the limits of the site, averaging about 7 kg in weight (cf. Hull 1987: 775). From a hill to the north-west the sample yielded 8 flint chips and 18 snail fragments; from a hill to the west 1 flint chip and 18 snail fragments; from a hill to the south (south of the Wadi Kuraiyim, which drains into the Jordan River and runs parallel to the larger Nahal Tabor; cf. Esse 1993: 1502) no flint chips and 14 snail fragments; and from the north bank of the Wadi Kuraiyim close to the southern border of the site, 23 flint chips and 809 snail fragments. The mean number of flint chips found in a sample from the site was 486, and the mean number of snail fragments 247. It will be seen from these statistics that if there had been a component of naturally created flint chips in the layers of the site, their number would have been negligible in comparison to cultural material. It is of some significance that the sample from the bank of the Wadi Kuraiyim yielded more than three times the number of snail fragments than the mean number found in a site sample (see below).

Knapping Experiments

Yet another effort to prove that the chips were debitage was an experiment in flint knapping. It was first assumed that most of the chips were from the process of retouching. In that case they had to be distinguished from geofacts by the typical morphological characteristics of microflakes. If such features could be produced empirically, they could be compared to what had been found in the field.

One of the samples contained a stone of flint about 25 by 15 cm in size. Such stones do not occur naturally at the site of Yaqush and were most probably carried in either from the Yarmuk River or from outcrops of the 'Hordus' formation to the west of the site which contains, among other things, cobbles of flint (Yaakov Nir: Personal Communication 1994). The stone was coarse grained and had fibrous and blocky fractures, for which reason it had probably been rejected as raw material for tool making (cf. Fladmark 1982: 209). Direct percussion was used with brutal force to obtain a substantial number of edges which could be retouched with a pointed bone fragment. It was seen that direct percussion for the production of macroflakes yielded a multitude of microchips. Even the process of retouching with a fingernail resulted not only in flakes bearing one or more of the required morphological characteristics, but also a substantial amount of amorphous microdebitage (cf. Stahle and Dunn 1982: 86). During the retouching process two kinds of microflakes were produced. The initial pressure of bone against flint produced a microflake which had a bulb on the ventral side and one or more of the other attendant features, whereas the dorsal side remained flat, being part of the original opposing surface against which pressure was exerted. The tool maker did not stop here, but followed through with more insistent pressure, creating a second larger intrusive microflake

which also had a bulb and various features on the ventral side, and the negative of the preceding microflake on the dorsal side, producing a characteristically curved profile when viewed proximally from above the platform.

When the experimental flakes had been examined they were compared to the material which had been extracted in flotation. Except for a few soil samples from small whole vessels in which not a single chip was found, all of the samples that contained chips included microflakes which had a bulb at the very least, and often one or more of the other required characteristics. These characteristic traits were better and more often represented in the Yaqush finds than in the experimental material, probably because the stone which was used to produce the microflakes had been a reject for being too impure and too soft.

Analysis

Flotation samples were taken from nine fine gridded floors, ranging from 8 to 18 samples, and from any other locus that showed promise for yielding microartefacts. In a substantial area located at the top of the tell (Square H5) two buildings were connected by a broad wall, and there was a courtyard between them (Fig. 2). Dated to EBI, this area went through a violent fiery destruction and was therefore extremely rich in macroartefacts (Esse 1993: 1502–1503). Comparatively, the number of microartefacts was average. In the western building there were relatively few microchips of which a high percentage came from retouching. Chances are that in this area the focus was more on tool use than tool production. In the yard and building to the east relatively more of the amorphous microdebitage was produced. In these areas there may have been a broader range of activities, including tool production and use. During excavation 21 whole sickle blades were found within the borders of the eastern building alone.

In the areas of Square J6 two superimposed floors showed a spectrum of activities, including tool production and tool use, lasting through a substantial period in the EBI, which may be evidence for long term occupation without change of activity. This was not the case in the areas of square K9, where two superimposed EBIII floors were sampled. The results from the earlier one suggested a broad spectrum of activities, whereas the later one with its relatively high amounts of amorphous microdebitage pointed to a more focused attention to the production of tools (specifically, the production of blanks from which stone tools could be manufactured elsewhere), an indication of change through time in the EBIII. This specialised activity during the same period was even more pronounced in square R13, where nondescript microdebitage on a floor was most voluminous and evidence for retouching at its lowest (Wood 1978: 260 states that the greater the disparity among the different artefact frequencies, the smaller the evenness, the more limited the activities).

The loci of square Q14, dated to EBII, were an example of areas where almost no activities are represented in the microartefactual record. Located at the bottom of the tell slope, the meagre finds of square Q14 were also proof against the claim

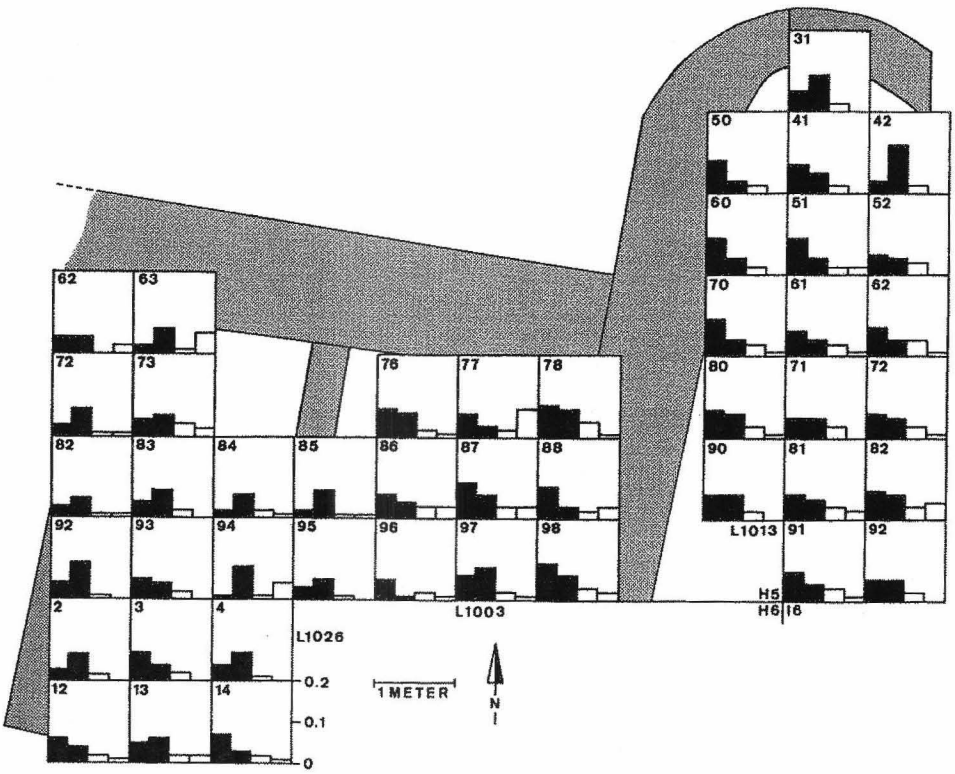

Fig. 2. Tell Yaqush, Square H5. Walls of two EBI houses connected by a broad wall have been darkened. In each fine grid the first column is number of flint chips per kg of soil; the second is the percentage of microflakes; the third is the weight percentage of shell; and the forth is weight percentage of bone.

that cultural material may move down slope through geological agents and become secondary refuse (Butzer 1982: 103; Schiffer 1972: 161). Most of the artefacts were surrounded by walls which would have prevented their migration, and almost all of them were still sharp-edged, meaning that they had not moved far from their original place of deposit. If there had been down slope movement of microartefacts, the bottom-most locus, square Q14, remained singularly unaffected by it as, indeed, did the slope of the Wadi Kuraiyim.

The amount of microdebitage determined the amount of shell within a certain locus. Possibly the snails adhered to reeds which were carried in from the Wadi Kuraiyim. It will be remembered that the sample taken from its bank contained more than three times the number of shell fragments than the mean number found in a sample from the site. Why the number of reeds carried in from the Wadi Kuraiyim would correlate with the production and use of tools is unknown.

The microdebitage indicated areas in which tools (1) were both made and used, (2) were made and not used, and (3) were neither made nor used. Diachronic

development was shown to remain relatively stable in one area whereas another area bore testimony to change. It may be indicative that all of the EBI loci showed a broader range of activities, whereas all of the specialised activity areas were confined to the EBIII.

Modi'in

In 1996 extensive salvage excavations were carried out on behalf of the Israel Antiquities Authority in the Modi'in area (directed by Shimon Gibson and Egon H. E. Lass) in advance of the road system and plot development for a new city (Gibson and Lass, in press). It was a prime example of landscape archaeology. Among the large number of features excavated, several were sampled systematically for flotation analysis.

Feature 128

The feature, probed by Natalie May, was a small terrace or field road of *terra rossa*, located in the Shimshoni area of Modi'in (Fig. 3; cf. Gibson and Lass, 1998: 116). It was retained on its western side by a scattered row of boulders and lensed out on its eastern side against outcrops of bedrock. At its northern end, a small wall of fieldstones cut obliquely across the field road in a northeasterly direction. Across the entire feature a flint scatter could be seen, dating to the Neolithic.

Seventy-two fine grids were sampled for flotation, in order to determine whether activity areas could be ascertained from the distribution of microdebitage. A total of 422.9 kg of soil was processed, yielding a heavy fraction of 90.5 kg. Of the 4,523 microchips that were sorted out, 293 (6.5%) were microflakes. Additionally, the samples yielded 1,316 pieces of macrodebitage and 771 snail shells.

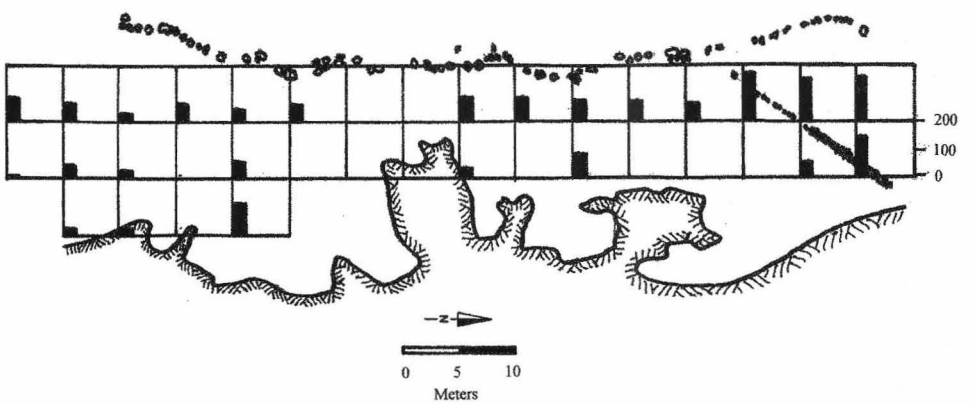

Fig. 3. Modi'in, Feature 128. Distribution of Neolithic macrodebitage across an ancient terrace or field road.

The distribution did not warrant a designation of activity areas. In fact, the cluster of macrodebitage at the northern end of the feature was not reflected in the microdebitage at all. The results showed that F128 was disturbed in recent times, so that if any patterns had been originally created during the Neolithic they were destroyed. When the microchips were examined in retrospect, many of them showed worn edges – another sure sign of disturbance and movement from the original position.

Feature 9

The feature was the richest and largest prehistoric site encountered; it was located in the north-eastern sector of the Shimshoni compound. More than 200 m in width and length, covering 40 dunams, it was bisected by three roads, Road 7 in the north, Road 19 through the middle, and Road 9 to the south (Fig. 4). The area was littered with debitage and Neolithic tools. No structures were discovered. The sample of this study covered only those territories for which Roads 7, 9 and 19 were planned. The slightly curving roads approximated a width of 20 m. Since surveying points had been placed at 20 m intervals, subdividing them into four equal parts imposed a grid of 10 m squares. Some of these were again divided into 10 by 1 m strips in order to gain a more refined distribution.

A surface collection of the research area was carried out, totalling 91,477 items of flint, averaging 915 flints per 10 m square. In comparison to F128, in which every 5 m square yielded an average of 74 flints, a similar area in F9 would yield an average of 229 flints. The distribution of macrodebitage (Fig. 4) does not fluctuate randomly but shows at least three orderly clusters across substantial territories. The first occurs at the east end of Road 7, where the refined sampling in 1 m strips shows a centre of activity, flanked by a receding gradient of values which decreases in proportion to its distance from the centre. The second may be seen at the west end of Road 19, and the third is at the east end of the same road. Other areas where very few items of flint were found represent locations in which no activity is indicated.

One-hundred-ninety-five flotation samples were also taken, one or two from each 10 m square. 28,653 microchips were sorted out, of which 1,787 were microflakes (6%, which compares well to 6.5% in Feature 128). The heavy fraction in Roads 7 and 19 appears to increase as the activity decreases. Less rough rock was lying about in activity areas, indicating that they were cleaner surfaces on which to work.

In Roads 7 and 19 the distribution of microchips and microflakes per kg of soil reflected those of the macrodebitage collected in the surface survey. In Road 9 to the south, where only small amounts of macrodebitage were collected, some of the samples showed a number of microchips that seemed very high. Perhaps the area was utilised for the more refined steps of tool making, even though there was no significant increase in microflakes.

The distribution of macrodebitage did not show significant clusters and did not reflect the patterns found in the surface collection or the sorted microdebitage. Neither did the snail distribution show any unusual concentrations.

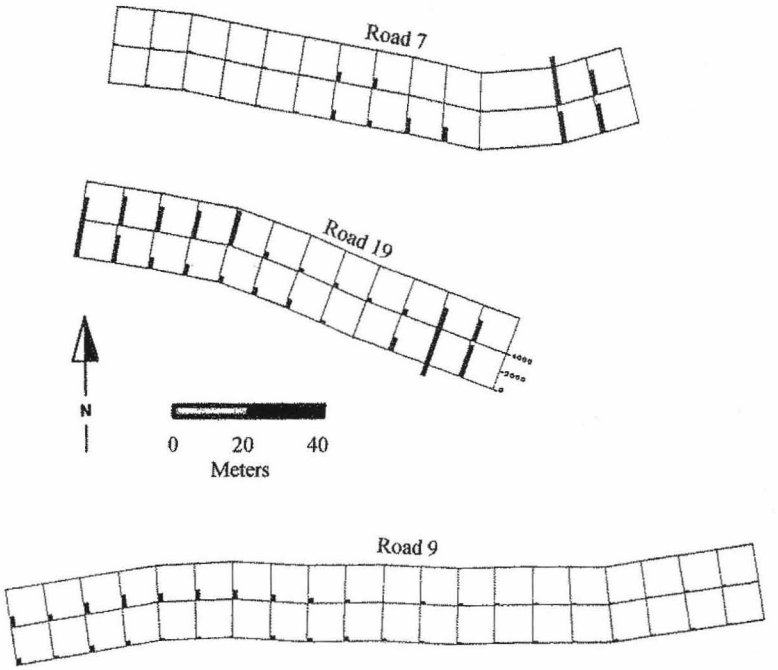

Fig. 4. Modi'in, Feature 9. Distribution of Neolithic macrodebitage across an ancient flint knapping site.

Feature 3

The feature, excavated by Hanna Gerstein, incorporated several archaeological units. An ancient road was flanked on its south side by a wine press and on its north side by an oval structure of limestone boulders, probably a harvest guarding station used on a seasonal basis for the protection of vineyards (Fig. 5). It was located on the southern slopes of Givah C, one of the prominent hills in the Modi'in area. Pottery found in the *terra rossa* fills of the feature dated between the first century BCE and the first century CE. In more recent times when the guard station had been abandoned, the circle of boulders was used to retain stones cleared from surrounding fields.

Since a number of flint fragments could be seen on the surface, a 1 m fine grid was imposed on the area. The macrodebitage was extracted from the excavated soil by dry sieving, numbering 2,886 items of flint, for an average of 85 items per 1 m fine grid (This value cannot be compared to those found in Features 128 and 9, which were surface collections). A soil sample for flotation was taken from each fine grid. A total of 46 samples were taken weighing 267 kg. Because flint occurs naturally all over the Modi'in area, two control samples were taken, one from the east and one from the west slopes of the hill (cf. Hull 1987: 775).

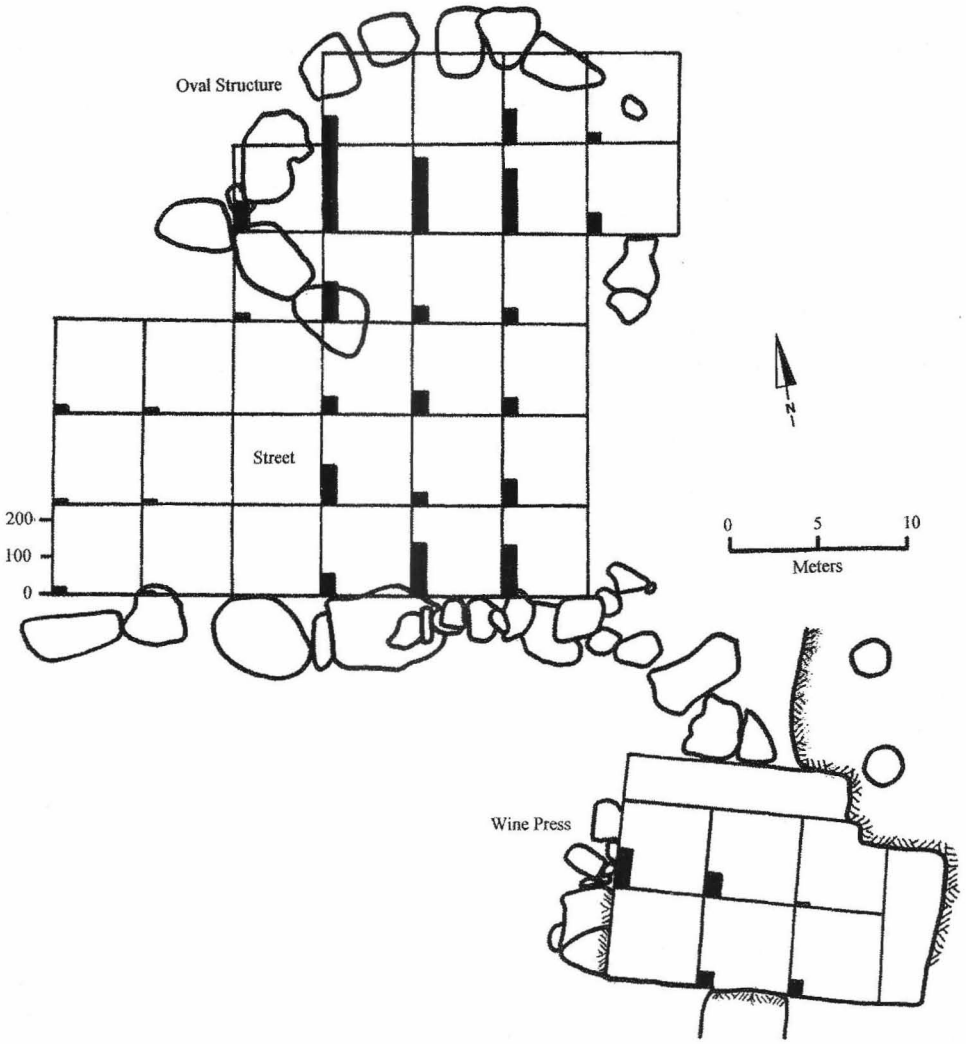

Fig. 5. Modi'in, Feature 3. Distribution of Roman macrodebitage across a watchtower, road, and treading pool.

The distribution of the dry-sieved macrodebitage showed that various activities of flint knapping were centred inside of the guard station. They also extended into an area of the street directly south of the entrance of the watch tower, and to a certain extent inside of the treading pool of the wine press.

Among the macrodebitage, analyzed by Ofer Marder, some ad hoc tools, cores, blades, bladelets and core trimming elements were found. The highest concentration of tools and cores was located in the eastern half of the oval structure, constituting a primary cultural deposit (cf. Schiffer 1972: 161; Butzer 1982: 98; Simms and

Heath 1990: 805). Unfortunately there was no time to sample the fine grids east of the feature, but those that were sampled west of it showed an unmistakable demarcation of activities (Fig. 5). The area in question was located in the road and measured 3 by 6 m. While the eastern half showed a substantial number of artefacts, in the western half the number of artefacts was negligible, and no activity was indicated.

In the final report (Gibson and Lass, in press) a proposal was made that one of the activities centred in the oval structure was the manufacture of flakes for threshing boards. Even if this was not the case, there can be no doubt that a flint industry existed in this location, contained within a sharply defined activity area, and that non-diagnostic tools were being manufactured during Early Roman times, based on the accompanying pottery and the absence of typical Neolithic or Chalcolithic flint tools.

The microdebitage in the same area, extracted from flotation samples, numbered 60,017 items, of which 1,427 (2.4%) were microflakes. This is a low value when compared to the amounts of microflakes found in the prehistoric features (6.5% in F128 and 6% in F9). It may support the theory that the activity in the oval structure and its surrounding area was the production of threshing-board flints, which do not need any retouch and would therefore not leave a proliferation of microflakes in its wake. In the final stages of production there may have been some light tapping which produced the flakes. The distribution of microdebitage in Feature 3 revealed both similarities and differences when compared to the macrodebitage. The clustering of tools and cores in the eastern half of the oval structure was supplemented by a relatively low number of microchips and a relatively high number of microflakes, indicating a favoured spot for the refined steps in flint tool manufacture. On the other hand, the sharp demarcation in the road between activity and non-activity areas was not seen in the distribution of microdebitage. The relative number of microchips and microflakes did not change appreciably in any of the fine grids in the road, and the border of the microdebitage scatter must be sought beyond the limits of the area sampled.

The entire site yielded only 120 bones, but of these an astonishing 92 were otoliths (see Part II of this report, where they are discussed in the section on Ashkelon). Of these, 80 were found in the oval structure, nine in the street, and three in the wine press. It would seem that the guard who was sitting in the watch tower regularly ate fish for lunch. There is one more phenomenon present in Feature 3 which was noted also in the samples from the site of Yaqush (Lass 2001: 407): the number of snails seemed to vary directly with the favoured spots of activity, which in F3 were presumably centred in the oval structure. The mean number of snail shells within the oval structure was 29 per kg of soil; in the road it was 10 per kg, and in the treading pool of the wine press it was 4 per kg; in the random control samples taken outside of the area it was 1 per kg.

Feature 98

The feature, excavated by the late Giora Parnus, was a farmhouse located in the Shimshoni compound of Modi'in (Fig. 6; cf. Gibson and Lass 1998: 116–17). Two main phases were discovered; the first one dated to the Umayyad period, the materials of which were cleaned from the building and deposited outside of its walls. The second contained pottery dated to the early and late Abbasid period, but a stratigraphical separation of this material proved impossible. The building was L-shaped and could be divided into an east and west wing. A majority of the walls were preserved to the height of about 0.5 m. The rooms were designated A through I by the excavator. The floors were made up of paving stones, plaster, or beaten earth, and an open courtyard connected to the north wall. A round stone installation, probably the base of an olive press, found in room H, may indicate that both rooms H and I were utilised for the processing of olives.

The clear outlines of the building were seen as an opportunity for extensive flotation sampling. Although time did not allow a full sampling of the 1 m fine grid, the building was sampled to the maximum extent possible, for a total of 130 samples. The combined gross weight was 422.9 kg, and the resulting heavy fraction 90.5 kg. The total number of sorted items, not counting eggshells or botanical remains, was 16,224. Since no stratified separation was possible, all of the flotation materials came from the Phase II floors, reflecting the state of the building at the point of abandonment (see the discussion of *de facto* floor assemblages in Diehl 1998: 620). The categories included fungi,[1] seashells, arthropods,[2] olives, and the heavy fraction made up of rough rock.

The fungi came in two forms; they were tiny soft pellets of pure fungi, 1 or 2 mm in diameter, or they were gathered into a furry hard mud pellet of the same size. Generally there were less of the former and more of the latter. To quantify the relative quantity in each fine grid, the fungi were laid out and measured according to mm^2, then calculated as mm^2 per kg of soil. At this stage of the work eggshells were calculated in the same manner. Three of the samples were given a preliminary check by Azriel Gorski. The major substance of the pellets was made up of fungi. Some of them had captured a number of modern synthetic fibers, including nylon, polyester and acrylic, because the samples had been laid out to dry in a high wind. However, one sample also contained cotton showing the attrition of age (Room EF, L585, Phase II). Another sample yielded a cotton fibre which was dyed red-lavender (Room C, L599, Phase II). The latter had been enveloped by fungi, which may attest to its age. The third contained a fibre which was probably flax (Room G, L577, Phase II), and a number of fibres which were definitely animal hair, probably goat.

Phase II Distributions

The fine grids, which were sampled in the courtyard north of the building, had no fungi at all. In room A only two fine grids contained fungi, both located in front of the doorway leading east (Fig. 6). When they were first encountered, fungi appeared

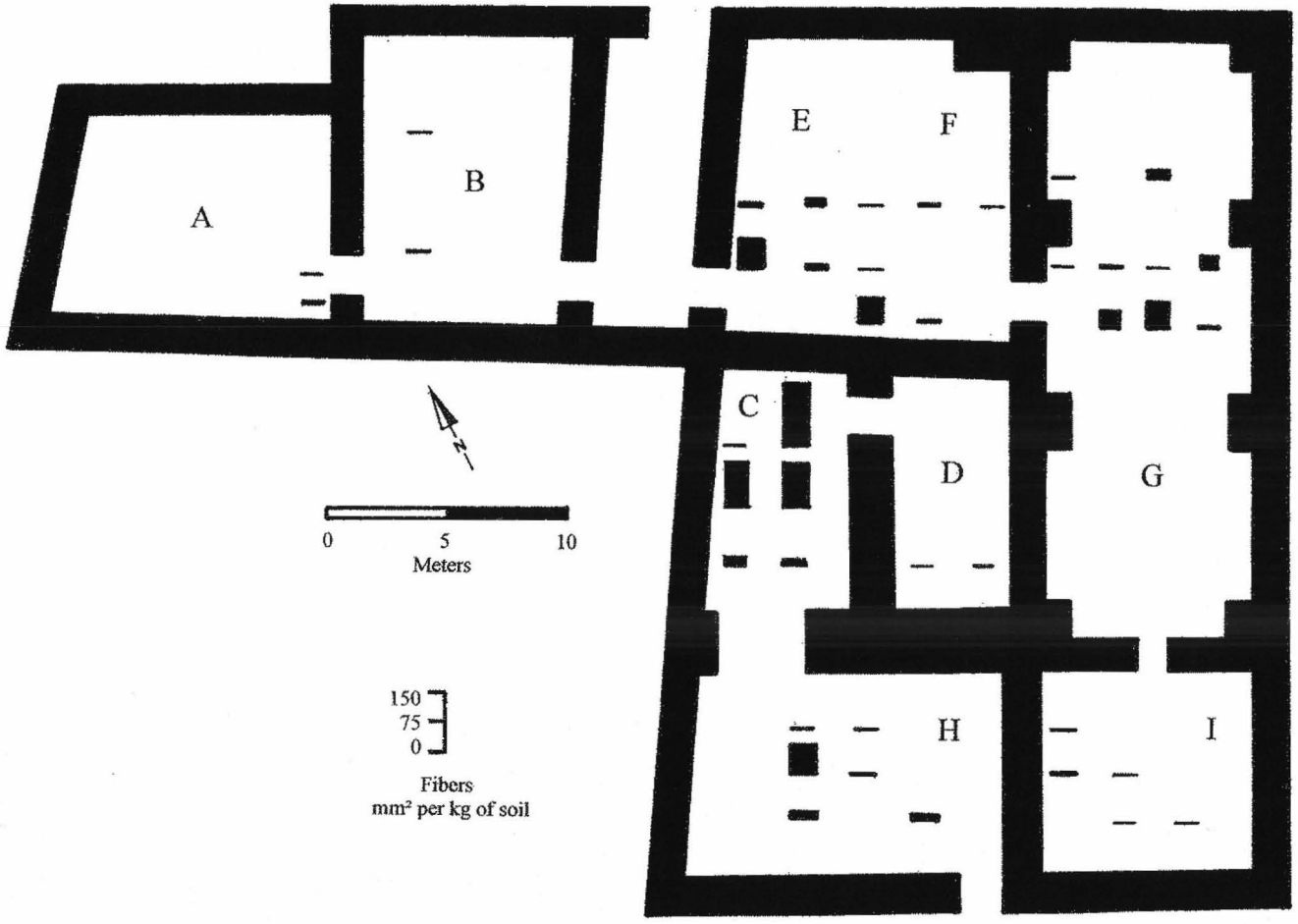

Fig. 6. Modi'in, Feature 98. Distribution of fungi across an Abbasid farmhouse, in mm² per kg of soil.

to indicate the placement of rugs in the building, and their scientific examination was to establish the materials of which these rugs had been manufactured. Azriel Gorski stated categorically that 'none of the samples contain fibres associated with rugs or carpets.' Indeed, the fungi could have grown from any organic matter whatsoever. However, the lack of fungi everywhere in room A except in front of the entrance way is suggestive, and it is reasonable to state that they may represent the placement of a mat. If this is true, then perhaps some of the other fungi distributions in the rest of the building may denote areas which were once covered by rugs or mats which were subsequently removed. If the beaten earth floors were damp and the rugs or mats were systematically trampled into the floors, even when they were removed parts of them would have adhered to the floor, creating a favourable environment for fungi as well as for snails. The heaviest distribution of fungi occurred in room C, and there was no room in the building in which there were not fungi. If rooms H and I were utilised for the processing of olives, perhaps the distribution of fungi indicated the remains of rotting waste products that were left behind after abandonment.

Every room sampled contained eggshell, as did the northern courtyard. The one sample that came from the southern courtyard, south of rooms A and B did not have eggshells in it, but this may have been due to chance. The highest clustered values came from rooms A and B. Rooms H and I also showed some fairly high values, but they were erratically placed and did not form clusters.

The fairly even distribution of the heavy fraction was made up of the very few centimetres of cultural accumulation, which adhered as a thin compact layer to the floors. Rooms H and I showed heavier concentrations than the other rooms, indicating that the fill contained a larger amount of rough rock, which may be a reflection of their special industrial nature. Room H contained a circular stone foundation which may have supported an olive press.

Arthropods were found in every room except Rooms H and I. Because they stem from aquatic creatures, they are not indicative of cultural activity but have a geological implication. Their lack in Rooms H and I may be accidental, or it may indicate that the soil in these two rooms came from a different place than the soil in the rest of the building. It may be another reflection on the special industrial function of the rooms.

Seashells were present in all of the spaces that were sampled, but nowhere as ubiquitous as in Rooms H and I, in all of the 15 fine grids that were sampled. This is a subtle difference, but reflects the differentiation noted before.

Carbonised olive pits were found in all of the sampled spaces, and together with eggshell they constituted the most prominent group of food remains in evidence. As expected, their highest concentration and blanket distribution were found in Rooms H and I, the likeliest two spaces for olive oil production.

Snail shells per kg of soil fluctuated in number from room to room, and sometimes quite drastically within the same room. In spite of the larger amounts in the fine grids next to the exterior wall of the building in the northern courtyard, the average number of snails per kg of soil was 11, as opposed to 22 within the building.

The overall number of snails found across the entire site was 18.4 per kg, comparing favourably to the number of snails found in Feature 3, which was 17.1 per kg.

Arthropods and seashells were only indirectly indicative of human activity. Their presence must be blamed on the massive collapse of the building, and they were most likely lodged in the mortar of the walls. Snails may have entered small cavities in the walls and ceilings, and subsequently became part of the debris.

Of the bones, all of the large ones had apparently been removed by sweeping. Those that were left were mostly from rodents and non-diagnostic fragments. Of the 995 items of flint which were thinly distributed throughout the farm house, most were microchips. No analysis was made, since the density (1 chip per kg of soil) was less than that of naturally occurring flint and did not represent a significant activity.

In the entire building only 4 cereal grains were found, suggesting that the making of flour was accomplished elsewhere. In spite of the fact that winepresses are a common feature in the Modi'in area, not a single grape pip was found in the building. This may indicate the ethnicity of the occupants. It is well known that Arab Moslem populations do not produce wine, and areas devoted to vineyards are relatively small (Finkelstein and Gophna 1992: 12). They were rather dedicated to poultry and the production of oil from olive orchards.

It should be noted that only the southern sites of Feature 3 and Feature 98 contained arthropods and seashells, whereas the northern sites of F128 and F9 did not, indicating different kinds of soil content.

Tell El-Ful

In salvage excavations at Tell el-Ful, during the winter of 1996–7, under the auspices of the Israel Antiquities Authority, directed by Shimon Gibson and Zvika Greenhut, 71 flotation samples were taken from a number of floors, the niches of a columbarium, and various other locations. The combined gross weight was 326.1 kg, yielding a heavy fraction of 86.4 kg. The total number of sorted items was 8,497. Samples of the heavy fraction were sorted under low magnification, into categories of pottery, bone, microflints, microflakes, snails, eggshells, fishscales, arthropods, seashells and other occasional finds such as glass, tesserae, metal, etc. The largest category was bones, followed by microflints and snails.

There was very little evidence of any patterns whatsoever, in the samples that were from fine-gridded floors, when each of these floors was taken separately. The number of eggshells, flints and bones did indicate, however, that there was a normal, if undistinguished, degree of domestic activities going on. The modest number of microflints and microflakes also indicated that whatever tools were occasionally used were not made at the site. They were only utilised and re-sharpened there during use, and were brought in ready made from other locations.

The unusually large number of eggshells in all the loci of area E1, as well as a scattering of fishscales, would indicate a locus of food preparation or consumption. There were two other unique clusters of fishscales. One occurred in locus 1076,

Fig. 7. Tell el-Ful, Building in Area D.

fine grid 6, west of the area D building, dated to the Middle Bronze II (Fig. 7). Fine grid 6 was in the centre of the floor, but no other fine grid had any fishscales on it, hence a one-time event must be assumed. The other cluster occurred in locus 1084, the lone sample at the east end of room B of the area D building (excavated by the late Giora Parnus). In the west half of this room, in locus 1090, 9 samples were taken from 8 fine grids, and not a single fishscale was found. This leads to the conclusion that there was a division of at least some activities between the eastern and western half of the room. However, the division of the entire room from the rest of the area is accentuated even more when the number of bones per kg of soil is considered. Locus 1090 in the west half of the room had 6.6 bones per kg of soil. Locus 1078 in room A had 17.9 bones per kg of soil, and locus 1076 west of the building had 15.8 bones per kg of soil. The clustering of fish scales in the east half of room B, and the drastically lower number of bones in the same room, may point to an adherence to dietary laws, such as would prevail in a Jewish household in which food was kept kosher (Cf. Lass 1994: 32, showing debris categories in which a courtyard is divided into similar activity patterns). However, such theories should be checked by a deeper and more precise faunal analysis.

There is one more cluster to be considered, located in locus 6049, presumably a niche in a columbarium, where 70 eggshells were found. 29 other samples were taken from the niches of this columbarium, and the highest number of eggshells in any one of them was 4. Since the distribution of eggshell in a columbarium is contingent upon the behaviour of birds, or possibly the passage of natural events through time, it is difficult to explain this cluster. Eggs from both chickens and pigeons were a significant part of the economy in Tell el Ful. The graph for eggshell thickness is bimodal showing two peaks, a lower one from 0.12 to 0.19 mm, and a higher one going from 0.20 to 0.41 mm. An experiment was made with 55 modern organic chicken eggs, in which the shell thickness ranged from 0.30 to 0.45 mm in thickness, which closely corresponds to the higher distribution at Tell el-Ful. The lower distribution is doubtlessly from the pigeons for which the columbarium was built (another experiment was made with 18 quail eggs, in which the shell thickness ranged from 0.17 to 0.22 mm; so far, none of the distributions in any of the sites that have been sampled shows a convincing peak within the range of those values).

Tell Farah (South)

In July and August of 1999, during archaeological excavations at Tell Farah (South), directed by Gunnar Lehmann and Tammi J. Schneider, 109 flotation samples were collected from fine-gridded floors and other loci. The number of samples from each floor ranged from 3 to 16 samples, according to the size of the floor. No architectural plans were available, but most of the samples probably dated to the Roman Period. A total of 998 kg of soil were collected, yielding a heavy fraction of 33 kg. The total number of sorted items was 11,143. They included pottery, bone, micro- and macroflints, eggshells, snails, seashells and occasional finds, such as beads, slag,

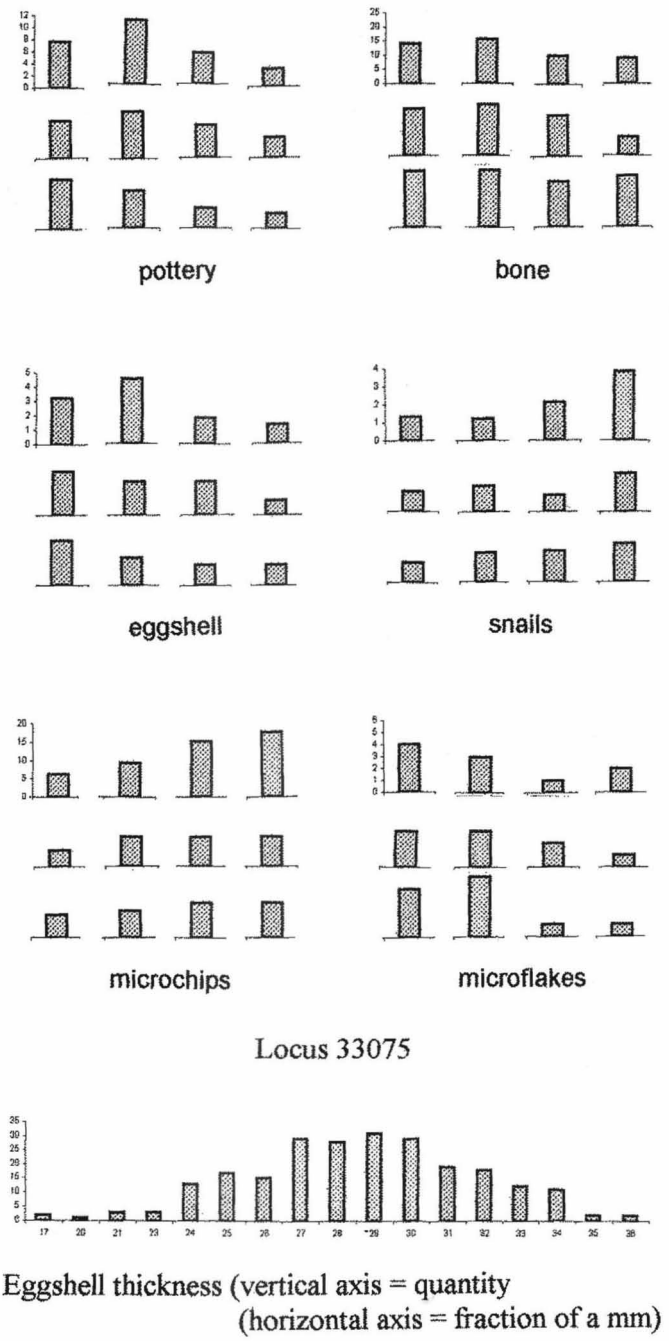

Fig. 8. Tell Farah (South). Example of six distributions across 12 fine grids of a floor, in items per kg of soil.

plaster, botanical remains, fossils, etc. The two categories that were significantly larger than all others were bones and flint microchips.

At Tell Farah (South), in five out of seven cases, the bone and eggshell distributions mimicked the pottery distribution. In six out of seven cases, the snail distributions were in opposition to the pottery, bone and eggshell distributions. In at least four out of seven cases, the distributions of the microflakes were in opposition to the distributions of the microchips (Fig. 8). There is a possibility that these patterns reflect long-term habits of doing things in certain ways, and that some activities were performed separately from others.

A summary of eggshell thickness shows that pigeon eggs were occasionally eaten, but only two fragments came from goose eggs. The total items per kg of soil at Tell Farah (South) amounted to 26.3, a fairly average reading.

Précis

Obviously, if a prehistoric site is sampled in which no structures are discovered, or if within the structures only one or two material culture categories survive, then evidence for human activity will be limited. Even within a rich historic site, if the sampling has not been substantial, only a diminished impression is gained. The seven sites discussed in this report conform to all of the above. A few sites have been massively sampled, and they will be discussed in Part II of this report, to be published in the following issue of *Strata*.

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Notes

1 The fungi were examined by Azriel Gorki and identified as such ('mold').

2 The arthropods were identified by Caroline Cartwright of the British Museum as follows: 'The samples from Modi'in contain ostracods. These are tiny arthropods which form a sharply defined order of the class Crustacea. They have a bivalved carapace of calcareous material, which may readily be fossilized. Ostracod valves are known from strata of the Upper Cambrian onwards and are still, today, amongst the commonest organisms found in almost every aquatic environment.'

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Oil Lamps on Kernos Vessels from Maresha

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This article focuses on the oil lamps on kernos vessels from Maresha from the Persian and Hellenistic periods discovered at the Maresha excavations, located in the Judaean lowlands in Israel. The uniqueness of these kernos finds is that they have oil lamps attached to them, rather than animals and plants, as in the Iron Age. The discovery of hundreds of pinched oil lamps attached to stands in this site is unique to Maresha. This article concentrates on the distribution of these distinctive items, the origin of their inspiration, and their function. Various factors lead to the possible conclusion that the kernos vessels may have been used for cultic mystery rites. In addition, the characteristics of these vessels and other artifacts found in close proximity to them indicate a connection to local rituals. These archaeological finds, connecting mystery rites and local traditions, may be considered proof of the existence of a syncretist Hellenistic process.

During the excavation of the ancient city of Maresha (Marissa; Tell Sandahanna in Arabic) located in the Judean Shephela (lowlands) in Israel, a large city from the Hellenistic period was found. The first excavation of the tell was conducted by F. J. Bliss and R. A. S. Macalister on behalf of the Palestine Exploration Fund in the summer of 1900. In these excavations the Upper City of Maresha, covering an area of 2.4 ha, was exposed. Between 1989 and 2000 intensive excavations of the site were carried out by the Israel Antiquities Authority, headed by A. Kloner, as part of the preparation of the site as a national park. For a description of the history of the excavations and the main findings see Kloner (2003: 1–30). The excavations focused mainly on the Lower City, which was built as a ring around the tell, in a wide range of locations at ground level, underground, and in a necropolis. The Lower City covers an area of 32 ha. Above ground, public buildings, dwellings and streets have been excavated. In the subterranean complexes, large underground chambers, mainly used for commercial purposes, such as olive presses and columbaria, have been excavated. The excavation has been continuing since 2000, headed by I. Stern and B. Alpert as part of the 'Archaeological Seminars' project in conjunction with the Israel Antiquities Authority, and mainly focuses on excavating a number of subterranean complexes.

The excavations of the site revealed a small part of the settlement from the Iron Age and the Persian era, as well as finds from the Roman, Byzantine, and Muslim periods. However, the settlement of Maresha was most extensive during the Hellenistic period. Maresha's economic importance is recorded in some historical

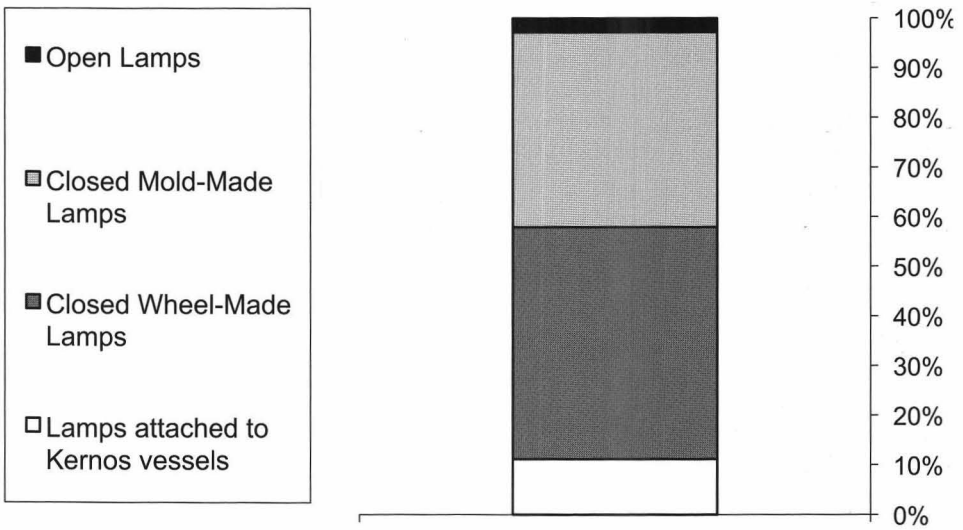
sources such as the Zenon Papyri and from the many epigraphic finds. Many ethnic groups, including the local population – Idumaeans and Phoenicians, Greeks, Egyptians, and others interacted in the city. The abundant material finds in Maresha include figurines, mold-made bowls, amphorae, coins, and objects of bone, glass and faience. All these together and separately are evidence of the material culture of the city. The abundance of imported goods is noteworthy, given the site's geographic location in the Judean Shephela.

Thousands of lamps of different types and from different periods were found in Maresha. The lamps from the Hellenistic period are the most prominent in their numbers and range of types. These lamps provide a great deal of information about the site, its inhabitants, and their traditions (Ambar-Armon 2007).

This article focuses on artefacts which are among the most interesting and important discovered in the Maresha excavations: *kernoi* – ceramic vessels with oil lamps attached to them. These artefacts are variously shaped, including stands, rings, and open vessels. Most of the oil lamps attached to the kernos vessels are pinched lamps, but other types, such as small round bowls and spouts attached directly to the vessel, were uncovered. While the vessels themselves were rarely unearthed complete, many of the attached lamps were preserved whole. The total number of whole lamps found on site up to 2005 was 274. Twenty-four other kernos vessels were preserved in good condition. In addition there were hundreds of broken lamps and the broken vessels to which they were attached. It is assumed that at least some of the shards belonged to the same vessel. Some were identified during restoration, and some were discovered nearby. Of the lamps found during the Maresha excavations, 11 percent belong to this type (Graph 1).

The authors prefer the term 'kernoi with oil lamps', rather than 'sanctuary lamps', used for example by Howland (1958: 128–9) and Bailey (1975: 96–7). This usage follows that of Pollitt, who studied artefacts with similar characteristics. Pollitt notes that the word 'kernos' has come to be used for any kind of multiple vessel which has smaller containers attached to some sort of larger support, such as a bowl or a ring (Pollitt 1979: 228). The kernos vessels with lamps can also be called 'lamps with multiple spouts'. However, these vessels are different from other mold-made lamps with multiple spouts for example at Tell Dor (Rosenthal-Heginbottom 1995: 241).

Their uniqueness lies in the fact that the lamps had one mouth or spout, and they were attached to a stand; and also the vast majority were open lamps, at a time when most lamps were already closed. The assemblage found in Maresha is important with regard to the wealth of types uncovered at one site. Some of the types mentioned in this article are known from other excavations from the Hellenistic world, but these finds are most outstanding given their quantity, which is not known at other sites. The occurrence of unique lamps in Maresha indicates that they were used mostly at this site. The importance of these items is due to their abundance, their unique components, their shape, and their raw material. These characteristics highlight a new type of vessel which is unknown elsewhere in the study of Persian and Hellenistic oil lamps. Furthermore, the kernos vessels help in understanding one of the least known aspects of Maresha – rituals. Kernoi are known mainly from



Graph 1 Proportions of lamps attached to kernos vessels, compared to other lamps, from all areas of site

other sites dated earlier than the Persian and Hellenistic periods. Indeed, earlier kernoi were not found in the excavations in Maresha albeit in adjacent sites such as Hirbat el-Qom (see for example Dever 2001) and Tell el-Hesi (Bignasca 2007). It seems that the early kernoi inspired, at least partially, the artefacts under discussion. The early kernos was a ring-shaped vessel made of clay, to which various elements, such as small bowls, animals, anthropomorphic elements, or plants, were attached (Pollitt 1979: 229–30).

Dever notes that 'kernos' in Classical and Aegean archaeology denotes a class of small bowls with a hollow rim, normally with various attachments around the rim called 'protomes' for pouring. Sometimes they are referred to as ring vases with spouts in the shape of human or animal heads, pomegranates, or simply clusters of bowls, while some have rings with legs, or stand on a ceramic column. They are also called 'trick vessels' or 'ring vases' (Dever 2001: 119–31).

Only a few examples from the earlier periods have been published, mainly from Crete and Cyprus (Pollitt 1979: 228; Mazar 1980: 109). Dever states that most of the kernoi found in Israel are from three Iron Age contexts. The first, from the twelfth and eleventh centuries BCE, is mainly from Philistine sites along the coast, such as Tell Qasile. The second context is in sites from the tenth to seventh centuries BCE, in Israel and Judah (Dever 2001: 119).[1] The third context is in sites from the 'New Philistine' period, dated to the ninth to seventh centuries BCE, such as Ashdod. Dever also discusses the origin of the vessels, which in his opinion, were brought over by the Sea Peoples from Cyprus (Dever 2001: 125–6).

It seems the use of the term 'kernos' for describing these early vessels first came into use in the Classical period, as mentioned in the writings of Athenaeus of

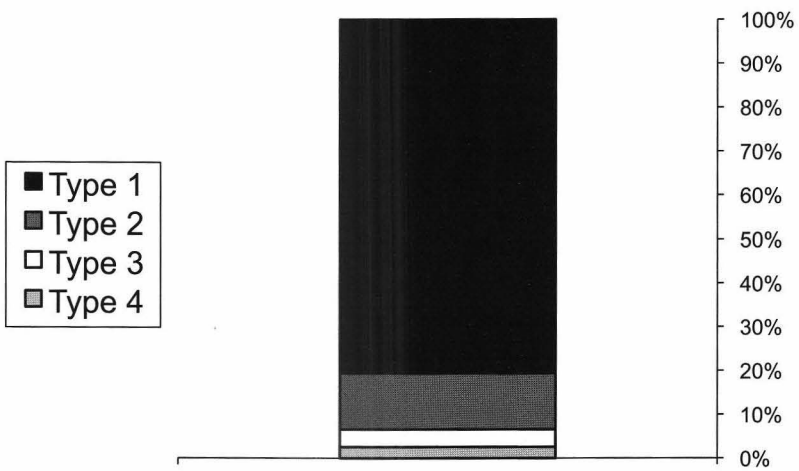
Naukratis, who quotes Polemon from the fifth century BCE: 'Kernos – an earthenware vessel, holding within it a large number of small cups cemented together. In these, Polemon says, are white poppy-heads, grains of wheat and barley, peas, vetches, okra-seeds, and lentils. The man who carries it, resembling the bearer of the sacred winnowing-fan, tastes these articles' (The Deipnosophists 11, 478d).

It appears that Xanthoudides (1905–6: 9–23) was the first to draw the connection between this term and the vessels from the Minoan and following periods. In light of this, the question discussed by Mazar, among others, arises: is it possible to refer to kernoi from different periods as one phenomenon (Mazar 1980: 134). In other words: is there any uniformity in the use of the term 'kernos' which has been seen as one group for thousands of years? The answer to this question is complex and it seems that the findings from Maresha reflect one aspect of the topic. Although the connection between these vessels from different periods is not clear, it is possible to use the term 'kernos' to refer to their morphology.

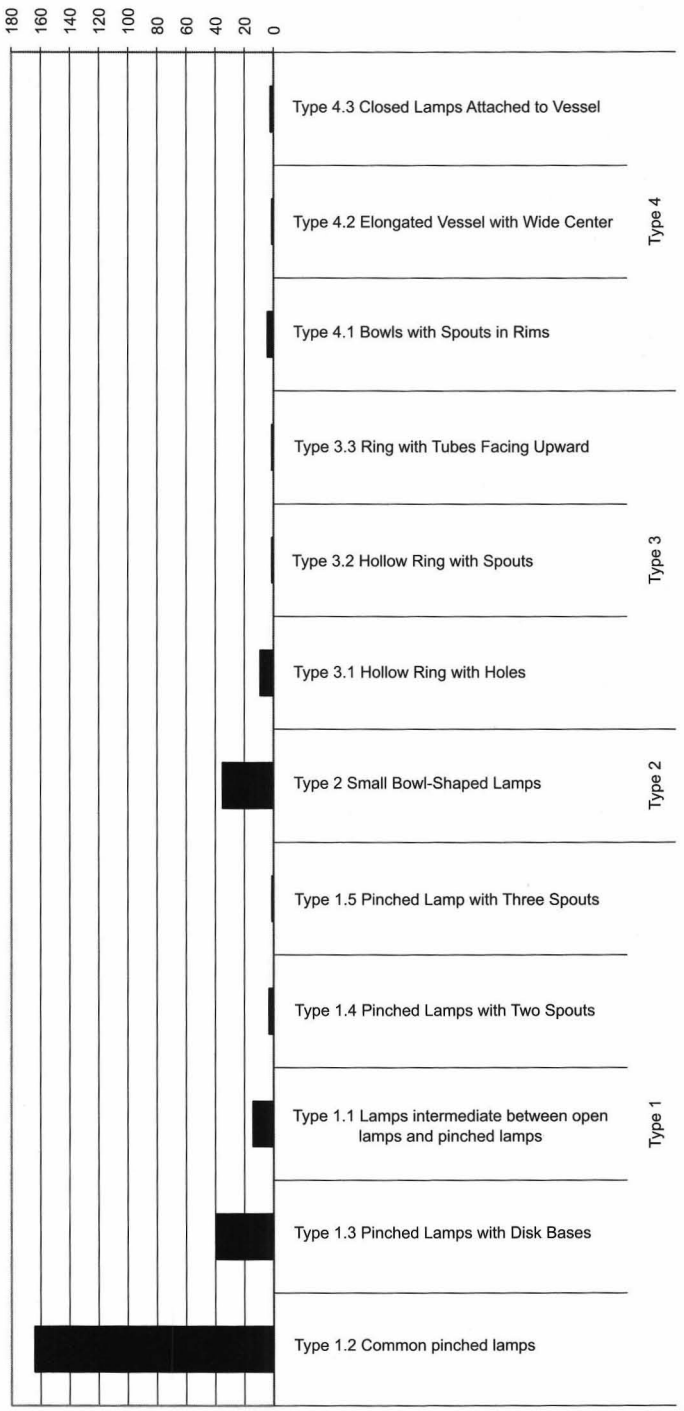
The uniqueness of the vessels found in Maresha compared to earlier kernoi lies in the fact that they have lamps rather than anthropomorphic or zoomorphic elements. Another important difference between the earlier kernoi and the kernos vessels with lamps is that in those found in Maresha there is rarely a free passage for oil between the lamps.

TYPES

The types of lamps attached to the Maresha kernos vessels are described below. In most cases, these were small lamps of various forms whose only connection was the rim of the vessel upon which they were mounted (Types 1 and 2). In a few cases the lamps were mounted on a ring (Type 3). In addition to these vessels, single lamps possessing different characteristics were also found and defined as a separate type: Type 4. Graphs 2 and 3 show the differences in quantities between the different types.



Graph 2 Types of lamps attached to kernos vessels



Graph 3 Sub-types of lamps attached to kernos vessels

The typological discussion is based on the lamps, and not directly on the vessels themselves, as the lamps have been preserved relatively better. The information available, including the different types of lamps and pieces of artefacts, shows that the lamps were attached to three types of vessels: stands, rings, and open vessels.

Pinched Oil Lamps (Type 1)

This is the most common type found in Maresha, attached to vessels, totalling 221 lamps, 80 percent of the lamps discussed in this article. The lamps are pinched, small round bowls placed as a group attached to a stand. They include five subtypes, which differ in general design, the number of spouts, and the design of the base. Of this group, 22 items are not the actual lamps, but rather vessels identified as stands for lamps, while the lamps themselves did not survive.

Lamps intermediate between open lamps and pinched lamps (Type 1.1)

Of this type, 14 whole lamps have been found in Maresha (Figure 1). Morphologically, this group is evidence of a stage of development between open lamps, known mainly throughout the Persian era, characterised by their large dimensions and their knife-shaved base (Stern 1982: 128–9); and the pinched lamps, common mainly during the Hellenistic period, discussed below. These intermediate stage lamps, all consisting of a small bowl pinched on one side to form the spout, had a wide range of designs. Most have a string-cut disk-shaped base, some have a concave base, and a few have other variously shaped bases. Some have a ledge rim, while others have a rounded rim. About half were made of pale yellow clay,

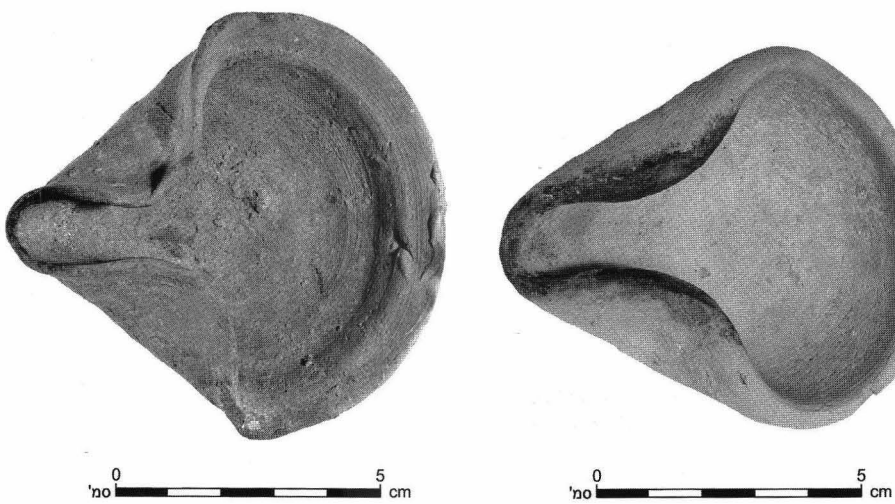


Fig. 1. Intermediate stage lamps between open and pinched lamps

and the rest from clays of various colours. Most contain white grits of different sizes. Their dimensions indicate that they were intermediate type lamps. The length of the lamps ranges from 7.4 to 8.9 cm, their width from 6 to 7.5 cm, and their height from 2 to 3.5 cm. These are smaller than the open lamps of the Persian era. A high proportion (40 percent) was found with no soot traces, strengthening the connection between these lamps and the kernos vessels (Ambar-Armon 2007: 238). In this respect they resemble the special lamps attached to the vessels, as will be discussed in greater detail below. These lamps have a strong morphological affinity to earlier types, but they resemble the lamps attached to the kernos vessels with regard to their size and ash residue.

Common pinched lamps (Type 1.2)

These lamps are the most common sub-type found in Maresha, comprising 164 items (Figure 2). Most of the lamps have been found whole, or with a complete profile. They are characterised by being open, very small, and pinched. The majority are small bowl-shaped lamps, with both sides pinched and often folded to the other side, creating the oil reservoir and the spout. This technique is well known from earlier open lamps. The pinching sometimes hermetically sealed the reservoir from the spout, and sometimes was partial or almost completely open. These lamps are very similar to folded lamps. The fold in the lamps was usually complete, sometimes with both sides touching in the centre, and sometimes overlapping. Occasionally it is possible to see the remnants of clay used to join the two parts. It is rarely possible to distinguish between pinching and folding, as these were just techniques for making the spout, without any aesthetic aspect. These lamps originally had a disk-shaped base, but as they were attached to a stand it is usually possible to distinguish its rim, or the piece of clay used to attach the lamp to the stand. This type occurs in a wide range of sizes, the length ranging from 4.5 to 7 cm, and the width from 3.2 to 6 cm. The height cannot be accurately determined, as the lamps are usually attached to the rim of the vessel.

Bliss and Macalister published kernoi of this type, recovered in the excavations in the Shephelah, probably at Maresha (Bliss and Macalister 1902: 130–1, pl. 66: 8, 11). A number of lamps of this type are found in the Adler collection (Adler 2004: 3, 5, nos. 24–9). The Sussman catalogue also includes two lamps of this type, from an unidentified source (Sussman 2007: 87). It is possible that the source of these lamps is from robberies of the Maresha excavations over the years. A similar lamp has been found recently in the excavation in Tell Halif (Borowski 2008: fig. 6).

The lamps of this subtype were placed on bowls that have a hollow centre stand, and all face outward. It is reasonable to assume that having all the wicks facing outward would enlarge the illuminated area, while having them facing inward would create a concentrated light much like a torch. The second lamp of this type described by Bliss and Macalister was oriented outwards, in the same direction as the rest of the Maresha lamps (Bliss and Macalister 1902: 130–1, pl. 66:8). Most of the lamps were attached to the rim of the vessel at a 90–degree angle, but others were at a

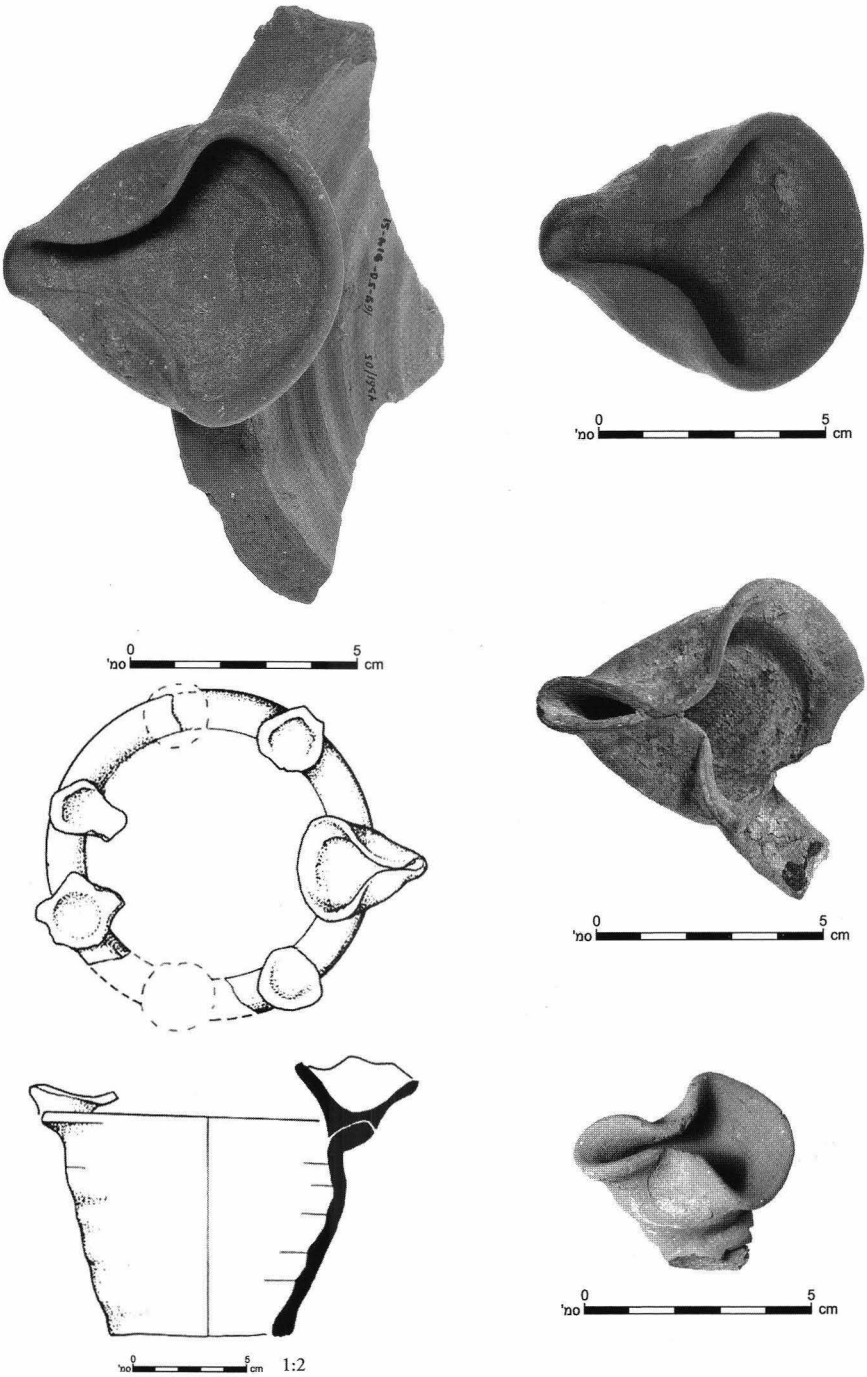


Fig. 2 Pinched lamps

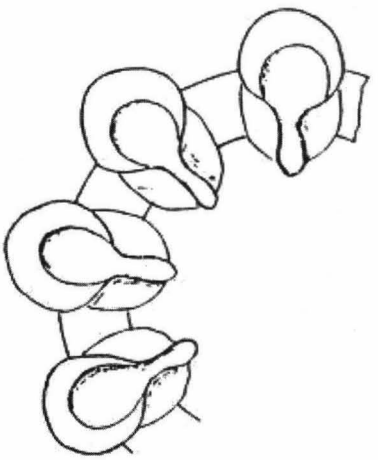


Fig. 3 Inward-pointing lamps (Bliss and Macalister 1902: 130–131, Pl. 66: 11)

45–degree angle, and sometimes they overlapped. The vessels to which the lamps were attached had open bases, proving that they were used only as lamp stands and not for containing a liquid. The quality of the levigation process of the clay of all the lamps and the vessels is identical, indicating that the vessels were made in one piece, from the same clay and by the same method of levigation.

Pinched Lamps with Disk Bases (Type 1.3)

This group of lamps consists of 39 items. They are unique, as the lamps have a disk base (Figure 4), in contrast to the others, with traces of clay on the base, which indicate that they were attached to a vessel. The disk bases of these lamps show that they had been string-cut. It is possible that these lamps were placed on stands. For example, a complete vessel with seven flat surfaces on which disk-based lamps would fit was found on site (Figure 5). These lamps were classified in this group because of their general shape, but the presence of the disk base makes this classification problematic. In addition, it became clear that a very large proportion of these lamps had not been used, as were the other lamps of this type, a phenomenon discussed below. This indicates that it was correct to classify these lamps as belonging to kernos vessels.

Pinched Lamps with Two Spouts (Type 1.4)

Three lamps with two spouts, rather than the more common single-spout type, were found in Maresha. One was imported (Figure 6), and the other two have local characteristics (Figure 7). In contrast to the other local lamps found in Maresha, the imported lamp was made of especially high quality, relatively thin, well-prepared

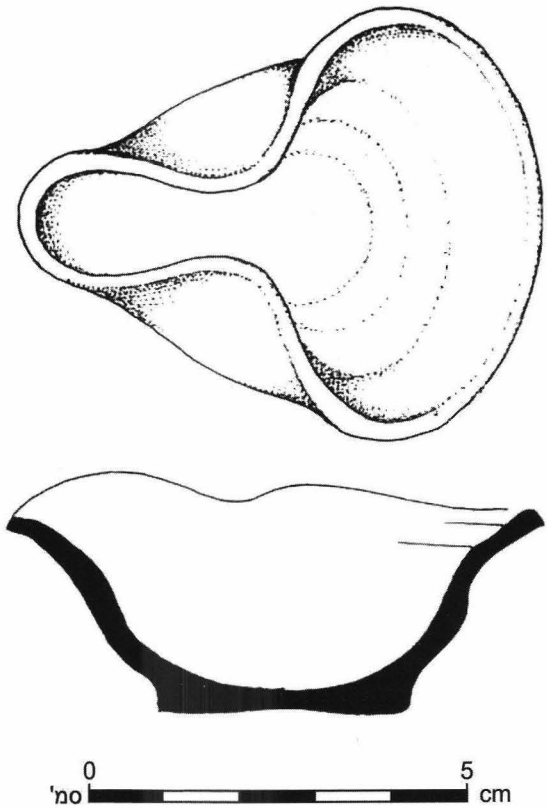


Fig. 4 Pinched lamp with disk base

clay, and was finished with a very shiny high quality slip. The two other lamps with two pinched spouts were made of local clay. The advantage of having two spouts is that the lamp gives more light, but the small number of these lamps shows that this advantage was not what motivated the potters. They preferred producing lamps with one spout, to be placed on one stand with several others, rather than lamps with two spouts.

Pinched Lamp with Three Spouts (Type 1.5)

One slightly different lamp of this type was found at the site, with its rim folded inward in three places to make three spouts in a tricorn shape (Figure 8).

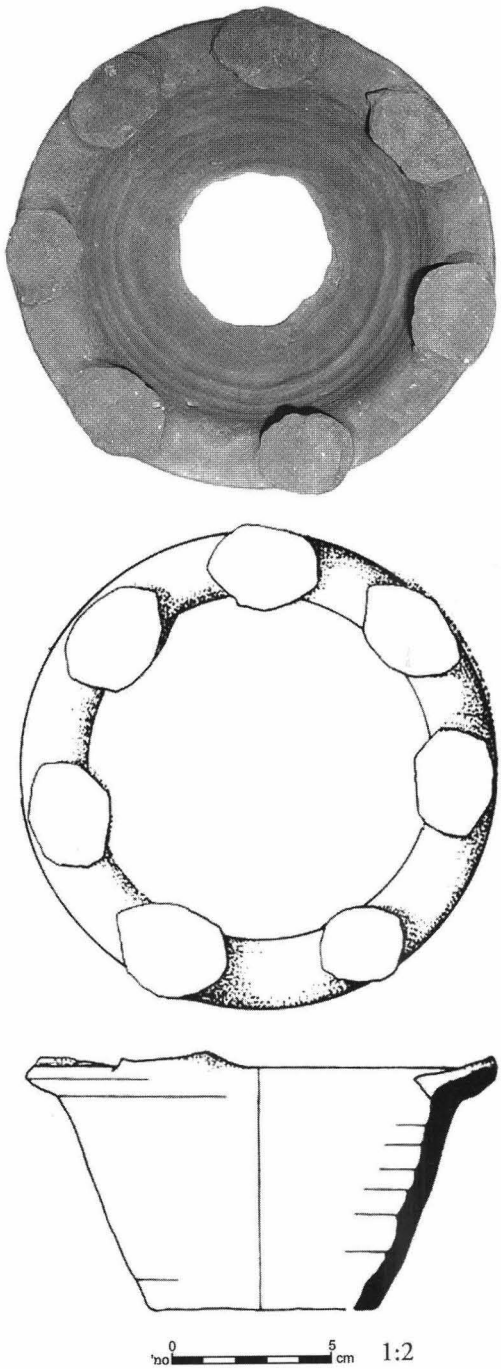


Fig. 5 Kernos vessel

Fig. 6 Imported pinched lamp with two spouts

Small Bowl-Shaped Lamps (Type 2)

The second type of lamp is in the form of a small bowl. These bowls were attached to the same vessels as the pinched lamps discussed above. Due to the preservation of a number of vessels of this type, it can be surmised that these vessels had a larger number of bowls on each stand and that they were placed closer together.

Thirty-five lamps of this type were found in Maresha (Figure 9); 13 percent of all the lamps discussed in this article. Most of them have a rim which is upright or turned slightly inwards. In contrast to the pinched lamps, these lamps do not have a designated place for the wick. Some of these lamps show that the wick rested on the rim of the bowl,[2] but it is possible that in other cases it floated in the centre.[3] The bowls usually have traces of clay which indicate that they were attached to the rim of a vessel. Four lamps of this type have a disk base with no evidence of having been attached to another vessel. It is possible, that the disk-based lamps were placed on a kernos vessel designed for this purpose (Figure 5). Some vessels to which the lamps were attached had a decorated surface for example, stripes with various shades of brown slip (Figure 10). Even though the vessel was sometimes decorated, the lamps themselves were not. These bowls were of different sizes. The inside height ranged from 1.3 to 2.3 cm, the inside diameter ranged from 2.9 to 4.8 cm, and the external diameter ranged from 4.1 to 5.5 cm. Only two of the lamps from Maresha were significantly larger; the diameter of their bowls estimated at approximately 8 cm.

Ring Kernoi (Type 3)

In Maresha 11 kernos rings were also found. They represent 4 percent of the finds discussed in this article. They consist of a single hollow ring to which additional

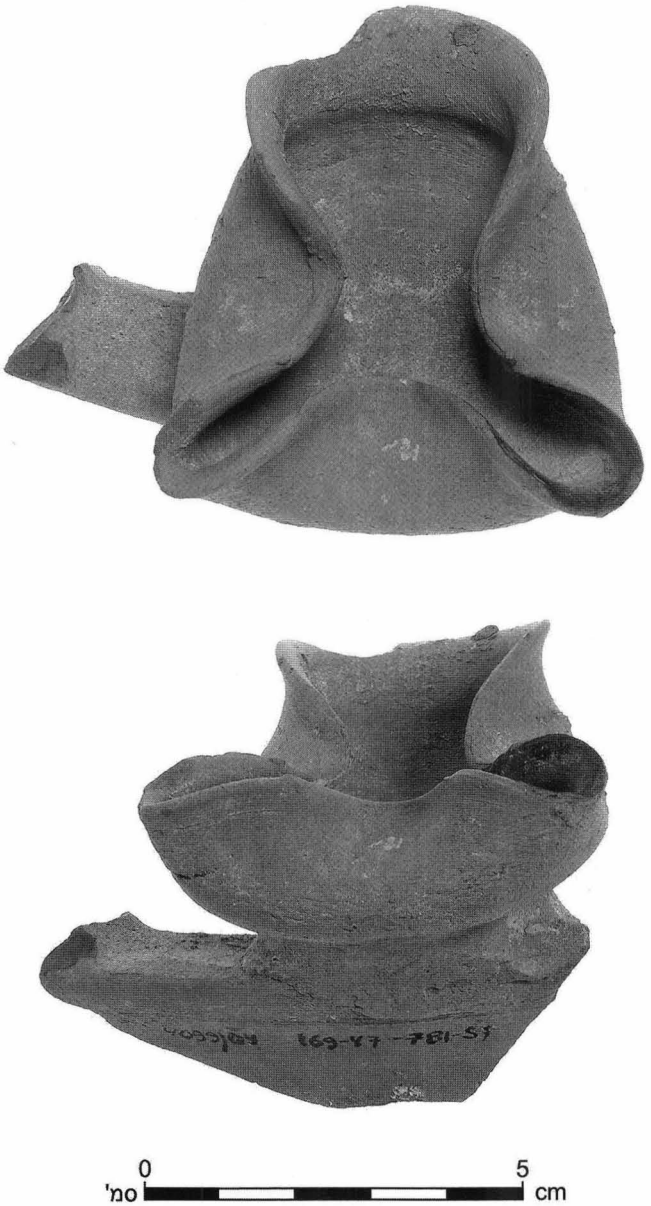


Fig. 7 Pinched lamp with two spouts

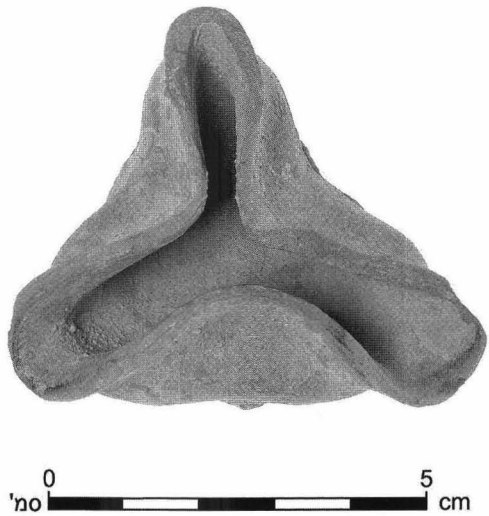


Fig. 8 Pinched lamp with three spouts

components were attached. There are three different sub-types: a hollow ring with holes on a deep vessel; a hollow ring with spouts, and a hollow ring from which tubes emerge upward. Two additional shards include two parts of rings, but it is not known to which type they belonged.

Hollow Ring with Holes (Type 3.1)

Nine vessels of this type were found at Maresha. One was published by Levine (2003: 133–4, fig. 7.1, no. 177). Another vessel was published by Bliss and Macalister (1902: fig. 66: 9). These vessels are deep and wide, and are characterised by the hollow ring attached to the rim of the vessel which had holes that were used as lamps (Figure 11). One vessel had 22 holes. The holes in the ring were made using a sharp object. These holes were spaced at 2–5 cm, equally, and unequally spaced. They were designed differently on various vessels. Some are round, pointing outwards, projecting slightly beyond the rim of the lamp, while others are oval. It can be assumed that in each lamp one of the holes was larger than the others, and was used for filling oil. In all the vessels of this type the ring had a flat base and was attached to a vessel. The side of the vessel was slightly thinner where the ring was attached. In two vessels that were relatively well preserved only a few of the holes on the complete ring had traces of soot. Wheel marks can be seen clearly in these vessels, both inside and outside. In most cases, in addition to these marks there are also relatively deep decorative grooves around the vessel. It seems the vessel was closed at its base. As for the dimensions of the vessels from Maresha, one was completely restored and is 28 cm high. The diameters of the vessels range from 20 to 36 cm. The rings are about 2 cm high and 2 to 2.5 cm wide, and the height of the space inside the ring ranges from 1.2 to 1.5 cm.

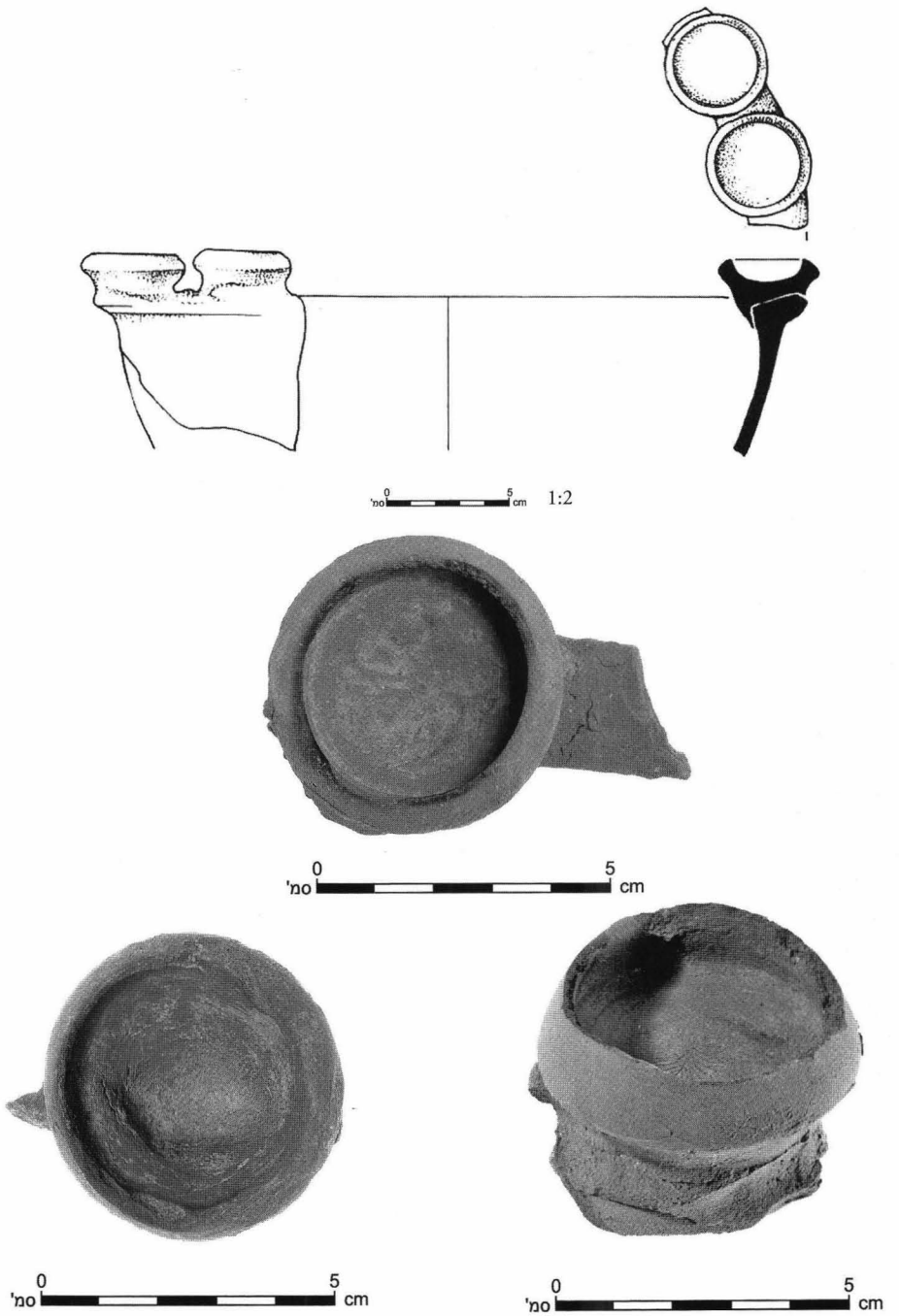


Fig. 9 Small bowl-shaped lamps

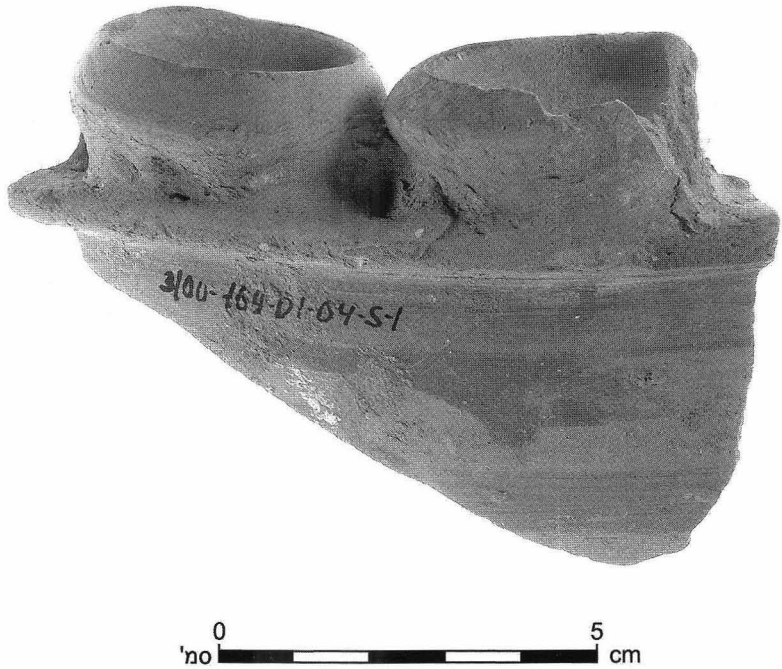


Fig. 10 Kernos vessel with a brushed band decoration

Hollow Ring with Spouts (Type 3.2)

One lamp of this type was found at Maresha (Figure 12). Only a small part of the ring, to which the spout was attached, was preserved. The spout was curved upward and rounded at its end, and had a very small opening. The spout was thick where it was attached to the ring, and narrow at the end.

Ring with Tubes Facing Upward (Type 3.3)

An object used as a lamp of this type was found at the site (Figure 13). The vessel is made of a hollow ring with a projecting tube facing upward. Only a very small fragment of this vessel, to which one tube (lamp?) was attached, survived. Identifying it as a lamp is questionable due to the lack of soot residue on its rim and because of its unique shape and lack of parallels. It is not known whether such tubes were attached all round the ring, or whether it had other components attached to it, as with earlier kernoi.

Other Types

Seven of the lamps found in Maresha, three percent of the lamps discussed, were mounted on kernos vessels of different types.

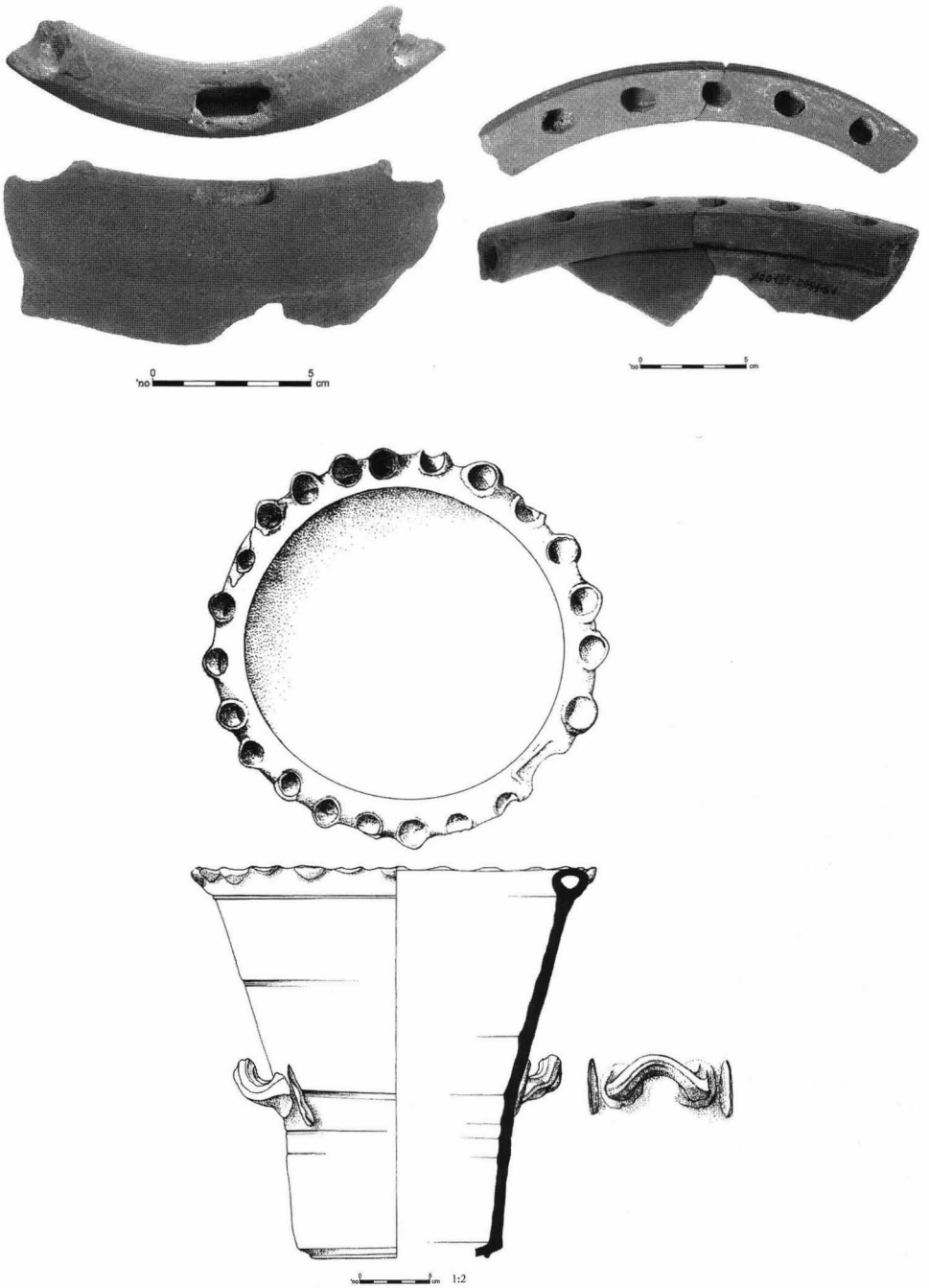


Fig. 11 Perforated hollow ring

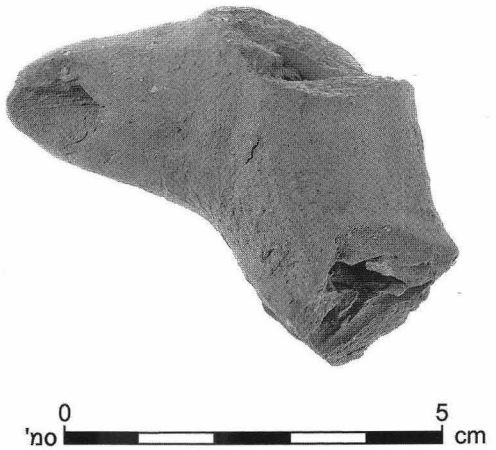


Fig. 12 Hollow ring with spout

Fig. 13 Hollow ring with pipe pointing up

Bowls with Spouts in Rims (Type 4.1)

Four sherds of bowls with closed spouts attached to their rims were found in Maresha (Figure 14), none of them surviving complete. Combining the different fragments, it can be suggested that these spouts were attached to a wide shallow

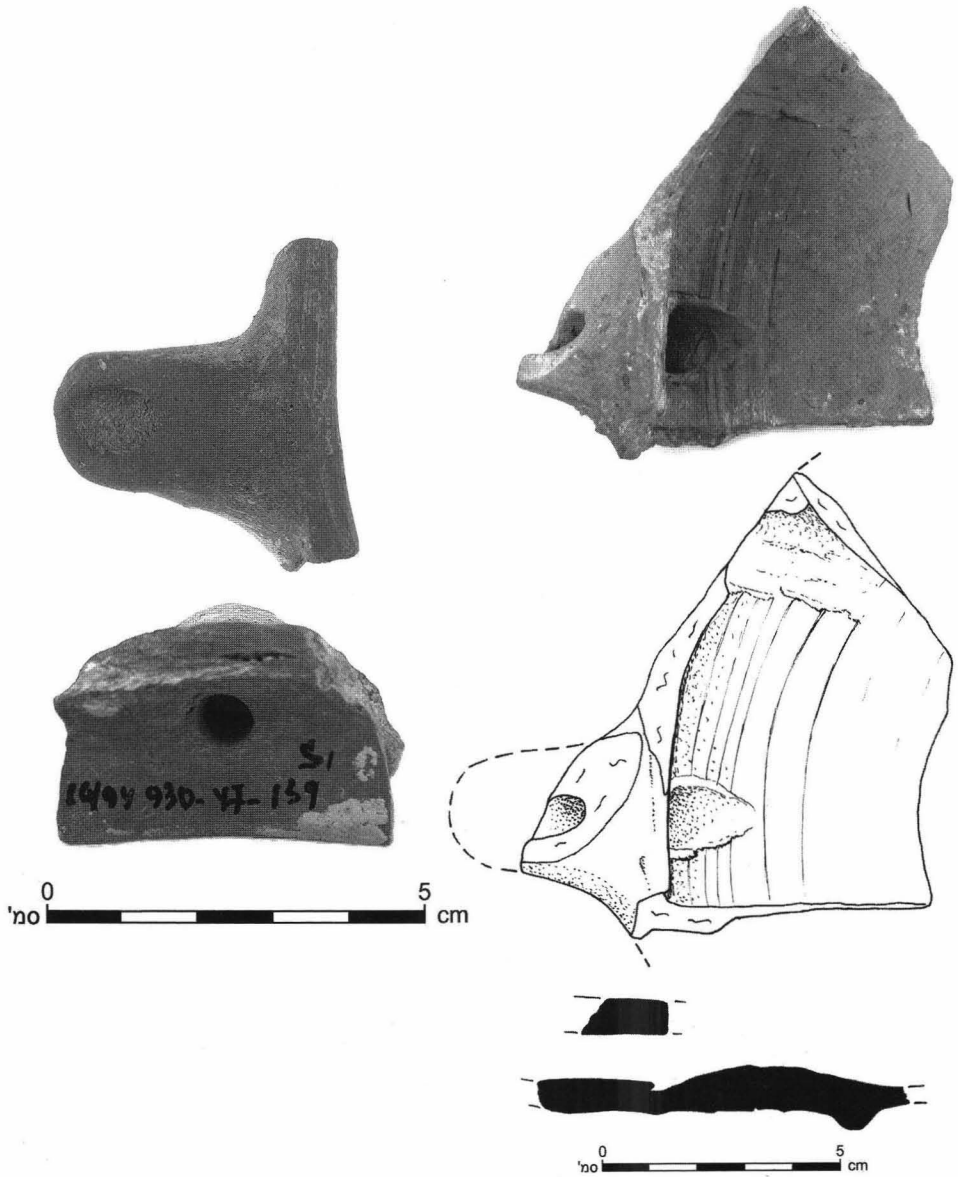


Fig. 14 Vessels with spouts on rim

bowl with a closed base. The ring base of only one of these bowls has survived: this specific bowl was exceptionally shallow and the lamp spouts emerged from its centre. The spouts were thick in the centre, slightly flattened above, and rounded at the end. They were attached to the bowl, or to another vessel such as a krater with its interior exposed. Thus, in contrast to the spouts emerging from the ring, the perforations are hidden to give an aesthetic appearance. The lamps are 3 to 4 cm long, and 2 to 3 cm high; the width of the spout varies greatly from 3 to 4.2 cm at the base (where it is attached to the bowl), to about 2 cm at the end. One of the bowls was 10 cm in diameter. The bowls were very shallow, one of them being 3 cm high.

Closed Lamps Attached to Vessel (Type 4.2)

Two single closed lamps were also unearthed in Maresha with their bases attached by remains of clay to a vessel which did not survive (Figure 15). Lamps similar to these albeit without remains of clay on their bases have been discovered in large quantities in excavations in the Judean Shephelah, and especially in Maresha. This is why they were also defined in the authors' research as Shephelah Lamps (Maresha) (Ambar-Armon 2007: 92–8). Their main characteristic is a high ridge around a wide filling hole. In addition, these lamps have a disk-shaped base which has been string-cut. In the lamps that were attached to kernos vessels it is not possible to see this base, but only the attachment marks to the clay remains which were attached to the vessel upon which they were placed. These marks indicate that the lamps were mounted on the rim of the vessel and were not individual items.

Elongated Vessel with Wide Centre (Type 4.3)

A sherd of a partially preserved vessel was also discovered in Maresha. This is a small closed vessel, widening towards the top. In its centre is a hollow space, which possibly served as a spout. The vessel, whose base was not preserved, was decorated on its outer surface by dark brush strokes. It is not possible to come to any conclusions regarding its origin, but it may have been used as a lamp (Figure 16).

DATING

The kernos vessels to which the pinched lamps were attached (Type 1) excavated at Maresha were probably in use towards the end of the Persian period, and throughout the Hellenistic period until the end of the 2nd century BCE.[4] This time frame is based upon their being unearthed in dated assemblages and morphological characteristics.

The intermediate type lamps (Type 1.1) are the earliest. Some were found in Subterranean Complex 75 in a stratum dated to the Persian period (Stern 2005: 136), and are made of coarse material similar to other artefacts from this period. Material

Fig. 15 Closed lamp on vessel

finds that can be dated to the early Hellenistic period were discovered together with some lamps of this type. Most of the pinched lamps, more refined in shape (Types 1.2 and 1.3), were in use during the mid-Hellenistic period. Their dimensions became smaller and their clay sides became thinner. These are also the prominent characteristics of all the lamps from the Hellenistic period. In addition, many of these lamps, in contrast to their predecessors, have been found with coins and amphora handle stamps from the 2nd century BCE. Three lamps uncovered in Area 940, together with coins from all stages of settlement of the site, are evidence of their extended use. It appears that these lamps were in use until the end of the 2nd century BCE.

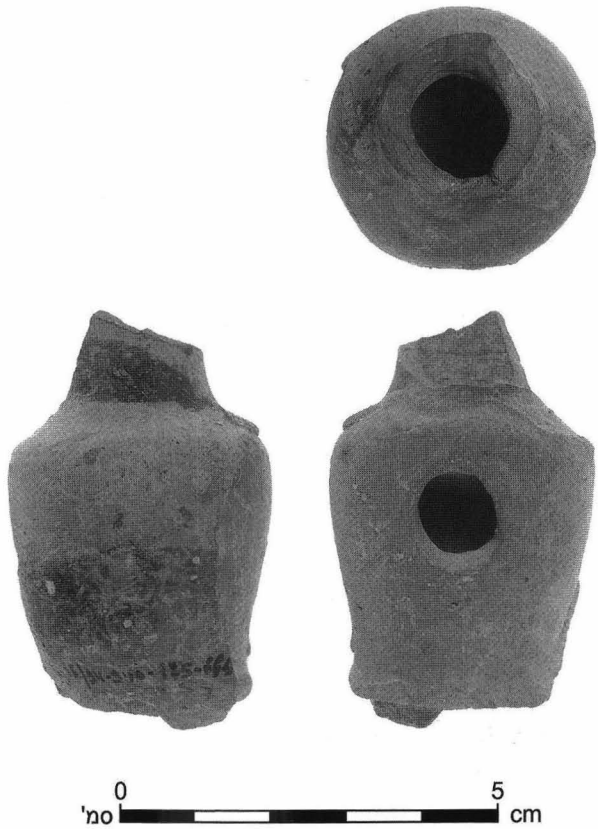


Fig. 16 Long vessel, wider at centre

A few parallel examples of pinched lamps attached to kernos vessels have been discovered outside Maresha, mostly from private collections, and of unknown provenance. Dating the lamps of this type to the Persian period is supported by a vessel with similar characteristics found in Stratum IV of the Ein Gedi excavations (Stern 2007: 212). A lamp similar to this type, also with a base attached to a vessel, was found recently in excavations in Area V of Tell Halif in a stratum dated to the late Iron Age (Borowski 2008). This is not surprising given the finds of smaller open lamps at other southern sites dated to the late Iron Age (Amiran 1969: pl. 100: 18–20). At least until now it seems that these vessels which had this type of lamp attached to them in Maresha have mostly been dated to the late Persian and Hellenistic periods, up to the 2nd century BCE but the possibility of their being in use at this site at an earlier date should not be rejected.

The pinched lamps with two spouts (Type 1.4) were mainly discovered in North Africa, where they were dated to the 7th to 5th centuries BCE (Deneauve 1969: 25–39, pl. 22–3). Similar lamps from the collection of Tübingen University were

dated to the fourth and third centuries BCE (Cahn-Klaiber 1977: 297, pl. 1: 1). However, Rosenthal and Sivan dated lamps of this type to the first half of the 2nd century BCE (Rosenthal and Sivan 1978: 67). It seems that the wide range of dating is due to the fact that they were in use over a very long period. The pinched lamps with three spouts (Type 1.5) were dated to the mid-2nd century BCE based on their morphological characteristics (Rosenthal and Sivan 1978: 67, fig. 276–7). None of these lamps were attached to a stand, which characterises this type of lamp in Maresha.

The small bowl-shaped lamps (Type 2) were also in use over a long period. Thus, one lamp was uncovered beside an almost complete amphora from Brindisi dated to the last third of the 3rd century BCE. Another lamp was found together with coins of a wide range of dates, including coins from the last third of the 2nd century BCE. The earlier vessels of this type from the Eleusinion in Athens were dated mainly to the 4th century BCE, even though some continued in use later (Miles 1998: 98). These vessels continued to be featured on coins of the 1st century BCE (Pollitt 1979: 232–3). Xanthoudides dated a vessel of this type from Crete to the late Hellenistic or Roman period (Xanthoudides 1905–6: 19).

Hollow rings were usually dated to earlier periods. They represent the early Iron Age type, discussed above, which had animals, etc., rather than lamps, attached to it. However, hollow ring lamps (Type 3) were attributed to types which had already been found in earlier periods: this type of lamp was discovered in Tell en-Nasbeh, and dated to the early seventh century BCE at the earliest (Wampler 1947: pl. 71: no. 1646). Similar examples of rings being used as lamps from Athens and Cyprus were dated to the mid-3rd century BCE (Vessberg and Westholm 1956: 127). Howland published two vessels of this type from Athens, the first dated to the end of the 2nd century BCE (Howland 1958: 129, pl. 44: no. 526), while the second dated from the end of 2nd century to the 1st century BCE (Howland 1958: 129, pl. 44: no. 527).

This type of unattached closed lamp discovered at Maresha has been dated mainly to the mid-Hellenistic period, and therefore the dating of identical closed lamps attached to vessels should be similarly dated. Closed lamps attached to vessels have been found in a relatively small number of sites. For example, such a vessel was found in Gortyn, dated to the fifth century BCE (Rutkowski 1983: 321). Another vessel was found in Corinth, and dated to the sixth century BCE (Broneer 1930: 34–5, fig. 16: 133, no. 42). A vessel with closed lamps attached was found in the Athenian Agora, and dated as Hellenistic (Howland 1958: 129, pl. 44, no. 528).

The wide elongated vessel (Type 4.3) was unearthed beside vessels from before the Hellenistic period and vessels typical of the Hellenistic period, among them an amphora stamp dated 233 to 220 BCE, and one dated to 192 to 180 BCE. These stamps reinforce the dating to the Hellenistic period. However, a similar vessel that was found in Gezer dated earlier, conflicts with the proposed dating to this period (Macalister 1912: pl. 152: 2).

To summarise, the presence of the pinched lamps and small bowl-shaped lamps in both earlier and later assemblages dates their use from the late Persian period

until the end of habitation of the site. There appears to be a general overlap and similarity between the dating proposed by excavators and researchers in various excavations in the Hellenistic World, and the dating proposed for the vessels and lamps of other types in Maresha.

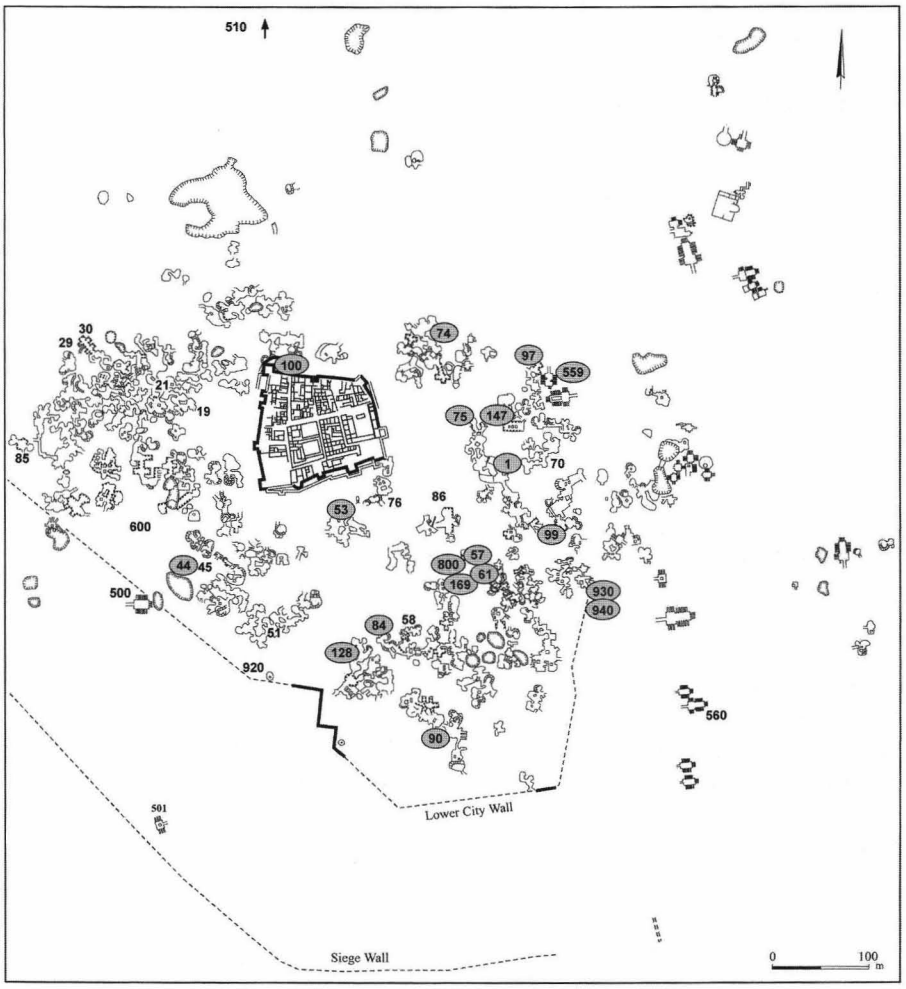
LOCATION OF FINDS AND THEIR DISTRIBUTION

Most (93 percent) of the lamps and the kernos vessel sherds were discovered in the subterranean complexes: thus it can be assumed that they were used for lighting these dark spaces. However, it is important to emphasise that they were found in all the assemblages studied in Maresha, including buildings in the Lower City, and probably also in the Upper City and its slopes.[5] One pinched lamp, whose base is evidence of it belonging to the group of lamps attached to vessels, was excavated in burial cave no. 560.[6]

The map showing the distribution of the kernos vessels indicates that they were uncovered in most areas of the Lower City of Maresha (see Map 1). The numbers outlined on this map are excavation areas in which kernos vessels were discovered: the other numbers are excavated areas in which they were not found. Kernos vessels were found on the northern side of the Upper City, in Area 100 and in Subterranean Complex (S.C.) 74; on the eastern side, in S.C. 1, 75, 97, 99, and 147 and Burial Cave 559; on the south-eastern side in S.C. and Area 61, in S.C. 57 and 169, and in Areas 800, 930 and 940; on the southern side in S.C. 84, 90, 128 and in S.C. and Area 53; and on the south-western side in S.C. 44. The kernos vessels were not discovered in all the excavation areas in Maresha, and especially not on the western side. However, the areas where they were not found have not been extensively excavated, which is probably why finds were few and random.

There were areas in which they were found in higher concentrations. Graph 4 shows the ratio of lamps attached to kernos vessels compared to lamps made by other techniques in different excavation areas. An exceptionally large number (148), and high proportion (42 percent), of kernos vessel sherds and attached lamps, compared to 204 lamps of other types, was unearthed in S.C. 169. In S.C. 57 there is also an unusually high ratio of 9 (39 percent) lamps attached to kernos vessels; but here the overall number of lamps is too low (only 23 lamps) to decide whether this is significant Graph 5 (A and B). This finding is surprising in comparison with other excavation areas, as shown in Graph 4. In each of the areas where extensive excavations were carried out: in S.C. and Areas 1, 61, 75, 84, 128 and 147, about 30 of these special lamps were found, in contrast to the 148 items discovered in S.C. 169. S.C. 169 is also surprising because of the discovery of a large number of Aramaic ostraca in it. In S.C. 89 the picture is reversed: here no shards of kernos vessel lamps have so far been found but only molded lamps

Area 800, which is adjacent and to the west of S.C. 57 and 169, is thought to be the area of a temple (Kloner 2001: 111–12). One of the finds in this area is a cube-shaped altar of exceptionally large dimensions. Although the finds in this area have

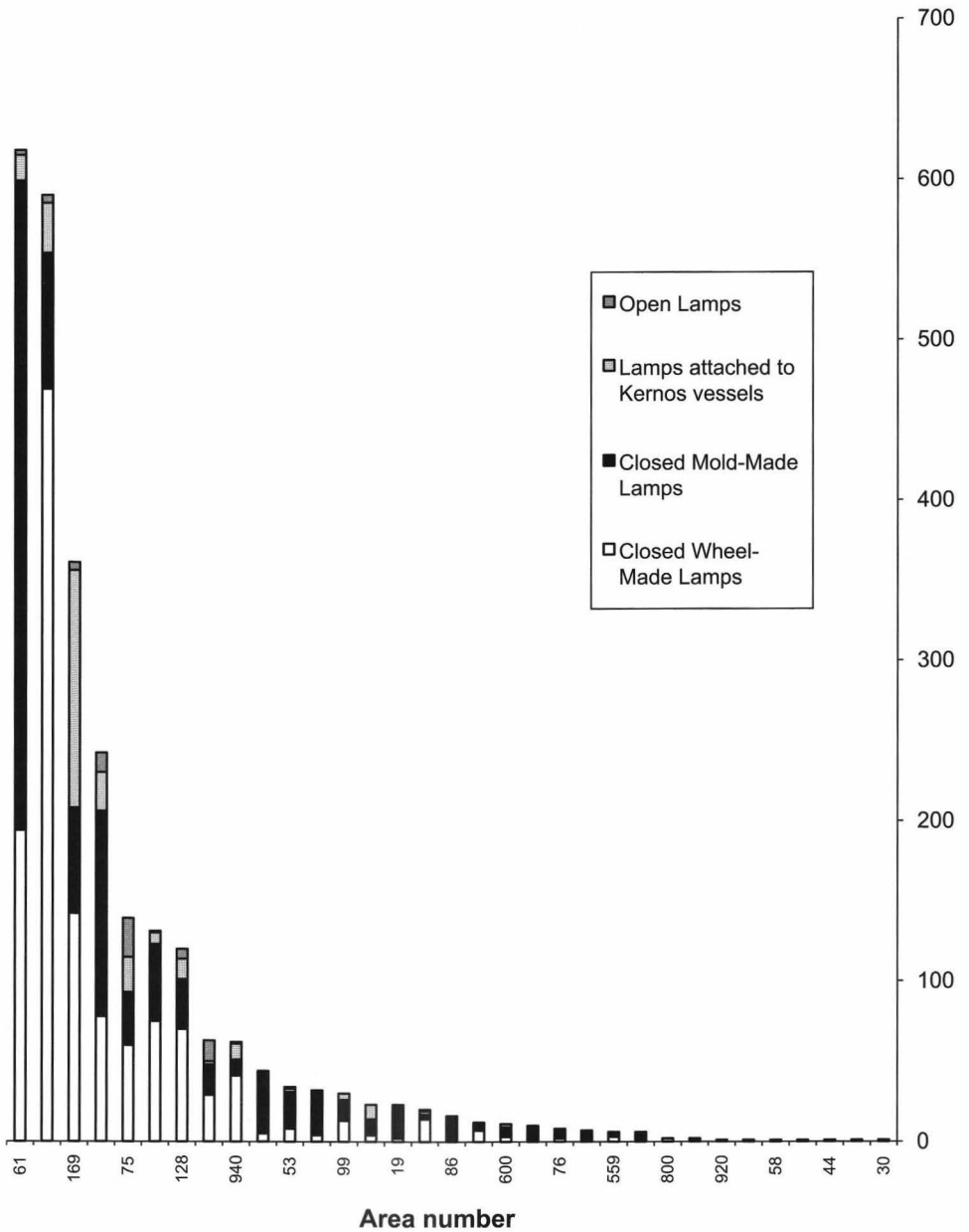


Map 1 Distribution of kernos vessels and lamps attached to them at Maresha (Highlighted Area numbers indicate where kernos vessels and lamps attached to them were found)

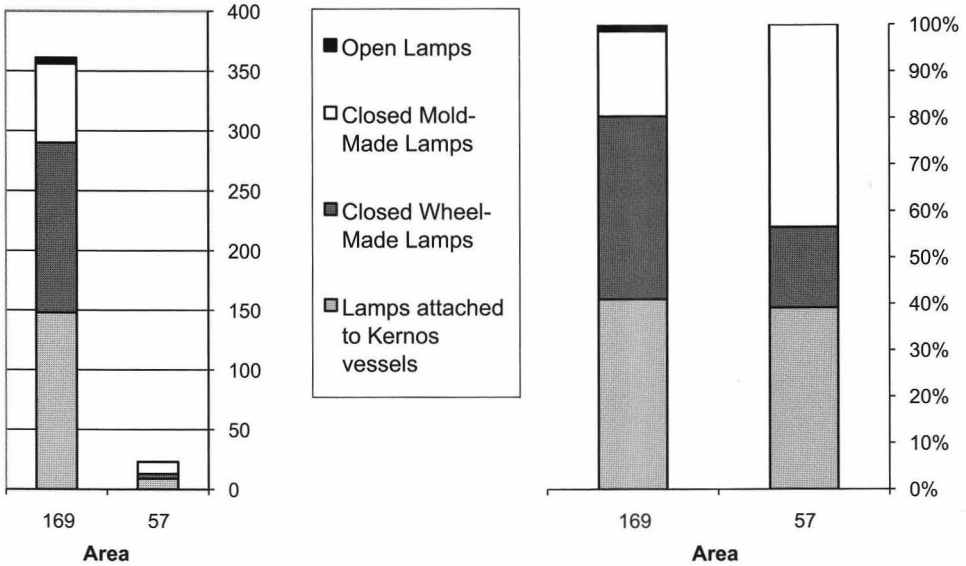
not been well preserved, shards of lamps attached to vessels have been observed. It is clear that about 58 percent of the kernos vessels were found on the south-western side of the Lower City and near Area 800 (see Map 1).

CLAY

The clay from which these vessels were made has characteristics similar to those of other vessels and lamps in Maresha, especially the open lamps and the wheel-made closed lamps from the Hellenistic period. The colour of the lamps is mainly



Graph 4 Numbers of lamps attached to kernos vessels according to other type of lamp and excavation areas



Graph 5 Proportions of lamps attached to kernos vessels, compared with other lamps, in S.C 57 and 169

a shade of reddish-brown, but light yellow-beige and brown lamps are also common. Only rarely have greenish or gray lamps been found. The clay is coarse and rich in grits, which can sometimes be very large. In least 95 percent of the lamps the grits are white, while the remainder contained grits of other colours, including black. The lamps and the vessels to which they were attached are usually not slipped, and their bases show wheel-marks and indications that they have been string-cut. Their side walls are sometimes thin and sometimes thick. Despite the carelessness in manufacture, clay levigation was reasonable.

In contrast to the majority of the lamps, the lamp illustrated in Figure 6 is made of light well-prepared clay, and has a high quality homogenous shiny black coating inside and out. It was probably imported, but because of its special shape and the lack of known parallels, its origin is so far uncertain.

Petrographic analyses of a number of lamps show that they are made of local clay found relatively close to Maresha.[7] Wasters found in S.C. 99 and 147 on the site are unambiguous evidence of their local production (Figure 17). It is important to note that lamp wasters were made of clay of the Moza Formation which is not local to Maresha. This waster is evidence that the clay had been brought to Maresha for the purpose of local production. The quantity of finds in Maresha, in addition to some of the types, strengthens the supposition that these vessels were produced locally.

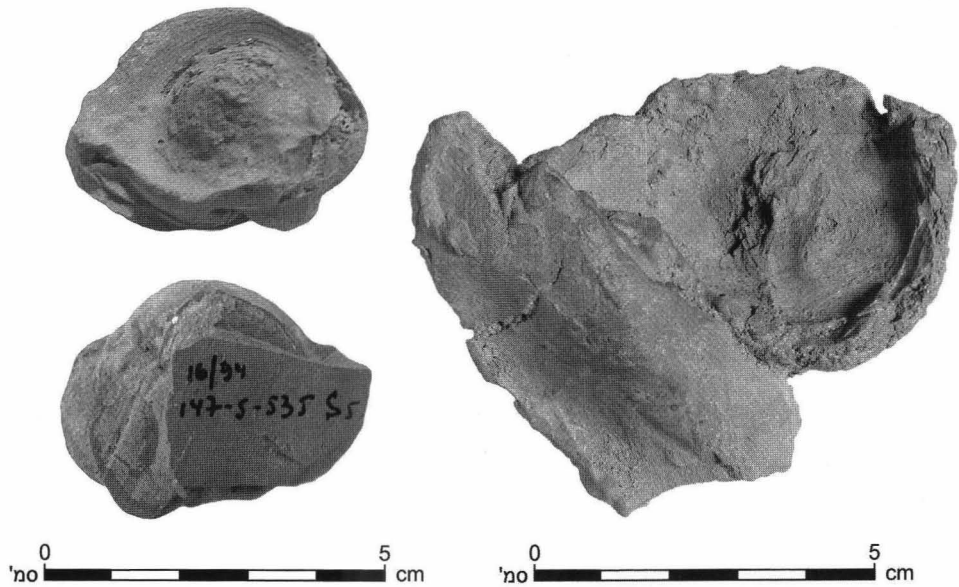


Fig. 17 Evidence of local manufacture – open lamp kiln wasters

SOURCES OF INSPIRATION AND INFLUENCE

It seems that the kernos vessels were the result of a number of sources of inspiration and influence, and that the combination of these is what led to the production of the most commonly occurring type in Maresha – the kernos vessel with pinched lamps. It appears that their uniqueness was connected to the adoption of vessels and lamps which were actually common in the country in earlier periods. The first source of inspiration was the early kernos discussed above to which various elements were attached. The second source was the open lamp, also known in the Persian and Hellenistic periods. The vessel and lamps were combined into one vessel with unusual characteristics. This development was made possible thanks to the local population and their knowledge of the common lamps and their advantages, and especially due to the simplicity of their production. Thus, it is possible to see their use on the one hand as preserving tradition, and on the other as adopting and innovating ideas. It is also possible that the two and three-spouted type of pinched lamp was influenced by the Phoenician type, which spread to Phoenician centres overseas in the southern Levant and the western Mediterranean. Open lamps with multiple spouts were common in North Africa and Spain in the fifth to third centuries BCE (Deneauve 1969). However, while the common lamps had a regular base, the lamps from Maresha were mounted on a stand.

Kernos vessels to which small bowls were attached have been unearthed in large quantities in at least two sites in Greece: Eleusis (Mylonas 1961: 222) and the

Eleusinion in central Athens (Pollitt 1979). Various types of kernos vessels, some of which were local (Bailey 1975: 243, Q513), have also been discovered in Egypt, and some similar to the types found in Athens and Eleusis. It is possible that the vessels from Maresha were also influenced by the nearby Hellenistic centre in Alexandria. The connections between Maresha and Egypt have been discussed at length (for example see Venit 2002: 175–9; and Oren and Rappaport 1984: 150). Researchers have claimed to observe, among other things, the strong influence of the cemetery in Shatabi in Alexandria on the burial caves in Maresha. A study of the lamps in Maresha shows that the lamps from Egypt had a strong influence on the local lamps (Ambar-Armon 2007: 304–6), which is why it is not surprising that the kernos vessels with lamps could have been influenced by this region.

The mixture of different influences is typical to Maresha. This phenomenon is also discussed in further detail in different contexts, such as the discussion on the figurines from Maresha (Erlich and Kloner 2008) and stone altars (Peshin 2001). Review of the lamp finds, and especially of the lamps attached to vessels, seems to support the idea that a similar melting pot of ideas existed in Maresha.

VESSEL FUNCTION

The range of kernos vessels found in Maresha, the choice of producing them on site, and the absence of the main type found at the site at other sites, emphasises the question of their function. As mentioned, 93% of the vessels and the lamps were found in the subterranean complexes in Maresha. This concentration might suggest that their main function was to provide light in the large dark spaces. Strengthening this claim is the fact that a large part of the production on site was carried out in these complexes, in chambers which were also dark during the day. Nonetheless, the main objection to this thesis is that at least some of the vessels and lamps were originally located in areas above ground, which had collapsed, or were dumped in the subterranean complexes together with the rest of the finds discovered in them, and their origin is in the habitation strata, and not necessarily in the subterranean complexes. In addition, a large number of the lamps had not been used at all, as will be explained below, and of the others, most were in use only for a short period, and possibly only once. It appears that, despite the morphological differences between the different types of lamps which are manifested in the positions of the oil reservoir and the wick, there was a resemblance in their function and the method of use, at least in the vessels to which the pinched lamps and small bowl-shaped lamps were attached. The rest of the lamps indeed have different characteristics, but they were found in relatively small quantities.

It is suggested below that these lamps had a ritual function. This suggestion is based on: 1. studying the functions of kernoi during the Iron Age; 2. practical aspects based on examining the traces of soot and the liquid capacity of the lamps from Maresha; 3. studying the function of the vessels of similar characteristics at other

sites; and 4. comparing the characteristics of the clay and the quality of other lamps which were thought to have a ritual function.

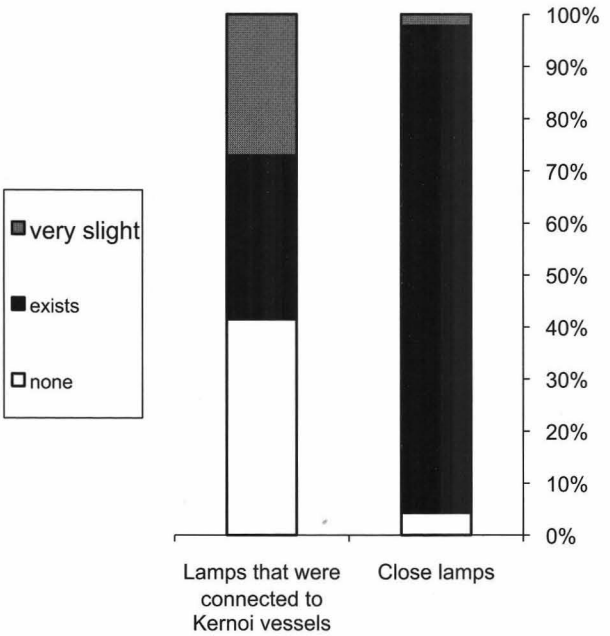
Function of the Kernos in the Iron Age

The first step is to examine the function of the kernos in the Iron Age. It is accepted that these vessels contained liquid which flowed around a ring and the attached elements to spouts. The rings could be filled with liquid, possibly wine, through the open elements. If the kernos was tilted, the liquid would come out of the main spout. However, in some cases, the space inside the ring was so narrow that it was difficult for the liquid to flow around it.

Hachlili, in her study of the kernos in Ashdod, stated that in spite of the fact that the function of the vessels is unknown, they were usually used for rituals and ceremonies. Some were used for home rituals, while others represented sacred offerings. The vessels themselves were used for libations, and the vessels found buried may indicate that they were offerings for the dead, or had a connection with death (Hachlili 1971: 132). Bignasca suggested that the kernoi were connected to mystic activities which were common in daily life, such as those associated with fertility and disease (Bignasca 2000: 250–8). Dever connects the kernoi to the custom of offering wine, oil, water and possibly milk (Dever 2001: 126). Ben Shlomo claims that study of the location in which the vessels were found indicates their connection to ritual sites and public buildings. In his opinion the zoomorphic pouring vessels were used for various libations together with the other kernoi. It is possible that these were connected to other liquids which had a religious, social or economic importance (such as wine, oil or milk). There is a possible connection to the sacrifice of the animal represented, when perhaps the sacrificed animal's blood was poured into the vessels (Ben Shlomo 1999: 144–5). Despite the variety of suggestions, there is an agreement that these vessels are connected to ritual activities, even if the exact nature of their use is not known.

Soot Marks and Lamp Capacity

In contrast to the Iron Age kernoi, the items under discussion are unique, as they were assembled from lamps: thus it is reasonable to assume that their function, even if it were ritual, was related to light, as in previous periods. A unique characteristic of the Maresha lamps is connected to the traces of soot on them. Graph 6 shows that of the pinched lamps, 95 (41 percent) had not been used at all for lighting. In addition, 62 (27 percent) showed very little use. Similar results were obtained from other lamps attached to kernos vessels. In spite of the fact that these lamps, which had multiple spouts and could give a bright light, could theoretically have been reused due to their effectiveness, in fact very few were, at least compared to the other lamps in Maresha. This conclusion is obvious, because only 76 (4 percent) of the closed lamps from Maresha had no soot marks, and only 39 (2 percent) of the closed lamps had slight or definite traces of soot (Ambar-Armon 2007: 238). Lamps



Graph 6 Soot-marks on lamps made by various methods

which had many soot marks indicate that they were used repeatedly, while the lamps with few soot marks may indicate a single use, and of course there could be situations in between.

Another characteristic is the size and capacity of the oil reservoir. All the lamps found adjacent to vessels have small containers which could have only provided a short burning time, compared with other lamps of the Hellenistic period (Ambar-Armon 2007: 271–3). The small bowl-shaped lamps could contain on average about 7.5 cm^3, and the pinched lamps slightly more, 11.5 cm^3, of oil on average. According to the authors' tests, this small capacity would not provide more than an hour's burning time.

If the large number of lamps on a stand were lit, even for a short time, they would have provided a strong light. However, the lack of burn marks on some of the lamps, and their small capacity, lead to the conclusion that they were not used for illumination, and they may have had another or parallel use. Comparing them with items from other sites and from various periods, it may be proposed that at times they were regarded as small containers in which various substances, such as oil, were placed as part of a ritual, and they were not used as lamps. Smith referred to this phenomenon of unused lamps for ritual purposes, noting, for example, that in the Athenian Agora a lamp was found with the inscription 'do not light', and that lamps made of expensive materials such as gold and silver were probably produced for display, and not for use (Smith 1964: 105, no. 6).

Function and Supposed Use of the Vessels at Other Sites

Lamps attached to vessels were found at other sites in the Hellenistic world. It is accepted that they were used in temple rituals and were designated accordingly (Howland 1958: 128–9). Researchers, among them Xanthoudides, attribute a special meaning connected to rituals to these vessels, considering that expensive offerings were placed in such vessels (Xanthoudides 1905–6: 10–23). Xanthoudides assumed that these vessels were used as described by Athenaios. These lamps have also been found in ritual contexts in other sites: for example, two lamps in the Temple of Athena in Corinth (Broneer 1930 : 34, fig. 16; 133, no. 42), in Naukratis in the Temple of Aphrodite (Bailey 1975: 96, Q152), and in Cnidos in the Temple of Demeter (Bailey 1988: 342, Q2742).

One example illustrating the suggested connection between the Maresha kernoi and ritual is the use of the vessels found in large quantities in Eleusis, near Athens (Mylonas 1961: 222), and in the Eleusinion in central Athens (Pollitt 1979), known as Plemochoe vessels (Miles 1998). The same types, with the same basic shape of a bowl on an elevated stand with vertical handles on each side, were found in both sites. The basic shape had a number of variants. One was a bowl with small bowls mounted on its rim resembling those mounted on stands (Type 2). Other variants include different shapes, among them bowls on which many circles of different sizes and in different places around the rim were arranged as a tower (Miles 1998: 96).

The vessels mentioned by Athenaios, with several small bowls attached to the body of the vessel, were connected, among others, to the mystery rites in Eleusis in Attica. This is the most widespread and popular of the secret rituals of the ancient world. Those let into the secret were promised a special place in the afterlife after their death. The ceremonies were kept secret, so that even today it is not known exactly what took place in them. It is believed that the participants purified themselves by immersion in water and then participated in large processions which left Athens for Eleusis accompanied by singing and ritual celebrations, carrying sacred articles. The story of Demeter and her daughter Persephone was presented as part of the two-day initiation festivities. Central to the ritual were agricultural issues. These rites were dedicated to Demeter, as she was considered the protector of crops and the fruits of the earth. In other sites, including some in the Black Sea region and Sicily, where totally different types of lamps with multiple spouts were discovered, the lamps were thought to have been used in rituals for Demeter and Persephone (Zavoikin and Zhuravlev 2005).

According to Xanthoudides, the priests who took part in this procession carried on their heads kernos vessels with a fire lit in their centre. Another point he mentioned, and which could be relevant to the vessels from Maresha, is that these vessels were associated with the sacrifice of pigeons,[8] but he does not expand on this (Xanthoudides 1905–6: 14).[9] Mylonas (1961: 219–23) and Pollitt (1979: 206) also believed that the vessels were carried on the heads of the worshippers in the procession. Evidence of this has been found in a vessel decorated with figures carrying vessels on their heads (Figure 18).

Fig. 18 Decorated vessel with figures with kernoi on their heads (Cintas 1950: pl. 46)

There is also evidence from earlier times indicating the placing of vessels on heads. For example, in Iron Age B, human and animal-shaped figurines with lamps or lamps with multiple spouts placed on their heads were in use. This type of figurine has been found in Cyprus, Rhodes, Israel, and Jordan (Bailey 1975: Q363, Q483, Q485). One was found in Beit Shemesh, near Maresha (Grant 1931: pl. 50). In any case, the figurines to which the lamps were attached indicate that they may have been used for ritual purposes. These figurines suggest a custom of this period, and it may be inferred that it continued in later periods. It may also be suggested that kernos vessels were placed on the heads of people (priests) as part of a ritual, and as stated, this was the custom in the Eleusinian Rites in Greece in the Classical period. However, from a practical aspect, some of the vessels from Maresha were large and heavy, and it is more likely that they were placed on flat surfaces.

Xanthoudides believed that finding the vessels in places other than the Athenian Agora and Eleusis shows that the ritual in which these vessels were used also took place elsewhere, and perhaps also in respect to other gods (Xanthoudides 1905–6: 19). Regarding Crete, he believed that it may have been associated with the goddess of agriculture, Diktynna or Britomartis. Kernos vessels similar to the types found in Eleusis and Athens have also been found in ancient Egypt, for example in the Shatabi cemetery in Alexandria. Xanthoudides stated further that it seems that these vessels came to Alexandria as a result of the influence of Hellenistic rituals in Egypt. Pollitt states that Ptolemy I established a village called Eleusis in eastern Egypt, in which the Demeter festival took place (Pollitt 1979: 229). Ptolemy II also led the rites of Demeter in Alexandria, and adopted certain attributes from the mystery rites (Bevan 1968: 96).

Lamp Quality

A specific hint regarding the function of the lamps may be suggested by their quality. Their simple manufacturing process is expressed as lack of accuracy, lack of symmetry and minimal attention to design. It was indeed customary to expect ritual

vessels to be of especially high quality, but this was not a requirement. Three groups of vessels found in large quantities are attributed by researchers to ritual activities; even though they are not of high quality. The first group, called 'Palaimonion Lamps' by researchers, which also have unique characteristics, are found in considerable quantities at the Temple of Poseidon at Isthmia, near Corinth. These vessels were wheel-made, and included a large bowl which contained the oil, and a central tube in which were slots which allowed the oil to reach the wick (Broneer 1977: 35–52). These vessels were also found in large quantities in the city of Samaria. Crowfoot stated that most of the lamps from Samaria were found in two areas connected to the ritual of Kore (Demeter's daughter, Persephone of the Classical period), and that they were dated to the 1st to third centuries BCE (Crowfoot 1957: 373–4, no. 11, fig. 88: 11). The vessels from Isthmia were found in excavations of the temple, which is why they were defined as ritual vessels. These vessels and the vessels from Samaria are relevant to the discussion, as they were defined as ritual vessels, even though they are not of high quality. Furthermore, wheel markings are visible, and most of the bases are string-cut. The second example is of the Plemochoai, which were used in the ritual at Eleusis. Miles concluded from their shape that they were used once, and for a specific purpose (Miles 1998: 97). These vessels were generally made of the same material as cooking pots and not from the high quality Attic clay which was common at that time (it is important to note that this was when the production of Red and Black Figure vessels was flourishing in Greece). Nonetheless, there are traces of white slip on some of the shards, and only rarely are there other decorations (Miles 1998: 96–7). In contrast to most of the vessels on this site, the vessels with a small bowl attached to them were made of high quality material with a homogenous black glaze. The third group is of lamps found in the temple in Kimmerian Bosphorus, in which according to suggestions of researchers, the ritual of Eleusis was performed. In this temple a large number of uniquely shaped lamps with multiple spouts were found. They are also made of coarse roughly purified clay (Zavoikin and Zhuravlev 2005: 309–10).

SUMMARY

Many different factors discussed in this article lead to the conclusion that the kernos vessels with lamps attached were used for ritual ceremonies by the local population. The underlying reasons for this conclusion are: 1. multiple spouts, 2. their similarity to Iron Age vessels which are usually considered ritual-related, 3. the absence of soot-marks in a high proportion of the lamps, 4. the small capacity of the oil chambers (an hour's burning time), 5. the resemblance to vessels with similar characteristics from other sites, and 6. the existence of figurines carrying lamps on their heads from earlier periods.

The fact that only one lamp was found in the burial assemblage indicates that the function of the kernos vessels was not connected to death rituals. However, the location of these lamps in various assemblages indicates that this might have been

connected to the production, and maybe even to an 'industrial ritual' fostering industrial prosperity. It is possible that in this context a 'ritual industry' was created, in which ritual objects, such as lamps attached to vessels, figurines, altars and the other artefacts found on site, were produced.

The kernos vessels on which the lamps were mounted are among the most singular artefacts produced in Maresha. It seems that the concept of these vessels was imported from abroad and adapted to the local needs and rituals performed at this site. The daring design, and the range and alternatives which are not known from other sites, including various types of lamps, should not be surprising, as they appear in other types of finds in Maresha. There were workshops on site, as shown by production wasters, whose existence depended on the specific needs of the population, thanks to the range of options which the potters could offer.

More than half of the lamps belonging to kernoi were found near the area suggested as a ritual site (Area 800). However, the locations of this type of lamp in most of the areas, including dwellings and the subterranean complexes, show that ritual was a very important part of the lives of the city's inhabitants. This situation is familiar, as many civil and private activities of residents of Hellenistic cities had religious aspects. Industry in Maresha was of the utmost importance. Both the columbaria and the olive presses provided much produce to a wide area, and were probably among the factors which enabled Maresha to flourish.

Some of the figurines and altars which were found in Maresha have been connected by researchers to mystic rites. Thus, Erlich suggested that the protomes which symbolise Demeter and Persephone, as well as Dionysus and his attendants, which were found on site, could be connected to this ritual (Erlich and Kloner 2008). Peshin also stated that an altar on which the name 'Demeter' was inscribed, and also a seal decorated with the pattern of an amphora and ears of grain could be connected to this ritual (Peshin 2001: 124). The finds discussed at length in this article strengthen the linkage with this ritual in the Levant, far from Greece. However, the character of the lamps, their obvious simplicity, their resemblance to lamps which were common in the region in the Persian period, and their resemblance to other lamps in use in this period in Judea, as well as the Aramaic inscriptions found adjacent to the largest concentration of these vessels in Maresha – all these support the suggestion of a connection to the local Semitic population, probably Idumaeans.

The two possibilities proposed above in connection with the mystic rites, together with the ritual associated with the Semitic population, even though they might indicate a contradiction, could also be evidence of the syncretism of the inhabitants of the site. From this, the kernos vessels carrying lamps from the Persian and Hellenistic periods indicate a mingling, which is expressed in the integration of the local religion with the western religions. It seems that here is a rare opportunity to prove the existence of a Hellenistic process of syncretism, based upon archaeological findings. The local Idumaean population of Maresha preserved their original cultural and religious patterns in the Aramaic/Edomite language, the Qos ritual, and other aspects, while absorbing and adapting Greek influences.

Notes

1. Many kernoi uncovered in Israel are mentioned by Mazar, including the kernos from the temple in Strata X-XII in Tell Qasile (Mazar 1980: Table 16).
2. In lamps of this type, which are not attached to kernos vessels, the rims were sometimes purposely broken after purification. The soot residue left on the rim of the bowl indicates that the wick rested on it.
3. In these lamps, the wick floated upon a support of some kind in the centre of the bowl, and thus soot residue would not be expected on these lamps (Parisinou 2000). Herodotus (5th century BCE) described the lamps which he saw in Egypt as a simple bowl full of oil in which the wick floated (Herodotus, *Hist.* 2: 62). It is not possible to refer to the distribution of these lamps, as they do not have soot residue to indicate their use.
4. The new excavations in Maresha show that towards the end of the 2nd century BCE the city went through a crisis that is assumed to be the Hasmonean conquest (Kloner 2003: 6).
5. The concentration of kernos vessels and the lamps attached to them in the subterranean complexes is in line with the rest of the findings, such as figurines, ostraca, ceramic finds, and coins, which have been found in large quantities in the layers of fill.
6. Additional kernos vessels are known, discovered in burial caves, such as in the cemetery in Shatabi. In earlier periods kernoi were also used for burial offerings (Pollitt 1979: 229–330).
7. A detailed report of the analysis will be presented as part of the final report of the Maresha lamps by A. Cohen-Weinberger.
8. Pigeon-raising flourished in Maresha, as evidenced by the dozens of columbaria found there (Kloner 2001).
9. Other researchers stated that the area which they considered as the temple was where the Eleusian Rites took place (in the Kimmerian Bosphorus). In addition to the ritual lamps, figurines and other ritual artefacts, together with many bones, especially of birds, were discovered (Zavoikin and Zhuravlev 2005).

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The Search for Scrolls in the Judaean Desert Caves in the Years 1950–1960 – An Archaeological Memoir

SHIMON DAR

Few know about the early days of the 1950s when scrolls were being sought in the Judaean Desert caves. Given the publication of Hanan Eshel and Roi Porat's second volume revealing the results of this work, I would like to attempt to provide a history of research. In this short paper I will be presenting you with information about the years that preceded this important expedition: the background and the figures that led to the activities in the desert caves.

At the end of March 1960 a national expedition for the study of the Judaean Desert Caves, organised by Yosef Aviram of the Israel Exploration Society, began its work. The expedition divided into four teams, directed by Yohanan Aharoni, Nahman Avigad, Pesach Bar Adon, and Yigael Yadin. The finds that were made by this expedition, from the Chalcolithic period to the time of Bar Kokhba Revolt, changed the face of Israeli archaeology. Today there is already a third generation of Israeli scholars dealing with the study of the Judaean desert caves and their vicinity.

After the 1948 War of Independence the border between Israel and Jordan, in the area of the Judaean Desert, was a virtual border – a green line on the map of 1:100,000, which was not respected by either side. Roads for vehicles still did not exist, and the area of the Judaean Desert wadis (*naḥalim*) was open to trackers and to brave visitors, spending many days walking, with all their provisions on their backs. It was only in the years 1954–5 that a number of roads were established from the Beer Sheba valley and in the direction of Naḥal Ḥever. The Bedouin on the Jordanian side during those years ignored the new national border. When, at the beginning of the Fifties, archaeological finds began to be found in the caves of the desert and along the coast of the Dead Sea, the Bedouin were able to occupy themselves without any disturbance in the wadis of the area of Ein Gedi, and Naḥal Ḥever and Naḥal Tseelim. Anybody who had the courage to approach the unmarked border would win a round of fire from British Enfield rifles that were in the hands of the Bedouin. At this time, word reached the young State of Israel (whether through the Intelligence of the Southern Command, or through civilians from abroad) regarding fragments of scrolls which were being offered for sale in Bethlehem and in Jerusalem for those who could afford it.

Fig. 1. 'Pool Cave' in Mizpeh Ein Gedi (Benno Rotenberg).

In 1952 a young officer by the name of Uri Shoshani (nicknamed 'Juke') approached Yohanan Aharoni, who was working at that time in the Israeli governmental Department of Antiquities (under the direction of Shmuel Yeivin). He showed Yohanan a small fragment of scroll and claimed that he himself had found it in caves in the area of Ein Gedi in the Judaean Desert. On the basis of this small scroll fragment, Juke was able to receive from the Israeli Defence Forces (IDF), a fully equipped command car, with petrol and food, fire arms, walkie-talkies, and permission to spend time wandering around the Judaean desert in search of scrolls. As the time progressed, it appeared that this brave man who liked to explore, gathered together a bunch of comrades (Fig. 3), among them a guy from Kibbutz Ma'abarot named Dani Yarkoni, and together they journeyed around the length and

Fig. 2. The leaders of the National Expedition 1960: (from left to right) Yadin, Aharoni, Aviram, Bar Adon. Missing: Avigad (Aharoni's family archive).

Fig. 3. The Uri Shoshani team in the Ein Gedi vicinity 1952 (Dani Yarkoni).

breadth of Israel for extended periods of time, but no scrolls were found. One of the brave fellow explorers who did indeed explore the Judaean desert at that time was Josef Reifenberg, nicknamed 'Jasie'. Later, Jasie joined the Judaean Desert Expedition and became one of their enthusiastic members.

Yohanan Aharoni brought Shmarya Guttman in to help him (Fig. 4). It was he who had been able to add the area of Ein Gedi to the new State of Israel during the course of the War of Independence. Guttman had connections among the senior commanders in the IDF, as well as connections on the Jordanian side of the Judaean Desert. The following now became clear: the Bedouin in the Judaean desert were indeed excavating in caves in the area between Ein Gedi and Naḥal Tseelim, and had found scrolls, which were subsequently taken out of the country. According to the information that the State of Israel had received, the scrolls that had been

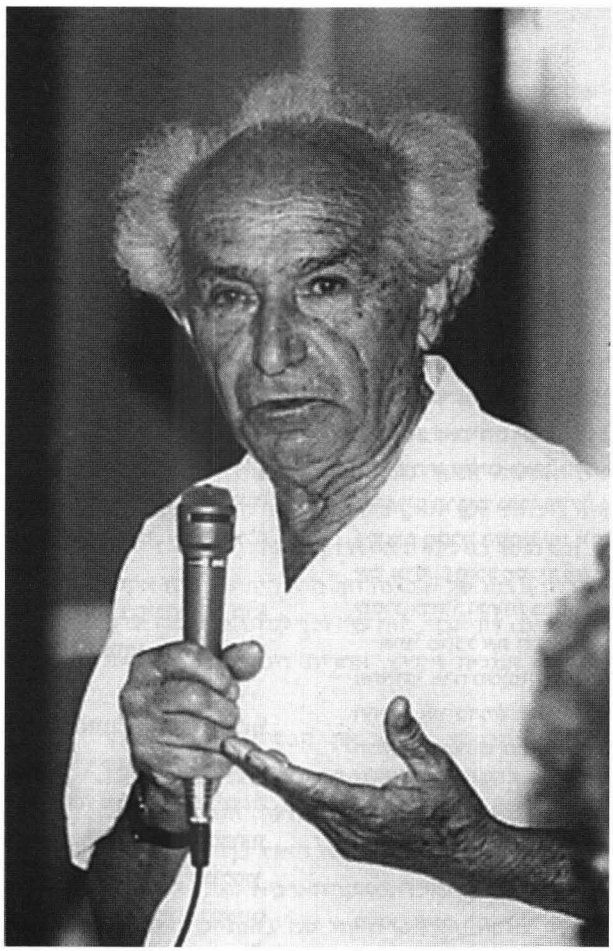

Fig. 4. Shmarya Gutman (Kibbutz Naan archive).

clandestinely exported included fragments of a number of books of the Bible, a pair of *tefillin*, Nabataean papyri and documents written in Aramaic, Hebrew and Greek, among them letters attributed to Bar Kokhba.

In the autumn of 1953 Yohanan Aharoni organised a small expedition that began investigations searching for caves in the area between Ein Gedi and Naḥal Ḥever. In Naḥal Ḥever, or in Arabic Wadi Habrah (Fig. 5), the expedition found openings to eight caves and the remains of two Roman siege camps on both sides of the wadi. At that time in Israel there were three organised institutions capable of setting up a mission towards exploring in the desert, namely the Comrades of the Labour Settlements (i.e. members of kibbutzim and moshavim), the IDF, and the Israel Exploration Society. Hence, between the years of 1953 and 1960 all expeditions that worked in the Judaean desert came to rely on these institutions, since they were

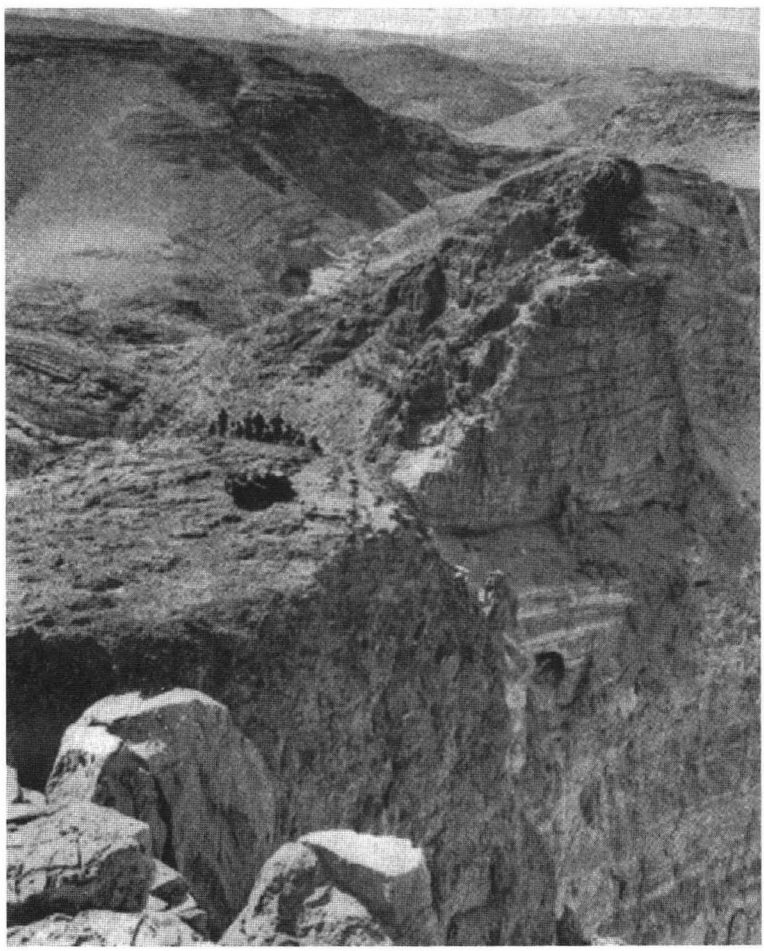

Fig. 5. Naḥal Hever (Wadi Habra) 1953 (Micha Bar-Am).

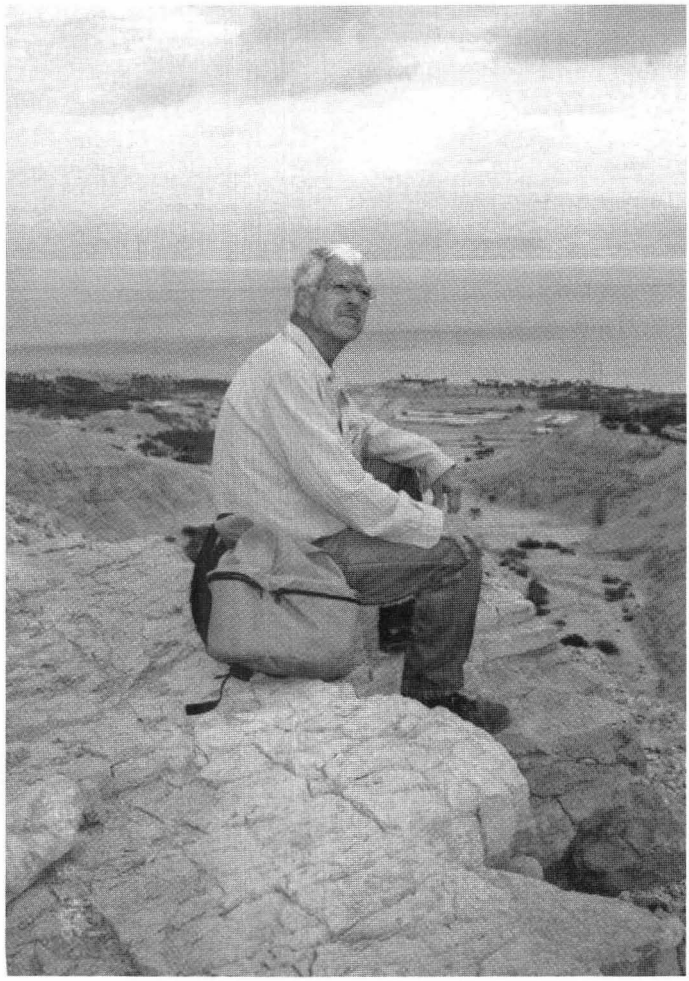

Fig. 6. Zeev Meshel (Zeev Meshel).

able to come up with enthusiastic volunteers, and to provide logistical help such as four-wheel-drive vehicles in the form of command cars and military jeeps, communications, food, and military security in the dangerous area of the Arava along the border with Jordan.

The young Kibbutz Ein Gedi opened up its doors and hosted these expeditions. Indeed, Yohanan himself had a kibbutz background in Kibbutz Alonim, and he immediately contacted the 'Yedi'at Ha-Aretz' ('knowledge of the country') units within the kibbutz movement, which were organised by Yehuda Roth, Mike Livne and Azriel Zigelman, and from them he asked to organise suitable volunteers for the expedition teams. Indeed, a score of volunteers joined up from the kibbutzim, as well as a number of parachutists from the IDF, and they set out towards Ein Gedi,

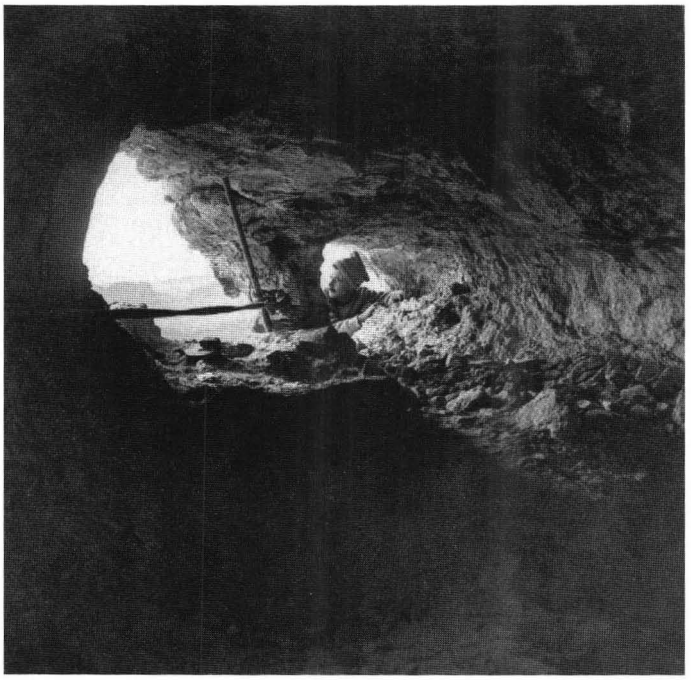

Fig. 7. Mike Livne 1960 (Mike Livne).

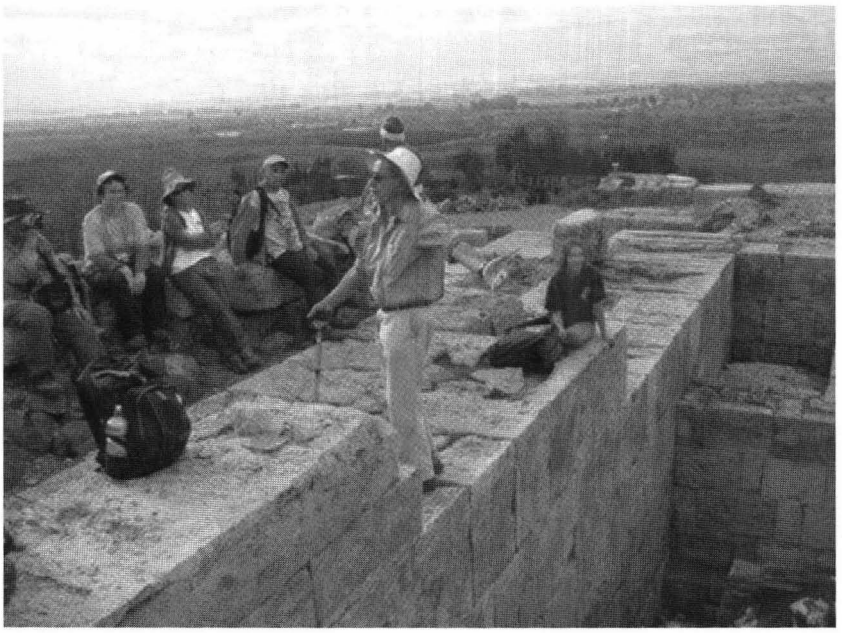

Fig. 8. Mike Livne 2009 (Mike Livne).

which served as the logistical base of the expedition, under the organizational wing of Shimon Nachmani of the Department of Antiquities.

The road through the hills of Jerusalem to Ein Gedi from the direction the Arava and Sedom took fourteen hours. The area chosen for the explorations was the deep Naḥal Ḥever, where observations had pointed out the existence of cave openings, that were difficult to access on foot. The expedition stayed in the area for 20 days during the months November and December 1953. The equipment and provisions from Ein Gedi to Naḥal Ḥever had to be brought on IDF beasts of burden, up the Tse'elim Ascent north of Masada. The movement of these provisions took six to eight hours in both directions, and so the necessary equipment only reached the expedition after three to four days.

The first caves to be investigated in Naḥal Ḥever proved that the Bedouin had got there first, before Aharoni, but they did leave behind them ceramic vessels, reed mats, and human bones. The main problem that the expedition members had while digging in the caves were clouds of fine dust mixed with the droppings of bats and other animals, that refused to settle after every cut in the ground with a hoe or pickaxe, but remained suspended in the air for the entire duration of the excavation, and caused problems of breathing and eye infections. In those days, there were no face-masks, and also *kefiyot* (Arab head-scarves) could not help in the face of all the dust. An additional problem were the collapses of rock which made it clear to Yohanan Aharoni and the expedition members that the task ahead was more difficult than they had assumed. Among the volunteer soldiers and kibbutz members Meir Harzion stood out since Aharoni had defined him as the most talented climber. He was one who helped Aharoni reach the opening of the caves in Naḥal Ḥever.

Even then the rule was never to look down vertically into the wadi so that one would not go into a panic and become dizzy because of the deep depths and the steep scarps descending down many dozens of metres. A fear of heights was not in the dictionary of the volunteers, and those who were not physically capable with an ability to climb above the depths left the expedition. Aharoni called the team members the 'crazy youths'.

The expedition conducting the first survey to Naḥal Ḥever discovered two small Roman siege camps, the first to the north and the second to the south of the wadi. Shimon Nahmani and Yosef Shmaya prepared the first maps of the camp, and Aharoni correctly identified it as a siege camp above the openings of the caves. Already then it was theorised that there was a connection between the positions of the Roman camps to that of the refugees of the Bar Kokhba revolt, who fled to the caves in the wadis of the Judaean desert.

Some of the expedition teams set out to the Judaean desert in the autumn and winter months and people slept in tents. The cold and the strong winds created a real natural barrier and the pre-thermal sleeping bags did not supply sufficient protection from the low temperatures, with temperatures dropping to freezing point. A solution for this were campfires that burned throughout the night in the expedition camp, and around them whoever could not sleep because of the cold would gather. Also sudden rains added to the logistical problems.

The expedition needed equipment. What was missing were long rope-ladders, lighting apparatus, none of which were available in the stores of the new Department of Antiquities. However, the head of the Department, Shmuel Yeivin, made the utmost of efforts to facilitate Aharoni through humble means. The IDF was called upon to help and provide experts on climbing and the best of its equipment from its stores, including dynamite to prepare paths and to get rid of stone collapses.

One of the enthusiastic volunteers, Baruch Safrai of Kibbutz Sa'ar, with marine knowledge, prepared temporary ladders made of ropes and metal stakes, to allow access to the steep caves. Baruch continued to work with the Judaean desert expeditions for many following years and was in charge of the rope-ladders. There is no doubt that the greatest achievement of the second expedition in 1953, which was organised as a result of the first, was the discovery of the 'Cave of Horrors' and its excavation. This cave received its name because of the many dozens of skeletons found inside it, of the families of the Bar Kokhba rebels, who died in the cave. On the basis of the remnants of clothing and sandals, there were many children who died. A Hebrew inscription was found in the Cave of Horrors, drawn on the shoulder of a large storage jar dated to the time of Bar Kokhba. This was one of the first inscriptions from the time of Bar Kokhba that was found by Israelis.

Among the people who took active part in the survey and excavations of the Naḥal Ḥever caves, one should mention Benno Rothenberg (Fig. 9), a friend of Aharoni's, who was the official photographer of the expedition as well as Aharoni's personal assistant, and also Micha Bar-Am, who served as a researcher-excavator, photographer and a clarinet player during the evenings around the bonfire.

The story of Baruch Safrai (Fig. 10) of Kibbutz Sa'ar, a long-term member of the expedition to the desert who crawled by himself through one of the narrow fissures in the 'Cave of Letters' is worthwhile telling even today. In this fissure Safrai saw a complete skeleton wrapped in a white robe. A shout came out of Baruch's mouth. He called Aharoni, but when he arrived at the fissure and Safrai moved backwards to give him access, there was suddenly a collapse of rock and the robed skeleton disappeared from view. Two generations have passed since then but Baruch Safrai still remembers this event as if it happened yesterday. He does not stop trying to persuade researchers and institutions that the need to continue searching beneath these rock falls, because beneath them there will be the bodies of the Bar Kokhba fighters. In the recent years, partly as a result of Safrai's activities, a new expedition of discovery was made to the Cave of Letters under the direction of Robert Freund and Rami Arav (see Freund 2004).

Aharoni was certain that the besieged people of the Cave of Letters never surrendered to the Romans, dying of hunger and thirst, or committing suicide like the last defenders of Masada.

The finds in Naḥal Ḥever brought the Bar Kokhba revolt to the attention of researchers and the people of Israel, and from that point onwards there has been research into the Second Revolt until today: henceforth the Lag Ba-omer holiday bonfires have become a subject of historical significance for the people of Israel.

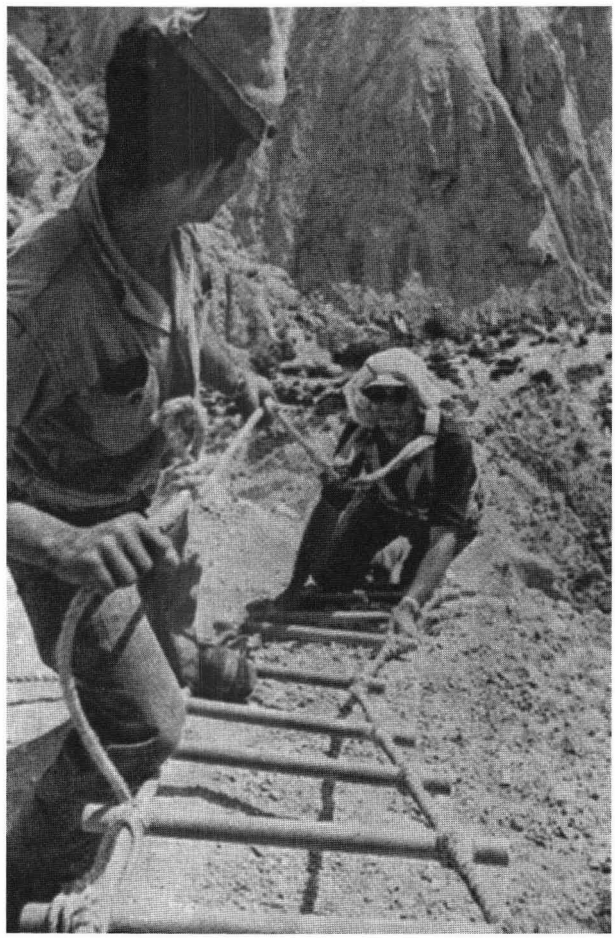

Fig. 9. Benno Rothenberg 1955 (Micha Bar-Am).

During the years 1955 to 1956 trial excavations were undertaken at Masada in the precipice palace of Herod, and at the end of the excavation a small expedition under Yohanan Aharoni turned towards the area of Ein Gedi where, according to rumours in its vicinity, there were hiding caves. In 1956, I joined these searches (Fig. 12). This time we searched in the ascent of Naḥal David in the area of the Mizpeh Ein Gedi (place of observation) known in Arabic as 'Najar'. Benno Rothenberg joined the expedition as a photographer as well as a surveyor. In that week the remains of a fortress and various structures in Mizpeh Ein Gedi were discovered, surveyed and measured by Yirahmiel Kolodni. Micha Livne (Mike) marked about 20 cave openings in the Naḥal Arugot and in Naḥal Ein Gedi.

Cave number 27 was chosen for inspection and it was situated north of the dry waterfall of Naḥal David. It was eventually nicknamed the 'Pool Cave', because of

Fig. 10. Baruch Safrai (drinking water) leading the team to the 'Pool Cave' above Ein Gedi 1956 (Benno Rotenberg).

the water system that was built into it by the rebels. In recent years Roni Reich has suggested viewing this water system as a purification pool (*miqveh*).

The ascent from Ein Gedi to the cave was long and hard, but the entrance into the interior was fairly easy. The opening of the cave was hidden from the direction of Ein Gedi and by the scarps surrounding it, but even because of this, those rebels in it did not survive the Roman siege. In the cave were found many remnants of the besieged, fragments of pottery vessels, reed mats and items of food. Even here the Bedouin had got there before us. It would seem that they had dug in the cave during 1951–52 and had taken out of it numerous finds including scrolls with biblical texts. At that time we did not know that already in the early 20th century a German scholar had visited this cave accompanied by Bedouin and had described the cave.

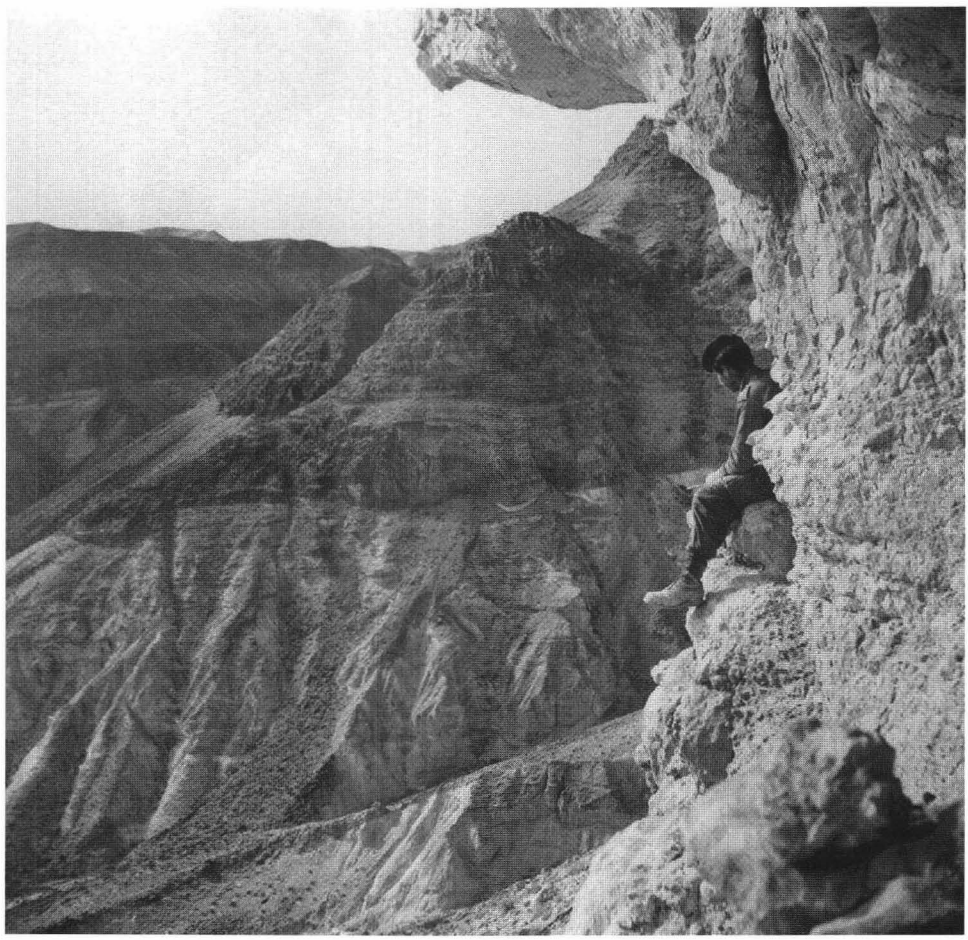

Fig. 11. Arnon Goren in one of the caves of Naḥal Tse'elim 1960 (Mike Livne).

According to his description there were numerous complete storage jars found inside with food remnants.

Nahman Avigad excavated the cave systematically during the main thrust of the survey of Judaean caves in the years 1960–61. He found in it arrowheads, glass vessels, wooden objects, textiles, reed mats, ropes, and two coins: one of Bar Kokhba and the other from the city of Tyre dated 127 CE.

From the important discoveries of the various surveying expeditions of Yohanan Aharoni were the caves on the northern bank of the deep Naḥal Tse'elim and in its northern tributary Naḥal Harduf. These caves were investigated during the cold months January and February 1960. Here also the expedition consisted of a mixture of long-term Judaean desert expedition members from kibbutzim and with soldiers and surveyors from the Department of Antiquities.

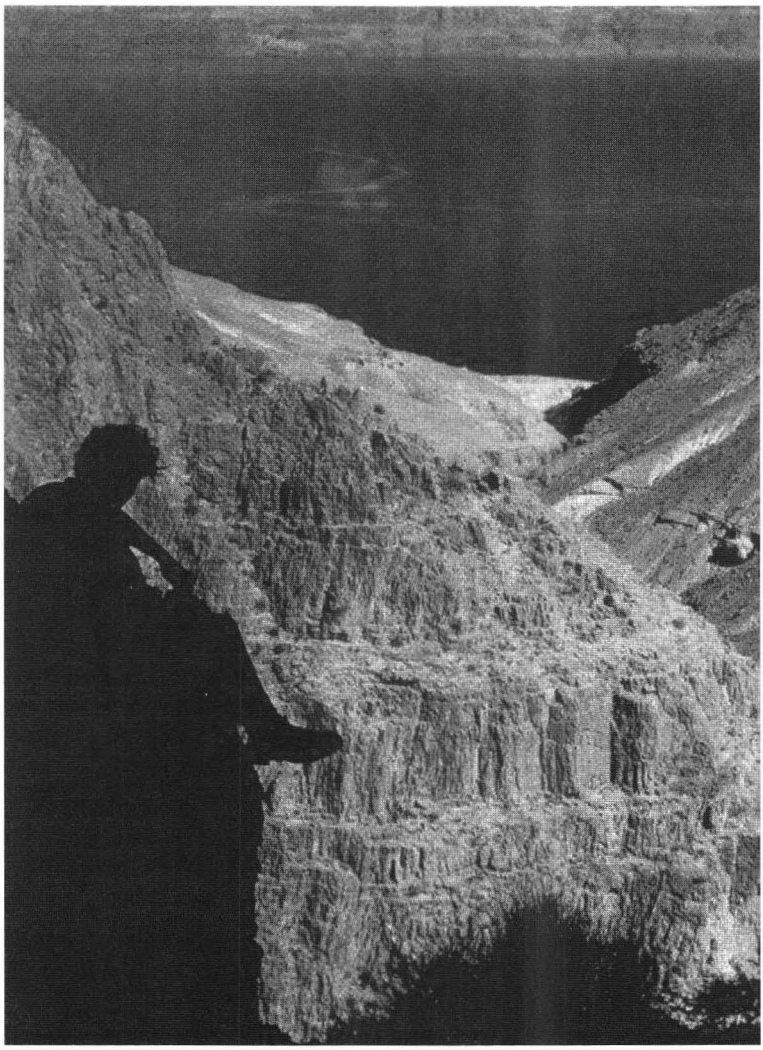

Fig. 12. Shimon Dar in the 'Pool Cave', Naḥal David 1956 (Benno Rotenberg).

Among the volunteers to the expedition was Giora Ilani of Gan Shmuel, a dedicated amateur of nature and wild-life, who was the first to discover wild leopards in Naḥal Tse'elim. His first meeting face-to-face with these leopards led Ilani to dedicate many years of his life to the study of leopard packs in the Judaean desert, and to bring them to the attention of the Israeli public.

Among those in the Naḥal Tse'elim expedition one should mention Meir Ben-Dov, Shimon Dror, Gabriela Baki, Rachel Hachlili, Micha Livne, Zeev Meshel, Yoram Tsafrir and Moshe Kochavi, who was Aharoni's second-in-command when he was absent.

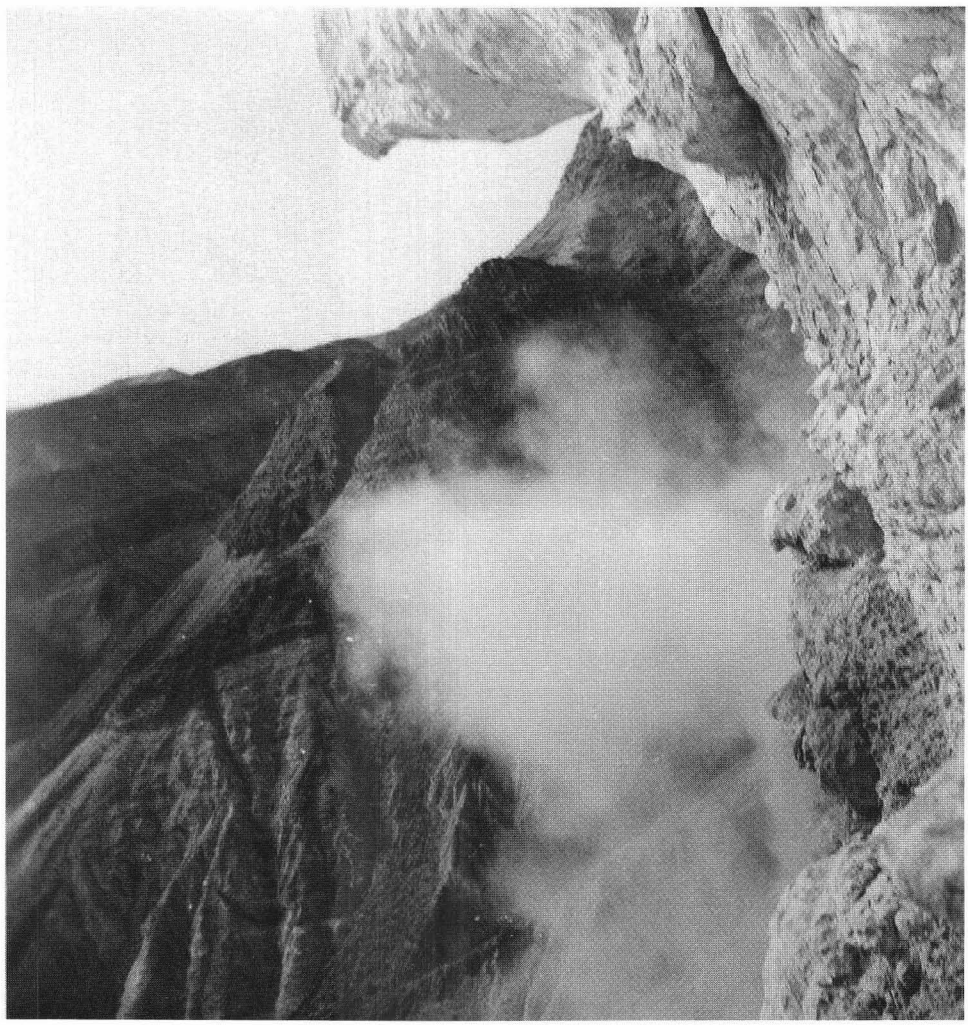

Fig. 13. The dust bursting out from one of the caves in Naḥal Tse'elim 1960 (Mike Livne).

A small trail of gazelles led to the three caves, nicknamed 'Skulls Cave', 'Arrows Cave', and 'Scrolls Cave', because of the nature of the finds within, and only the most courageous of the volunteers were able to enter them. These included Arnon Goren from Ma'abarot and Yigael Ben-Efraim from Shamir. The difficulties of access had prevented the Bedouin from ransacking part of these caves, and the material found in them revitalised the study of the period of Bar Kokhba. In these caves were found the bone remnants of the fighters, as well as numerous ceramic vessels, including 'Herodian lamps', numerous arrowheads, coins, game dice, and a hair comb. The main discoveries were fragments of a *tefillin* document. From the Naḥal Tse'elim caves which had been robbed by the Bedouin came additional

documents, written on papyrus in Aramaic and in Greek, all of them dating to the Bar Kokhba period. In a cave in Naḥal Harduf was found a collecting pool similar to the pool in the Naḥal Ein Gedi.

As a result of the discoveries in Naḥal Tse'elim, Yosef Aviram, secretary of the Israel Exploration Society, organised in March 1960 a national expedition known as the 'Judaean Desert Cave Enterprise'. This expedition included 60 volunteers from amongst the kibbutzim, 20 students and 80 soldiers. The IDF provided logistical assistance including the flying of provisions by helicopter. In the recent book by Hanan Eshel and David Amit (1998) on the refuge caves of Bar Kokhba they refer to the second generation of studies of the caves, between the years 1947–1965, that altogether some 1200 documents from different periods were discovered in the Judaean desert caves, and that 17 caves were examined in total. The discoveries of the Israeli expeditions between the years 1953–1960 provided a major contribution to the study of scrolls.

This memoir would not be complete without mentioning the names of the volunteers of Yohanan Aharoni's expeditions, but this mission would be almost be an impossibility. The diaries with the names of the expedition members were not always preserved. The names of the soldiers were not written down at all. In conclusion the expeditions had many hundreds of volunteers from the Kibbutz Movement.

Research in the Judaean desert, including Masada, was undertaken at its inception by remarkable and enthusiastic researchers, such as Shmarya Guttman, Zeev Meshel, and Mike Livne. It was these people who provided Yohanan Aharoni with background and access to the desert. At that time, the desert was unknown to Israeli researchers. From my own personal acquaintance with a large number of volunteers to the expeditions from 1953 to 1960, I can testify, that this period of searches was imprinted in everyone's soul for the rest of their lives. Quite a few of them then turned to the study of archaeology and history during their careers. This combination of ancient landscapes, unusual physical challenges, and comradeship around the bonfire, combined with the special warm personality of Yohanan Aharoni, was what conquered everyone.

This survey would not be complete if I did not mention the appearance of the second volume of the refuge caves of the Bar Kokhba period edited by the researchers Hanan Eshel and Roi Porat (2009). This is a volume with much content of very high quality, and sums up all of the data that has accumulated since 1950 and up to 2010 (see reviews section of this journal).

We now know of more than 50 refuge caves, and their distribution ranges from the heart of Samaria to the Shephelah and down to the south of the Hebron hills. This fact adds to the testimony as to the extent of the rebellion, concerning which so little is known from textual sources. It would appear that this new third generation of cave discoverers is succeeding quite well, using new knowledge and technical expertise, and are uncovering cave after cave with great discoveries like the Bar Kokhba silver coin hoard in the Cave of the Twins (Fig. 15). What is sad is that all of these caves were robbed in the past and continue to be robbed until this very day.

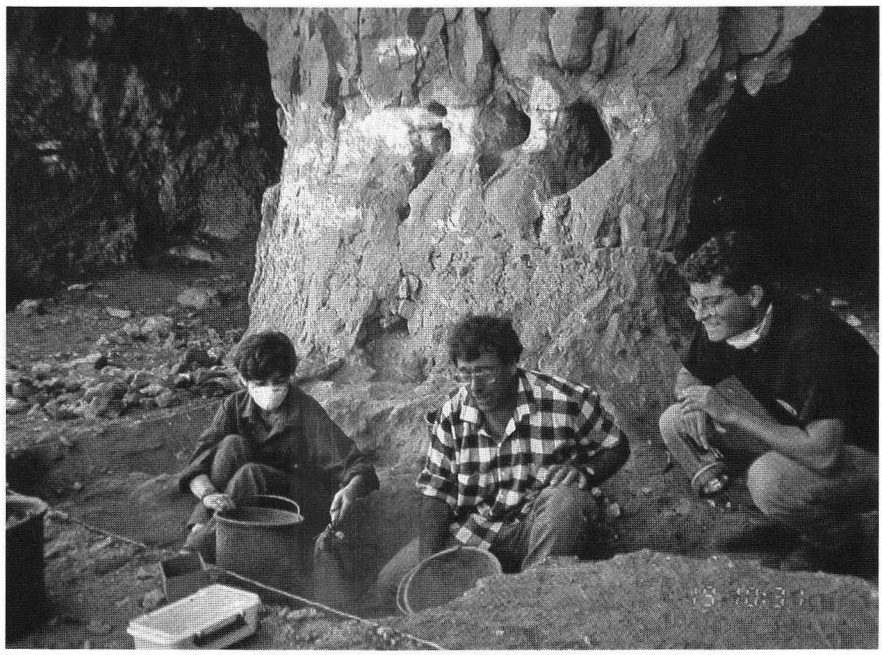

Fig. 14. Hanan Eshel (centre) with Zissu (right) and Ladijnskaya (left) digging Ketef Jericho Cave 1993 (Boaz Zissu).

Fig. 15. The Bar Kokhba silver coins found in the 'Cave of the Twins' in the Judaean mountains, 2009 (Boaz Zissu).

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Book Reviews

Tali Erickson-Gini, *Nabataean Settlement and Self-Organized Economy in the Central Negev: Crisis and Renewal.* BAR International Series 2054. Oxford: Archaeopress, 2010. Pp. viii + 330, illustrated throughout with maps, plans, figures, drawings and photographs. £53.00. ISBN 978-1-4073-0543-1.

The book under review is based on the author's PhD dissertation submitted to the Institute of Archaeology of the Hebrew University of Jerusalem in 2004. The title of the original work was *Crisis and Renewal – Settlement in the Central Negev in the Third and Fourth Centuries C.E.* After a thorough reading of the published book it is evident that this title more accurately describes the contents of this book, rather than the modified title adopted for publication. Most of the published material in the book is dated after the Roman annexation in 106 CE, and, from a political point of view, these materials cannot be considered 'Nabataean'. Although Nabataean culture continued through the centuries in that region, the cultural achievements of the communities that were living in the former Nabataean territories were attributed to the new ruling authorities – the Romans and Byzantines – and as such are not to be labelled Nabataean. The material published in this book is based upon the work of several scholars of the Negev cities as well as the author's own fieldwork in Mampsis, Oboda and Mezad 'En Hazeva.

This improved and revised version discusses human settlement phases in the Negev, settlement motivations, as well as cultural production during the classical periods that span the Nabataean to the Byzantine periods. It is worth mentioning that the Late Roman and the Early Byzantine periods have not received enough attention from scholars even though the region under discussion witnessed a notable increase in population during this time. The aim of the author from her study is, therefore, to discuss and present the available relevant evidence that sheds some light on the development and change that took place in the region and the reason behind this change.

The book is divided into two major parts. The initial part discusses the geology of the region as well as its climate and vegetation. The first chapter concludes that these factors inhibited the construction of permanent settlements as the rainfall was insufficient, the water springs were limited and the soil was arable. The author argues that the region under discussion was seemingly inhabited by pastoral nomads, but later, during the Byzantine period (from the 4th to the 7th centuries), it witnessed the appearance of permanent settlements, population growth, as well as an increase in the agricultural activities. The second chapter then summarises the history of archaeological explorations in the region during the 19th and 20th centuries which included various surveys and excavations. Special attention is paid to those which are related to the period of study.

From Chapter 3 to 6 Erickson-Gini presents the historical background about the region from the 1st century CE to the end of the Byzantine period and discusses clearly the available archaeological evidence, history of human occupation, as well as the political, economic and military developments that took place in the Negev and its neighbourhood. In Chapter 3 the author discusses Nabataean origins, the development of Nabataean trade and external policies, as well as its inland and maritime trade, based on historical sources and archaeological evidence. In addition, she discusses the stages of Nabataean expansion up to the annexation in 106 CE, and provides some information about the motivations and reasons behind this event which led eventually to the establishment of the Provincia Arabia. She mentions an important discovery in the region, which is an *officina* uncovered near 'En Boqeq. This is dated to the first half of the 1st century CE and all the materials discovered here indicate use contemporaneous to the Nabataean period.

Chapter 4 examines the crises and decline that took place during the 3rd century CE that followed a very prosperous and developed period. The author then presents information regarding the Sassanid threat and the rise of Palmyra, and considers the central Negev in the 3rd century from the evidence of coins, inscriptions and pottery. The crisis of this time certainly affected the region which witnessed, according to the author's own observations, a notable decline, especially along the Petra-Gaza road, after 222 CE. Chapter Five discusses the recovery in the Tetrarchic period of the late 3rd century and the political, military and economic reforms of Diocletian. This period was a period of architectural prosperity, as is indicated by the Latin texts discovered in several places in the southern Levant. This architectural renaissance was a reaction to internal and external factors, and here Erickson-Gini includes a discussion of the Roman military stations in the Negev.

Chapter 6 discusses political and economic developments in the 4th century and the adoption of Christianity. It details the administrative system during the Byzantine period, including the economy and the commercial competition between Byzantium and the Sassanid Persia. Special attention is paid to the Negev during the 4th century in terms of administration, defensive architecture, and the widespread adoption of the Christian faith, as well as to the incidence of natural disasters such as the earthquakes. Examples of damage caused by earthquakes from excavated Negev sites are also provided. The contents of this chapter suggest settlement expansion in the region. There was an increase in agricultural practices, particularly wine production, as several wine presses have been recorded there, in addition to pottery pots used for the storage or transportation of wine. From Byzantine period too there are agricultural installations such as terraces, water channels and farmhouses.

The second part of the book assesses the archaeological evidence uncovered in three sites in the Negev – Mampsis, Oboda and Mezad 'En Hazeva – with significant attention paid to pottery dated to the period between the 3rd and 5th centuries CE. The author argues that the international trade in the region was replaced by inter-regional trade, which was based on the agricultural production, especially during the 4th century CE. Other scholars, however, speculate that this was a result of

climatic factors (a wetter climate), which lead eventually to the appearance of permanent settlements.

From Chapter 7 to Chapter 9 the author presents the cultural material discovered recently in Mampsis, Oboda and Mezad 'En Hazeva, and sheds more light on the material related to the period of the study. Chapter 10 examines the vessels and special finds of the early 3rd century and concentrates on pottery, and this is followed by further evaluation of the vessels and special finds dated to around 363 CE. Both these chapters divide the pottery into a number of types and forms and provide tables that include descriptive information and parallels as well as illustrations about these discoveries.

Chapter 12 examines the vessels and special finds of the early 5th century. It is followed by tables that include descriptive information, parallel examples, pottery illustrations, information on the ceramic plaques and metal objects, with further reference to a relevant Nabataean text written on the wall plaster inside one of the rooms in Oboda. This was dated by Avraham Negev to the late 4th to early 5th century, although the palaeography may suggest an earlier date as the forms of the letters do not belong to the script of the late 4th century. Rather, this text is similar to some of the Wadi Rum texts that were written by ink, uncovered in 1930s. These are from the vicinity of the Nabataean temple built during the reign of the Nabataean king Rabil II and dated to the 1st century CE. Therefore, from a palaeographical point of view, dating the Nabataean text uncovered in Oboda to the 4th century should be ruled out.

The book is very well illustrated as it contains clear photographs, drawings and maps. Each chapter is followed by discussions and conclusions, as well as appendices. With reference to the appendices, it is a disappointment that the table classifying the coins lacks photographs or drawings of the relevant finds. It would be much improved if these were illustrated in the same way that that pottery images accompany the tables. In summary, this volume is a welcome addition to the history and archaeology of the Negev during the classical periods. It is a rich source of information about the Negev cities such as Mampsis, Oboda and Mezad 'En Hazeva for any scholar and student researching the history and archaeology of the southern part of the Levant during these periods.

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Stephen Gabriel Rosenberg, *Airaq al-Amir: The Architecture of the Tobiads*. BAR International Series 1544. Oxford: Hadrian Books, 2006. Pp. xiv + 229. Illustrated with maps and plans. £42.00. ISBN: 978-1-8417-1757-9 (paperback).

The Qasr al-Abd is one of the most enigmatic buildings in the Ancient Near East, which has inspired voluminous study since its initial recognition by western scholars in 1818. In this study Rosenberg has brought together the key data from nearly 200 years of observation and analysis in a lucid text. The Qasr was initially thought to be a temple, and was more recently argued to be a palace, but neither of these suggestions has achieved general acceptance. Although Albright suggested, as long ago as the 1930s, that it was the mausoleum of the Tobiads, surprisingly, no one until now has attempted to present a detailed argument in support of this hypothesis. Rosenberg does this very well, first by showing the lack of parallels between the recovered plan of the Qasr and contemporary temples and palaces, and, secondly, by showing the many parallels between the Qasr and contemporary tombs and burial monuments.

In order to properly place what is universally recognised as the estate of the Tobaids, known from numerous historical sources, including the Bible, the Zenon papyri, and especially Josephus Flavius, Rosenberg opens with an account of the history of the Tobiad family. In this he suggests a link between the family and its name and the biblical land of Tob, which is clearly located in trans-Jordan. The case for this linkage is a very interesting one, and would resolve a number of difficulties. He also makes a sterling effort to resolve the chronological problems arising from Josephus' account of events which occurred long before his own time.

Of particular interest is Rosenberg's Chapter 13, 'The Bestiary Revisited', in which he examines the various animal and bird sculptures of the Qasr al-Abd, and the parallels for the use of these creatures in art of the period. His conclusions as to the overwhelmingly funerary use of these images in the art of the period constitute a highly suggestive line of evidence concerning the nature and usage of the Qasr, strengthened by the appearance the following year of David Jacobson's new study of the Painted Tombs of Marisa (*The Hellenistic Paintings of Marisa*. Palestine Exploration Fund Annual VII, Leeds, 2007). The one clear mistake in Rosenberg's treatment comes in his discussion of the site of Airaq al-Amir as a whole, which he sees as the estate of the Tobiads, and specifically in his discussion of it as a defensible site, or at least a site with defensible elements, in terms of Josephus' use of the term '*baris*'. In this discussion he several times refers to the man-made, or at least altered, caves in the cliffs above the Qasr as defensible refuges in the event of attack – a mistake against which his familiarity with the fate of those who took refuge in the caves of the Wadi edh-Daliyeh should have warned him. This, however, does not affect his main argument.

While it is hardly likely that Rosenberg's work will lay to rest the long-running argument over the nature of this unique building, and of the estate which surrounded it, his extended argument in support of the mortuary nature of the Qasr al-Abd is a

major contribution to the ongoing discussion of the archaeology of this fascinating site and its architecture.

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Hanan Eshel and Roi Porat, *Refuge Caves of the Bar Kokhba Revolt*. Volume 2. Israel. Exploration Society and the Jeselsohn Epigraphic Center of Jewish History: Jerusalem. 2009 (Hebrew) ISBN: 978-9-6522-1078-4.

Professor Hanan Eshel, formerly of Bar Ilan University in Israel, provided before his untimely death (see Obituary) this excellent second volume of archaeological and historical studies relating to the important phenomenon of refuge caves dating from the time of the Bar Kokhba revolt, co-edited with his student and collaborator in the field, Roi Porat. The first volume, co-edited with his colleague David Amit and published in 1998, opened up the subject and provided important archaeological details on these caves and the finds made in them.

In this recent volume, Hanan Eshel contributed numerous papers written by himself, and also as a co-author. He opens the book with an important summary article entitled: 'On the Ongoing Research of the Refuge Caves in the Judean Desert'. The following chapters, co-authored or written with Roi Porat, Amos Frumkin, Uri Davidovich and others, deal with refuge caves in the lower Nahal Kidron (Wadi en-Nar), north of Ein Gedi, in Nahal Qedem, Nahal Arugot (Wadi Areijeh) and elsewhere in the eastern Judean Desert and close to the western shore of the Dead Sea. The book also includes specialist reports on coins (Eshel, Roi and others), military equipment (Guy Stiebel), and environmental remains (Orit Simchoni and Mordechai Kislev; Liora Kolska Horwitz). Importantly, there are further chapters on manuscript discoveries: two new Greek documents and some fragments from the Har Yishai Cave and fragments of a Leviticus scroll from a cave in Nahal Arugot.

One should also mention assessments of Bar Kokhba period manuscripts by Yosi Baruch. Esther and Hanan Eshel, together with Ada Yardeni, describe a new document with the dating: 'Year Four of the Destruction of the House of Israel'. This document points to the likelihood that the Bar Kokhba revolt actually lasted for four years until 136 CE and not to 135 CE which has been the consensus of opinion hitherto: a very important conclusion for history. In one of the papers Eshel describes the discovery of a Bar Kokhba denarius at a site in the Hebron Hills. Hitherto, such coins have only reached the scientific world through robbery and illegal trade activities and not from archaeological excavations or surveys. Over a thousand Bar Kokhba period denarii have been published in learned journals, but all of them from undocumented sources and illegal excavations.

The further significant recent discovery of a rich cache of Bar Kokhba silver coins in the Teomim ('Twins') Cave in the western Judean Mountains is also documented in this volume; it provides scholars with a new view concerning Bar Kokhba numismatics. This recent work by Hanan Eshel and his collaborators is of the utmost importance. The two volumes are published in Hebrew and are replete with numerous maps, drawings and photographs. One hopes that these books will eventually be made available to scholars in English.

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Jan Djikstra, Meindert Djikstra, Karel J. H. Vriezen, *Tall Zar'a in Jordan. Report on the Sondage at Tall Zar'a 2001 – 2002 (Gadara Region Project: Tall Zira'a)*. BAR International Series 1980. Oxford: Archaeopress, 2009. Pp. 83, including 3 maps, 25 tables, 3 graphs, 41 photographs and 28 drawings. ISBN 978-1-4073-0512-7 (paperback.)

This excavation report is divided into nine chapters presenting the sondage excavation at Tall (Tel) Zar'a (Zira'a) in the western region of the Wādī al-'Arab, 10 km southeast of the Sea of Galilee, by the Theological Faculty, University Utrecht (Netherlands) as part of the Gadara Region Project, Jordan.

After a short introduction (Chapter 1), Chapter 2 presents the stratigraphic situation within the 5 – 7 m × 6 m sondage at the long-inhabited site, describing 5 strata divided into 2 to 5 phases: Late Roman / Early Byzantine (Stratum I), Hellenistic (Stratum II), Iron Age IIB (Stratum III), Iron Age A/B – AII (Stratum IV), and Late Bronze – Iron Age IA layers (Stratum V); no Iron Age IIC layers were discovered. Preliminary results on possible building structures are incorporated in Chapter 3. Chapter 4 deals with pottery including two discussions on painted pottery and pottery handles. The first treats mainly LBA (Late Bronze Age) painted pottery emphasising the differentiation of local, imported and possible imitated ware. The second demonstrates the diagnostic value of pottery handles and identifies different types of storage jars and pithoi. IA (Iron Age) pottery is discussed in Chapter 7, with a strong focus on cooking pots, due to high incidence of cooking facilities within the 6m × 6m sondage. Statistical analyses show the uniformity of IA cooking pots at Tall Zar'a in contrast to observed modifications of such pots at contemporary sites. Additionally, the typology and the production process of cooking pots are described. Small finds are presented in Chapter 5, which lists a small number of single small finds of varying materials (e.g. a seal impression, a potter's mark or a copper alloy arrow head), and further in Chapter 6, which describes variations of mainly basalt stone artefacts, including millstones, pestles, mortars, weights, spindle whorls and building remains.

All finds and their contexts are listed in clearly arranged tables linked to related phases and strata. Additionally, the context table gives the number of potsherds for each chronological section and the relative incidence of further finds: stone tools, flint, sherds from a *tannur* (clay bread oven of a slightly conical form), bones, glass. Most of the finds and stratigraphic units are documented by photos and drawings. By Chapter 8, at the end of the volume, the historical landscape of the Gadara region is explored and the authors identify Tall Zar'a as the ancient (pre Hellenistic) Gadara / Qadara. Here, the results of the Wādī al-'Arab survey and the excavations of the Biblisches Archäologisches Institut (BAI) Wuppertal at Tall Zar'a (2003 – 2008) are set in relation to textual sources. Chapter 9 contains the conclusion. As long as the aims of the research are clearly defined, even limited information of sondage excavations have great value. This is particularly exemplified by this rather short volume, which underlines the importance of small-scale excavations in large regions such as Gadara.

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Shimon Gibson, *The Final Days of Jesus: The Archaeological Evidence*. New York: Harper One and Lion Hudson, Oxford Pages, 2009. Pp. xvi + 254. £12.99. ISBN 978-0-7459-5395-3 (paperback).

Any scholar who ventures off his own turf to see how one body of information relates to another – or could help clarify another – is likely to be treated as an amateur intruder by the border guards of the other discipline, and even disowned by his own group as wanderer! Nowhere is this more true than in relation to the body of evidence about the origins of Christianity that survive in the form of first or early 2nd century Greek documents commonly referred to as 'the New Testament.' Indeed, such is the vigilance of those who patrol those borders that often none but a member of 'the guild' – a term used by New Testament scholars of themselves – is thought skilled enough to write on 'their' texts: be that person an historian of the period, a theologian concerned with the intellectual content of the document, or, as here, an archaeologist who is concerned with the material remains of the scene where the central events of those documents took place. The result of this segregation is that one can read volumes of exegesis without ever encountering a detailed reference to what we can know about the culture of Jesus; and any criticism of this position is thought to imply a pre-critical approach to the texts when it was assumed that biblical data could enlighten archaeological investigations and vice versa. Similarly, one can read excavation reports from Israel-Palestine which do throw light on aspects of Second Temple Judaism, yet one does not find any reference to any text included in the Bible: its seems that

being in a 'holy book' disqualifies the texts from being considered within empirical discourse.

So, before proceeding any further, let me note that Gibson is to be congratulated for breaking out of the disciplinary boundaries and presenting the non-archaeologist with a survey of what light recent excavations can throw on life in Jerusalem around the time of Jesus. He is engaged in what may be a thankless task, but he recognises that 'a point of stagnation has been reached in scholarly studies [of the gospels], and archaeology is still a seriously undervalued source of data' (pp. 81–2). To remedy this, he has digested a vast amount of information and presents it as a portrait of the city and its religious structures at the time of Jesus' death. For this labour, New Testament scholars should be simply thankful. A case in point is the amount of evidence he has assembled about ritual purity and ritual bathing at the period, both in large pools (Bethesda and Siloam) and in domestic *miqva'ot*, which he sees as pointing to an 'overall "explosion" of purity that took place within Judaism in the 1st century CE' (p.79). Using this archaeological evidence as a point of departure, exegetes of the many passages in the gospels dealing with observance, or not, of purity laws are enabled to appreciate their texts than by following the more normal course of seeing them as manifestations of earlier legal texts. Gibson's book abounds with similar examples of his having brought together information on the 1st century CE in such a way that textual obscurities are removed.

The work is obviously focused on the last days of Jesus life and its central claim is that new archaeological evidence may explain his movements from his arrival in the city until the burial – and inevitably this brings in questions of whether or not the traditional cult-sites in Jerusalem are to be accepted. While no doubt this very sharp focus will be attractive to many readers, it will also raise the greatest suspicions among biblical scholars. Gibson has a confidence about the possibility that the various gospel accounts can be somehow plumbed for dates / times during that week which is far too optimistic. He moves too freely between the Synoptics and John in the hope of establishing a single, firm chronological sequence. This becomes explicit at times, but one senses that it is implicit for much of the book, as when he says: 'This apparent contradiction may be resolved if one attributes the story of the Priest's plot as it appears in Mark (14:1–2) as occurring on *one* of the days of the holy week and not on the first day of Jesus' arrival' (p. 43). This hermeneutic – that the contradictions are but apparent – echoes an approach that can be traced back to the time of Christian opposition to Porphyry in the works of Eusebius at the end of the 3rd century. Here Gibson's solution is a variant on the classic medieval solution as formulated by Adomnan of Iona in the late 7th century and which has its origins in Augustine *De consensu euangelistarum* at the beginning of the 5th century. However, it fails to take account of the nature of the 'history' that is presented in the gospels – and their role in the earliest churches – and therefore asks them to bear an impossible evidential weight. More agnosticism on precise details regarding times and locations, with greater emphasis on context and how archaeology can show the problems with using the gospels as historical quarries, as he does splendidly in his treatment of the

trial of Jesus (e.g. on p. 81) would have offered an even better service to biblical studies.

On the whole there is a tendency in the book to look at the archaeological and textual evidence as if it can cohere – and this implies that statements about miracles in the Scriptures and about ground plans from archaeological excavations exist on a single plane of meaning. This is an example of epistemological *naïveté* that everyone seeking to link the texts to their original historical setting must confront openly. Failure to do so results in rationalism that does credit neither to modern scholarship, nor to ancient religious texts, and on two occasions the book falls into this trap: Dealing with the burial of Lazarus (John 11), Gibson writes: 'The fact that Lazarus' body was not rotting after having been in the tomb for four days suggests that he must have been in a trance of state of catalepsy' (p. 28); and, then, 'owing to the state of medicine in the 1st century it is conceivable that the phenomenon of people waking up in tombs inevitably led to stories of people being raised from the dead' (p. 30). This is conceivable, but the issue of miracles – how they were imagined *then* and how contemporary scholars with an Enlightenment world view might approach these texts so as not to dismiss them – is far more complex than the solutions that are proposed here. Gibson rightly notes that textual scholars are often too unacquainted with the work of archaeologist: *tu quoque*!

The Final Days of Jesus seems to have several audiences in mind: it wishes to provide information for those who go to Jerusalem on pilgrimage (or on 'Bible Study Tours' for those who dislike the associations of the word 'pilgrimage') and this group will find this an excellent preparation for their trip. It also engages with those who seek ever more sensational discoveries about the times of Jesus – see his excellent debunking of 'The James Ossuary' on pp. 175–87 – and its calm assembling of evidence marks it out as a voice of sanity. Gibson does, however, want to encourage a greater dialogue between biblical studies and archaeology, and while he argues for, and illustrates the importance of such a debate, he also shows that there are many hurdles to be crossed on both sides. Having finished this book one just hopes that this agenda will be further pursued.

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Hershel Shanks, *Jerusalem's Temple Mount, from Solomon to the Golden Dome*, Continuum, New York & London, 2007. Pp. 206 with 138 illustrations, $39.95. ISBN 978-0-8264-2884-4

Oleg Grabar and Benjamin Z. Kedar (eds), *Where Heaven and Earth Meet, Jerusalem's Sacred Esplanade*, Yad Ben-Zvi, Jerusalem and University of Texas, Austin, USA, 2009. Pp. 411, with 209 illustrated plates. $40.00. ISBN 978-0-2927-2272-9.

The Temples of Jerusalem continue to fascinate, partly because the evidence is so sparse, and the site is contentious in contemporary politics. Hershel Shanks' book, *Jerusalem's Temple Mount*, provides the excellent idea of starting from the present day and going back in time to the earliest available evidence for the site of the present-day Dome of the Rock, like an archaeological dig, and seeks also to counter any politically-motivated denials of Jewish monuments existing here.

Today two domed structures stand on the Haram al-Sharif, the Temple Mount, and both are splendid constructions. The more obvious one is the Dome of the Rock, an octagonal building with no particular direction of prayer. Its four doorways face onto the four corners of the Earth and its focus is inwards towards its centre, which is the rock called *Even-Shetiyah*, the foundation stone, the centre of the known world in the Jewish tradition. In Muslim tradition it is called *Al-Sakhra* (the Rock) and acts as the cover over the Well of the Spirits, where all will congregate at the end of days to learn their fate. Whichever it is, this is the location of the Last Judgment and so the Dome has no specific direction, but is open to all the four cardinal points, for who knows from which direction the Final Arbiter will approach?

The second dome is different, it is the leaded hemisphere over the Mosque of al-Aqsa and its direction is plain. It was placed south of the Rock, with its face towards Mecca. In this way it faced the birthplace of Mohammed and turned its back on the Rock, which may have been the centrepiece of the Temple of Solomon. It was a significant gesture by the Caliph Omar (who conquered Jerusalem in 635–8 CE), to face south and proclaim the superiority of Mecca and the new faith of Islam. From these present-day structures, which Shanks analyses in some detail, he then reverts to the time when the Haram was bare and bereft of building, which he calls the Interregnum, between the Roman destruction of Herod's Temple in 70 CE and Caliph Abd al-Malik's building of the Dome of the Rock in 692 CE. What was going on during those 600 years? Was this really a Sacred Esplanade or more likely a city dumping ground? Was there a Roman Temple standing on it, or just two statues of the Emperors?

The stone inscription, used upside-down as an infill by the lintel of one of the entrances south of al-Aqsa mosque, seems to be the base of a statue to the Emperor Antoninus Pius, who followed his patron Hadrian in the Roman occupation of Jerusalem. It is quite likely that his statue stood on the Haram, together with that of Hadrian himself, until they were both dismantled by the incoming Arab invaders of 635 CE. It is probable that there was little of significance on the Haram, as the

Byzantine mosaic map of Jerusalem in Madaba does not even show the spot. But one incident of this period must be noted, and Shanks provides considerable detail. It is the attempted rebuilding of the Jewish Temple during the short reign of the Emperor Julian (361–3 CE), named the Apostate. Having abandoned Christian policy for the Empire, it appears that he encouraged the Jews to rebuild their Temple on the original site, with the hope that, on his successful return from the war in Persia, he could see the sacred city of Jerusalem restored and that he 'together with you (the Jews) may glorify the Most High God therein'. This was not to be, for the rebuilding attempts were thwarted by early collapses and the effect of an earthquake in 363 CE, and then the death of Julian at the war in Persia, which meant the project lost its one and only powerful sponsor.

Shanks then goes back to the Temple of Herod, which he calls the 'second' Second Temple, the one destroyed by the Romans to discuss an inscribed stone of the Herodian retaining wall, at the south-west corner of the huge perimeter, marked with the words, 'the place of the trumpeting'. This serves to confirm that this was indeed the outer wall of the Herodian Temple *temenos* (sacred platform) where the priests would blow the trumpet to announce the beginning and end of the weekly Sabbath.

Both the reasons for Herod's rebuilding the Second Temple, and his construction of the enormous platform on which it stood, are rather obscure. Josephus states that he was grateful to God for giving him the right to rule Judaea and the Jews, and to grant success to his kingdom. This all sounds rather abstract, although another reason may have been to solve the chronic unemployment that was always dogging Jerusalem, an important city but one short of natural resources. It had limited water supply and a shortage of minerals and other productive commodities on which to base an economy. As it was founded on a series of limestone strata and had access to nearby timber forests, the builders of the Temple could use these local materials and thus give employment to hundreds of craftsmen.

Herod wished to impress his Roman patrons and managed to build a *temenos* that was larger than anything in the Empire, bigger than that of the Temple of Jupiter in Baalbek, bigger than the upper Acropolis of Athens, or the Forum of Augustus in Rome. It was a stupendous achievement, and Shanks celebrates it accordingly. Like everyone he marvels at the magnificence and scale of the achievement, and drools over Herod's building and ability to move so many tons of solid ashlars.

The plan Shanks offers of the Herodian Temple is similar to other conventional ones and offers no new insights. Like everyone else he is unable to reconcile the descriptions given in Tractate Middoth and in Josephus, and indeed it seems futile to try to reconcile two different literary descriptions until such time as one is able to conduct excavations on the site. Even the exact location of the Temple Sanctuary is in doubt, as is the original square of 500 cubits that was laid down by the Rabbis as the sacred area. This was probably the size of the original platform built by the Hasmoneans around the Temple, and Shanks gives a useful diagram of twelve different 'modern' theories of its location, from de Vogüé in 1864 to Ritmeyer in 1995.

However little we know of Herod's Temple, we know even less of the 'first' Second Temple, built by the exiles returning from Babylon. There is no known description of it, but it stood as a central shrine throughout the Persian period, when the High Priest served as secular leader of the Judaeans as well as religious leader. The famous Cyrus cylinder of 538 BCE records a decree giving permission for exiles to return to their respective countries and to rebuild their shrines, though Judaeans are not mentioned specifically. Ezra mentions a Persian document that gave the Jews permission to rebuild their Temple, but no such document has yet been found. Jewish texts, including Josephus, have it that Alexander the Great came up to Jerusalem on his way to Egypt, but there is no external confirmation of this story. While it is mentioned many times in Josephus and in the Books of the Maccabees, it is not described. The Roman general Pompey entered the sanctuary in 63 BCE but did not destroy it.

In his discussion on the first Temple, the Temple of Solomon, Shanks again follows the conventional line and quotes the well-known similarities with the temple at Tel Ta'yinat, but he also brings some fine pictures of the temple at 'Ain Dara, in Syria, dated in three phases between 1300 and 740 BCE. The overall plan of the 'Ain Dara Temple is similar, but includes an antechamber between the porch and the sanctuary, together with fierce black-stone cherubim, that probably carried out the same guardianship functions as those in the Solomonic Temple. 'Ain Dara additionally contains colossal footprints that represent the entry and presence of the god who was residing there. As Shanks notes, judging by the footprint length of 3 feet and more, the resulting personage would have been over 65 feet tall. As at Jerusalem, 'Ain Dara was built to be entered from a courtyard, but Shanks fails to point out that in the case of the Solomonic Temple this courtyard was shared with the Palace (according to 1 Kings 7:12). And thus the First Temple was really a royal chapel or shrine, with part of the royal quarters and only accessible through them, as in many Assyrian examples. It is not generally recognised that the First Temple was part of the palace complex and would not have been so easily reached by the population. It was only after the Babylonian Exile, when there was no king in Judaea, that the shrine was truly a people's temple. Thus reconstructions of the Temple as a free-standing structure are not correct, although, to be fair, we know little or nothing of the palace construction or ground plan. Hence if we take the depiction of the Temple in 1 Kings as reliable, we must also take into account its description of the palace, the House of the Forest of Lebanon, however minimal that may be.

Shanks discusses the Yehoash tablet, that came to public notice in 2003 and describes repairs made to the fabric of the Temple at the time of King Yehoash (842–2 BCE). The tablet and the text, so close to the original biblical passages, have been written off as a forgery by many, though not all, scholars, so it is hard to understand why Shanks devotes nine pages to this suspect inscription.

Shanks then develops his account of the antecedents to the Temple, the Mishkan (Tabernacle) as well as the prehistory of the site, a subject that is avoided by most commentators on the First Temple. The evidence of the Mishkan is of course purely

biblical and, despite claims to the contrary, no tangible evidence for it at Shiloh has yet been found. But the location of the Temple is another matter, and here Shanks rightly brings details of the cave below the Dome of the Rock, called the Well of the Spirits in Islamic tradition. Located as it is under al-Sakhra, it is now believed to be a Middle Bronze Age tomb with, perhaps, the present short staircase having taken the place of the original shaft. In view of the large number of cisterns under the Temple Mount, Shanks follows Rivka Gonen in suggesting that these were originally shaft tombs further cut and squared off to act as water catchment reservoirs. It amazes Shanks that the holiest of structures, the Solomonic Temple, may have been built over a cemetery, considered by the later rabbis to be the most defiling source of ritual impurity, but who knows what the *Halakha* (normative law), if any, may have been in the time of Solomon?

There is one further point to be made about location, not mentioned by Shanks. Why was the site of Jerusalem so important? Given that it was a defensible site with a good water source from the Gihon spring and a saddle in the long stretch of the mountains that ran down the centre of the land, it provided a convenient crossing point for travellers, nomads and merchants who needed to move from west to east, or east to west. It lay between an ancient port on the Mediterranean (proto-Jaffa) and the fords across the Jordan near Jericho. It therefore may have become a significant crossing point with all the attendant functions of the provision of food and drink, and a shrine for use by those wishing to honour the Deity, as well as a burial ground for the dead. Shechem was in a similar position, a low point between two mountains, and on a route between the Mediterranean (at Straton's Tower) and the fords of the Jordan (at Adam-Damiya), and thus it also became an important religious centre, but one further north. Perhaps it was geography that led to Jerusalem and Shechem becoming the two main cultic centres of Judah and Israel.

With his access to the formidable BAR archives, Shanks has provided some wonderful illustrations and plans, some based on Ritmeyer's drawings, and one stunning double spread of the exterior of the Dome of the Rock (pp.16–17), showing the colourful contrast between its golden dome, the predominantly blue and white casing of the octagon below, and the blue sky above. This is a magnificent rendering of a well-known view, but one has to admit that it is outshone by the more subtle picture of the sombre interior of the Dome, as shown in Pl. 63 of the second volume under review. This is Muslim architecture at its finest, the colours are restricted to shades of grey and gold, but the effect is majestic and awe-inspiring. One can see a dozen columns, each of a different shade of grey marble, but toning together in harmony. The light from the fenestrated drum around the dome shines down to give a magical glow to the whole interior. Shanks has made a brave attempt to set the record straight regarding the Jewish monuments that originally stood on al-Haram al-Sharif.

On the other hand our second volume under review, *Where Heaven and Earth Meet*, has no such defensive programme, or need of it. It is sponsored by the Hebrew University of Jerusalem, the École Biblique et Archéologique Française de Jérusalem and the Al-Quds University and Center for Jerusalem Studies, so it comes

with the imprimatur of the three leading Jewish, Christian and Muslim intellectual authorities of the city. It is authored by 21 scholars, affiliated to one or other of these centres of excellence, as well as a number of independent experts from the United States and Great Britain. They all write about their own specialties and periods, but generously acknowledge the contributions made by their colleagues, so that this volume can be said to give a fair and balanced history of the sacred site.

The book is divided into eleven chapters of history, in the chronological sequence from the 10th century BCE to post-1967. Of these eleven periods, the first two reflect the two Jewish temples, the third is the site without a temple, the next one is the first Islamic presence, then followed by the Crusader one, subsequently by four Islamic episodes, and finally two modern ones, both after 1917 There is also a fine ten-page dossier of photographs by Said Nusseibeh of Damascus, followed by eight chapters on themes such as artistic, religious and literary sources, and then three personal points of view from the presidents of the Hebrew and Al-Quds Universities and from Cardinal Martini, former Archbishop of Milan, who served for a time in Jerusalem.. The final chapter is an epilogue written by the two editors, who stem from the Institute of Advanced Studies, Princeton, and the Hebrew University.

The chapter on the First Temple rejects the idea that it was a royal chapel but in fact seems to support this concept when it points out that Ezekiel's view of the future temple was that it should not be connected to the palace (Ezek. 43:7–9). Victor Hurwitz refutes this, by claiming that there was free public access, although he brings no evidence to confirm this premise. Joseph Patrich, writing on the Second Temple period, states that Nehemiah built gates to the Persian citadel (Bira) which were needed as the Temple was no longer part of the royal palace. Patrich also puts forward a controversial siting for Herod's rebuilt Temple, in a diagonal position within the vast platform, apparently locating it on top of cistern no. 5. This is based on his view that it provided the large quantities of water needed for the animal sacrifices and so it would be logical to place it directly above or in parallel with this water source.

After the Roman destruction of the Temple, did the site stand empty? Yoram Tsafrir thinks not; he considers that it may have been occupied by a Temple of Zeus, as mentioned by Dio Cassius, though his description may refer to anywhere in the city. There is the suggestion that the Capitolium (the chief temple of the new Aelia Capitolina, dedicated to Jupiter, Juno and Minerva, the three deities of the new city) was located on the Temple Mount, though the description may also refer to a site nearer to the later Church of the Holy Sepulchre. The testimony of Christian pilgrims is also inconclusive. The Bordeaux Pilgrim, of the 6th century, mentions a temple that he says stood on the site of the Temple of Solomon but he may be referring to the ruins of that building. On the other hand he also refers to two statues of the Emperor Hadrian standing there. These were probably the statues of Hadrian and his protégé Antoninus Pius, the inscription of whose base has been referred to above.

After the Muslim conquest of 638 CE the emphasis shifts from the Temple of Jerusalem to the Mosque of Jerusalem, which was given great significance by Caliph

Abd al-Malik, who designated the Haram as the rebuilt Temple and attempted to make the Dome of the Rock a Muslim focus. The Dome was understood to stand on the Temple of the Lord Jesus and later the Mosque of al-Aqsa on the Temple of Solomon. Possibly the whole of the Haram became one mosque and the Aqsa is just the smaller mosque within the larger one. Kaplony outlines how, in Muslim understanding, Mohammed on his night journey with the Angel Gabriel, came to this 'Furthest Mosque' (the meaning of al-Aqsa). In addition, Sharik an-Numayri, a hero of early Islam, entered Paradise from a pit on the Haram. At the End of Days, the Mahdi messiah will die and the majority of Jews will become Muslims. The Ka'aba will come here from Mecca and the angel Israfil will blow his trumpet from the Rock and resurrect the pious dead. Kaplony claims that during this early Arab period, Jews and Arabs shared traditions about the Sacred Esplanade and had joint access to it.

Under Frankish (Crusader) rule, from 1099, Jerusalem became the capital of the Latin kingdom of Jerusalem, and the Dome of the Rock was preserved as the Templum Domini, the al-Aqsa as Palatium Solomonis. In other words, the Franks attempted to eliminate the Muslim presence and building achievements. The Crusaders set a golden cross over the Dome and the building became an Abbey Church. The imprint of Mohammed's foot on the Rock, where he sprung onto his horse al-Buraq on his flight to heaven, became the imprint left by the foot of Jesus when he expelled the money-changers from the Temple. Authors Benjamin Kedar and Denis Pringle show that, under the Franks, the Church of the Holy Sepulchre, which had uniquely carried the Christian tradition in Jerusalem, now had to share it with its former rival the Dome of the Rock, which achieved Christian sanctity by its association with the Herodian Temple, visited by Jesus.

It is noted that although access for both Muslims and Jews was difficult, it seems that the famous Jewish codifier Rambam of Cairo (Maimonides) visited Jerusalem in October 1165 and prayed at the Dome. He mentions praying at the most holy Jewish site, which would be on the Mount, but some say he was only able to gain access to the Western Wall and would not in any case have set foot on the Mount, the site of the Temple, which he considered too holy to be approached by any Jew. Another famous Jew, the traveller Benjamin of Tudela of Spain, writing around 1170, calls al-Aqsa the 'Palace of Solomon' and says it is inhabited by the Knights (Templar) three hundred of whom ride out to war every day. In 1187, the Ayyubid ruler, Saladin, was about to conquer the city and the Crusader leader Balian of Ibelin sued for terms. Saladin refused and said he would deal with the Franks by murder, enslavement and other savageries, as they had dealt with the population in 1099. Balian responded that the Christian population would kill their own womenfolk and children and then set fire to all the monuments on the Haram. Thereupon Saladin relented and the Franks were allowed to leave the city on payment of ten dinarii per man, five per woman and two per child.

After the ousting of the Crusaders, Islamic building restarted on a grand scale and a full description of its work on the Mount is given by Michael Burgoyne. He describes the fact that the walls of Jerusalem were dismantled in 1219 so as to make

the city 'defenceless' and save it from another attack by the Franks (the Fifth Crusade) who were camped in the Nile Delta. It may have had the opposite effect, as most Muslims left the city in fear and building work stopped on the Haram.

Jews had returned to the city in 1209 from France and England but the Haram al-Sharif was out of bounds. During the Mamluk period (1260–1516), described by Donald Little, non-Muslims were barred from the Haram but they could view it from outside or from the Mount of Olives. Some Christians were able to bribe their way in, in Arab dress, and stare in amazement at the five hundred and more lamps that burned in the Dome of the Rock. At the Porch of Solomon, al-Aqsa, one German knight was able to see 'the eight hundred lamps that burn there every day' and wrote that no Christian or Jew was suffered to enter there since 'the Muslims say that we are base dogs and not worthy to go to the holy places on pain of death'. Here, however, the chief Mamluk judge Mujir al-Din published a history of Jerusalem and Hebron in about 1480, in which he notes the history of the Haram from the time of the Creation, including the fact that Solomon, on completion of the Bayt al-Maqdish (Temple) is transported in flight to Mecca, where he foretells the emergence of an Arabian prophet of monotheism.

The architecture of the Mamluk period is described by Michael Burgoyne, in particular the large number of gates, madrasas and mausoleums that were constructed around the perimeter of the Haram, where development was still allowed. Markets and bathhouses were also built to help finance the sanctuary and its numerous staff. The Dawadariyya Convent of 1295, on the north perimeter, has one of the finest Islamic ceilings to its entrance hall. It consists of a pair of eight-pointed dome soffits set within a double square rectangle defined by continuous rows of miniature stalactite vaulting. The architect is named as Ali ben Salami. Under Ottoman Rule (1516–1917), described by Amnon Cohen, the city originally had a population of 5,000, which increased dramatically when the walls were rebuilt in 1538–41, under the supervision of one Mohammed al-Celbi al-Naqqash of Istanbul, who also arranged for a better water supply to the city from Solomon's Pools in 1540. This enabled the fountains at the Gate of the Chain and that of the Superintendent to be built, with many of their ornate arched lintels reusing Crusader stonework.

Yitzhak Reiter and Jon Seligman bring the story up to the present. At the start of the British Mandate in 1917, it became clear that the monuments on the Haram were in a poor state of repair and a full survey was undertaken by E. T. Richmond, an architect who had worked on Muslim monuments in Cairo. Seeing the poor state of the major buildings, Richmond originally recommended that the dome of the Dome of the Rock would have to be dismantled and rebuilt, but that course was eventually avoided by careful repairs continuing over many years. A severe earthquake in July 1927 rocked Jerusalem, but luckily did not hinder the repair works that were completed the following year. Much conflict was due to the limited access to the Western (or Wailing) Wall, where only a small strip of paving was available to the Jews. Here, as elsewhere, the British Mandate tried to maintain the principle of the status quo, maintaining that no substantial change of any kind was

to be allowed to any religious buildings or sites, which applied to the Western Wall as well as all the monuments on the Haram. This principle was applied in theory, if not always in practice, to any request for change.

Earthquake tremors in 1937 did not affect the Dome, but much of al-Aqsa lost its roof and the whole was substantially rebuilt. Parts of the original decorated timberwork had to be removed, preserved today in the Rockefeller Museum. After the war of 1948, the Haram came under Jordanian rule. Tensions arose between the Palestinian administration of the Waqf (the Muslim endowment administering the Haram) and the Jordanian monarchy. King Abdullah I would come to the Aqsa Mosque for Friday prayers, with the Jordanian Military Band playing him in. The presence of a British-style military band was considered to be a religious violation of the site, and may have led indirectly to the assassination of the king at the entrance to al-Aqsa in 1951. Of course, things changed after June 1967, when Israel gained control of the Haram, but the Israeli flag that was hoisted on the Dome of the Rock was soon removed on the orders of Moshe Dayan, and the principle was established that the Waqf would retain control on the Haram, preserving the status quo, with only the Israeli police having the right of interference if and when necessary.

With the establishment of the Palestine Authority, Muslim activity increased. Yasser Arafat refused to allow Israel to invite King Hussein to pray at al-Aqsa, and the Palestinian Mufti established his office on the Haram. This is also the time when early Muslim traditions were revived, and included the claim that al-Aqsa was built by the first man Adam forty years after the Ka'aba in Mecca. The existence of the Jewish Temple is denied, it is only referred to as the 'alleged' temple, even though the official guide to the Haram, issued in 1929 by the Supreme Muslim Council, had stated that the Dome had been the site of Solomon's Temple, where David had built an altar to the Lord. The rise of the northern branch of the Islamic Movement, based in Umm el-Fahm in the Galilee, changed rhetoric into action. Their actions culminated in a very substantial change to the status quo when the southern Solomon's stables (so called because the Knights Templar had installed their horses there) were converted into a multi-storeyed underground Mosque, called al-Marwani. This involved extensive construction works being undertaken without any archaeological supervision, resulting in the loss of substantial evidence relating to the original uses of the Haram and its construction by Herod and others. This work was started in 1997, specifically against the advice of the professional team of the Waqf, who had been barred from the operation.

An interesting Palestinian view of the post-1967 events is given by Nazbi Al-Jubeh of the Centre for Architectural Conservation in Ramallah. He points out that the Israeli side made three changes to the status quo immediately after 1967. The destruction of the historic but slum-like residential quarter in front of the Western Wall, the seizing of the keys to the Magharibah (Moghrabi) Gate, by which the Haram was approached from the Western Wall Plaza, and the confiscation of the Madrasa Tankizziyah on the west side of the Haram, for use by the Israeli Police. These actions by Israel caused suspicion among the Muslim community and led to the closure of the Haram to visitors. The Israeli authorities insisted that the open

areas on the Haram were public spaces but allowed the Waqf to maintain control over the buildings and decide whether to give access to visitors or not. A major traumatic event was the arson attack on al-Aqsa by the Australian Michael Rohan in 1969, which led to much damage to the wooden structure of the Mosque, the eventual installation of a proper fire-hydrant system, and a well-directed programme of restoration by local craftsmen, which won the Aga Khan award for Architecture in 1984–86. Al-Jubeh points out that the changes initiated after Israeli control of Jerusalem were always considered as changes to the 'Status Quo' and so caused great resentment among the Palestinian population, but the major change to the status quo has been the reconstruction of Solomon's Stables into an underground Mosque, larger than al-Aqsa and the Dome of the Rock combined. This work has created the greatest change to the status quo of the area and the fact that it was done without any archaeological supervision is a blot on both the Muslim and Israeli administrations.

Of the personal accounts, with which the volume concludes, the most revealing is that by Mustafa Abu-Sway of Al-Kuds University. He confirms that the Holy Land is sacred to the people of the Book and their prophets, and that the line of prophecy led from Abraham to Mohammed, who was taken from Mecca to the Farthest Mosque (al-Aqsa) and the 'blessed cities', which is a reference to the Bayt al-Maqdis, the Hebrew Temple in Jerusalem. The Bayt al-Maqdis was also a name given to al-Aqsa Mosque, and the term al-Aqsa was used to designate the whole site of the Haram rather than just the southern Mosque. But what is significant is that Allah took the prophet Mohammed on the night journey from Mecca, not direct to heaven, but via the holy city of Jerusalem, which is the gate to heaven for the Muslims as well as the Jews.

Guy Stroumsa, of Oxford University, says that the Temple Mount is a prime example of the fact that religious history is the story of the 'devaluations and revalorizations' of various manifestations of the sacred. The Temple Mount first owed its sacredness to Solomon's Temple. The Christians then attempted to erase its significance and transfer it to the Cenotaph of the Anastasis (Holy Sepulchre) while the Mount remained desolate, as predicted by Christ. On entering Jerusalem, Caliph Omar politely declined the invitation to pray at the Anastasis and went on to build the beginnings of the Dome of the Rock on the site he considered more sacred than that of the Holy Sepulchre. The Islamic Dome was later, by the Crusaders, transformed into the Abbey Church, the Templum Domini, which restored for them the supremacy of the Mount. But that did not last long before the site was again Islamicised, with Christians and Jews denied access. The day will come, Stroumsa says, when the three faiths will meet in Jerusalem, and the Jews, who held it in the past, the Christians who believe in it for the future, and the Muslims, who hold it for the present, will all search for the consensus that will bring them together. Cardinal Carlo Maria Martini quotes the prophet Malachi, who speaks about the Messenger who will prepare the way, 'and the Lord whom you seek will suddenly come to the Temple, and the Angel of the Covenant...behold he is coming...' (3:1). As a Christian, Martini understands these words to refer to Jesus

of Nazareth and his entering of the Temple, as recounted by John the Evangelist. For him, as for the Hebrew prophet Malachi, the Temple Mount is the place of the convergence of many peoples, and Martini extends that to many faiths as well.

Finally Menahem Magidor, recent President of the Hebrew University, admits, as a secular Jew, that when he is on the site of the Haram, the Temple Mount, he is transported in time. He connects to the ecstasy of his forefathers, he is part of a long chain that runs through the Jewish, Christian and Islamic presences that all joined in making this a 'sacred esplanade'. He remains firmly attached to his Jewish past, unbothered by the fact that 'another religion was dominating the site' and 'the fact that.....History superimposed the dreams and imaginations of other cultures, adding depth and meaning to my collective memory'. This is the overwhelming conclusion of this marvellous volume. That the three Abrahamic faiths, often at loggerheads, have each given added depth to the meaning of this site, which they all consider to be their connection from Earth to Heaven, and on which, in this volume, they have graciously given ground to each other.

Hershel Shanks has set the scene for a rational evaluation of the background to the present-day Temple Mount, while Grabar and Kedar, and their team of all the three monotheistic faiths, have given him a stamp of approval for the history of the Temple Mount, al-Haram al-Sharif, and all its vicissitudes throughout the ages.

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Nazenie Garibian de Vartavan, *La Jérusalem Nouvelle et les premiers sanctuaires chrétiens de l'Arménie: Méthode pour l'étude de l'église comme temple de dieu*. Yerevan, 2009. 450 pages. Bibliography of over 500 references including 90 original sources. 153 figures and 25 plates, including 10 in colour. US $120. ISBN 0-9527827-7-4 (paperback).

Pilgrims have sometimes made a great difference when they went back home, and the Armenians are an excellent example. They went on an annual pilgrimage to the Holy Land, and they and their neighbours were led to change both their church calendar and their holy places into reflections of Jerusalem. *La Jérusalem Nouvelle* deals directly with this question, and also sheds new and unexpected light on the design of the Mother Church of Ējmiacin. The author, Mme Garibian de Vartavan, describes her method as *ecclésiologie appliqué*, which means that the key documents about church design are contextualised largely by liturgy and theology. The author is a very reliable guide through the documents.

The book therefore starts with Eusebius' dedication sermon at Tyre, connecting the church with the Temple – not the Jerusalem Temple on earth but its model, the one in heaven. Synagogues were also connected with the heavenly Temple, although

the author does not say so. The Beth Alphaa mosaic, for instance, has angels on the nave floor and in the picture of the sanctuary (see cover of *Strata*), and the simplest explanation is that this synagogue too represented the heavenly Temple. It was also true of Constantine's church on Golgotha. But the area, which was known as Golgotha long before, already had a building on it – the Temple of Aphrodite: this being the principal reason for pulling the shrine to Aphrodite down. During the clearing of the site an unexpected event took place. The Tomb of Christ was discovered, and the author accepts the statements of Eusebius (*Vita Const.* 3.30.4) and Sozomen, who lived in about 400 CE (*Hist. Eccles.* 2.1.5), that inside it were pieces of the cross. She thus rejects as legendary their finding by Helena.

The rock, now revered as the site of Golgotha, as Gibson and Taylor have said, is far too small for three crosses, and a wider area for Golgotha is also implied by calling the Martyrium, to use the words of Egeria, the 'Great Church built by Constantine on Golgotha behind the Cross'. So what is the Rock of Calvary containing the cross itself? The author, judging perhaps from the unsuitability of the site, thinks that it must commemorate another miracle, and suggests Cyril's luminous cross which extended from the Mount of Olives to the Anastasis. But there is no need to suggest such a miracle. The cross may have been there since the first arrangement of Golgotha. In my mind it served as a focus for the whole Golgotha area, and, according to Egeria (*Itin.* 37.5) the people who looked at this cross during Holy Week thought simply of the suffering Christ.

Vałaršapat, or Ējmiacin, the present seat of the patriarch, had been ruined and burnt to the ground by the Persians in the 360s. The city included four holy places, according to the *Vision of St. Gregory*: the Mother Church, the places where the first virgins were martyred and the oil-press where they lived. St. Sahak rebuilt the churches and dedicated them between 414 and 417 CE. But at almost the same time (417 to 435 CE according to Charles Renoux) the Armenian Church adopted the calendar of Jerusalem. This meant a change in the church year, but it also implied a need to get some parallel holy places linking Vałaršapat and Jerusalem. So the four churches were given parallels from Jerusalem. The church farthest to the east, St. Hrip'simē, was the Eleona. The oil-press was the church of Gethsemane, which is Aramaic for 'oil-press'. The Mother Church was the Basilica of Constantine, now the Holy Sepulchre, and the one to the south, St. Gayanē, was Holy Sion.

The book ends with a study of the Mother Church of Ējmiacin. Anahit Sahinyan was the only archaeologist allowed to excavate the church, and he was working in the 1950s, since when there have been many improvements to archaeological method. Sahinyan concluded that the present church was founded at the end of the 5th century. Garibian de Vartavan shows that very little is known about the history of the church, apart from the fact (or legend) that it was founded by the first missionary to Armenia, St. Gregory the Illuminator. If this is true it ranks as a famous church, but the history of its restoration and repairs is almost completely lacking. At the beginning of the 5th century St. Sahak did some repairs (which are unknown), in 487 CE Vahan Mamikonean had to do some more repairs to stabilise the church, and by 618 the Catholicos Komitas changed the wooden roof into one

built of stone. This is all the information available and highlights how great our need is for comparable studies on other famous Armenian churches, I hope by someone as reliable as Garibian de Vartavan.

This is an excellent book, not least because it fearlessly offers new and convincing interpretations of the documents.

John Wilkinson
Former Director, British School of Archaeology in Jerusalem

Grant Reports

IAN CIPIN AND SEVINC DUVARCI
Institute of Archaeology, University College London

In July – August 2009, Ian Cipin and Sevinc Duvarci, both Masters students at the Institute of Archaeology, University College London, participated in the Tel Bet Yerah Research and Excavation Project. The site is located at the southwest shore of the Sea of Galilee, Israel, about a 15 minute drive south of Tiberias. This 30 hectare mound was occupied during the Early Bronze Age (EBA) (3500–2300 BCE) and provides important information for the transition from village to city life, being one of the earliest sites of a planned urban settlement in the Southern Levant. The site has become particularly important due to its associations with a particular type of pottery named after the site itself, Khirbet Kerak Ware (KKW). The importance of KKW stems from its associations with sites in Eastern Anatolia, the Caucasus and Western Iran of the same period. After the EBA town, limited parts of the site were occupied in the Middle Bronze Age and in the Persian, Hellenistic, Roman, Byzantine and Islamic periods.

The site has been periodically excavated since the early 1920s but with little subsequent publication of the work carried out. Thus one of the main objectives of the renewed excavations directed by Dr Rafael Greenberg and Sarit Paz has been to track down and publish the results of the previous eleven excavation campaigns. Furthermore, apart from the most significant structures excavated, a vast amount of the mound is still intact as most previous work concentrated on the exposure of deep soundings which offer little elucidation with regard to the function of structures such as the 'Circles Building'. Thus the renewed project aims to rectify this and such related issues.

UCL has in fact had a long association with Tel Bet Yerah with some of the material from the earliest excavations being held at the Institute of Archaeology. It was therefore with great delight that the opportunity arose to join a team being led by Dr David Wengrow and to take part in the current project. Dr Wengrow assembled a team of 35 students to join the 16 from Tel Aviv University in what was planned to be the first year of a long standing collaboration.

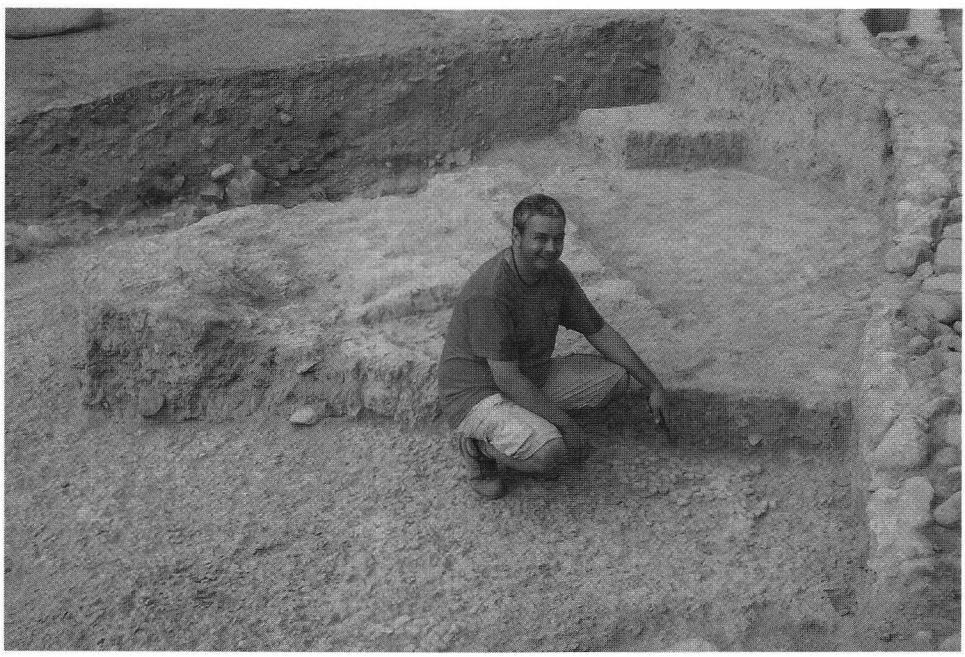
In 2009, the areas being excavated were Area SA-M to the northeast of the Circles Building which contains structures from the EBA; Area GB-H to the north of Area SA-M (newly opened in 2009) with Hellenistic period structures; Area SA-S, on the western side of the Circles Building, which included the recording of the Early Islamic and Hellenistic period structures and the excavation of the domestic

complex of the EBA; and Area GB-T, involving re-excavation and recording of the fortified basilical complex.

Area SA-S (Ian Cipin)

As a student of the Master's Programme in the Archaeology of the Eastern Mediterranean and Middle East at UCL's Institute of Archaeology, with a particular interest in the Chalcolithic and Early Bronze Age of the Southern Levant, it was with great excitement and anticipation that I attended the 2009 season at Tel Bet Yerah. I was designated to work in Area SA-S as assistant to the Area Supervisor, Sarit Paz. The intention for this season was to build upon the work carried out in 2007 where a street was properly cleaned and domestic structures were revealed. The hope was to find out more about the Early Bronze Age levels in the area just to the west of the Circles Building.

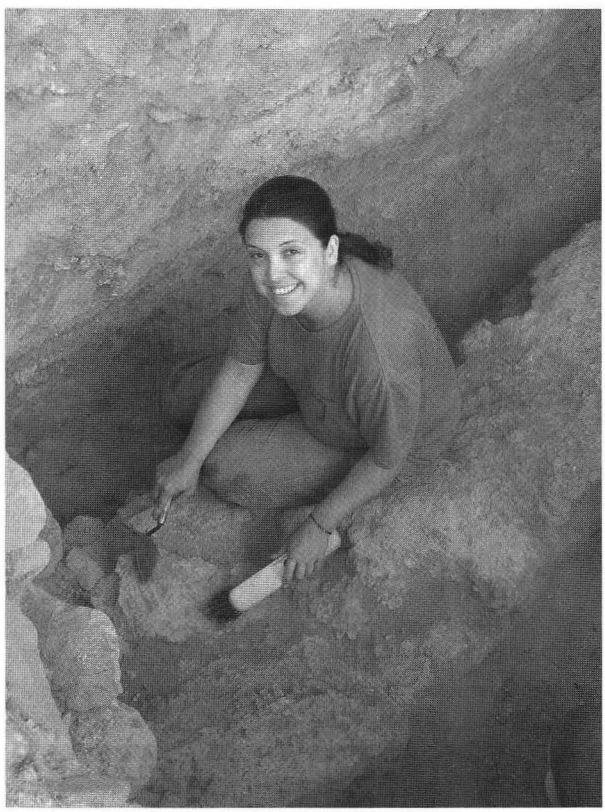
Before work on the Bronze Age levels could begin in earnest, however, it was necessary to properly excavate, record and remove the later Hellenistic and Early Islamic features. This included some substantial walls and floors but perhaps the most interesting feature was a beautifully preserved water channel that ran across the area. In places this was capped with stones, with the plaster being very well preserved both on the inner and outer walls. Eventually Early Bronze Age levels were reached across the majority of the area revealing a complex of 3 houses with paved streets to the east and south.



The most exciting find was made, however, at the edge of a packed gravel pavement that may have been part of a shared courtyard on the north side of the complex. At the edge, where the pavement was partly washed away, was found a fragment of a ceremonial Egyptian palette measuring approximately 2 × 4 cm. It is believed that this is the first such palette found outside of Egypt. It bears the carving of an arm and hand holding a sceptre together with an ankh sign. Although connections with Egypt are attested at this time, such a remarkable find only goes to illustrate the importance of this site in relation to wider connections with the world further afield.

Area GB-T (Sevinc Duvarci)

As an assistant to the area supervisor Taufik Deadle, my duty was to assist him in the re-excavation and recording of the fortified basilical complex which was unearthed by Bar-Adon and Guy in early 1950s. My work consisted of assisting him in overseeing the undergraduate students of the field school with their fieldwork and surveying techniques, recording of the data, processing of the pottery and assisting him in implementing the excavation strategy.



The clearing and recording of the area and mosaic floor fragments excavated by Bar-Adon was the first work in the area. After that my supervisor and I focused our attention to the excavation of Rooms 34 and 76 situated north of the apsidal building together with Room 21, located at the south of it and Tower 12 situated west of the Area SA-S. The structure was identified as synagogue, Roman or Byzantine fort, Umayyad palace of al-Sinnabra by previous researchers. Thus it was our primary aim to uncover sealed contexts, such as foundation trenches and floor deposits, which could provide us an excellent opportunity for getting a broader view of the construction and dating of this massive complex. The deep sounding in Room 34 yielded evidence of earthquake damage which could aid to date the structure. Furthermore, the repairs to the main structures and the mosaics indicate at least two building levels. With the accumulation of the architectural and pottery data it is suggested that the complex is dated to the Early Islamic period with the possibility of the earliest of the Umayyad palaces. The deep sounding in Room 34 which yielded EBA pottery and especially KKW around the same levels of Area SA-M gave us some insights that the building could be situated on the EBA structures of the site.

With my supervisor's early departure, I was handed over the responsibility to carry on the excavations in the area which proved an invaluable experience for me.

As a Master's student, my main research interest is the EBA of the Near East with a concentration on the investigation of the change and continuity of traditions in material culture. Khirbet Kerak ware is essential in investigating the commercial and cultural relations between the Levant, Caucasus, Anatolia and Western Iran.

We are most grateful to Dr David Wengrow for including us in his team, Dr Raphael Greenberg and Sarit Paz for providing the opportunity to participate in this stimulating and exciting project and the Anglo-Israel Archaeological Society for their generous grant that allow us to participate.

ZOE GRIFFIN
University College London

On July 15th, 2010, a small group of five undergraduate and postgraduate students of University College London (UCL) travelled to Israel to join the excavations at the Bronze Age site of Tel Bet Yerah on the Sea of Galilee. I am to start my Masters in the Archaeology of the Eastern Mediterranean and Middle East this September with UCL and was lucky enough to be able to participate in this year's excavations thanks to the generous grant from the Anglo-Israel Archaeological Society.

Led by Dr David Wengrow from UCL, we joined the core project team of staff and students from Tel Aviv University and students from the University of California, Los Angeles (UCLA). As one of the earliest urban centres of the Jordan Valley during the Early Bronze Age, Tell Bet Yerah is a hugely important site. It has played a particularly important role in research into the transition from village to urban life in the late 4th and 3rd millennia BCE. This year the British team were

excavating domestic areas in close proximity to the famous Circles Building in Area SA, supervised by PhD student Sarit Paz of the University of Tel Aviv.

Excavating a Tell site is slow work requiring a great deal of care. We generally use small tools and must frequently clean as we go in order not to miss anything. Digging in Israel in July is physically draining work, so work is at a fairly slow pace! However, in just the two weeks that our team were on the excavation we made good progress and some interesting discoveries.

Some of our discoveries may prove important in helping to substantiate existing theories. Sarit Paz is investigating the settlement of Early Transcaucasian (ETC) migrants at Tell Bet Yerah during the 3rd Millennium BCE. It is thought that there was some kind of unknown crisis at the end of the Early Bronze (EB) II which led to the complete or partial abandonment of the city. The ETC migrants are thought to have arrived after this and to have established themselves in the unoccupied or partly abandoned settlements. The discovery of Khirbet Kerak Ware (KKW) pottery is thought by many to be evidence of this migration. Sarit Paz believes that because they simply re-used existing buildings, did not build fixed hearths or benches and did not produce large non-portable storage vessels, this suggests that they never really established themselves or settled properly.

This season I was mostly excavating inside a domestic building at EBII levels in which I found no KKW pottery, as expected. However, I did discover a pit cut into the EBII levels which appears to have been dug by the ETC 'migrants' as it contained a great deal of KKW. Interestingly, in the pit I also discovered a large quantity of daub with reed imprints. This is interesting because the EBII people did not use wattle and daub; they constructed walls from mud bricks. Wattle and daub is a lot quicker to construct and could be said to make a more temporary structure than mud bricks walls. Therefore, not only does this discovery suggest that these ETC 'migrants' were notably different to the EBII people, it also might support Sarit Paz's theory that these people perhaps did not see themselves settling here permanently.

Whilst digging in this area we also discovered many mud bricks that had fallen, sometimes in large chunks of bricks, quite a distance from the original walls. This might support a common theory that the crisis that caused many, if not all, of the people to leave may have been a massive earthquake.

I also discovered in this area fragments of a beautiful, delicate alabaster vase which can only have come from Egypt. This is interesting because one of the British students, Mike Lewis, found a part of Egyptian palette in this area last season which is of very high quality comparable to royal cosmetic palettes. These discoveries along with other previous discoveries in Tell Bet Yerah and Egypt suggest possible interaction between the Egyptian court and the Early Bronze Age town.

Other discoveries by the British team this year were the continuation of a very well-preserved internal pebble floor and another KKW pit containing organic material, including grains, which should produce some interesting information.

The site director Rafi Greenberg, along with Sarit Paz and all the Israeli students were exceptionally welcoming and helpful and made it a fantastic experience for

all of us. They have said that we are more than welcome to return as the excavations will continue to run each July so hopefully we will return in the near future!

LYDIA ATUBEH
University of York

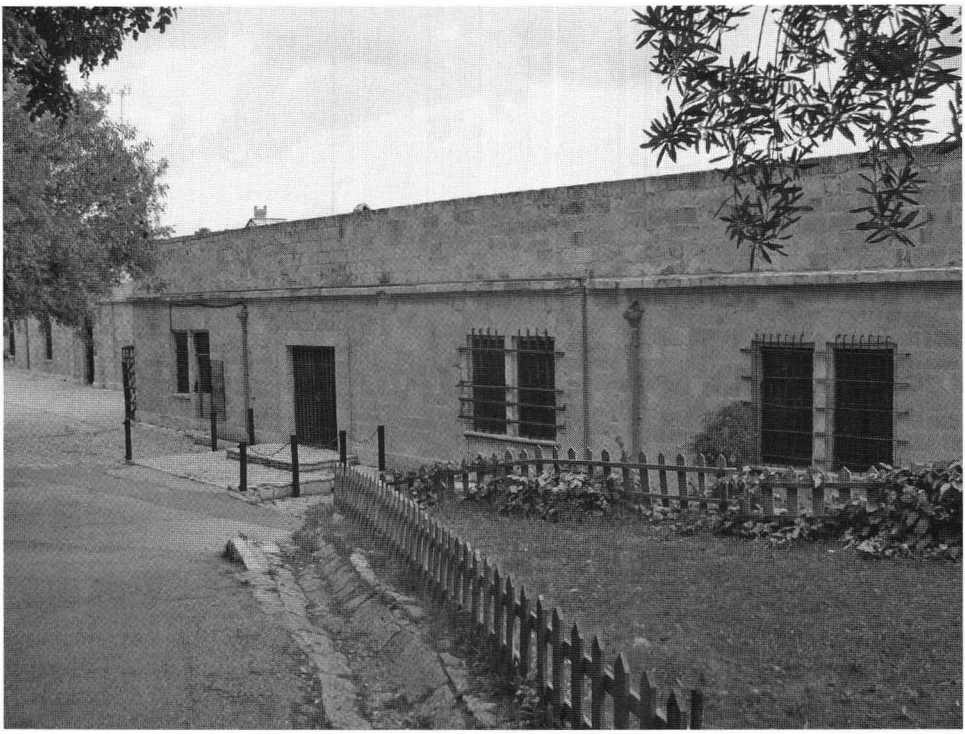
A musical celebration of the 100th anniversary of the kibbutz movement, a meeting with the deputy mayor of Jerusalem and a visit from the president of Israel were highlights from my three week placement with the Society for Preservation of Israel Heritage Sites (SPIHS). As part of my postgraduate programme in Conservation Studies of Historic Buildings at the University of York, I observed the conservation activities and policies of the country and completed research for my dissertation on conservation planning.

SPIHS, created in 1984 as a non-governmental organisation, advocates for the protection of historic buildings and landscapes throughout the country. The society is divided into geographic regions with each area under separate management. I had the privilege of working under district managers, Tamar Tuchler and Isaac Shweky, from Tel Aviv and Jerusalem respectively. There were similarities in the conservation approaches within both cities as both engaged community residents, business owners, and political leaders in the identification of areas of historical value, develop plans for their immediate care and long term conservation needs.

In Jerusalem, several projects are underway including historical research and protection of the Jerusalem Central Prison, a museum (see photo). Another is the regeneration of the Street of the Prophets which incorporates a well known market area within the city. While in Tel Aviv I was fortunate to observe the adaptive reuse of the Old Train Station (see photo) near the coastline of the city. The society is currently collaborating with management to develop future conservation measures for the site.

Numerous architectural elements in the Israeli landscape were built during the British mandate period, 1917 to 1948. In Rosh Ha'Ayin, a city near Tel Aviv, several British military buildings are still standing. With the aid and direction of Yiska Raveh, a freelance historian, SPIHS is investigating the significance of the buildings. Through a search of the United Kingdom National Archives, the British Library and newspaper repositories, I located documents and articles for further research. The buildings are in varying stages of repair and reuse. The hope is to renew interest in the architecture and encourage its conservation.

For my dissertation research, I journeyed to Jaffa near Tel Aviv to where a regeneration project was recently completed. The area, a long time commercial centre, was transformed by restoring its historic architecture. A significant aspect of the project was the signage for the individual stores. Initially, each business owner wanted to protect the image of their store by keeping their original signs. With encouragement from the project's conservation architects, an agreement was made



to create signs to fit the architectural scale of the buildings' exteriors while retaining the unique design of each store. Another iconic feature of the area is its clock tower.

My time in Israel was beneficial in many ways. Not only was I able to gain a clearer understanding of the conservation of historic buildings in the country, but also a deeper knowledge of the society and culture. With each conversation, whether speaking with a political leader, architect, or local historian, the message was the same.

Conservation of the architectural heritage of Israel is valuable to its citizens. Like other forms of cultural expression, the preservation of heritage appears to transcend language and borders. Although a young country, the history of the people of Israel is quite long. There is much to preserve and the people are passionate about relating this history, structures and places, to an international audience.

Summaries of Lectures

From Burckhardt to Bell: Western Travellers in the Near East

EVELINE VAN DER STEEN

In the 19th century the Near East was a cauldron of tribal activity and tribal conflict. It was officially part of the Ottoman empire, but particularly in the south, in Transjordan and the Arabian peninsula, the Bedouin tribes were all-powerful. This was also a time that saw a surge of exploration in the region, largely from western explorers and travellers, looking for adventure as well as for the homeland of the Bible. The accounts of these travellers, their encounters with the Bedouin and their descriptions of life in the Holy Land and beyond make fascinating reading. They also tell us of a way of life and a political constellation that has since disappeared, but that can teach us much about a society in which tribal politics and tribal affiliations determine the social and political landscape, not only in the recent past but also in earlier periods such as the Bronze and Iron ages in Palestine and Transjordan.

The Place of the Dead Sea Scrolls Community in Jewish History

ANDRÉ LEMAIRE

Khirbet Qumran is famous for the discovery of some 900 Hebrew and Aramaic manuscripts, dated about the turn of the era, in caves around the ruins. These manuscripts are now all published but the publication of the excavations directed by R. de Vaux is still on the way because the excavator died in 1971. There are still many discussions about the function of the site itself with some ten different interpretations. From the archaeological point of view, the function of the site seems an enigma since none of the proposed interpretations fit all the archaeological data and the historical context. After reviewing these archaeological data, the connection with the manuscripts and their content, as well as the historical context, a new interpretation will emerge that explains the place of Khirbet Qumran in Jewish history.

The New Ancient Near East Gallery at the Ashmolean Museum, Oxford

JACK GREEN

This lecture presents an overview of the Ancient Near Eastern archaeological collections at the Ashmolean Museum from its humble beginnings to the present period of major change and innovation. The opening this year of the newly transformed Ashmolean provides an opportunity to look forward to the future, as well as back to the history of the Ancient Near East collections, from D.G. Hogarth's role as Keeper, assisted by T. E. Lawrence and Leonard Woolley in the early 20th century, to the four decades of research and publication facilitated and carried out by Dr Roger Moorey.

Between the 1920s and 1970s, the Ancient Near East collection underwent considerable expansion, due to its active role as a teaching and research collection, and as a repository of finds from major British-led excavations in Iraq, Syria and Palestine. As a result, it includes important material from Kish and Nimrud, Al Mina

and Tell Atchana, as well as those carried out by Kathleen Kenyon at Jericho and Jerusalem. The accessibility, representativeness and range of the Ancient Near East collection (rather than its size) has made it renowned throughout the world.

The old Drapers' gallery that housed the Ancient Near East collections in the Ashmolean is fondly remembered. However, this gallery was difficult to find and in considerable need of updating. When the design of a new Ancient Near Eastern gallery began in 2007, there were many challenges, especially in terms of how the collection was to serve in teaching and research, as well as meeting the expectations of a new visitor audience. This lecture provides an overview of the new gallery of the Ancient Near East, and considers the future for Near Eastern archaeology in museums during changing times.

A Creaking Door Lasts Longest: The Balawat Gates of Ashurbanipal

NIGEL TALLIS

It is to be expected that archaeological narratives will feature discovery, but that of the gates from Balawat is far more than this. This is a story of discovery, loss, recovery and, ultimately, despite everything, of survival. Three remarkable elaborately decorated and inscribed gates have been found at the site of Balawat in Northern Iraq (the ancient site of Imgur-Enlil). Two of these gates were set up by the Assyrian king Ashurnasirpal II (883–859 BCE) and one gate by his son Shalmaneser III (858–824 BCE). They consist of long bands of sheet bronze once mounted on wooden doors. These bronze bands have finely embossed and chased decoration showing scenes of warfare, files of prisoners, the presentation of tribute, and hunting. Crucially, the bands also have descriptive epigraphs for the scenes (something the contemporary stone reliefs lack) together with longer royal inscriptions on the edging of the doors.

The large Shalmaneser gate is well known. It was excavated in 1878 by Hormuzd Rassam in the palace at Balawat, and was brought back to the British Museum for display. It has been published in full in 1902 and in 1915. What is less well known is that Rassam actually found two sets of gates in the palace: the second was a less well preserved gate of Ashurnasirpal II, of which only two bands were published while the remainder lay forgotten in a storeroom until rediscovery by R. D. Barnett in 1956.

The second set of Ashurnasirpal II gates, that from the Mamu Temple at Balawat, was found by Sir Max Mallowan during the excavations of the British School of Archaeology in Iraq (also in 1956). R. D. Barnett was instrumental in gaining permission to include this new discovery in his planned publication on the British Museum gates, and the Mamu Temple gates were sent to the British Museum for conservation and detailed study. On return they were placed on permanent display in Mosul Museum, but sadly these gates were looted, seriously damaged and largely lost in 2003.

In 2008, R. D. Barnett's aim for the final publication of the gates was realised. For the first time it has been possible to reconstruct the original arrangement of the decoration of the gates, to understand how the gates were made, and to place them in their historical context – specifically Ashurnasirpal's first major engagements with the west.

The Story of the Scrolls

GEZA VERMES

From the time the Dead Sea Scrolls were discovered in 1947 to the present day the story of the Scrolls has been one of great controversy, complicated by an atmosphere of secrecy. While the texts from the Judaean desert have now been published, the archaeology of Qumran – the place where the Scrolls were found – remains partly hidden from view. This continues a legacy

of secrecy, meaning that archaeologists still cannot fully understand the context of the Scrolls. While a variety of different interpretations of the site have been presented over the past decades, that Qumran was an Essene settlement continues to be the most likely interpretation of the available evidence.

The Joy of Studying Aramaic Ostraca

BEZALEL PORTEN

In the last two decades there have come to light some 1700 Aramaic ostraca, spanning the years 362 to 302 and believed to have come from the vicinity of Hebron, situated in what was ancient Idumaea (Biblical Edom). They made their appearance on the antiquities market and were grabbed by eager collectors, who made them available to enthusiastic scholars, who published them in record time. Three major publications have already appeared and a fourth is on the way. The editors of one of these books never saw the actual ostraca and worked only from photographs. Today, their black and white pictures are no longer considered adequate. All photos must be digital. Each piece is shot twice, dry and wetted, and also a third enhanced print is produced. Aided by these three prints, each piece is hand-copied at source. Deciphering a piece is often like solving a puzzle. Initial readings that do not make sense need to be challenged. Thus the letter *qof* in the incomprehensible name Shaqaniqos could be broken into the two letters *ayin* and a *dalet*, yielding the hitherto unknown but comprehensible name Saadaniqos, 'Qos has helped me.' This reading was validated in two other ostraca, each from a different collection. A daring reading in a third ostracon produced the name Rabsaadani, 'The Great One helped me'. Most unexpected is a land description text which opens with mention of 'the ruin of the temple of YHW' and closes with reference to two private tombs. Three ostraca for Óaggu/Óagagu b. Baalsamak clarify the historical question of when Antigonus replaced Alexander IV. Four ostraca demonstrate the agricultural work detail of the major clans and two illustrate a 6+ month run of a single scribe recording 17 chits for wheat flour. Finally, we survey the many different logos by which scribes sealed their documents and view two that were both unique and colourful.

The Bible and Archaeology – Where are We Now?

HUGH WILLIAMSON

Arguments continue to rage about the proper association of archaeology with Biblical studies. Some continue to believe that archaeology should be used mainly as a handmaiden to Biblical history, supporting the written text and illustrating it where appropriate. Others take the completely opposite view and think that the history of Israel should be written exclusively on the basis of archaeology (this being first-hand evidence) and the Biblical account can then be seen to be largely erroneous and should be corrected accordingly. And, of course, many others sit somewhere between one or other of these extremes. This lecture is a very personal take on this dispute, drawing on the lecturer's experiences of excavation at Lachish and Jezreel while being professionally a teacher of the Hebrew Bible. It is suggested that the current debate has important issues of method to raise about the proper approach to ancient history but that both sides are guilty of misrepresenting one aspect of the topic or another; archaeology and textual study can be better viewed as complementary rather than as exclusive undertakings.

The Khirbet Qeiyafa Inscription and the Kingdom of David and Solomon

GERSHON GALIL

The Qeiyafa inscription was unearthed two years ago at excavations conducted by

Prof. Yosef Garfinkel and Mr. Saar Ganor at Khirbet Qeiyafa near the Elah valley. It is proposed in this lecture that the inscription is prophetic, dictated by a teacher to his student, and the most ancient Hebrew inscription ever found. It indicates that there were scribes in Israel who were able to write literary texts and complex compositions as early as the beginning of the 10th century BCE. The issue of the reliability of the Biblical description of the kingdom of David and Solomon is raised again, in light of the Qeiyafa inscription.

The Nature of the Neolithic Religions in the Near East

DOUGLAS BAIRD

The Neolithic of the Southern Levant and the Near East more generally, c. 10,000–6,000 BCE, is replete with interesting evidence of distinctive ritual practices. These include plastered human skulls, decapitated animal burials, elaborately decorated ritual buildings, charnel houses, elaborate paintings and plaster reliefs of animals and people, monumental stone sculpture, and distinctive deposits in walls and under floors, often incorporating unusual artefacts or material remains in unusual fashion. Some scholars have suggested that major transformations in the nature of religious beliefs and cosmologies at this time had an important role to play in the development of the first villages and farming communities. For example, Jacques Cauvin has suggested that people at the beginning of the Neolithic were the first to conceive of the supernatural world in terms of gods and goddesses and that this allowed communities c. 11000 years ago to take control of the natural world. Others have suggested that the Neolithic saw significant changes in ritual practice from a world of shamans to one where practice was more institutionalised. Interpretations of Neolithic religions have seen central roles for Mother-goddesses, for phallocentrism, for the transcendence of violence and death, and for ancestor veneration. This lecture reviews some of these intriguing ritual practices from the southern Levant and across the Near East, asking whether the Neolithic had a special place in the development of religion and whether reflection on these issues can inform our understanding of religion more broadly.

Obituary

HANAN ESHEL (1958–2010)

Hanan Eshel, professor in the Martin (Szusz) Department of Land of Israel Studies and Archaeology at Bar-Ilan University, passed away in Jerusalem on April 8, 2010 after a long battle with cancer. An expert on the history and archaeology of the Land of Israel in the First and Second Temple periods, Hanan was best known for his scholarship on Qumran and the Dead Sea Scrolls, the Bar Kokhba revolt, numismatics, and the Samaritans. Hanan's service to the field included directing the Jesselson Epigraphic Center of Jewish History at Bar-Ilan University, and membership on the board of the Israel Exploration Society, and the editorial boards of the *Israel Numismatic Journal* and *Dead Sea Discoveries*.

Hanan was a prolific scholar who authored or edited several books and over 200 articles. His books include *The Dead Sea Scrolls and the Hasmonean State* (in Hebrew and English), two volumes on *Refuge Caves of the Bar Kokhba Revolt* (in Hebrew), *The Days of the Hasmoneans* (in Hebrew), and Carta's Field Guides to Masada, Qumran and En Gedi (in Hebrew and English).

Hanan was also an active field archaeologist, with whom we had the honour and pleasure of collaborating on various projects. At Khirbet Yattir in southern Judaea,

Hanan co-directed excavations with Jodi Magness and Eli Shenhav. Hanan was a avid fan of the film *Monty Python's Life of Brian*, which he knew by heart and insisted be shown every week on the dig (and which he watched every time!). But Hanan's true passion was the exploration of caves and discovery of scrolls. In a cave at Ketef Jericho, he and Boaz Zissu excavated documents dating to the Persian period and the Bar Kokhba revolt. In the Cave of the Sela at Naḥal Ḥever, Hanan and David Amit discovered a tetradrachma of Bar Kokhba – the first coin of this type to be found by an archaeologist. Hanan's more recent projects included excavations with Magen Broshi in the cemetery and residential caves at Qumran.

Hanan's wife and companion Esther (Esti) Eshel, a prominent epigrapher and biblical scholar at Bar-Ilan University, collaborated with Hanan on many scholarly projects. Hanan is survived by Esti, two children, and three grandchildren.

Hanan's tremendous energy and intellectual curiosity were exceeded only by his seemingly boundless knowledge, which he generously shared with others. Hanan was a great man with an equally great appetite for life, and his loss leaves a void that is deeply felt by his many close friends, colleagues, and students.

"*Always look on the bright side of life*." (Monty Python)

Jodi Magness and David Amit

Special Thanks

PROF. HUGH WILLIAMSON, CHAIRMAN, SCHOLAR & 'AMBASSADOR FOR ARCHAEOLOGY': A HOMAGE

After 19 years of immense dedication between 1991 and 2010, Prof. Hugh Williamson has stepped down from his position as Chairman of the Anglo-Israel Archaeological Society (AIAS). Hugh has certainly put in the miles – the 76 committee meetings, 13,680 kilometres of train travel from Oxford to London, and goodness knows how many glasses of middling wine only start to tell the story of his commitment.

Hugh remains the Regius Professor of Hebrew at the Oriental Institute, the University of Oxford, and Fellow ('student') of Christ Church. The life of an Oxford don is relentless and the 'species' comes in two types: the white rabbit who scuttles along the town's back lanes, always trying to catch up with the backbreaking workload generated by the dreaming spires. And then there's the eclectic don, who gracefully juggles a mind-boggling diversity of duties. Hugh Williamson falls into the latter category of the modern Oxbridge professor, in his AIAS Chairman days combining the role of Chairman of the Oriental Studies Faculty Board and tutor with college duties, journal and book author and editor, and 'ambassador' extraordinaire for our Society. He has been much involved also in our sister organisations, the PEF and BSAJ/CBRL. Hugh is currently Vice-Chairman of the Board of Governors of the Oxford Centre for Hebrew and Jewish Studies and Vice-Chairman of the FBA. Despite these formidable responsibilities, Hugh took time out to get his hands dirty on site, having participated in five seasons of excavations at Jezreel from 1990.

Over almost two decades Hugh has steered the Society with a wise sense of direction, maintaining perfect ballast and somewhat miraculously keeping its cargo unspoiled. These have been years of both great change and soul-searching within biblical archaeology. In the 1990s the discipline tried to divorce itself from the spectacularism of simply digging to unearth the Bible where ever the pick broke soil. For an organisation such as ours, the new 'Syro-Palestinian archaeology' was not always an appetising dish to serve up. The political criticism of all things Israeli, culminating in cross-board attempts to boycott its scholars, was a further sharp reef needing thoughtful navigation.

Other than its open camaraderie, perhaps the greatest achievement of the AIAS under Hugh's tenure has been its sense of fair play and non-political front to the outside world, promoting togetherness rather than differences. Scholars from any country, religion and political background have been welcome to speak to the

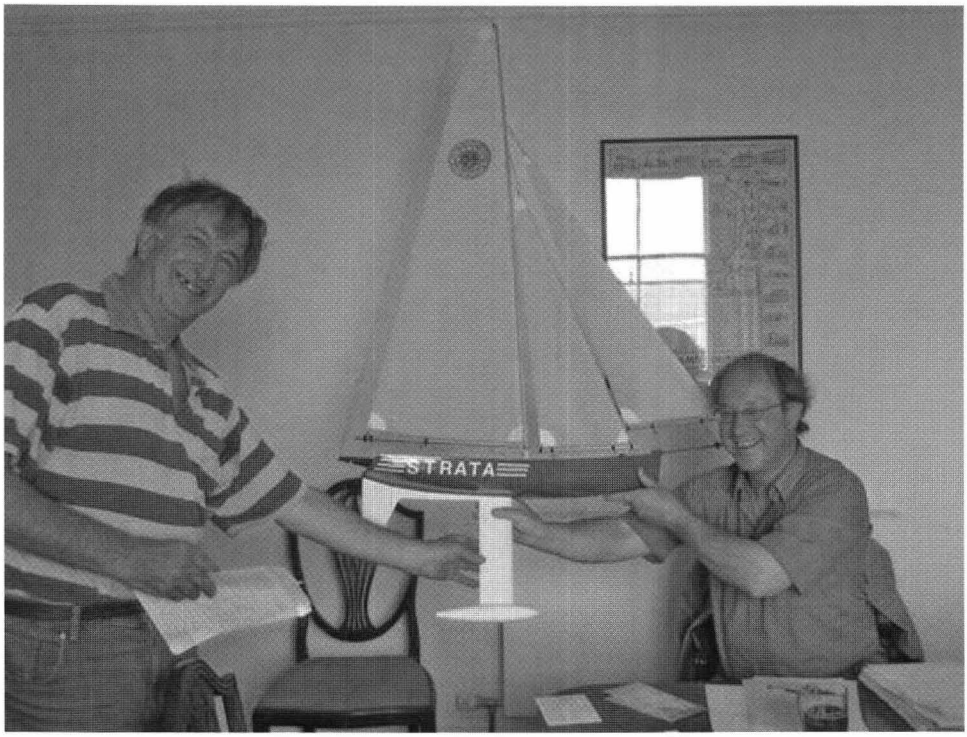
Society and publish in its journal. The Society under Hugh always travelled the middle ground and occupied it with non-discriminatory morals. This philosophy has been reflected in lectures, articles and grants, where Natufians, Assyrians, Philistines, Egyptians, Israelites, Jews, Christians and Samaritans have all rubbed shoulders in the examined past.

The vision that Hugh brought to Anglo-Israel archaeology was always expansive – more telescopic than microscopic. As Chairman, agenda-free he never promoted his personal beliefs but always retained the role of conductor rather than maestro, keeping the beat nicely ticking along. Although a renowned expert on the Book of Isaiah, Hugh's interests in antiquity are appropriately wide. Behind his humility, it seems reasonable to suggest that when it comes to the archaeology of the Bible Hugh is especially stimulated by long-term events, rather than 'men and movements', those heady literary events and larger-than-life personalities that Old Testament priests selected as the glue to bind their biblical epic together.

In a lecture delivered in St. George's Cathedral, Perth, in 2004 on 'Confirmation or Contradiction? Archaeology and Biblical History', Hugh opened a window into the ideas behind his thinking:

> It is in the nature of the case that archaeology is best suited to providing data necessary for describing the conditions that make for major social change. It is clear that only in very rare circumstances (and certainly far less frequently than the old biblical archaeologists believed) is it possible directly to correlate archaeological finds with specific historical events. There are many reasons, for instance, why a site may have been destroyed and many people who may have been responsible. But conditions for change are of much longer development, depending as they are on a host of environmental as well as human and other factors. Certainly, some of these may be so strong that change becomes predictable, and so inevitable. It is evidence of this sort that archaeology was actually always best suited to provide...
>
> On the other hand, even if the evidence of this sort is sufficiently strong to conclude that change is inevitable, it usually also requires a catalyst to bring the change into being. Such a catalyst may be a peculiar set of circumstances or the appearance of a particular personality... Alongside the broader conditions for change there is also a particularity about the course of historical events which are equally the subject for legitimate inquiry. It is on these latter which the biblical writers appear to have concentrated, and without the textual evidence we should be unable to say anything about them at all. This equally makes such matters the subject of research and debate, and given the nature of the sources and the distance which separates us from the events it is not at all surprising that there should be differences of opinion among scholars.

These far-reaching fascinations in *l'histoire de longue durée* – the slow social changes that moulded the everyday world of ancient Israel – as well as in the protagonists of the Old and New Testaments, were reflected in the choices of lectures selected during Hugh's tenure, which he took a particular interest in keeping lively and diverse. These ranged from *Cyprus and the Levant in the Neolithic*



Despite his many responsibilities, Hugh Williamson has managed to keep up a family hobby of racing model boats. This he enjoys in his home town with the local Society of Southwold Model Yacht Regattas. Barbara Barnett, a long-time AIAS committee member heard of this from Martin Goodman, Hugh's friend and successor. So Geoffrey Earle, an expert model-maker, was commissioned to design a new model boat for Hugh as a leaving present. We named it 'Strata' after this journal and Barbara's daughter, Celia Barnett and colleagues, worked on our logo of the Signs of the Zodiac from the Beth Alpha synagogue, now emblazoned on one of the sails. We hope it wins many races!

(Joanne Clarke) to *Ugarit: Clues from a Canaanite City?* (Adrian Curtis), *The Disappearance of Mrs. God* (Diana Edelman), *Idols of the People: Miniature Images in Canaan, Israel and Judah* (P. R. S. Moorey) and *Fakes, Forgeries and Looted Artefacts in the Archaeology of the Holy Land* (Shimon Gibson).

Fittingly enough, Hugh ended his tenure as Chairman in May 2010 by delivering his own lecture at the British Museum, entitled *The Bible and Archaeology – Where are We Now?* His argument followed the lines of his 2004 Perth lecture cited above, and was very well received by the public. As one blogger, Dr. Bhaskar Dasgupta, succinctly told the world:

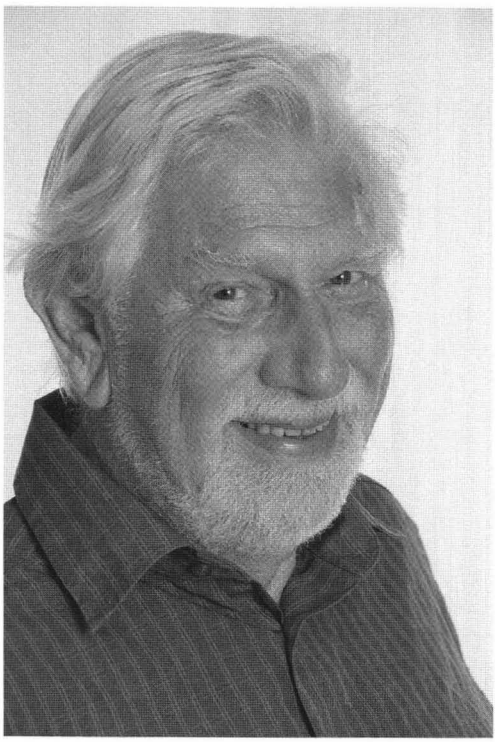
Hugh Williamson with 'Strata'.

> It was a fascinating lecture and I learnt so much about the Bible and Archaeology. It was full of professors, people with spectacular beards and corduroy wearing historians, archaeologists and other luminaries... So his point was simple, do not look at the bible as a history book. Look on it as a book of faith, a book of myths and stories, a book which is full of parables. It was written by people who collect memories and then mix it up with rumours, myths, politics, and so on and so forth... While exiting the British Museum, guess who I bumped into? One of the Kings (well, Prince Charles in this case) for whom history is written.

For the members who had the pleasure to sit on the committee of the Anglo-Israel Archaeological Society, observing the artistry of Hugh's Chairmanship has been a privilege and exemplar that has certainly contributed much to my own personal and professional development. The entire Society wishes Hugh continuing success in his career and greatly looks forward to especially warmly welcoming him to future lectures with many more middling glasses of wine.

These are seriously big shoes to fill, but in Prof. Martin Goodman, the incoming Chairman, the Society is extremely fortunate to have secured the services of another brilliant mind with enormous experience in our field. No rest for the train tracks to and from Oxford quite yet.

Sean Kingsley, Director, Wreck Watch Int., London



Ashley Jones

ASHLEY JONES: A DEDICATED FRIEND

Ashley Jones, who has stepped down as Vice-Chair of the AIAS, has been a dedicated and enthusiastic member of the Society for many years. He has been Vice-Chair for most of that time and a Trustee. On many occasions he has presided at lectures in his own charming style. He provided a most appropriate meeting place for our Executive Committee Meetings for many years. This was at his office, behind the fascinating Museum Bookshop he ran till quite recently, in Great Russell Street. Not only was this a treasure-trove of books on all aspects of archaeology, to which visiting archaeologists would come, it was also the centre for many activities. From there, too, he established a unique organisation arranging for keen amateurs to join excavations and explore Israel. Ashley had much practical advice to offer our Society, especially on publishing matters. He was always up-to-date on the latest archaeological literature and he wrote numerous interesting reviews for our journal.

In addition to being Vice-Chair Ashley has been Publishing Editor and then Book Reviews Editor Bulletin for many years. We commiserate with him over recent health difficulties he has experienced. We shall miss him!

Barbara Barnett

Reports from Jerusalem 2009–2010

REPORT 16 – SEPTEMBER 2009

Although it is now the end of the summer dig season, not much has yet been announced about recent finds, but there has been plenty of other news.

IAA private Collections register

The Israel Antiquities Authority (IAA) has begun to compile a register of private collections of antiquities. There are estimated to be 100,000 collectors of more than 15 significant artefacts, and they have been required by law since February of this year to register with the IAA. So far few have come forward as it seems owners are worried that their items may be impounded, and they are also worried about security. The IAA says there is no intention to requisition any item, only to register it and see if private collectors are holding items that may help to further identify or explain artefacts held by the State. The IAA will issue certificates to approved collectors and will also help with photographs and historical analysis of the items.

Palimpsest investigation at Ben Gurion University

Ben Gurion University in Beersheba is designing a programme to investigate palimpsests, and the University scientists are finding methods of highlighting the original text, which may have been partly scratched off to make way for the later one. In several cases, an original Hebrew text has been deciphered under a later Arabic one. The texts in question are mainly medieval and come from such sources as the Cairo Genizah, the Al-Aqsa manuscript library in Jerusalem and Al-Azar manuscript library in Cairo. The method of investigation is being developed by the computer science and humanities departments of the University and when fully operational the scientists hope to be able to examine further documents now in the British Museum, the Louvre and other national libraries.

Jerusalem: Roman mansion

The large site opposite the City of David Visitor's Centre, which used to be the Givati car park, is throwing up more and more evidence of intensive use. The latest finds indicate that it housed a luxurious Roman mansion, of which already 1,000 sq. metres have been uncovered by Dr. Doron Ben-Ami of the IAA. This was the

area where an ornate gold ear-ring was found recently, and the small sealing stamp in the shape of a boxer's head. The mansion was built in two storeys around a central courtyard and had a tiled roof. It seems to have been destroyed in the earthquake of 363 CE that devastated many buildings around the Jordan Valley.

Sepphoris tomb

About six months ago a small stone doorway was uncovered to an underground tomb in Tzippori (Sepphoris) in the Galilee. The landowner was preparing to build a chalet on his garden plot and discovered this underground opening, of which the lintel bears the name of the 3rd century Rabbi Joshua ben L.evi. The Tiberias Magistrates court and the owner have now reached agreement for the IAA to conduct an excavation of the site, which will begin shortly. There is considerable speculation about the inscription and doubt, as this Rabbi Joshua is mainly known to have lived in Lod, much further south. And there is also some concern that extreme Jewish religious elements, who oppose any disturbance of buried remains, will oppose the dig.

Binyamin Netanyahu visits Palestine Exploration Fund, London

The recent visit of Israel's Prime Minister Binyamin Netanyahu to the offices of the PEF during his visit to London caused some excitement in the Hebrew Press, and the Prime Minister mentioned his pleasure at the visit at his Press Conference. The Jerusalem Post said he was 'thrilled' and gave a brief history of the Fund.

Jerusalem: Canaanite wall

It was announced by the IAA that sections of a Canaanite wall of the MBA II period were recently uncovered by Prof. Ronnie Reich and Dr. Eli Shukron in the area of the Jerusalem National Park around the City of David. It is built of massive boulders and stands 8 m. high in places. The size of the wall and its location confirms, according to Reich, that Jerusalem was at that period an urban entity with a ruler who was able to organise such an impressive set of defences. The wall is known to have run for at least 24 m. and will have continued further west as well.

Sussita (Hippos): Aphrodite figurines and odeon

The dig at Sussita (also called Hippos), on the east side of Lake Kinneret, directed by Prof. Arthur Segal and Dr. Michael Eisenberg of Haifa University, has come up with the find of a cache of three Aphrodite figurines, dating to the 4th century CE. The figures are 30 cm. (12 inches) tall and stand with a nude goddess covering her private parts, known as 'the modest Venus'. They are of clay and made from a mould, and would have been cast in large numbers, possibly to aid women in childbirth and marriage, according to Segal.

Another important find this season at Sussita was a small semi-circular theatre-like structure. It was originally roofed and would have seated about 600 people. Such a structure is unusual in Israel where the known theatres housed an audience of several thousand and were not roofed. A small structure like this may have been used for poetry and musical events and would be a small public hall, called an odeon, or *bouleuterion*, a conference chamber for meetings of the town council..

REPORT 17 – OCTOBER 2009

Demre, Turkey: synagogue

The main archaeological news is that Turkish archaeologists have, in September, uncovered the remains of an ancient synagogue at the former port of Myra, today the village of Demre, near Antalya in southern Turkey. It indicates that there was an active Jewish population at the port and that by the 3rd century CE (the estimated date of the synagogue) they were established enough to build their own prayer house. The remains include a marble tablet with a menorah, shofar (ram's horn) and trumpet on one side and a palm and citrus tree on the other. The prayer hall was about 7 m. by 5 m. and had two entrances, to the west and to the north. No evidence has yet been found of the place for the ark.

According to the excavators, led by Dr. Nevzat Cevik of Akdeniz University, Jews were allowed to become Roman citizens in the province of Lycia by a law of 212 CE and that led to permission to build a synagogue, though the date of the structure may well be later than the 3rd century. The inscriptions found have not yet been fully deciphered but the words 'Amen' and 'Israel' are evident, as well as the names of two donors, Procles and Romanus.

Jerusalem: forgery trial

Shuki Dorfman, Director of the IAA, recently gave the sensational testimony that two highly respected epigraphers were suspected of having been involved in recent forgeries. This came out in the ongoing trial of Oded Golan and others (the James Ossuary and the Yehoash Tablet trial) when Dorfman stated that Professor André Lemaire, of the Sorbonne, and Ada Yardeni, of the Hebrew University, had been suspected by the IAA of having been involved in the so-called forgeries. On the other hand Dorfman also claimed that the chief prosecution witness, Shlomo Moussaieff, had not been telling the truth in his testimony at the start of the trial. The proceedings, which started in 2005, drag on in the Jerusalem District Court.

Avdat vandalised

An important public archaeological site has recently been vandalised. It is the UNESCO World heritage site of Avdat, the Nabataean town in the Negev, on the

ancient trade route from Elath to the port of Gaza. On the morning of October 5th local tour guides found that many walls and pillars had been demolished and parts of the structures, including the churches, had been daubed in black paint and oil. Local farms had also been attacked and crops uprooted. This is the first time that a public archaeological site has been vandalised. The archaeologists estimate that it will take at least six months to repair the damage.

Migdal (Magdala): synagogue

In September, the IAA made the surprise find of a very early synagogue, this time at Migdal (Magdala), on the shores of Lake Kinneret. The surprise is that it dates from the time when the Second Temple still stood, and so joins a small band of four or five synagogues from that period. Work is in progress and the finds include a stone inscribed with a seven-branched menorah. The dig's director, Dina Avshalom-Gornic, believes that the sculptor may well have been to Jerusalem and 'seen the Temple menorah with his own eyes'.

Betar environs: coin cache

A large hoard of coins has been found in a deep cave in the Jerusalem area, dating to the time of the Bar Kokhba revolt of 132 CE. Some 120 coins of gold, silver and copper were found in good condition in the cave which is 20 m. deep and contained metal weapons, storage jars, oil lamps, an earring and a glass bottle. The site, whose location has not been revealed, is being investigated by Boaz Zissu and Hanan Eshel of Bar Ilan University and Amos Frumkin and Boaz Langford of Hebrew University. Based on the rich findings and the location of the cave near to Betar (where Bar Kokhba made his last stand), the team speculate that the cave was the last hiding place of an important nucleus of rebels.

Jerusalem: **miqveh**

One of the largest *miqvaot* (ritual baths) ever found in Jerusalem has been discovered within the chambers of the Western Wall tunnels, within what looks like a large mansion of the Second Temple period, and not 20 m. from the western wall of the Temple complex. The *miqveh* is lined with ashlars of the highest quality, similar to stonework by Herod on the Temple Mount itself. This suggests that it belonged to a member of the Sanhedrin, the highest Court, which tradition holds met in the 'Chamber of Hewn Stones' within the Temple complex. Alternatively, judging by the large size, it has been suggested by the site's excavator, Alexander On, that it may have catered for VIPs among the pilgrims coming to the Temple during the three seasonal festivals.

REPORT 18 – NOVEMBER 2009

Lod: Roman mosaic

The remarkable 1700 year old mosaic of Lod has been moved to the Israel Museum for essential preservation work. When the plaster base was uncovered, the restoration team looked for the original guide lines that outlined the placing of tesserae. To their surprise they also found the imprint of several feet and sandals of the original artists. Jacques Neguer of the IAA Conservation Department, described them as having been made by sizes 34, 37, 42 and 44 sandals. The mosaic will be fully restored and the footprints will be removed and exhibited separately at the new Mosaic Archaeological Centre in Lod.

Jerusalem: new exhibition

A new exhibition at the Davidson Centre by the Temple Mount in Jerusalem opened on November 11th. It is organised by the IAA and will show the latest finds from the area, including the sarcophagus lid inscribed with the words 'Ben Hacohen Hagadol', and many coins of the Roman and Jewish mints of the Great Revolt period of 66–70 CE. There will also be a model of the city during Second Temple times. Many of the exhibits come from very recent digs, by Prof. Ronnie Reich and others, but some go back to the excavations headed by Prof. Benjamin Mazar in the 1970s.

Akko: marble hoard and World Heritage workshop

In a rescue dig last month in Akko (Acre), just north of the city wall, a hoard of broken marble items was uncovered. They date to the 13th century Crusader period and were found in a sealed cellar that contained 350 pieces, including a stone cross and broken tombstones. Dr. Edna Stern, who conducted the dig on behalf of the IAA, said this was a unique find for the period and demonstrated the high quality of the work being undertaken by the Crusaders in their local capital. Crusader Acre fell to the Mamluks in 1291, presumably before the hoarder of these precious fragments, some of which may have been imported, was able to use them in local building work.

Also at Acre, experts from 16 countries met this month for the second UNESCO World Heritage workshop on 'Disaster Risk Reduction to Cultural Heritage Sites'. The first such meeting had been held in Olympia, Greece, in 2008. Areas of collaboration were identified, particularly between Israel and Jordan, and especially in the field of dangers from earthquakes, where the work being done by Israel at Masada can be applied to similar sites at Petra in Jordan, both being subject to such dangers in the Rift Valley around the Jordan basin. The focus of the papers was to identify the dangers and take preventative measures before disaster struck, and to pressurise governments into finding the necessary funds. An International Conservation Centre is being set up by Israel in the Old City of Acre to establish training in the conservation of these valuable heritage sites all around the world.

REPORT 19 – DECEMBER 2009

Akko: conservation workshop

At the end of November a special course was started at the International Conservation Centre in Acre called 'Saving the Stones'. The course will run for five months and is aimed at young people who wish to learn all the current techniques of preservation of ancient buildings, and the city of Acre itself serves as their classroom. The youngsters come from all over the world and participate in actual restoration projects, learning all the processes of documentation, survey, planning the treatment and the practical work itself. This is the first time that the course is being held, and it is planned to run twice a year. The director, Shirley Anne Peleg said it was an opportunity for the students to learn their techniques within the context of a living community in an ancient city like Acre, which is an UNESCO Heritage Site. The course is a joint enterprise between the IAA, the Old Acre Development Authority and the Acre Municipality.

Ḥorvat Ma'agura, Negev: Hasmonean fortress

In time for the Hanukkah holiday, the IAA announced that recent work in the Negev had demonstrated that the Hasmonean kings had extended their rule deep into the region. Dr. Tali Erickson-Gini, of the IAA, explained that Josephus had indicated that their rule had only extended to just south of the Gaza strip, which was conquered by Alexander Jannaeus in 99 BCE, and archaeologists had found nothing to indicate that their rule extended further. Now, at the fortress of Ḥorvat Ma'agura, two miles west of the Sede Boker region, it was found that it was the Hasmoneans who built the fortress (and not the Romans as previously thought) to stop the Nabataeans using this route to bring spices from Petra to Gaza. Hasmonean coins of Alexander Jannaeus were found here as well as at Nessana, a desert town, about 25 miles west of Ḥorvat Ma'agura. It appears that the Hasmoneans employed mercenaries as well as Jewish troops to fight the Nabataeans, judging by the evidence of imported vessels and wine, the remains of which were found by Dr. Erikson-Gini.

Jerusalem: Akeldama

Some time ago Prof. Shimon Gibson, with colleagues Dr. Boaz Zissu and Prof. James Tabor, located a sealed tomb at the Akeldama Cemetery in the Ben Hinnom Valley of Jerusalem, to the south-west of the Old City. It became known as the Tomb of the Shroud because the male body was wrapped in a simple white shroud and was unusual in that the body's bones had not been removed to an ossuary after a year, as was the normal practice at the time. The tomb doorway was found sealed and the skeleton was radiocarbon dated to the first half of the 1st century CE. The remains were sent for medical analysis and the results, by Israeli, American and British scientists, have just been published. The results show that this is the first

known case of a human shown to have been suffering from 'leprosy', actually a form of the skin disease psoriasis. However the DNA analysis showed that the man actually died of tuberculosis. The shroud in which he was contained was of a much simpler weave than the famous Turin Shroud, which was claimed to have wrapped the body of Jesus, and the experts have therefore suggested that this known shroud, of the time of Jesus, shows that the complex Turin one was of much later manufacture.

Nazareth: 1st-century house

Just in time for Christmas, the IAA announced the find of a house of the time of Jesus in Nazareth. The excavation, led by Yardenna Alexandre (née Rosenberg), was an IAA rescue operation in the courtyard of what is planned to be a small museum being built next to the Church of the Annunciation. The dig revealed a large wall of the Mamluk period built over five or six walls of a modest dwelling with pottery of the 1st century CE (the early Roman period). These are the remains of the first house of this period found in Nazareth, the location of Jesus' childhood. This work, together with the location of nearby tombs, suggests that Nazareth was at that time a small Jewish village of about fifty houses. The house contained a water cistern and an underground storage chamber, with a concealed entrance, that acted as a storage silo that may have also been used to hide persons from the eyes of the Romans during the Great Revolt of 66 CE. The pottery found was of a simple nature but included some stone vessels which indicate that the inhabitants were Jewish, and concerned about ritual purity matters, as stone was not subject to ritual impurity. The excavation has still to be completed and will then be left exposed in the courtyard to be attached to a small museum, being developed by the Chemin Neuf Franciscan organisation, who sponsored the IAA excavation.

REPORT 20 – JANUARY 2010

Gesher Benot Ya'akov Acheulian culture remains

This site of Gesher Benot Ya'akov, north of the Sea of Galilee (Lake Kinneret) on the banks of the Jordan has yielded evidence of very early artefacts of the Acheulian culture, according to researchers from the Hebrew University. The remains are so early that they seem to indicate human activity half a million years earlier than previously thought. There was in this area a freshwater lake (later Lake Huleh, now drained) that supported 'a hundred thousand years of hominid occupation'. The evidence comes from a high density of fish and crab bones indicating the earliest signs of fish consumption by prehistoric people. There are remains of charred wood and signs of processing of basalt and other stone hand tools located around a hearth. The tools are in the form of hand axes, scrapers, and choppers, as well as hammers and anvils that suggest the processing of nuts for roasting and eating. The evidence

of dating is not clear and sceptics have suggested that the remains could be typical of any date of camping site with fish bones, nutshells and a hearth. It remains to be seen what further evidence of dating the Hebrew University researchers will be bringing forward.

Khirbet Qeiyafa: inscription

The pottery sherd with ink writing uncovered last year by Prof. Yossi Garfinkel at Khirbet Qeiyafa has now been deciphered by Prof. Gershon Galil of Haifa University. It is written in ink in a form of Paleo-Hebrew script on five lines separated by a series of dashes. Galil notes that the language is Hebrew as it uses certain words, such as '*almanah*' (widow) not used in the language of adjoining cultures. The sentiments expressed, such a taking care of slaves and strangers, are not to be found in the writings of neighbouring nations, but relate closely to social issues expressed in Hebrew writings, such as Isaiah 1:17, Psalms 72:3 and Exodus 23:2. Galil suggests that the fact that scribes were active at this period in peripheral areas, such as this site, must indicate that in the capital and other urban areas, scribes were perhaps even better trained and able to record significant data.

The ostracon, judging by the context in which it was found, is of the 10th century BCE and is therefore the earliest example of Hebrew writing known so far. [*See Summaries of Lectures: Ed.*]

Galil also notes that the writing is evidence of a kingdom that administers a form of justice in its territory, and this would indicate an administration existing in the 10th century BCE, which would be the period of King David, according to the Biblical chronology. The text of the sherd, in English (as published by Galil) is as follows:

> 'You shall do (it), but worship the (Lord),
> Judge the sla(ve) and the wid(ow).... judge the orph(an),
> (and) the stranger. (P)lead for the infant.... plead for the po(or and)
> the widow. Rehabilitate (the poor) at the hands of the king.
> Protect the po(or and) the slave...support the stranger'.

This reading is strongly challenged by some scholars and not accepted by Garfinkel himself.

Ramat Aviv: Palaeolithic and Neolithic Remains

There was intelligent life in Tel Aviv eight thousand years ago, and near the University! The IAA has recently uncovered a Neolithic structure in Ramat Aviv, thought to be between 7,800 and 8,400 years old. It lay on the northern bank of the Yarkon river, where it was joined by its Ayalon tributary, the kind of well-watered site selected by even earlier settlers (from 13,000 – 100,000 years ago) who left behind basalt bowls and animal remains, including hippopotamus bones and sheep/goat teeth, according to Ayelet Dayan who directed the dig.

REPORT 21 – MARCH 2010

Samaritan community

Eleazar ben Tzedaka ben Yitzhaq, the Spiritual leader of the Samaritan Community was laid to rest on February 4th, 2010, in a small cemetery south of Nablus. He was 83 years old and it was claimed that he was the 131st holder of the position of High Priest since Aaron. The Samaritans claim to have lived near Nablus, formerly Shechem, since before the fall of Samaria to the Assyrians in 722 BCE. They have preserved their version of the Torah in an archaic script similar to Paleo-Hebrew. The present community of 730 persons is concentrated at Kiryat Luza, a small hill town above Nablus, near to Mount Gerizim, which they view as the site of their former temple, which was destroyed by the Maccabean king John Hyrcanus in 128 BCE. Both the Palestinian Governor of the Nablus Region and the Israeli officer heading the Civil Administration gave eulogies in Arabic in praise of the deceased High Priest. An offshoot of the Community lives in Neveh Pinchas, a neighbourhood of Holon, south of Tel Aviv and, at the beginning of March, a circumcision ceremony was held there for the latest male addition to the tiny community, Shahar Yehoshua. It was a rare event, attended by nearly half of the whole community and by six priests in long robes and red fezzes, marking the important addition of this new member to the small Samaritan community.

Jerusalem: Byzantine street

Excavations at the west entry to the Old City, leading to David Street, have revealed the original pavings of the Byzantine period, far below the present surface. Thanks to work by the Jerusalem Development Authority in renewing the present underground infrastructure, the IAA was able, under director Dr. Ofer Sion, to excavate this very busy part of the Old City. At a depth of 4.5 m below the present level, the IAA uncovered metre-long paving flagstones of a street that corresponded to a main thoroughfare from the west shown on the famous Byzantine mosaic map of the 6th century CE in St. George's Church at Madaba, Jordan.

Jerusalem: Abbasid inscription

During renovation work at a private house in the Jewish Quarter, a small stone fragment, about 10 × 10cm, was found inscribed in Arabic, and dated to 910 CE. It has been dated to the Abbasid period and the rule of the Caliph al-Muqtadir. It appears to express the thanks of an army veteran to the 'Emir of the Faithful' for the gift of a tract of land in the area. It may signify the way the Caliph rewarded his troops and established a core of faithful supporters in Jerusalem while he ruled from faraway Baghdad. The find was made by Annette Nagar of the IAA and the fragment was read and dated by Prof. Moshe Sharon of the Hebrew University.

Naḥal Sorek: Byzantine wine-press

A massive industrial-size wine press dating to the Byzantine period has been found in the Naḥal Sorek area (near Kibbutz Hafetz Ḥaim), famous for its vineyards. The site is not far from Ashkelon and the wine may have been processed for export to Egypt, or even Italy, according to Uzi Ad of the IAA, in charge of the excavation. It is almost identical to one found 20 km. away, near Ashkelon.

The installation is a sophisticated one, including an octagonal mosaic-paved treading floor leading to two holding vats and then, via stone strainer grids, to two collection vats. The whole system covers an area of more than 15 m. square. The region is designated as agricultural land for settlers evacuated from the Gaza Strip in 2005, and it is hoped to preserve the remains within the new farmland.

Jerusalem: Iron Age wall

A massive wall, 70 m. long and 6 m. high was recently uncovered in the area between the City of David and the southern wall of the Temple precinct by Dr. Elath Mazar, working with the IAA and the Israel Nature and Parks Authority. The remains of the wall include an inner gatehouse, a corner tower and portions of another major structure. Mazar claims that the remains are of the 10th century BCE and testify to a ruling monarch who was able to organise such major construction, her reference being to the elusive king Solomon. The gatehouse is of the standard four-chambered type. The adjacent structure is dated by pottery to the 10th century BCE and contained a number of large storage jars, one of them inscribed to a court official. There was also found a number of '*lemelekh*' jar handles, which suggests that some of the work may belong to the later period of the 7th or 8th century BCE.

Heritage Plan

At the end of February the Israeli Government issued a list of 150 sites of national historical importance which will receive funding to help preserve and maintain their important status and facilitate public access without damage to the remains. The sites include the 'trans-Israel footpath' that extends from Metulla to Elath, but is mainly concentrated on archaeological locations such as Masada and modern historical sites like Tel Hai. Although the Heritage Plan is largely non-controversial, and has been welcomed by all the usual site preservation agencies, as allocating Government funds to their upkeep, two sites have raised criticism from the Palestinian Authority. They are the Cave of the Patriarchs in Hebron and the Tomb of Rachel near Bethlehem. Both sites are in the area that may become part of the future Palestinian State and opposition to the designation has been strongly voiced by the Palestinian Authority.

REPORT 22 – MAY 2010

Beth Shemesh: illegal excavation

Four men were arrested in mid April digging illegally at the Iron Age site of Beth Shemesh, 20 km. west of Jerusalem. They were spotted by the IAA Unit for the Prevention of Robberies, as their jeep was parked alongside the site and they were digging down into the network of tunnels under the ancient remains, where investigations have been going on for several years by Prof. Shlomo Bunomovitz and Dr. Lederman of Bar-Ilan University Land of Israel Department. The illegal digging has caused irreversible damage to some of the site and the men will be charged with damage and unlawful digging on an archeological site, which are offences that could lead to prison sentences of up to five years. Amir Ganor, head of the IAA Unit, was present at the arrest, and told the Press that every year 150 such robbers are caught and 85% are found guilty. The IAA knows of 300 such sites that are robbed every year and there may be an equal number of which they do not know, seeing the number of artefacts that come onto the market, and the keen demand that there is for them.

Lod: museum

The ancient city of Lod, a few kilometres south of Ben Gurion Airport (it used to be called Lod Airport) has a venerable history, but today is better known for its rampant drug trade. The Lod Foundation was set up by Ruth and Aviv Wasserman Lande in 2008, and this April it held an international fair of local and foreign voluntary groups in order to help set up a local open-air Museum, which will rehabilitate the ancient town centre that has ruins going back some 8,000 years. In the past Lod was important as a major centre on the route from Damascus to Cairo, and it was before this the home of several prominent Rabbis of the Talmudic Period. With the help of Government and private funding, the city is now showing its determination to renovate the past and bring back its beauties.

Hanan Eshel

The archaeologist and historian Prof. Hanan Eshel died on 8th April. He was only 52, and had fought a long battle with cancer. Hanan was an international expert on the Dead Sea Scrolls and the site at Qumran, as well as the events of the Bar Kokhba Revolt of 132–5 CE. He dug at caves near to Qumran and Jericho and discovered letters from the Second Temple Period and scroll fragments going back to parts of the Biblical Book of Numbers. Hanan was Head of the Department of Land of Israel Studies at Bar-Ilan University and published several books and 200 articles, some in conjunction with his wife Esther, who is an epigraphist, and who survives him. His last lectures in Jerusalem were to packed audiences and one of them was published posthumously in the Hebrew Daily Ha'Aretz. [*See Obituary: Ed.*]

Sea of Galilee: Tell Beth Yerah and al-Sinnabra

It was announced in March that one of the ancient synagogues on the banks of the Sea of Galilee (Kinneret), at Tell Beth Yerah, had been wrongly identified and was actually the ruins of the Umayyad winter palace of Al-Sinnabra, whose location had been lost. The ruins were excavated in the 1950s, and identified as a synagogue, when the carving of a menorah was found, but recent re-examination of the location by archaeologists from the Tel Aviv and Hebrew universities has come to the conclusion that the remains are from the Umayyad dynasty, which ruled in this region from 685 to 750 CE. In 2002 Donald Whitcomb of Chicago University first suggested the identification with the Islamic palace and this has been confirmed by the recent work, led by Rafi Greenberg of Tel Aviv University. It is possible that the site was later used as a synagogue and thus the menorah was inscribed on one of the monoliths.

Jerusalem: Ḥurvah Synagogue

The Ḥurvah Synagogue, the largest in the Old City of Jerusalem, was recently rebuilt and reopened in April. The word Ḥurvah means 'ruin', and the synagogue is so named because it was originally built over the ruins of the study house of Rabbi Judah Hasid in 1701. It was actually destroyed at least five times, and lastly in May 1948 by the Jordanian Army when they held the Jewish Quarter. In 1967 the ruins were commemorated by a single arch which has now been augmented by a complete rebuild of the former synagogue of 1864. It incorporates a wonderful high dome that rivals both the golden Dome of the Rock and the black dome of the Church of the Holy Sepulchre. During the latest rebuilding the original foundations were uncovered and were seen to have been built over a large ritual bath (*miqveh*) of the Second Temple period and an industrial workshop of the Byzantine period that had its entry from the nearby Cardo. The builders also found an arms cache of the Jewish Stern Gang, called a 'Slick' by the troops of the British Mandate, and one which had remained hidden and out of use since 1948. The new Ark, based on an 18th-century design, is an unusual two-storey structure with a special Ark curtain. The story circulated for some time that one of Napoleon's generals, during the Retreat from Moscow, got lost in a Polish forest and was rescued by a local Jewish peasant. The general was grateful and gave the peasant his overcoat to combat the severe winter. This coat was so grand in his eyes that his wife decided to make it into an Ark curtain. When they eventually came to Palestine in the mid-19th century they brought it with them and donated it to a synagogue near Haifa. This story was authenticated when it was found there some years ago and it now forms the basis for the Ark curtain in the Ḥurvah synagogue.

REPORT 23 – JUNE 2010

Jerusalem: Mamluk aqueduct

An aqueduct from the Mamluk period was uncovered at the north end of the Sultan's Pool just west of the Old City walls in Jerusalem. It can be dated to 1320 CE and was carried on nine arches, two of which have been found, across the valley. This was part of a much earlier system that brought water from Solomon's Pool at Bethlehem to inner Jerusalem. The later Ottoman rulers reused and rebuilt part of the ancient aqueduct and later converted it to a metal pipeline. The archaeologists knew of its existence from 19th-century photographs but the arches did not come to light until repairs were made recently to the present water supply. The early photograph showed an inscription dating to 1320, dedicated to Sultan Nassar al-Din Muhammad Ibn Qalawun, according to Yehiel Zelinger, who led the excavation on behalf of the IAA. The findings will be preserved in the redevelopment of the Sultan's Pool area, south-west of the Jaffa Gate.

Ashkelon: cemetery

We have mentioned previously that work to the Barzilai Hospital emergency underground shelter facility was held up due to the location of graves on the site. After a lengthy period of Government indecision, the work is now going ahead, and the IAA have been authorised to excavate the bones, which are considered to be of non-Jewish origin, although this is disputed by some orthodox protesters. The bones will be carefully collected and handed over to the Religious Ministry for safekeeping. During his work on the site, Dr. Yigal Israel, of the IAA, uncovered a drum-shaped base with carved garlands that is considered to have been a Roman altar, which further underlines the non-Jewish nature of the cemetery, that would have served Hellenistic Ashkelon.

Tell Qashish: Bronze Age vessels

In an emergency dig by the IAA before the laying of a natural gas pipeline in the north, a cache of over 100 artefacts was uncovered in a rock hollow along the route at Tell Qashish. According to director Edwin van den Brink of the IAA, some of the small vessels, containing liquids and dated to 3,500 years ago (Late Bronze Age, 1550–1200 BCE) came from Cyprus and Mycene. The items were probably buried after going out of use, indicating that they had served a cultic function associated with a nearby shrine, and were not just to be destroyed but had to be buried. The site lies at the foot of the Tell at Yoqne'am, in the Jezreel Valley, and the IAA has agreed to exhibit the artefacts later in the year.

Nazareth: Bronze and Iron Age burials

After considerable work on a site in central Nazareth, due to be developed as a hotel and shopping mall, bones were uncovered and a halt was called to the work, for fear of demonstrations by religious groups. However, the work was reorganised to be completed in just one long day, as was done recently, under the direction of Yardenna Alexandre of the IAA. The excavation went to a depth of 10 m. and exposed four MBA shaft tombs, one of a warrior buried with his weapons, and one that had been reused in the Iron Age. Full details are not yet available. During the work demonstrations did take place but the protestors were held back.

Jerusalem: Bible Lands Museum

The Bible Lands Museum, which stands opposite the Israel Museum in Jerusalem, has been celebrating its 18 years of existence with anniversary lectures and a special exhibition named Angels and Demons. The exhibition is devoted to Jewish magic through the ages and the catalogue contains learned articles, including one by Prof. Mark Geller of University College London. The opening Ceremony was addressed by Sir John Boardman, of Oxford, who lectured on 'Greeks going East'. From this one can see that the Museum, which was founded by the late Dr. Elie Borowski in 1992, and is directed by his widow Batya, has now become a respectable centre of learning and excellence. In the early days, no self-respecting archaeologist and scholar would grace its doors, seeing that the exhibits were mainly bought on the market and some were of dubious origin. But with time this has changed and we have come to appreciate the range of artefacts and the scholarship that has accompanied their display.

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Tel Rehov: beehives

During excavations at Tel Rehov, under the direction of Prof. Amihai Mazar of the Hebrew University, thirty intact beehives were found in 2007, as well as evidence of over another 100 hives made of straw and clay. From their context these hives could be dated to about 900 BCE. It was surprising to find these hives in the middle of the city, and the residue of the hives, which included bee fragments, were sent for biological analysis by Prof. Guy Bloch of the Hebrew University Department of Ecological Science. He confirmed the great age of the hives that had become carbonised, and he found remnant of bee larvae and pupae, remnants of wings and legs. The type of bee was different from the local Syrian species, and not similar to the known Egyptian or Persian varieties, but was found to be related to the Anatolian type found in central Turkey. It may have been that they were indigenous to Israel in antiquity or that they were somehow imported to the region. The reason for their use at Rehov was that the species is known for their high productivity as well as their docility, which made them suitable for an urban setting.

Evidence was found of moving bees in large pottery hives and an Assyrian stamp of the 8th century BCE (from elsewhere) showed that some bees had been brought 400 km. from the Taurus mountains in Turkey, to a southern location. Bloch therefore speculated that the Rehov beekeepers had started with the Syrian variety but, after finding them too aggressive for an urban location, they had taken the trouble of importing the more docile species from Turkey in the north.

Jerusalem: Herod's Gate

Four years into a five-year programme of renovation of the Old City walls, the work to Herod's gate, at the north-east sector, has been completed. It is one of the seven major gateways and all its stonework has been repaired, cleaned and repointed. Ugly electrical and drainage conduits have been removed or concealed and the interior of the gate refurbished. The gate dates from 1539 and leads into the Muslim Quarter. The work was co-ordinated with the local residents so as not to disrupt their busy commercial activities during the four months of the facelift. The complete renovation project is funded by the Prime Minister's Office, administered by the Jerusalem Development Authority and executed by the Conservation Department of the Israel Antiquities Authority (IAA). The next phase of the work will concentrate on the Damascus Gate and the Lion's Gate, on the north and east walls of the Old City.

Jerusalem: Damascus Gate

During work near the Damascus Gate, the workmen found an area of shattered stone that concealed an old hand-grenade. The police were called, and it was identified as a Turkish-era weapon and removed it for controlled detonation. It was considered to have lain hidden in the wall for at least eighty years.

Jerusalem: Kidron Valley fresco

Remains of a 9 m × nearly 3 m high fresco were discovered during rescue excavations in the Kidron Valley, next to Gethsemane, Jerusalem, in 1999. The fresco probably came from a wall of 12th century Abbey of St Mary of the Valley of Jehoshaphat. At the time it had to be cut up and taken for safekeeping into the storage rooms of the Israel Museum to avoid being destroyed by the sewage line that was being built in the valley, and it is now being restored by expert Jacques Nagar and prepared for exhibition in the newly renovated Israel Museum, which is opening its doors this week.

The coloured fresco depicts Jesus in the centre flanked by Mary to his right and John the Baptist to his left, both seeming to plead for forgiveness for humanity. There are further incomplete figures and a Latin inscription from St. Augustine that reads, 'Who injures the name of an absent friend, may not at this table as guest attend', which is a warning against loose talk. According to Jon Seligman of the

IAA, who was in charge of the original discovery, this will be an opportunity for the public to see one of the few remaining frescoes in Israel.

El-Ahwat, Wadi Ara: Canaanite chariot axle

During excavations by Prof. Adam Zertal of Haifa University in 1997 at El-Ahwat in the Wadi Ara, a small bronze circular tablet was found, only 2 cm. in diameter and 5 mm. thick. It depicts the head of a woman with large wheel-like earrings and has now been identified by scientist Oren Cohen of Haifa University as the decorative plaque set on the end of the linchpin that held the axle of a Canaanite chariot. He came to his conclusion after seeing similar objects on the chariots in the battle scenes in the Temple of Ramses III in Luxor, Egypt.

Dating from its context in the 'Governor's House' of the town, it is suggested by Zertal that the 12th century BCE pinhead may have served one of the 900 chariots of the foreign general Sisera in his fight with the Israelites under Deborah and Barak at the battle of Mount Tabor in the lower Galilee. Zertal claimed thirteen years ago that the site of El-Ahwat was most likely the Haroshet Hagoyim mentioned in the Book of Judges (4:2) as the headquarters of Sisera. It appears that having one's head on such a linchpin was a sign of insult and indignity, and that this woman depicted here was a Hittite goddess, one hated by the Egyptians and presumably also by the Canaanites, who were being led by Sisera.

Bethsaida: Antoninus Pius coin

In Bethsaida, north of the Sea of Galilee the excavations directed by Dr Rami Arav, of University of Nebraska at Omaha have yielded a gold coin of Antoninus Pius (138–61 CE) in a residential building of this town, mentioned in the Gospels as being visited by Jesus. The coin was minted to announce that Antoninus Pius had been designated consul by the Roman Senate for the second time, a very high honour. It is the first such coin found in Israel, having the head of the Emperor on the obverse and the goddess Pietas before an altar on the reverse. The coin is 98% gold, and weighs 7g. It is unusual to find such a high-value coin in a provincial town, but a silver coin has been found there in a previous season and it is possible that the town was an active trading post on the shores of the lake that attracted wealthy merchants from further afield.

Jerusalem: cuneiform fragment

A 2 cm × 4 cm. fragment of a larger cuneiform tablet was found in fill from the Ophel area, north of the City of David, Jerusalem, in excavations directed by Dr. Eilat Mazar of the Hebrew University. It is only a tiny fragment but the cuneiform writing is of a good quality and indicates that it was the work of an expert scribe working for a high-level administration. The date assigned to the context is 14th century BCE and shows that it was contemporary with the El Amarna

correspondence that was exchanged between the Egypt of Akhenaton and prince Abdu-Heba of Jerusalem. The piece has been identified by Prof. Wayne Horowitz of the Hebrew University as being of high quality but there is insufficient of it to read its meaning, although a few words such as 'you were', 'to do' and 'later' are mentioned. Nevertheless the fragment indicates the importance of Jerusalem at this early date. Mazar described this piece as one of the most important finds of her dig and thought that the appearance of one fragment might well lead to the discovery of further pieces of this document.

Tel Hazor

Several fragments of cuneiform tablets were recently found in the palace area of Tel Hazor, during excavations directed by Prof. Amnon Ben-Tor and Dr Sharon Zuckerman of the Hebrew University. The language is Akkadian and the words 'slave', 'master' and 'tooth' have been deciphered, which makes the subject similar to one treated in the Code of Hammurabi of the 18th century BCE from Elam and Mari in the East. The newly discovered fragments will be published, together with others found previously, by Prof. Wayne Horowitz of the Hebrew University. They form the largest body of cuneiform documents so far discovered in Israel. The collection indicates that Hazor was an important trading, administration and cultural centre in the Middle and Late Bronze Ages. Work on site continues with the excavation of a large monumental Bronze Age building where the team hopes to recover further fragments.

Stephen Gabriel Rosenberg,
Albright Institute, Jerusalem

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Chapter in book:
Gibson, S., (2001). 'Agricultural Terraces and Settlement Expansion in the Highlands of Early Iron Age Palestine: Is There a Correlation Between the Two?' Pp. 113–46 in A. Mazar (ed.), *Studies in the Archaeology of the Iron Age in Israel and Jordan* (Sheffield).

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