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Front: Tel Beth Shemesh/Route 38, Aerial view of Iron IIB Building 420 (A. Davidesko)

Back: A Fatimid (?) period brooch from Einot Zippori (photo V. Naikhin)

Letter from the Editor

Our sixth volume of excavation reports is devoted, once again, to contract/salvage/mitigating excavations—seven of them—carried out prior to development. The geographical range runs from the lower Galilee (Kfar Kama, Ein Zippori) to the Judean Hills (Horbat Ad'sa), the Judean Shephelah (Tel Beth Shemesh, Tel Gishron), and the southern coast of Israel (Ashkelon Agamim). The different reports include a wide variety of periods: the early Chalcolithic (at Ein Zippori and Tel Gishron), the Iron Age II (Tel Beth Shemesh), the Hellenistic and Roman Periods (Ein Zippori, Kfar Kama), the Byzantine-early Islamic Period (Ein Zippori, Horbat Ad'sa, and Ashkelon Agamim), up to the 19th-20th century (Khirbet Sheikh Sa'ad, Tell Musa Shahin and Horbat Ad'sa).

Tel Beth Shemesh is the largest contract excavation we have embarked upon; it was necessitated by the expansion of Route 38. The final publication will be a monograph and it will take a couple years to complete. In the meantime, Yehuda Govrin and

Lily Singer-Avitz publish here a preliminary report of the Iron Age IIB remains from the western part of the excavation franchise. Other excavations were also carried out as a result of road widening: Ein Zippori, Kfar Kama, Khirbet Sheikh Sa'ad. The laying of a gas line initiated the salvage project at Tel Gishron, and residential construction at Tell Musa Shahin and Ashkelon Agamim.

I would like to take this opportunity to thank Michal Yron for coordinating the publication process (otherwise known as “herding cats”), Yael Govrin for her fine graphic work, and Anna Hayyat for her expert layout and formatting.

Our forthcoming issue will include community excavation projects at Ein Limon (Ayn Rafa) and Lod, and salvage excavations at Yehud, Or Haner, Rahat and Be'er Halmut. In the meantime, the NGSBA staff continues to prepare the publications of our flagship Tel Dan project. We plan to be in the field in the summer of 2022—feel free to visit or even to get your hands dirty.

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Map of reported sites

Excavations at Beth-Shemesh, Route 38 West: The Iron Age Remains — Preliminary Report

Yehuda Govrin and Lily Singer-Avitz

Abstract: Large scale salvage excavations were conducted along both sides of Route 38 highway adjacent to Tel Beth-Shemesh. The salvage excavations were carried out due to the urgent need to widen the highway on both of its sides. The present article summarizes the excavation results in the area west of the highway and examines the association of the new discoveries with the

settlement on the adjacent mound. It reaches the conclusion that throughout the Iron IIB and Iron IIC periods both the mound and area near Route 38 had a common history, both forming an upper mound and a lower terrace of a single settlement. **Keywords:** Beth-Shemesh, Iron Age, olive oil press, Iron Age ceramics, Judah, Iron Age chronology.



Figure 1. Aerial view of the Beth-Shemesh excavations crossed by Route 38, looking east. The excavated areas are on both sides of the road; the tell can be seen at the bottom of the picture.



Figure 2. Aerial view of Route 38 West, looking east: A. Building 420; B. Building 378; C. Olive oil press.

Tel Beth-Shemesh was excavated by three expeditions during the 20th and 21st centuries. The first excavation was conducted in 1911–1912 by Duncan Mackenzie on behalf of the Palestine Exploration Fund. The second excavation took place in 1928–1933 by Elihu Grant of Haverford College, Pennsylvania. The third excavation has been directed by Shlomo Bunimovitz and Zvi Lederman since 1990 on behalf of Tel Aviv University (for the history of these expeditions and references to their reports see Bunimovitz and Lederman 2016: 3–37). The excavators leading these three expeditions focused on the remains discerned on the tell, where large areas were exposed (for location of all excavated areas see Bunimovitz and Lederman 2016: Fig. 1:7).

In 2016–2017, a trial excavation was conducted on the eastern and southern fringes of Tel Beth-Shemesh by Elie Haddad and Nathan Ben-Ari on behalf of the Israel Antiquities Authority. In these excavations, it became clear

that the settlement extended beyond the boundaries of the tell itself and spread to the east as well (Haddad and Ben-Ari 2019; Haddad *et al.* 2020).

From March 2018 until October 2019, large scale salvage excavations were conducted east of the tell, with the participation of hundreds of workers and dozens of archaeologists. The excavations were carried out to facilitate the widening of the Route 38 highway on both sides. The excavation in the southern part of the area on both sides of the highway, covering an area of 12.5 dunams (3.09 acres), was directed by Yehuda Govrin on behalf of the Hebrew Union College (Govrin 2019) (Fig. 1). The northern section of the salvage excavation east of the highway was directed by Boaz Gross on behalf of Tel Aviv University.

In this article we shall concentrate on the Iron Age remains in the western part of the southern salvage excavation directed by Govrin.¹ We shall label this area Route 38 West — a long, narrow strip that borders the tell on its western side and

¹ The staff included Michal Yron, Zvi Lederman, Baruch Yosefovski, Yeshayahu Lander, Tsfania Gruenwald, Svetlana Tarkhanova, Michael Chernin, Ibrahim Abu Rabia and Pnina Ben-Hanania. The logistics manager was Ofer Powitzer. The plans were prepared by Jay Rosenberg, the aerial photographs were taken by Avshalom Davidesco and Tal Rogovsky, pottery was restored by Nili Cohen and drawn by Anya Dodin, the finds were photographed by Tal Rogovski, and the figures were prepared by Yael Govrin. We would like to thank David Ilan for his useful editorial comments.



Figure 3. Aerial view of Building 420, looking north.

Route 38 along its eastern side (Fig. 2). Following a short description of the remains and a discussion of their date, we shall reach conclusions regarding,

(1) the association of the new excavated area with the adjacent tell and, (2) the date of the settlement in both areas during the Iron IIB-C periods.

DESCRIPTION OF THE REMAINS

Due to the limitations of the salvage excavation, the excavated area was narrow, precluding the full exposure of all the structures. Four buildings and an olive oil press installation were unearthed here. Two of the structures (Buildings 273 and 1054) were fragmentary. Unfortunately, part of the excavated area was disturbed; no architectural remains were discerned and only a large number of Iron IIB-C sherds were recovered. No signs of destruction were ascertained here, indicating

that the buildings were abandoned rather than destroyed.

Building 420 is a four-room house that was preserved in its entirety (Fig. 3; labeled A in Fig. 2). The building was oriented east/west and built on the slope of the mound. It is comprised of three longitudinal, parallel rooms (Loci 420, 423, 432) separated by columns which are backed by a broad room (Locus 439). In front of the building, on the eastern side, another wide space probably served as a courtyard where the entrance to the building was located (Locus 357). The walls and floor of the building were founded directly on limestone bedrock. The northern and eastern walls were ca. 60 cm thick, each built of two rows of large fieldstones, while the other walls were narrower, built of a single row of fieldstones. The entrance jambs and the columns were made of large ashlar blocks.

Two fragmentary small rooms were situated adjacent to the southern wall. One of the rooms, with an opening to the south, was paved with fieldstones. In the other room a 1.7 m deep pit was cut in the rock floor. Since the southwest side of the building was destroyed, it is unclear whether there was an opening from the broad room to these service rooms.

The building was covered with stones debris, mainly over its northern and eastern wings, most likely the result of wall collapse. No construction phases could be discerned, and no signs of a deliberate destruction were noted.

The pottery assemblage found in this building was, for the most part, comprised of typical Judahite vessels related to domestic activities. The northern longitudinal room (Locus 432) was particularly rich in pottery and contained



Figure 4. Statuette of Bes from Building 420.



Figure 5. Aerial view of Building 378, looking east.

unique finds as well. Of particular interest is the 30 cm-high headless limestone statuette of the Egyptian deity Bes (Fig. 4). Bes was one of the most popular gods in ancient Egypt and was worshipped as a protector of households.

While the stratigraphy of the building was not clear, and no separate phases could be discerned, two periods are clearly discernible in the pottery assemblage: the Iron Age IIB and the Iron Age IIC, including various types of *lmlk*-impressed storage jar handles. These assemblages are presented and their separation demonstrated in the pottery section below.

Building 378, located north of Building 420, was only partially exposed and may have

had a central courtyard surrounded by rooms (Fig. 5; labeled B in Fig. 2). This building type was intended as an office and/or dwelling for functionaries (Netzer 1992: 201). Like Building 420, no stratigraphic phases were discerned; it is the pottery that indicates both the Iron IIB and the Iron IIC periods. The pottery includes various types of *lmlk* impressed storage jar handles (to be published separately) and many asymmetrical bowls (unfortunately fragmentary).² Gitin suggested that these vessels were used “to scoop up and apportion grain or other dry foodstuffs” in administrative centers (1993: 100ⁿ). Zuckerman (2007) proposed that during the Late Bronze Age the scoops were connected to cultic or ritual

² A large concentration of asymmetrical bowls was uncovered also in Tel Beth-Shemesh Level 3 (the “Scoop Floor”; Bunimovitz and Lederman 2016: 316–321).

spaces, usually in relation to the use of liquids, while during the Iron II they lost their cultic function and became merely administrative vessels. At Beth-Shemesh, where the olive oil industry was extensive, in both the Route 38 excavations (see below) and on the tel, these vessels were possibly used to transfer oil from the production facility to storage containers. If so, the prevalence of this pottery type would reinforce the inference that the structure had an administrative/public function connected to olive oil production.

An olive oil press was uncovered in the northern part of the excavation between fragmentary wall remains (Fig 6; labeled C in Fig. 2). The installation is of a type common in Judah during the Iron Age. It contained a large, round limestone crushing basin surrounded by fieldstones. The basin is ca. 1.25 m in diameter and ca. 70–80 cm deep and is flanked by two stone-cut vats resting on the floor on either side of the basin. The vats, ca. 75 cm in diameter, have flat bases and tops; in the center of each is an opening ca. 35 cm in diameter. A circumferential channel was hewn in their upper part. In the western vat olive pits were recovered. Wall remains uncovered in close proximity to the press suggest that it was integrated into the building's construction. One of the adjoining walls most likely contained a niche which secured the end of



Figure 6. The oil press, looking north.

the press-beam. The stone weights that would have been attached to the beam were not preserved.

Most of the pottery found in the crushing basin and around the installation included Iron IIB and Iron IIC sherds, among them a *lmlk*-impressed storage jar handle.

THE POTTERY

The ceramic repertoire consists mainly of sherds and only a few complete or nearly complete vessels. We have concluded that the site was abandoned by its inhabitants. Since no stratigraphic phases could be distinguished in this part of the excavation, the overall life span of the site was determined by the pottery types to span the Iron IIB and Iron IIC periods.

In their groundbreaking article, Aharoni and Aharoni (1976) laid the foundation for a ceramic distinction between the Iron IIB and Iron IIC periods in Judah. Over the years, new excavation

results have sharpened further the ceramic distinctions between the two periods (e.g., Freud 1999; Mazar and Panitz-Cohen 2001; Singer-Avitz 2002; Zimhoni 2004). While some types appear in both periods, others are popular in the Iron IIB and not in the Iron IIC, whereas other types occur only in the Iron IIC.

Most of the vessels and sherds exposed in the Route 38 West excavation are well known and typical to the Judahite pottery assemblages of the Iron IIB-C; the pottery vessels presented in Figures 7–10 are mainly those that help us

refine the dating. The discussion below is based on comparisons to the pottery found in Tel Beth-Shemesh and in neighboring sites with well-controlled stratigraphy and well-established ceramic sequences.

Bowls

Most of the bowls are wheel-burnished and only a few are red-slipped. Wheel burnish is common mostly on the interior and rims of bowls. This surface treatment is a characteristic feature of Iron IIB-C Judahite pottery assemblages. The most popular type is the folded-rim bowl (Fig. 7:5), one of the most popular bowl types in most Judahite sites.

Shallow open bowls (Fig. 7:1–2). These are shallow straight-walled bowls with a low disc base. No. 1 has a plain, rounded rim which is most popular in Iron IIB and only a few examples are known in Iron IIC. At Tel Beth-Shemesh it is known in Level 3 and is defined as one of the main Iron IIB bowl types in Level 2 (Bunimovitz and Lederman 2016: Figs. 9.95:1–2, 12.34: Type BL ft). No. 2 is similar in most details, with the exception of the rim which is splayed-out and downturned. This bowl type is known in Iron IIC strata only, such as Arad Strata VII–VI (Singer-Avitz 2002: 129, Type B 6).

Everted-rim bowl (Fig. 7:3). These are small to medium size bowls, carinated on the upper third of the body, with an everted rim and a disc base. Bowls of this type are in most cases red-slipped and wheel-burnished on the inside and on the rim. At Tel Beth-Shemesh they are known in Level 3 and one of the main Iron IIB types in Level 2 (Bunimovitz and Lederman 2016: Figs. 9.95:3–4, 12.34: Type BL ldg-rim).

Small, deep straight-walled bowl (Fig. 7:4). This bowl type has a small disc base. Most bowls are neither slipped nor burnished. This bowl type is mainly known in 8th century Judahite sites and it continues in small numbers into the 7th century

BCE. At Tel Beth-Shemesh it appears in Level 3 and Grant and Wright's Stratum IIB as well (Bunimovitz and Lederman 2016: Pl. 9.97: 9–11). It is defined as one of the main Iron IIB bowl types in Level 2 (Bunimovitz and Lederman 2016: Fig. 12.34: Type BL thn-evrt).

Folded-rim bowl (Figs. 7:5). Bowls with a folded rim are common at all Judahite sites. They are open and have a carination on the upper third of the wall. The rim shape comes in a wide assortment of variations — an unintentional result of technological factors (Franken 1985; Franken and Steiner 1990: 61–66). Most bowls are wheel-burnished inside and on the rim, and only a small number are both red-slipped and wheel-burnished. Some bowls have a disc base, but they mostly have a ring base. Their size varies — some bowls are small to medium-sized, and some are larger. This type is one of the most popular bowl types at Judahite sites during the Iron IIB-C periods. At Tel Beth-Shemesh it is known in Level 3 and in Level 2 it is defined as one of the main Iron IIB types (Bunimovitz and Lederman 2016: Figs. 9.94: 1–2, 12.34: Type BL fld-rim). It appears in the water reservoir as well (Bunimovitz and Lederman 2016: Fig. 5.72).

Small carinated bowl (Fig. 7:6). A thin-walled carinated bowl with a splayed rim. Only one example has been found and its base is missing. It is wheel-burnished inside and outside up to the carination line. This bowl type shows a marked Assyrian influence. Imitations of Assyrian-type bowls, which sometimes have local variations, are widespread outside the Assyrian heartland and are well known in the Southern Levant during the late 8th and 7th centuries (Anastasio 2010; Hunt 2015; Singer-Avitz 2007).

Medium-sized carinated bowl (Fig. 7:7). Only one example of this type has been found. It has a straight, relatively long rim. At the carination, where the bowl's circumference is the largest, there are two prominent ridges, to which knob handles

are attached. Horizontal burnishing is discerned on both sides of the neck. On the lower part of the outer side, under the handles and towards the rounded base, the burnish lines are vertical. The bowls of this type are made of a relatively fine, well-levigated clay, lending the vessel a “metallic” quality. In the Assyrian bowls repertoire, the carination line is usually smooth, although sometimes it has prominent ridges as in our bowl (e.g., Hrouda 1962: Taf. 60: 138; Oates 1959: Pl. 37:59; Wicke 2013: Abb. 5c).

Asymmetrical bowl (Fig. 7:8). An asymmetrical large bowl with a rounded base and two large loop handles extending from the rim to the mid-body. Part of the rim is pushed inward, creating the asymmetry. Some of the rims are out-turned and others are grooved. The grooved-rim bowls are less popular, though some of the bowls from Lachish Level III have a grooved rim as well (Zimhoni 2004: Figs. 26.11:5; 26.12:11, 13; 26.16:6, 8–9). The asymmetrical bowl type, which is widely distributed in the southern Levant, has a long chronological range, beginning in the Late Bronze II and continuing well into the Iron IIB and Iron IIC (Gitin 1993; 2017: 2–5, 98–100; Zuckerman 2007). It is labelled as “scoop” (Gitin 1993) or an “asymmetrical bowl” (Ussishkin 2004). A large assemblage was uncovered in Tel Beth-Shemesh Level 3 and Grant’s Stratum IIB (Bunimovitz and Lederman 2016: 9.88–9.89, 9.91:2–3, 9.97: 16–19).

Mortarium (Fig. 7:9). A large open bowl with thick walls, a flat base, and a thickened elongated rim. The earliest examples of this bowl appear in the mid- to late 8th century BCE and they are common in assemblages from the later part of the Iron Age in the southern Levant. Petrographic analyses of 8th and 7th centuries BCE bowls have shown that most of them were imported from Cyprus (Zuckerman and Ben-Shlomo 2011). This large-scale importation continued to many sites during the Persian period, as indicated by the

petrographic study conducted by Gorzalczany (1999: 189 and Table 4.10:7–11; 2003: 121–124).

Kraters

The kraters include both open and closed vessels. The most popular is the large open type (Fig. 7:11), a characteristic feature of Iron IIB-C Judahite pottery assemblages.

Closed medium-sized deep globular krater (Fig. 7:10) with an inverted hammer-headed rim which is downwardly angled. Two grooves were incised under the rim. One loop handle extends down from the grooves area. None of the bowls are complete and they all lack their base. The kraters are made from reddish clay and some show air bubbles in the wall (as a result of small pockets of air trapped in the clay which was not well kneaded).

A comparable one-handled krater was uncovered in a cave near the northwest necropolis at Tel Beth-Shemesh (Mackenzie *et al.* 2016: Fig. 2.22:5) and another one (with five handles) was found in Level 2 at the same site (Bunimovitz and Lederman 2016: Fig. 12.42:1).

None of the kraters found in the Route 38 West excavation are complete. But given their partial scale data and in accordance with the identical complete krater found on the tel, they possibly were one-handled as well.

Similar kraters but without handles are known mainly in Philistine inner coastal plain sites such as Tel Batash and Ekron in strata attributed to the 8th and 7th centuries BCE (Mazar and Panitz-Cohen 2001: 66–67, Fig. 3: KR11a; Gitin 2017: 103–104, Fig. 4A:12– Type IIKR 1–5). But it is worth emphasizing that, to the best of our knowledge, one-handled kraters are unfamiliar in Philistia.

Large open krater (Fig. 7:11) with a folded rim, a ring base and four loop handles. Most kraters of this type are wheel-burnished on the interior and the rim and only rarely are red-slipped. This krater

type is most popular in Judahite sites during the Iron IIB-C periods. At Tel Beth-Shemesh Level 2 it is defined as one of the main Iron IIB types; they were found in the water reservoir as well (Bunimovitz and Lederman 2016: Figs. 12.34, 5.72 — Type BL 4-hndl).

Cooking-pots

Two main categories can be distinguished among the cooking-pots: Open cooking-pots (Fig. 8:1–6) and closed cooking-pots (Fig. 8:7–9).

Open, thickened-grooved-rim cooking-pot (Fig. 8:1–2). It has a rounded base, rounded carination at the center of the wall and thickened rim with a groove around its exterior. Two loop handles extend from the rim to the body. This is one of the most prevalent cooking-pot types found in the country (north and south) in the Iron IIB (for parallels see Mazar and Panitz-Cohen 2001: 83–84). At Tel Beth-Shemesh it is known in Level 3 (Bunimovitz and Lederman 2016: Pls. 9.95:14).

Open, thickened-profiled-rim cooking-pot (Fig. 8:3–4). This cooking-pot has a thickened, profiled rim, rounded base, and a rounded carination at mid-body. Two loop handles extend from the rim to the body. Some of the handles are incised with potmarks (Fig. 8:4). This cooking-pot type is one of the most prevalent in the Iron IIB (for parallels see De Groot and Bernick-Greenberg 2012: 67, Type 7). At Tel Beth-Shemesh it is known in Levels 3 (and Grant's Stratum 2b), in Level 2 where it is defined as one of the main Iron IIB types, and in the water reservoir (Bunimovitz and Lederman 2016: Figs. 9.95:15, 9.97:26, 28, 12.34, 5.72: Type CP grv-rim).

Open, everted-rim cooking-pot (Fig. 8:5). It has a rounded base and two loop handles extending from the grooved, shelf-like, everted rim to the body. Generally, it is made of thin, metallic clay. This cooking-pot type is among the most common cooking-pot types found at all sites in Judah in the Iron IIC (for parallels see De Groot and

Bernick-Greenberg 2012: 68, Type CP8). This type has been found in Tel Beth-Shemesh in the water reservoir (Bunimovitz and Lederman 2016: Fig. 5.72: CP evrt-rim).

Open, pinched-rim cooking-pot (Fig. 8:6). It has a rounded base and two loop handles extending from the rim to the body. Immediately below the rim is a protruding, pinched ridge. Only a few examples were found in the present excavation. This cooking-pot type appears in limited numbers in Judahite Iron IIC sites (mainly at Beersheba Valley sites) and is particularly common in 7th century BCE sites on the southern coast (for parallels see Singer-Avitz 2002: 140, Type CP-5).

Closed, grooved-neck cooking-pot (Fig. 8:7). It has a globular body, high, upright, grooved neck and a pair of loop handles extending from the neck to the shoulder. Some of the cooking-pots have an incised potmark on the handle. At Tel Beth-Shemesh Level 2 it is defined as one of the main Iron IIB types and is known in the water reservoir as well (Bunimovitz and Lederman 2016: Figs. 5.72, 12.34: Type CP glob). This is one of the most common vessel types in Judah during the Iron IIB and is found at all excavated sites (for parallels see De Groot and Bernick-Greenberg 2012: 68–70, Type CCP2).

Closed, single-grooved-rim cooking-pot (Fig. 8:8). A complete, relatively small cooking-pot with a globular body. Two loop handles extend from the rim to the shoulder. The high neck is incurved, and a groove is incised under the rim. Only one cooking pot of this type has been found. A similar vessel was discovered at Tel Beth-Shemesh Level 3 (Bunimovitz and Lederman 2016: Fig. 9.95:11). This cooking-pot type is not common at other sites: It is known in Jerusalem (mainly in Caves I and II, sometimes with one handle) and only in the Iron IIB (for discussion and references see Singer-Avitz 2019: 117).

Closed, single-ridged-neck cooking-pot (Fig. 8:9). It has a globular body, high, straight,

slightly everted neck and a single pronounced ridge protruding at the base of the neck. Two loop handles extend from the rim to the body. It was very common in Judah in the Iron IIC and rare in the southern Coastal Plain (for parallels see Mazar and Panitz-Cohen 2001: 85–86, Type CP 9). At Tel Beth-Shemesh it was found in the water reservoir (Bunimovitz and Lederman 2016: Pl. 5.72: CP *sngl-rdg*) and one item was present in Tomb 8 in the northwest necropolis (Mackenzie 1912–1913: Pl. 56:22).

Storage jars

Four-handled storage jar (Fig. 9:1–4). Large storage jar with a rounded shoulder, a straight or slightly inward sloping neck, and thickened rim. This storage jar, which is known as the *lmlk* type, has four loop handles extending from the shoulder to the wall. Some of them bear *lmlk* seal impressions on their handles. This storage jar type is a hallmark of Judahite pottery assemblages in the Iron IIB (Zimhoni 2004: 1794–1795). Complete storage jars bearing stamps were not found at Beth-Shemesh, Route 38 West, however dozens of handles with *lmlk* and ‘private’ seal impressions were uncovered. At Tel Beth-Shemesh this storage jar type was found both in Level 3 and in Level 2, as well as in the water reservoir. It is considered as one of the main Iron IIB types (Bunimovitz and Lederman 2016: Pls. 9.92, 9.93:1–3, 9.94:5, 9.96:1–2, 12.34, 5.72: Type SJ *lmlk*).

Two-handled storage jar (Fig. 9:5). In this nearly complete storage jar — the neck and rim are missing — the body, wide in the shoulder region, gradually narrows towards the rounded base. Two loop handles extend from the shoulder to the wall. It is similar in shape and clay to the *lmlk* storage jars, but smaller and has only two handles. This jar was deliberately cut at the top for an unknown purpose.

Bag-shaped storage jar (Fig. 9:6). This type has a bag-shaped body, a sloping shoulder and

a rounded base. The straight, long neck ends in a ring-like rim. Two loop handles extend from the shoulder carination to the wall. The clay color is usually light. This storage jar type is widespread at Judahite sites of the Iron IIC (for parallels see Mazar and Panitz-Cohen 2001: 105, Type SJ 17). At Tel Beth-Shemesh it appears in the water reservoir (Bunimovitz and Lederman 2016: Pl. 5.72).

Carinated-shoulder storage jar (Fig. 9:7). Only a few rims of this storage jar type have been found. This is a storage jar with a swollen upper body that narrows toward the base. The neck is short, and a pair of loop handles extend from the shoulder carination to the body. These rims can be attributed to several different sub-types that are known in the Iron IIB–C. Since only the rims survived, we cannot attribute them to a specific subtype. Their typological origins are probably in the southern Coastal Plain (for discussion see Zimhoni 2004: 1797–1799, 1801–1803, Groups III: SJ-5, III: SJ-9, II SJ-4, II: SJ-5; Singer-Avitz 2016: 614–616, Types SJ-5, SJ-7). At Tel Beth-Shemesh Level 2 (where only rims survived), it is defined as one of the main Iron IIB types and is known in the water reservoir (Bunimovitz and Lederman 2016: Figs. 5.72, 12.34: Type SJ *cstl*).

Barrel-shaped storage jar (Fig. 9:8). This storage jar type has a barrel-shaped body and a folded rim. There is a ridge on the outside of the rim, producing a kind of gutter. Only fragments of this type were found in the current excavation. However, these storage jars usually have four loop handles extending under the rim, and a ring base. This variant of the holemouth storage jar is known only in the Iron IIC (‘En Gedi — Yezerski 2007: Pl. 9: 1–3; Tel ‘Ira Stratum VI — Freud 1999: Fig. 6.62: 16–17).

Thick-walled pithos (Fig. 9:9). It has an elongated body and a thickened, inward-turned, grooved rim. The body profile narrows toward a narrow, rounded base. Two loop handles extend from the sloping shoulder to the body. Only rim

and body fragments were found here. This type has antecedents in the Iron IIA but it is mainly known in the Iron IIB (Singer-Avitz 2016: 619–620). Large assemblages of such pithoi were found at Kuntillet ‘Ajrud (Ayalon 1995) and Tel ‘Ira Stratum VII (Kletter 1999, with additional parallels). At Tel Beth-Shemesh it is known in Level 3 and Grant and Wright’s Stratum IIB (Bunimovitz and Lederman 2016: Figs. 9.93: 4, 9.98: 3–7). Neutron Activation Analysis of the clay of pithoi from various sites clarified that they were all made of clay associated with the Moza Formation found in the Jerusalem area (Gunnweg *et al.* 1985).

Cylindrical holemouth jars

Medium-sized cylindrical body shaped jars with a rounded base. They were popular in many sites in Judah and likewise at Beth-Shemesh Route 38 West. Three sub-types were defined according to the shape of the rim.

Thick-ridged, everted rim (Fig. 9:10). In most cases the rim protrudes slightly on the exterior. At Tel Beth-Shemesh Level 2 (where only rims were found), it is defined as one of the main Iron IIB types and is found in the water reservoir (Bunimovitz and Lederman 2016: Figs. 5.72, 12.34: Type HM rdg-rim). This vessel type is very popular in some Iron IIB sites (such as Tel Beersheba Strata III–II) but is rare in Lachish and is almost unknown in Jerusalem and the highland sites (Freud 2019; Singer-Avitz 2019).

Thick, smoothed rim (Fig. 9:11–12). This vessel is similar to the latter type, except that the thick rim is smooth and without ridges. The main occurrence of this holemouth jar is in the Iron IIB. At Tel Beth-Shemesh it is known in Level 3, and in Level 2 where only rims survived; it is defined as one of the main Iron IIB types (Bunimovitz and Lederman 2016: Pls. 9.96: 1, 12.34: Type HM pln-rim).

Thin, smoothed rim (Fig. 9:13). This vessel has a thin smooth rim, forming a right angle with the body. The main occurrence of this holemouth jar is in the Iron IIC (Freud 2019). At Tel Beth-Shemesh these vessels have been found in the “holemouth jar pit” (F240) and in another similar feature (F235) as well as in the water reservoir (Bunimovitz and Lederman 2016: 442–444, Fig. 5.77: 6–7). This type is also known in the earlier excavations (Mackenzie *et al.* 2016: Fig. 2.22:4, 6; Grant 1932: Pl. 34:1–2, 13, 16, 18–19).

Jug and juglets

Mainly rims, handles and bases of jugs were found; most were fragmentary and only a few can be attributed to a specific type.

Red-slip small jug (Fig. 10:1). A relatively thick-walled small jug with a round base and a broad body. One handle extends from the slightly ridged neck to the body. The jug is red-slipped all over including its base. A similar jug was uncovered in Tel Beth-Shemesh Level 2 (Bunimovitz and Lederman 2016: Fig. 12.40:12 and another example is presented in the earlier excavations (Grant and Wright 1938: Pl. 65:37).

Dipper juglet (Fig. 10:2). It has an elongated, cylindrical body, rounded base, wide neck, and handle extending from the rim to the shoulder. On some juglets marks of vertical burnish are visible. At Tel Beth-Shemesh Level 2 it is defined as one of the main Iron IIB types; they were found in the water reservoir as well (Bunimovitz and Lederman 2016: Figs. 5.72, 12.34: Type JT clndr). It is one of the main juglet types in Iron IIB-C sites in Judah.

Narrow-neck juglet (Fig. 10:3). A juglet with a swollen body, rounded base slightly pointed at its center, short, narrow neck, and a handle extending from the rim to the shoulder. Sparse vertical burnish is visible on body surface. At Tel Beth-Shemesh Level 2 it is defined as one of the main Iron IIB types and is also found in the

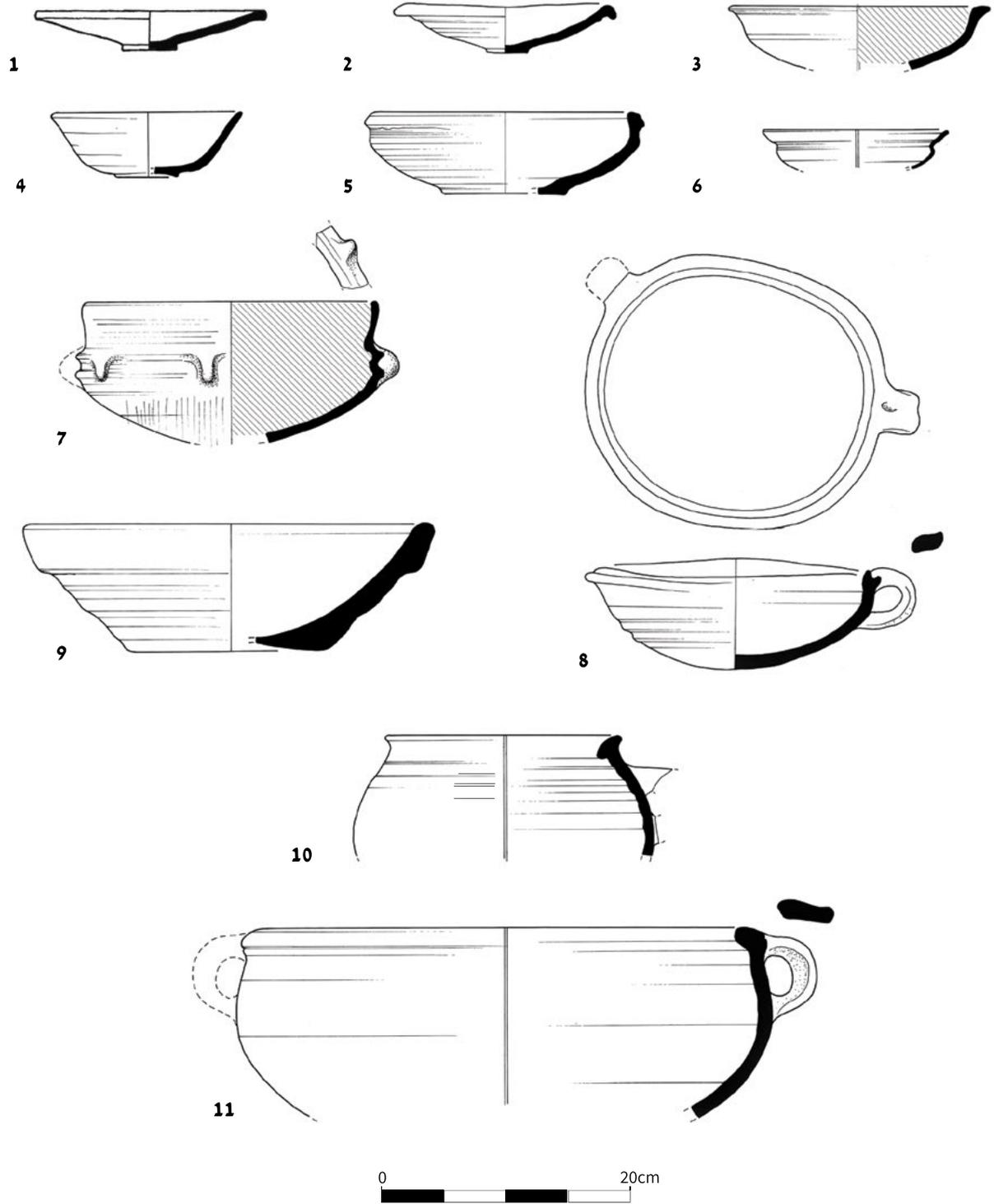


Figure 7. Bowls and kraters.

Figure 7. Bowls and kraters.

No.	Reg. No.	Locus	Notes
1. Bowl	3100/1	432	
2. Bowl	1645/1	345	
3. Bowl	3060/1	432	Red slip, wheel burnish
4. Bowl	1543/1	334	
5. Bowl	2229/3	1015	Wheel burnish
6. Bowl	3119/1	432	Wheel burnish
7. Bowl	3055/1	432	Horizontal and vertical burnish
8. Bowl	1890/1	357	
9. Bowl	3052/1	423	
10. Krater	3103/3	432	
11. Krater	3100/2	432	

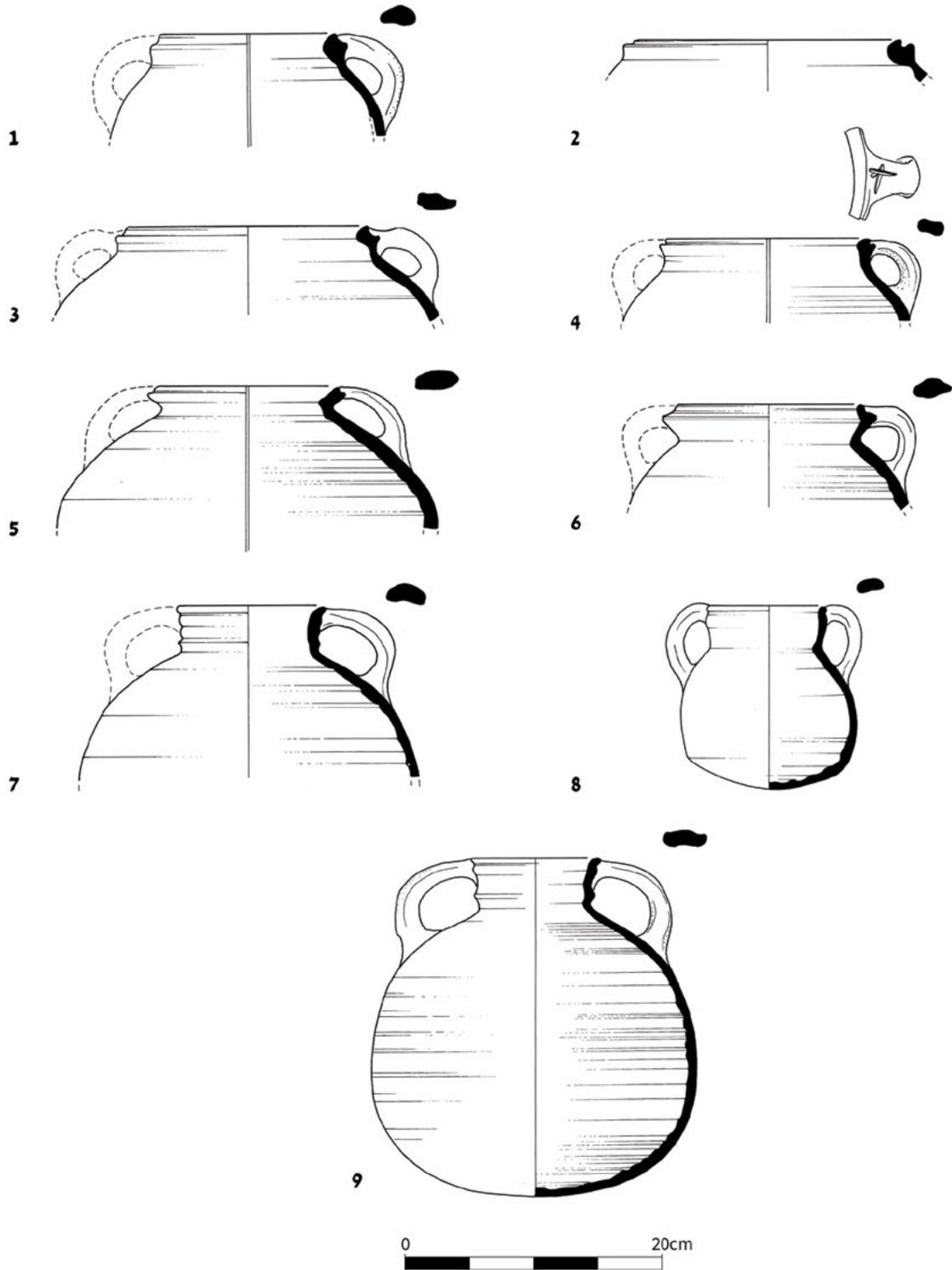


Figure 8. Cooking-pots.

Figure 8. Cooking-pots.

No.	Reg. No.	Locus	Notes
1. Cooking-pot	2108/2	390	
2. Cooking pot	3119/3	432	
3. Cooking-pot	3067/4	432	
4. Cooking-pot	3027/3	432	Potmark
5. Cooking pot	3085/5	432	
6. Cooking pot	3046/3	432	
7. Cooking pot	3020/1	432	
8. Cooking pot	2271/2	1024	
9. Cooking pot	1922/2	357	

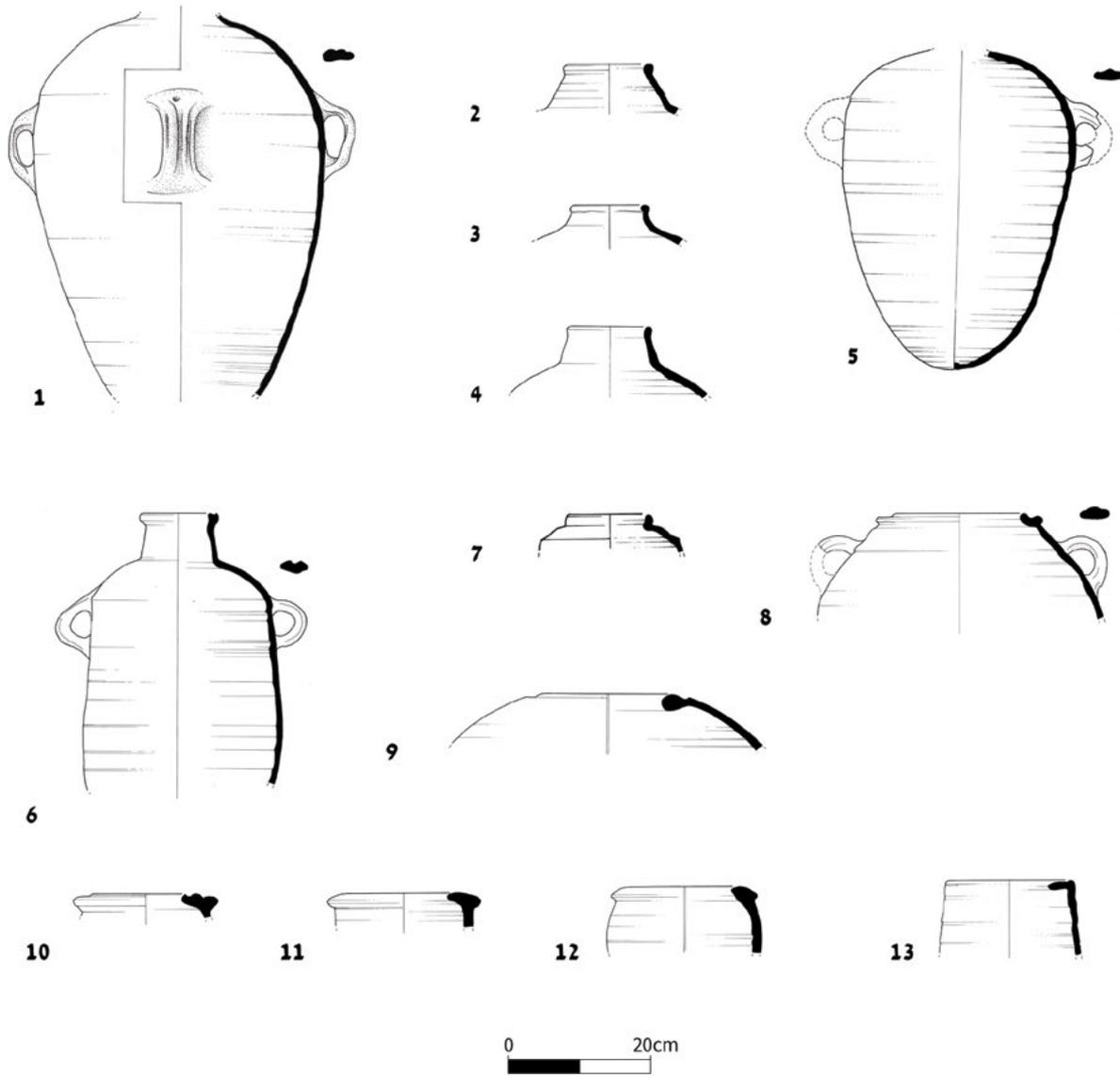


Figure 9. Storage jars and holemouth jars.

Figure 9. Storage jars and holemouth jars.

No.	Reg. No.	Locus	Notes
1. Storage jar	3118/1	432	
2. Storage jar	3103/2	432	
3. Storage jar	3020/4	432	
4. Storage jar	3027/5	432	
5. Storage jar	3119/4	432	
6. Storage jar	3112/2	432	
7. Storage jar	3020/3	432	
8. Storage jar	1614/1	451	
9. Pithos	3123/1	432	
10. Holemouth jar	3088/1	432	
11. Holemouth jar	3118/2	432	
12. Holemouth jar	3060/3	432	
13. Holemouth	1793/1	478	

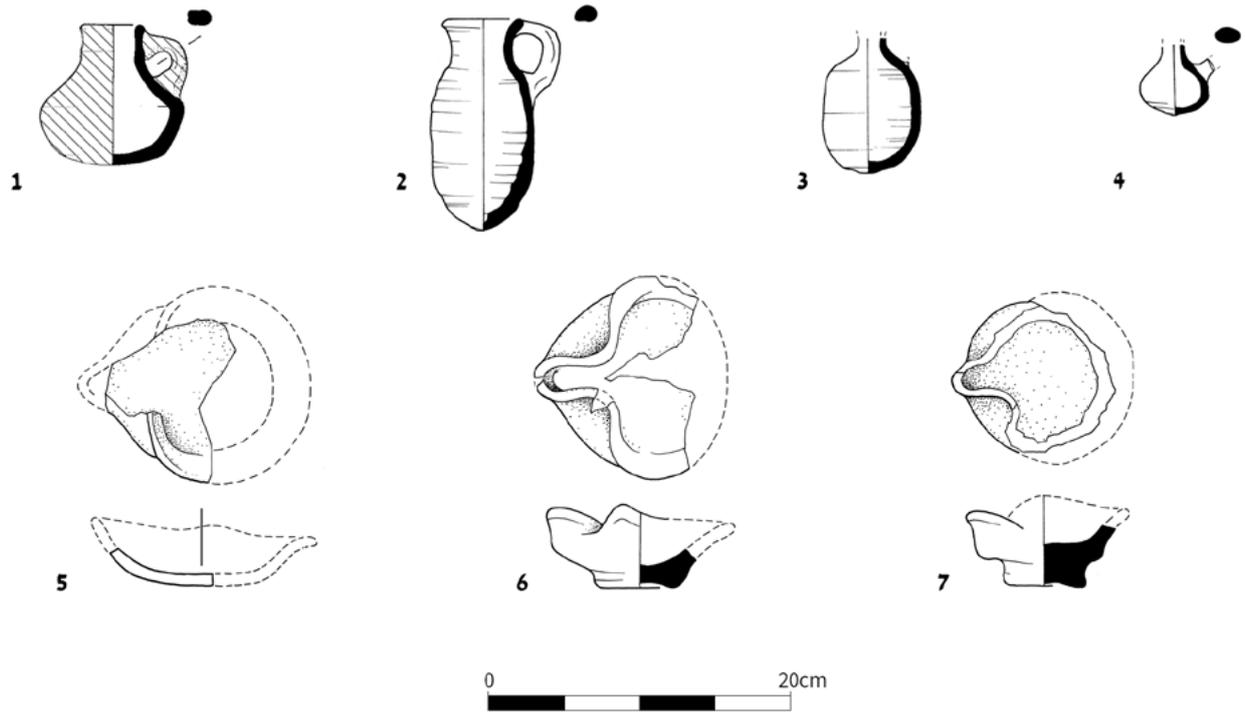


Figure 10. Jug, juglets and lamps.

No.	Reg. No.	Locus	Notes
1. Jug	1647/1	345	Red slip
2. Juglet	3120/1	432	
3. Juglet	3116/1	432	
4. Juglet	3106/1	432	
5. Lamp	2321/5	1033	
6. Lamp	3103/1	432	
7. Lamp	2301/2	1033	

water reservoir (Bunimovitz and Lederman 2016: Figs. 5.72, 12.34: Type JT nrw). It is one of the main juglet types in Iron IIB–C sites in Judah (for references see Gitin 2017: 130, Types IJJUL 10, IJJUL 11).

Small black juglet (Fig. 10:4). It has a rounded base slightly pointed at its center and a short, narrow neck. A relatively large handle extends from the rim to the shoulder. A few vertical burnish lines are on the body. At Tel Beth-Shemesh Level 2 it is defined as one of the main Iron IIB types (Bunimovitz and Lederman 2016: Fig. 12.34: Type JT blk).

Lamps

Lamp with a rounded base (Fig. 10:5). This lamp type has a rounded base and broad, pronounced rim. Lamps with a rounded base are characteristic of the Iron IIA but they also appear in the Iron IIB. In the latter period the rim is usually more

pronounced. Only a few examples were found in the excavation.

Lamp with a disc base (Fig. 10:6). This lamp type has a relatively wide, low disc base and a broad pronounced rim. These lamps are most common in Judahite sites of the Iron IIB, and only occasionally are also found in Iron IIC. At Tel Beth-Shemesh it is known in Level 3 and in Level 2 and defined as one of the main Iron IIB types. Lamps of this type were found in the water reservoir as well (Bunimovitz and Lederman 2016: Figs. 5.72, 9.94:3, 9.95: 18–19, 12.34: Type LP I-disk).

Lamp with a thick, high disk base (Fig. 10:7). This lamp type is common in Judahite sites of the Iron IIC. At Tel Beth-Shemesh they were found in Grant's excavations (Grant 1932: Pl. 45:40–42; Grant and Wright 1938: Pl. 45:25–27) and in the water reservoir (Bunimovitz and Lederman 2016: Fig. 5.72).

DATING

The pottery assemblage presented above is comprised of vessels known well at Tel Beth-Shemesh and many other Judahite sites in Iron IIB and Iron IIC contexts. The vessel types that are typical to the Iron IIB and do not continue into the Iron IIC are: shallow open bowl with a rounded rim (Fig. 7:1), open cooking-pot with a thickened, grooved rim (Fig. 8:1–2), open cooking-pot with a thickened, profiled rim (Fig. 8:3–4), closed cooking-pot with a grooved neck (Fig. 8:7), closed single-grooved rim cooking-pot (Fig. 8:8), four-handled storage jar (Fig. 9:1–4), two-handled storage jar (Fig. 9:5), large thick-walled pithos (Fig. 9:9), thick-ridged rim holemouth jar (Fig. 9:10), thick-smoothed-rim holemouth jar (Fig. 9:11–12) and red-slipped small jug (Fig. 10:1).

The vessel types that appear for the first time in the Iron IIC are: shallow open bowl with a splayed-out and down-turned rim (Fig. 7:2), open cooking-pot with an everted rim (Fig. 8:5),

open cooking-pot with a pinched rim (Fig. 8:6), closed cooking-pot with a single pronounced ridge (Fig. 8:9), bag-shaped storage jar (Fig. 9:6), barrel-shaped storage jar with a ridged folded rim (Fig. 9:8), holemouth jar with a thin, smoothed rim (Fig. 9:13) and thick, high disk-based lamp (Fig. 10:7).

Unfortunately, at the Route 38 West site there is no way to separate the two periods' pottery assemblages based on stratigraphy. However, the finds clearly indicate that this area was first settled during the Iron IIB (the Lachish III horizon) and lasted — probably without interruption — until the end of the Iron IIC period (the Lachish II horizon). The site was probably abandoned at the end of this period. Since there is no evidence for destruction, we cannot say whether the abandonment is related to the Babylonian assault on Judah in 587/6 BCE.

Typical Judahite vessels make up the bulk of the assemblage. Most of the pottery is plain and

undecorated. A few vessels are red-slipped and many of the bowls and open kraters are wheel-burnished. Only a few vessels bear non-local features: vessels with Assyrian characteristics (such as the bowls in Fig. 7:6–7, and a fragment of a bottle, not drawn), a few vessels with coastal

characteristics (the cooking-pots and storage jars in Figs. 8:6, 9:7), and vessels of Cypriot origin (mortarium in Fig. 7:9). These data are consistent with the picture obtained at Tel Beth-Shemesh, where vessels with foreign characteristics are also rare.

DISCUSSION AND CONCLUDING REMARKS

Four buildings were unearthed in Beth-Shemesh Route 38 West, while only one of them, Building 420 (the four-room house), was completely uncovered. In addition, an olive oil press installation with fragmentary walls next to it was discovered. Unfortunately, the excavated area is problematic, due to the limited extent allowed within the framework of a salvage excavation and the fact that the remains were close to the surface. No clear stratigraphy could be discerned. However, the pottery recovered throughout the excavation area dates to both the Iron IIB and IIC periods, undoubtedly displaying the full time span of this part of the settlement.

This dating is strengthened by the presence of a wide variety of storage jar handles with stamp seal impressions: the so-called ‘private’ type, four-winged and two-winged *lmlk* impressions, concentric and rosette types. About 40 stamped handles were found in the Route 38 West area and an additional 160 stamped handles in the eastern part of the excavation. This collection, to be published elsewhere, bolsters the evidence that emerges from the pottery regarding the chronological range of the site: the settlement here was established in the 8th century BCE and lasted until the end of the 7th or beginning of the 6th century BCE.

The pottery assemblages of both periods have distinct Judahite characteristics. Although geographically this is a border site between Judah and Philistia, only a few vessels have coastal characteristics.

The proximity of Route 38 West to the mound of Tel Beth-Shemesh raises the question

of the relation/connection between the two. Let us now briefly review the corresponding strata and chronology of the adjacent tel during the Iron IIB-C.

Bunimovitz and Lederman reached the conclusion that the Tel Beth-Shemesh Level 2 settlement was an unfortified agricultural/industrial town dating to the Iron IIB. At least 18 oil presses of the lever-and-weights type and numerous simple oil-production installations were found, indicating a flourishing olive-oil industry (Bunimovitz and Lederman 2017: 35). They concluded that Level 2 was destroyed in 701 BCE during Sennacherib’s campaign to Judah, like many of the Shephelah sites. The underground water reservoir underwent a short period of reuse by some Judahite families which returned in the mid-7th century BCE (Level 1), but no evidence of resettlement on the tell following Sennacherib’s campaign was discerned (Bunimovitz and Lederman 2003; 2016: 143–146, 152–153). Hence “Level 2 should be considered the last Iron Age settlement at Tel Beth-Shemesh” (Bunimovitz and Lederman 2016: 420).

We would like to address these conclusions:

Was Level 2 destroyed in 701 BCE by Sennacherib?

Level 2 should undoubtedly be dated to the 8th century BCE, in parallel to the Lachish III horizon. It is puzzling that in the data presented by Bunimovitz and Lederman (2016: 419–469) no clear evidence for a violent destruction or conflagration is reported in relation to this stratum (e.g.,

an ash layer, charcoal and burnt bricks), or for military activity, such as arrowheads. So, the questions are: What was the nature of the destruction? Was Level 2 indeed totally destroyed by the Assyrian army or only partially destroyed? Did the settlement capitulate without a battle? Or was it not destroyed at all? We refer to these questions below.

Was Level 2 the last city of the Iron Age which was then deserted?

Bunimovitz and Lederman stated that there is no evidence of resettlement on the tell following Sennacherib's campaign and the city's destruction, apart from a short period of reuse of the underground water reservoir (Level 1). They believe that in the third quarter of the 7th century BCE a small group of Judah's inhabitants tried to return to Beth-Shemesh. This attempt lasted for only a short period of time (ca. 650–635 BCE) and was eliminated by the Philistines and the Assyrians (Bunimovitz and Lederman 2003; 2016: 85–156).

Fantalkin (2004) rejected this interpretation and suggested that the water reservoir operated throughout the 7th century BCE until its destruction during one of the Babylonian campaigns (604 or 587/6 BCE). Regarding the assertion of

Bunimovitz and Lederman that there is no settlement in the 7th century BCE Fantalkin suggested that the inhabitants of farmsteads scattered around the site utilized the water reservoir.

Examination of the data presented in the reports of the three expeditions reveals that Iron IIC pottery can be detected not only in the water reservoir, but in other areas as well. Unfortunately, due to the method of publication and lack of information in the old excavation reports, we cannot always associate the vessels (and other finds) with their original contexts. Here is a list of the Iron IIC finds on the tell itself:

1. An impressive olive-oil press comprised of two large stone vats (Grant 1931: 73, 78; Grant and Wright 1938: Pl. 19:3, 4; 1939: 76). On either side of each vat were large pithoi sunk in the ground (three of them were found complete, Fig. 11). The pithos on the south side of one of the vats contained many olive pits (Grant 1931: 73).

This four-handled pithos type (90–100 cm high) appears in the Iron IIC and is unknown in earlier contexts. Four complete such pithoi were found at Arad Stratum VI (Singer-Avitz 2002: 149–150, Fig. 18: SJ 18). Such vessels were also found at Lachish (Tufnell 1953: 92, Pl. 95:487),

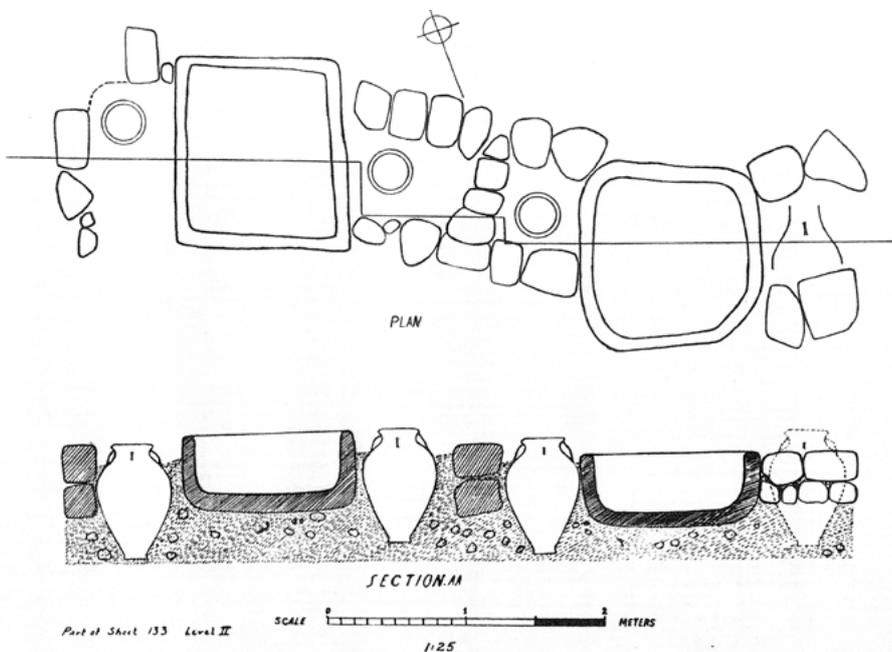


Figure 11. Olive oil installation (after Grant 1931: 78).

Tell en-Nasbeh (Wampler 1947: Pls. 3:34, 36–37), Ramat Raḥel (Aharoni 1962: Fig. 25:9), and Horvat ‘Uza (Freud 2007: Fig. 3.17:6).

2. A fragment of such a pithos was also found in Room 453 (Grant and Wright 1938: Pl. 65:16).

3. During Grant’s 1929 season, several Iron IIC vessels were discovered but there is no way to associate them with an architectural unit. These vessels included a decanter and several lamps with a heavy, thick base (Grant 1932: Pls. 43:26, 45:40–42).

4. Lamps with a heavy, thick base were found by Grant in the 1933 season: One lamp from Room 375 and two others from Cistern 4 (Grant and Wright 1938: Pl. 45:25–27; 1939: 141).

5. Grant uncovered many holemouth jars in 1929. Only some of the complete vessels were presented in the plates of his report and he pointed out that “fragments were very numerous” (Grant 1932: 50). Some of the published items can be dated to the Iron IIB and others to the Iron IIC (for the Iron IIC types see Grant 1932: Pl. 34:1, 2, 12–13, 16, 18–19).

6. A large amorphous pit (F240 — the “holemouth jar pit”) that cut through an oil-press installation and disturbed the remains of Levels 2 and 3 in the southern part of Area E was unearthed by Bunimovitz and Lederman (2016: 442–444). The pit was filled with an enormous quantity of broken holemouth jars, among them Iron IIC types. The excavators believe that Pit F240 was dug by robbers seeking building materials from the desolated tell, but do not explain the presence of Iron IIC pottery in a site that was not inhabited at that time.

7. The same holds true for a similar feature exposed in this area (F235) (Bunimovitz and Lederman 2016: 442).

8. Rock-cut tombs, rich in finds, were unearthed at the northwest slope of the tell by Mackenzie. Most of the pottery can be dated to the Iron IIB and

Iron IIC periods (Tombs 2, 4–8, 10, 14). Typical Iron IIC jugs, juglets, decanters, a cooking-pot, a storage jar and lamps were recovered from these tombs (Mackenzie 1912–1913: Pls. 33:4–5, 37:3–4, 13–14, 17, 39A:4, 39B:5, 41:2, 44A:8–10, 46:10, 12, 47:3–4, 13–14, 54:4–5, 12, 56:13, 18, 20–22, 57:1, 4, 8, 10–11, 15–17, 19; Mackenzie *et al.* 2016: Figs. 2.21:1(?), 3, 5–6, 11; Grant and Wright 1938: Pl. 48:5, 8, 12). Earlier finds of the Iron IIA (or even slightly earlier) were found in Tomb 1 (Mackenzie 1912–1913: Pls. 22:3, 17, 19, 24:7, 12, 14–18).

9. In a cave near the northwest necropolis (not identified as a tomb), cylindrical holemouth jars with a thin, smooth rim of the Iron IIC type were found (Mackenzie *et al.* 2016: 2.22:4, 6).

We should keep in mind that only part of the ceramic material gleaned in the large-scale excavations of Mackenzie and Grant (which extended across half the area of the large tell) was published (Grant 1932: 50). It should also be considered that the distinction between Iron IIB and Iron IIC pottery types was unknown at the time of the first two expeditions. Were it possible to reexamine all the pottery (complete vessels as well as sherds), a different picture would emerge.³ The researchers of the third expedition recognized the presence of the Iron IIC pottery but assumed that no settlement existed at Tel Beth-Shemesh during this period and interpreted the finds in the water reservoir and in Area E accordingly.

The above review indicates that Iron IIC period pottery is represented in the various areas of the tell: in the center of the mound, in the underground water reservoir (on the northeastern side of the tell), and in the cemetery (on the northwest slope of the tell). The vessel types are typical of the Lachish II horizon and are present in many other Judahite sites at the end of the Iron IIC. These

3 Only some of the vessels are kept in the Rockefeller Museum stores. We thank Alegre Savariego, the curator of the Rockefeller collections and mosaics, for facilitating their examination by us.

observations indicate that a settlement existed during this period (Level 1) at Tel Beth-Shemesh.

The houses of the unfortified Level 2 town/village had spread beyond the line of the former city wall and over the edges of the tell (Bunimovitz and Lederman 2016: 442, 464). We believe that the site of Route 38 constitutes a lower mound, or suburb, at the foot of the tell — an integral part of the settlement. In Level 2, during the 8th century BCE, the oil industry flourished, and olive-oil installations were scattered all around the mound, within the domestic compounds (Bunimovitz and Lederman 2016: 420). At this time, the settlement also expanded to the east and buildings and oil installations were constructed over a large area.⁴ It is unclear what happened at the end of the 8th century BCE, during Sennacherib's campaign. But even if the settlement came under Assyrian rule, it was not completely destroyed, and the oil industry continued to function during the 7th

century BCE. The high mound and the lower mound have a similar character and a common history throughout the Iron IIB and IIC periods, i.e., oil installations within residential neighborhoods, without functional division into residential and industrial districts.⁵

We were unable to stratigraphically distinguish the chronological phases during these periods in the Route 38 West area. In Route 38 East superimposed construction phases were discerned and we anticipate better stratigraphic and chronological distinction.

Two main centers for olive oil production existed in the Judahite Shephelah in the 8th century BCE: Tel Beth-Shemesh and Tell Beit Mirsim.⁶ The latter site did not withstand the Assyrian attack of 701 BCE and was abandoned, while the settlement at Beth-Shemesh survived and flourished uninterrupted until the end of the Iron IIC period.

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- 4 Another 14 oil installations were exposed in the area east of Route 38 (Govrin 2019).
- 5 Following the salvage excavations carried out by Haddad and Ben-Ari, the excavators came to the conclusion that the western and eastern mound are parts of the same settlement. According to the pottery, they determined that settlement in the lower mound was established only in Iron IIC (Haddad *et al.* 2020). This conclusion is inconsistent with the findings of the pottery in the current excavation. It is also not compatible with the fact that the large stamped handles corpus found here includes 'private' and four-winged seal impressions, which date to before Sennacherib's campaign (Lipschits *et al.* 2010; Vaughn 2018).
- 6 Recently, Maier *et al.* (2021) raised the possibility that olive oil production might have been one of the economic mainstays of Iron IIA Philistine Gath, and that perhaps the flourish of olive oil production in the 8th century Judahite Shephelah (Beth-Shemesh and Tell Beit Mirsim) was connected to the vacuum created by the destruction of Gath by Hazael in the last part of the 9th century BCE.

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Salvage Excavations in Agamim Neighborhood, Ashkelon

Rona S. Avissar Lewis

In August–September 2017, a salvage excavation was conducted in Lot 260 Jezreel Valley Street, Agamim neighborhood, Ashkelon (Figs. 1–2); a residential building was going to be built by “Shimon Tzarfati Constructions” on the lot (map coordinates 158804–617927 158657–617810). The excavation (license B454/2017) was conducted by R.S. Avissar Lewis on behalf of Y.G. Contract Archaeology Ltd, under the academic auspices of the Hebrew Union College–Jewish Institute of Religion, Jerusalem. The expedition staff was

comprised of J. Rosenberg (surveying and drawings), A. Tsipin (pottery drawings), R.S. Avissar Lewis (photography), and Y. Farhi (numismatics).

The site was surveyed and 72 test sections were cut with a backhoe in May 2017 under the supervision of D. Yegorov of the Israel Antiquities Authority (IAA). Considering their discoveries, and based on the requirements of the IAA, the salvage excavation was conducted in three areas extending over 11 excavation squares, near the location of Sections 5, 6, 7, 11, 17, and 50. (Fig. 3)

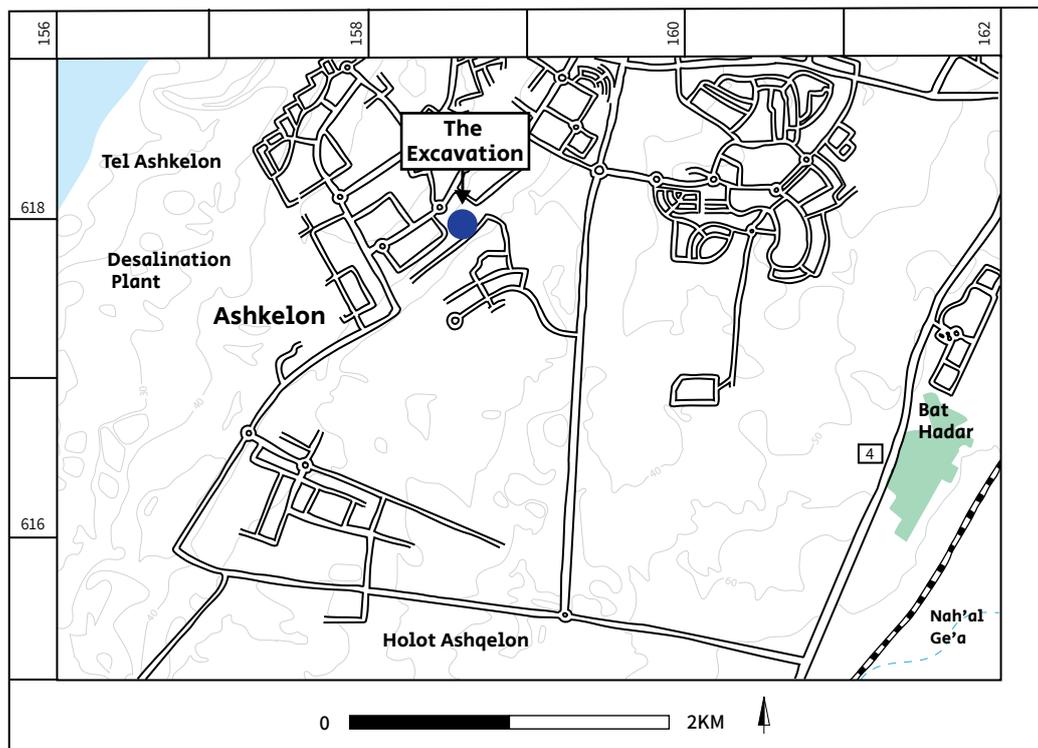


Figure 1. Location map.

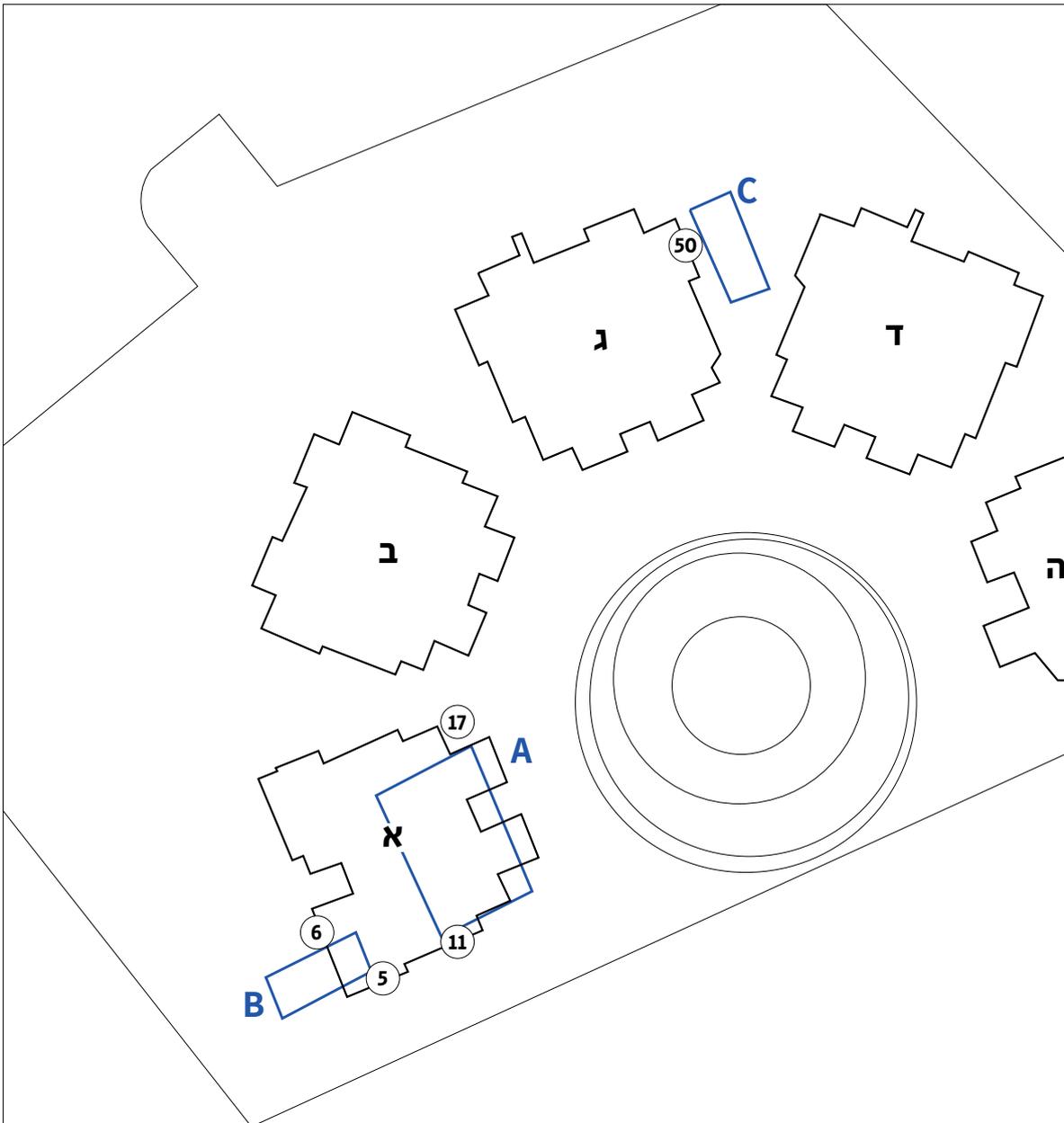


Figure 2. Map of the excavation areas.

In Area A, seven squares were excavated by hand. This area contained ceramic wasters; hence we assume it was on the edge of a ceramic workshop (not found in the excavation area). Two walls constructed of jars and some stones were a prominent feature. In Area B, two squares were

excavated by hand and revealed only the foundations of a thick wall (maximum of two courses), leaving no archaeological remains to explain its function. In Area C, two squares were excavated both by hand and with a backhoe, without any significant archaeological finds.

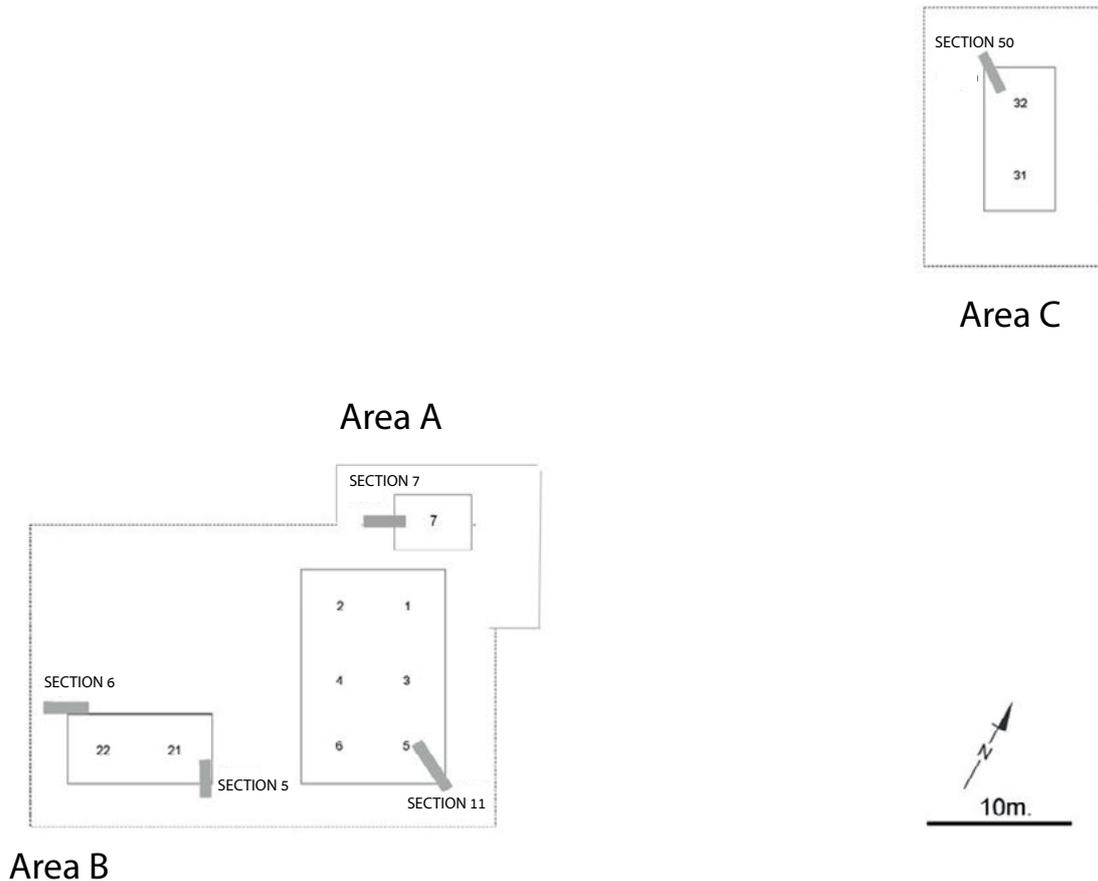


Figure 3. Map of the squares' locations.

AREA A

Square 1

Wall 06 (Figs. 4–5), oriented east/west, built of jars with several stones, was the boundary between the inhabited area and the sand in the north. Walls of this type are not common, but such walls are built from the most available raw material — in this case jars — in areas lacking stones (Israel 2006: 294–296). The jars, from the transition period between the Byzantine period and the Umayyad period, were filled with sand and placed on their

rims; the wall was built directly on the sand. No further architecture was discovered around this wall, and we assume that it served as a boundary fence of the pottery workshop area. The square was excavated down to a clean sandy soil layer.

A coin of Constantine I (324–330 CE)¹ was found on the northern side of Wall 06, outside of the area of the ceramic workshop fence, on the sand. Therefore, it cannot date the pottery workshop (Farhi, this volume).

¹ Coin B024, L.007.



Figure 4. Square 1, a segment of a jar Wall 06, looking south.



Figure 5. Square 1, close up of two jars from W.06.



Figure 6. Square 2, an intact juglet from the Byzantine-Umayyad period transition.

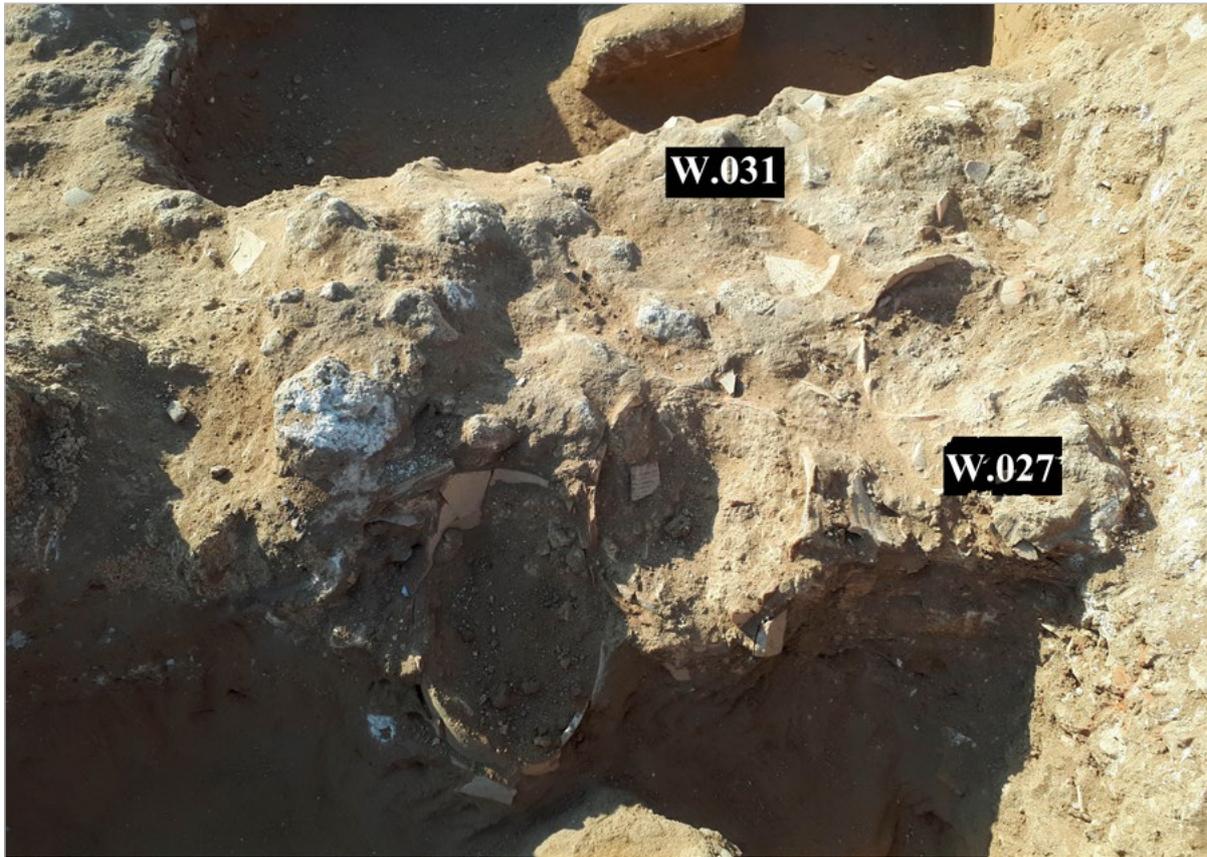


Figure 7. Square 3, adjacent Walls 031 and 027 (the jar wall).

Square 2

Only sand with some pottery, with no architectural features, was discovered in the entire square, as well as a whole juglet (Fig. 6), dating to the transition between the Byzantine period and the Umayyad period. The square was excavated until clean sand was reached. The coin of an unidentified emperor² was found in this square, which could be dated from the 5th to the early 6th century CE; this may date the latest activity at the site (Farhi, this volume).

Square 3

A semi-rounded jar wall W.027 (running north/south and then east/west) was discovered in this square, its northern part comprising the boundary between the activity area to the south and the sand field to the northeast. West of W.027 (the jar wall) was L.026, an amalgamation of very hard brown soil with a 50 cm thick layer of ceramics (Fig. 7). This is probably waste from the pottery workshop, though probably far from the workshop itself (there is a lack of slag). A corner of a room (L.030) was discovered in the southwest corner of the square, W.032 (running north/south) bounded with W.031 (running east/west). Stone

² Coin B.019, L.008.



Figure 8. Square 3, looking west.



Figure 9. Square 4, the walls and the section, looking south.



Figure 10. Square 6, looking north.

Wall 031 was adjacent to the east/west side of the jar wall W.027 (Fig. 8), but apart from a paving stone which was not in situ, no special finds were discovered in room L.030. All the pottery from the square, including the jars from the jar wall are from the Byzantine-Umayyad transitional period. A sterile layer of sand was revealed at the height of the foundation of the wall. The square was excavated down to a clean sandy soil layer.

Square 4

A very thick layer (up to 50 cm) of pottery workshop waste (L.021) was uncovered almost throughout the entire square. Remains of Wall 036 (east/west) were discovered, its architectural connection being unclear. The foundation of conglomerate Wall 035 (west/east) was discovered, built of small stones (10 cm in diameter) mixed with pottery and earthen mortar. The architectural context of this wall is also unclear. All the sherds from this layer also date to the Byzantine-Umayyad transitional period.

Beneath the waste layer in L.021, was a layer of sand containing three concentrations of fine-grained organic black material (Fig. 9). The square was excavated, in some areas, down to a clean sandy soil layer.

Square 5

Part of Section 11, excavated with a backhoe by the IAA, was encountered in this square. Therefore, only small remains of several walls (W.020, W.014, W.010, W.019) were discovered. These walls were built of two courses of medium-size stones,

without clear architectural context. Again, all the ceramics are from the Byzantine-Umayyad transitional period. The square was excavated down to a clean sandy soil layer.

Square 6

A corner of room L.018 (Fig.10) was discovered in this square, beyond the two cornering walls W.012 (east/west) and W.013 (south/north). In L.018 a coin³ of an unidentified emperor (possibly Arcadius; Farhi, this volume) was found. The coin probably dates to 383–392 CE, but because the area could not be dug more intensely and no diagnostic pottery was found here, it cannot date the entire area. Wall 011 (south/north) is most probably bonded with W.015 (east/west), but the corner was not excavated. W.015 also served as the back side of a rubbish pit, L.016, which goes much deeper into the sand than proximate Wall 015. Fragmentary wall W.040 (east/west) also has an unclear architectural context. Interestingly, though the pottery appears to have been deposited in a number of phases (which are not clear), the dating is nevertheless from the same period — the transition between the Byzantine and the Umayyad periods. The square was excavated to a clean sandy soil layer.

Square 7 (Fig. 11)

Sand with very little pottery was encountered in the entire square. IAA Section 7 was exposed in the western part of the square. The dating is again the Byzantine-Umayyad transitional period. The square was excavated to a clean sandy soil layer.

AREA B

Squares 21 and 22

A thick plastered Wall 039 (east/west) was discovered in Squares 21 and 22 (Figs.12–14). The wall

was about half a meter thick, built on the sandy soil, and partially preserved to a height of two courses. An in-situ slab of paving stone was

3 Coin B.026, L.018.

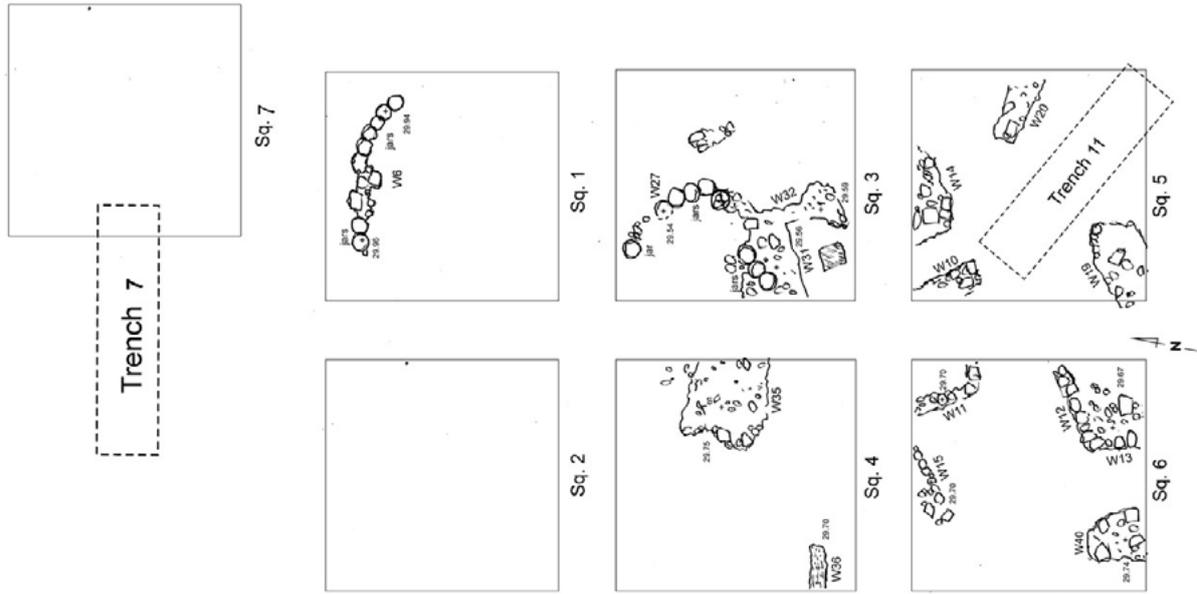


Figure 11. Map of Area A.



Figure 12. W.039 in Square 21, looking west.



Figure 13. W.039 in Squares 21 and 22, looking south.

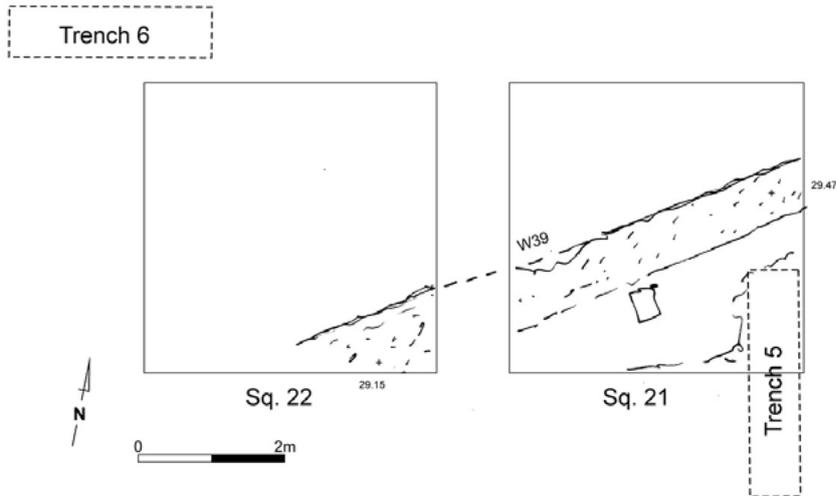


Figure 14. Map of Area B.

discovered south of the wall and was probably part of the building floor. Although the construction method is totally different from the rest of the walls in this area, all the ceramics are dated to the Byzantine-Umayyad transitional period. The squares were excavated to a clean sandy soil layer.

AREA C

Squares 31 and 32

Squares 31 and 32 were excavated by hand, and, after no architectural findings were found, a backhoe fragmented the hard soil, and again the excavation was carried out by hand. The sherds were all very small and weathered; none were diagnostic.

CONCLUSION

It seems that most of Area A was occupied by pottery workshop waste; the waste rested above natural sand. The pottery workshop itself was not found, but the jar walls (boundary walls?), and the lack of slag (only two small pieces were found) suggest that this was the far end of the discard area.

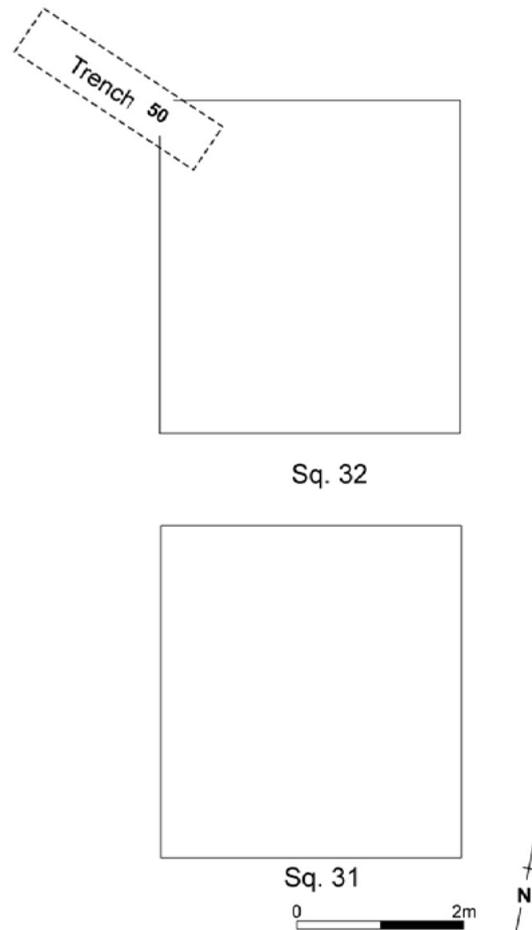


Figure 15. Map of Area C.

The ceramic assemblage (Figs. 16–24) dates to the transition between the Byzantine and Umayyad periods. It is paralleled by assemblages at sites such as the Be’er Sheva North Train Station (Israel et al. 2013), Khirbat el-Thahiriya (Kogan-Zehavi and Hadad 2012), Ramle (Kohn-Tavor 2017), Tel Shiqmona (Torge and Ad 2013) and other sites in

the Ashkelon region (Hadad 2012: 90–96; Israel et al. 2013: 59–68; Kohn-Tavor 2017: Figs. 2.11–13, 2.19, 2.21, 2.27–28, 2.46; Nahshoni 2009; Torge and Ad 2013: 117–125; Yegorov 2017). Some of the coins date to an earlier period, though all of them were found in areas where the ceramic assemblage gives later date.

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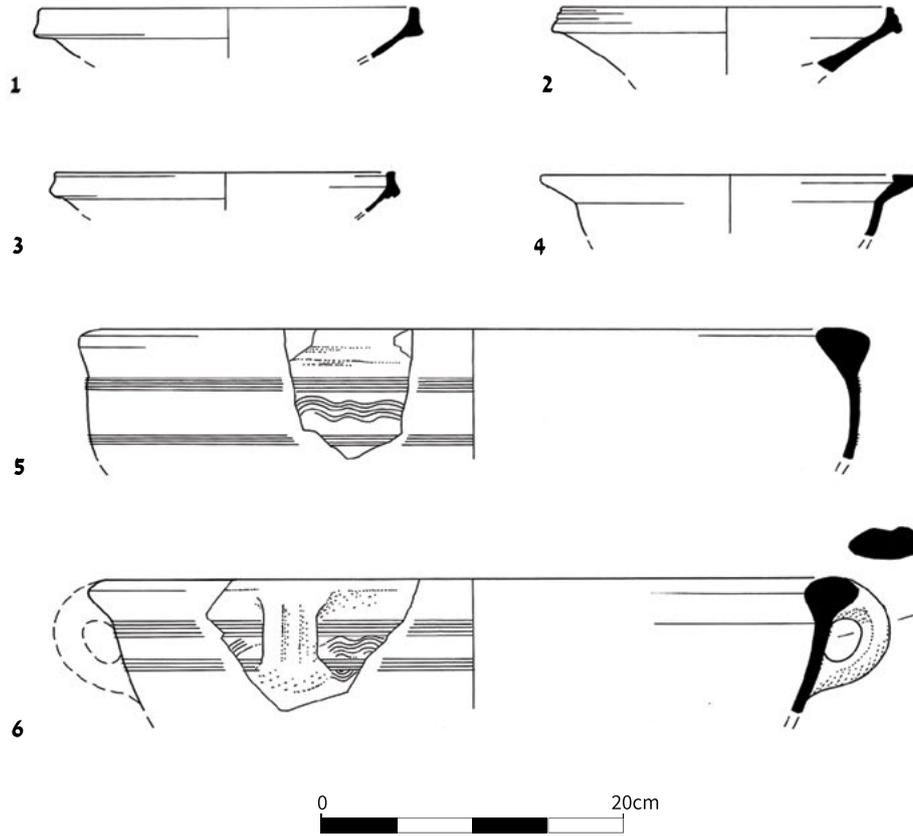


Figure 16. Bowls and basins.

No.	Basket no.	Locus	Square	Description
1	54/2	021	4	Bowl
2	15/2	005	2	Bowl
3	54/3	021	4	Bowl
4	54/15	021	4	Bowl
5	29/1	021	4	Basin with incised decoration
6	16/10	009	3	Basin with incised decoration

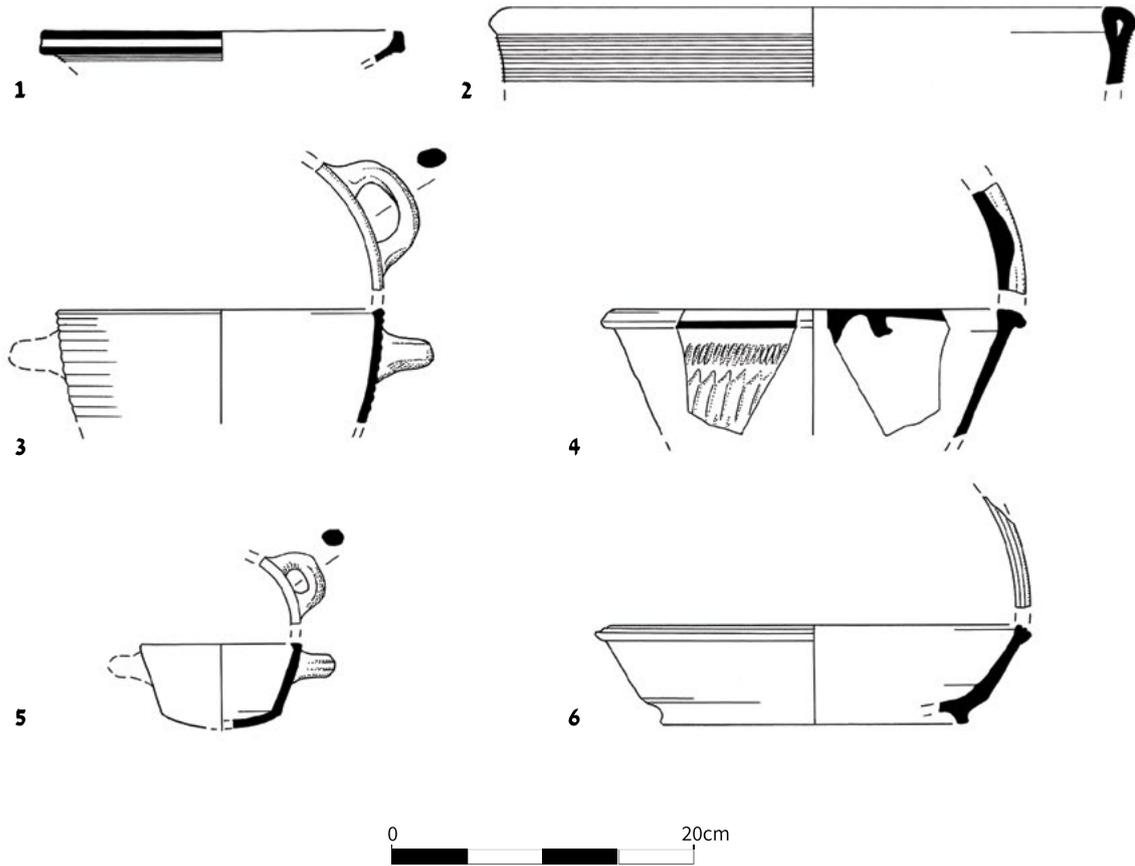


Figure 17. Bowls, kraters and casserole.

No.	Basket no.	Locus	Square	Description
1	54/1	021	4	Bowl
2	37/1	016	6	Krater
3	11/1	005	1	Casserole
4	13/1	009	3	Bowl with incised decoration
5	41/1	009	3	Small Casserole
6	59/1	024	22	Krater

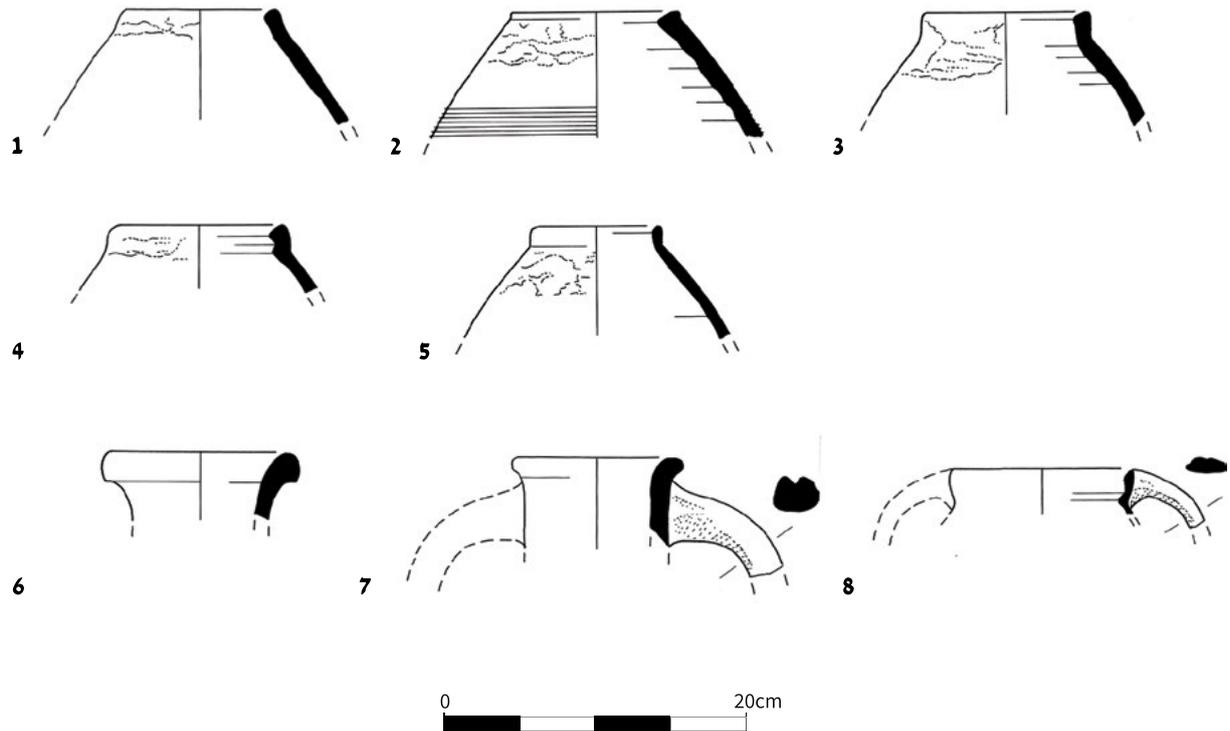


Figure 18. Jars and jugs.

No.	Basket no.	Locus	Square	Description
1	54/9	021	4	Gaza ware Jar
2	54/10	021	4	Gaza ware Jar
3	54/7	021	4	Gaza ware Jar
4	54/8	021	4	Gaza ware Jar
5	54/14	021	4	Gaza ware Jar
6	45/4	021	4	Jug
7	17/1	017	6	Amphora
8	54/13	021	4	Cooking pot

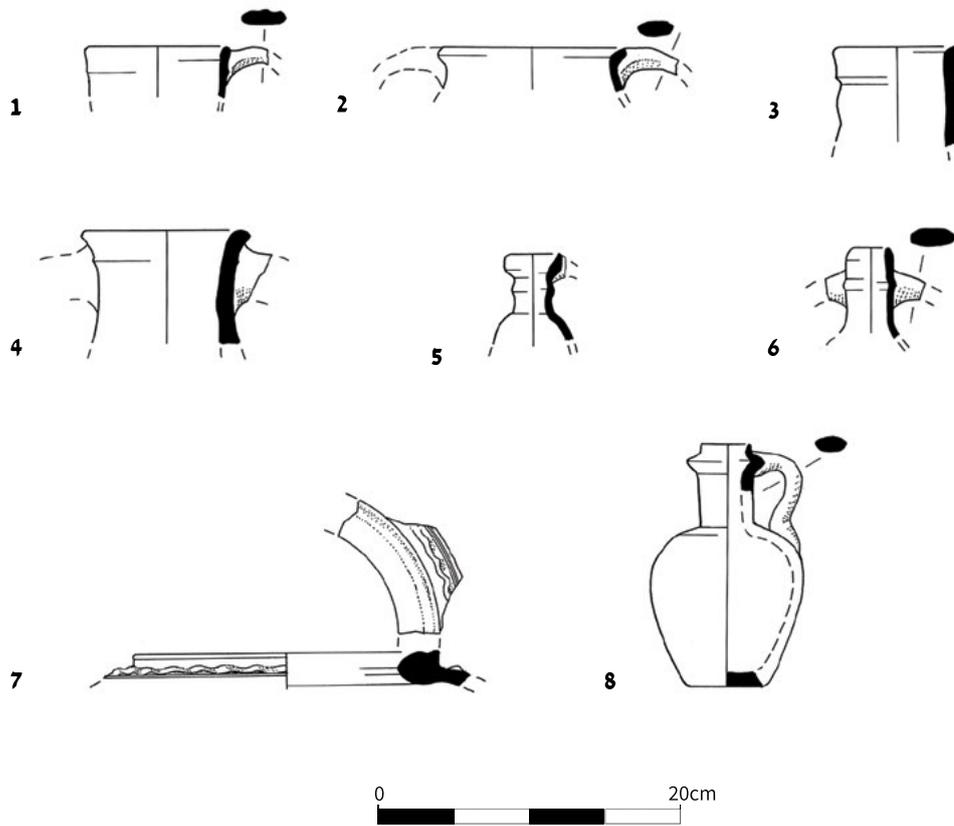


Figure 19. Jugs.

No.	Basket no.	Locus	Square	Description
1	37/2	016	6	Jug
2	41/2	009	3	Cooking pot
3	54/5	021	4	Jug
4	54/6	021	4	Amphora
5	59/2	24	22	Jug
6	45/23	021	4	Flask
7	28/1	009	3	Krater
8	18/1	008	2	Juglet

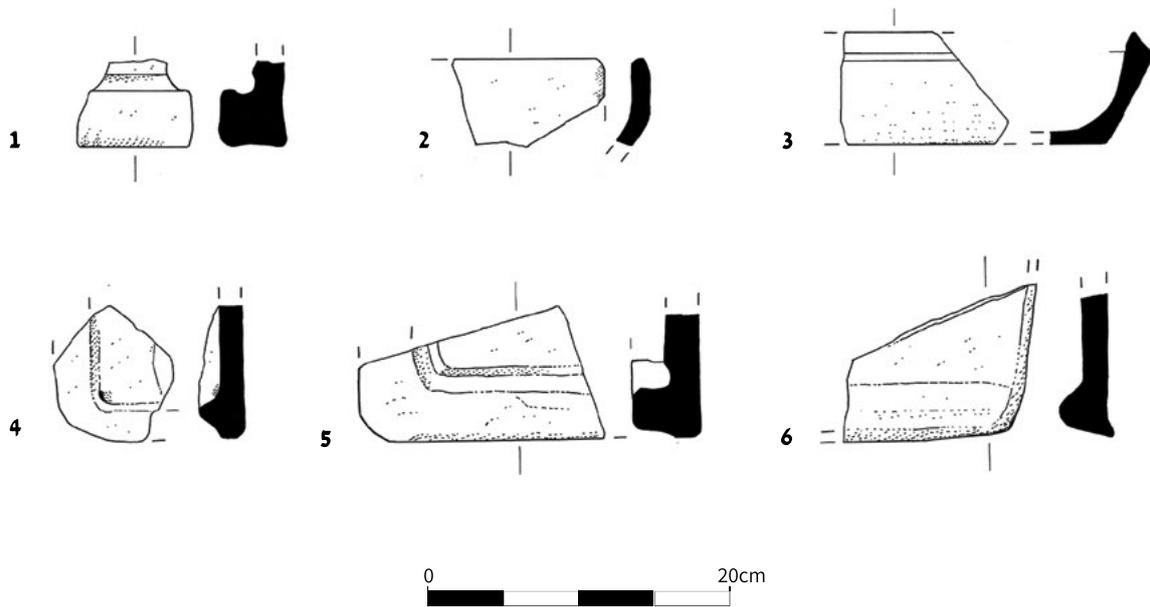


Figure 20. Ceramic basins and tiles.

No.	Basket no.	Locus	Square	Description
1	54/12	021	4	Roof tile
2	45/2	021	4	Ceramic Basin
3	45/3	021	4	Ceramic Basin
4	35/2	021'	4	Roof tile
5	35/1	021	4	Roof tile
6	54/11	021	4	Roof tile

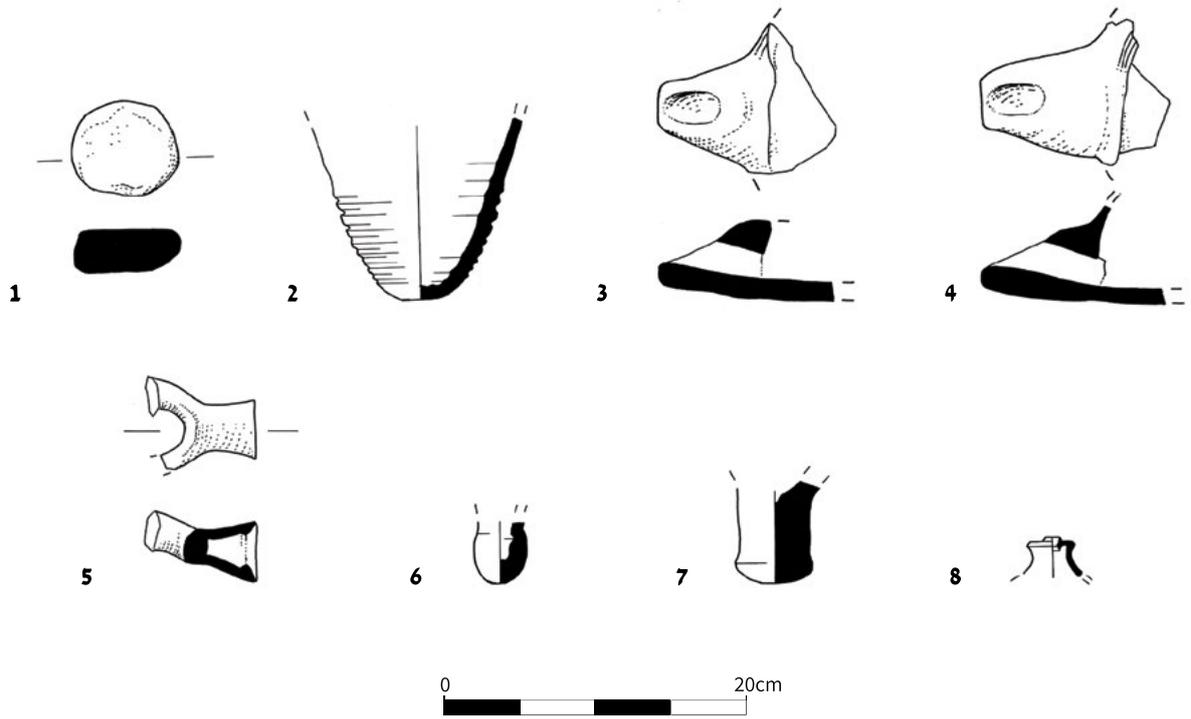


Figure 21. Miscellanies.

No.	Basket no.	Locus	Square	Description
1	31/1	008	2	Jar stopper
2	54/16	021	4	Jar base
3	60/1	025	21	Lamp
4	31/2	008	2	Lamp
5	15/17	005	1	Pan handle
6	34/1	008	2	Jug base
7	31/3	008	2	Amphora base
8	37/3	016	6	Amphoriskos

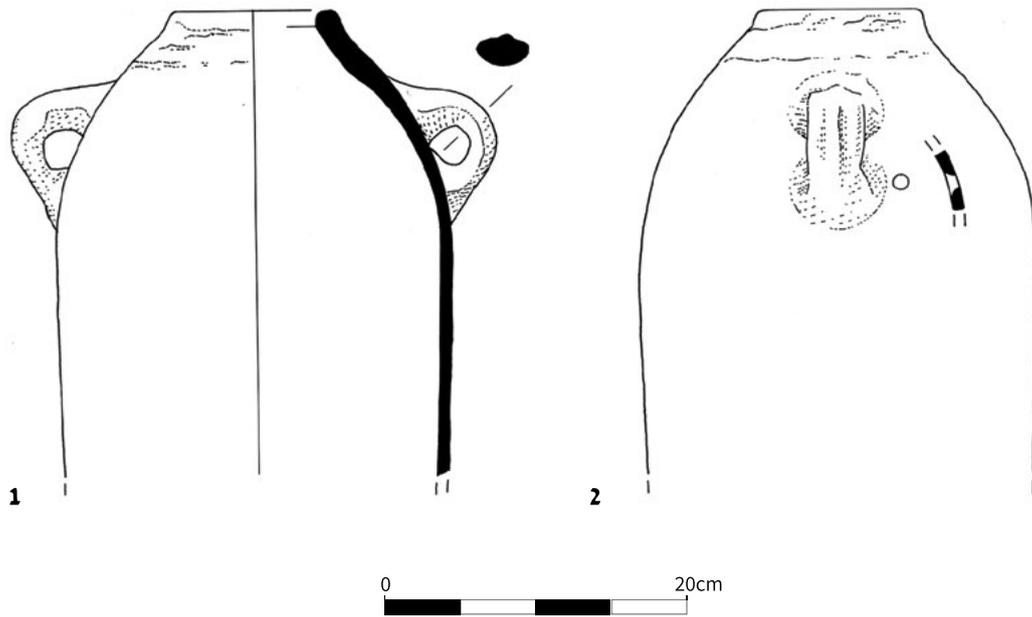


Figure 22.

No.	Basket no.	Locus	Square	Description
1	76/1	W.06	1	Jar from the jar wall

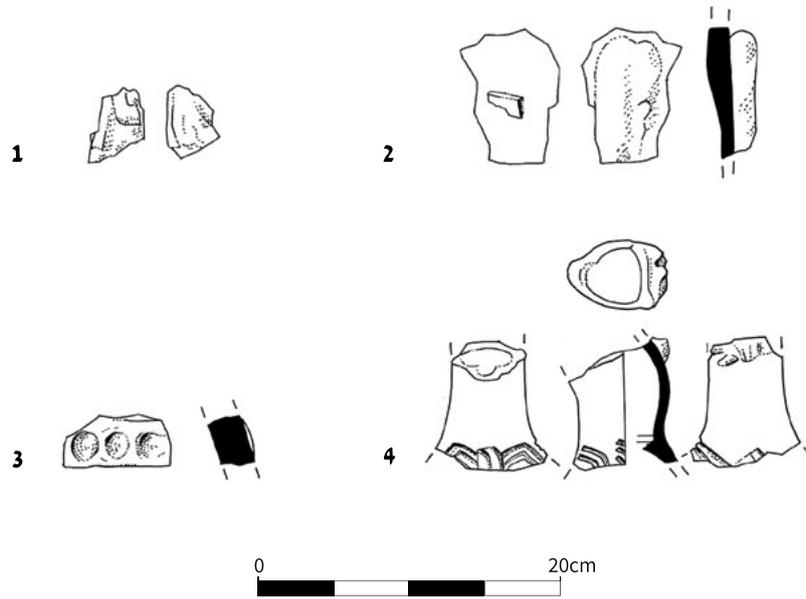


Figure 23.

No.	Basket no.	Locus	Square	Description
1	42/1	021	4	Slag
2	42/2	021	4	Slag
3	54/17	021	4	Applied band with impressions
4	41/3	09	3	Zoomorphic Vessel?

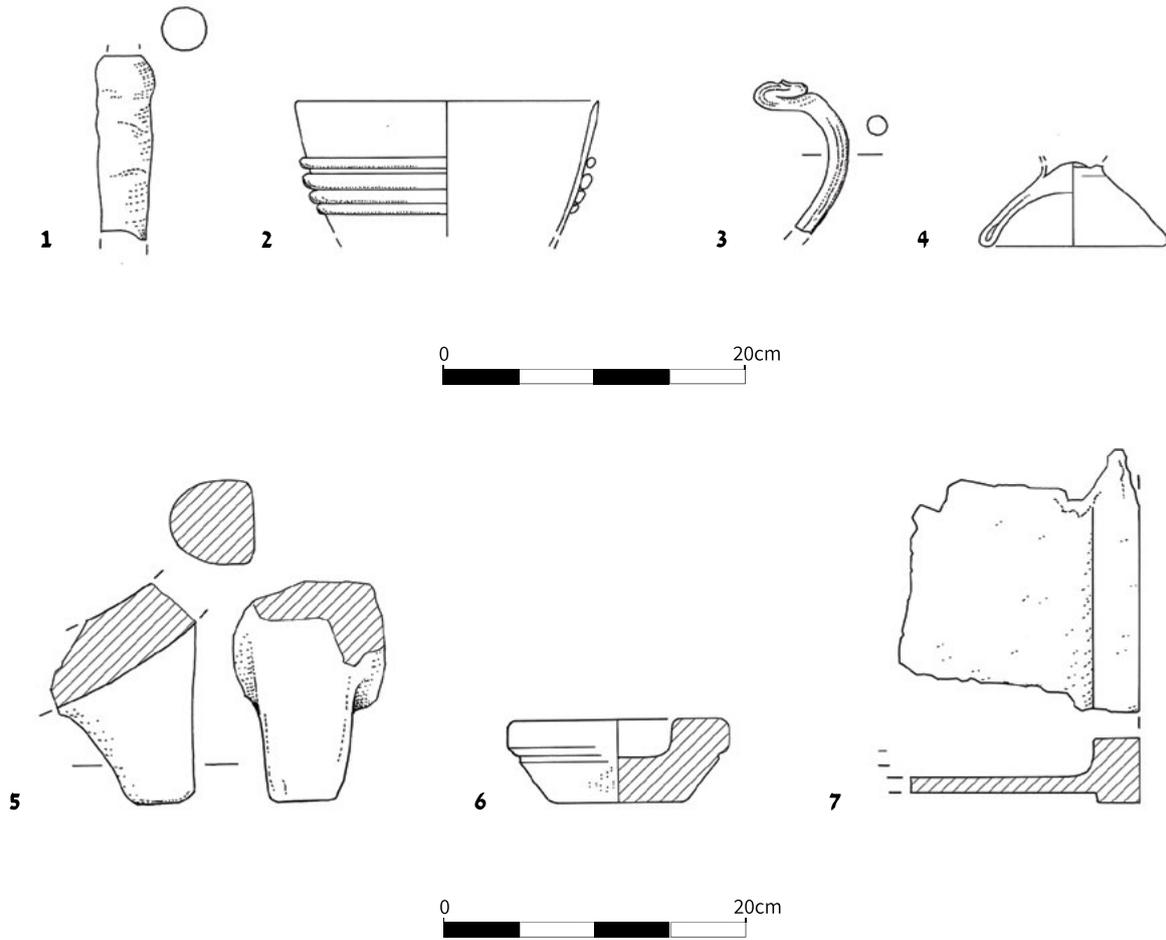


Figure 24. Glass and Stone Objects.

No.	Basket no.	Locus	Square	Description
1	37/4	016	6	Glass object
2	18/2	008	2	Glass bowl or jug
3	58/1	021	4	Glass object
4	58/2	021	4	Base of vessel from glass
5	35/3	021	4	Leg of a basalt bowl
6	42/3	021	4	Limestone bowl
7	44/1	024	22	Modern metal artifact

The Coins from Ashkelon — Agamim

Yoav Farhi

Three copper-alloy coins were found during the excavations at Ashkelon — Agamim (Avisar Lewis 2021 this volume). Two coins are from the 4th century CE, while the third is worn and

partly illegible, but should be dated to the 5th–early 6th centuries CE. The coins are of known types, commonly circulated in the region during the late Roman/early Byzantine period.

CATALOGUE

1. Reg. no. 024; Locus 007 (Fig. 1)

Constantine I (306–337 CE). Date of coin: 324–330 CE.

Obverse: Bust to right, laureate, around: CONSTAN-TINVS AVG

Reverse: Camp-gate with two towers and star above, around: PROVID[EN]-TIAE AVGG. In exergue: S [—].

2.62gr., 20mm., Axis: 6.

Cf. LRBC I: 26, No. 1073.



Figure 1.



2. Reg. no. 026, Locus 018 (Fig. 2)

Unidentified Emperor (possibly Arcadius). Date of coin: 383–392 CE, Nicomedia.

Obverse: Bust right, pearl-diademed, around: [—]

Reverse: Victory advancing left, dragging captive, around: SALVS REI- [—]; in exergue: SMN [—].

0.81gr., 12mm., Axis: 6.

Cf. LRBC II: 94, Nos. 2403–2405.



Figure 2.

3. Reg. no. 019; Locus 008

Unidentified Emperor. Date of coin (based on the fabric and dimensions of the flan): 5th–early 6th century CE (?)

Obverse: Head right.

Reverse: Illegible.

0.60 gr., 9mm.

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Tel Gishron — An Early Chalcolithic Settlement in the Northern Negev

Michal Yron

In March and early April 2019, a salvage excavation was conducted west of Moshav Menucha and adjacent to Tel Gishron (license number B474/2019, map.ref. 178250/618589) for the purpose of transferring a gas line. The site is located on agricultural land on the northeastern bank of Nahal Guvrin, north of the confluence of Nahal Dikhrin and Nahal Guvrin and north of the remains of the Arab village of A'jaser (Jusayr) (Figs. 1–2).

A test excavation carried out by Nahshoni and Aladjem (2009) of the Israel Antiquities Authority (IAA) revealed a settlement from the Early Chalcolithic period (the Besorian Culture)

that covers an area of about 1.5 dunams with living floors, refuse pits and stone and brick foundations. In July–August 2018, test trenches were cut along the route of the gas pipeline, prior to the broadening of the pipe, in the process of which archaeological remains were exposed — mainly installations, remains of fieldstone walls, ceramics, and flint from the Early Chalcolithic period (Wesel 2018).

Three squares C5, C7, D6 were opened adjacent to the IAA excavation (Square C6, Fig. 3). The continuation a one-period settlement with oval installations and three construction phases



Figure 1. The excavation area looking southwest toward Road 40.

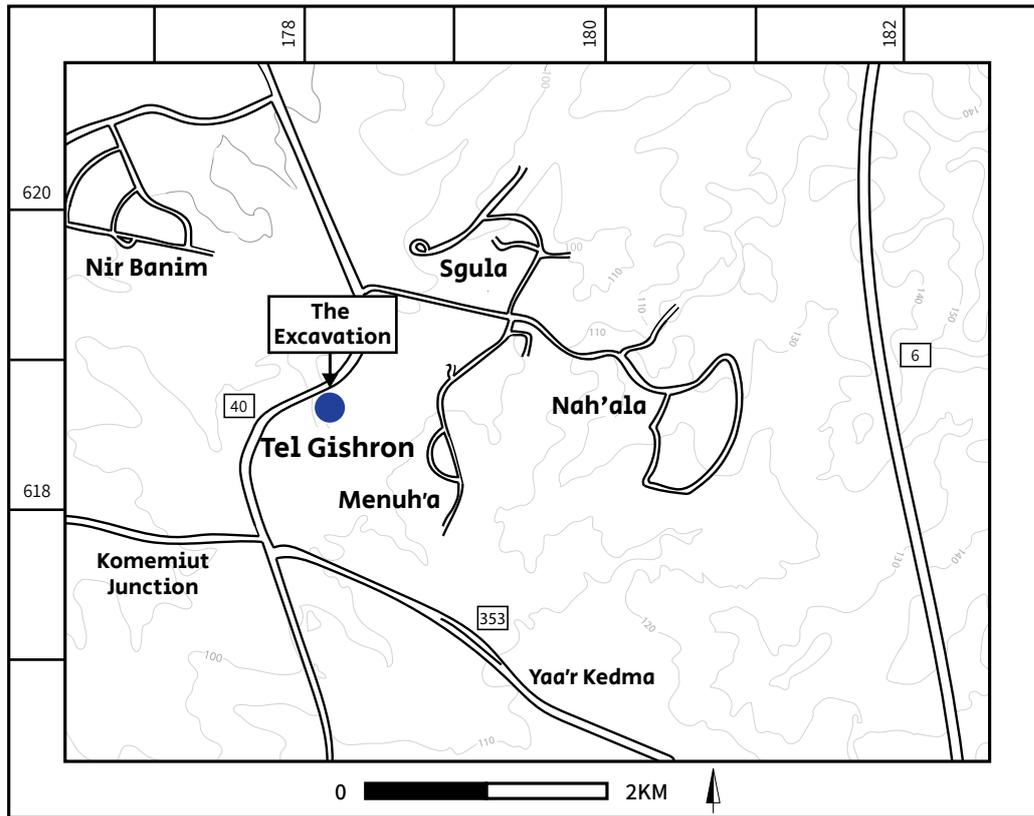


Figure 2. Location map.

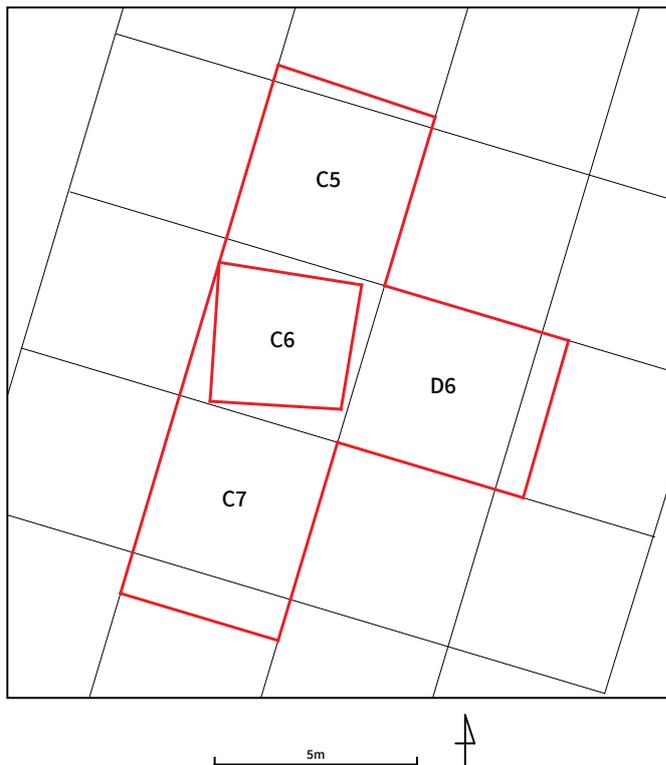


Figure 3. The excavation squares adjacent to the test excavation (C6) of the Israel Antiquities Authority.

was discovered, dating to the Besorian/Qatifian phase of the early Chalcolithic period.¹ The ceramic assemblage is varied and includes bowls, and flat-rimmed and thick-walled holemouth jars, all lacking painted decoration. The small flint assemblage includes cores, a scraper, and a single sickle blade, while the ground stone assemblage

is diverse and includes objects imported from distant locations (Ilan, this volume). The archaeozoological findings are consistent with the findings revealed at other sites from this period (cf. Nahshoni and Aladjem 2009; Nahshoni et al. 2002) and include cattle, sheep, and domesticated pigs (Kehati, this volume).

ARCHITECTURE AND STRATIGRAPHY

Five oval installations in Squares C5–6 and D6 were exposed. The installations were built of fieldstones founded on a substructure of small stones and levels of crushed chalk mixed with reddish soil (F258, F259, Figs. 4–7).

Installation 261 (Locus 111) (Fig. 5) is located in the eastern part of Square D6 and measures 0.87 x 1.10 m. It was built of small to medium-sized fieldstones on a chalk substructure. A crushing stone was found near the installation (Ilan, this volume, Fig. 1:7), as was a holemouth jar with thumb decoration under and on the rim (Fig. 21:15).

Installation 234 (Locus 105) (Figs. 6–7) is located in the center of Square D6, is 0.93 x 1.80 m, and built of medium-sized fieldstones.

Installations 260 (Locus 115), 262 (Locus 117) (Fig. 5) 0.73 x 1.10 m, and 0.56 x 1.30 m respectively, are located in Squares C6–D6 and C6 west and built of small fieldstones. Brick material was found on their northwestern side (Fig. 14).

Installation 263 (Locus 103) (Figs. 5:10–13) is located between Squares C5 and C6, dimensions 1.40 x 1.45 m, and is constructed of large fieldstones based on a layer of crushed chalk (Figs. 11–12) and below that a layer of small stones.

The installations were found empty, but many ceramic finds, crushing and grinding stones, and animal bones were collected around them.²

Courtyards and stone floors (Fig.4). Floors with two construction phases were identified: a phase of leveling and preparing of surface with crushed chalk and medium-sized fieldstones to create a foundation, and a phase of paved surfaces of small and medium stones with a filling of crushed chalk between them (Figs. 8, 10).

Due to the limited excavation area, no remains of walls or complete residential complexes were exposed. Installations and cobble floors that form part of open workspaces and courtyards are known from other sites in the Negev, such as the Nahal Govrin site, where oval installations of Stage IIB were dated to the Early Chalcolithic, Besorian phase (Nahshoni 2011: Figs. 4–5, Plan 2, Area A2, Locus 146, Installations 168 and 169). Oval installations are known also from the Ghassulian at Horbat 'Illit B, for example (Milevski et al 2013: Figs. 20–21).

The ceramic assemblage, which was exposed on the floors of Loci 107,118, 106, 105 109, 112, and 116 included bowls (Figs. 16:1–3, 6–8, 13; 17:7), holemouth jars (Figs. 18:1–3, 7; 19:14,16–17), jars (Fig. 20:3, 6), two churns (Fig. 21:4–5),

1 The excavation was directed by the author. Drafting and documentation using the Geogenie Documentation System were carried out by the author as well. Other contributors: drawing of ceramics, flint, and stone vessels — A. Tzipin; stone artifact analysis — D. Ilan; archaeozoology — R. Kehati; human remains — J. Zias; aerial photos — T. Rogowski; archaeology consultant — Y. Guvrin; excavation — workers from the village of Beit Zurif.

2 It is possible that the cluster of stones forms a base for a brick-built surface for raising above ground level for drying products. Brick remains were found near Installations 262,260 and west of Installation 263.

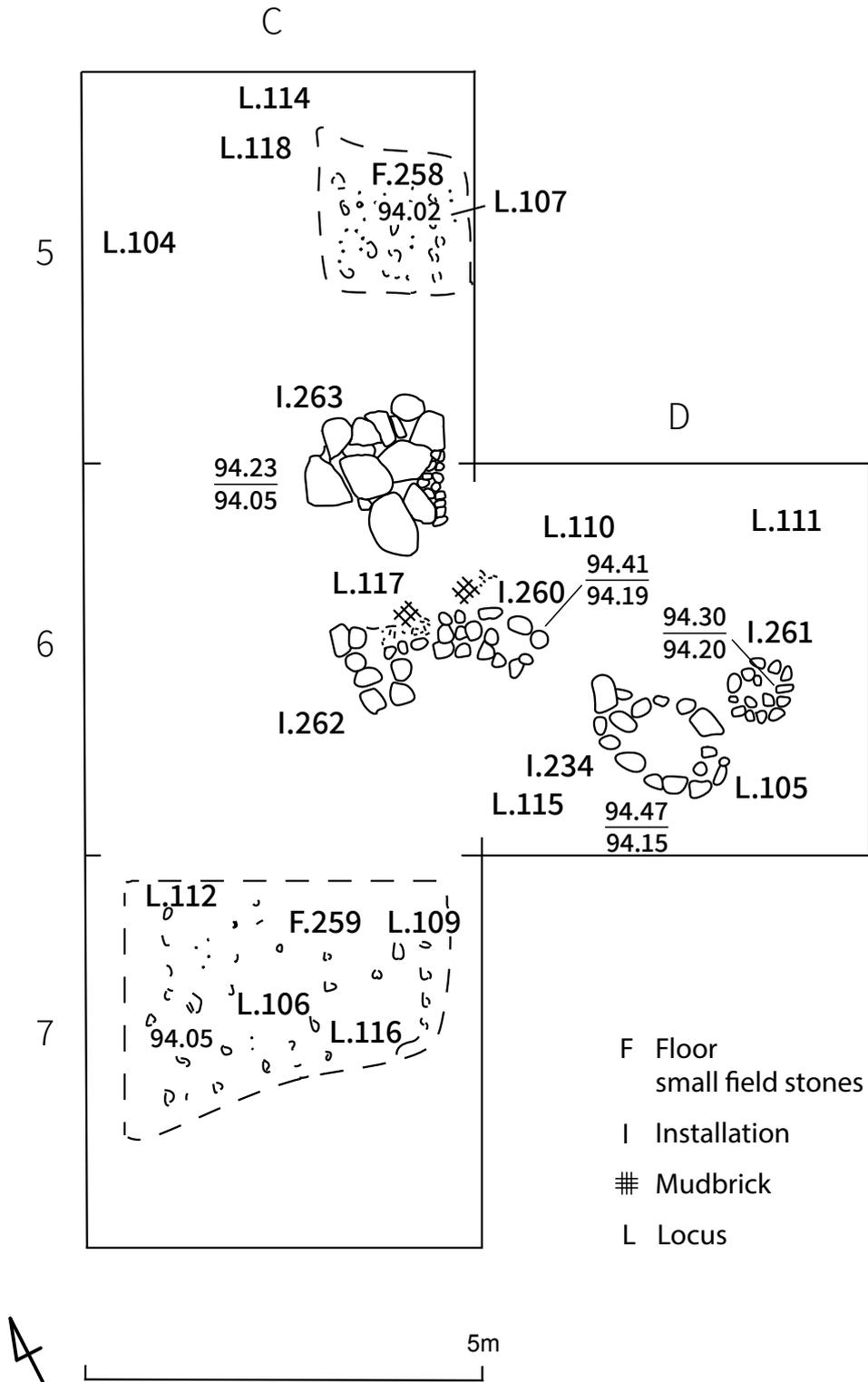


Figure 4. General plan of the excavation area — the oval installations 261,234,260,262,263 and floors F259, F258.

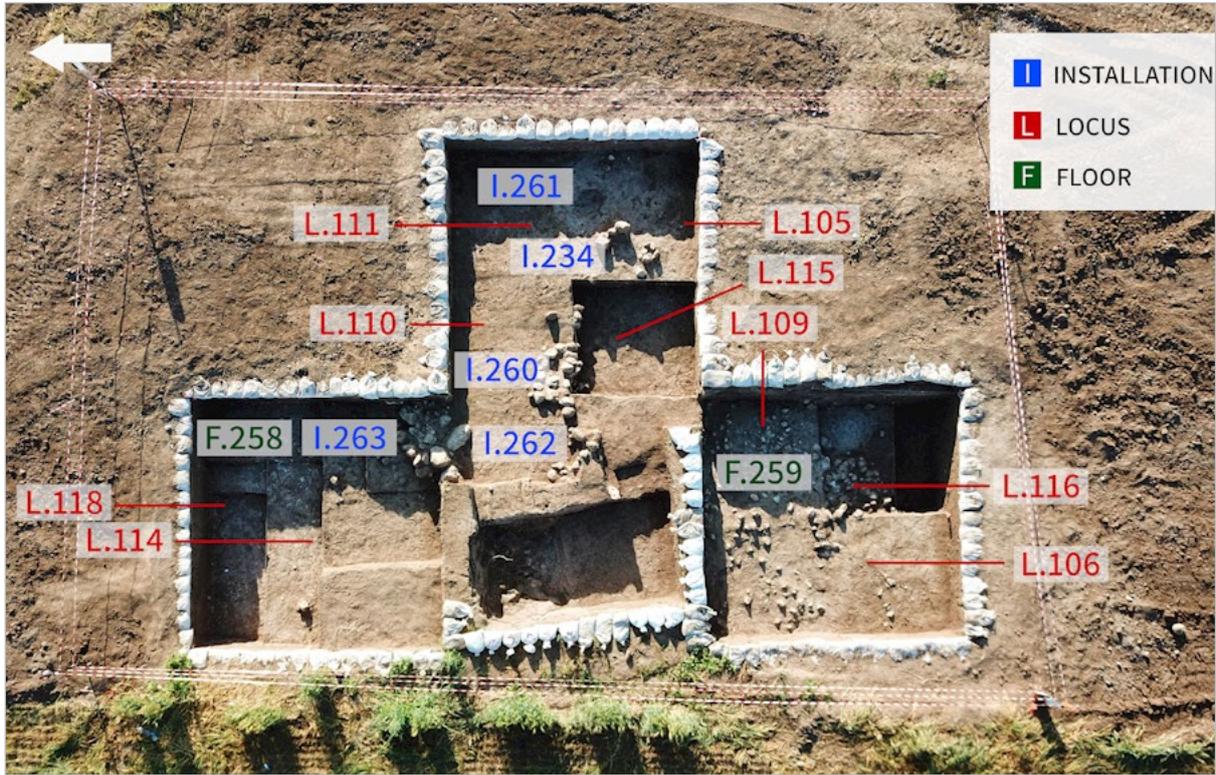


Figure 5. The oval installations and floors, looking west.

and loop- and pierced handles. The assemblage is indicative of the Besorian phase with Qatifian types. The ceramic finds are discussed below.

In addition to the animal bone assemblage (Kehati, this volume), a cluster of human bones was found in Locus 115 (Figs. 4, 9, 15) associated with Stratum III, the foundation level of the courtyard. The bones were apparently moved from their original context and buried temporarily in this pit, and later transferred to permanent burial while leaving some of the skeletal parts. According to Zias' anthropological report,³ remains of a minimum of four individuals from the Chalcolithic period were registered:

- two partial femurs, their size difference indicating that they two different adults.

- one incomplete humerus, very gracile, belonging to a sub-adult, perhaps a female, due to the size.
- a fragment of an incomplete ulna from a very young child.
- two fragments of an adult skull.

Next to the human bones, the following objects were recovered: a straight-walled bowl (Fig. 16:9), a krater with a mending hole (Fig. 17:1), holemouth jars (Fig. 18:5–6), a medium high-necked jar (Fig. 20:5), a hand-made jar base with mat impression (Fig. 20:15), two stoppers (Fig. 23:1–2), a spindle whorl (Fig. 23:3), a sickle blade with gloss (Fig. 24:6), a scraper (Fig. 24:5), and a sling stone (Fig. 24:7).⁴

³ I thank J. Zias for his analysis

⁴ The slingstone is made of clay



Figure 6. Two oval installations (234, 260) in Square D6, looking north.



Figure 7. Oval Installations 261, 260, 234 in Square D6, looking west.



Figure 8. Square C7: three phases of floors (F259), looking west

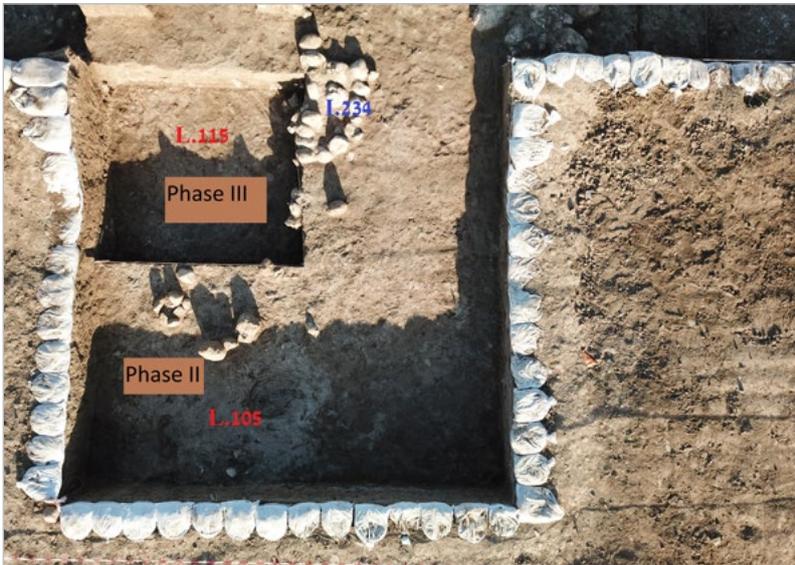


Figure 9. Square D6, Installation 234, L105 crushed limestone level, and a pit containing human bones (L115), looking east.



Figure 10. Square C5, looking west. Strata III, II — chalk floors (F258), and oval installation 263.



Figure 11. Installation 263, looking south. The level of crushed chalk upon which the installation is placed is seen clearly.



Figure 12. Installation 263, looking west.

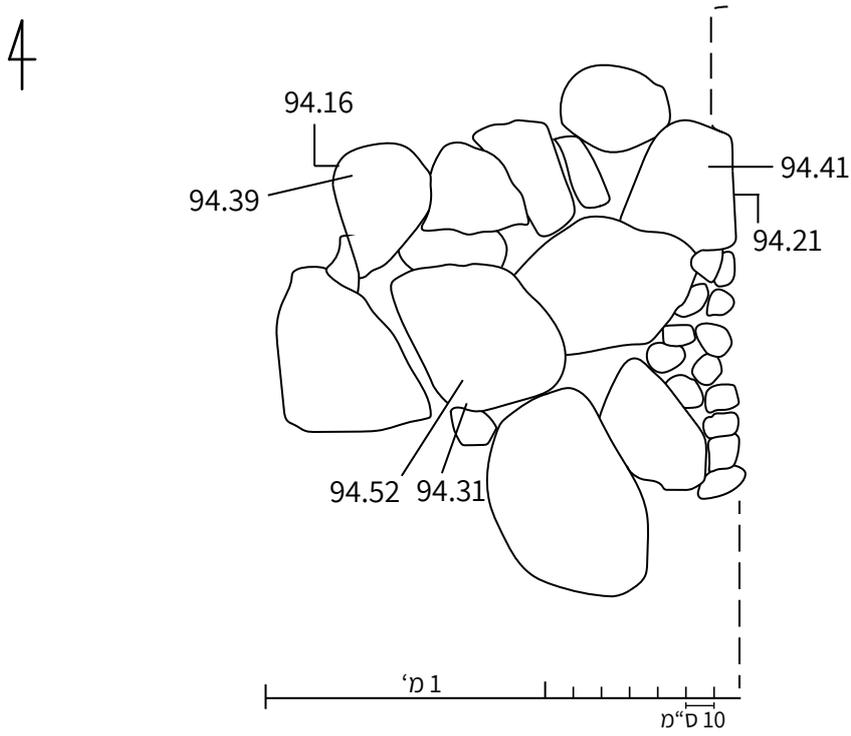


Figure 13. Installation 263, looking north.



Figure 14. Square C5, L117: remains of mudbricks.

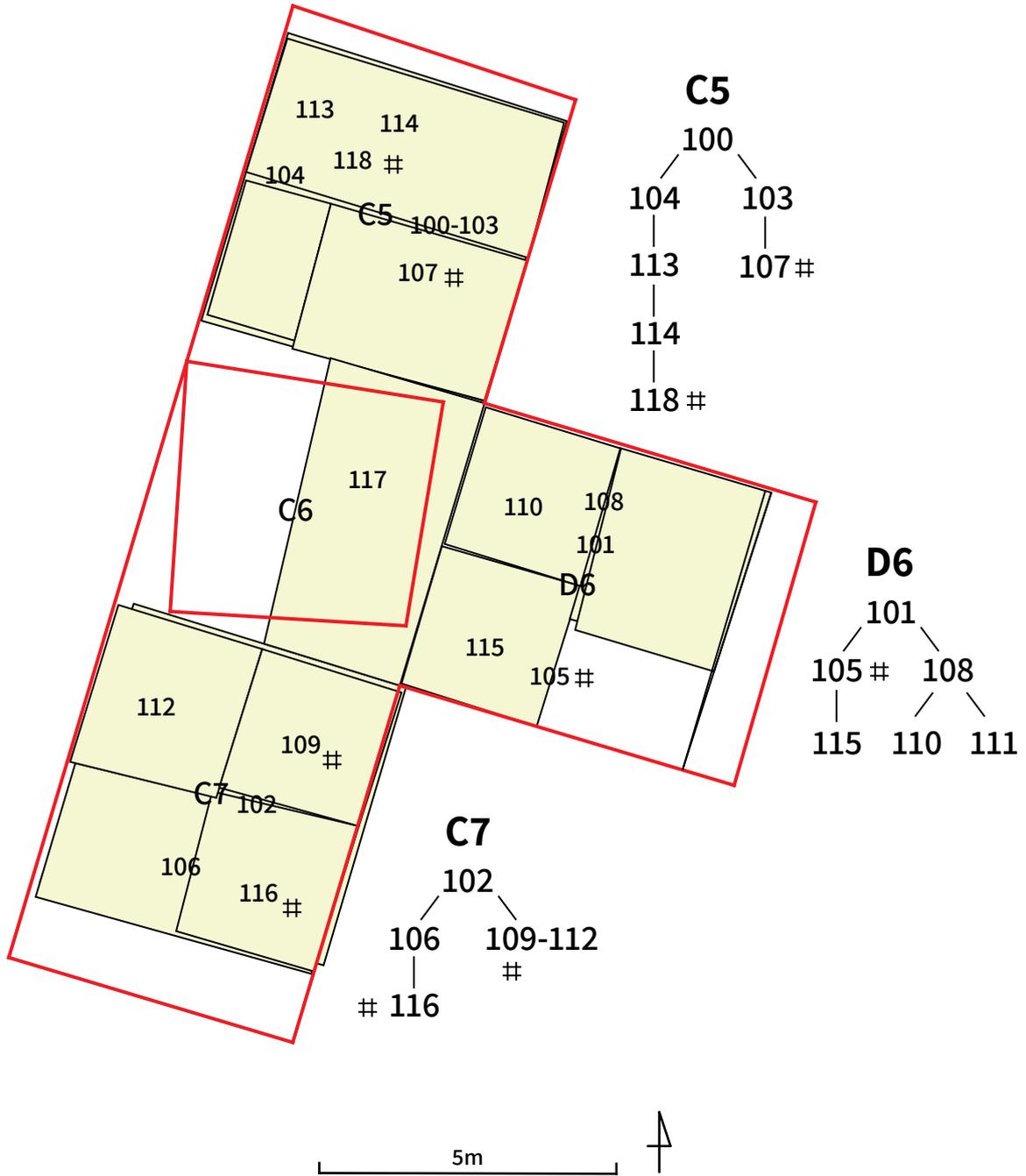


Figure 15. Matrix of loci (The numbering of the installations can be seen in Figures 4 and 5).

CERAMIC FINDS

The site dates to the Besorian phase of the early Chalcolithic period (Gilead 2007: 33–49), although one can identify types belonging to the Qatifian culture, and few vessels which resemble Ghassulian types. Ware of the northern Wadi Rabah culture also appears. The fabric is rough, made by hand or on a slow tournette, and fired at a low temperature. The clay is usually reddish gray/brown with a gray core, containing many organic inclusions and large gray grits, similar to the fabrics at sites near Tell el-Far'ah (South) and in the Nahal Besor drainage (Gilead and Alon 1988: Table 3). The complete absence of cornets, the few churns and lack of red bands and red slip is typical to this phase.

Bowls (Fig. 16). The ceramic complex includes small, large, and straight-walled bowls. Some have thumb impression on the rim (Fig. 16:8–10) similar to the Qatifian assemblage (Goren 1990, Y3 site; Nahshoni 2011). Most of the bowls are handmade and contain many gray grits (Fig. 16:1–3, 5, 8–12). The assemblage lacks any painted decoration and only a few vessels have brown slip (Figs. 20:4; 21:2). The few prototypes V shaped, rounded, rimmed bowls lack the typical red band decoration on the rim. They have rounded walls, characteristic of the Besorian assemblage (also appear at Gilat site and Ramot 3 (Nahshoni et al. 2002; Fabian et al. 2004).

A unique hand-formed stand (Fig. 16:11) was found in L115 (Fig. 9) with parallels in Wadi Rabah ware (Garfinkel 1999: Fig. 78: A–C), as were a basin and platter, associated with Ghassulian types (Fig. 16:12–13).

Kraters (Fig. 17). These are open vessels with a thickened rim and a thick wall, and reddish-yellow clay with white grits (Fig. 17:1–2). Some are hand-formed (Fig. 17:3). Some have a vertically impressed thumb decoration (Fig 17:6,

cf. Gilead and Alon 1988: 76). One krater has a grooved rim (Fig. 17:7), a Wadi Rabah type (Garfinkel 1999: Fig. 82:7).

Holemouth jars (Figs. 18–19; 22:1–4). The rough, thick-and-straight-walled holemouth jar is the most common type in the Tel Gishron assemblage. Its rim leans slightly inwards, and it has loop handles (Beth Pelet type), unique to Besorian phase (cf. Fabian 2014: Fig.16:8–9; Gilead and Alon 1988: 127). Other features include reddish to brown to gray clay, white to gray grits, a thick rim (Fig.18:13, 17), hand forming (Fig. 19:14–17), a sharp-rimmed type (Fig. 18:10), a combed surface type (Fig. 18:3), and a form with thumb impressions and applied decoration (Fig. 18:5–6; cf. Nahshoni 2011: Fig. 11:1–2).

Jars (Fig. 20) have reddish brown to gray clay with gray grits and organic inclusions. Only one jar had red slip (Fig. 20:4). There are both low- and high-necked types with a variety of rims: upright, almost holemouth-like (Fig.20:2), out-curving (Fig. 20:1), accompanied by loop handles (Fig. 22:1–6). Bases are thick (Fig. 20:10–11, 13–14) typical of Beth Pelet jars (Gilead and Alon 1988: 127). One showed a round mat impression, typical to the Qatifian culture (Fig. 20:15, cf. Nahshoni et al. 2002: 9; Goren et al. 1990, Site Y3).

Goblets (Fig. 20:12; 21:1–3) and a footed goblet base (Fig.20:12) are typical to the Besorian culture. They are mostly hand made. They have pierced handles, resembling those of the small holemouth jars; their bases are narrow and thickened (Fabian et al. 2002).

Churns (Fig. 21:4–5). Churns are rare in the assemblage; only two were found, one small, with a thin wall, small gray grits, and red slip (Fig. 21:5), and one handle of a large rough churn with gray grits and a gray core.

THE CHIPPED STONE ASSEMBLAGE

In contrast to the ceramic finds, only a few flint artifacts were found; mainly cores (Fig. 24:1–4), a round scraper (Fig. 24:5), the shape typical to this phase (Fabian et al. 2004: Fig. 8:3), and

a single sickle blade with gloss (Fig. 24:6). Small numbers of sickle blades, with and without gloss, are known from sites such as Ramot 3, where only five were found (Fabian et al. 2004: 71).

CONCLUSIONS

The lithic and ceramic assemblage of Tel Gishron dates to the Besorian phase of the early Chalcolithic period. This phase is characterized by jars and holemouth jars with loop handles and thick bases, bowls with straight walls, and kraters with vertical thumb decoration on their rims. A similar assemblage was reported at Ramot Nof, Ramot 3 (Nahshoni et al. 2002; Fabian et al. 2004) and from another part of Tel Gishron (Nahshoni and Aladjem 2009). Contrary to the absence of basalt bowls and grinding and crushing stone utensils in Ramot 3 and Ramot Nof (Fabian 2004: 79), various ground stone objects were found at our Gishron site (Ilan, this volume).

The occurrence of Qatifian ware together with Besorian ware is found in other Besorian assemblages without clear stratigraphic separation between the two: at Ramot Nof, and even to the east of the Dead Sea at Ain Waida for example (Gilead 2007: 43–44). The two cultures shared similar looped handled jar types. However, the Qatifian ceramic assemblage displays a clay with

50% straw tempered inclusions (mostly in bowls and hole mouth jars), while in the Besorian calcite inclusions are the rule. The two cultures predate the Ghassulian phase of the late Chalcolithic, but the chronological relationship between them is still in need of clarification. Although it seems that the Besorian is later than the Qatifian, they occupy almost the same geographical landscape, and it is possible that there is a spatial hierarchy between them in addition to a chronological one (Abadi-Reiss 2009: 211).

When considering the Tel Gishron assemblage, it is important to note the affinity between both the Besorian and the Qatifian cultures to the Wadi Rabah culture of the north; they share a number of tool types.⁵ The site at Tel Gishron, with its oval installations and the ceramic finds from the Besorian and Qatifian cultures, makes it possible to fill in the settlement gap between Teluliot Batashi in the north and Grar, Ramot 3, and Gilat in the south (Gilead 2007, Fig. 1; Abadi-Reiss 2009: 31).

⁵ At the site of Teluliot Batashi the Qatifian culture appears above the Wadi Rabah phase (Goren 1990).

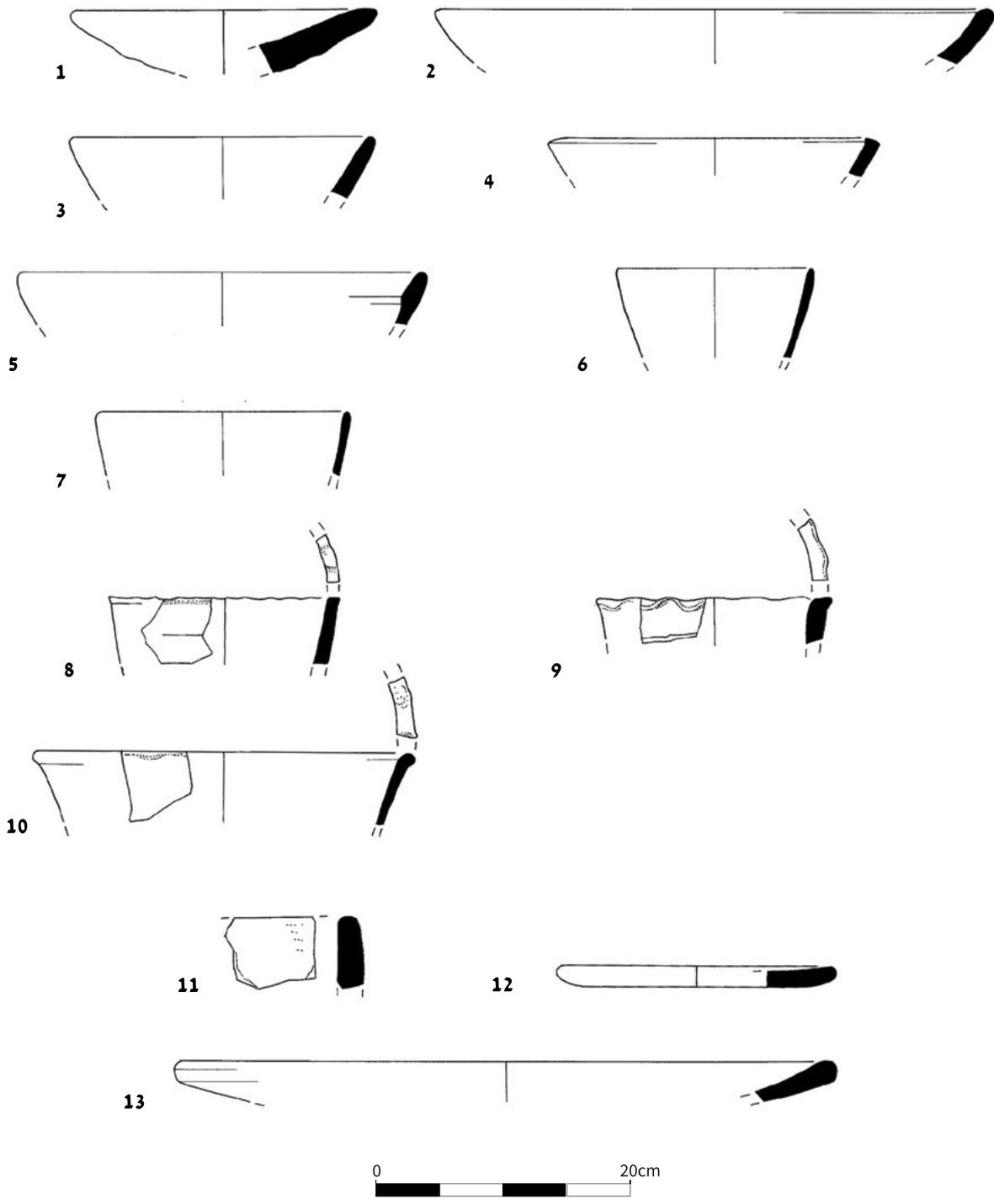


Figure 16. Bowls, straight walled bowls, platters and basins.

Figure 16. Bowls, straight-walled bowls, platters and basins.

No	Type	Basket No.	Locus	Description	Parallels
1	Bowl	10039/1	112	Reddish brown clay, hand made	Garfinkel 1999: Fig. 117:4
2	Bowl	10022/6	107	Reddish gray, brown clay, hand made	
3	Bowl	10024/6	109	Reddish brown clay, gray core, white grits, organic inclusions, hand made	
4	Bowl	10040/4	114	Reddish yellow clay	Fabian et al 2004: Fig. 16:3
5	Bowl	10038/4	114	Reddish brown clay, hand made	
6	Bowl	10054/4	116	Reddish gray, yellow clay. White grits, thin walls	
7	Bowl	10025/1	107	Dark reddish gray clay, gray grits	
8	Straight-walled bowl	10013/1	105	Reddish yellow clay, large gray grits, hand made, thumb impression on rim	Garfinkel 1999: Fig. 116, type A2, QW; Gilead and Alon 1988: Fig. 11: 6–8, Fig. 12:5, QW
9	Straight-walled bowl	10055/2	115	Reddish gray clay, many large gray grits, hand made	Garfinkel 1999: 191, Type A2, QW
10	Straight-walled bowl	10029/3	109	Reddish gray clay, hand made?	
11	Stand, platter?	10048/4	115	Reddish brown clay, many white grits, hand made	Garfinkel 1999: Fig. 78: A-C. Early Chalcolithic, WR
12	Platter	10052/3	111	Reddish brown clay, white grits, hand made	Garfinkel 1999: Fig. 132:4 LC??
13	Large bowl or, basin	10027/6	107	Reddish brown clay, small white grits	Ben Ari and Ilan 2015: Fig. 56:4, LC?

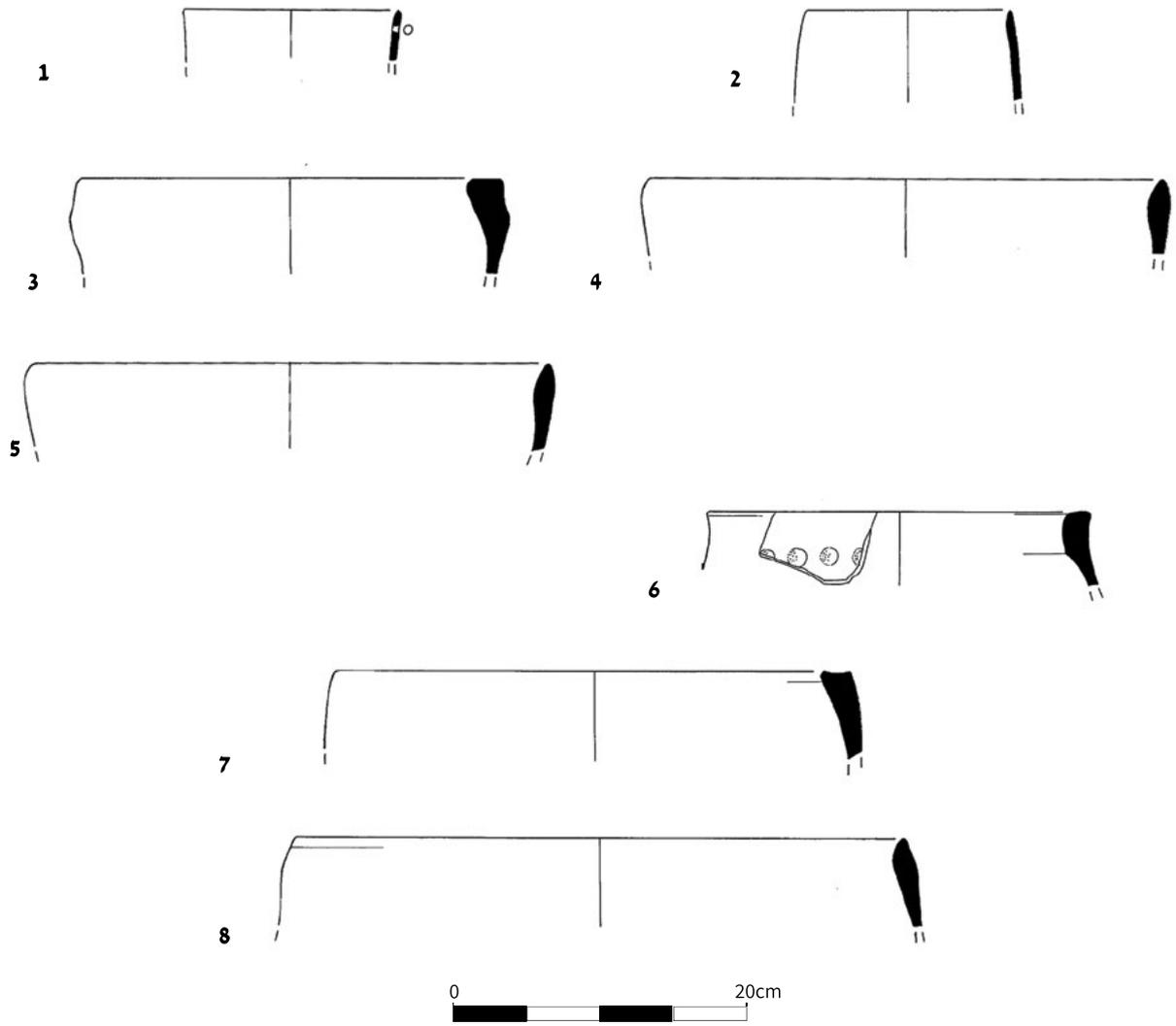


Figure 17. Small and large kraters.

Figure 17. Small and large kraters.

No	Type	Basket No.	Locus	Description	Parallels
1	Small krater	10048/125	115	Reddish yellow clay, well levigated, correction hole	
2	Small krater	10038/5	114	Reddish yellow clay	
3	Krater	10023/2	108	Light gray clay, gray core, hand made	
4	Krater	10032/2	111	Reddish brown clay	
5	Krater	10030/3	111	Reddish yellow clay, many white grits	
6	Krater	10042/1	117	Reddish yellow clay, gray grits, rounded impression	Gilead and Alon 1988: DII
7	Krater	10049/5	116	Reddish brown clay, white grits, grooved rim	Garfinkel 1999: Fig. 82:7 WR
8	Krater	10048/1	116	Reddish yellow clay, small gray/white grits, hand-made?	

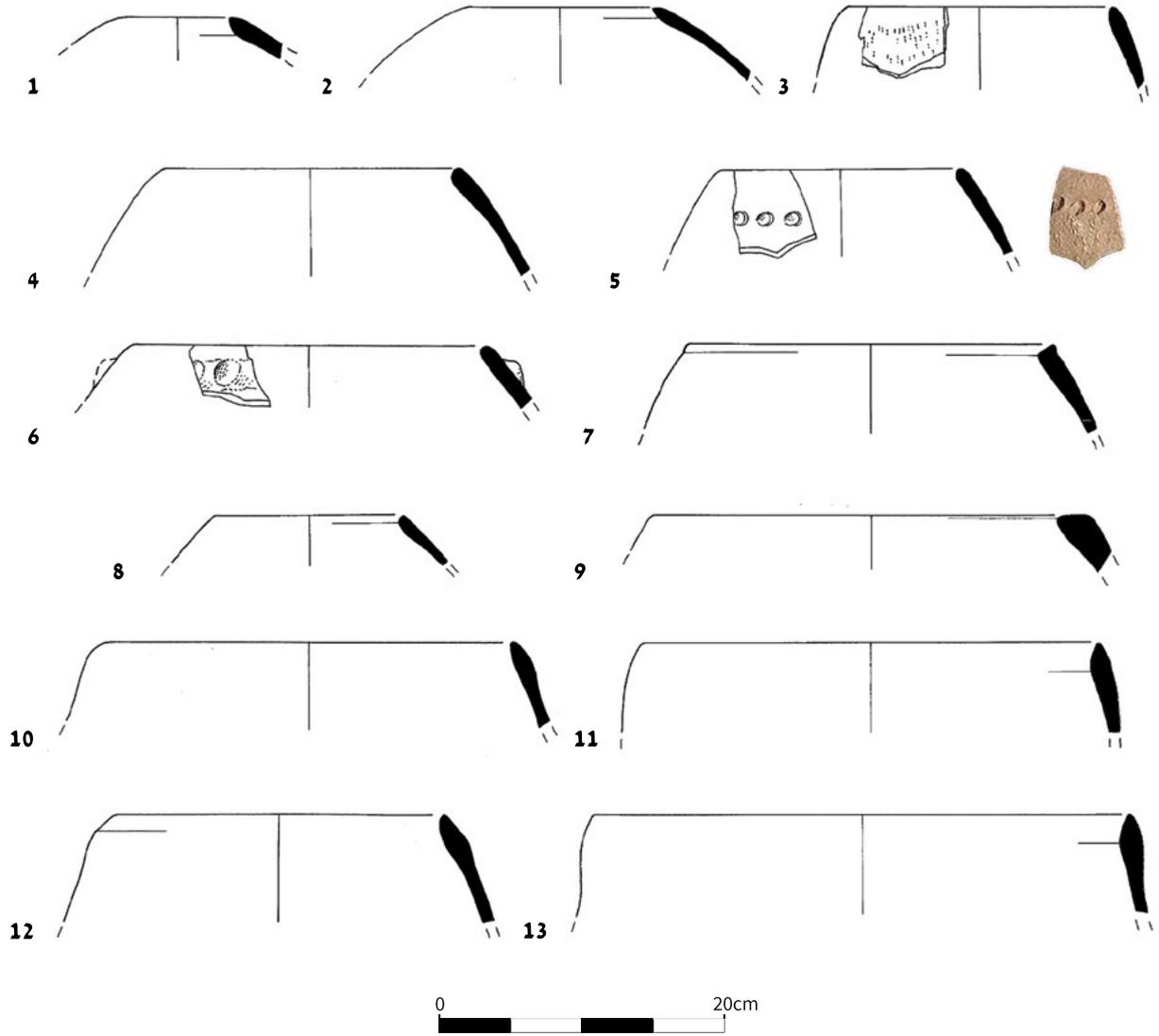


Figure 18. Holemouth jars.

Figure 18. Holemouth jars.

No	Type	Basket No.	Locus	Description	Parallels
1	Small hole-mouth jar	10043/1	116	Gray clay, well levigated clay	
2	Holemouth jar	10027/3	107	Reddish brown clay, thin wall, well levigated	Fabian et. al. 2004: Fig. 16:7 BW
3	Holemouth jar	10049/6	116	Reddish brown clay, many white grits, combed surface.	Garfinkel 1999: Photo 72:2. WR
4	Holemouth jar	10022/2	107	Dark reddish gray clay, many white grits	
5	Holemouth jar	10037/1	115	Reddish brown clay, rounded rim, thumb impression decoration.	Garfinkel 1999: 131, Figs. 82:8, 83:3. WR
6	Holemouth jar	10048/5	115	Reddish yellow clay, thumbbed plastic decoration.	
7	Holemouth jar	10043/10	116	Reddish yellow clay, gray grits	Garfinkel 1999: Fig. 81:13 WR MC? with slip
8	Holemouth jar	10018/7	106	Reddish yellow clay, gray grits, rounded rim	Garfinkel 1999: 131, 171 MC WR??
9	Holemouth jar	10027/5	107	Gray clay, gray grits, thick wall,	Fabian et. al. 2004: Fig. 16:6, BW
10	Holemouth jar	10047/1	114	Reddish yellow clay, pointed rim, a lot of concretions	WR?
11	Holemouth jar	10038/7	114	Reddish yellow clay, large gray/white grits, thick walls.	
12	Holemouth jar	10044/4	114	Reddish yellow clay, White grits	Garfinkel 1999: 171, Fig. 104:4.
13	Holemouth jar	10044/3	114	Reddish yellow clay, gray grits, thick rim	

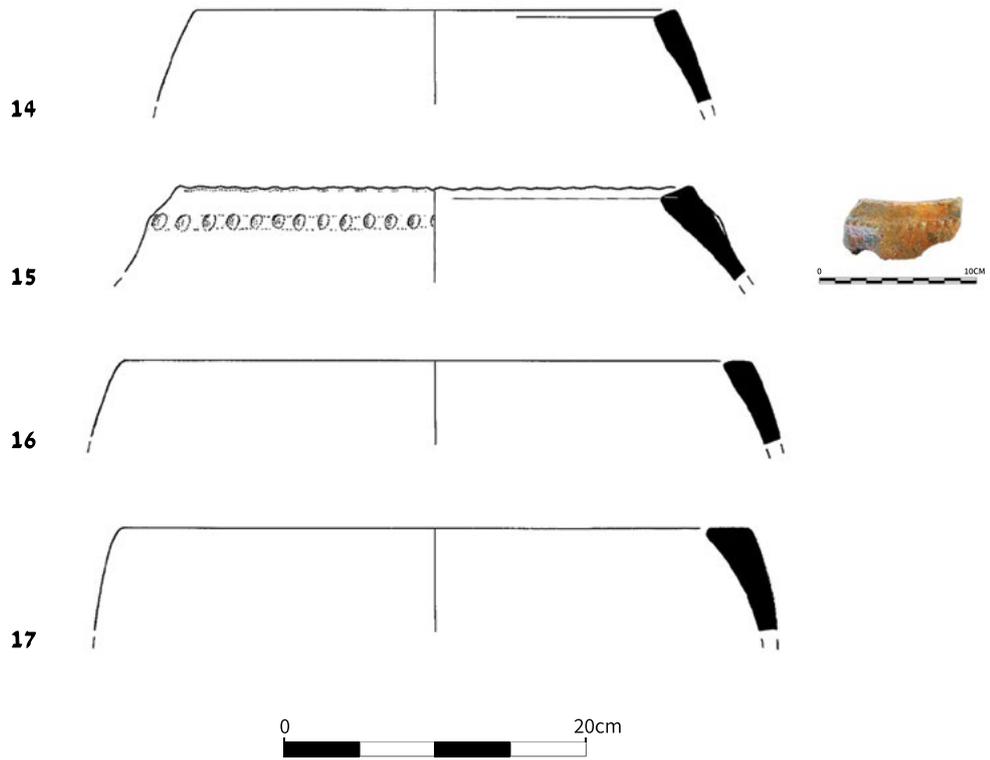


Figure 19. Holemouth jars (continued).

Figure 19. Holemouth jars (continued).

No	Type	Basket No.	Locus	Description	Parallels
14	Holemouth jar	10057/5	116	Reddish brown clay, white grits, square rim, hand made.	Garfinkel 1999: Fig. 82:1. WR
15	Large hole-mouth jar	10032/119	111	Reddish yellow clay, many gray/white grits, applied rope decoration, hand made? Slow tournette?	Garfinkel 1999: 172, 274, Fig. 105:1, Nahal Habesor, Site B WR MC QW
16	Holemouth jar	10057/2	116	Reddish brown clay, white grits, hand made.	
17	Hole mouth jar	10049/3	116	Reddish gray clay, Hand made, thick rim	Garfinkel 1999: Fig. 82:3, WR

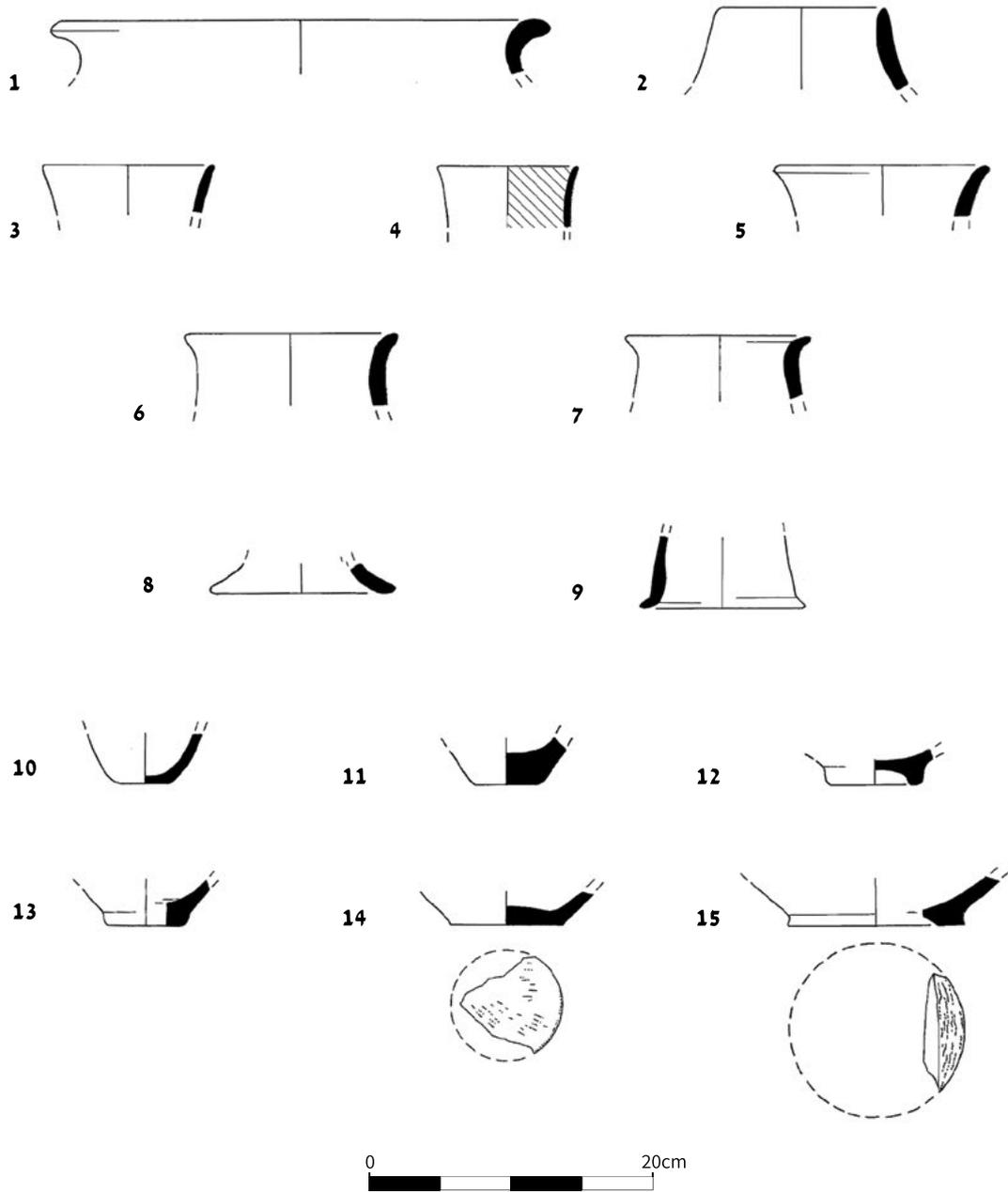


Figure 20. Jars, chalices, and bases.

Figure 20. Jars, chalices, and bases.

No	Type	Basket No.	Locus	Description	Parallels
1	Low necked jar (pithoi)	10042/3	117	Light reddish-brown clay, gray core, gray and white grits	Garfinkel 1999: Fig. 86:4–5. WR
2	Hight-necked jar	10038/3	114	Reddish gray clay	Garfinkel 1999: 233, Fig. 141:6 LC, Getzov 2015: Fig. 8:14, EC
3	Jar	10043/11	116	Reddish brown clay, gray grits,	
4	Small jar	10033/1	113	Reddish yellow clay, red slip	Late?
5	Medium high-necked jar	10037/3	115	Reddish yellow clay	Marder et al 2002: Fig. 4:1–5
6	Hight High-necked jar	10024/5	109	Gray clay, dark gray core	Garfinkel 1999: Fig. 121:4, Qatif site
7	Jar	10012/1	103	Gray clay, light gray grits	
8	Chalice	10018/5	106	Light gray clay	
9	Chalice	10020/2	102	Reddish yellow clay	
10	Base	10043/3	116	Reddish yellow clay	
11	Base	10018/2	106	Pinkish gray clay, small gray grits, handmade	Garfinkel 1999: 233, Fig. 141:2 LC; Marder et. al. 2002: Fig 5:12
12	Footed goblet base	10014/3	106	Reddish brown clay	
13	Jar base	10052/2	111	Reddish gray clay, gray grits, handmade	Garfinkel 1999: Fig. 122:8, QW; Marder et. al. 2002: Fig. 5:12
14	Base	10057/6	116	Reddish yellow clay, mat impression	Garfinkel 1999: 271, Pl. 2
15	Base	10055.1	115	Dark gray clay, many white grits, mat impression, handmade.	Garfinkel 1999: Fig. 122:12 (QW), 142, Pl. 68 (WR); Abadi-Reiss 2009: Fig. 1.3

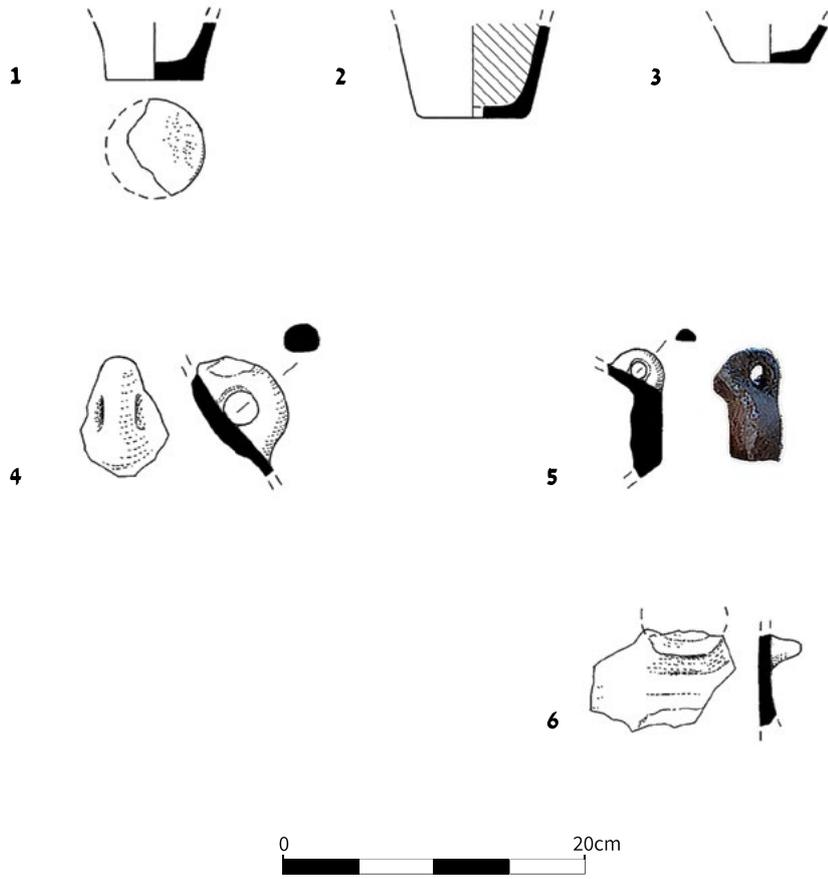


Figure 21. Bases (continued), churns and a spouted vessel.

Figure 21. Bases (continued), churns and a spouted vessel.

No	Type	Basket No.	Locus	Description	Parallels
1	Goblet base	10043/3	116	Reddish yellow clay, mat impression on base	
2	Goblet base	10020/3	107	Reddish brown clay, white grits, brown slip, hand made	
3	Goblet base	10024/3	109	Reddish brown clay, hand made	
4	Churn	10041/4	116	Light gray clay, gray core, gray grits	Nahshoni 2011: Fig. 14:1,3
5	Small churn	10027/1	107	Light gray clay, small gray grits, red slip	Ben Ari and Ilan 2015: Fig. 70:11 LC
6	Spouted vessel	10024/3	109	Reddish brown clay, Many white grits, organic inclusions, handmade	Garfinkel 1999: Fig. 68:2, Fig. 117:11 QW

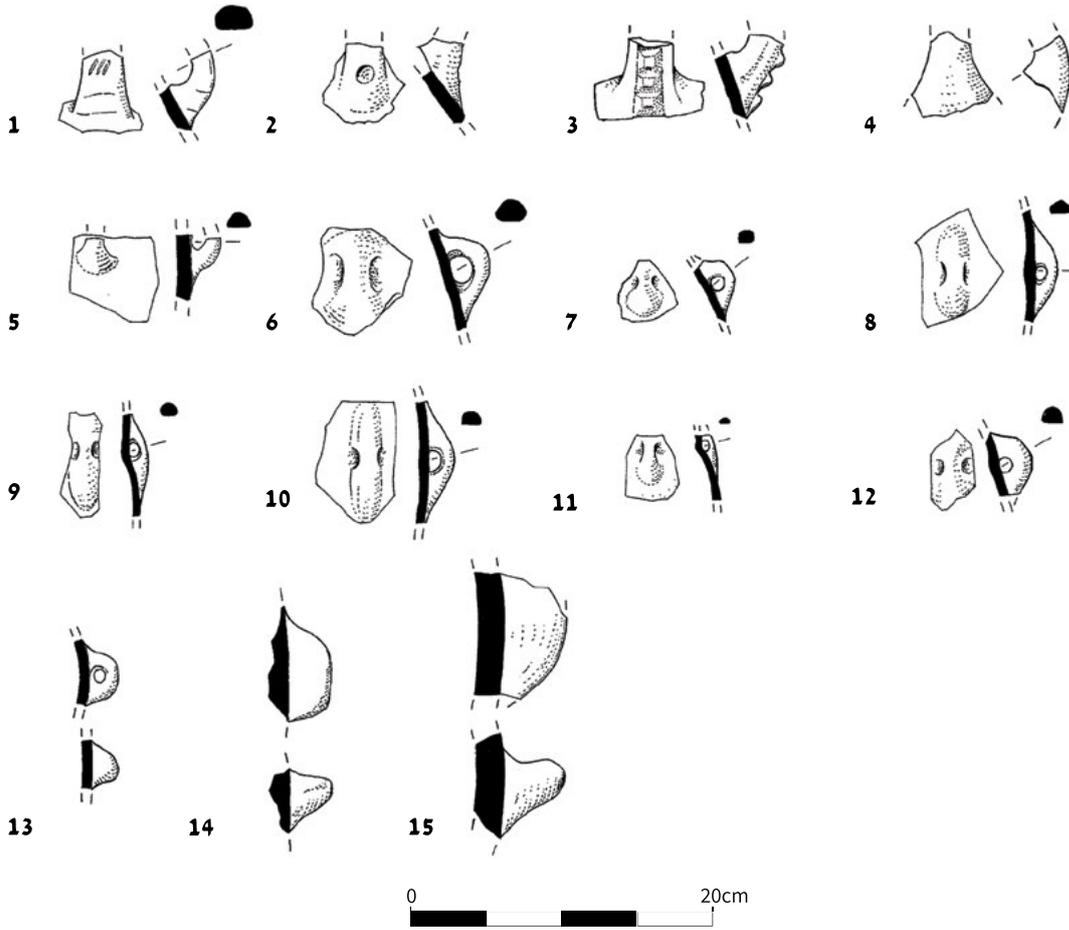


Figure 22. Handles.

Figure 22. Handles.

No	Type	Basket No.	Locus	Description	Parallels
1	Loop handle	10034/5	112	Reddish gray clay, incised decoration	Garfinkel 1999: Fig. 91:10–12. WR
2	Loop handle	10024/1	109	Gray clay, Many gray grits, impressed decoration	
3	Loop handle	10018/6	106	Reddish yellow clay, white grits, applied thumb decoration.	Nahshoni et. al. 2002: Fig. 4:19 BW; Milevski et. al. 2013: Fig. 34:1–4, LC; Ben Ari and Ilan 2015: 86, Fig. 59:3; Garfinkel 1999: Fig. 169: 3, LC
4	Loop handle	10046/2	116	Reddish yellow clay, red slip	
5	Handle	10035/2	107	Reddish brown clay, gray core, many gray grits.	
6	Handle	10048/3	115	Reddish brown clay, gray grits, brown slip.	
7	Pierced handle	10041/5	116	Reddish yellow clay.	
8	Pierced handle	10034/3	112	Reddish brown clay, red slip.	Garfinkel 1999: Fig. 169:5, Pseudo pierced handle
9	Pierced handle	10043/6	116	Reddish yellow clay.	
10	Pierced handle	10035/1	107	Reddish brown clay	
11	Pierced handle	10044/1	114	Reddish yellow clay	
12	Pierced handle	10048/2	115	Reddish brown clay	Garfinkel 1999: Fig. 112:1
13	Pierced handle	10018/4	106	Reddish brown clay, large gray grits,	
14	Lug handle	10038/1	114	Reddish brown clay, gray core, handmade.	Garfinkel 1999: Fig. 122:4–6, QW
15	Lug handle	10029/1	109	Reddish brown clay	

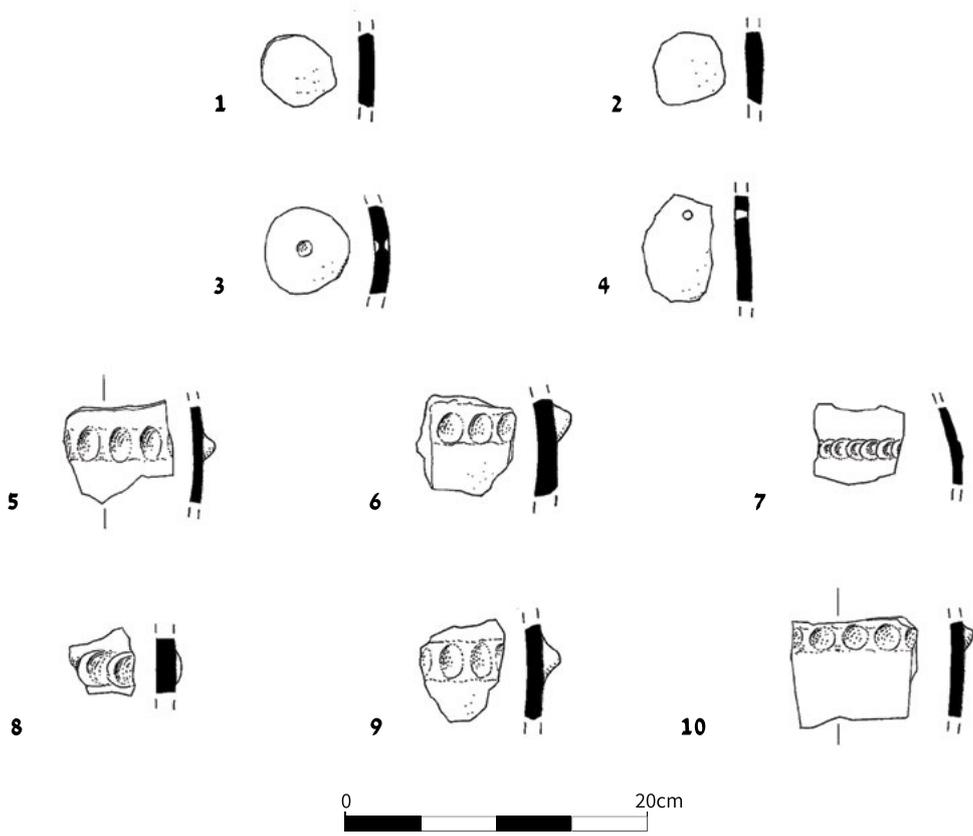


Figure 23. Stoppers and decorations.

Figure 23. Stoppers and decorations.

No	Type	Basket No.	Locus	Description	Parallels
1	Stopper	10055/4	115	Reddish brown clay	
2	Stopper	10054/5	115	Reddish brown clay	
3	Spindle whorl	10037/113	115	Reddish brown clay	Getzov 2015: Fig. 14:4
4	Correction hole	10018/8	106		Abadi-Reiss 2009: Fig. 7.3, Qatif Site Y3
5	Impressed decoration	10024/9	109	Reddish brown clay, many large white grits	
6	Thumbed impression	10055/3	115	Reddish brown clay, large gray grits,	Garfinkel 1999: Fig. 120:5–6
7	Thumbed plastic decoration	10043/4	116	Reddish brown clay, pervious clay	
8	Thumbed plastic decoration	10029/5	109	Reddish brown clay	Getzov 2015: Fig. 9:6
9	Impressed plastic decoration	10054/7	115	Reddish gray clay, Many large gray grits	
10	Impressed plastic decoration	10024/10	109	Reddish brown clay, many gray grits, handmade	

The Flint Assemblage.

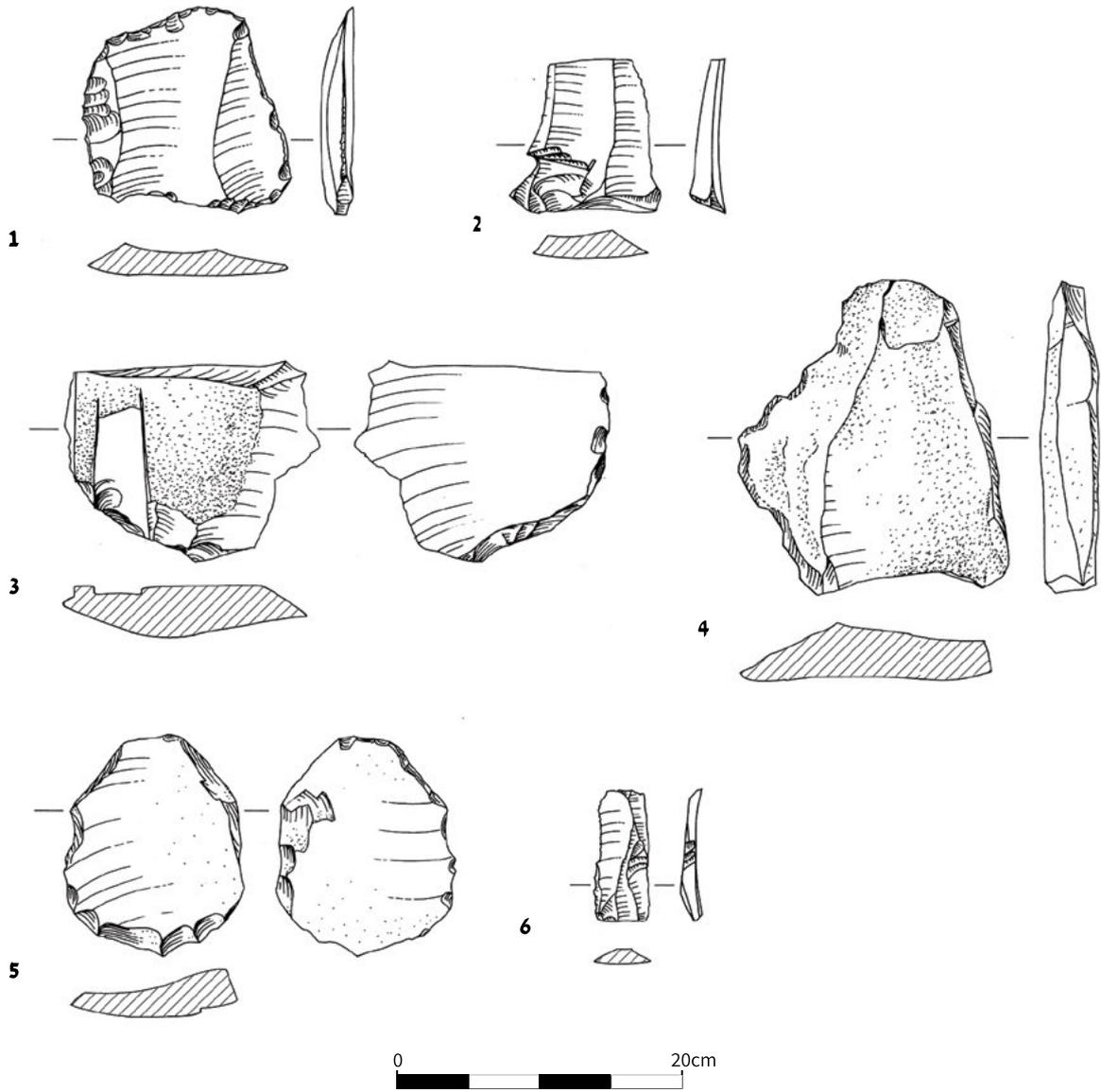


Figure 24. Cores, scraper, sickle blade, sling stone and hammerstone.

Figure 24. Cores, scraper, sickle blade, sling stone and hammerstone.

No	Type	Basket No.	Locus	Description	Parallels
1	Core	10003	100		
2	Core	10072/7	107		
3	Core	10022/8	107		Fabian et. al. 2004: Fig. 5–6
4	Core	10025/3	107		
5	Scraper	10037/5	115		Fabian et. al. 2004: Fig. 8:3
6	Sickle blade	10037/112	115	Sickle gloss	Fabian et. al. 2004: Fig. 12:6; Abadi-Reiss 2009: Fig. 4.4: 7–8
7	Sling stone	10037/4	115	Clay	Milevski and Getzov 2014: Fig. 12. EC
8	Hammer stone	10001/107	101	Flint	Abadi-Reiss 2009: Fig. 5.5

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The Ground Stone and Natural Stone Objects from Tel Gishron

David Ilan

The ground stone assemblage of the Tel Gishron/Menuha assemblage (N=27 items, Table 1) is characteristic of Besorian and Ghassulian sites.¹

Most elements could equally belong to the earlier Qatifian or later Early Bronze I.

RAW MATERIALS AND MANUFACTURE

Silicified limestone, limestone, basalt (vesicular for grinding slabs and non-vesicular for vessels), quartzite, phosphorite, and siltstone are all present. Most of the artifacts were smoothed and some polished such that the flaking and pecking techniques of the early phases of manufacture are not manifest. The possible celt is the only exception; flaking and polishing were evident, but whether

or not this was actually a tool is in doubt. No remains of in situ fabrication of ground stone items was noted — manufacture took place elsewhere, perhaps closer to the sources of raw materials. Several of the objects rostered below are of natural, unmodified stone (the pestle, the pebbles/slingstones, and the token).

INVENTORY

Bowls (N=4)

All the bowls are of the coarse, thick-walled variety. One is of limestone and the three others are basalt. These are all deep, steep-sided bowls. Figs. 1:1 and 1:3 have rounded walls, while Fig. 1:2 may have a more straight-sided wall. Two flat bases were recorded (e.g. Fig. 1:2). The diameter at rim appears to range consistently between 15 and 20 cm, though our sample is small. Of the three basalt vessels, two are only mildly vesicular but Fig. 1:3 is more vesicular — it may have served more for a grinding purpose.

Bowls on fenestrated stands (N=2)

Fig. 1:4 is a ring stand fragment with two fenestrations separated by a vertical divider. The angle inclines from base to top, as is always the case with this vessel type. A second fragment, not illustrated, is of the wall of the bowl section, quite deep, steeply inclined, like the bowls described above, but out-flaring, rather than rounded.

Grinding slabs (N=3)

As noted above, the basalt bowl fragment of Fig. 1:3 may have belonged to a deep convex grinding slab. Two other small fragments (nos. 20

¹ For the site report see Yron, this volume.

and 21 in Table 1, not illustrated) appear to be of flat-faced or slightly concave-faced grinding slabs.

Upper millstone (? N=1)

This identification is uncertain; item no. 21 in Table 1 is a limestone fragment whose dorsal top takes the loaf-shaped profile of upper millstones. But the active face is missing; it may simply be a fragmentary building stone.

Mortars (N=2)

Two small mortars were recovered in the excavation (Fig. 1:5–6). Fig. 1:5 has a smoothed convexity, suggesting more intense use, while the bowl of Fig. 1:6 is rough, indicating little to no abrasion. Their diminutive size suggests the crushing of small quantities of material such as pigments or condiments. They are also termed “bowlets” in some publications (e.g. Streit 2020).

Suspension weight (N=1)

Fig. 1:7 shows half of a perforated limestone ring, the only one in the assemblage. It is too massive and coarse to have been a spinning whorl. It may have been a suspension weight for weaving or for weighting a net or tent flap.

Pestle (N=1)

Fig. 1:8 is a natural cobble with a smooth, slightly flattened end, suggesting that it was used as a pestle.

Whetstone (? N=1)

Fig. 1:9 is a broken, narrow slab of silicified limestone with one smooth flat face. When complete it would have fit nicely in the hand as a whetstone.

Disc (N=1)

Fig. 1:10 is a smoothed disc of silicified limestone. The smoothing has removed the scars of flaking and pecking. Various functions have been proposed: lid or stopper, scraper, gaming object,

or symbolic token for the accounting of agrarian products in a redistributive economy (Schmandt Besserat 1992; 2019; Rosenberg et al. 2008).

Mullers (N=2)

These are tools grasped in one hand (as opposed to upper millstones), used for grinding pigments, condiments or foodstuffs on a slab (Fig. 1:11). They can also be called hand-stones, processors, or rubbers. The example published here is the only quartzite item in the ground stone assemblage. The muller not illustrated is of silicified limestone.

Palette (N=1)

Fig. 1:12 is a small fragment of finely ground siltstone with smooth, slightly convex but almost flat surfaces, and a finely beveled, slightly rounded edge. This fragment is highly analogous to many of the plentiful palettes reported from Besorian and Ghassulian Gilat as well as several other sites from the southern part of Canaan. Palettes are most often associated with the grinding and pasting of pigments, and associated ritual-symbolic activities (Rowan et al. 2006: 595–597).

Celt? (N=1)

This basalt artifact (Fig. 1:13) is flaked and partially polished on both faces. What appears to be the working edge is chipped. Morphologically it looks like a celt, but it is quite small and the finishing is coarse.

Pebbles/slingstones (N=3)

These appear to be natural pebbles, smoothed by watercourse abrasion. They were scavenged from the nearby watercourse (Nahal Guvrin) or pebble-bearing conglomerates and brought to the site. The purpose of such pebbles is not clear. Since they often have an ovoid form (Fig. 1:14) and tend to weigh 60–100 grams they may have been slingstones (cf. Rosenberg 2009), gaming pieces (cf. Sebbane 2001: 218), or miniature pestles for

pigment crushing (Rowan et al. 2006: 581 and references there). In Egypt polished pebbles are found in association with palettes in Predynastic burials. They may also be commodity accounting devices (cf. Schmandt-Besserat 1992; 2013).

Token (N=1)

This small beige (Munsell 10YR 8/1) limestone object (Fig. 1:15) takes the form of a steep-sided pyramid. It is highly polished. In the literature it would be defined as a token (e.g. Schmandt-Besserat 1992; 2013) and might be considered an accounting device for agrarian commodities — the pyramid representing a known quantity of grain, livestock or liquid product. It could, of course, be another gaming piece. Tokens are frequent at Besorian and Ghassulian Gilat (Rowan et al

2006: 585–586, Figs. 12.19–12.22), though none of them take on this particular pyramidal form.

Natural stone manuport (N=1)

Item no. 26 in Table 1 is a phosphorite stone fragment, obviously a manuport, though it is not worked.

Stone artifact distribution (Table 2)

This is a very small excavation exposure, and the preservation of the remains is not particularly good. The finds in Loci 101, 102, 105 and 106 are closer to the surface and lack much other material culture. Most of the ground stone artifacts were located in Loci 114 and 115, which also contained more pottery and more association with surfaces and architectural fragments.

CONCLUSIONS

The small ground stone assemblage reported here resembles those reported from other early and late Chalcolithic sites in the southern Levant, such as Ramot Nof (Nahshoni et al. 2002: 14*-16*), Grar (Gilead 1995: 309–333), Horbat 'Illin B (Milevski et al. 2013: 128–135), and Abu Ghosh (Milevski et al. 2015: Fig. 17). The repertoire of Gilat is mirrored particularly well, though the Gilat assemblage is much larger and more varied (Rowan et al. 2006). These types continue the traditions of the Late Neolithic southern Levant, western Asia and Egypt (Streit 2020: 90–91, 151–154, 222–225, 265–266). The Gishron-Menuha occupation reported in this volume by Yron has been dated by ceramic criteria to the early Chalcolithic Besorian phase (ca. 4700–4500 BCE, cf. Gilead 2007).

The rock sources suggest a rather extensive geographical purview (Fig. 2), whether taking the form of acquisition expeditions or trade networks. The limestone is surely local — the Turonian and Cenomanian formations 10 km to the east, or the even more proximate *nari* of the Eocene formations — as are the pebbles quarried from the Nahal

Guvrin watercourse or the nearby Bira-Gesher-Pleshet conglomerate formations. Siltstone is available in the Miocene Ziqlag formation, ten km to the east. The basalt most likely originates in either beds in Jordan or sources in the Galilee and the Golan Heights. The quartzite comes from the Negev — perhaps from the Ramon Crater — and phosphorite originates in the Campanian Mishash formation in the Negev. It is interesting to note that there are no grinding slabs made of beachrock in the assemblage; at least some of this material is usually present in ground stone assemblages of the Shephelah.

The activities represented by the assemblage's ground stone types include grain processing (grinding slabs and mortars), plant food processing (mortars and pestle), condiment and pigment crushing (small mortars, mullers, and palette), blade and point sharpening (whetstone), textile manufacture or tent weighting (stone ring), gaming and or accounting (pebbles, disc, and token), and hunting (slingstones/pebbles).

Table 1. Inventory of ground stone and natural stone objects from early Chalcolithic Gishron-Menuha.

No.	Type	Reg. no.	Locus	Square	Material	Weight (grams)	Figure	Comments
1	Bowl	10039/128	112	C7	Limestone		1:1	Fragment
2	Bowl	10057/129	116	C7	Basalt, non-vesicular		1:2	Fragment, base
3	Bowl	10048/8	115	D6	Basalt, non-vesicular			Flat base fragment
4	Bowl?	10041/5	116	C7	Limestone			Fragment; somewhat rough — possibly a natural stone
5	Grinding slab/bowl	10056/130	118	C5	Basalt, large vesicles		1:3	Fragment, concave top
6	Fenestrated pedestal bowl	10018/114	106	C7	Basalt, non-vesicular		1:4	Base fragment
7	Fenestrated pedestal bowl	10013/112	105	D6	Basalt, small vesicles			Small fragment of pedestal
8	Bowl mortar	10048/126	115	D6	Silicified limestone		1:5	1/3 vessel
9	Bowl mortar	10054/1	115	D6	Silicified limestone		1:6	Entire artifact, chipped
10	Perforated weight	10041/127	115	D6	Limestone		1:7	1/2 artifact
11	Pestle	10048/8	115	D6	Silicified limestone	542	1:8	Natural stone
12	Whetstone?	10054/3	115	D6	Silicified limestone		1:9	Broken
13	Lid?	10048/9	115	D6	Silicified limestone	144	1:10	Intact
14	Palette?	10014/1	106	C7	Siltstone		1:12	Fragment, one edge intact
15	Pebble — slingstone	10051/3	114	C5	Limestone	57	1:14	Intact, chipped
16	Pebble — slingstone	10051/4	114	C5	Silicified limestone			Intact; no modification; water weathered
17	Pebble — slingstone	10049/9	114	C5	Limestone	86		Intact
18	Token	10001/1	101	D6	Calcite	12	1:15	Intact
19	Grinding slab	10005/111	102	C7	Basalt, large vesicles			Fragment, base is flat, top is concave

THE GROUND STONE AND NATURAL STONE OBJECTS FROM TEL GISHRON

No.	Type	Reg. no.	Locus	Square	Material	Weight (grams)	Figure	Comments
20	Grinding slab	10028/8	114	C5	Basalt, large vesicles			Fragment, dorsal and ventral faces are flat
21	Upper millstone?	10054/2	115	D6	Basalt, small vesicles			Fragment; loaf-shaped; bottom (active) face missing
22	Muller	10040/5	114	C5	Quartzite		1:11	Possibly broken
23	Pebble	10053/3	116	C7	Limestone			Intact; no modification
24	Muller?	10048/10	115	D6	Silicified limestone			Intact; one flat face; possible natural, water-weathered stone
25	Celt?	10057/7	116	C7	Basalt, small vesicles		1:13	Complete, some chipping
26	Natural stone	10051/1	114	C5	?			Contains small sparkling crystals
27	?	10048/1	115	D6	limestone			Fragment

Table 2. Distribution of ground stone artifacts by locus.

Locus	Locus type	Types present	Total*
101	Debris	Token	1
102	Debris	Grinding slab	1
105	Tamped earth surface	Fenestrated pedestal bowl	1
106	Tamped earth surface	Fenestrated pedestal bowl, palette	2
112	Cobble surface	Bowl	1
114	Tamped earth surface	Muller, pebbles/slingstones (n=3), grinding slab, unworked phosphorite stone,	6
115	Debris around and under stone installations	Bowl, bowl mortars (n=2), perforated weight, pestle, whetstone, lid, upper millstone, muller	9
116	Tamped earth surface	Bowls (n=2), pebble	3
118	Tamped earth surface	Grinding slab/bowl	1

* Two unidentified objects are not included.

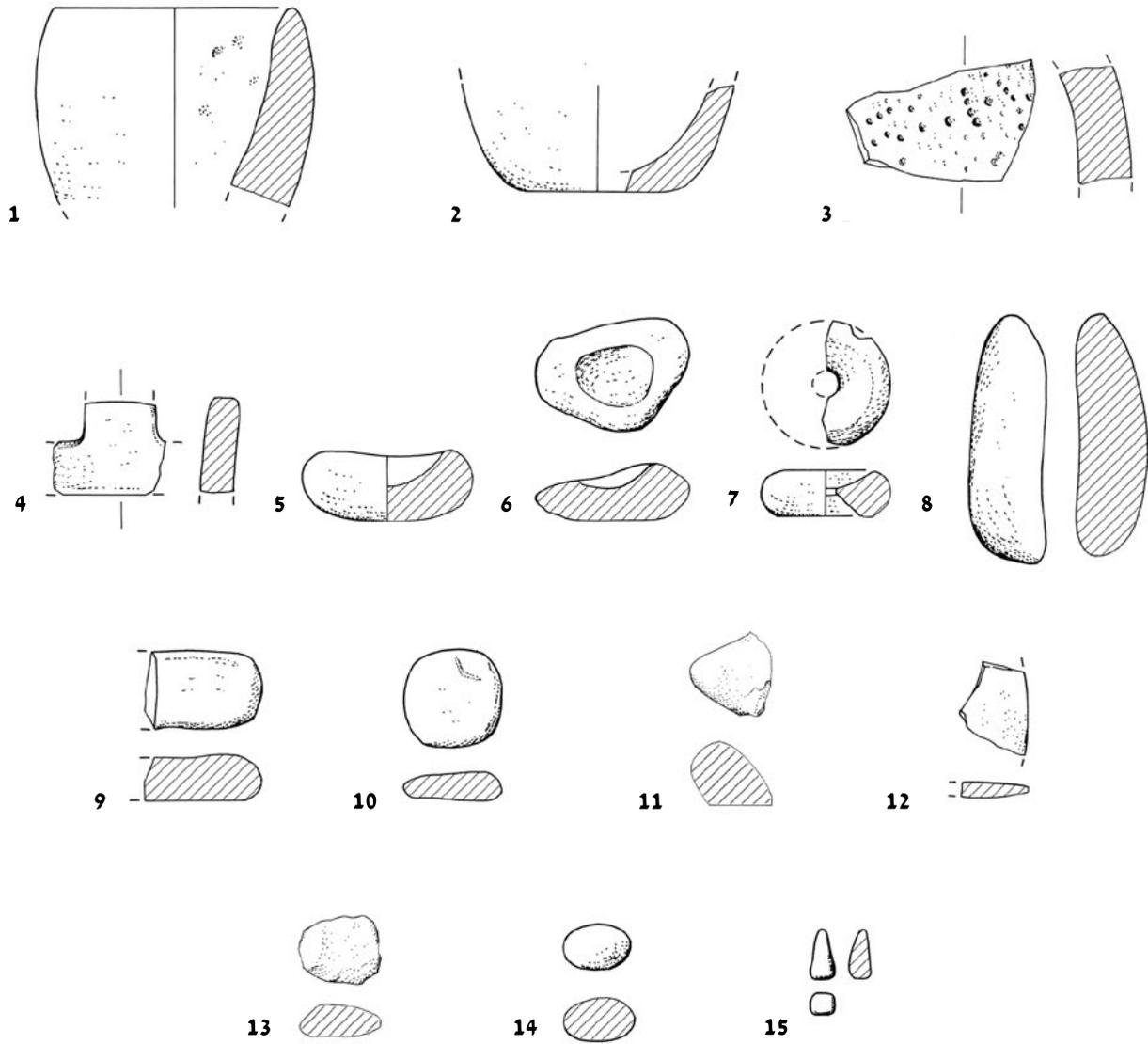


Figure 1. The ground stone and natural stone objects from early Chalcolithic Tel Gishron-Menuha.

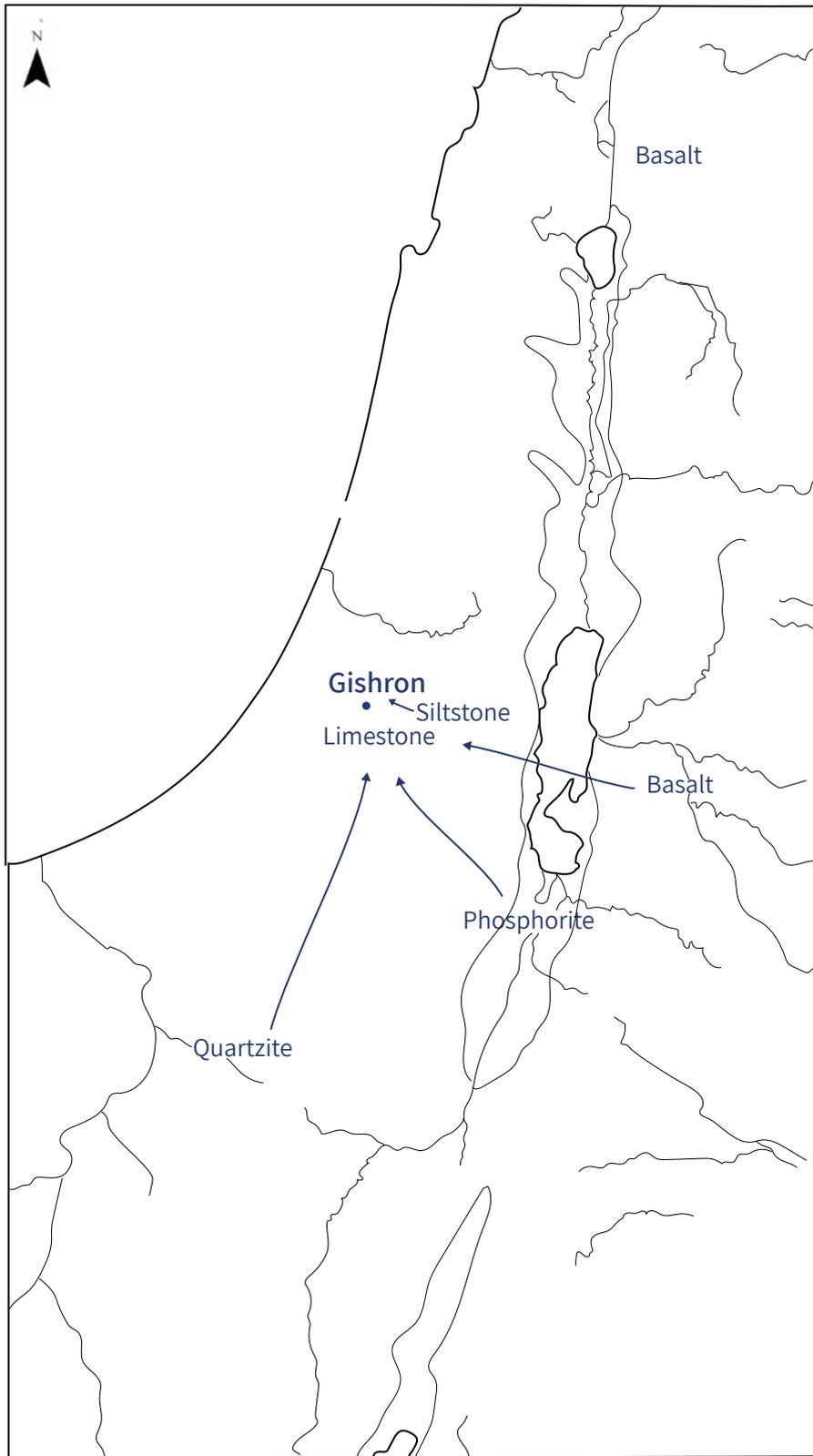


Figure 2. Likely sources of stone from the Gishron-Menuha assemblage.

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Early Chalcolithic Fauna Remains from Tel Gishron

Ron Kehati

During the months of March and April 2019, a salvage excavation (license number B474/2019) was carried out by M. Yron at the site of Tel Gishron (Yron, this volume). The excavation exposed elliptical installations built of fieldstones, floor makeup composed of cobbles, floor surfaces of crushed chalk, and white bricks. The elliptical installations were found in Squares C5–6 and D6. Small and medium cobble levels appear to

the north and south of the installations, founded on a level of crushed chalk mixed with reddish soil. Typical early Chalcolithic period pottery was found and crushing and grinding tools (some made of basalt) stone bowls, and a basalt fenestrated-pedestal bowl (Ilan, this volume). Some ochre and charcoal were also found. The site was defined as a settlement from the early Chalcolithic Besorian culture (Yron, this volume).

THE FINDS

A total of 95 bones were examined (N=95). All the bones were covered with a thick concretion that did not come off in water with brush cleaning and required, in several cases, the use of 5% acetic acid to expose the bone in such a way that the bone element could be identified. Only three or four species are present: cows, sheep and/or goats, and pigs (Table 1). The largest animal is the cow (*Bos taurus*) with 25 bones found. They come from at least three individuals (MNI=3), and most of the bones (72%) belong to the lower parts of the head and limbs, which are low-meat parts and considered slaughter waste.

Sheep and goats

In this complex, bones of sheep (*Ovis aries*) and goat (*Capra hircus*) were identified as “Ovis/Capra.” None of those bones could be explicitly identified as either sheep or goats.

Pigs

At least eight bones belonging to at least two pigs (*Sus*) were uncovered. Most bones (N=5) belong to the skull and three bones to the limbs. These were most likely domesticated.

Shells

Two valves of *Glycymeris* mollusc shells were found on site. *Glycymeris* shells are found on the shores of the Mediterranean and were brought to the site by humans for an unknown purpose. No signs of use have been detected on the shells.

Medium and large mammals

Bones whose specific species could not be identified probably belong to one of the identified species. If the “large mammals” are cattle, cattle would then comprise 60% of the mammals in the assemblage. If they belong to “medium-sized mammals”, such as sheep, goats and pigs, then these comprise 35.8% of the mammal assemblage.

Cut marks

Cut marks were not identified on any of the bones, but such marks may be hidden by the concretion that covered much of the bones.

Burning marks

Burning marks were evident in fore bones. One cow phalanx had a grey-white color, indicating

a high-intensity fire. A skull bone of a pig showed black-blue color, indicating a moderate-intensity fire. Finally, two rear leg bones (tibias), one of a sheep or goat and one of a pig, bore black-blue burn marks indicating a moderate-intensity fire.

No processed bones of any kind have been discovered.

SUMMARY AND CONCLUSIONS

The faunal remains from Tel Gishron are typical of Chalcolithic sites of the fifth millennium BC. They indicate permanent settlement, the breeding of domesticated animals, and their utilization for various products and crafts. The size of cattle bones and the nature of pig skulls indicate that they are domesticated animals. The significant percentage of pig bones, especially, indicates permanent settlement because pig grazing is carried out in the close vicinity of a settlement, and pigs are not suitable for herding due to their physical limitations.

An excavation at the site in 2006 also revealed bones of cattle, sheep, goats, and pigs (Nahshoni

2009). The conclusion of the excavators was similar to the conclusions here. Animal figurines from the 2006 excavation suggest that these animals were important on an artistic and perhaps ritual level. Similarly, at the site of Tel Qatif, attributed to the Qatifian culture, which preceded the Besorian culture, (Abadi-Reiss 2009: 7), the leading animal species were cattle (28%), sheep and goats (34%), and pigs (29%), all identified as domesticated. Only 4.2% of the bones in this assemblage were of wild animals and appeared to have been hunted for fur (Abadi-Reiss 2009: 200).

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Table 1. Animal species represented at Tel Gishron

Species	Common Name	NISP*	%
<i>Ovis/Capra</i>	Sheep/Goat	11	11.6
<i>Sus</i>	Pig	8	8.4
<i>Bos taurus</i>	Cattle	25	26.3
	Medium Mammal	15	15.8
	Large Mammal	32	33.7
<i>Glycymeris</i>		2	2.1
<i>Unidentified</i>		2	2.1
NISP TOTAL		95	100.0

* Number of identifiable specimens

Table 2. Body part inventory (for cattle and sheep/goat)

Body part	Skeletal term	Sheep/Goat		Cattle	
		NISP	%	NISP	%
Cranial	Maxilla, mandible, loose teeth	2	20.0%	5	20.0%
Upper forelimbs	Humerus, scapula	1	10.0%	4	16.0%
Upper hindlimbs	Femur, pelvic	4	40.0%	0	0.0%
Middle forelimb	Radius, ulna	0	0.0%	2	8.0%
Middle hindlimbs	Tibia, fibula, patela	2	20.0%	1	4.0%
Lower forelimb	Carpal, metacarpal	1	10.0%	0	0.0%
Lower hindlimb	Tarsal, metatarsal	0	0.0%	7	28.0%
Feet	Phlanx	0	0.0%	5	20.0%
Limb	"Long bone" fragment	0	0.0%	0	0.0%
Lower limbs	Carpal/tarsal, metapodial	0	0.0%	1	4.0%
Trunk	Vertebras, ribs, sternum	0	0.0%	0	0.0%
Total		10	100.0%	25	100.0%

Khirbet Sheikh Sa'ad (Ramat Hasharon Tennis Center): Remains of a Settlement from the Byzantine and Early Muslim period and a Muslim Cemetery

Gideon Sulimani

In January and February 2019, a salvage excavation (license B472/19) took place south and adjacent to Route No. 5 and near the Ramat Hasharon Tennis Center (Map ref. 185680–670620; Figs. 1–2). The excavation was conducted by G. Suleimani and M. Chernin with the assistance of A. Davidsko, M. Yron (measurements and GIS), M. Kahan (plans), T. Rogovsky (aerial photography), A. Tzipin (artifact illustration), V. Naikhin (artifact photography), V. Eshed (human remains), N. Amitai-Preiss (numismatics), M. Chernin (pottery restoration), K. Raphael (glass), and Y. Govrin (scientific consulting). The excavation was carried out on behalf of Y.G. Archeology Ltd., under the scientific auspices of Hebrew Union College and funded by the Israel Roads Corporation (Netivei Israel).

The excavation was executed in two areas, A and B (Fig. 2). In Area A, located on the southern slope of a low hill 49 m high and adjacent to the excavation carried out by the Israel Antiquities Authority (see below), 14 squares and six half-squares totaling about 450 m² were opened. Three phases were exposed:

Stratum I. A surface/colluvial layer containing material of the 19th and 20th centuries.

Stratum II. The main stratum, which dates to the 8th–10th centuries, and includes residential buildings, an open courtyard and a reservoir.

Stratum III. A floor level from the late Byzantine period 6th–7th centuries.

In Area B, nine excavation squares, oriented east–west, were excavated, six of them east of the Israel Antiquities Authority's excavation squares, and three to the west of the IAA excavation. Two layers were exposed in this area. Stratum I is associated with the cemetery of the Arab village from the 19th and 20th centuries. Stratum II consists of rubbish pits and a small square structure belonging to a settlement that existed nearby in the 8th–10th centuries, which was also exposed in Area A.

This village was mentioned in the Palestine Exploration Fund survey under the name *a-Swalimia* (Conder and Kitchener 1882: 226), a Bedouin/Arab village where about 450 people lived until 1948 (Avitsur 1980; Khalidi 1990). In the late 1970s the site was surveyed by Gophna and Ayalon (2012) who identified finds from the Late Roman, Byzantine and Early Muslim periods (Israel Archaeological Survey Map No. 69, Site No. 95). The site was visited again by Ad, Barkan and Yekuel (2007) as part of a development survey (Ad et al. 2009).

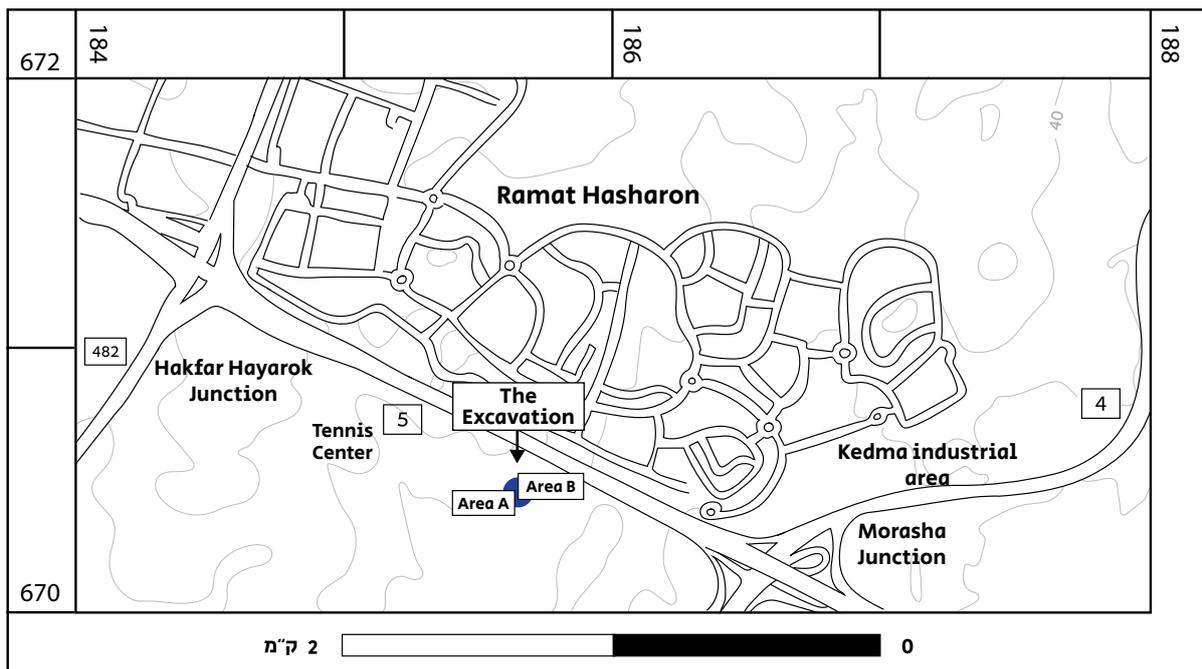


Figure 1. Ramat Hasharon — Road 5: map of site location and excavation Areas A and B.



Figure 2. Excavation Areas A (in the center of the photo) and B to the north and adjacent to Road No. 5.



Figure 4. German Mauser rifle bayonet.

Area B. The cemetery (Figs. 5–6)

Twenty-one graves were uncovered in the cemetery, including 13 children's graves and eight adult graves. Thirteen graves contained human remains (for these see Eshed, this volume). Several types of graves have been identified and some have two burial stages.

Children's graves (Figs. 5–7)

A concentration of children's burials was found in the western part of Squares N-L99. Two more children's graves were found in Squares R-S99. The graves are as follows:

L1019A. An elliptical tomb built of small and medium fieldstones (0.30 x 0.65 m), was found empty of burial.

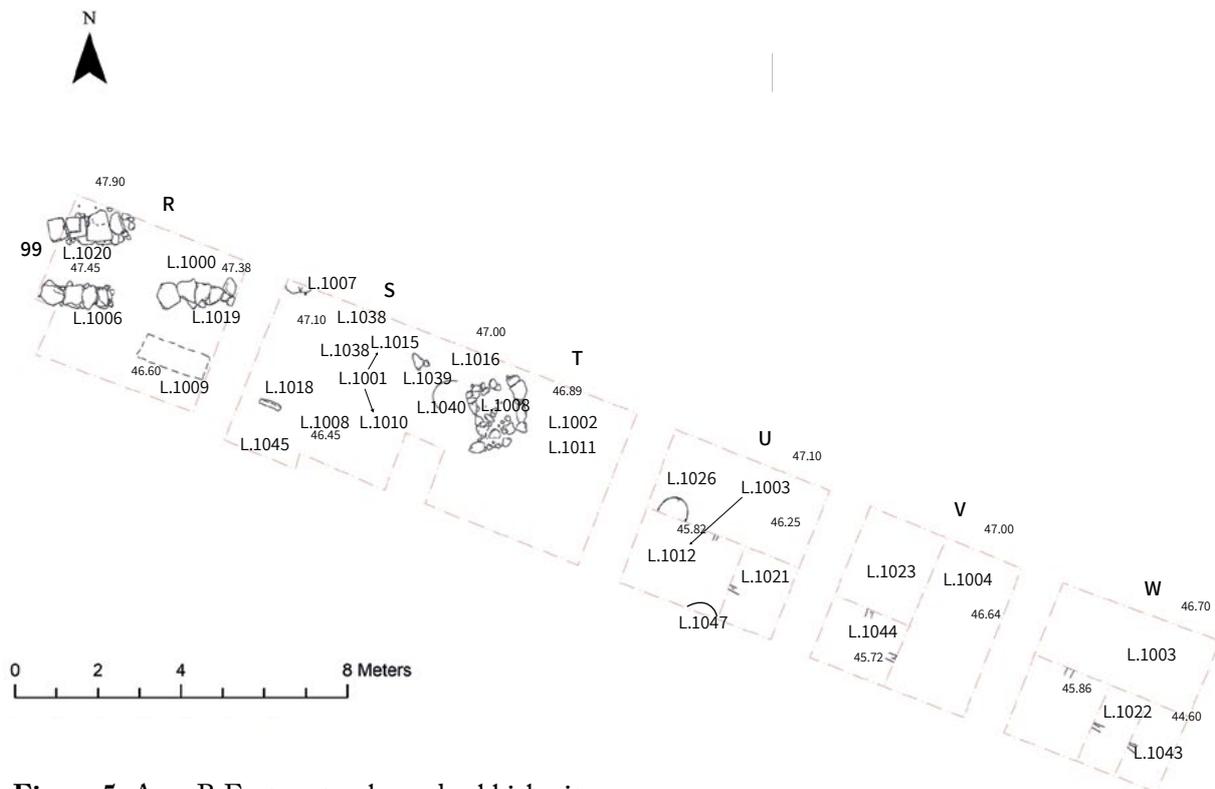


Figure 5. Area B East — tombs and rubbish pits.

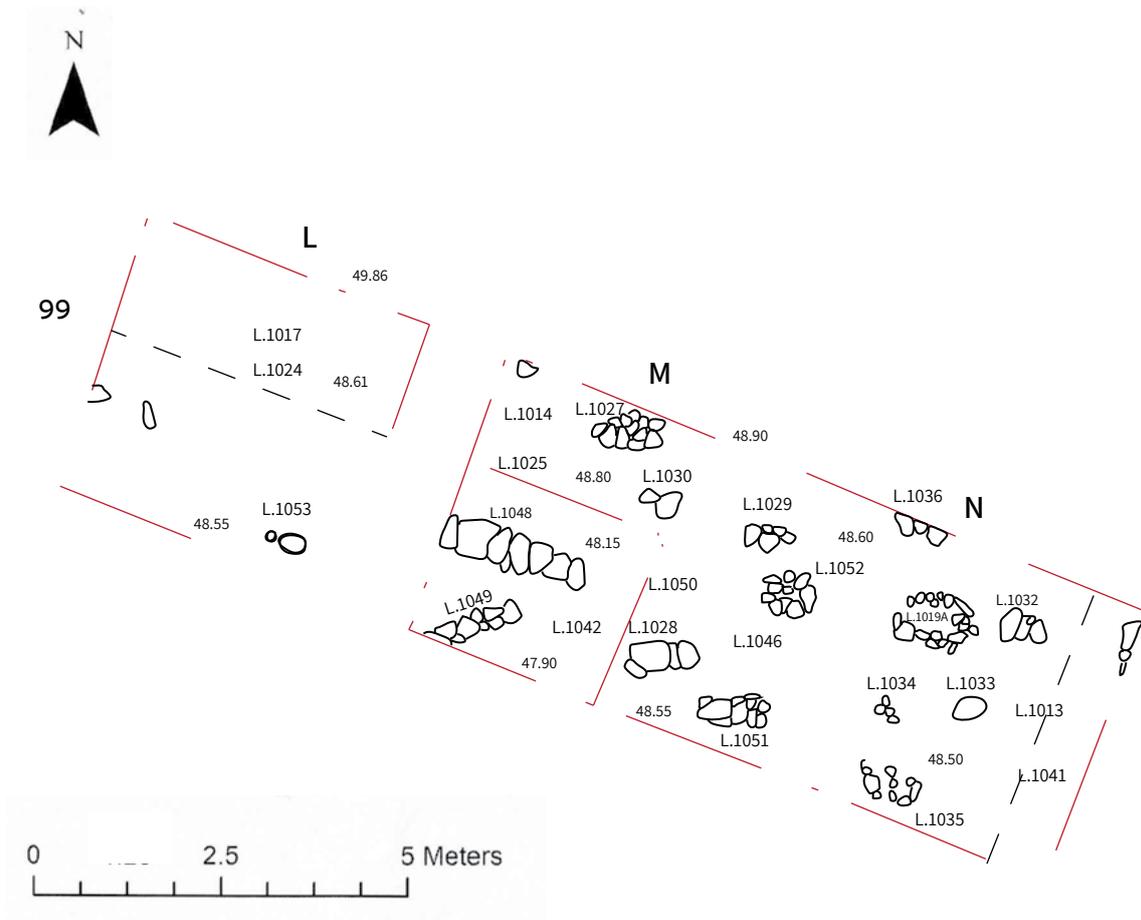


Figure 6. Area B West — the cemetery.

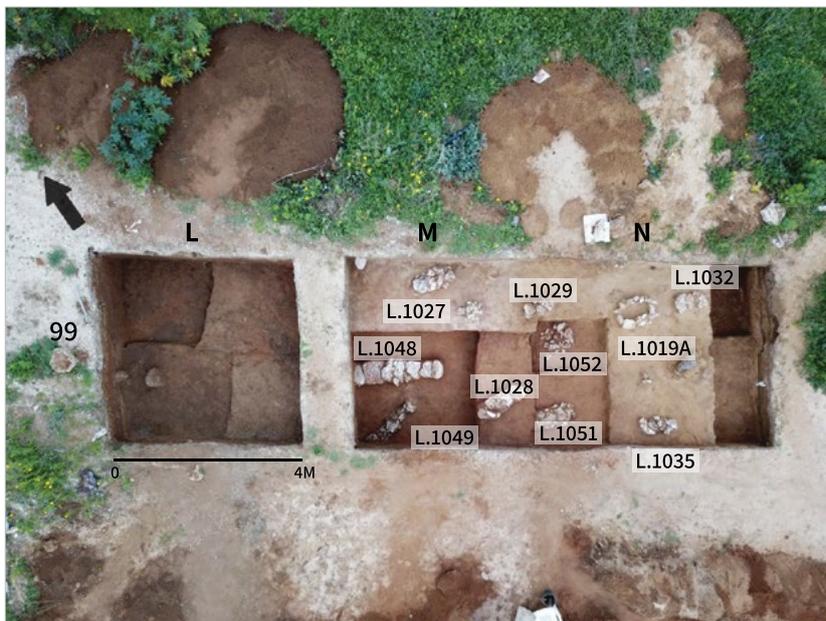


Figure 7. Area B East — the children's graves, and the burial of the adults at a lower level.

L1027. An east-west pit burial covered with stone slabs and small fieldstones. Dimensions 0.50 x 0.90 m. A newborn.

L1028. An east-west pit burial, covered with three slabs of kurkar stones. Dimensions 0.40 x 0.90 m. The state of bone preservation did not allow sex and age to be identified.

L1029. An east-west pit burial, covered with a pile of small and medium-sized stones.

L1030 (Square M99). An east-west pit burial, covered with a pile of small and medium-sized fieldstones. A chain of beads, probably a burial offering, was found in the tomb around the neck. The deceased is a female infant, about one year old.

L1032. A shallow east-west pit burial covered with three stone slabs. Dimensions 0.40 x 0.80 m. The deceased is a child aged 8–9 years. A coin was discovered in the tomb as a burial offering and beads (a string) were placed near its head.

L1033 (Square N99). A baby buried in a large jar (Fig. 8) that was placed on an east–west axis. The jar was placed on its side and the top was removed for the purpose of placing the deceased. The jar is supported on both sides by two fieldstones.

L1034 (Square N99). Concentration of small and medium-sized fieldstones. No burial was found and it appears to be a stone marker.

L1035. A pit burial, measuring 0.80 x 0.90 m, oriented east-west. The tomb was covered by a pile of small and medium fieldstones. The deceased was probably a boy about three years old.

L1036 (Square N99). A pit burial, c. 0.70 m long, covered with stone slabs. Due to the continuation of the tomb beyond the excavation area, it was decided not to uncover it.

L1039 (Square S99). A small pit burial, two stones indicating its location. The deceased is a child 1–5 years old.

L1053 (Square L99). The burial of a fetus was exposed in a large jar lying on its side directed east-west, the upper part of which was removed for the purpose of placing the deceased.

Adult graves

Five graves were exposed in Squares R–S99, three graves in Squares M–N99, and three cist tombs were exposed in square R99 (Fig. 9). These are as follows:

L1006 (Square R99). A cist tomb built of two rows of fieldstones and covered with four slabs of kurkar stone. The direction of the tomb was east-west and its dimensions 0.50 x 1.80 m. The deceased was placed on its right side in an east-west direction. Head west and face south. The deceased is a 30–35-year-old. (Fig. 5).



Figure 8. Burial of a baby in a jar L1033.

L1007 (Square S99). A cist tomb covered with stone slabs was exposed, most of it was located outside the excavation boundary on the north side, so it was decided not to uncover it.

L1019 (Fig. 9). A cist tomb, its dimensions 0.50 x 2.0 m, east-west direction. Thin iron plates were placed under the head of the deceased and close to the sides as part of the construction of the tomb structure. The deceased was placed on the right side in an east-west direction. Head west and face south. The tomb was marked by two rows of fieldstones, and five slabs of kurkar were placed as a cover.

L1020 (Square R99 northwest of the square). A cist tomb marked with two rows of fieldstones. The tomb was covered with four kurkar stone slabs and its dimensions were 0.50 x 2.0 m. The deceased was placed on his right side, in an east-west direction, his head in the west and facing south. The deceased is about 19 years old.

L1038 (Square S99). A pit burial without a cover. The deceased was placed inside a sandy soil matrix, on the right side and in an east-west direction. Its head is to the west and it faces south. A chain of coins was placed around the forehead and skull (9 coins, Amitai-Preiss, this volume). Remains of a braid were exposed, and glass beads were placed on the head. The deceased is 15–20 years old.

L1048 (Figs. 7, 10). A cist tomb bounded by two rows of stones. The tomb was covered with seven kurkar stone slabs. The direction of the tomb is east-west, and its dimensions are 0.50 x 3.00. The deceased was placed on the right side in an east-west direction, his head in the west and facing south. The deceased is about 25–35 years old. This tomb is located 1 m lower than the level of the children's tombs and precedes them. This tomb also predates Tomb 1052, which contains an old deceased (Fig. 10).

L1049 (Figs. 7, 10). Unlike the rest of the cist tombs this is a cist tomb enclosed by two rows of stones and covered with pediment-shaped stone slabs. The grave is directed northeast-southwest and was found at an elevation of 47.90 m. It

predates the children's graves. The deceased is about 50 years old.

Locus 1052 (Fig. 7). The cist tomb was enclosed by two rows of stones and covered in its western part only with stone slabs and small stones. Dimensions 0.50 x 1.0 m. The age and sex of the deceased was not identified.

Summary

The cemetery belonged to the residents of the village of *a-Swaliemia*. The deceased are laid lying on an east-west axis, on their right side, with their head to the west and tilted south. In traditional Muslim burial the prone deceased faces Mecca. This form of burial also appears in infant graves. The men were buried without burial offerings, in contrast to the graves of women and children, which contain coins, beads, and bracelets. Five types of graves can be distinguished:

1. Cist tombs, built of two rows of stones and stone slab coverings.
2. Pit burials: shallow ditches covered with stone slabs or piles of fieldstones.
3. Burials in a pit without covering.
4. Burials of infants in jars.
5. Graves without burials.

Two stages of burial were distinguished in the western part of the excavation. The lower phase, consisting of Graves 1048–1049, is located circa one meter below the level of the children's burials. Grave 1049 is unusual compared to the others both in terms of direction of burial and in terms of covering style. The different direction has been observed at other sites (Gorzalczany 2010), and it most likely reflects winter burial when sunrise and solar direction are different from burial in summer.

The phenomena of marking the outline of the tomb without burial was also found in the Muslim cemetery in Mamila (Suleimani 2017).

The first Muslim cemetery excavated and published in full was that of Tell el-Hesi, dated to the 14th–18th centuries and attributed to the



Figure 9. Three cist tombs, Loci 1006, 1019, 1020



Figure 10. Tombs 1048 and 1049.

region's local Bedouin population (Eakins 1993). The style and characteristics of the burials at Ramat Hasharon, including the burial of infants in jars, correspond to the burials at Tell el-Hesi.

Rescue excavations carried out by the Israel Antiquities Authority have documented many Muslim cemeteries, with similar burial characteristics and finds from the Mamluk and Ottoman periods: the cemetery in Kfar Ana (Gophna, Taxel, Feldstein 2007, and extensive bibliography there; Sion and Rapuano 2017). Six types of graves were identified there; all the grave types uncovered in the village of Ana were also found in our excavation, and date to the end of the Ottoman period.

STRATUM II — EARLY MUSLIM PERIOD

Area A (Fig. 3)

Immediately below the surface level, the remains of a single-layer of construction were discovered, including sections of walls and floors, an open courtyard, and a water reservoir. The walls and floors of the buildings were built on red *hamra* soil that characterizes the area. The walls are built of kurkar stone and hard limestone bonded by cement and plaster. Their general direction is north-south and east-west and they have been preserved to a height of two to three courses. Bricks may have been laid on the stone courses. The settlement plan includes a number of buildings in the northern part of the site, and a large open courtyard to the south.

Remains of buildings were found in the northern row of squares B-F5. A building corner (Fig. 11) that included Walls C5-1 (0.50 x 3.0 m) and C5-2 (0.45 x 1.7 m) was exposed in Square 5-C. The walls, built of small fieldstones bonded with mortar, were preserved to a height of 3 courses. The floors of Loci 116 and 121 were made of compacted earth (elevation 48.25 masl). A corner of a building that included Walls D5-1 (0.50 x 1.25 m), D5-2 (0.50 x 2.5 m) was exposed in Square D5. The building had a tamped earth floor (L141). Another section of wall that can be attributed to the western complex is in Square B5, Wall B5-2 (0.50 x 1.0 m). Square E5 was excavated by the Israel Antiquities Authority.

Part of another structure was exposed in Squares E-F5 and included Walls E5-1 (0.5 x 2.5 m), E5-2 (0.50 x 2.5 m), WE 5-3 (0.50 x 2.5 m). The walls were built of small fieldstones bonded with cement and preserved two courses high. The collapse of the walls extends over part of the northern room (Fig. 12) and the compacted earth floor (L146) at an elevation of 48.25. In Square F5 to the east, a compacted earth floor (L112) with a level of sherds was exposed, which

included a broken jar and a cooking pot with three intact glass vessels inside it (Figs. 13-14, Raphael, this volume).

The floor, (elevation 48.25), abuts WE5-1 to the east and is part of the room complex to the west. In the southern part of Square E5 (L147), part of the building's tamped earth floor was exposed with a broken jar on it (Fig. 15). A layer of stones and fire was identified on the floor, including a large number of burnt wooden cinders. This fired layer was also exposed in Locus 145 to the south. A layer of ash was compacted on the floor.

South of the complex of buildings, an open space can be restored bounded by walls in the south and west. To the west, in Square B7, Wall B7-1 (0.65 x 2.4 m), oriented north-south, was exposed. The wall has a corner facing east. The wall was built of small to medium-sized fieldstones bonded with mortar and preserved to a height of about 3-4 courses (Fig. 16). Locus 130 and Locus 115 are the associated floor levels.

In Square D7, Wall D7-1 (0.5 x 0.9 m) was exposed, the continuation was exposed in square E7 to the east, WE 7-1 (0.5 x 1.8 m). (Loci floors 115, 118, 119), abut those walls to the north. The floors bear layers of ash. Matrices of black and gray material, containing potsherds and tabun fragments, were also exposed in Squares C6, D6, and E6 (Loci 126, 133, 134, 145) below the surface layer. The average elevation of these levels is 49.95 masl. These levels are part of a large open space bounded by walls to the west and south and by a row of buildings to the north.

A pit (L143) was exposed in the southwestern corner of Square B5. The pit was enclosed by stone Wall B5-1 (0.15 x 1.7 m) to the north, which was preserved up to two courses high and built of small fieldstones (Fig. 17). A part of the pit is below the



Figure 11. Corner of a building and dirt floor, L116.



Figure 12. A compacted earth floor, L146, and the walls of the room. Ash can be seen on the floor.



Figure 13. The Locus 112 floor, with three glass vessels inside a cooking pot (see Fig. 1 in Raphael, this volume).



Figure 14. The Locus 112 floor, with jar and cooking pot.



Figure 15. The Locus 147 floor, with a broken jar and an ash layer.



Figure 16. Wall B7-1 and the compacted earth floors of an open courtyard.



Figure 17. Pit 143 lined with a thin stone wall.



Figure 18. The plastered reservoir in Square G6, L107.



Figure 19. A refuse pit with a complete jar inside it, L1012.

bulk separating Squares B5 and B6, it is not clear what the pit was used for and what its contents were.

In Square G6, in its northern part, the northwestern corner of a stone-lined and plastered pit was exposed. The exposed part was 1.2 x 1.2 m (Fig. 18) and the walls were preserved 1 m high. The floor of the pit and the sides of the pit were plastered with sandy yellow plaster with white grains. The bottom of the pit is at 46.20 masl. The location in the lower part of the site was meant to facilitate the collection of rainwater from the open courtyard buildings to the west.



Figure 20. A small stone structure and a refuse pit next to it.



Figure 21. A tamped earth floor of Stratum III, L144.

In Area B, Squares TU 99, a few round trash pits dug into the *hamra* soil were exposed. (Loci 1026, 1040, 1047) with diameters of 0.70 m, and depths of 0.85 m. The finds in the pits include sherds, bones, and glass. A complete jar for restoration, circa 1 m in diameter and 1.20 m deep, was found in L1012 (Fig. 19).

A square stone structure built of small to medium fieldstones (L1008) was exposed in Square T99 in the northwestern corner (Fig. 20). Its dimensions are about 1 x 1 m. It is not clear what it was used for. It dates to the 7th-9th centuries. Adjacent to it is a refuse pit, L4010.

STRATUM III — BYZANTINE PERIOD

Area B

In all the excavation squares, below the living surfaces and wall foundations of Stratum II, we reached a layer of *hamra* and sterile yellow sand upon which the settlement was founded. In Square C5 an occupation level that included a jar placed on a level of small stones was exposed

(L144, Fig. 21). A similar level with a shattered jar was exposed in Locus 145 to the south. On the shattered jar of Locus 144, was placed a fragment of a large basalt grinding stone. Aside from these, no structures or walls belonging to this phase were found.

THE FINDS¹

Stratum I — The Ottoman period

The finds from this period include the two jars that were used for burial, the rim of a porcelain bowl, and two clay pipes.

Porcelain bowls (Fig. 22:1) were imported from France and Ireland and are common at the sites of this period (19th-20th centuries); they have also been found in Migdal Yama (see figure table). The jars (Fig. 22:2-4) are Gaza Ware, with the rim folded out and a ridge in the center of the neck. The handles are pulled from the bottom of

the neck to the shoulder of the jar. The pottery was made in and around Gaza and was common in the 19th and 20th centuries. Jar No. 2 is made of reddish-brown clay and is of a type also found at the sites of El Kebab,

Clay pipes (Fig. 22:5-6) are made of black-gray clay, decorated with a comb on their rim. They common throughout the country from the 17th to the 20th century. Comparable examples have been found in Yokneam (see figure table).

¹ The different layers are displayed in separate figures. In the early Islamic phase, ceramics are displayed according to the floors of the rooms, The open courtyard, refuse pits and a separate figure for surface finds.



Figure 22. Stratum I, the village and the cemetery, 19th-20th centuries.

No.	Basket	Locus	Description	Parallels
1	10003	103	Porcelain bowl rim, white clay, geometric decoration in blue on the inside	Taxel 2017: Fig. 13:8
2	15026	1053	Jar, reddish-brown clay, thin wall, combed decoration in the center of the outer wall	Ein Gedi 2006: Fig. 7:8
3	10024	103	Jar rim, black-gray material	Stern 2017: Fig. 5:1
4	15080	10033	Jar, black-gray material, combing under the rim and on the body of the vessel from the outside. Thin wall.	Stern 2017: Fig. 5:1
5	20001	2000	Pipe rim, black and gray clay, combed decoration.	De Vincenz and Sion 2007: Fig. 16.
6	15034	1004	Pipe rim, black and gray clay, combed decoration on the rim from the outside	De Vincenz 2011

STRATUM II — EARLY MUSLIM PERIOD

The Stratum II assemblage contains most of the pottery types of the 8th-10th centuries. Parallels derive from several excavation reports and synthetic studies (Avisar 1996; Magness 1999; Kletter 2005; Kohn Tavor 2017; Stacey 2004).

Glazed open bowls. The simple glazed bowls are represented in Figs. 23:1, 24:4-6, 25:1-5. These bowls are made of reddish clay, have a thick wall, are covered with yellow and green glaze with brown and green decoration. The rim is simple and everted, and the base is usually a disc. Date: 8th-10th centuries.

Non-glazed open bowls (Fig. 23:2-3) are made of reddish-brown clay, have slightly rounded wall and a folded rim. The rim is combed in some bowls. Date: 6th-9th centuries.

Polished and decorated bowl (Fig. 25:6). This hand-made bowl with a flat base has a polished black, straight wall. The Geometric decoration that adorns the outer wall is filled with white chalk. Date: 8th-10th centuries.

Deep bowls (cups) (Fig. 24:7-9). No. 8 is of the Fine Byzantine Ware (FBW) type, thinly polished and well-fired. Bowls 7 and 9 have a straight wall, a rim flaring outward, and combing on the outer wall. Date: to the 8th-10th centuries.

Large bowls/kraters (Fig. 23:2-3) with straight walls, thickened rims, and combing under the rim

from the outside have a long-time span and date to the 7th-10th — centuries.

Cooking pots (Figs. 24:10-12; 26:3). Two types of cooking pots were identified: the first (Fig. 26:3), a cooking bowl with handles without glazing, dating to the 7th-8th centuries; and the second (Fig. 24:12), a closed cooking pot with an out-flaring rim. This type has a long-time span and dates to the 9th-12th centuries. Fig. 24:10, 11 are cooking pot lids.

Jars (Figs. 23:4-6; 24:13, 14; 26:1). A variety of jars were recovered with straight rims inclined slightly inwards. The handles are on the shoulder and under the rim. The body is cylindrical, but over time becomes elongated. There is delicate combing on the body. Date: 7th-10th centuries. Jar type Fig. 26:1 appears also in the 11th-12th centuries.

Jugs (Figs. 23:7; 24:15; 25:7-10; 26:2) are made of well-levigated clay and have a thin, straight rim. Fig. 23:7 has combed decoration on the body. Figs. 26:2, 25:8-9 display geometric decoration under the rim. and decoration on the handles. Fig 25:10 has a strainer mouth. Date: 8th-10th centuries.

Oil lamps (Fig. 25:11; 23:8). These are typical lamps in the early Muslim period (7th-10th centuries). Fig.23:8 has a decoration of beads around the lamp mouth. Fig 25:11 has a decoration that simulates Arabic script.

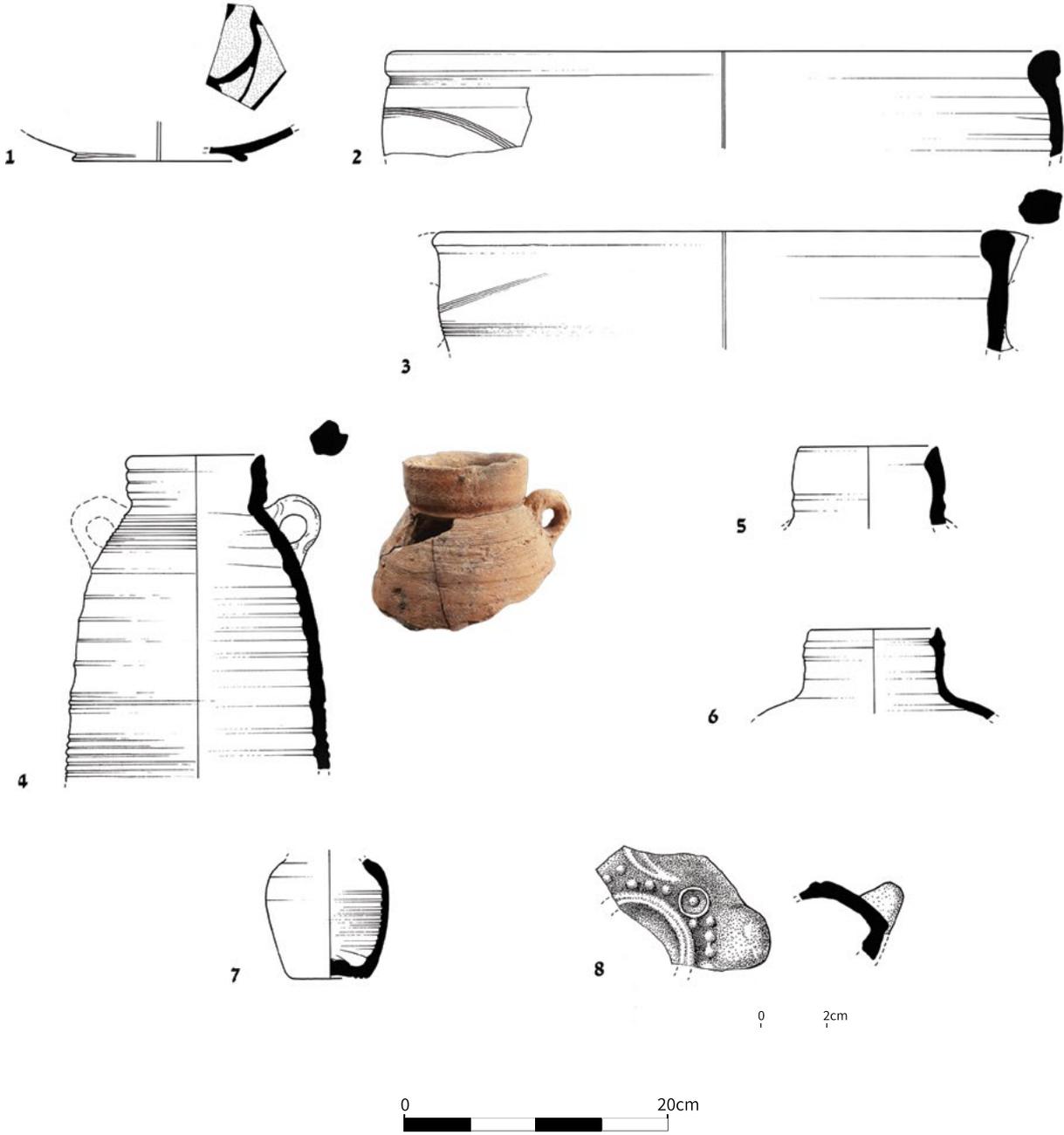


Figure 23. Stratum II, Building floors, Early Muslim, 7th-9th centuries.

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No.	Basket	Locus	Description	Parallels
1	10113	142	Bowl base, red material, green glazed slip, and geometric decoration on the inside of the bowl	Avissar 1996: Fig. XIII.3:1
2	10060	112	Krater, red material, white slip, combed decoration on the outside.	Kohn-Tavor 2017: Fig. 2:19; Kletter 2005: Fig. 13:5,7
3	10013/3	142	Krater, red material, white slip, combed decoration on the outside.	Avissar 1996: Fig. XIII. 79:80
4	10118	147	Jar, reddish brown material, black core	Avissar 1996: Fig. XIII. 113:2
5	10113/4	142	Jar, a reddish-brown material, is combed over the entire body from the outside.	Avissar 1996: Fig. XIII.114:5-6
6	10118	147	Jar, a reddish-brown material, is combed over the entire body from the outside.	Avissar 1996: Fig. XIII. 114:5-6
7	10117	146	Jug, delicate clay, burnished, combed decoration on the base	Kletter 2005: Fig. 16:1-2; Kohn Tavor 2017: Fig. 2:30.
8	10115	145	Oil lamp with decoration	Magness 1993: 253, Form 5.

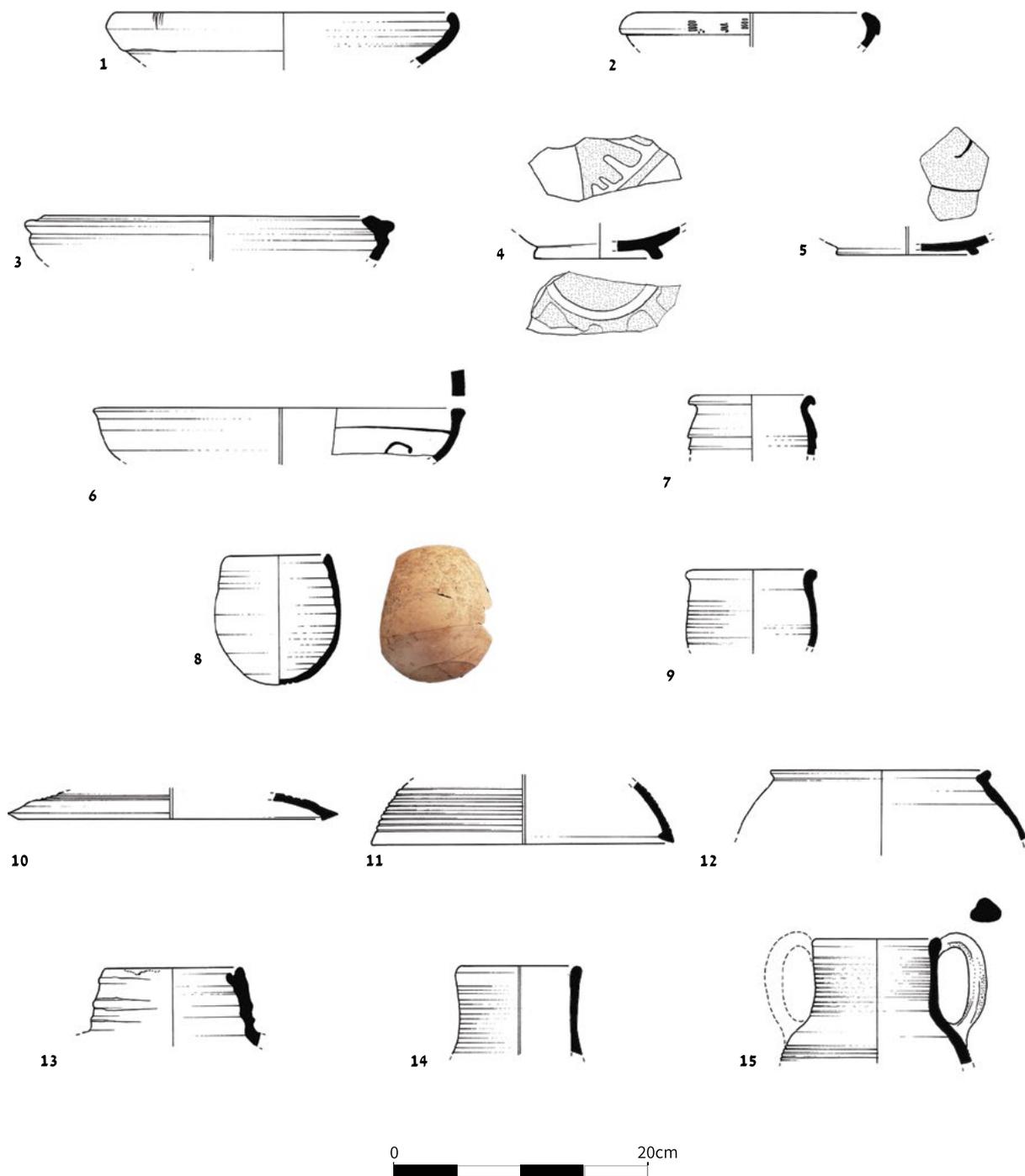


Figure 24. Stratum II, open courtyard, early Muslim 7th-9th century.

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No.	Basket	Locus	Description	Parallels
1	10021	115	Bowl, reddish brown material, burnished	Kohn Tavor 2017: Fig. 2.11:7
2	10063/2	130	Bowl, light brown material, combed decoration on the rim	Avissar 1996: Fig. XII.68.1-2.
3	10067	126	Bowl, reddish brown material, burnished	Avissar 1996: Fig. XII.68.1-2.
4	10109	138	Bowl base, red material, yellow glaze, and slip, with line decoration on the inside.	Kletter 2005: Fig. 12:1-2.
5	10074/2	128	Bowl base, red material, yellow glaze, and slip, with brown line decoration on the inside.	Kletter 2005: Fig. 12:1-2.
6	10063/1	130	Bowl, brown material, yellow glaze, and slip, with brown line decoration on the inside.	Kletter 2005: Fig. 12:16.
7	10109	138	Bowl, reddish brown material, burnished.	Kletter 2005: Fig. 15:8.
8	10101	130	Bowl, red material, thin wall, burnished.	Kohn Tavor 2017: Fig. 2.42:8.
9	10074	128	Bowl, delicate white material, line combed on the body under the rim.	Kohn Tavor 2017: Fig. 2.12:1.
10	10048/4	104	Cooking pot lid, dark red material.	Avissar 1996: Fig XIII.110:2.
11	10084	126	Cooking pot lid, dark red material, burnished.	Avissar 1996. Fig. XIII.110:1
12	10104	135	Cooking pot, red material, good firing, burnished	Kohn Tavor 2017: Fig. 2.23:6.
13	10117		Jar, reddish brown material, burnished	Avissar 1996: Fig. XIII.114:5-6.
14	10081	124	Jar, reddish brown material, burnished	Avissar 1996: Fig. XIII.113:1
15	10080	130	Jug (Jar?), white delicate material. Comb decoration	Kohn Tavor 2017: Fig. 2.34:5.

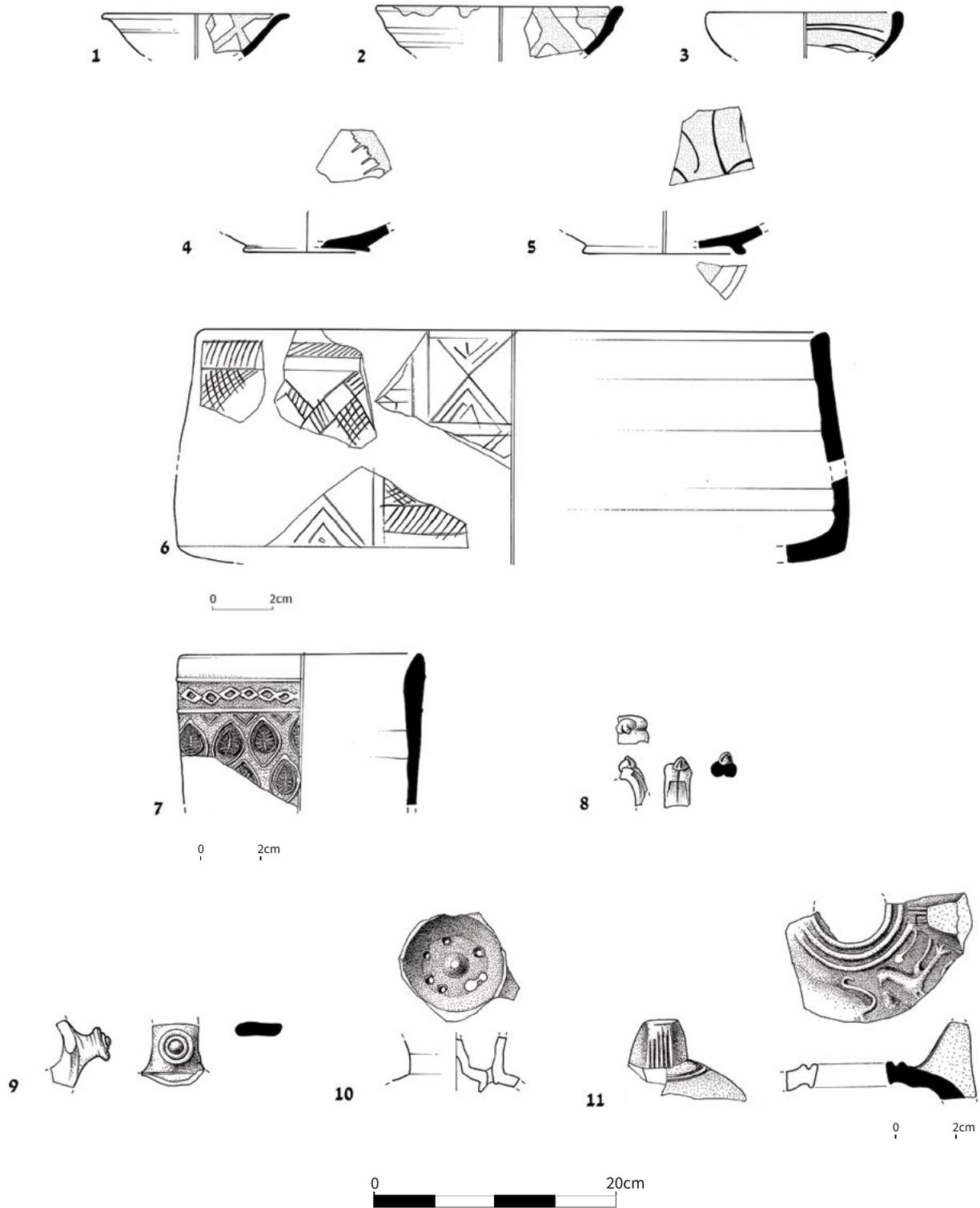


Figure 25. Surface pottery — Stratum II, Early Muslim, 7th-9th centuries.

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No.	Basket	Locus	Description	Parallels
1	10005	105	Bowl, white delicate material, green glaze on the rim and on the inner side of the vessel.	Kohn Tavor 2017: Fig. 2.4:1; Avissar 1996: Fig. XIII.4:1, Kletter 2005: Fig. 11:1.
2	10001	101	Bowl, white delicate material, green glaze on the rim and on the inner side of the vessel.	Avissar 1996: Fig. XIII.3:1
3	10088	136	Bowl, dark material. Yellow glaze with lines decoration inside the bowl.	Avissar 1996: Fig. XIII.8:5-6
4	15008	1007	Bowl base, white, brown material, green glaze on the inside of the vessel, white slip on the base of the vessel from the outside.	Avissar 1996: Fig. XIII.3:1.5
5	10008	108	Bowl base, red material, white slip on the base of the bowl on the outside, yellow glaze with brown line decoration inside the bowl.	Avissar 1996: Fig. XIII.8:1,5.
6	10049	108	Bowl, black, gray material, burnished, geometric decoration engraved on the body of the vessel from the outside.	Avissar 1996: Fig. XIII.74:1-4. Stacey 2004. Fig. 5.7:8
7	10001/2	101	Jug, white delicate material geometric decoration on the rim.	Avissar 1996: Fig. XIII.132:1-3.
8	10043	125	Jug handle, white delicate material, double handle with $\text{r}^{\text{r}}?$ decoration.	Avissar 1996: Fig. XIII.138:2-3.
9	10009	101	Jug handle, white delicate material, prominent button decoration on the handle.	Kohn Tavor 2014: Fig. 1.31:22-23.
10	10009	101	Jug, white delicate material with a strainer	Kletter 2005: Fig. 16:12.
11	15006/2	1000	Oil lamp, red material, decorated	Avissar 1996: Fig. XV.25:26

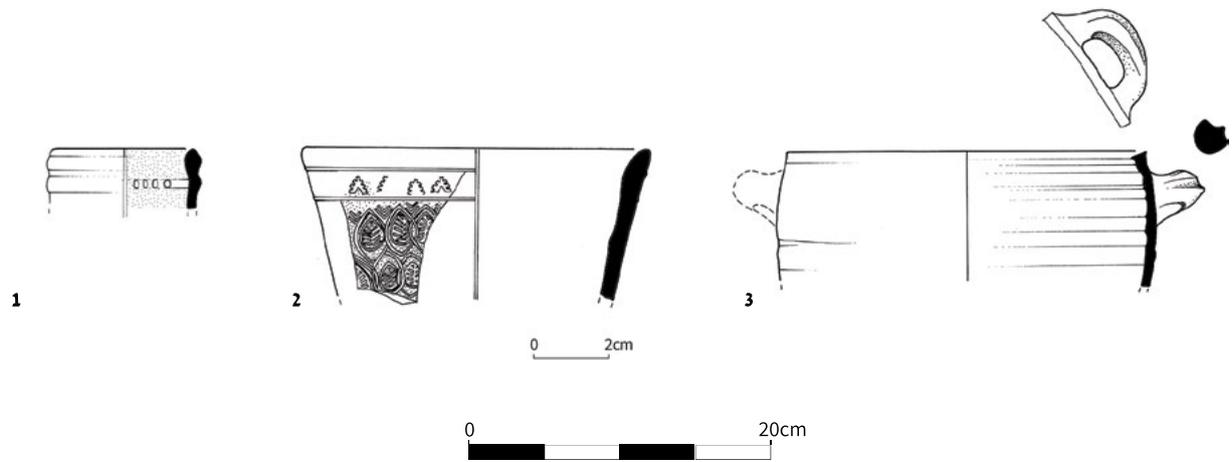


Figure 26. Refuse pits — Stratum II, Early Muslim, 7th-9th centuries.

No.	Basket	Locus	Description	Parallels
1	15058	1026	Jar, reddish brown clay, green dots decoration in the inner rim	Avissar 1996: Fig. XIII. Type 13:2
2	15028/3	1012	Jug, white delicate material, geometric decoration under the rim.	Avissar 1996: Fig. XIII.132, Type 6
3	15058/1	1026	Cooking pot/bowl, reddish black material	Avissar 1996: Fig. XIII.99

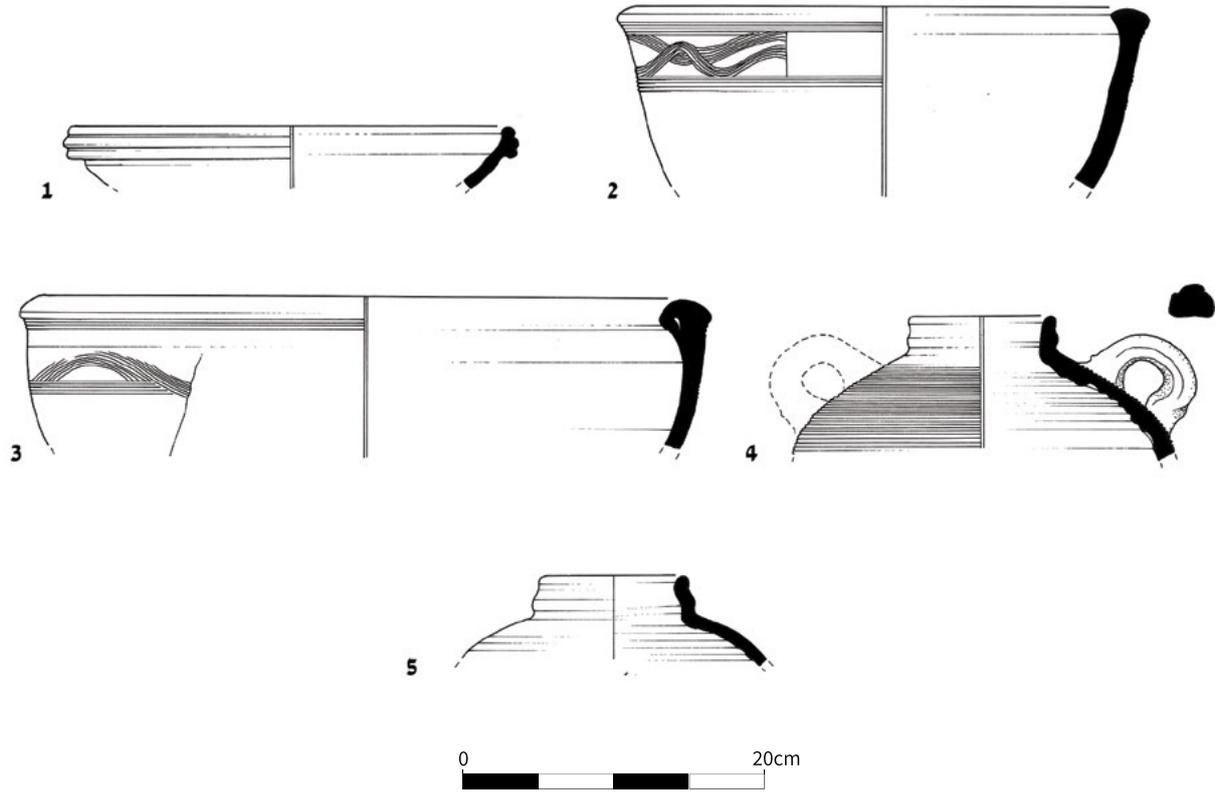


Figure 27. Stratum III, Byzantine period, 5th –6th centuries.

No.	Basket	Locus	Description	parallels
1	10098	144	Bowl, reddish clay, red slip, burnished inner and out, notch on rim	Magness 1993: 189, Form 2b
2	10087/2	140	Krater, Reddish brown clay, combing under the rim	Magness 1993: 209, Form 3
3	10087/1	140	Krater, Reddish brown clay, combing under the rim	Avisar 1996: Fig. XIII.79
4	1066/1	116	Jar, reddish clay, outside combing	Magness 1993: 225. Form 4b-c.
5	1066/8	116	Jar, reddish clay, outside combing	Magness 1993: 225. Form 4b-c.

STRATUM III — BYZANTINE PERIOD

The assemblage from the Byzantine period includes bowls and jars dated to the 6th-7th centuries.

Bowl Fig. 27:1 has a folded rim and a rounded wall. Date: 6th century.

Bowls/kraters Fig. 27: 2-3 with straight walls, a thickened rim and combing under rim, date to the 6th-7th centuries.

Jars Fig. 27:4-5, of the sack-shaped type, were common in the 6th-7th centuries. Their thickened rim folds inwards and there is combing on the body of the vessel.

Stone items

Five stone vessels (Fig. 28-29) were found in the excavation, two of which were found on the

surface (Fig. 29). Two grinding stones were found in the levels of the open floor (courtyard) from the Early Muslim period (Fig. 28:1-2) and one piece of stone (No. 3, not photographed) dated to the Byzantine period.

Fig. 28:1 is a small, elliptical-shaped mortar made of compact, non-vesicular basalt. Fig. 28:2 is a fragment of rotary quern stone of vesicular basalt. The perforated center contained the cone of the upper stone. The basal side was ground smooth. A third basalt item (not photographed) was part of the lower stone of a rotary quern. It was found on a jar on the floor of Locus 144, in Stratum III. The stone may have been intentionally broken.

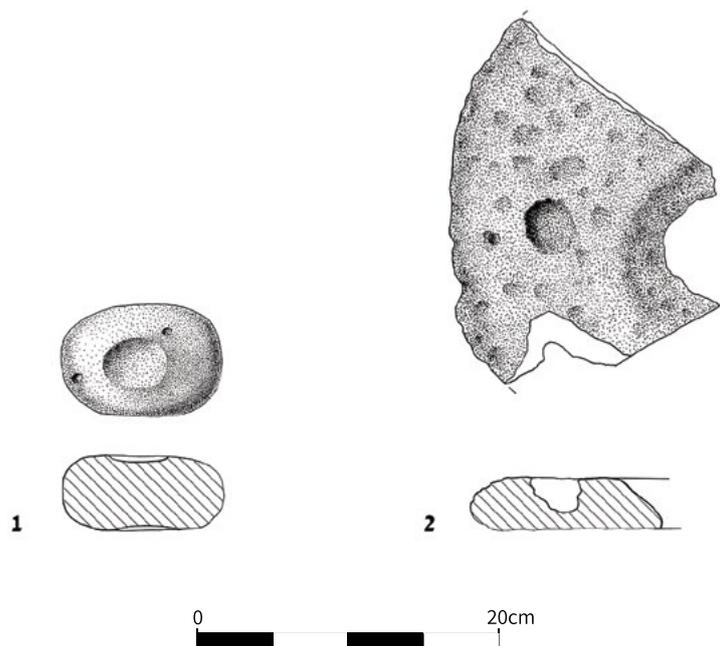


Figure 28. Stone artifacts — Stratum II, early Muslim, 7th-9th centuries.

No,	Basket	Locus	Description	Parallels
1	10071/1	132	Mortar, smooth basalt stone	Tal and Taxel 2008: Fig. 6:130
2	10108/1	139	Grinding stone - basalt with holes	Kletter 2005: Fig. 26:1-3.

Stone items — surface



Figure 29. Stone artifacts from surface level²

No.	Basket	Locus	Description
1	10103/1	surface	Architectural item in secondary use; the perforation in the center is the result of secondary use
2	10103/2	surface	Grinding stone of beach rock

² Photographed by M. Yron

SUMMARY

The earliest level at this Ramat Hasharon-Route 5 site, Stratum III, dates to the late Byzantine period (6th-7th century); an occupation level was exposed without architecture. It is not possible to say much about this settlement at this stage.

The next level up, Stratum II, revealed the poorly preserved fragments of a one-period settlement: walls and floors, an open courtyard, and trash pits. The walls of the houses are built of small kurkar stones bonded with a cement-like material. Floors and a burnt layer were identified in one building. Fragments of jars, pottery sherds, glassware, and broken grinding stones were found on the floors. This settlement belonged to a rural

settlement network north of and near the Yarkon in the 8th-10th centuries. Similar settlements were excavated and uncovered in Kfar Saba (Ayalon 1998) and Tel Hashash (Tal and Taxel 2010).³ The burnt layer in one building and the subsequent abandonment of the site may be evidence of the political instability in the region during the 9th-10th century period of Abbasid rule (Gil 1983).

The final phase of use was revealed in Area B: part of a Muslim cemetery of the village a-Sawalma that was abandoned in 1948. The forms of burial and the accompanying artifacts are typical of Muslim burial in the 19th and 20th centuries.

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Glass and Metal Finds from the Khirbet Sheikh Sa'ad — Ramat Hasharon Excavation

Kate Raphael

The following report presents a small number of modest objects that were found in three areas with different characteristics (Suleimani, this volume). The latest finds date to the 19th-20th century Arab village and its Muslim cemetery. This level yielded eight early modern medicine bottles, and fragments of a metal plaque and iron fittings (not illustrated). The earliest finds came from a poorly preserved domestic setting dated by the excavators to the Early Islamic period 7th-9th centuries. The latter yielded two intact bottles that date to the Umayyad period. They were found inside a cooking pot, together with a storage jar above a tamped earth floor. One of the garbage pits, also dated to

the early Islamic period, yielded an iron pruning knife fragment.

Nineteen baskets containing approximately 27 glass finds were collected throughout the excavation; these include fragments that could not be identified and two intact bottles. Sixteen finds are presented in this report. Out of the four metal finds, only two were identified and incorporated in this report.

The report starts with the latest period—the finds of the modern Arab village—and ends with the artifacts from the Early Islamic period (7th-9th centuries).

NINETEENTH AND TWENTIETH CENTURY FINDS FROM THE ARAB VILLAGE

1. Glass medicine bottles (L.1040, B.15064/4, Fig. 1:1)

Eight modern (19th-20th century) glass bottles, used for various medicines, were found in the garbage dump of the Arab village. Their heights range 4.5–11 cm; some are clear, some dark brown. Each bottle is embossed with a number on the

base. As Ouahnouna (2017) notes, “medicine bottles are probably the largest and most diverse group of glass bottles produced from the nineteenth until the mid-twentieth centuries CE.” There are no markings of the producer on the Khirbet Sheikh Sa'ad vessel. Parallels: Tell Musa Shahin (Kefar Gevirol; Arbel et al. 2013: Fig. 22).

UMAYYAD AND ABBASID GLASS VESSELS

All the glass bottles presented below are relatively common finds in domestic Early Arab-period sites. The bottles were blown and the quality of

the work was ordinary. They were made locally and used daily.



Figure 1. Glass vessels from the Arab Village (19th-20th Centuries) and Early Islamic Period.

2. Two plain glass bottles (L.112, B.10054/1; L.112, B.10054/2, Fig. 1:2)

Brownish-green glass. Height: 5.5–6 cm, diameter 6–6.5 cm. Two complete globular glass bottles were found in the remnants of a domestic building, on a dirt floor inside a cooking pot. The body is not completely symmetrical, and the glass contains many air bubbles. The rim is plain and the neck short and wide. Similar bottles were found in Jerusalem, dated to the Byzantine period (Hamilton and Husseini 1935), and Beth Shean (Hadad, 2005: 102–103, Pl. 5).

3. Rim and neck of a glass bottle (L.112, B.10055, not illustrated).

Fragment of a concave base. Color light green. Coated with a layer of silver patina. Diameter 2.4 cm, length of neck 3 cm. Thick ledged rim, narrow neck. Similar bottles were found in the Jerusalem cemetery at Karm al-Shaikh (Baramki 1932: Pl. V), Beth Shean (Hadad, 2005: Pl. 9: 182–183 and 184).

4. Fragment of a fine glass bottle (L.1000, B.15074/1, Fig. 1:4)

Light greenish-blue, long neck with slightly flaring rim. Length of neck 5 cm, diameter of rim 1.2 cm. A similar bottle was found at 'Aqir (Gorin-Rosen, 2016: Fig. 24:7).

5. Fragment of a fine glass bottle (Fig.1:5).

Pale blue with a straight, wide neck and simple rim. Decorated with fine blue trails of glass thread. This style of decoration was popular throughout the Umayyad period (Hadad 2005: 24–25). Similar fragments were found at 'Aqir (Gorin-Rosen, 2016: Fig. 24:11).

6. Glass base (L.1021, B.15049/1, Fig. 1:6)

Thick heavy ring base, light green. The edge of the base is chipped. It probably belonged to a drinking vessel or perhaps a bowl. Diameter 3.8 cm, height

0.8 cm. Similar bases were found at Ramla (Gorin-Rosen 2016: Fig. 1:5), 'Aqir (Gorin-Rosen 2016: Fig. 24:6), and Ashdod-Yam (Ouahnouna 2014: Fig. 30:2).

7. Large glass base (L.100, B.10024, not illustrated)

Dark green concave base. Much of it is missing. The full diameter cannot be obtained. Width 9 cm, thickness 0.3 cm. It could have belonged to a bowl or a jug. Parallels: Beth Shean (Katsnelson 2014: Fig. 8:8); Beth Shean (Winter 2011: Fig. 12.3:5).

8. Bead (L.120, B.10038/1, Fig. 1:7)

Fine circular dark blue glass. Diameter 0.8 cm. Found in Area A, Level II, among the poorly preserved remains of a domestic building, it may have been part of a necklace or bracelet.

Metal Objects from the Early Islamic level

Out of the four finds only two are presented in this report. The other two are fragments and a broken base of an iron vessel (Area A Level II, L.133, B.10103/3, not illustrated); and an iron clasp and a metal rod (Area A Level I; L.108, B.10008/1, not illustrated).

9. Pruning knife (L.108, B.10008/1)

Curved iron blade with a socket (Fig. 2:9). Found in Area A Level II in the fill and poorly preserved architectural remains of a domestic building, the blade is badly corroded and poorly preserved. Length 13 cm, width 2.3 cm. Dated to the Early Islamic period (7th–9th centuries CE). Similar tools have been defined as pruning hooks used to trim and prune trees and vines, or for clearing scrub and cutting reeds (Avitsur 1976: 154). It seems their shape did not change much over the centuries. Parallels: Shiqmona, Byzantine period (Elgavish 1994: Fig. 15); Kursi, 7th — 8th centuries



Figure 2. Metal artifacts.

CE (Tzaferis 1983: Pl. 16); Sumaqa, 1st and 2nd centuries CE (Dar 1999: Fig. 39:2).

10. Bronze speculum (probe) (L.120, B.10038/1, Fig. 2:10)

These slender bronze rods were a basic instrument used by surgeons for exploring wounds, and for mixing and applying creams and ointments.

Length 11 cm, thickness 0.4 cm, rounded and very slightly pointed edges. This small, simple instrument has barely changed in shape or dimensions through the centuries. It is a common find in many rural and urban sites, from the Roman to the Mamluk periods. Parallel: Ashdod-Yam, early 7th centuries CE (Raphael 2014: Fig. 23:1).

SUMMARY

The glass artifacts presented in this report are well known and well documented domestic types. The Early Islamic glass bottles may have contained ointments, perfumes, or aromatic oils; they were probably made nearby. Similar bottles were found in numerous sites across the country, in both urban and rural sites. Copper alloy speculae such as the

one presented here are also a common find in domestic settings from the classical to the medieval periods. Though common and locally made, the corpus here is too small to assist us in inferring the socioeconomic status or nature of the community that occupied the site.

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Islamic Coins from Ramat Hasharon

B472/18

Nitzan Amitai-Preiss

During the excavations at Ramat Hasharon, Khirbet Sheikh Sa'ad, nine Islamic coins were unearthed. Eight of them were part of a headdress of an interred young woman (Reg. no. 15093 from Locus 1038; Sulimani, this volume p. 104). These are described in the catalogue below, in chronological order. The last coin unearthed, not part of the headdress, is No. 9.

The young woman's headdress may have been that of a Bedouin bride (see below); perhaps she died on the eve of her wedding day. The people who lived at Khirbet Sheikh Sa'ad were Bedouin of the clan of a-Sawalimah, who resided in the area till 1948. According to the tradition of the clan, they were a subclan of the Abū Ṭīyyah, one of the clans of the tribe of Arab al-Khawīṭa, from Jordan (Avitzur 1980: 144–145).

A linen thread, 2.3 cm long, was attached to one of the headdress' coins. In addition to the coins the headdress included an elongated bead flanked by two round beads (Fig. 1:10). The beads were examined by Dr Yael Elkayam, of the Archeo-Gemology laboratory of the Martin (Szusz) Department of the Land of Israel Studies and Archaeology at Bar Ilan University. They were examined with a 10x magnifying glass, and with a fluorescent device by short and long waves (SW and LW) in ultraviolet (UV) light. The beads glittered despite their weathered layers, but their shine was weak. The beads were identified as amber. Today they are grey, due to their patina, but originally, they were honey-colored.

The origin of the amber is either in the European lands around the Baltic Sea, or Lebanon. An interesting parallel to the Khirbet Sheikh Sa'ad beads was recently discovered in graves in the Ottoman-period cemetery of Majdal Yābā, near Rosh Ha-Ayin (Marcus et al. forthcoming). The Majdal Yābā beads are disk-shaped and also of honey-colored amber with a grainy black patina (Amitai-Preiss forthcoming a).

As for a pseudo-Ottoman coin — a coin for a bride (No. 7, Fig. 1:9), this coin has a parallel unearthed at Horvat Midras (Amitai-Preiss forthcoming b) where Ottoman and European coins were found as part of a women's headdress. This headdress for Bedouin women, a *barq'a*, was made of fine fabric, according to a strict order: the large and highly valued gold and silver coins were sown around the face and the smaller coins, or the pseudo coins, were put on the back of the neck or on the sides (Meir 2002: 15). Two of the coins from the headdress, Catalogue Nos. 1 and 2, bore the negative of the headdress fabric, or of her shroud.¹

The coins of the headdress range in date from Mahmud II (1829–1830), to the Nuremberg coin (1880–ca. 1902). The latter German coin dates the grave of the young woman to between 1889 and ca. 1902.

Another grave, apparently of a young boy (L1032, B 15086), contained a coin (No. 9) and a few glass beads. This grave is dated to 1809–1810.

¹ Coins often bear the negative of the sack they were carried in when they were buried. For such two occasions see Shamir 2009 and also Kool et al. 2011.

THE CATALOGUE

The young woman's headdress, Reg. no. 15093 (Coins 1–8, in chronological order)

1. Coin Fig. 1:7.
Mahmud II, year 21, 1829–1830 CE, Miṣr.
On both sides two intertwined branches and fruits.
Obv.: Tograh, 21 (the upper part of the coin bears the negative of the shroud of the deceased).
Rev.: مصر
1223
AE, one para, 1.24 g, 29 mm, the axis of the coin cannot be determined since not all the features on the original coin can be seen properly.
Cf. Pere 1968: 252, No. 846.
Remarks: The coin is perforated, broken into two parts, so it is a partial coin only.
2. Coin Fig. 1:6.
Mahmud II, year 21, 1829–1830 CE, Miṣr.
On both sides two intertwined branches and fruits.
Obv.: Tograh.
Rev.: مصر
١٢ [٢٣] [23] 21
This is the hijri date of the coin, found below the name of the mint.
AE, 1.42 g, 28 mm, 12.
Pere 1968: 252, No. 846.
Remarks: Perforated, negative of the shroud on reverse.
3. Coin Fig.1:8.
Mahmūd II, 1808–1839 CE
Obv.: Traces of Tograh of Mahmūd II.
Rev.: Worn.
AE, 0.18 g, 16 mm.
Remarks: Traces of silver above the bronze.
4. Coin Fig.1:3.
ʿAbd al-ʿAzīz, 1860–1861 CE, Miṣr
Obv.: Tograh and a branch on the right upper side.
Rev.: ضرب/ في/ مصر
١٢٨٧ 1287
This is the hijri date, found below the name of the mint.
AE, 0.36 g, 16 mm, exis cannot be determined.
Cf. Sultan 1977, Vol.II: Pl. 283, No. 3666.
Remarks: Perforated, negative of the shroud on reverse.
5. Coin Fig.1:2.
Murād V, 1875–1876 CE, Miṣr
Obv.: Negative of the reverse.
Rev.: ضرب في/ مصر
١٢٩٢ 1292
This is the hijri date, always found below the name of the mint.
AE, 0.23 g, 16 mm.
6. Coin Fig. 1:5.
ʿAbd al-Hamid II, 1911–1912 CE, Constantinople.
Obv.: Tograh.
Rev.: قسطنطينية / ضرب في /
[١٢٢٣]
The hijri date would be below the mint name, not found on this coin.
AE, 0.21 gr, 14 mm, axis could not be determined.
7. A Token for a Bride
Coin Fig. 1:9.
A bride's special pseudo-Ottoman coin-token, Egypt, 20th century.
The two sides of this token have the same identical design:
Obv.: A pentagram made of dots, between each of its two rays is a crescent. Margins are a frame of a twisted cable.

- Rev.: A pentagram made of dots, between each of its two rays is a crescent. Margins are a frame of a twisted cable.
 Brass, 0.43 g, 16 mm.
 Cf. Amitai-Preiss forthcoming b: Coin No. 67.
8. Coin Fig. 1:4.
 Nuremberg, 1880–circa 1902
 Obv.: Traces of crowned double-headed eagle, [with shield on breast, holding orb and sword (bifid blade)], with the legend:
 [NURN]BERG SPIEL RECHNE
 PFENING
 Rev.: In wreath: SPIEL/MARKE
 AE, 4.55 g, 40 mm, 12.
 Mitchiner 1988: 579, Nos. 2096–99. The coin from Ramat Hasharon is of a different die.

The coin from Grave 1032:

9. L1032, B 15086
 Mahmūd II, 1809–1810 CE, Constantinople.
 Obv.: In center Tograh, three Arabic words each in a cartouche, between each one a branch and fruit, above سلطان; unclear on right; زمان on left
 Rev.: In center ٢١
 three Arabic words, each in a cartouche and between each one a branch and fruit, above محمود غازي on right خان on left
 AE, 3.5 gr, 27 mm, 9.
 Pere 1968: 243, No. 745 (Pl. 50, No. 745).

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Figure 1. Coins.

The Human Remains from the Muslim Cemetery at Khirbet Sheikh Sa'ad (Ramat Hasharon Tennis Center)

Vered Eshed

In 2019, a salvage excavation (license B472/19) took place south and adjacent to Road No. 5 and near the Ramat Hasharon Tennis Center. The excavation was executed in two areas, A and B (Sulimani, this vol: Figs. 1–2). The human remains were excavated in burials located in Area B, Stratum I (Sulimani, this volume, p. 101, Fig. 6).

The burials and human remains were associated with the cemetery of the Bedouin/Arab village of Swalimia from the 19th and 20th centuries where some 450 people lived until 1948 (Avitsur 1980; Conder and Kitchener 1882: 226; Khalidi 1990; Sulimani, this volume, p. 104).

THE BURIALS AND HUMAN REMAINS

Graves were found 0.30–0.40 m under the surface. The highway widening required only parts of the cemetery to be excavated. Human skeletal remains were discovered and excavated in different grave types (Sulimani, this volume). Most of the burials were interred in a simple pit in the soil. A few tombs were enclosed from both sides with a single course or two courses of dressed stones or simple fieldstones, which marked the grave and were laid higher than the body. Some of the tombs were also covered with up to seven stone slabs (mostly of *kurkar*) or covered by a pile of fieldstones (Sulimani, this volume). One unique grave (Grave 1049) was found covered with a gabled stone construction. Children were usually buried in a simple pit, backfilled and covered with stones — to indicate burial location — or inside a jar. All the graves had an east-west orientation.

Most of the bones were found in a fairly good state of preservation. Bones were examined for anthropological data during the excavation in the

field and then left in situ, or reburied. Below are the anthropological data according to grave/locus (and see Table 1).

L1006: The gender of this individual is male, based on the vertical diameter of the femoral head (46 mm. Bass 1987: 219). The age was 30–35 years, based on tooth attrition level (first lower molar shows minimum dentin exposure at all cusps, second molar shows dentine exposure at one cusp, cf. Hillson 1986), and the lumbar vertebrae, where no sign of osteophytes were found, which suggests that the individual is less than 40 years (Nathan 1962).

L1019: The remains included one adult individual, placed on his right side, with his head on the west, the face pointed south. The forearm is placed on the pubis. At the southern (lower?) part of the skull and face a metal plate was found. Sex determination of the individual as male is based on the vertical diameter of the femoral head (47 mm. Bass 1987:219). Age 20–30 years, based on tooth

attrition level (first lower molars and pre-molars show minimum dentin exposure at one cusp, and attrited enamel, Hillson 1986).

L1020: One adult individual, placed on his right side, with his head on the west, and the face is pointed south. The legs were slightly flexed. Sex determination as male based on the vertical diameter of the femoral head (47 mm. Bass 1987: 219). Age determination as older than 19 years, based on fusion of head and shaft of femoral bone (Bass 1987: 219).

L1027: Bones of a child in a bad state of preservation. Primary burial with anatomical articulation. The child was placed on its right side, with its head on the west, the face looking south, the legs flexed slightly backwards. Based on long bone length without the epiphysis (maximum ulna shaft length was 65 mm.) the baby was a newborn (Bass 1987:170).

L1029: The remains included bones in a poor state of preservation. The burial position is unknown. Based on long bone length without the epiphysis (maximum femur shaft length was 67 mm.) this was a newborn (Bass 1987: 217).

L1030: Bones in a moderate state of preservation. Primary burial and anatomical articulation noted. Head (badly preserved) to the west; face direction is unknown. Green beads found around the neck were most probably part of a necklace, which might suggest a female. Based on long bone length without the epiphysis (maximum humerus shaft length was greater than 65 mm.) the baby's age is 0–1 years (Bass 1987: 149).

L1032: Bones in a poor state of preservation. Primary burial and anatomical articulation of the bones noted. A child placed (probably) on its right side, with its head to the west, the face looking south, the legs slightly flexed. The child's age is 8–9 years old, based on stages of tooth eruption and development: the first permanent central incisor has complete crown and incomplete root, the first molar was fully developed, and the second molar

had a complete crown with the beginning of root development (Johnston and Zimmer 1989).

L1033: Bones in a good state of preservation, inside a jar. Primary burial and anatomical articulation noted. Skeleton appears to be in a flexed position. This is a fetus, based on long bone length without the epiphysis: maximum humerus shaft length was more than 54 mm., clavicle length was 32 mm, (Bass 1987:149).

L1035: Bones in a poor state of preservation. Primary burial and anatomical articulation noted. The child was placed on its right side, head to the west, face looking south, the legs slightly flexed. The child was about 3 years old, based on: stages of tooth eruption and development (first pre-molar has 1/3 of crown height development, canine with half of crown height developed, and first molar with an almost complete crown, Johnston, and Zimmer 1989).

L1038: One adult individual, placed on its right side, with his head on the west, and the face is pointed south. The left forearm placed about 95 degrees above the pelvis. On the frontal bone of this individual and downwards, a "diadem" of coins was found. The coins left a patch of blue colour on the frontal bone and on part of the facial bones. Traces of hair node were found too. Therefore, it is possible that this individual is female. Other bone morphology also supports a female determination: the mandible bone was gracile and had a pointed, V-shape female chin morphology (Bass 1987: 81–82). The frontal and zygomatic bones were also gracile and no supra orbital ridge was noted (Bass 1987:81–82). Age determination is 15–25 years, based on tooth eruption and attrition level; the second pre-molar and first molar showed complete root development, with tooth attrition and no dentine exposure (Hillson 1986). Moreover, the epiphyses of the ulna bone were fused with the shaft; hence, the female age is older than 15 years (Johnston and Zimmer 1989).

L1039: Mostly cranial bones, located at the west part of the grave, of a poorly preserved infant aged 1–5 years.

L1048: One adult individual, placed on his right side, with his head to the west, facing south, and legs slightly flexed. The individual is female based on the vertical diameter of the humerus head: 40 mm (Bass 1987: 151). Age determination was 25–35 years, based on tooth attrition level; the canine and first upper pre-molar showed minimum dentine exposure of cusp (Hillson 1986).

L1049: One adult individual, placed on his right side, with the head to the west facing south, legs slightly flexed. Sex determination was male, based

on: (1) skull and long bone morphology (mandible is robust and had a rectangle shape, skull bones are thin and robust, and supra orbital ridges are prominent; Bass 1987: 81–82); and (2) the vertical diameter of the femoral head (50 mm. long; Bass 1987: 219). The individual's age was more than 50 years, based on: (1) ante-mortem tooth loss in the mandible bone, of all teeth, and alveolar resorption of the mandible bone (Hillson 1986); and (2) degenerative bone changes in the ilium bone (retro-auricular bone changes at the ilium bone; Lovejoy and Meindle 1985). The height of the individual, based on maximum femoral length (43.8 cm) was 166 cm (Bass 1987: 44).

SUMMARY AND DISCUSSION

Thirteen graves with human remains were found and excavated in the Muslim Cemetery of Khirbet Sheikh Sa'ad (Ramat Hasharon Tennis Centre). Six of them contained adult individuals (males and females) and seven graves contained infants or children under the age of 15 years (Table 1). This data implies that the cemetery served the local village, as both sexes and a range of age groups were present.

Grave types

Several types of graves were found in the cemetery (cf. Sulimani this volume). These kinds of graves/burials are known from other Muslim cemeteries dated to the Late Islamic, Mamluk and Ottoman periods in Israel. One example is the Muslim cemetery of the late Mamluk-early Ottoman village of Jindas (now in the fields of Moshav Ginaton, Toueg et al. 2019; 2021; Eshed et al. 2021). However, most of the infants in the cemetery of Jindas were buried in ceramic jars, and some in a shallow pit. These types of burials have also been found in Ge'alya, near Yavneh

(Gorzalczany 2016). Gorzalczany has documented more of these burial types in other cemeteries as well, all dated to the Mameluke period (Gorzalczany 2009: 226–230).

Burial position

All the graves (13 in total) in the Khirbet Sheikh Sa'ad cemetery contained one individual, in primary burial position. No multiple burials or secondary burials were found.¹ All the graves were oriented east-west (or approximately in this direction), and in all the discernible cases, individuals were placed on their right side, in the east-west direction, with the head to the west, facing south. This orientation and position conform to the Muslim custom of the dead facing Mecca, with minor variations. Gorzalczany (2007: 77) has pointed out that the variations in burial orientation (from c. 65 degrees to 90 degrees) are typical of many late Muslim cemeteries in the southern Levant, such as Tel Tanim (Nagar 2001) and Kfar Saba (Gorzalczany 2007). In accordance with the religious custom of keeping Mecca in sight,

¹ Graves including two or more individuals were present in other Muslim cemeteries dated to the Mameluke or Ottoman period in Israel (Eshed et al. 2021; Gorzalczany 2007; 2009; 2016; Toueg et al. 2019; 2021).

the dead were placed facing the direction of the summer sunrise, but not more than 90 degrees east in winter.

Burial goods

Objects were found in several graves — bead necklaces, a coin diadem, and a metal plate near the face). We assume that jewellery was more common with female burials, whereas male burials might include military or working tools, as indeed was the case at Khirbet Sheikh Sa'ad. This phenomenon is known in other Mamluk and Ottoman cemeteries. At the Jindas village cemetery bracelets, other jewellery, small bottles, glass fragments, and coins were interred in almost all the graves of females (Toueg et al. 2019; 2021; Eshed et al. 2021).

The population

The population sample included 13 individuals (Table 1 and Figure 1)—6 adults (46.2%) and seven children under the age of 15 years (53.8%) (Table 2). Among the adults, four were males (66.7%), and two females (33.3%). A high

percentage of infants and children (more than 50%) was also detected.

The mortality pattern in the Khirbet Sheikh Sa'ad population is similar to other “normal” ancient mortality curves (Eshed et al. 2021), with high mortality rates of children up to the age of five years and decreasing mortality of children from the age of 5 to 15 years (cf. the model of Weiss and Wobst 1973). Children up to the age of 5 were at a high risk of death from disease since the body's immune system is not yet fully developed. To this must be added environmental factors, and existential and nutritional stress, which increased morbidity and mortality rates among inhabitants of an ancient agricultural village such as Khirbet Sheikh Sa'ad (Alesan et al. 1999; Eshed et al. 2004; 2021).

While the number of individuals excavated and studied from the Khirbet Sheikh Sa'ad cemetery is small, it is possible to learn something about the characteristics of the village population (Fig. 1). As is customary, the population included individuals of both sexes as well as high percentages of infants and children (more than 50%)—a civilian rural population (cf. Weiss and Wobst 1973; Eshed et al., 2021).

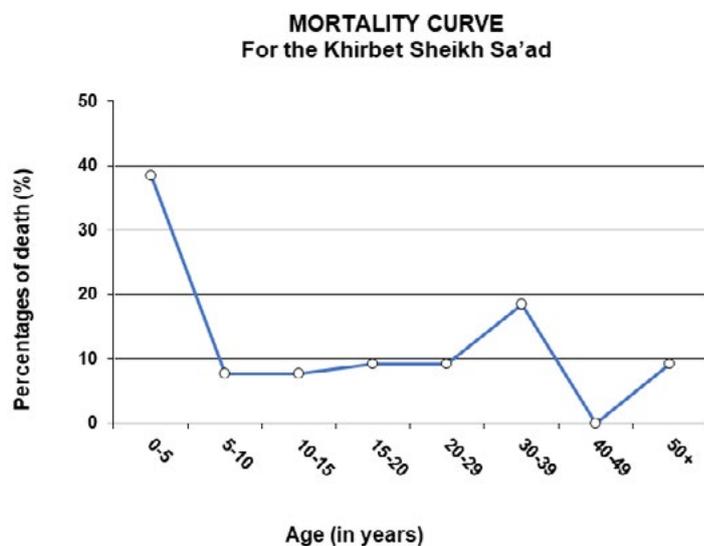


Figure 1. Mortality pattern of the Khirbet Sheikh Sa'ad cemetery.

Table 1. Age and sex distribution at the Muslim cemetery of Khirbet Sheikh Sa’ad (Ramat Hasharon Tennis Center: B-472/2019).

No.	Locus	Sex	Age	Grave goods	Grave type
1	1006	M	35–30		Cist tomb
2	1019	M	30–20	Metal plate — near face	Cist tomb
3	1020	M	19<		Cist tomb
4	1027	?	0–0.5		Pit burial
5	1029	?	0–0.5		Pit burial
6	1030	?	0–1	With beads- female?	Pit burial
7	1032	?	8–9		Pit burial
8	1033	?	fetal		Jar burial
9	1035	?	3		Pit burial
10	1038	F	15–25	With coin diadem	Pit burial
11	1039	?	1–5		Pit burial
12	1048	F	25–35		Cist tomb
13	1049	M	50<		Cist tomb

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A First World War Ottoman Bayonet from Khirbet Sheikh Sa'ad — Ramat Hasharon

Michael Chernin

In February–March 2019 salvage excavations were conducted at Khirbet Sheikh Sa'ad (Khirbet es-Sualimiyeh) located south-east of the Kfar Hayarok junction (Coordinates 185524/670576; Sulimani, this volume). The excavations focused on three areas: A, B, and C. Most of the finds date to the Abbasid period (remnants of a building in Area A) and the late Ottoman period (a Bedouin cemetery in Area B). Nevertheless, a number of finds indicate the presence of the Ottoman army at the site in the early 20th century. The most prominent artifact of this period is a bayonet that belonged to a Mauser 1890 rifle found in the topsoil of Area A. Next to the well-preserved bayonet we uncovered a small heap of poorly preserved bones and a metal plaque that may have belonged to a military belt.

In the single square that was opened in Area C, located c. 150 meters east of Area A (Sulimani, this volume, Fig. 2) many glass jars and ampules

DESCRIPTION OF THE FINDS

The steel bayonet (Fig. 1) is made of a straight, single edged blade, a cross guard, and a hilt. Its full-length measures 590 mm, its blade length 465 mm, and blade width 26mm. The point is double edged and has a typical fuller groove along the blunt side. The cross-guard that separates the blade and the hilt is bent towards the edge of the blade and ends in a rounded pommel. The other side of the cross-guard ends in a ring (inner diameter 15.5 mm) that was used to mount the bayonet onto the rifle. The hilt is made of a grip and a pommel. The grip was of

were uncovered. These items probably contained medicines (Raphael, this volume pp. 127–131) and should also be dated to the early 20th century; they are probably the residue of a military field hospital.

The above finds suggest the site was occupied by the Ottoman army during the First World War in the battle against the British, a battle that took place in November–December 1917.



Figure 1. the bayonet of the Ottoman rifle from Khirbet Sheikh Sa'ad.

wood held in place by screws. The pommel in this particular type of bayonet has a spring that locked the bayonet into position. Both the wood and the spring mechanism were worn and disintegrated.

Bayonets of this type were often inscribed; the inscriptions here were partially eroded. On the blade, close to the point where it connects to the cross-guard, the word "Mauser" (written in Arabic)—the manufacturer's name — and the manufacture date (the Hijra calendar date in Arabic numerals) can still be made out. The series number was engraved on the center of the

cross guard in Arabic numerals. On the center of the pommel is the royal Ottoman signature (*tughra/toghra*) of the sultan Abd al-Hamid II (r. 1876–1909). The pommel also had six pointed stars and a crescent engraved on it. The latter indicates that the product was authorized. Similar designs appear occasionally on cross guards (Janzen 1991: No. 191.2; Vial 2004: No. 1175; Kulinski 2002: No. 497). The bayonet most probably had a scabbard, but we did not find one during the excavation.

GERMAN-OTTOMAN ARMS DEALS BETWEEN 1887 AND 1903

Following the agreement signed in 1887 between the Ottoman Ministry of Defense and the Association of German Arms Companies Mauser and Ludwig Loewe & Co. KG, the Germans undertook to supply the Ottoman army with half a million M87 rifles and another 50,000 carbine rifles of the same model. Behind this agreement stood the renowned Ottoman mathematician Hüseyin Tevfik Paşa (1901–1832; Fig. 2) who arrived in Germany to examine the military products of the Mauser plants in his role as a member of the Military Audit Committee (*Askerî Teftiş Kurulu*) of the Ottoman army (Ayduz 2008).

The rifles (supplied to Turkey at the end of 1893) had bayonets which were specially designed and adapted to the 1887 model of the "Mauser" rifle. They were manufactured in Germany by V.C. Schilling, Simson & Co. and J.P. Sauer & Sohn.

In the following years (1890, 1893 and 1903) the Mauser Company produced a series of new and improved rifles. For these rifles a uniform model of bayonet was developed — the "Mauser" bayonet model of 1890. The new model bayonet (presented in this article) is very similar to its predecessor from 1887; it only differs in internal diameter and the location of the ring on the cross guard of the bayonet (Kulinski 2002: No. 496).



Figure 2. Hüseyin Tevfik Paşa, who initiated the first German-Ottoman arms deal in 1887.

The new model rifles were supplied by the German manufacturers to the Ottoman army in two additional rounds. According to the agreement signed in 1893, the Germans undertook to supply the Ottomans with 200,000 Mauser M93 carbines, which arrived in Turkey at the end of 1896. In 1903 the Ottomans placed another order that included 200,000 Mauser rifles of the

improved M1903 model (Yorulmaz 2014: 97–132). As a result of these arms deals, prior to the First World War, the Ottoman army was in possession of over 900,000 rifles and carbines manufactured by Mauser Company. Thus, about two-thirds of all soldiers in the Ottoman army used weapons produced by Mauser.

THE REGION OF KHIRBET SHEIKH SA'AD DURING THE BATTLE AT THE YARKON RIVER 1917

During the First World War, following the breach of the Ottoman army's defensive lines by the British forces at the Battle of Beersheba on October 31, 1917, the Turks retreated north. Their retreat enabled the British army to improve their positions in both the mountains and the coastal areas; In November 1917 they conquered Jaffa.

The retreating Ottomans fortified themselves along the northern bank of the Yarkon (al-Ujah) River (Tirosh 2010: 6–21). The Turkish outposts threatened the British supply lines in the area between Jaffa and Ramla and prevented the British from using the port of Jaffa, due to the danger of artillery shelling. Thus, the British

headquarters decided to cross the Yarkon and take the enemy outposts along its banks. The first crossing took place on November 24, 1917, and was carried out by the New Zealand forces of the British Army. Although the New Zealanders succeeded, they were forced to retreat the next day following a massive counterattack by the Ottoman army that managed to regain control of some of its outposts.

Three weeks later, after careful preparation and under the cover of torrential rain, on the night of December 20–21, 1917, the British forces of the 52nd Scottish Lowland Infantry Division, under the command of Major-General John Hill, carried



Figure 3. Palestine Exploration Fund map of the area of Khirbet Sheikh Sa'ad, Khirbet es-Sualimiyeh, and Khirbet Hadra.

out the second crossing of the Yarkon River. They attacked three different points along the river (Fig. 3):

1. In the westernmost sector, the area of the estuary, the river was crossed by the forces of the 157th Brigade of the 52nd Division. In this section, the British managed to take the Ottoman positions in the area known today as Tel Baruch beach.
2. In the central section, the area of the village of Sheikh Munis, the river was crossed by the 156th Brigade of the 52nd Division. After the crossing, the British managed to take the Ottoman positions in the area of Sheikh Munis.
3. In the easternmost section, the river was crossed by the 155th Brigade of the 52nd Division at the al-Hadar Bridge (today's "Ten Mills"), 2 km southwest of Khirbet Sheikh Sa'ad.

The successful crossing allowed the British to not only gain control of the north bank of the river, but also to drive the Ottoman forces several kilometers north. The crossing of the Yarkon was one of the key battles in the British conquest of Palestine during World War I.

It seems that during this campaign, the hill of Khirbet Sheikh Sa'ad served as one of the Ottoman army's strongholds in the eastern Yarkon section. The Ottoman forces were composed of the 161st Regiment of the 7th Division; the center of the defense array was located at Khirbet Hadra (today's Hadar Yosef)—north of the "Ten Mills" (Gihon 1974: Map 194).

As mentioned above, during the second crossing of the Yarkon River the Ottoman forces were attacked by the 155th Brigade's 4th and 5th Battalions. The 5th Battalion of the Royal Scottish Fusiliers under the command of Lieutenant-Colonel R.W. Paton crossed the river at 2 am and attacked the Turkish positions at Khirbet Hadra. To maintain the element of surprise the British



Figure 4. Lieutenant-Colonel Neil Graham Stewart-Richardson from the force who led the attack at Khirbet Sheikh Sa'ad. <http://www.northirishhorse.com.au/NIH/Images/People/Full%20pictures/Stewart-Richardson.html>.

used only their bayonets. They quickly took control of the site and captured three Turkish officers, including the battalion commander, and 119 of his soldiers.

After the conquest of Khirbet Hadra, at 3:30 am, a second British assault force, the 4th Battalion of the same brigade, under the command of Lieutenant-Colonel Neil Graham Stewart-Richardson (Fig. 4), also crossed the river at the same point, passed Khirbet Hadra to the east, and took control of the enemy positions located northeast of it. The official history of the 52nd Division, published in Glasgow in 1923, notes: "The 5th R.S.F. occupied Hadra, and the 4th R.S.F. came forward, taking up a line on the ridge facing

towards the east. The whole position was then consolidated” (Thompson 2004: 496).

From this description it appears that the ridge Khirbet Sheikh Sa’ad is indicated; the site sits

on a ridge facing east and dominates the western riverbed of Nahal Hadarim (Wadi Samara) which flows into the Yarkon from the north (Fig. 3).

SUMMARY

The bayonet found in Khirbet Sheikh Sa’ad belongs to a series issued by the German arms company “Mauser” in 1890. Bayonets of this type were common in the Ottoman army during the First World War. Based on the archaeological finds and the historical information regarding the battles in the area, it seems that the hill on which

the site is located served as one of the Ottoman army’s strongholds in the eastern part of the Ottoman defense system along the Yarkon River. The site was taken on the night between the 20th and 21st of December 1917, in a campaign led by the 4th Battalion of the 155th Division of the British 52nd Brigade.

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A Salvage Excavation at Ein Zippori — Route 79

Michal Yron

In October and November 2017, a salvage excavation was carried out at the Ein Zippori site (license B456/2017 D.P. 225300–737800/225700–738000), in preparation for a drainage channel adjacent to the widening of Route 79 and the construction of the Zippori Interchange by

the Netivei Israel Company. The excavation was conducted by M. Yron on behalf of Y.G. Contract Archaeology Ltd, under the academic auspices of the Hebrew Union College-Jewish Institute of Religion, Jerusalem.¹

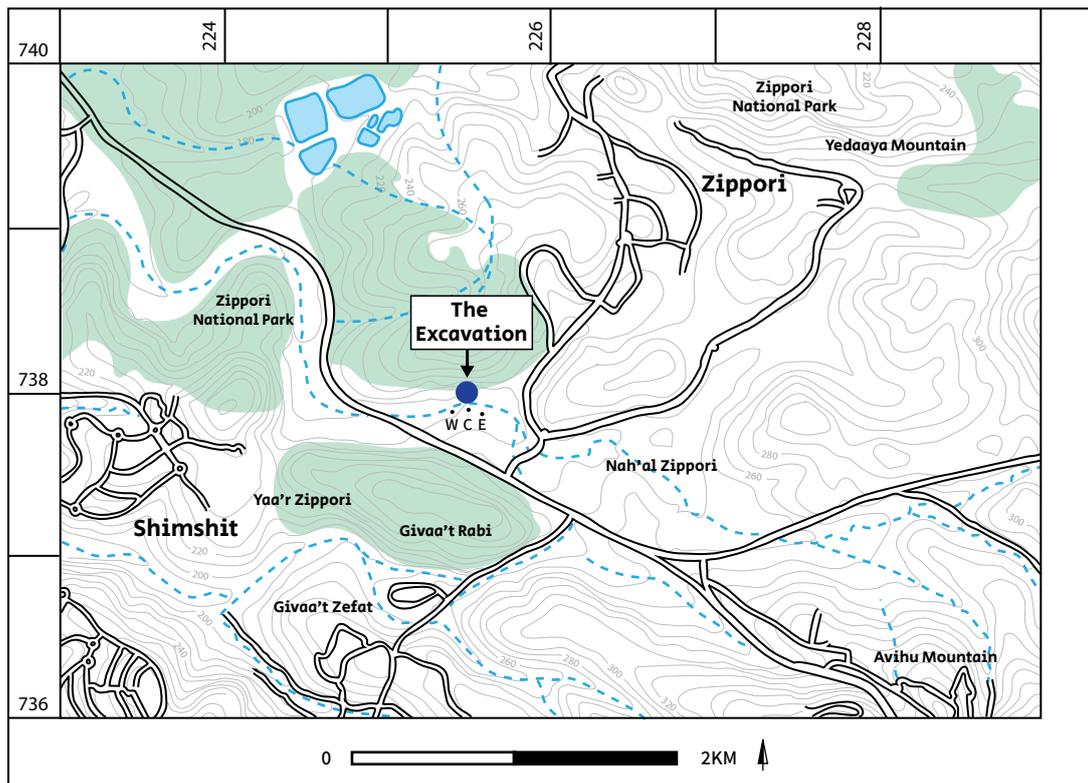


Figure 1. Ein Zippori, Excavation Areas E, C, and W.

¹ The excavation was directed by the author. Staff included Y. Govrin, archaeological consultancy; R. Lewis: Crusader remains, metals, survey and aerial photography, K. Raphael: late-period ceramics and glass; J. Roskin: geomorphology; Y. Farhi: numismatics; M. Yron: flint artifacts and early ceramics; A. Tzipin: artifact illustration, M. Goodman: late period ceramic illustration; V. Naikhin: artifact photography; O. Lubin: lithic photography; Y. Govrin and M. Yron: surveying and plans; excavators from the village of Bir al-Maqsour.



Figure 2. Location of the excavation near the Zippori Stream, looking west.

Many excavations and surveys have been conducted around Einot Zippori (the Zippori Springs) and remains have been exposed from the Neolithic to the Ottoman period (Khalily and Mardar 2009; Barzilai 2010; Zidane 2014; Yaroshevich 2016; Getzov and Milevski 2017; Vardy, Shemer and Zidane 2019; Mukari 2020; Shtatil 2020). Our own excavation followed the excavation of 88 inspection sections carried out in 2015 by the Israel Antiquities Authority, and a subsequent excavation in May 2016 by Getzov and Milevsky (2017). Sixteen squares were opened

in three areas — E, C, W (Fig. 3.2)—located adjacent to the previous excavations of the Israel Antiquities Authority (Getzov and Milevski 2017). The excavation field is located south of the Zippori Stream, on a cultivated terrace bearing sherds, chipped stone, metal artifacts and coins from different periods.

About 0.2 m below the plowed horizon, a layer of heavy alluvial soil was exposed. At a depth of 1.7–1.8 m, a layer of weathered Paleolithic flint artifacts was discerned between thin chalk layers. (Fig. 16, Roskin this volume pp. 198).

STRATIGRAPHY AND ARCHITECTURE

Four main strata were exposed:

Stratum I: Ottoman period.

Stratum II: Early and Late Roman and Byzantine Period.

Stratum III: Floor level and pits from the Early Chalcolithic (Wadi Rabah) Period stage.

Stratum IV: Phase of eroded paleolithic flint.

Artifacts from the Pre-Pottery Neolithic period, the coins (Farhi, this volume), and the metal artifacts from the Crusader period (Lewis, this volume) were discovered without architectural context.

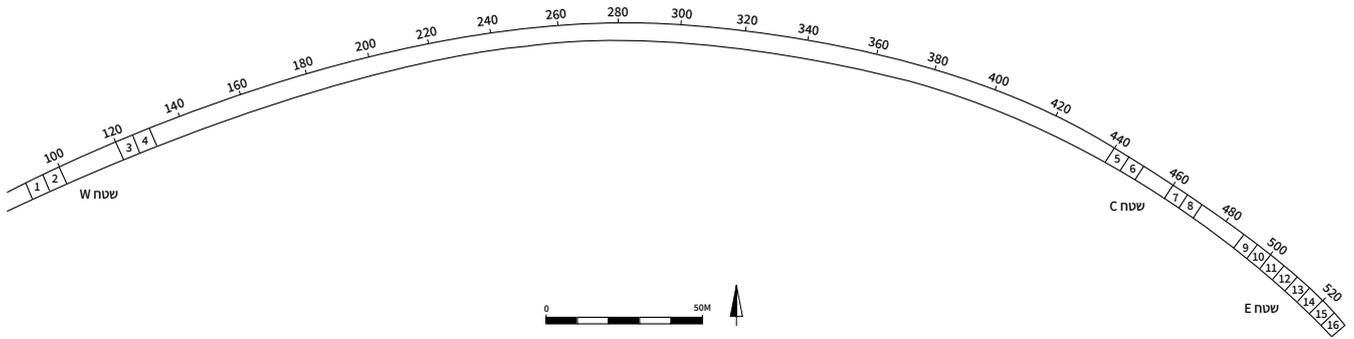


Figure 3. The excavation areas and squares.



Figure 4. Areas E and C, looking south.

Pits from the Early Chalcolithic (Wadi Rabah) period

Two pits (311/320 and 536) from this period were exposed (Figs. 5–6, 10–11). The shallow pits, about 0.5 m in diameter and about 0.4 m deep, contained a few artifacts dating to the early Chalcolithic (Wadi Rabah) period: pottery (Fig. 14), flint tools (Fig. 15: 6, 9, 11), tabular flint (Fig. 15: 15–17), and two hammer stones (Fig. 17: 1–2). At the top of Pit 320 (Locus 311, Square C6) a human figurine made of limestone was found (Fig. 14:8). The left hand is placed in front of the body and

the head and legs are missing. Similar pits were uncovered in previous excavations (Yaroshevich 2014: Fig. 12).

Area E

In Squares E15–16, in the easternmost part of the excavation, at a depth of 0.25 m, a corner of a building was discovered. Its walls (E15–1, E16–2) were preserved to a height of one course and constructed with two rows of medium sized stones and a filling of small stones between them. The foundation floats without a discernible floor



Figure 5. Pit 536, Square E11, looking south.



Figure 6. Pit 536 after excavation, looking east.

(Figs. 7–9). Similar walls were exposed in previous excavations in Ein Zippori, but all these dated to the Early Bronze Ia-II period (Milevski and Getzov 2014). The pottery from this structure dates mostly to the late Roman and Byzantine periods. Cooking pots are completely absent from the repertoire. The building was used again in the 13th–14th centuries and in the late Ottoman period as indicated by the pottery, which includes Gaza Ware and the glass bracelets (Raphael, this volume pp. 179–191).

Area C

In Squares C5–6, a rectangular structure whose walls survived to a height of one course was exposed. Wall C3–6, oriented southwest/northeast, was built of large and medium-sized stones, with a fill of small stones and earth. The wall was built into a thin white layer of lime—probably a Chalcolithic floor (Locus 320, Floor 311, Figs. 10–11).

The building’s eastern wall (WC6–1) was built of large trapezoidal, partially hewn stones. The building is bounded from the west by W2–6 which was built with stones in secondary use. The northern part was destroyed by a late pit (Fig. 11). The complex to the north is delineated by the massive WC5–6, which was preserved to a height of three courses and was exposed by heavy earth-moving equipment. The wall was built of large stones and during its dismantling, many

Roman, Byzantine and Ottoman sherds, mixed with Chalcolithic artifacts, were collected.

The building was used in the early Roman period, in the 2nd–4th centuries CE, and in the late Roman period. The ceramics from this structure are discussed by Raphael in this volume (pp. 183–191). Similar structures were exposed in previous excavations and defined as “agricultural structures” (Getzov and Milevski 2017: Fig. 10, Area J; Shatil 2020: Fig. 4).

The section in the southwestern part of the building revealed a floor bearing a small number of sherds from the early Chalcolithic period (L315 and L320) and a round flint tool with bifacial knapping and a natural hole in its center (Fig. 15:11). The room was divided by a low wall or fence (WC64) built of small fieldstones. This fence also appears west of the building (WC51) without architectural contexts except for a massive fill of small stones north and south of the wall (Fig. 10).

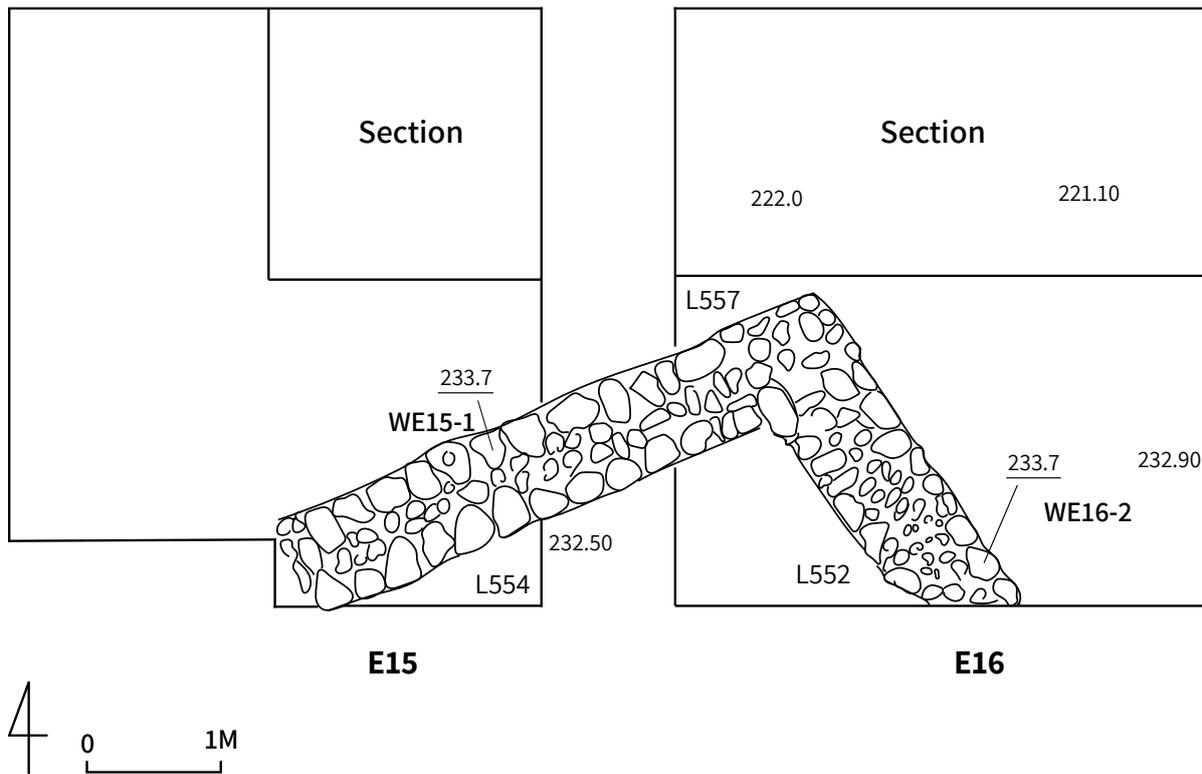


Figure 7. Structure E15–16. E15–16, looking east.



Figure 8. Structure E15–16, looking west.



Figure 9. Structure E15–16, looking east.

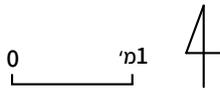
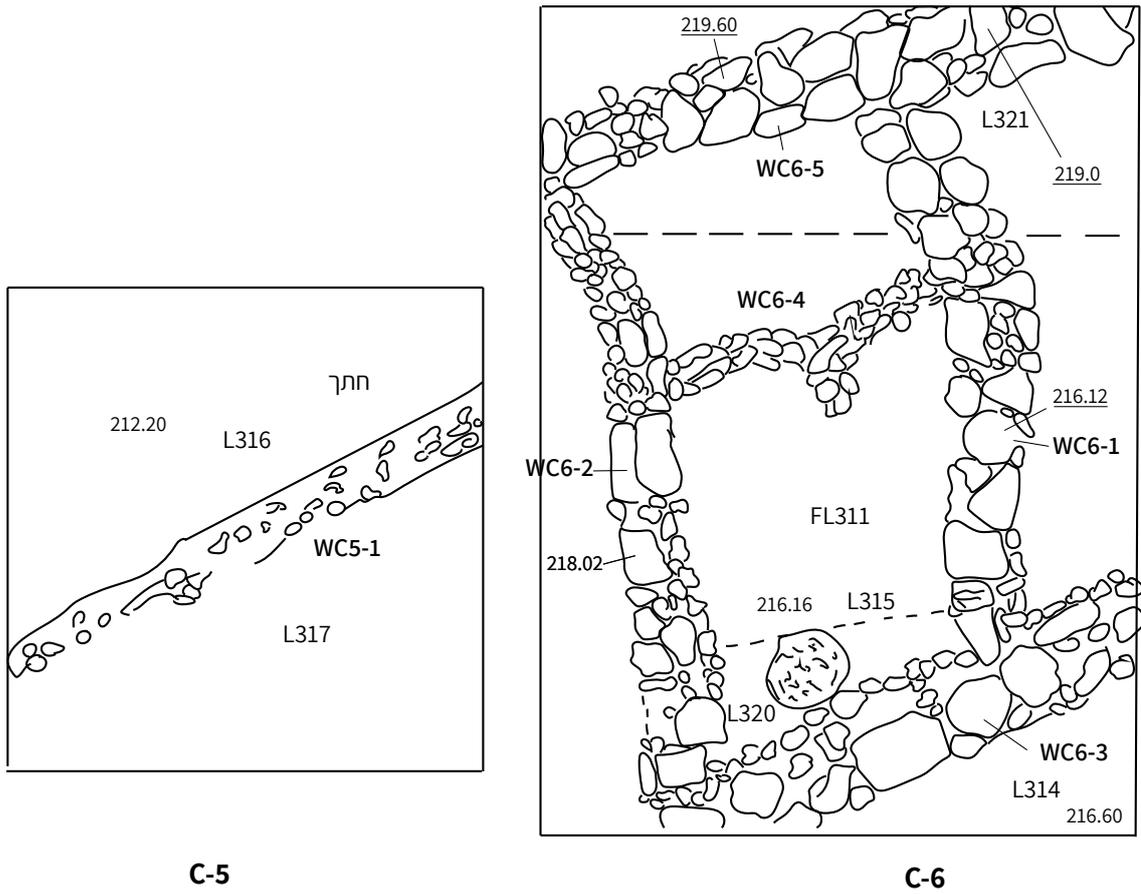


Figure 10. Structure C6, looking north.

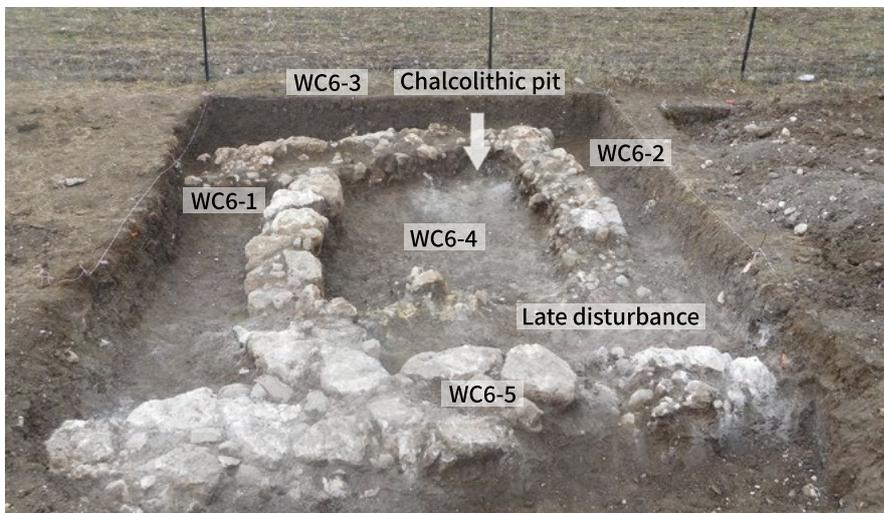


Figure 11. Structure C6-5, looking south.

Area W

Four squares were opened on the western side of the excavation to a maximum depth of about 1.8 m. Squares 1 and 2 (Fig. 3) were found to be empty of architecture and finds, except for sherds on the surface from the Roman period onwards. In Squares 3 and 4 (Fig. 3) a massive wall built of large unhewn stones was erected in the northeast (Fig. 12), perpendicular to the current channel of the Zippori Stream and about 300 meters away from it. This wall served as a dam. The date of the dam is unclear and most of the associated finds are not *in situ*. A similar dam was exposed in previous excavations in Ein Zippori (Zidane 2014: Fig. 5; Getzov and Milevski 2017: Fig. 6; Mukari 2020: Figs. 2–5).



Figure 12. The dam wall, looking southwest.



Figure 13. The dam, oriented northwest southeast.

SMALL FINDS

We focus here on finds associated with the architecture (for the finds discovered in the metal detecting survey see the articles by Lewis and Farhi in this volume).

The Pottery from Stratum III (Fig. 14:1–6)

The ceramic assemblage from Stratum III was exposed in shallow pits and on lime surfaces over which later structures were constructed. The assemblage dates to the Wadi Rabah phase of the early Chalcolithic Period and includes rounded bowls with soft carination (Fig. 14:1) similar to bowls from Ein el Jarba (Garfinkel 1999: Figs. 70:11; 73: A), and bow-rim jars (Fig. 14:2) similar to examples from Munhata 2 (Garfinkel 1999: Fig. 84:4). Open and closed kraters (Fig. 14:3–5) are present (cf. Barzilai 2010: Fig. 10:5, 8), some of them with impressed decoration (cf. Garfinkel 1999: Fig. 91:14), and incised decoration (Fig. 14:6, cf. Garfinkel 1999: Fig. 91:5). In addition, a few body fragments of the “Dark Faced Burnished Ware” type were found (cf. Milevski and Getzov 2014).

Figurine and Weights (Fig. 14:7–9)

The limestone figurine (Fig. 14:9) belonging to this stage was found on an early Chalcolithic floor (L311, see the locus matrix, Fig. 18). The body

is cylindrical and smooth with a diameter of 2 cm and a height of 4.6 cm. It takes the form of a person standing with his left hand placed in front and attached to the body. Similar figurines were found at sites such as: Ard’ al-Samra, dated to the early Neolithic period (Barzilai 2010: Fig. 11), Ramot Nof, dated to the Besorian/Qatifian Culture (Nachshoni 2002: Fig. 6), and Zippori dated to the early Chalcolithic period (Milevski and Getzov 2014: Fig. 15).

Fig. 14:7 is a possible loom weight made of limestone with a biconical perforation at its center. Fig. 14:9 is a spindle whorl made of clay with a flat, smooth face. These types are widespread in southern Israel, e.g., at Ramot Nof (Nachshoni et al. 2002: Fig. 8:6–7) and in northern Israel (e.g., Getzov 2015: Fig. 14:4).

Two rounded hammerstones were exposed on the early Chalcolithic floor. Fig. 17:2 is a round core tool of flint with scars of percussion. Perhaps it was used for knapping flint tools. Fig. 17:1 is a roughly polished basalt hammerstone (cf. Nahshoni 2002: Fig. 8: 4–2; Barzilai 2010: 3). In addition, a tiny lead bullet was found (Fig. 17:3), apparently belonging to a light long musket dated to the 17th-18th century. Similar bullets were identified at Hanot Minim (Stefansky 1989: 15–17).

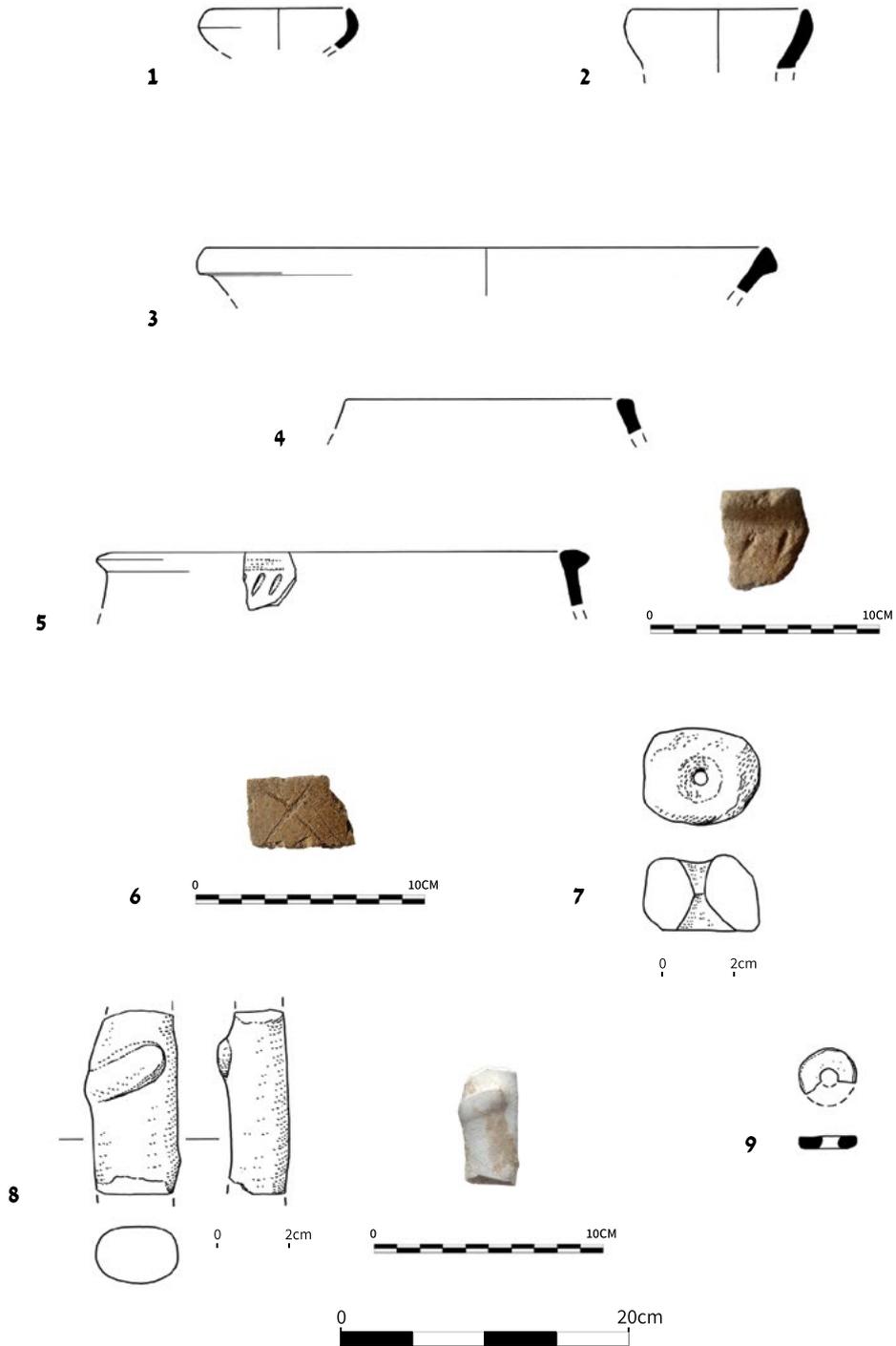


Fig. 14. Ceramic and small finds from Stratum III — early Chalcolithic (Wadi Rabah phase).

Fig. 14. Ceramic and small finds from Stratum III — early Chalcolithic (Wadi Rabah phase).

No.	Basket No.	Locus	Square	Type	Material
1	3049/11	320	C6	Small carinated Bowl	Ceramic
2	3049/10	320	C6	Bow rim jar	Ceramic
3	1024/2	105	W3	Open krater	Ceramic
4	5149/2	554	E16	Closed krater	Ceramic
5	1024/3	105	W3	Closed krater with impressed decoration	Ceramic
6	3041/3	315	C6	Incised decoration	Ceramic
7	3009	303	C8	Loom weight (?)	Limestone
8	3030/1	311	C6	Figurine	Limestone
9	1027/1	105	W3	Spindle whorl	Ceramic

The Lithic Assemblage²

The surface near Ein Zippori and that on the terrace south of the stream are rich with lithic finds that represent the entire time span of the site's existence. Most of the material is not *in situ* and was mostly in the matrix of the colluvium that flowed down from nearby workshop sites such as Givat Rabi (Sadeh 1994; Marder 2009; Barzilai et al. 2013; Barzilai and Milevski 2015; Khalaily and Vardi et al 2019a; Vardi et al 2019b). Pre-Pottery Neolithic and Pottery Neolithic finds include cores (Fig. 15:1–3), a bifacial axe (Fig. 15:4; cf. Khalaily and Marder 2009, Vardi et al. 2009: Figs. 8, 10), a sickle blade (Fig. 15:5), and tabular flint (Fig. 15:15–17).

Most of the lithic assemblage was found in our Stratum III, in soil pockets, above and inside pits, and on the floors in Square C6: Loci 306, 311, 315, 320, dated to the early Chalcolithic (Wadi Rabah) phase. The tools (Fig. 15:7–10) include a chisel, a bifacial tool, and sickle blades with glossy edges, typical to this period (Fig. 15:9–10; cf. Yaroshevich 2016: Fig. 16). An unusual tool with a rounded contour resembling a half fan and a natural hole in its center (Fig. 15:11) was found

on the floor of L311 (Fig. 11, the Chalcolithic pit). No parallels were found. A single obsidian flake (Fig. 15:14) was recovered in L310, associated with the early Chalcolithic phase. Hundreds of obsidian items were uncovered from this phase in the excavations of Milevski and Getzov (2014), indicating trade relations with Anatolia (Schechter et al. 2016).

No occupation level dated to the Early Bronze Age IB was found in this excavation, but a large settlement from this period was exposed on both sides of Route 79, one km to the south (Milevski and Getzov 2014). Two sickle blades with glossy edges (Fig. 15:9,12). may be related to this settlement.

Weathered Lithics

A layer of weathered lithics was exposed 1.5 m below the surface (Roskin, this volume), in both our and other excavations in the Ein Zippori and Givat Rabi region. These are mainly dated to the Middle Paleolithic and include, among other things, patinated tools and debitage in the Levallois technique (Fig. 16, cf. Yaroshevich 2016: Fig. 7).

² I thank Avi Gopher for his guidance.



Figure 15. The lithic assemblage from the Pre-Pottery Neolithic A to early Chalcolithic/Wadi Rabah phases. EBIB Canaanite blades (12–13), obsidian flake (14), and debitage (15–17).

Figure 15. The lithic assemblage from the Pre-Pottery Neolithic A to early Chalcolithic/Wadi Rabah phases. EBIB Canaanite blades (12–13), obsidian flake (14), and debitage (15–17).

No.	Basket No.	Locus	Square	Description
1	5084/1	536	E11	Bladelet core
2	1012/9	102-surface	W2	Bladelet core
3	5118/6	550	E15	Bladelet core
4	5089/9	531	E16	Adze
5	3011/1	305	C7	Sickle blade, denticulation
6	3039/1	317	C5	Blade
7	5064/2	526	E12	Chisel
8	3012/9	306	C6	Bifacial tool
9	3041/1	315	C6	Sickle blade, denticulation, single glossy edge
10	5082/1	534	E9	Sickle blade, single glossy edge
11	3037	311	C6	Semi rounded tool
12	5065/6	527	E13	Canaanite blade, single glossy edge
13	5074/2	533	E14	Core waste, possibly from the manufacture of a Canaanite sickle blade
14	3036/1	310	C5	Obsidian tool
15	3049/2	320	C6	Tabular flint
16	3047/7	320	C6	Tabular flint
17	3049/6	320	C6	Tabular flint



Figure 16. Weathered lithic artifacts.



Figure 17. Hammerstones and a rifle bullet.

No.	Basket No.	Locus	Square	Description	
1	3049/1	320	C6	Hammerstone — basalt	
2	3050/1	320	C6	Hammerstone — flint	
3	5020/9	515	E9	A rifle bullet? (clay)	Ottoman

Figure 18. Locus matrix, looking south.

		Area E					Area C					Area W				
		Chalcolithic pit					structure					surface				
		Structure					structure					The dam				
sq16	sq15	sq14	sq13	sq12	sq11	sq10	sq9	sq8	sq7	sq6	sq5	sq4	sq3	sq2	sq1	
	507	506	505	504	503	502	501				307	100	101	103-102 surface		
	508	511	513	514	509	510	512	303	301	308	310	104	105	106		
						516										
	522	521	519	518		517		318	302	309	316					
	530	528	528	527	526	525	524	305		311	317					
	531	529	533	535	541	536-	544									
	539	538	543	548	547	537	545			314						
						540				315						
	551	550	549	556			555			320-						
	552-					546				chalcolithic						
	554				553					321						
	557															

SUMMARY

Due to the limited extent of the excavation only scanty remains were exposed of three settlement strata, with the earliest dating to the Wadi Rabah phase of the Early Chalcolithic period. Pits lined with lime and some crushed lime floors can be attributed to this period, but there were no architectural remains. The structure in Area C can be attributed to the Early and Late Roman period. The building in Area E was erected during

the Byzantine period but continued to be used intermittently even in later periods, until the late Ottoman period. The dam that was exposed in Area W indicates agricultural activity that focused on the agricultural terraces adjacent to the stream channel. The flint assemblage, stone artifacts, ceramics, glass, numismatic and metal finds testify to the long-standing importance of the settlement and the region.

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The Metal Objects from the Einot Zippori 2017 Excavations

Rafael Y. Lewis¹

The Springs of Saforie² (Einot Zippori) are well known as the encampment where the Latin Kingdom of Jerusalem assembled, from which the warriors set out for Tiberias on 3 July 1187, marching into a battle that ended with their decisive defeat by the Muslims near the Horns of Hattin on the following day (France 2015; Herde 2002; Kedar 1992; Lewis et al. 2021; Lewis et al. 2020; Lewis 2015; Nicolle 1993). The modern-day expansion of Route 79 (which connects the city of Nazareth to the coastal road via Route 77) and the construction of a new interchange for the Sepphoris (*Zippori/Diocaesarea*) National Park, led to a series of salvage excavations extending over several seasons, from 2011 to 2017. These excavations were mainly conducted by the prehistoric

division of the Israel Antiquities Authority (IAA). The current report concerns the salvage excavation conducted by M. Yron (this volume) on behalf of Y.G. Contract Archaeology Ltd, under the academic auspices of the Hebrew Union College-Jewish Institute of Religion, Jerusalem.³

In the 2017 excavations at Ein Zippori 94 metal objects were unearthed (Table 1), out of which about a quarter could be attributed to the time of the Latin Kingdom of Jerusalem (ca. 1099–1291), and to the seasonal encampment of armed forces and travelers at this site (Lewis 2013: 337–347; Lewis et al. 2021: 31–46). This report presents the objects found and discusses, in brief, their spatial significance.

LOCATION AND NATURE OF THE SITE

The site of Einot Zippori is located ca. 2 km west of Nazareth, in a small valley between the foothills of Giv'at Rabi (in Arabic, Jebel el-Ayn) and the Nahal Zippori stream, close to the Einot Zippori springs. This is a cluster of springs of which the main one flows out from a small springhouse into a pool located to the north-west. The springhouse has been tentatively dated to the Roman period (Porat 2015). The springhouse and the small ancient

mound overlooking it from the east, known as “Tell Ein Zippori,” are the focal points of the valley. The Zippori stream flows from the springs to the west along a 32 km drainage into the Kishon River which flows to the Mediterranean Sea. In the mid-20th century, and very probably also in the more ancient past, this cluster of springs was the richest in the Lower Galilee (Kedar 1992: 196). The moderate slopes of Giv'at Rabi consist of chalk bedrock

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2 The site is also known as 'En Zippori / Seforie / Saforie / Eyn el-Qastel/ Saffuriah, in this report, I refer to the place name as “Saforie”, as it appears in 12th and 13th century writings.

3 Excavation license numbers: A-6272, A-6457, A-6784, A-7613, A-7722, A-7177; map ref. 2257/7375.

with natural terraces covered by a thin layer of *nari* limestone and a dark brown clayish grumusol. The archaeological material at the site was located on the grumusol layer and on the bedrock.

A series of settlements was excavated at this site in previous years, dating from the Pre-Pottery Neolithic B, Pre-Pottery Neolithic C, Late Pottery Neolithic/Nahal Zippori horizon, Early Chalcolithic, Late Chalcolithic/Ghassulian, Early Bronze Age IB, IIA, and Early Bronze IV. The finds from the Early Bronze Age IB were particularly impressive and included a well-developed settlement enclosed by a thick stone wall — perhaps a dam (Yron, this volume p. 154). This is also the largest site that can be attributed to the Wadi Rabah culture, dated to the sixth millennium BCE (Lewis et al. 2021: 33; Getzov and Milevski 2017; Milevski and Getzov 2014). Finds from periods later than the Early Bronze Age IV included scattered pottery, coins, a small quarry dating to the Roman period, and threshing floors from the twentieth century (Lewis et al. 2021: 33; Milevski and Getzov 2014; Raphael, this volume pp. 179–191; Farhi, this volume pp. 192–197). Unlike the relatively poor finds from these other

periods, the number of metal artifacts attributed to the time of the Latin Kingdom of Jerusalem is astonishing. The results of the excavation conducted by the HUC team (to the immediate south of the Zippori stream's waterbed and north of the biggest cluster of the IAA excavations), add substantial material evidence to our knowledge of the Frankish and/or Ayyūbid encampment site (Lewis et al. 2021). Metal artifacts were found both in the excavation trenches and during a topsoil metal detection survey, conducted between the excavation trenches.⁴ Although topsoil levels are usually regarded as a burden by archaeologists and are frequently bulldozed away, in landscape and battlefield archaeology topsoil is a key horizon for understanding the site and its formation. In many cases it is the topsoil that contains the material signature of a specific historical event (Sutherland 2004: 15). A geomorphological survey conducted by J. Roskin (this volume, pp. 198–202) has revealed that the current surface was configured about one millennium ago (and see Lewis et al. in press). This indicates that the finds are likely to be more or less *in situ*.

THE METAL OBJECTS

During this study, 16 coins⁵ and 78 metal artifacts (Table 1, Fig. 5) were recovered (from topsoil and excavation trenches).⁶ Excluding the coins, 17 out of the 78 objects in the assemblage can be attributed to the Fatimid period and to the time of the Latin Kingdom of Jerusalem. Since the artifacts were not found in well stratified levels, their dating relies on reference to contemporaneous stratified assemblages (Lewis et al. 2021: 38–46; Barbé 2010: 333, Fig. 107; Boas 1999: 164, Fig. 6.2, 10, 12; Boas 2012: 77–78, Figs. 107–109; Dean 1927: 37,

Fig. 53.u; Getzov 2000: 100, Fig. 30:7–13; Johns 1997: 50, Fig. 15.17; Lewis 2013: 447–465, Pls. 14–32). In addition, several objects were classified as pre-modern (Ottoman to the 20th century), although no exact parallels were found due to their poor state of preservation. The medieval and pre-modern metal objects included a decorated brooch, carpentry nails, horseshoe nails, four hobnails and three fittings, a buckle, a curb chain bit, a curb bit, a cheek-piece of a horse snaffle, pegs, iron rings, and a chain (in addition to the curb chain bit).

4 At surface level and down to a depth of 30 cm.

5 For a preliminary identification of the coins, see Table 1. For a detailed report, see Farhi, in this volume.

6 This adds to the metal artifacts found at the Springs of Saforie in the IAA excavations.

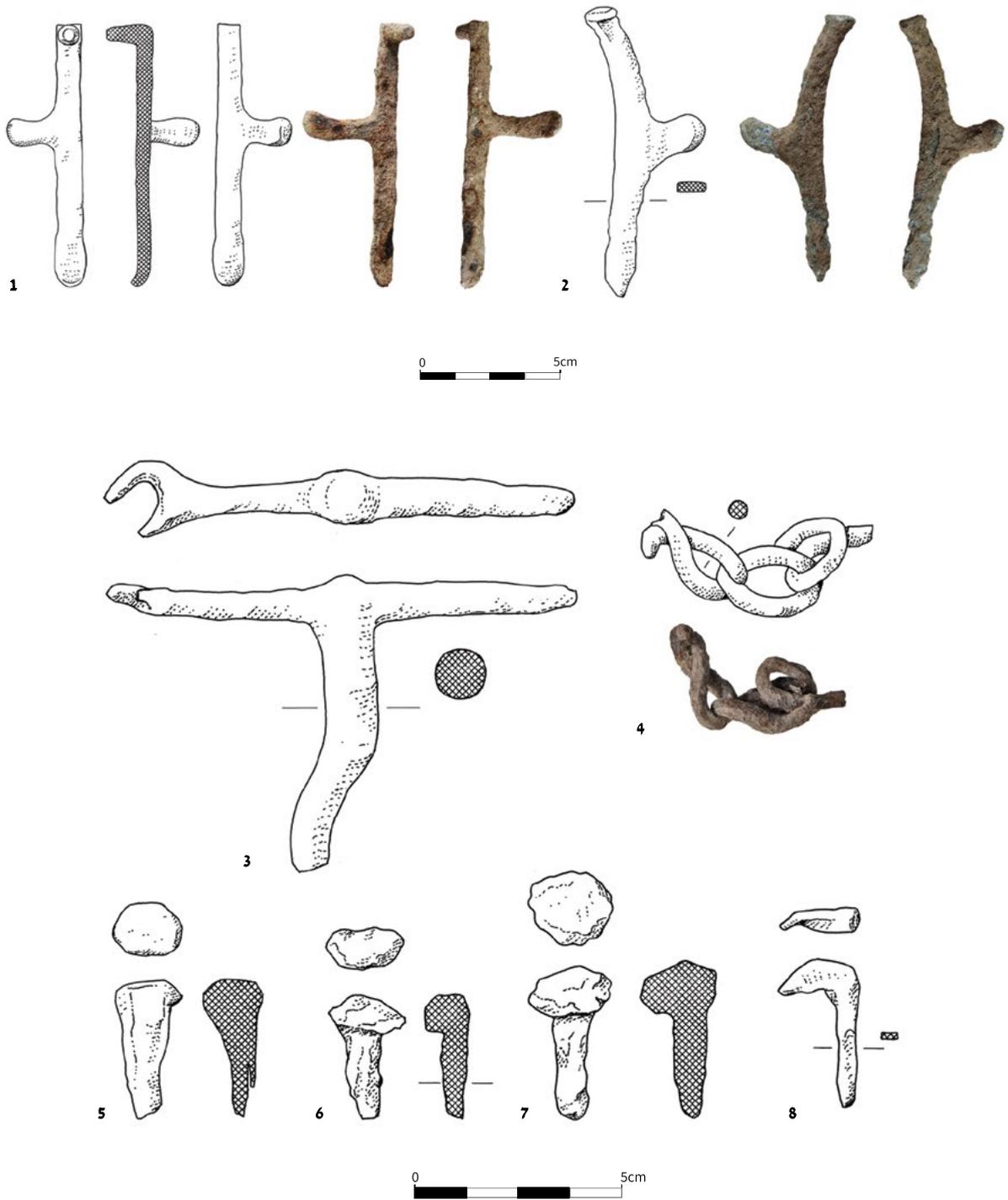


Figure 1. Horsemanship artifacts.

Horsemanship artifacts

As in previous excavations by the springs (Lewis et al. 2021: Figs. 3.7–3.12, 3.14), equine related items (Fig. 1) were dominant in this assemblage. In the current study, these items comprised: 12 horseshoe nails (Fig. 1:6–8); a possible broken spur (Fig. 1:2) (Lewis 2013: 464, Pl. 31:7; Lewis et al. 2021: 44 Fig. 14); a curb chain bit (Fig. 1:4) (Lewis 2013 464, Pl. 31:4), a cheek-piece (Fig. 1:3), and part of a curb bit (Fig. 1:1). The broken iron ring (Fig. 2:3) could be related to either a cheek-piece (Lewis 2013: 464, Pl. 31.8), a rein loop (Boas 2017: 203, Pl. 18.11B), or part of a snaffle bit (Clark 2011: 49, Figs. 34, 35). In addition, the copper alloy buckle (Fig. 3:1) could also be part of a harness.

Horseshoe nails

A total of 12 horseshoe nails were found, out of which three could be identified as the local (eastern) type. (Fig. 1:6–8). During the period of Latin rule in the East, the horseshoe nail head projected from the horseshoe, enabling a good grip of the ground. The nails were subjected to greater wear and breakage than the horseshoe itself and were therefore frequently replaced (Green 1996: 307). Although the typology of horseshoes and their nails has been well defined in western Europe (Clark 2011: 75–123), only preliminary efforts have been made to date in the Latin East (Rosen 2000: 107–108; Lewis 2013: 183–185). Despite an apparent variety of forms, we can characterize only two main types of horseshoes and horseshoe nails at this point: Eastern and European.

The Eastern horseshoe is characterized by the following features: a metal plate that covers most of the shoe; at times with a large round hole in the center of the shoe and small round holes (for about four nails) along the edges of the shoe. The nails of this type of horseshoe have a flat, square

head, with the sharp point protruding from one of the four flanks of the head, creating an L-shaped vertical section. This type of horseshoe and nail has been found in stratified archaeological sites in the Levant dating from the 10th century CE to the mid-20th century (Lewis et al. 2021: 40 Fig. 3.8.7–10; Lewis 2013: 183–185, 448, Pls.15:10, 13, 15; 16:6; 17.3; 20:4, 7; 21:4; 22:8–9; 25:1–2, 4–11). It was used for shoeing both equids and cattle (when used for threshing). The second type of horseshoe, the European horseshoe, found in 12th to 13th century archaeological contexts in the Latin East, is U-shaped. The metal plate is much thicker than in the Eastern type and the tips of the shoes (calkins) are folded back towards the ground (double-folded calkins). The nail holes are rectangular at the ground surface and rectangular or rounded at the bearing surface. The nails used for this kind of horseshoe are known as “violin key” or “fiddle key” horseshoe nails. The nail head is narrow and either hexagonal, trapezoid, or rectangular (Lewis et al. 2021: 40, Fig. 3.8.1–6; Barbé 2010: 333, Fig. 107.8–9; Boas 1999: Fig. 6.2.10; Getzov 2000: 100, Fig. 30:7–9–11; Green 1996: 305–308; Johns 1997: 50, Fig. 15:12–13; Khamis 1996: 20, Fig. XVIII.2.2; Lewis 2013: 183–185, 341–342, Pls.14:6–7,10; 16:3; 18:4–7; 19:5–7; 20:6; 21:4–6; 23–25). Future studies on this subject are expected to provide a much more detailed typology of horseshoes in the Levant.⁷

Interestingly, and in contrast to previous areas excavated at the Einot Zippori site, only the eastern, local, type of horseshoe has been identified there (Fig. 1:6–8). The fact that only three horseshoe nails, out of the 12 found, could be clearly attributed to a specific type, prevents us from drawing any conclusions regarding the spatial distribution of nail types, unlike what was surmised in previous studies of material from the site (Lewis et al. 2021: 41–42, Figs. 3.9–3.10). In

⁷ A PhD study on this subject by J. Gosker (supervised by A.J. Boas, the University of Haifa), is currently in progress.



Figure 2. Tools and household items.

any event, it would appear that the replacement of broken horseshoe nails was one of the main activities in this location (Lewis et al. 2021: 42, Fig. 3.10).

Harness Fittings

A curb chain bit (like that found in the IAA excavations (Lewis et al. 2021: 42, Fig. 11.3) was excavated in Square E16 (Fig. 1:4). Another possible curb bit part was found in Square E13 (Fig. 1:1; Clark 2011: 43–46, 51–53, Figs. 37–39). The T-shaped metal artifact (Fig. 1:3) found in Square E13 is probably related to a very basic type of cheek-piece of a medieval snaffle (Clark 2011: 46–51, Figs. 30, 33, 36). Both Ward and Clark have indicated the problem inherent in the typology and chronology of horses' bits; few have been found in stratified levels, and these show considerable morphological variation (Ward 1939: 77; Clark 2011: 43). Though the Einot Zippori site has provided us with one of the richest metal assemblages of this period, these finds come mostly from unstratified contexts in an area that served as an assembly point at least six times in the 12th-13th centuries (ca. 1126–1251; Lewis et al. 2021: 46). Hence, this assemblage cannot answer more specific questions related to the typology and chronology of equine harness fittings in the Latin East.

Tools and household items

Several agricultural tools and household-related items were also found (Fig. 2), including a broken sickle blade (Fig. 2:5) and a sickle blade tail (Tatcher 2009: 184, Fig. 3.41:1–2; Lewis 2013: 450, Pl. 17:5). A few pegs (Fig. 2:1, 11), one of which is a ring with an iron anchor (Fig. 2:1, usually thought to have been anchored to stone-walls, Boas 2017: 211, Pl. 18:26A–C),⁸ together

with a key (Fig. 2:4), are probably related to one of the small structures that can be observed in close proximity to the excavation areas in a 1945 aerial photograph (Fig. 4).

Carpentry nails, hobnails, and rivets

A total of 24 nails were found, of which only two have been classified as pre-modern (Figs. 1:5, 2:9), in addition to four hobnails (Fig. 2:6–7, 10; Lewis 2013: 449, Pl. 16:10; 452, Pl. 19:3, 453, Pl. 20:10, 462, Pl. 29:1,7), and three fittings (Fig. 2:8). Iron nails are often the most common metal objects found in archaeological excavations of urban sites (Nenner-Soriano 2013: 277; Boas 2017: 210). The number of publications on nails is nonetheless minimal relative to their substantial presence in many archaeological assemblages (Nenner-Soriano 2010: 255, Photo 8.5). Battlefield archaeology studies conducted in Israel in the last decade have revealed a similar phenomenon on battlefields and at encampment sites (Lewis et al. 2021: 38–46, Figs. 3.6–3.12, 3.14; Lewis 2020: 371, Fig. 23:9:3; Lewis 2013: 447–465). All the nails found during the current project were made of iron. Unlike copper alloy nails, used for delicate work on a variety of materials (wood, bone, ivory, etc.), iron nails were used in the construction of heavy wooden household items such as shelves, in building (scaffoldings, roofing, wooden frames, etc.), and in the making of heavy tools and equipment (Nenner-Soriano 2013: 277).⁹

Belt buckle

A broken rectangular belt (or strap) buckle (3 x 1.8cm) made of copper alloy was found in Square E16 (Fig. 3:1). The buckle is of very basic shape and could have been part of an article of clothing or armor (Egan and Pritchard 2010: 95, Figs. 425–426, 430; Boas 2017: 202, Pl. 18:10E),

⁸ Though the reference here is to a 13th-century site, this anchor and ring could also be from some other period.

⁹ Horseshoes and horseshoe nails, too, are subject to strain and friction; they were also made of iron.



Figure 3. Belt buckle and brooch.

or part of a horse's reign, harness fittings, spur buckle (Clark 2011: 151, Fig. 109), or part of a stirrup strap used to position the stirrup at a suitable height for rider and saddle (Clark 2011: 72, Fig. 54).

Decorated smilax leaf/heart-shaped¹⁰ brooch

A copper alloy decorated leaf, or heart-shaped brooch (3.2 x 2cm) was found in Square E9 (Fig. 3:2). The shape of the object resembles that of the leaf of the *Smilax aspera*, also known as the *Mediterranean smilax* (*Kisosit* קיסוסית in Hebrew). The front of the brooch is sectioned into two parts by an incised horizontal line. The upper part of the brooch is incised with four oblique lines forming a crisscross pattern, while the rhombus areas formed between the oblique lines are each drilled (in six cases) with one or two punched dots (known as *roundels* in heraldry; Grant 1948:

33–34), making a total of seven punches in this part. Below the horizontal line four similar round incisions are distributed unevenly. The possible remains of gold (seen faintly) on the surface, and the asymmetrical pattern of the roundels, might suggest that the incised lines and drilled dots were not part of the decoration but, rather, functioned to enhance adherence between the gilded layer and the surface of the brooch. The back of the object features two integral pins, probably intended to be pushed vertically into a piece of fabric, with the brooch being held in place by its own weight (Egan and Pritchard 2010: 247).

The possibility that this item was connected to heraldry is unlikely, first and foremost because it is very likely a Fatimid piece, a period when heraldry was in its very early stages of development. Additional support for this supposition comes from the fact that there is no perceptible expression of its owner's religious, spiritual, or social standing through the shape of the brooch and the symbols on it. Therefore, although this item probably had some personal significance for its owner, it is more likely that it was used for decorative rather than heraldic purposes. Nevertheless, the brooch might be a link to the city of Tiberias, 30 km to the east, in possible reference to one of the artifacts excavated in the Abbasid and Fatimid quarter (Strata I–II) in that city's Roman theater, abandoned, according to the excavator, before the earthquake of 1033 (Atrash 2010; Atrash 2020: 14, Fig. 27). The *smilax leaf* motive can also be seen on many of the objects excavated at the "House of the Bronze" metal hoard found in Tiberias (Khamis 2013: 232, 249, 253, 258–260, 315–16, 324, 359, 395, 413, Figs. 1, 79–80, 82, 95–98, 260, 268, 347, 540, 590).

¹⁰ The shape may resemble that of a folded bird wing, see Khamis 2013: 410–411, Figs. 582–584.



Figure 4. Aerial photo of Ein Zippori, No. 680 ps 8. 5119 2 Jan 1945, 15,000 ft. Note the location of structures, marked with circles.

DISCUSSION

The relatively high concentration of metal artifacts found in the topsoil levels of the Springs of Saforie site can be explained by the proximity of the excavation site to the road that once ran along the southern bank of the Zippori stream, which can be seen on mid-20th century photographs and maps (Fig. 4).

The road and the stream attracted substantial human activity which has left its mark on the field to the south. There are several characteristics differentiating this assemblage from those excavated earlier by the IAA (Lewis et al. 2021):

- Horseshoes are completely absent from the assemblage discussed here and only horseshoe nails of the Eastern type were recovered.
- No weapons (e.g., arrowheads) were found;
- The number of coins was much higher than what was gleaned in other areas of the site (Farhi, this volume);

Metal objects associated with the Fatimid period and with the Latin Kingdom of Jerusalem were only found in the eastern part of the excavation area, from 2.5 m west of Square E9 to the eastern section of Square E16. A similar pattern of distribution was revealed in previous work, with the number of metal artifacts substantially increasing closer to the main water source (the spring house). While the medieval artifacts recovered here were not stratified, excavations at the Einot Zippori site have revealed, for the first time in the Latin East, the archaeological remains of an encampment. It is hoped that these findings will inspire archaeologists to further study the material culture of medieval encampment sites in our region.

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THE METAL OBJECTS FROM THE EINOT ZIPPORI 2017 EXCAVATIONS

Area E

	E9	E10	E11	E12
5128 * 5124 * 5127 * 5129 * 5126 *	5028 x 5080 x 5001 x 5029 x 5034 x 5035 x 5036 x 5099 x	5031 x 5037 x 5058 x 5132 5131	5072 x x 5038 x 5039 x 5133	5090 x 5041 x 5011 x 5040 x 5057/1 x

// Outside the excavation area
 ■ Surface
 5001/1 - No location - surface
 5016 - No location - surface
 5072 - No location - surface

E13	E14	E15	E16
5009 x 5044 x 5047 x 5045 x 5024/1 x 5046 x 5032 x 5134	5050 x 5048 x 5060 x 5049 x 5154	5069 x 5051 x 5053 x 5111 x 5052 x 5138 x 5101 x 5148/1 x 5100 x 5135	5076 x 5075 x 5056 x 5057 x 5081 x 5121 x 5130 x 5054 x 5053 x 5123/1 x 5136 5137 5120/2 x 5120/1 x 5140 x 5070 x 5055 x

5059 - No location - surface
 5142 - No location - surface
 5146 - No location - surface

Area C

C5	C6	C7	C8
3005 x 3023	3027 x 3047/1 x 3033 x 3015 x 3044 x	3004 x	x 3003 x 3014 x



→
 5139
 Hasmonean coin
 3025/1 No location - surface

Figure 5. Location of artifacts; for details see Table 1

Table 1: Inventory of metal artifacts and coins found in the HUC excavation of Einot Zippori.

No.	Bas. no	Locus	Square	MASL	Object	Fig.	Date
1	3004	301	C7	227.67	Peg	2:11	Pre-modern
2	3005	Topsoil	C5	217.37	Coin		Late Roman
3	3014a	303	C8	223.22	Chisel/ peg		Modern
4	3014b	303	C8	223.22	Iron ring/ nail	2:2	Pre-modern
5	3015	306	C6	216.72	Iron plate		
6	3027	311	C6	215.92	Sickle blade tail		Medieval-Modern
7	3033	311	C6	218.1	Coin		Byzantine
8	3044	314	C8	217.1	Coin		Late Roman
9	5001	500	E9	227.49	Sickle blade	2:5	Medieval-Modern
10	5009	504	E13	230.42	Cheek-piece	1:3	Frankish or Ayyübid
11	5010	507	E16	230.92	Coin		Hasmonean or Roman Governors of Judea
12	5011	503	E12	228.82	Metal rod		Modern?
13	5016	510	E11	227.52	Coin		Late Roman
14	5018	513	E14	231.32	-		
15	5021	516	E10	230.67	Nail		Modern
16	5028	515	E9	229.57	Striking pin		Modern
17	5029	515	E9	229.37	Copper alloy and gilded decorated ivy-leaf-shaped brooch/mount, with oblique line (crisscross) and dotted incisions.	3:2	Fatimid
18	5030	515	E9	229.47	Hobnail/rivet	2:7	Pre-modern
19	5031	516	E10	228.97	Horseshoe nail		Fatimid-Ayyübid
20	5032	519	E13	233.37	Curb bit	1:1	Frankish or Ayyübid
21	5033	522	E16	236.17	Coin		Ayyübid
22	5034	515	E9	228.97	Coin		Mamlük
23	5035	515	E9	229.27	Nail		Modern
24	5036	515	E9	229.47	Nail		Modern?
25	5037	516	E10	229.97	Coin		Ottoman
26	5038	517	E11	230.67	Nail		Modern
27	5039	517	E11	230.17	Nail		Modern?
28	5040	518	E12	231.17	Rivet/fitting	2:8	18 th -19 th century
29	5041	518	E12	231.17	Nail		Modern

THE METAL OBJECTS FROM THE EINOT ZIPPORI 2017 EXCAVATIONS

No.	Bas. no	Locus	Square	MASL	Object	Fig.	Date
30	5044	519	E13	232.27	Nail		Modern?
31	5045	519	E13	232.67	Nail	1:5	Pre-modern
32	5046	519	E13	233.07	Horseshoe nail		Frankish or Ayyūbid
33	5047	519	E13	233.07	Iron ring	2:3	Pre-modern
34	5048	520	E14	234.37	Nail		Modern
35	5049	520	E14	233.47	Nail		Modern
36	5050	520	E14	232.37	Hobnail/rivet		?
37	5051	521	E15	235.17	Hobnail/rivet	2:10	Modern?
38	5052	521	E15	234.17	Nail		?
39	5053	521	E15	234.87	Copper alloy belt/ strap loop		Probably modern
40	5054	522	E16	235.37	Coin		Ottoman
41	5055a	522	E16	235.37	Key	2:4	Modern
42	5055b	522	E16	235.37	Nail		Modern
43	5056	522	E16	235.47	Horseshoe nail		Fatimid-Ayyūbid
44	5057	522	E16	234.87	Nail		Modern
45	5058	516	E10	228.37	Eastern horseshoe nail	2:8	Fatimid-Ayyūbid
46	5059	519	E13	231.77	Nail		Modern
47	5060	520	E14	233.07	Hobnail/rivet	2:6	Pre-modern
48	5069	529	E15	235.32	Eastern horseshoe nail		Fatimid-Ayyūbid
49	5070	530	E16	236.37	Metal rod		Modern
50	5071	531	E16	?	Iron plate		Modern
51	5072	525	E11	230.82	Horseshoe nail		Fatimid-Ayyūbid
52	5075	531	E16	235.72	Nail		Modern
53	5076	531	E16	235.72	Eastern horseshoe nail	1:6	Fatimid-Ayyūbid
54	5080	534	E9	229.12	Coin		Islamic
55	5081	531	E16	235.22	Nail		Modern
56	5090	526	E12	230.12	Nail		Modern
57	5099	534	E9	225.42	Coin		Mamlūk
58	5100	528	E15	235.72	Rivet/fitting		
59	5101	529	E15	235.32	Bucket frame		Modern
60	5111	538	E15	235.12	Rivet/fitting		Pre-modern
61	5121	552	E16	235	Belt buckle, copper alloy	3:1	Frankish
62	5124	Topsoil survey no. 1		228.42– 223.97	Bombshell fragment		Modern

No.	Bas. no	Locus	Square	MASL	Object	Fig.	Date
63	5126	Topsoil survey no. 3		“	Horseshoe nail		Fatimid-Ayyūbid
64	5127	Topsoil survey no. 4		“	Coin		Ottoman
65	5128	Topsoil survey no. 5		“	Nail		Modern
66	5129	Topsoil survey no. 6		“	Peg nail head		Pre-modern
67	5130a	552	E16	234.5	Coin		?
68	5130b	552	E16	234.5	Handmade metal rod		?
69	5131	Topsoil survey no. 7		228.42– 223.97	Nail		Modern
70	5132	Topsoil survey no. 8		“	Two chain rings		Pre-modern
71	5133	Topsoil		“	Metal plate (zigzagged)		Modern
72	5134	Topsoil survey no. 10		231.32	Horseshoe nail		Fatimid-Ayyūbid
73	5135	Topsoil survey no. 11		232.32	Horseshoe nail		Fatimid-Ayyūbid
74	5136	Topsoil survey no. 12		234.32	Peg/anchor and ring	2:1	Pre-modern
75	5137	Topsoil survey no. 13		“	Horseshoe nail		Fatimid-Ayyūbid
76	5138	552	E16	234.3	Iron plate		
77	5139	Topsoil survey no. 15			Coin		Alexander Jannaeus
78	5140	552	E16	234.3	Nail	2:9	Pre-modern
79	5142	552	E16	234.3	Horseshoe nail	2:7	Fatimid-Ayyūbid
80	5146	552	E16	234.3	Iron plate		Modern?
81	5154	Topsoil on the south- ern section of E14			Spur?	1:2	Frankish or Ayyūbid
82	1005/1	103	W1	203.25	Metal rod		Modern
83	1008/1	102	W2	200.45?	Coin		Roman imperial
84	1012/1	102	W2	206.8	Nail		Modern
85	3025/1	305	C7	216.02	Nail		?
86	3047/1	315	C6	213.8	Coin		Roman provincial
87	5001/1	500	E9	228.42	Belt/strap loop, copper alloy		Modern
88	5024/1	519	E13	233.57	Metal rod		Modern
89	5057/1	518	E12	231.17	Nail		?
90	5120/1	552	E16	235	Curb chain bit	1:4	Frankish or Ayyūbid
91	5120/2	552	E16	235	Iron plate		Modern
92	5123/1	552	E16	235	Iron plate		?
93	5146/1	552	E16	234.3	Iron plate		?
94	5148/1	554	E16	232.5	Nail		Modern

The Glass Finds from a Salvage Excavation (License B456/17) at Ein Zippori

Kate Raphael

The following report presents the modest collection of glass finds from the excavation of two domestic units in different areas (E and C). The site yielded 42 fragments of glass of which 20 were selected for the current publication. Most of the glass finds were found in Area E, within a relatively well-preserved building and in loci next to it. Pottery found while dismantling walls (Wall

E15 and E16) dated the building to the Byzantine period. In addition, there are a few glass objects gleaned from fills in Area W, where a crudely constructed, broad wall was found. The glass finds include common domestic vessels, beads, and bracelet fragments. The corpus is presented typologically. Parallels are brought mainly from sites in the Lower Galilee.

THE GLASS CORPUS

Wine glasses and a bottle

1. Wine glass (Sq. E15, L554, Reg. 5144)

Fragment of a concave base. Thick stem with a knob. Glass worn and badly chipped. Color: pale blue-green. Parallels: Beth Shean, Hadad 2005: Pl. 21: 402; Illut, Gorin-Rosen 2009: Fig. 14:3. (not illustrated)

2. Wine Glass (Sq. E16, L552, Reg. 5150/8)

Fragment of a concave base, its rim completely missing. Color: pale blue-green. (not illustrated)

3. Wine Glass (Sq. E16, L552, Reg. 5150/6)

Fragment of a concave base with tubular rounded edge at the edge. Color: pale blue-green. (not illustrated)

4. Wine Glass (Sq. E16, L531, Reg. 5098)

Fragment of a concave base with tubular rounded edge at the edge. Color: pale green. (not illustrated)

5. Bottle (Sq. E16, L552, Reg. 5123)

Neck and part of the shoulder of a fine glass bottle; most of it is broken and chipped. Rim completely missing. Color: light green. Parallels: Khirbat 'Adadsa, Gorin-Rosen 2008: Fig. 2:10. (not illustrated)

Beads (Fig. 1:3–5)

1. Bead (Sq. E16, L552, Reg. 5122)

Found within the building in Area E. Small, barrel shaped, dark brown-red glass. Red glass was introduced in the 17th–18th centuries CE. This bead is therefore of the late Ottoman period and probably belonged to a necklace or earring. Dimensions: length 4mm, diameter 4mm. Parallels: Bethsaida, Late Ottoman, (Rottloff 2009: 231). (not illustrated)

2. Bead (Sq. E16, L552, Reg. 5153/1)

Found within the building in Area E. Barrel shaped. Light green, slightly chipped. Dimensions:

length: 4 mm, diameter: 4 mm. Parallels: Bethsaida from burials dated to the Late Ottoman, (Rottloff 2009: 231). (not illustrated)

3. Bead (Sq. E16, L554, Reg. 5147)

Found within the building in Area E. Large round bead with light green petals decorating the surface (Fig. 1:1). Dimensions: length 1.4 cm, diameter 2.1 cm. Parallels: similar but not identical beads were found in the Mamluk level at Mary's Well, Nazareth, Alexandre 2012: Fig. 4.12:5.

4. Bead (Sq. E14, L533, Reg. 5187)

Found in fill west of the building. Half a bead in the shape of an olive pip. Color blue green (Fig. 1:2). Glass surface coarse. Parallel: Bethsaida from burials dated to the Late Ottoman Rottloff 2009: 231.

5. Bead (Sq. W4, L100, Reg. 1006/1)

Topsoil find. Bead in a shape of an olive pip. Color dark blue-green (Fig 1:3). Decorated with incised dots. Dimensions: length: 1 cm, diameter 5 mm.

Mamluk and Ottoman bracelets (Fig. 1:4–9)

All the bracelets below, except No. 5, were found in the Area E house. It seems the house was resettled in the Mamluk period, abandoned, and then settled once again in the Late Ottoman period.

1. Bracelet (E16, L552, Reg. 5120/2, Fig. 1:4)

Found while enlarging the excavated square with tractor. Spirally twisted bracelets with round section. Dark ink-blue. Dimensions: width 5 mm. Parallels: Late Ottoman (18th-19th centuries) level at Mary's Well, Nazareth, Alexandre 2012: Fig. 4.11:11; Late Ottoman Yafo, de Vincenz 2017: Fig. 6:6.

2. Bracelet (Sq. E16, L552, Reg. 5123/1, Fig. 1:5)

Found in mixed fill. Fragment of monochrome dark blue band bracelet. Section semicircular. Dimensions: width 3 mm. Parallels: Mamluk Mary's Well, Nazareth, Alexandre 2012: Fig. 4.10:1.

3. Bracelet (Sq. E16, L552, Reg. 5123/2, Fig. 1:6)

Found in mixed fill. Fragment of a light blue band with a green-yellow decorative stripe. Dimensions: width 8 mm, thickness 2 mm. Parallels: Mamluk, Mary's Well, Nazareth, Alexandre 2012: Fig. 4.11:2.

4. Bracelet (Sq. E16, L522, Reg. 5027/1, Fig. 1:7)

Found in mixed topsoil. Fragment of a bracelet, round in section. Black and red coils twisted with fine white threads. Dimensions: thickness 5 mm. Parallels: Mamluk, Mary's Well, Nazareth, Alexandre 2012: Fig. 4.10:5.

5. (Sq. W14, L100, Reg. 1015/8, Fig. 1:8)

Found in topsoil. Fragment of a translucent bracelet with decorative bands in white and light green set in a spiral. Dimensions: diameter 5 mm. Mamluk, Mary's Well, Nazareth, Alexandre 2012: Fig. 4.10:4.

6. (Sq. E9, L515, Reg. 5010/1, Fig. 1:9)

Found in fill just below the topsoil. Fragment of a light green bracelet. Round section with yellow coil merged within. Dimensions: width 5 mm.

Phials

Two tubular phials. Both fragmented, only the thick bases remain. Used for storing liquid medicines (Lester, 2004: 188), perfumes or oils.

1. (Sq. E14, L513, Reg. 5018)

Found in fill below topsoil, west of the Area E building. Thick round cylinder tube, uneven base. Color: blueish green. Diameter: 1.3 cm. Parallels (both Abbasid): Tiberias, Lester 2004: Fig. 7.9:111–113; Beth Shean, Hadad 2005: Pl. 35:690.

2. (Sq. W3, L105, Reg. 1024/11)

Found in fill below topsoil. Thick, very crude and worn cylinder, dark blue color. Glass very porous. Diameter: 9 mm.

SUMMARY

This modest collection represents what would be characteristic of local village folk. While the vessels are dated to the Byzantine and Early Arab periods, the glass bracelets and beads date to the Mamluk and Late Ottoman periods. Similar glass bracelets are found throughout the country and were

part of local women's jewelry in both towns and villages and among nomadic populations. Such items are frequently found, for example, in burials at Bethsaida (Late Ottoman, Rottloff 2009: 232) and Tel Dan (Mamluk, Spaer 1992: 57–58).



Figure 1. Beads (1–3), and Bracelets (4–9)

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Pottery from the Salvage Excavation of Ein Zippori (License B456/17)

Kate Raphael

The following analysis of the pottery from Ein Zippori proceeds by excavation area, including a brief contextual-stratigraphic account of each

area (for a more detailed analysis of the excavation see Yron, this volume pp. 147–154).

AREA E

The foundation courses of a corner of a substantial Byzantine building were excavated. All the loci from within the building yielded mixed baskets. The function of the structure could not be determined, due to the small scale of the excavation and the modest architectural remains. No sealed loci and no floors were found. Thus, the report is based on diagnostic material from the fills according to their location and elevation above sea level (ASL).

Late Roman-Byzantine material dominated the pottery baskets (Fig. 1:12–13, 15, 17), with one or two Late Ottoman black Gaza Ware sherds (Fig. 1:1–3 pipe), in all the fills from within the building — L531 (235.72), L529 (234.62), L554 (232.5)—and in the excavations of the north-western Wall E1–5 and L529 (235.32–234.62). Locus 531 was the only one with some medieval

monochrome glazed ware that dates to the 13th–15th centuries (Fig. 1: 4, 5).

The glass finds follow the same stratigraphic and chronological order. Ottoman and Mamluk bracelets were found within the upper fills (L552, 234.5 ASL) mixed with fragments of Byzantine wine glasses.

The pottery and glass finds indicate that the building was constructed in the Byzantine period. Although no cooking pots were found within or outside the building, the pottery is clearly of a domestic nature. The building was abandoned shortly after the Byzantine period, occupied again for a short time in the 13th–15th century, and abandoned once again until the Late Ottoman period. A similar pattern of occupation is known from the Golan (Hartal 2014).

AREA C

In Area C a crudely built two-room structure was excavated. It may well have been part of a larger building as suggested by Wall C1–5 that runs northwest (see plan, Yron, this volume p. 151). Most of the baskets contained Roman period pottery dating to the 2nd–4th century CE, with few Late Ottoman and Byzantine sherds.

Next to the building, as well as within its rooms, fills from the topsoil (L306, L307) contained a mixture of Late Ottoman, Byzantine, and Early Roman pottery (Fig. 2:1–3). The only diagnostic sherd — a bowl from above the floor (L309)—was dated to the Late Roman period (Fig. 2:6). The jug and bowl found below the floor

(L315) date to the 2nd-4th centuries CE (Fig. 2:5, 12).

Thus, the building was occupied between the 2nd and 4th centuries CE. However, a pocket of Early Roman sherds (Fig. 2:8–10), mainly from the top layers (L.307, L310), suggests the site was settled earlier. The Ottoman and Byzantine

potsherds are so few that they may have been transported by colluvium or by plowing. As in Area E, the excavations are too limited and the remains too poor to allow clear-cut conclusions as to the function of this structure. Nevertheless, the nature of the pottery suggests it was a simple village or farmstead dwelling.

AREA W

A crude poorly preserved wall was excavated in Area W. Yron (this volume, p. 154) suggests that it may have been a dam. But it is difficult to establish what its true purpose was.

All the baskets had mixed pottery: black Gaza ware from the Late Ottoman period and a spout that may date to the 13th-15th centuries were found in fills just below the topsoil L101, L102 and L105. The latter yielded a dark glazed

Late Ottoman bowl (not illustrated). Two 13th-15th century light green glazed bowls, common in both Crusader and Mamluk periods (Fig 3:4–5), were found in L101. However, an early Roman juglet also surfaced in L101 (Fig. 3:13). The earliest pottery in L105 was dated to the Roman period (2nd-4th centuries) suggesting the wall may have been constructed in the 3rd-4th centuries or slightly earlier (Fig. 3:8–10).

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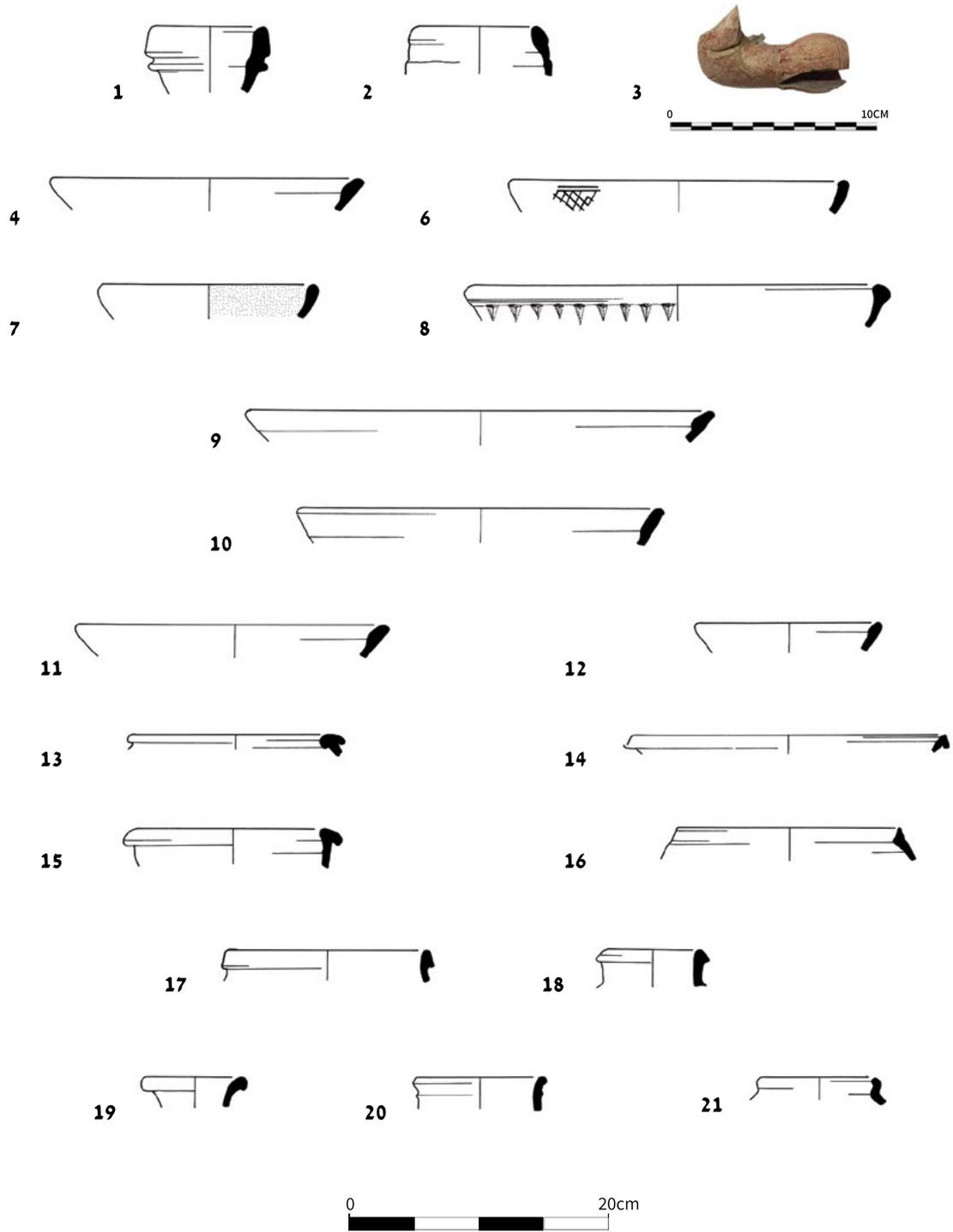


Figure 1. Pottery from Area E

Figure 1. Pottery from Area E

No.	Form	Sq. & Locus	Basket	Description, date and parallels
1	Ibiriq/ water jug	E16 L554	5144/7	Gaza Ware, late Ottoman. Dark gray clay with fine lime inclusions. Prominent ridge below the rim. Parallels: Israel 2006: 132; Feig 2020: Fig. 18:14
2	Ibiriq, jug	E16 L554	5144/5	Gaza ware, late Ottoman. Light brown fabric. Wavy rim and neck. Parallels: Israel 2006: 134
3	Pipe	E16 L531	5071/1	Fine gray fabric. Coated with a rusty red slip. Decorated with incised lines. Bowl partially missing, decorated with incised circles. Rouletted band round the shank. Late 18 th - early 19 th centuries. Parallels: Rauchberger 2017: Fig. 14.8:66
4	Bowl	E16 L531	5071/5	Thick rim, dark reddish-brown clay, mustered yellow monochrome glaze on the inside. 13 th -15 th centuries. Parallels: Avissar and Stern 2005: Fig. 3:4
5	Bowl	E16 L531	5071/13	Orange-brown fabric. Dark green glaze on the inside. 13 th -15 th centuries. Parallels: Avissar and Stern 2005: Fig. 3:4 (not illustrated)
6	Bowl	E15 L529	5097/8	Orange slightly gritty fabric. Decorated on the outside with a net brown glazed pattern. No parallels found
7	Bowl	E14 L504	5154/3	Fine rim, light orange-brown clay, pale green monochrome glaze on the inside. Mid-13 th -15 th centuries, Parallels: Avissar and Stern 2005: Fig. 4:2
8	Bowl	E16 L550	5118/3	Fine light orange fabric. Decorated below the rim with incised triangles. Byzantine-Umayyad. Parallels: Bar-Nathan and Atrash 2011: Fig. 11.39:4
9	Bowl	E15 L529	5097/5	Rusty-brown fabric. Thick-walled rim. Late Roman-Byzantine. Alexandre 2012: Fig. 3.2: 3; Gekht 2015: Fig. 5:3
10	Bowl	E15 L529	5097/3	Rusty-brown fabric. Thick-walled rim. Late Roman-Byzantine. Parallels: Alexandre 2012: Fig. 3.2:5
11	Bowl	E12 L503	5071/6	Orange fabric. Galilean bowl Late Roman. Parallels: Spivak 2019: Fig. 4:4
12	Bowl	E16 L531	5098/5	Orange fabric. Galilean bowl Late Roman. Parallels: Covello-Paran and Tepper 2011: Fig. 9:6
13	Bowl	E16 L554	5144/8	Orange-brown fabric. Large dark inclusions. Thick flat rim. Late Roman. Parallels: Alexandre 2017: Fig. 5:6
14	Bowl	E15 L529	5097/9	Fine light brown fabric. Red slip. Late Roman Early Byzantine. Parallels: Alexandre 2016: Fig. 13:4
15	Bowl	E16 L554	5149/5	Orange-brown fabric flat rim with prominent groove between vessel wall and rim. Byzantine. Parallels: Amos 2014: Fig. 5:6; Spivak 2019: Fig. 4:6
16	Bowl	E15 L529	5088/7	Dark brown fabric, small lime inclusions. Byzantine. Parallels: similar but not identical Feig 2020: Fig. 18:2
17	Jug	E16 L531	5071/7	Rusty-brown fabric. Byzantine. Parallels: Sion 2011: Fig. 3:14
18	Jug	E14 L504	5154/2	Creamy fabric. ridge on shoulder. Umayyad, Parallels: Kohen-Tavor 2017: Fig. 2.36:6; or Mamluk flask Stern and Kletter 2019: Fig. 43:1
19	Jug	E16 L551	5119/7	Brown-dark orange fabric with lime grits. Byzantine Parallels: similar but not identical. Parallels: Avissar 2014: Fig. 9:13-14
20	Jug	E16 L554	5144/9	Orange fabric with lime inclusions. Early Roman (?) Mlynarczyk 2009: Fig. 8:1
21	Jug	E15 L529	5067/10	Orange-brown fabric. Curved stepped rim. Byzantine?

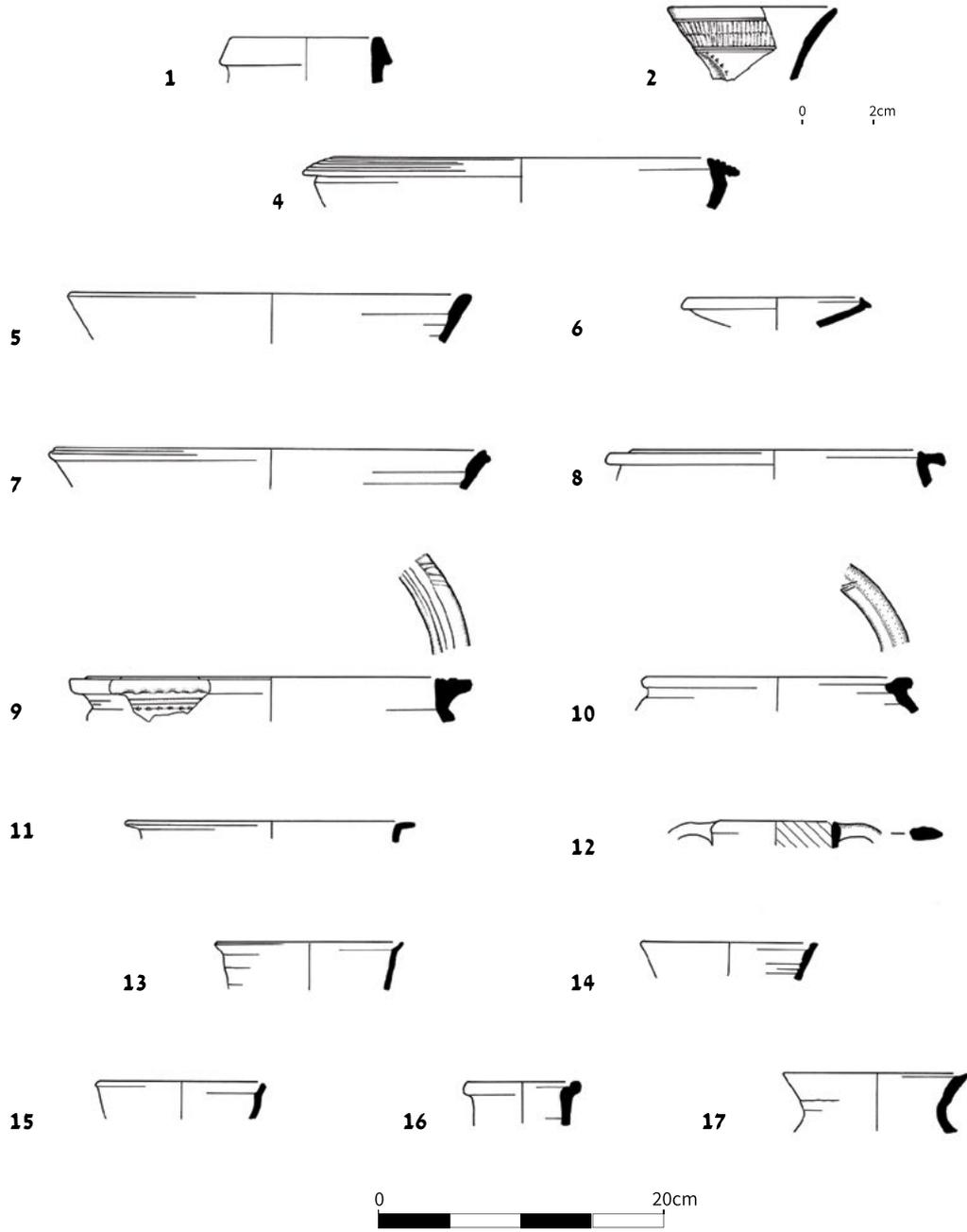


Figure 2. Pottery from Area C

Figure 2. Pottery from Area C

No.	Form	Square/ Locus	Basket	Description, date and parallels
1	Jug	C6 306	3012/1	Gaza Ware, Late Ottoman. Dark gray fabric. Parallels: de Vincenz 2016: Fig. 2:6
2	Bowl	C5 307	3013/5	Light brown-pink fabric, shelf shaped rim, slip painted yellow-cream glaze with stripes of brown on the inside and yellow on the external side of the rim. Late Ottoman 18 th -20 th centuries. Parallels: Kleiner 2018: Fig. 4:3; de Vincenz 2019: Fig. 3:5
3	Tobacco Pipe	C5 L307	3013/6	Creamy brown-pink fabric. Flaring rim decorated with rouletted lines. Fragment of 18 th century bowl of an Ottoman pipe. Not illustrated.
4	Bowl	C6 L306	3012/5	Light brown fabric, flat rim with 3 deep grooves. Byzantine. Parallels: Har'el 2015: Fig. 5:8
5	Bowl	C5 L307	3019/1	Galilean bowl, light orange-brown fabric. Roman 1 st -3 rd centuries. Parallels: Kapitaikin 2010: Pl. 1:1
6	Bowl	C6 L315	3047/2	Brown fabric. Fine flat thin rim. Late Roman. Parallels: Har'el and Atrash 2011: Fig. 4:6
7	Bowl	C6 L309	3021/3	Orange fabric. Galilean bowl grooved rim. Late Roman. Parallels: Har'el and Atrash 2011: Fig. 4:4.
8	Bowl	C6 L311	3034/1	Orange slightly gritty fabric, dark rusty red coating. Early Roman. Parallels: Mlynarczyk, 2009: Fig. 6:14
9	Bowl	C6 L310	3036/1	Fine light orange fabric. Decorated with incised lines on the shelf rim and below it. Early Roman. Parallels: Dagot 2014: Fig. 9:1
10	Bowl	C5 L310	3032/3	Light brown fabric flat rim with prominent groove between vessel wall. Early Roman. Parallels: Dagot 2014: Fig. 9:2
11	Bowl	C5 L307	3019/9	Plain brown fabric. Thin-walled shelf rim. Early Roman. Parallels: Dagot 2014: Fig. 9:4
12	Cooking pot	C5 L317	3039/2 212.2	Reddish dark brown fabric with small lime inclusions. Straight plain rim. Late Roman. Parallels: Tatcher et al. 2009: Fig. 23:1
13	Jug	C6 L315	3047/1	Orange-brown fabric. Fine thin rim slightly flaring with shallow channel on the inner side. Roman 3 rd century. Similar not identical. Parallels: Tepper 2016: Fig. 10:12
14	Jug	C5 L316	3046/2	Rusty-brown fabric. Thin-walled rim. Roman 2 nd century CE Parallels: Mlynarczyk 2009: Fig. 8:2
15	Jug	C5 L316	3040/2	Brown orange fabric rim slightly flaring thin-walled rim. Roman 2 nd century CE. Parallels: similar not identical Mlynarczyk 2009: Fig. 8:2
16	Jug	C5 L307	3019/4	Reddish brown fabric. rim slightly flaring with shallow channel on the inner side. Mid Roman. Parallels: Har'el 2015: Fig. 5: 7; Har'el 2012: Fig. 5:7
17	Jar	C5 L307	3019/5	Light brown fabric Slightly flaring rim. Late Hellenistic. Parallels: Alexandre 2012: Fig. 10:9

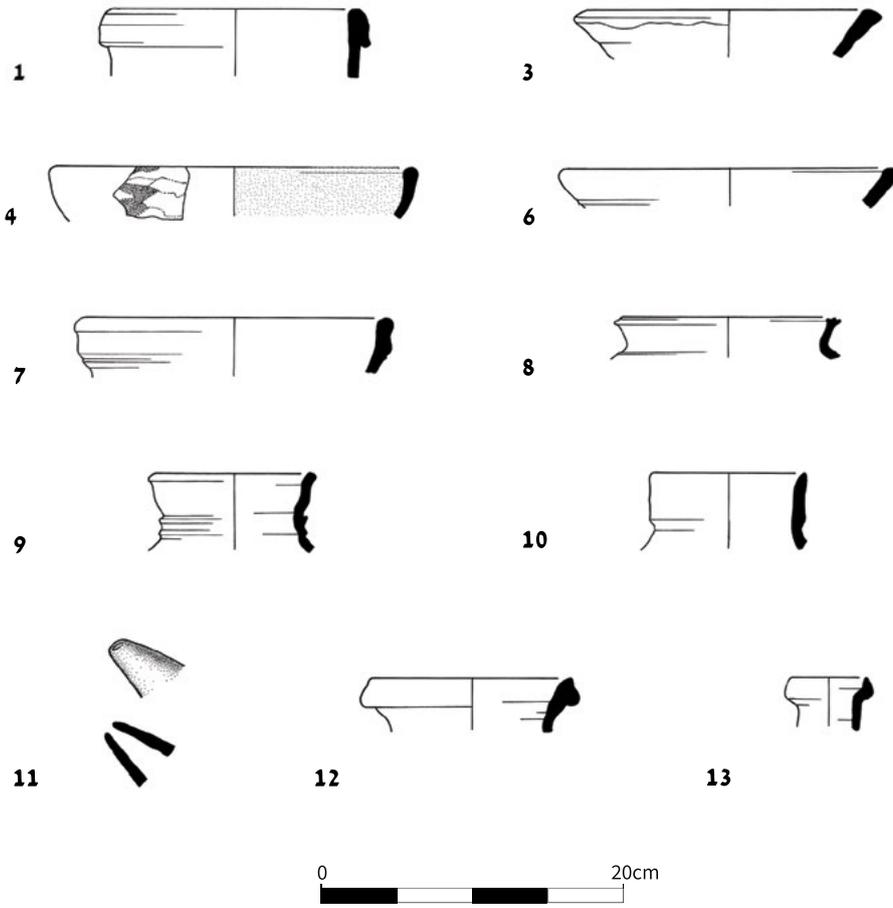


Figure 3. Pottery from Area W

Figure 3. Pottery from Area W

No.	Form	Square/ Locus	Basket	Description, date and parallels
1	Jar	W3 101	1011/1	Dark gray fabric, black Gaza Ware, thick rim and long neck. Late Ottoman. Parallels: de Vincenz 2019: Fig. 9:4
2	Jug	W2 102	1002/1	Light gray fabric, black Gaza Ware, Late Ottoman. Parallels: Alexandre 2012: Fig. 3:19:7 (not illustrated)
3	Bowl	W3 105	1024/7	Brown-pink fabric dark brown-green glaze. Late Ottoman. Parallels: Could not find parallel.
4	Bowl	W4 100	1015/5	Orange-brown clay, mustered yellow monochrome glaze on the inside. 13 th –15 th centuries. Parallels: Avissar and Stern 2005: Fig. 4:2
5	Bowl	W3 101	1011/10	Orange-brown clay, light green monochrome glaze with sgraffito inside. 13 th centuries. Parallels: Avissar and Stern 2005: Fig. 6:1, Alexandre 2012: Fig. 3.9:6
6	Bowl	W3 101	1011/2	Reddish fine ware. Coated with a fine rusty-red slip. 4 th –5 th centuries CE. Parallels: Avshalom-Gorni 2018: 20:5
7	Jug	W3 101	1011/9	Orange-brown fabric gray core. Could not find parallels (not illustrated)
8	Cooking pot	W3 105	1027/8	Dark brown-reddish fabric. Roman 2 nd century CE. Parallels: Israeli 2008: Fig. 4:12:12
9	Jar	W3 105	1027/7	Orange brown fabric. High neck with ridges at the bottom of the neck. 3 rd –4 th centuries. Parallels: Alexandre 2012: Fig. 3.2:14
10	Jar	W3 105	1027/5	Sandy yellow fabric. High neck. 2 nd –3 rd century BCE. Alexandre 2012: Fig. 3.1:11
11	Jug	W3 101	1016/2	Orange-brown fabric. Long wide spout. Belonged to a jug of medium size. 13 th –15 th centuries. Parallels: Avissar and Stern 2005: Fig. 45:4–5
12	Jug	W4 100	1015/1	Light brown fabric. Thick protruding rim. Mamluk (?). Parallels: Avissar and Stern 2005: Fig. 45:9
13	Juglet	W3 101	1016/4	Reddish-brown fabric. 1 st century CE. Parallels: Bouchenino 2008: Fig. 9:48

The Coins from the Ein Zippori 2017 Salvage Excavation

Yoav Farhi

Fifteen coins were found during this 2017 salvage excavation at Ein Zippori. They range from the 1st century BCE to the early 20th century CE. Most of the coins are made of copper-alloy (Nos. 1–12), while the last three (Nos. 13–15) are made of nickel. All the coins are surface finds, uncovered with the aid of a metal detector.¹ Many of them are

poorly preserved. All the coins are listed chronologically in Table 1.² Most of them are of known types, commonly circulated in the region during the Hasmonean, Roman, Byzantine, Islamic and Ottoman periods; however, some exceptions are noted below.

Table 1. Catalogue of the coins from Ein Zippori.

No.	Locus/ Reg. No.	Wt. (g)	Diam. (mm)	Axis	Obverse	Reverse	Date	Mint	References and Notes
HASMONEAN Alexander Jannaeus (104/3–76 BCE)									
1*	Surface 5139	0.63	9.5x11	-	[—] Eight-pointed star surrounded by circle of dots; around, illegi- ble Aramaic legend.	[—] Anchor in plain circle; around, traces of illegible Greek legend.	80/79–76 BCE or lat- er successors	Jerusalem	Cf. <i>TJC</i> : 210, Subgroup L, No. 7
Hasmonean or Roman Governors of Judea (2nd century BCE–1st century CE)									
2	507 5010	2.05	14	-	Traces of wreath around illegible type.	Illegible	c. 125 BCE–31/2 CE		Burnt and corroded. Bevelled.

1 The coins were discovered following a metals survey conducted by R. Lewis.

2 The coins were preserved by O. Cohen and photographed by A. Hayat.

Abbreviations used in the table:

l. = left

r. = right

stg. = standing

adv. = advancing

Coins bearing an asterisk are illustrated in Fig. 1.

No.	Locus/ Reg. No.	Wt. (g)	Diam. (mm)	Axis	Obverse	Reverse	Date	Mint	References and Notes
ROMAN PROVINCIAL (1st cent. BCE–3rd cent. CE)									
3*	315 3047/1	5.91	18x19	12	Male (?) head r. Small circular and unclear countermark in r. field.	[—] Figure stg.l., cir- cular counter- mark containing male head (Heracles?) in r. field.	1st cent. BCE–1st cent. CE		Worn
ROMAN IMPERIAL Diocletian (284–305 CE)									
4*	102 1008/1	1.85	19x20.5	6	IMP CC VAL DIO- CLETI[—] Bust r., radiate, draped and cuirassed.	CON[—] Diocletian stg.r., receiving victory on globe from naked Jupiter stg.l., holding sceptre; below: Γ (?)	c. 295 CE	Antioch (?)	Cf. <i>RIC</i> V/2: 253, No. 306 Antonini- anus Worn
LATE ROMAN 4th Century CE									
5*	314 3044	1.27	12	5	[—] Bust r. pearl dia- demed, draped, and cuirassed.	SALVS REI- [—] Victory adv.l., and dragging captive. In l. field, P; illegible mintmark.	383–395 CE		Worn
6	510 5016	0.92	11x11.5	12	[—] Same	[—] Same	Same		Worn
Late Roman — Partly Identified									
7	Surface 3005	0.98	10x11	-	[—] Head r.	Illegible	Late 4 th – early 6 th cent. CE		Worn
BYZANTINE Constans II (641–668 CE)									
8*	311 3033	2.58	15.5x18.5	7	[—] Constans with long beard and moustache stg. facing, wearing crown and chlamys; holding long cross in r. hand and globus cruciger in l.	M Above, star (?). To l., N/E/O/S; to r., A/[—] beneath, B; in ex., XIII	654/5 CE	Constan- tinople	<i>DOC</i> II/2: 543–451, No. 72a. Follis

No.	Locus/ Reg. No.	Wt. (g)	Diam. (mm)	Axis	Obverse	Reverse	Date	Mint	References and Notes
ISLAMIC Umayyads									
9*	534 5080	2.80	14x15	3	Arabic legend in three lines: لا اله الا الله وحده (?)	[—] Schematic representation of a calyx with a three-petalled flower in the crescent-shaped cup	c. 700–750 CE		Cf. Walker 1956: 203, No. 596; Ilisch 1993: 44, Nos. 529–530 (?) Worn, identification uncertain.
Ayyūbids Al-‘Azīz ‘Imād al-Dīn Abū al-Fath ‘Uthmān ibn Yūsuf (589–595 H.; 1193–1198 CE)									
10*	522 5033	4.33	22x26	10	Arabic legend in two lines; below, floral ornament. All within dotted circle; around, illegible marginal legend.	Arabic legend in three lines. All within dotted circle; around, illegible marginal legend.	1197–1198 CE	Damascus	Cf. Balog 1980: 112–113, Nos. 222–223.
Mamlūks									
11	534 5099	2.56	16x17	-	Illegible Arabic legend	Illegible	14th–15th cent. CE		Worn
12	515 5034	2.41	16	-	Illegible Arabic legend	Illegible Arabic legend	Same		Worn
TURKISH-OTTOMAN EMPIRE Muhammad V (1327–1336 H.; 1909–1918 CE)									
13*	522 5054	2.38	19	12	Tughra in circle	Denomination (10) in circle	1911	Constantinople	10 Para Nickel Pierced
14*	516 5037	2.50	19	12	Same	Same	1912	Same	Same
15*	290 5127	1.67	16	12	Same	Denomination (5) in circle	1912	Same	5 Para Nickel

Previous excavations at the site revealed various finds from the Hellenistic, Roman, Byzantine, Islamic, Crusader and Ottoman periods. However, coins were reported from a few

of these excavations only and without detailed catalogues. These coins are listed in Table 2, together with a summary of the coins from Yron’s 2017 excavation (Table 1).



1:1

Figure 1. Catalogue of the coins from Ein Zippori.

Table 2. Coin finds reported so far from Ein Zippori (‘En Zippori)

Reference	Coins by period	Total
Porat 2005	Hellenistic (1) Byzantine (1) Ottoman (4)	6
Milevski and Getzov 2014	Crusader (2)	2
Zidan 2014	Hellenistic (3) Late Roman (3) Mamlük (4) Ottoman (1)	11
Yron 2017 (Table 1)	Hellenistic (1) Roman (3) Late Roman (3) Byzantine (1) Umayyad (1) Ayyübid (1) Mamlük (2) Ottoman (3)	15

Table 2 shows that the coins discovered during Yron’s 2017 excavation enrich the numismatic profile of the site not only by the total number of the coins found (which was larger than the overall number of coins uncovered in each of

the other excavations) but more importantly, with coins from a few periods missing from the finds unearthed previously in Ein Zippori: Hasmonean (No. 1); Roman, until 3rd century CE (Nos. 2–4); Umayyad (No. 9); and ‘Ayyübid (No. 10). In addition, they supplement types not found before at Sepphoris. While Hasmonean coins are common at Sepphoris (e.g., Bunnell 1937: 38–39, Nos. B5–B14; Ariel and Bijovsky 2018: 529–532, Nos. 36–147), as are various Roman period coins (e.g. Ariel and Bijovsky 2018: 533–549, Nos. 148–305), coins of Constans II (No. 8) are totally absent. Umayyad coins are also not so common (e.g. Ariel and Bijovsky 2018: 568–569, Nos. 604–609; none in Bunnell 1937), and ‘Ayyübid coins are scarce; only one is known so far from this site (Ariel and Bijovsky 2018: 570, No. 613).³

The coins found during Yron’s 2017 excavation at Ein Zippori, together with the coins from previous excavations at this site, shed new light on the periods of time when the site of Ein Zippori was populated, or at least visited. These coins, together with the finds from Sepphoris itself, enrich our knowledge regarding the types of coins which circulated in this area.

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Einot Zippori Exchange Excavation¹ (B456/2017) Geomorphology and Sedimentology

Joel Roskin

CURRENT GEOMORPHOLOGY

The Ein Zippori Exchange site is characterized by several stages of construction. The site lies within a broad 400–500 m wide valley of the perennial (*Nahal*) Zippori stream that appears to be the channel's first floodplain. Hills 50–130 m high, composed of Eocene chalk and limestone strata (Picard & Golani 1992), straddle the valley, and are covered with grey Rendzina soils. The upslope section has been reported to have 0.25–0.5 m thick

alluvial sediment upon the Eocene chalk bedrock (Namdar et al., 2015). The base of the hills reveals a 10–30 cm thick red Terra Rossa-like colluvial deposit, indicating downslope erosion (Fig. 1).

The Ein Zippori site is located in a flat agricultural field, composed of dark brown Grumusols (vertisols; Fig. 1), 40–60 m south of a meander of Nahal Zippori and 450 m downstream of the Zippori spring. The wadi bed is incised 3–5 m into



Figure 1. A westward view of the topographic features of the Ein Zippori Interchange site environs: 1. Eocene chalk hills; 2. Possible ancient fluvial terrace; 3–4. Flat surface of the Ein Zippori Interchange site setting that appears to be a fine-grained colluvium-covered, pre-Mousterian, fluvial terrace; 5. Hydrophilic vegetation in the wadi bed of Nahal Zippori.

¹ The excavation was conducted by M. Yron on behalf of Y.G. Contract Archaeology Ltd, under the academic auspices of the Hebrew Union College-Jewish Institute of Religion, Jerusalem (Yron, this volume pp. 147–154).

the soil cover and underlying Eocene carbonates. South of the site, the valley has two distinct higher levels that may be ancient stream terraces. The flat field hosting the site seems to be located upon an

abandoned stream terrace. On the upper level is the site described by Milevski and Getzov (2014), settled since Neolithic times.

GOALS

The goal of this geomorphic study was to reconstruct the paleoenvironment of the Mousterian units and the Chalcolithic palaeosurfaces, identify geomorphic processes and answer specific questions. On November 28, 2017, I visited the site following a light rain the day before. Following

a field survey of the site's periphery, I focused on studying the stratigraphy of three main squares: E9, E10, and E11, and sampling selected units for sedimentological analyses and OSL dating. The stratigraphy and samples are described (geologically) from bottom to top.

RESULTS

Square E9 (Fig. 2)

Unit	Depth	Description	Sample	Comments
1 (I)	1.6+	Top of brown clay unit. Moist (estimated ~10–15% water content). Abundant layers of flint, angular/sub-angular cobble-size fragments.	MTZ-1 for OSL	
2 (II)	1.45–1.6	Within moist (~10%) dark brown clay unit lenses of sub-round to angular 1–3 mm carbonate and 1–10 mm chert/flint granules. Slight evidence of fining-up.	MTZ-2 MTZ-2b from western face	
3 (III)	1.45–0.3	Very dark-brown Grumusol. Moist (~6–10%). Shiny slickensides of cracks down to 1.4 m. Cracks host shards in a vertical posture and are infilled with carbonate concretions.	MTZ-3 for OSL MTZ-4 for OSL (top of unit)	Sediment reworking may produce “noisy” OSL signal
4 (IV)	0–0.3	Modern, tilled agricultural soil with prismatic structure. Clear boundary.	MTZ-5	

Square E11

Unit	Depth	Description	Sample	Comments
1	1.6+	Angular/sub-angular cobble-size flint fragments forming a surface and infilled with brown clay.		
2	1.25–1.6	Three dipping poorly sorted granule 4–7 cm thick units within this dark brown clay unit. Sub-round to angular 1–3 mm carbonate and (1–10 mm) chert/flint granules.	MTZ-10	
3	1.25–0.3	Very dark-brown moist (~6%) Grumusol. Shiny slickensides of cracks down to 1.4 m. Cracks host shards in a vertical posture.		
4	0–0.3	Modern, tilled agricultural soil with prismatic structure		

DISCUSSION

Surprisingly, none of the studied squares (Fig. 2) that reached depths of 2+ m revealed any alluvial/fluvial remains of a floodplain or paleo-channel of Nahal Zippori. It is not clear if the substrate beneath the soils is *in-situ* Eocene chalk, alluvium, or conglomerate of the ancient Zippori watercourse. The lack of fluvial features within the site suggests that the clay cover of the site is an accumulation of aeolian clay with significant additions of similar sediments that were washed downslope.

Slope erosion of clay-dominated sediments in this region has been dated by OSL and archaeology to the end of the Mousterian period (around 50–45 ka BP; Zilberman et al. 2009). This age range resembles that of desert loess erosion from the slopes of the central and northern Negev (Avni et al. 2012). We suggest that a Mousterian flint layer extends well beyond the environs of the site.

Both the Terra Rossa and Grumusol clays are dominated by Smectite (Ravikovitch 1992). The terra rossa may be of predominantly aeolian origin

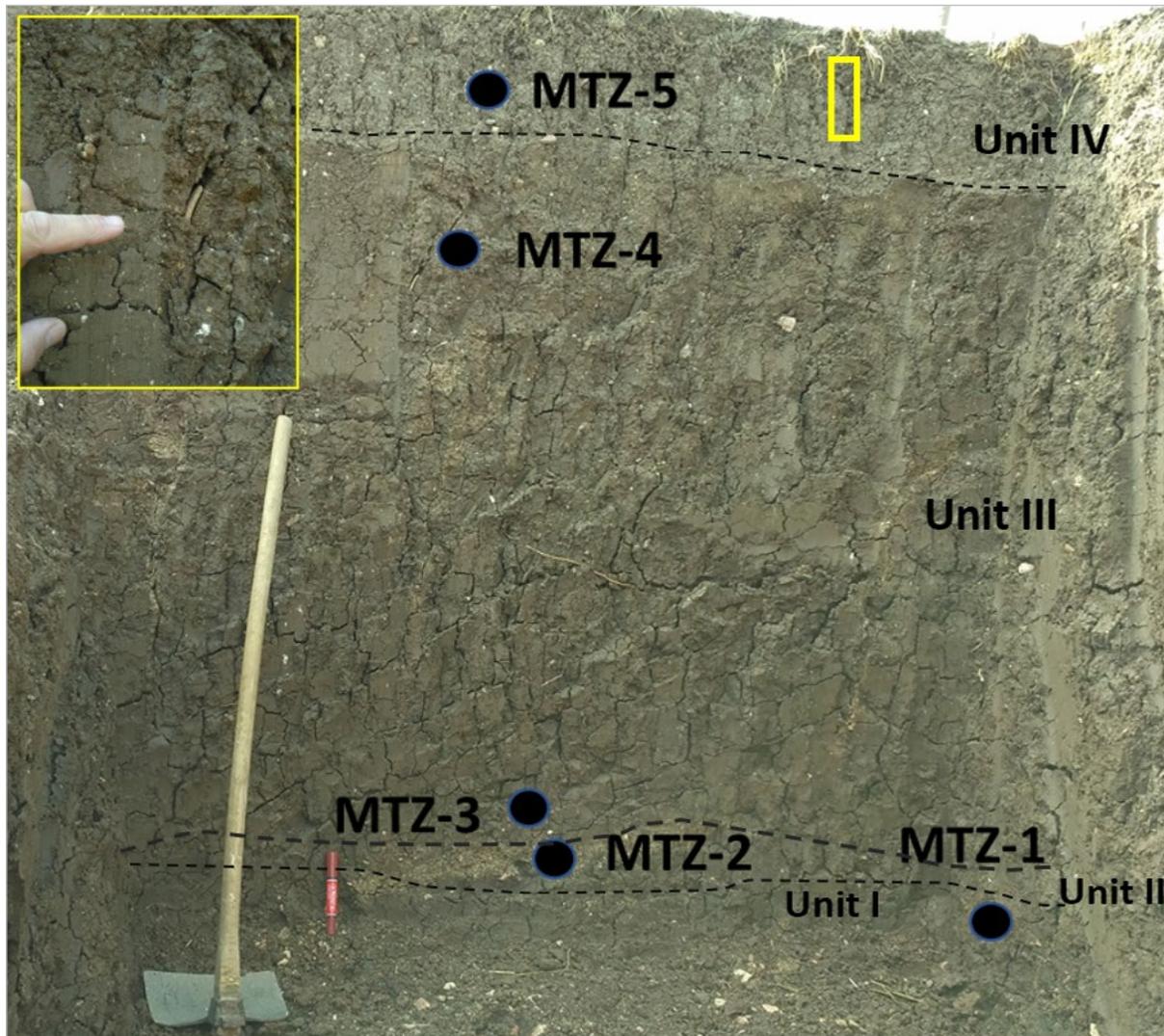


Figure 2. Section photograph of Square E9.

(Sandler 2013) and the Grumusols, common in the valleys, are probably alluvial deposits of earlier Terra Rossa soils and source sediments that originated on the slopes of the nearby hills. The soils of the upper part of the studied section resemble colluvial soils found near the Giv'at Rabi sites and indicate that slope erosion occurred during the Terminal Pleistocene (Shemer et al. 2019).

A low energy colluvial wash of fine (terra rossa) sediments accumulated in the Nahal Zippori valley. Such local alluvial movement may explain the high number of abraded artifacts found at the site. This process was probably coeval with a similar one at the nearby Giv'at Rabi sites (Yaroshevich et al. 2018).

The well-preserved Roman-Byzantine remains and the slope's pedocomplex suggest both historic and current slope stability during the late Holocene. This stability is indicated by the shallow depth of the Chalcolithic remains. It suggests that prior to the middle Holocene there were times of enhanced slope wash, including episodes that led

to rill incision along the slopes and downslope deposition of residual clay-rich Terra Rossa soils, along with local granule-rich pockets where flow energy was relatively higher.

The palaeovegetation cover of the site environs is not clear, but thick vegetation would probably have limited slope erosion. It is possible that the Mediterranean maquis was cleared by the prehistoric inhabitants of the nearby sites — an action that enhanced slope erosion. However, Roman-Byzantine agriculture seems not to have led to significant colluvial deposition. Clay deposition at 1.5 ka BP has been reported by Zilberman et al. (2009), which may indicate that at the end of the Byzantine era, with the (hypothetical) abandonment of the fields, there was rapid deposition of sediments originating in agriculturally disturbed soils, which gradually eased circa 1,000 years ago. Since that time, the surface has been stable, explaining the very shallow Crusader remains (Lewis et al. 2021) and mixtures of artifacts upon today's surface.

SUMMARY

The stages of landscape development are suggested to be:

1. The Nahal Zippori channel flowed along a course similar to that of today.
2. Aeolian deposition of brown clay-rich sediments, possibly upon an ancient floodplain.
3. The appearance of Mousterian knapping and camping sites, several meters from each other, upon a clay-rich (flood?) plain.
4. Surface flow led to local erosional rills that facilitated the local transport and dispersal of artifacts and the deposition of granules and lag deposits of carbonates and small flint fragments.
5. The further colluvial, and probably aeolian, deposition of clay.
6. Chalcolithic occupation and construction upon a clay soil surface.
7. Roman activity slightly above Chalcolithic level.
8. Colluvial deposition over the Roman remains.
9. Stability of the current surface configuration as of circa 1000 years ago and the hosting of Crusader to modern activities.

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Horbat Ad'sa — Pisgat Ze'ev The Muslim Cemetery

Michal Yron and Joe Zias

In November 2019, a salvage excavation was conducted for development purposes at Horbat Ad'sa — Pisgat Ze'ev, (license number B482/2019, map.ref. 222550/637190).¹ The site is located on a hill 757 m. above sea level, (Fig. 1–2) that rises above its surroundings and is currently bounded by modern construction on all sides. In the vicinity

of the site are many ancient sites: Khirbet Ras Abu Maruf (Seligman 1992; 1993; 1999; Kloner 2001: Sites 45 and 91; Zelinger 2015: Permits No. A 7679, A 7730) and the Nahal Zimra site c. 700 m east of the excavation (Yogev 1984; Meitlis 1991; Kloner 2001: Site 88). The site was surveyed several times in the past and test and

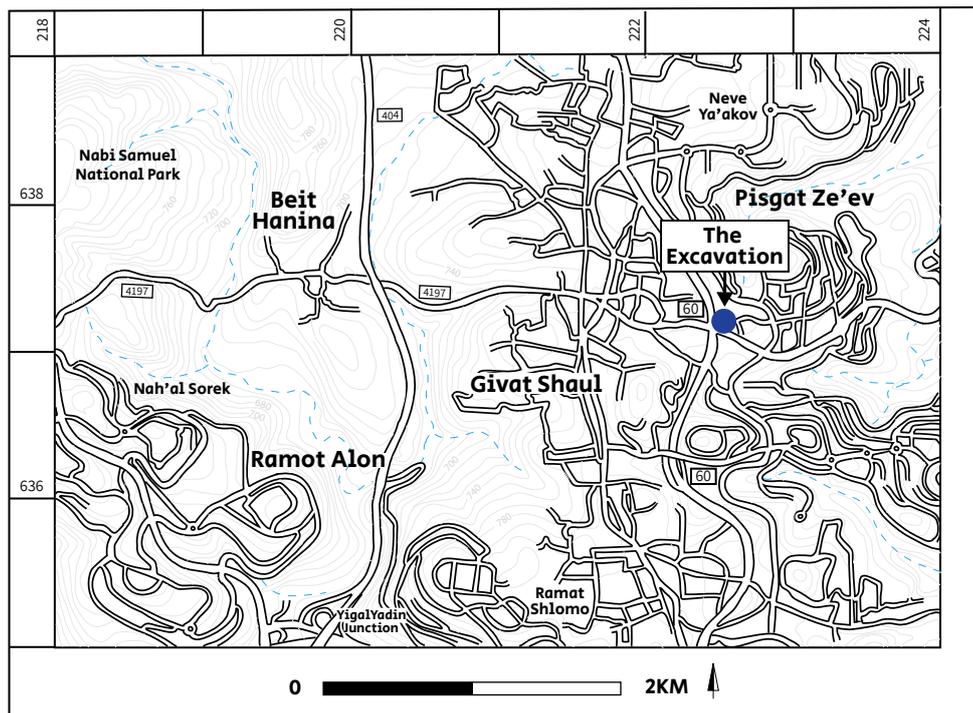


Figure 1. Location map of the Horbat Ad'sa.

1 The excavation was directed by M. Yron. Drafting and documentation using the Geogenic Documentation System were carried out by M. Yron and A. Davidesko. Other contributors: drawing of ceramics — M. Goodman; stone and metal artifact — K. Raphael; human remains — J. Zias; aerial photos — A. Davidesko; archaeology consultant — Y. Govrin; excavation — workers from the village of Beit Zurif.



Figure 2. Horbat Ad'sa, beginning of excavation.

salvage excavations were carried out in and around it. A settlement from the Early Roman, Byzantine, and Early Islamic periods was exposed (Khalaili and Avissar 2007; Khalaili 1995; Zelinger 2015).

The renewed salvage excavation at the site was intended to uncover graves not excavated by the Israel Antiquities Authority (IAA) that had

been covered with geotechnical fabrics. Twenty-five squares were marked off and most of the graves marked on the IAA excavation map were uncovered (N=30; Fig. 3). Most of the graves were placed above the architecture and overburden of the settlement. In some locations graves penetrated down to the bedrock layer.

THE CEMETERY

In the course of the excavation, approximately 40 possible grave locations were marked (Figs. 3–4). Some of the graves were found empty. Most were shallow pits with a single burial, but some contained a double burial. The remains were separated as data layers using GPS and the

geographical documentation system Geogenie, adapting to the architectural plan supplied by the IAA (Fig. 4)².

The human skeletal remains were exposed, analyzed, and documented *in situ* and the bones were removed. All the deceased (without

² We thank Kfir Arbiv from the Israel Antiquities Authority for the data, supplied in DWG form.

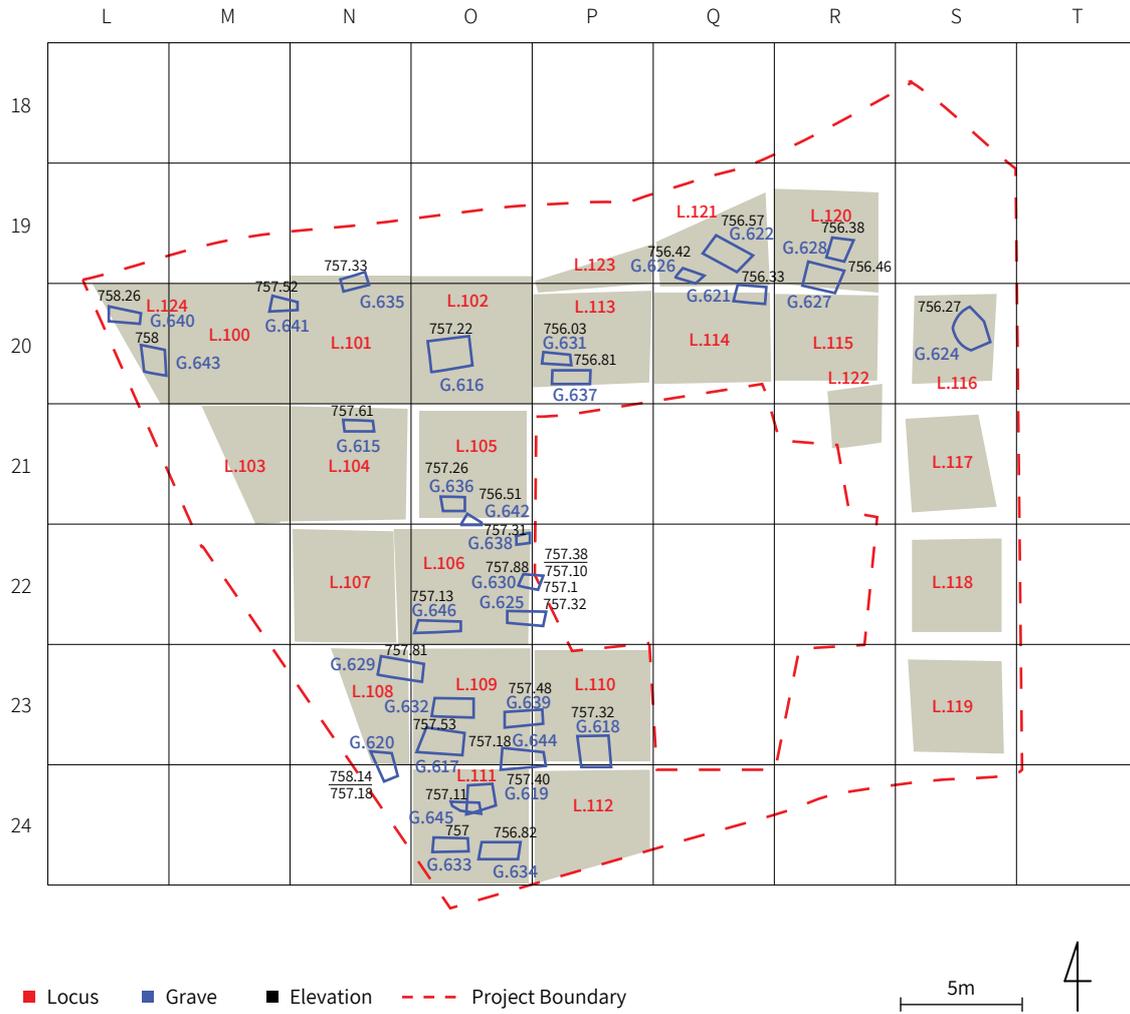


Figure 3. Map of the excavation squares and the excavation boundary. The graves are marked in blue, along with the elevation data.



Figure 4. Site plan received from the IAA on the layer of the excavation squares (green) and the loci (light blue).



Figure 5. Tomb 630, burial of a woman, west–east orientation, head to the west and facing south.



Figure 6. Tomb 618, a 10-year-old child.



Figure 7. Tomb 640, with fieldstone covering.



Figure 8. Tomb 645, with fieldstone covering.



Figure 9. Tomb 625, a well-constructed tomb, in earlier and later phases of excavation. The deceased was placed on his back, with his head to the west.

exception) were placed in a west-east orientation, head to the west and face to the south, a position typical of Muslim burials. In some graves, stone cushions were placed under the head (T634), and some were covered with fieldstones (Figs. 7–8). The deceased were placed in a contracted position (Fig. 5). The one exception is T625 (Fig. 9), constructed of plaster-lined stone slabs, where the deceased (an adult male, 30–40 yrs. old and about 1.60 m tall), was lying on his back, in a fully extended position with his hands at the sides of his body. This tomb was built next to the wall of the main building, in a narrow space between walls. All the graves were empty, no offerings/burial goods were found. Similar graves were uncovered in the Muslim cemetery of Khirbet Sheikh Sa'ad in Ramat Hasharon (Sulimani, this volume and Eshed, this volume).

The total number of individual burials excavated was 24.³ The minimum numbers of individuals: 15 female, five male, three sub-adults, and one individual of indeterminable age/sex.

A CISTERN, A CYLINDRICAL PIT AND A QUARRY

A bell shape cistern was also excavated (Figs. 10–11). The neck (diameter 1 m) was hewn in the *nari*, the cistern itself was hewn in chalk (maximum diameter 3 m and depth 4 m). The mouth of the cistern was built of three to four courses of masoned stones and the cistern interior was plastered with several layers of well-preserved hydraulic plaster (Fig. 11). The cistern was full of modern rubbish.

During the demolition of the main ancient structure, previously excavated by the IAA, the cylindrical opening of another hewn cistern was

All the burials were primary inhumations. With the possible exception of T625, all the excavated burials reflect Islamic practices. No planning in the overall layout of the cemetery was observed.

The 3–1 ratio of adult females over males suggests that this is a population in which polygamy was practiced (see Qur'an Sura 4 [An-Nisa], Ayah 3).

Noteworthy was the dentition of the population, which was remarkable in terms of near total absence of caries, dental hypoplasia, and periodontal disease. Whereas dental disease is largely diet related, it seems that the population interred here may have had access to natural water sources, containing high levels of natural fluoride, which inhibits dental disease. Moreover, the ratio of adults to sub-adults (20:3) suggests high health standards compared to contemporaneous Islamic populations in the region. The only observable trauma was one well healed fracture of the forearm.

The absence of grave goods in all twenty-six burials, precluded a precise dating of interment.

exposed (Fig. 12). The diameter was circa 1 m and its depth was circa 2.5 m. It was not plastered.⁴

In the south-western part of the excavation area, as well as under the main building, remains of stone quarrying that preceded the construction on the settlement were exposed. Remains of the cut-off grooves and rock crevices indicate the quarrying method designed to extract ashlar from the *nari* rock (Fig. 13).

In earthen pockets under the tombs and in sections not previously excavated, *in situ* sherds were discovered (Raphael, this volume).

3 Unfortunately, daily harassment by haredim severely limited our ability to obtain detailed anthropological data.

4 Beit Shemesh excavation B462/2018 revealed cylindrical refuse pits and sumps dating to the Umayyad period (Beit Shemesh 2018 excavation files, Israel Antiquities Authority Archives).



Figure 10. The opening of the cistern hewn into the *nari*.



Figure 11. Layers of plaster on the wall of the pit.



Figure 12. The cylindrical pit.



Figure 13. Remains of quarrying that preceded the settlement construction.

SUMMARY AND CONCLUSIONS

The entire cemetery of Horbat Ad'sa was uncovered. It seems that it belonged to the area's Bedouin population. Most of the deceased (probably from recent centuries), were buried above and into the ancient debris, in shallow trenches, dug to

a depth of 0.5–1.0 m at most. The skeletal material was found in a good state of preservation. The fact that most of the deceased are women suggests that this cemetery is gender segregated perhaps reflecting the practice of polygamy.

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Table 1. List of graves.

Grave Number	Sex	Age	Remarks
615	Female	Adult	
616	Female	Adult	
617	Female	Adult (20–30 yrs)	Ht.. 158 cm
618	Indeterminate	6–10 yrs	
619	—	—	Empty
620	?	?	Disturbed
621	Male	Adult (35–45 yrs)	
622	Female	Adult	
623	Female	Adult	Ht.. 151 cm.
624	?	?	Disturbed
625	Male	Adult (30–40 yrs)	Ht. 161; anomaly
626	Female	Adult (50+ yrs)	Edentulous
627	Indeterminate	2–3 yrs	Nearly empty
628	?		
629	Indeterminate	Adult	
630	Female	Indeterminate	Probably included a finger ring; only copper mark was left
631	Female	Adult	Ht. 165 cm
632	Female	Adult (20–30 yrs)	Ht. 152 cm
633	Male	Adult (20 yrs)	Fully extended; ht. 171 cm
634	Female	Adult (25–30 yrs)	
635	Female	Adult	Severe dental disease, abscess, M1, crowns effaced,
636	Female	Indeterminate	
637	Female	Adult (30+ yrs)	Skull only
638	?	8–10 yrs	
639	?	?	Incomplete
640	—	—	Empty
641	Male	Adult (30–40 yrs)	Ht. 163 cm
643	Female	Adult	
644	Female?	Adult	
645	Child	1–3 yrs	
646	?	Indeterminate	

The Pottery from Khirbat 'Adasa — Pisgat Ze'ev

Kate Raphael

The excavations of an early modern Bedouin graveyard, established on the site of Khirbat 'Adasa — Pisgat Ze'ev (License B482/2019), were conducted by M. Yron on behalf of Y.G. Contract Archaeology Ltd, under the academic auspices of the Hebrew Union College, Jerusalem. The Bedouin graves penetrated into the earlier period structures of Khirbat 'Adasa, a village and a farmstead dating from the Hellenistic through the early Islamic periods. The pottery and the small

finds (stone vessels and metal artifacts) were not found in archaeological context and are therefore described and dated according to similar vessels found in the region of Jerusalem. The vessels include common, locally made cooking pots, a large number of storage jars, bowls, jugs and an oil lamp — all characteristic of rural and urban settlement across the country. The pottery is presented here by typological and chronological order.

Table 1. Roman and Byzantine cooking pots (not illustrated)

No.	Form	Locus	Basket	Description
1	Cooking pot	109	10009/1	Reddish-brown fabric. Wide grooved rim. Early Roman. Parallels: Jerusalem, Weksler-Bdolah 1998: 37:1.
2	Cooking pot	111	10061/2	Brick-red fabric. Strap handle. Late Roman. Parallels: Jerusalem, Weksler-Bdolah 2006: Fig. 8:6.
3	Cooking pot	102	10035	Brick-red fabric gray core. Short, curved neck rim hangs over the vessel wall. 6 th -7 th century CE. Parallels: Jerusalem, Magness 1989: Fig. 72.2.
4	Cooking pot	113	10048/3	Brick-red fabric. Short neck rim hangs over the vessel wall. Thick handle starts from the rim. Late Byzantine. Similar to the above (102, 10035).
5	Cooking pot	102	10056/5	Dark reddish-brown fabric. Thick, short neck rounded straight rim. Byzantine. Parallels: Jerusalem, Balouka 2013: Fig. 6.1:5.
6	Cooking pot	110	10040/2	Brick-red fabric. Fine triangular rim. Roman (?)
7	Cooking pot	115	10085/3	Dark brown fabric. Plain straight rim and neck. Roman (?).

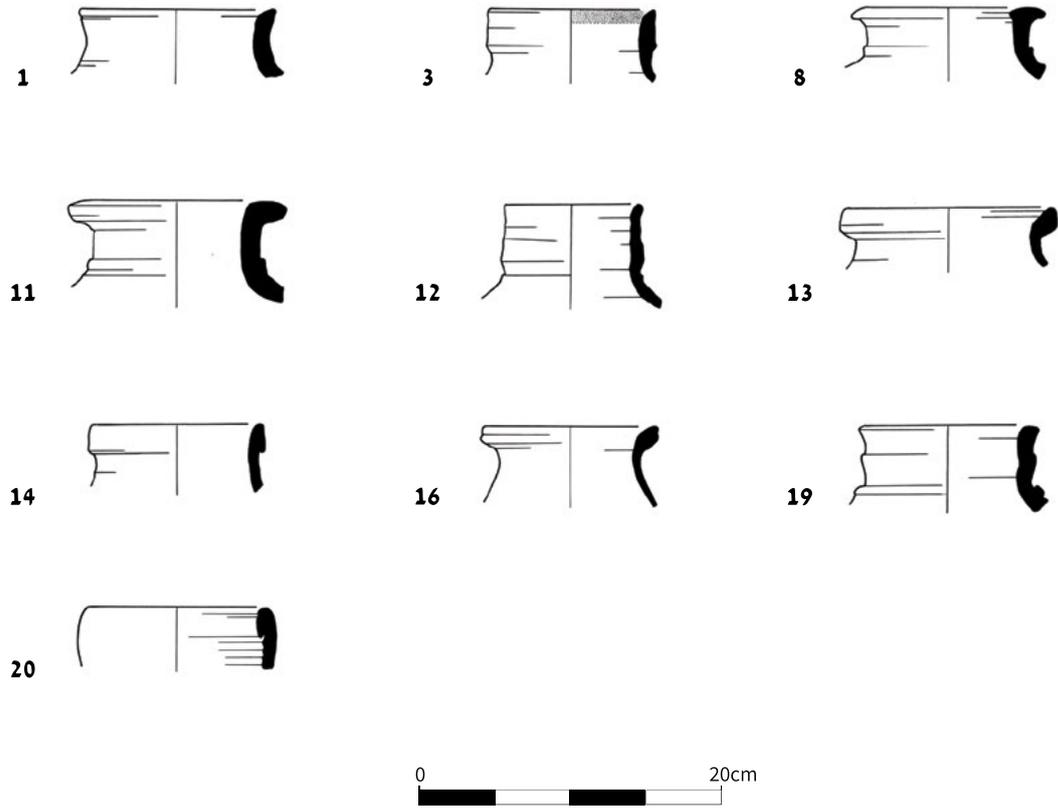


Figure 1. Hellenistic, Roman, Byzantine and Early Arab storage jars.

Figure 1. Hellenistic, Roman, Byzantine and Early Arab storage jars.

No.	Form	Locus	Basket	Description
1	Storage Jar	107	10066/2	Pink-brown fabric. Thick flaring rim. 3 rd century BCE-1 st century CE. Parallels: Nazareth, Alexandre 2012: 3.1:9; Jerusalem Sion and Rapuano 2014: Fig. 5:6.
2	Storage Jar	104	10022/1	Brown, pink fabric. Folded rim, groove at the bottom. Second half of the 2 nd century–early 1 st century BCE. Parallels: Jerusalem, Mizrahi et al. 2016: Fig. 8:4.
3	Storage Jar	104	10005/3	Brown, pink fabric with gray core. Thick folded rim with groove at the bottom. Second half of the 2 nd century–early 1 st century BCE. Parallels: Jerusalem, Mizrahi et al. 2016: Fig. 8:3.
4	Storage Jar	110	10081/2	Orange, brown fabric. Folded rim slightly flaring. Late Hellenistic. Parallels: Nazareth, Alexandre 2020: Fig. 29:11.
5	Storage Jar	106	10067/1	Orange-brown fabric. Flaring rounded rim short, curved neck. Hellenistic–Early Roman. Parallels: Khirbat 'Adasa, Khalaily and Avissar 2008: Fig. 5: 4.
6	Storage Jar	111	10061/5	Dark brown fabric. Thick folded rim. Hellenistic–Roman Parallels: Jerusalem, Gelman 2017: Fig. 5:2.
7	Storage Jar	102	10026/2	Dark brown fabric with lime grits. Straight long neck with slightly thickened everted rim. 1 st BCE-1 st CE. Jerusalem, Tchekhanovets 2013: Fig. 5.2:12
8	Storage Jar	101	10001/1	Rusty-reddish fabric. Short neck flat rim triangular in section. 1 st century BCE-1 st century CE. Jerusalem, Avner 2006: Fig. 3:9.
9	Storage Jar	105	10079/1	Orange-brown fabric light brown core white grit. 1 st century CE. Parallels: Jerusalem, Avni and Adawi 2015: Fig. 22:2
11	Storage Jar	102	10026/3	Reddish–brown fabric. Simple flat rim, rectangular in section, short neck. 1 st CE. Parallels: Jerusalem, Tchekhanovets 2013: Fig. 5.3:1
12	Storage Jar	111	10061/3	Fabric reddish–brown. Straight plain rim, high neck. Hellenistic–Early Roman. Parallels: Horvat 'Adesa, Khalaily and Avissar 2008: Fig. 5:7.
13	Storage Jar	102	10055/2	Fabric light reddish–brown. thickened, rounded or triangular rim and a short, slightly swollen neck. 1 st century CE. Parallels: Jerusalem, Tchekhanovets 2013: Fig. 5.16:17.
14	Storage Jar	107	10066/3	Reddish brown fabric. Rim thick folded over with ridge at the bottom. Early Roman. Jerusalem, Sion and Rapuano 2014: Fig. 5:1.
15	Storage Jar	112	10014/2	Reddish brown fabric. Straight cylinder neck with ridge at the bottom. 1 st CE. Parallels: Sion and Rapuano 2014: Fig. 5:4.
16	Storage Jar	110	10081/3	Light orange, brown slender flaring neck. 1 st century CE. Parallels: Jerusalem, Avni and Adawi 2015: Fig. 22:4.
17	Storage Jar	102	10002/3	Brown–reddish fabric. Cylindrical neck, fine ridge on the shoulder first half of the 2 nd –4 th centuries CE. Parallels: Jaffa, Gendelman 2020: Fig. 6:4.
18	Storage Jar	102	10027/1	Light brown–pink, white grit fabric. Thick cylindrical neck. First half of the 2 nd –4 th centuries CE. Parallels: Jaffa, Gendelman 2020: Fig. 6:3.
19	Storage Jar	102	10047/1	Light brown creamy fabric. High neck with a ridge at the base. 3 rd –4 th centuries CE. Nazareth, Alexandre 2012: 3.2:12.
20	Storage Jar	114	10029/4	Light brown fabric with white grit. Rim folded inward with an inner ridge. 5 th –6 th centuries CE. Parallels: Jerusalem, Balouka 2013: Fig. 6.5: 4.
21	Storage Jar	102	10027/2	Reddish–orange sandy fabric with white grit. Plain, coarse, short thick neck. 6 th –8 th centuries CE. Parallels: Jerusalem, Balouka 2013: Fig. 6.4: 6.

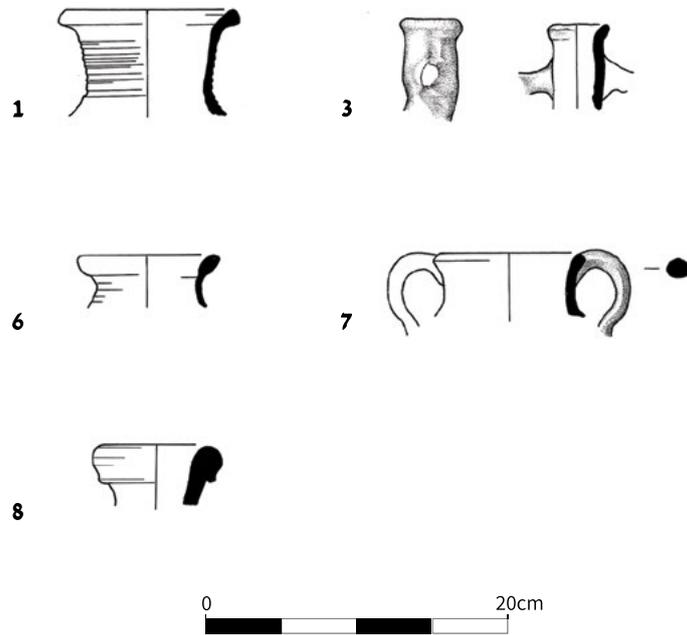


Figure 2. Hellenistic and Roman jugs and table amphorae.

No.	Form	Locus	Basket	Description
1	Jug	102	10055/1	Light brown fabric. Thick edged flaring rim. Straight neck with ridges. 1 st –2 nd BCE. Parallels: Jerusalem, Sandhous 2013: Fig. 4.2:7.
2	Table Amphora	102	100035/1	Light brown–cream fabric, square rim. 1 st century BCE. Parallels: Jerusalem, Mizrahi 2016: Fig. 8:6.
3	Flask	106	10087/1	Light-brown fabric. Two handles reach long neck with a slightly thickened rim. 1 st BCE–1 st CE. Parallels: Jerusalem, Tchekhanovets 2013: Fig. 5.3:5.
4	Jug	107	10019/1	Fabric light brown with gray core. Funnel-shaped rim, a narrower neck. 1 st century BCE. Parallels: Jerusalem, Sandhous 2013: Fig. 4.2:8.
5	Jug	104	10045/4	Fabric light brown–orange. Flaring thick rounded rim. Early Roman. Parallels: Jerusalem, Tchekhanovets 2013: Fig. 5.3:11.
6	Jug	107	10066/1	Fabric brown–orange. Flaring fine rounded rim. Similar to previous (104, 10045/4).
7	Jug	114	10029/2	Fabric Orange–brown. Handle attached to simple rim. Early Roman. Parallels: Gamla, Berlin 2006: 2.9:12.
8	Jug	101	10070/2	Dark rusty red fabric. Thick, short, rolled rim. mid–2 nd century CE or later.
9	Juglet	114	10029/3	Light brown–reddish fabric. Flat base, straight walls, no rim. Byzantine. Parallels: Ashqelon, Nahshoni 2009: Fig. 6.6.
10	Juglet	114	10029/1	Light orange–brown fabric. Pear shaped, only the base remains. Byzantine. Parallels: Ashqelon, Nahshoni 2009: Fig. 6:4.

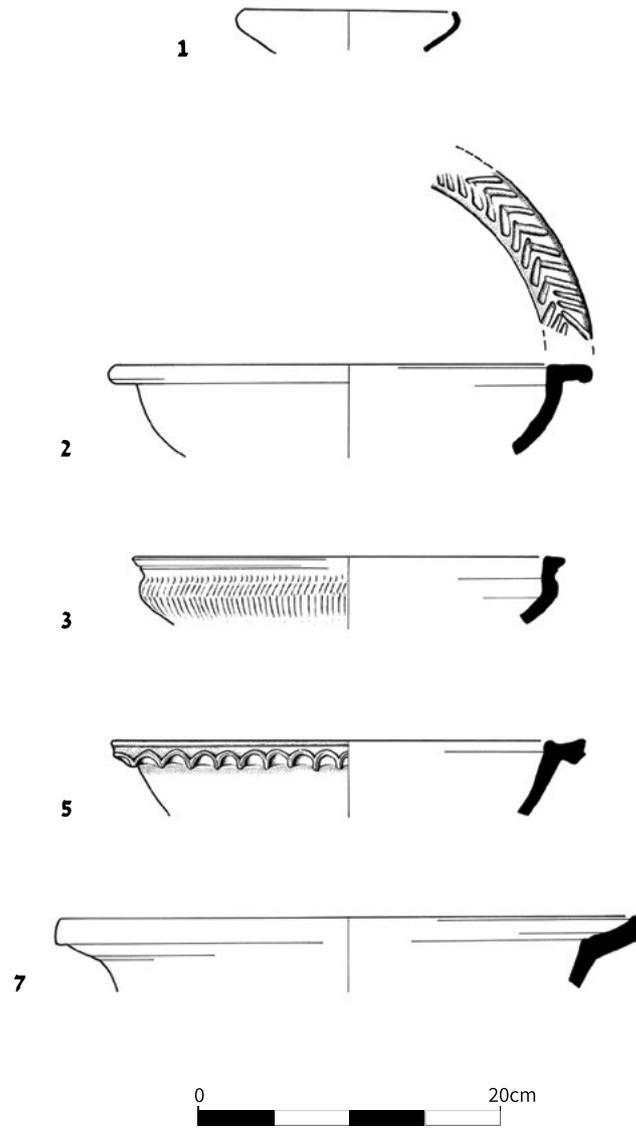


Figure 3. Hellenistic, Roman, Byzantine and Early Islamic bowls.

Figure 3. Hellenistic, Roman, Byzantine and Early Islamic bowls.

No.	Form	Locus	Basket	Description
1	Bowl	115	10085/1	Reddish-brown fabric. Small, plain, thin, well-fired ware with an in-curved rim. Hellenistic. Parallels: Jerusalem, Sandhous 2013: Fig. 4.1:2.
2	Bowl	115	10050/2	Light brown-orange fabric. Wide flat rim with incised v-shaped pattern. Early Roman. Parallels: Jerusalem, Sion and Rapuano 2014: Fig. 5:1.
3	Bowl	102	10071/4	Orange-brown fabric. Flat short rim concave. Fine rouletting on the outside. Late Byzantine. Parallels: Jerusalem, Balouka 2013: Fig. 6.6: 1.
4	Bowl	112	10014/3	Brown-orange fabric. Rounded rim with groove below. Byzantine. Jerusalem, Zilberbod and Amit 2010: 5:20.
5	Bowl	113	10073/1	Orange-brown fabric. Wide rim with shallow channel and wavy plastic decoration. 6th-8 th century. Parallels: Khirbat 'Adasa, Khalaily and Avissar 2008: 8.3.
6	Bowl	113	10048/2	Light brown fabric. Wide grooved flat rim. combed wavy decoration below the rim. 6 th -8 th century. Parallels: Khirbat 'Adasa, Khalaily and Avissar 2008: 8.1
7	Bowl	115	10090/1	Dark brown fabric dark gray core. Wide, thick, flat shelf rim. Byzantine Parallels: Ashqelon, Nahshoni 2009: Fig. 5:9.
8	Basin	108	10063/2	Orange-brown fabric. Arched rim basin. Byzantine. Parallels: Jerusalem, Balouka 2013: Fig. 6.5: 6.

Herodian oil lamp: Buff brown-pink fabric. Wheel made. Two incised lines across the nozzle. Wide elliptical hole for the wick. Parallels:

Jerusalem, Tchekhanovets 2013: Fig. 5.19:4–5; Hippos, Kapitaikin 2018: Pl. 4:6, Date: 1st BCE–1st CE.

SUMMARY

Although the pottery has no stratified archaeological context, and it was found scattered during the excavations of the Bedouin graves, the assemblage clearly belongs to rural domestic settings of the Hellenistic through the Early Islamic periods. The vessels are common, locally made cooking pots,

many storage jars, bowls, jugs, and an oil lamp. The storage jars are the dominant group. Although the ceramic vessels are from several periods, the majority date to the Hellenistic and Early Roman periods.

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An Iron Pruning Hook and Stone Vessels from Pisgat Ze'ev

Kate Raphael

The excavations of an early modern Bedouin graveyard, established on the site of Khirbat 'Adasa — Pisgat Ze'ev (License B482), were conducted by Michal Yiron on behalf of Y.G. Contract Archaeology Ltd, under the academic auspices of the Hebrew Union College, Jerusalem. The Bedouin graves penetrated down to the earlier period structures of Khirbat 'Adasa, a village and farmstead dating to the Hellenistic through the early Islamic periods. The pottery and the small finds (stone vessels and metal artifacts) were not found in stratified contexts and are therefore

described and dated by parallels to vessels found in the region of Jerusalem.

Five fragments of limestone measuring cups, one limestone bowl, one limestone weight, one basalt grinding stone, and one limestone pestle were found during the excavations of the early modern Bedouin graveyard. Limestone vessels are known from many sites across the country. While it was once thought that the limestone vessel industry declined and vanished after the Bar Kokhba revolt (135 CE), recent excavations and research has shown that they continued well after this date (Adler 2017).

Table 1. Measuring cups and a bowl.

No.	Form	Locus	Basket	Description
1	Limestone measuring vessel	110	10016/289	Fine base, rim and handle
2	Limestone measuring vessel	109	10042/292	Base and walls
3	Limestone measuring vessel	102	10055/299	Crude base
4	Limestone measuring vessel	111	10092/300	Crude Base
5	Limestone measuring vessel	110	10016/290	Crude Base
7	Limestone bowl	110	10065/1	Disc base

Limestone vessel measuring cup (L.110, B.10016/289), Fig. 1

The best-preserved vessel has a complete base and remnants of the walls. Most of the body is missing. Rectangular handle and a fragment of the straight, plain rim. Carving marks can be seen clearly on

the external walls. Diameter of the base: 9.5 cm., thickness: 7 mm.

Date: Early Roman.

Parallels: Mount Scopus, Amit et al. 2008: 20.15; Jewish Quarter, Geva 2010: Fig. 5.4:3,6; Khirbat Burnat, Korenfeld 2010: Fig. 5.

Stone scale-weight (L.110, B.10065/293),
Fig. 2, left

Diameter: 4.1 cm, thickness: 2.3 cm, weight: 79gr
Early Roman, 1st century BCE to 1st century CE.
Parallels: 525 weights of this type were found in
the excavations of the Jewish Quarter (Reich 2006:
Pl. 18.6:125). One was found in Gamla (Reich
2016: 83–84).

Pyramid-shaped basalt grinding stone
(L.110, B.10065/245), Fig. 2, right

Coarse and porous, fits nicely in the palm.
Height: 6.1 cm, width: top — 7.4, bottom — 8 cm.

Ball-shaped limestone pestle (L.111,
B.10065/296).

Diameter: 5cm.

Iron pruning hook (L.112, B. 10039/1),
Fig. 3

Length: 13 cm, width: 3cm. Crescent shaped
blade with tonged handle. Badly corroded, point
missing. Traces of wood can still be seen on the
tonged handle. This tool type has barely changed
throughout history. Parallels: Nahariya, Persian
or Hellenistic (Ovadia 1993: Fig. 6:2); Tel 'Ira,
Byzantine period (Goldsmith et al., 1999: Fig.14:
18, 13).



Figure 1. Limestone measuring cup.

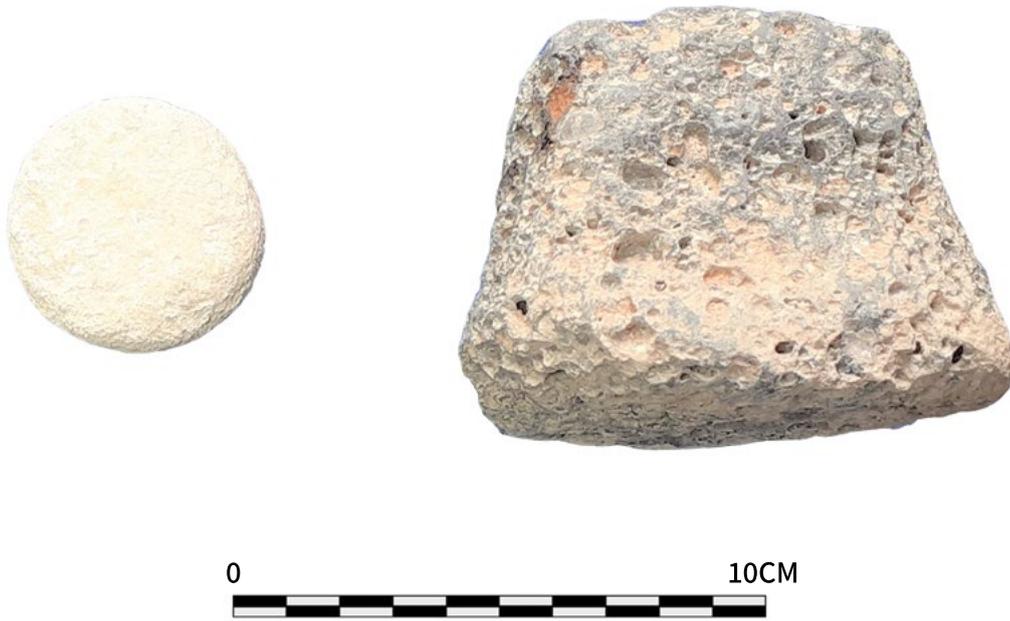


Figure 2. Limestone weight (left) and basalt grinding stone (right).



Figure 3. Pruning blade.

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Kfar Kama: An Empty Roman Tomb

Kate Raphael and Eran Meir

In December 2020, a salvage excavation was carried out at Kfar Kama, license No. B497/2020, map coordinates 241798,736035 (Fig. 1). The excavation was conducted by K. Raphael on behalf of Y.G. Contract Archaeology Ltd, under the academic auspices of the Hebrew Union College, Jerusalem.

The Circassian village of Kfar Kama is located in the Lower Galilee, north of the road that leads from Kfar Tabor to Yavniel and down to the Sea

of Galilee (Route 767). Low hills, rich heavy soils, and basalt rock characterize the region. Numerous excavations have been conducted in the village of Kfar Kama and its surroundings since 1941. Previous excavations revealed a small 6th century CE church, in the old Circassian village (Makhoully 1941; Saarisalo 1963: 15–16; Saarisalo and Palva 1964: 3–15). More recent excavations (summer 2020) conducted by Nurit Feig, and Mordechai Aviam exposed a large, three-apse

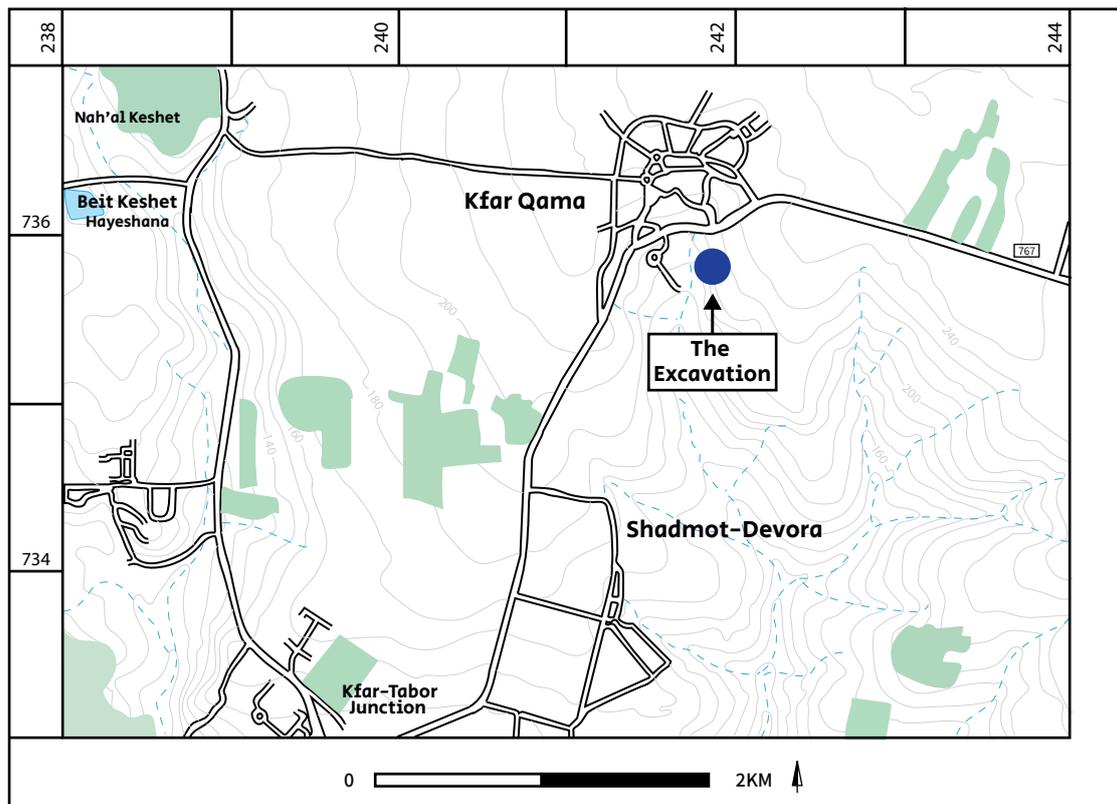


Figure 1. The Kfar Kama excavation site and the surrounding area.

Byzantine church located on a low hill, opposite the village, south of Route 767, where a new recreation park is currently being laid out. In addition to the two churches, several well-built Late Roman tombs have been excavated within the modern village of Kfar Kama and next to the

Byzantine church excavated by Feig and Aviam. The above fieldwork reveals that a large, well-established village existed here during the Byzantine period. The size of the Late Roman settlement is difficult to assess.

ROMAN TOMBS IN KFAR KAMA

Makhouly was the first to record well-built tombs constructed of chalk stones. His short notes, neat drawings, and photographs provide a detailed account of two tombs, orientated northeast-southwest (Figs. 2–3). He does not mention skeletons nor burial goods. He dated the tombs to the 4th century CE. Both tombs were destroyed before Makhouly arrived at the site (Makhouly 1941). Tzuri excavated a similar tomb, with three skeletons inside it, and he clearly states the tomb was

robbed. He dated it to the Talmudic period (Tzuri 1969: 8–9). In 1994, Ben-Nahum excavated two tombs, on the western side of the modern settlement. This tomb's orientation was west-east, and it contained a skeleton of an adult male. The burial goods included simple bronze jewelry, a bronze ritual shovel and an assortment of glass vessels (Ben-Nahum 2007: 104–105, Plan 1, Fig. 4). The tomb was dated to the 2nd–3rd centuries CE according to the glass vessels. In 2017, Turgeman

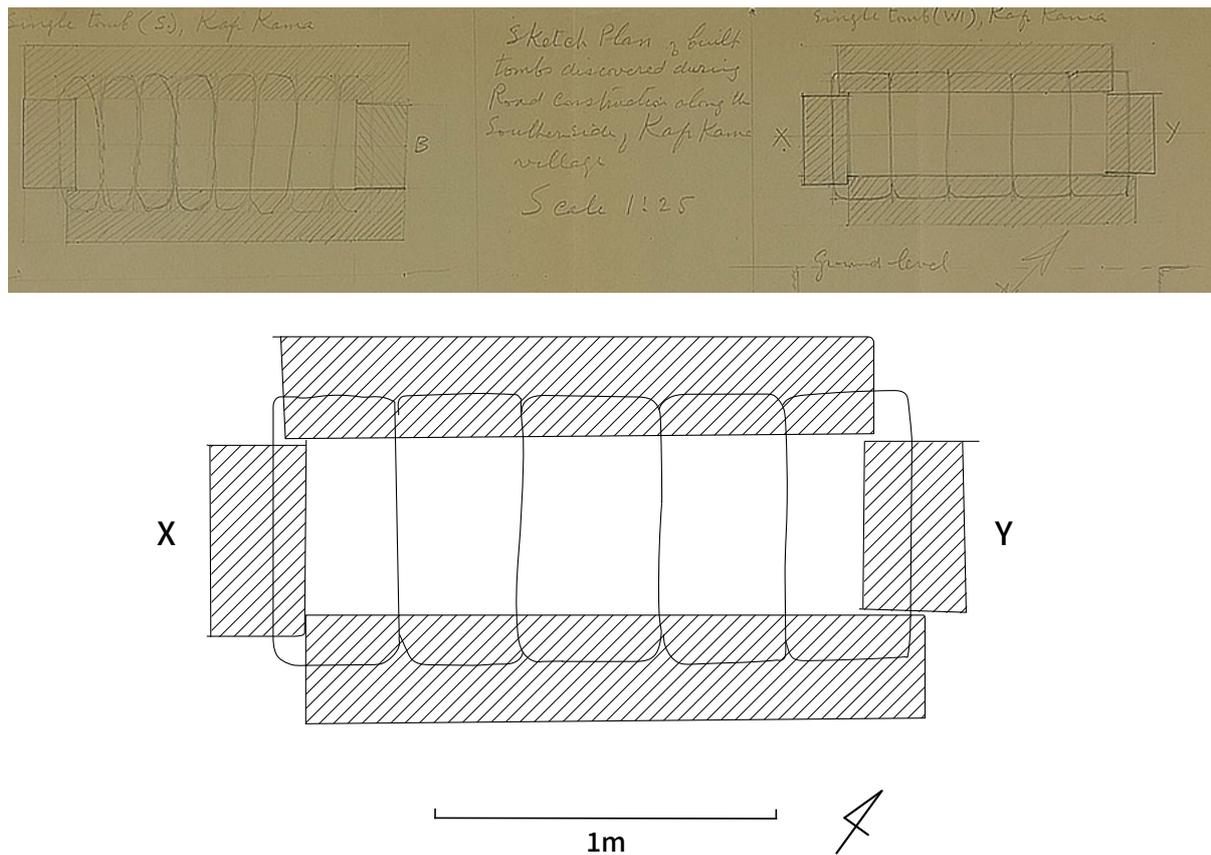


Figure 2. Kfar Kama tombs excavated by Makhouly in 1941.

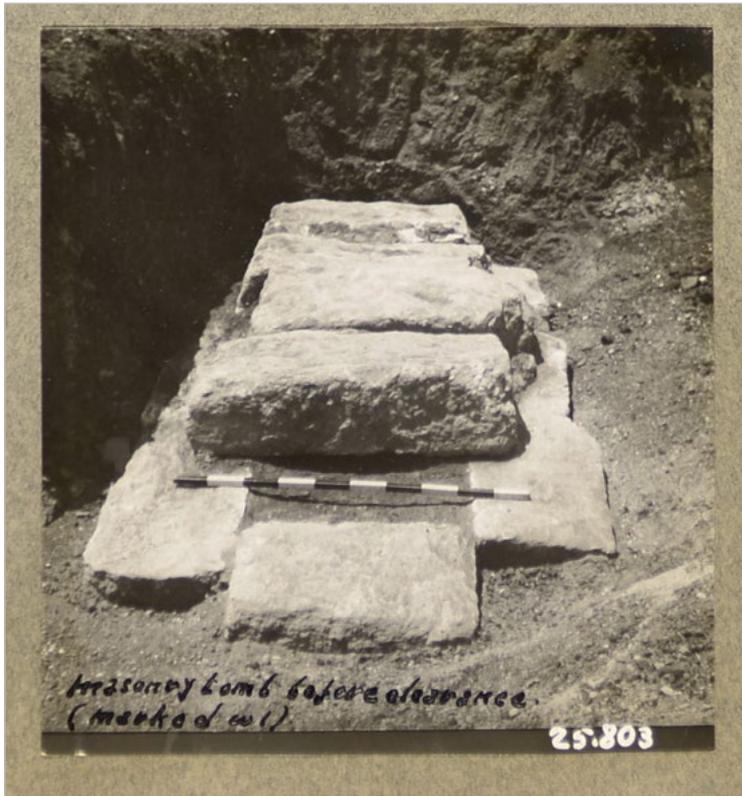


Figure 3. Kfar Kama tombs excavated by Makhouly in 1941.

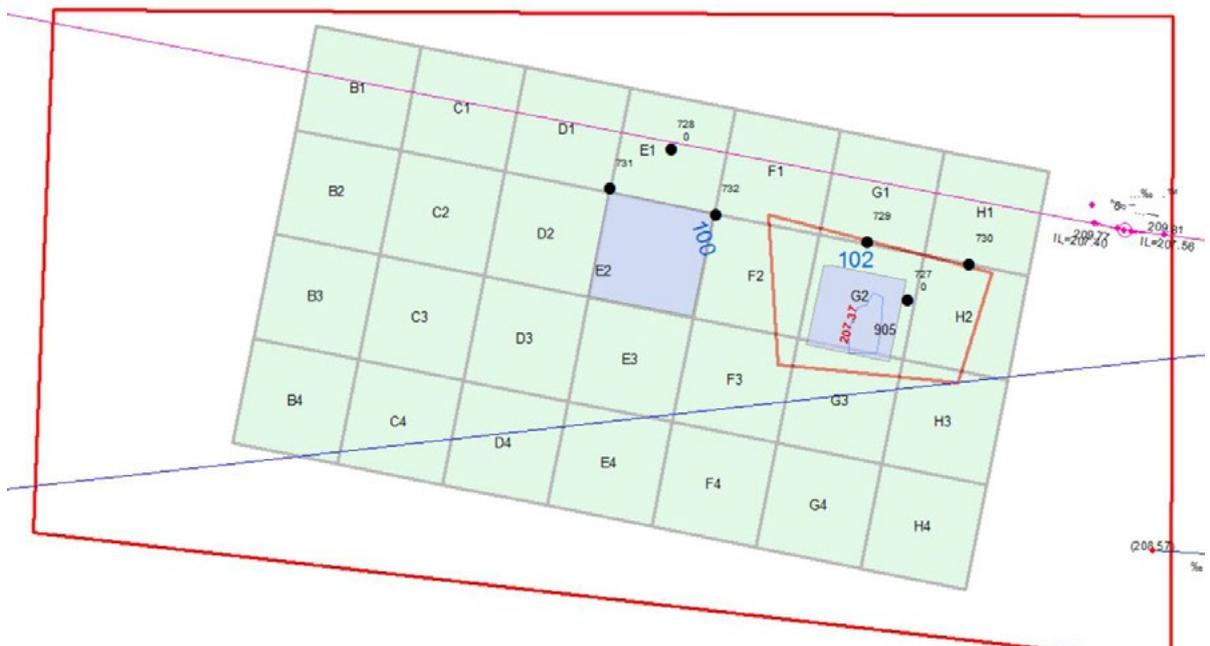


Figure 4. Kfar Kama, the excavated site (measurement and digital documentation using Geogenie software, Bnei Eli Etkes Ltd.).



Figure 5. The tomb as seen from the north.



Figure 6. Floor surface.



Figure 7. The remains (on the left) of the two stone slabs that covered the tomb.

excavated a similar tomb south of Road 767, next to the Byzantine church, the tomb's orientation being north-south. Based on its similarity to the tombs excavated by Ben-Nahum, Turgeman dated it to the Late Roman period (Zohar Turgeman, personal communication).¹

The tomb uncovered in the current excavation (Figs. 5–6), by Meir and Raphael, is similar to those described above. The structure was constructed on a gravel-like basalt layer. Although the region is dominated by basalt, the tomb was constructed of soft, porous chalk stones brought from the region of Nazareth. The tomb is 2.2 m long, 0.6 m wide and 0.45 m deep (Fig. 5). Five stone slabs (each slab measures 0.6 x 0.3 m) make up the level floor of the tomb (Fig. 6). The long walls are built from three stone slabs (0.45 x 0.73 x 0.34 m). The stone slabs that enclose the tomb

from its northern and southern ends are fragmented and badly preserved. Only two covering stones were found (Fig. 7). The latter are heavier and larger than the rest (0.85 x 0.34 x 0.20 m). Along the western side there was a line of basalt field stones that seems to have supported the western wall of the tomb. These fieldstones were oriented north-south. The tomb must have been robbed in antiquity and left open, allowing the dark heavy silt to fill it over the centuries. A few worn non-diagnostic sherds were found in the fill. As noted by others, the quality of the masonry is high. The stones were finely dressed only on the side that faces the inside of the tomb. The external sides were roughly dressed. The tomb was completely dismantled; no pottery or burial goods were found in the fill or below the tomb indicating it was robbed in earlier centuries.

SUMMARY

The necropolis of the Late Roman-Byzantine village at Kfar Kama stretched over a wide area, from the western perimeter of the modern settlement to the modern road and south of the road. All the graves are of a similar form and size — rectangular box-like structures made of well-dressed chalk slabs. Similar graves were found across the country in both urban and rural settlements (Jerusalem: Avni 2005: Fig. 3; Jaffa: Jakoel 2015: Fig. 2:1; Hafetz Haim: Arbel 2011: Fig. 9; Or Aqiva: Lipkunsky 1998: 53–54). This type of grave was prevalent across the country during

the Late Roman and Byzantine periods, and it appears to have served the lower- and middle-class population. Unlike the tombs in Kfar Kama, such tombs are usually built from local stone and their orientation varies considerably from site to site and within each necropolis. While the tomb we excavated was empty, simple burial goods, such as glass vessels and jewelry are often found next to the skeleton. In most cases only a single person was buried in each grave, but occasionally, more than one skeleton is found.

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Tell Musa Shahin — al-Kubeibeh: a 19th-20th Century Village

Achia Kohn-Tavor, Rona S. Avissar Lewis, Ron Kehati

In the years 2014–2016 we conducted several salvage excavations of al-Kubeibeh, a 19th-20th century village in the precinct of the Kfar Gvirol neighborhood of the city of Rehovot.¹ The remains of several residential buildings and the village mosque were excavated.

Tell Musa Shahin is a registered site, where the village of al-Kubeibeh (also spelled al-Qubeiba in the British survey and Mandate maps), was located. The village name means “small dome”, which describes the structure of the hill upon which the village is located, or

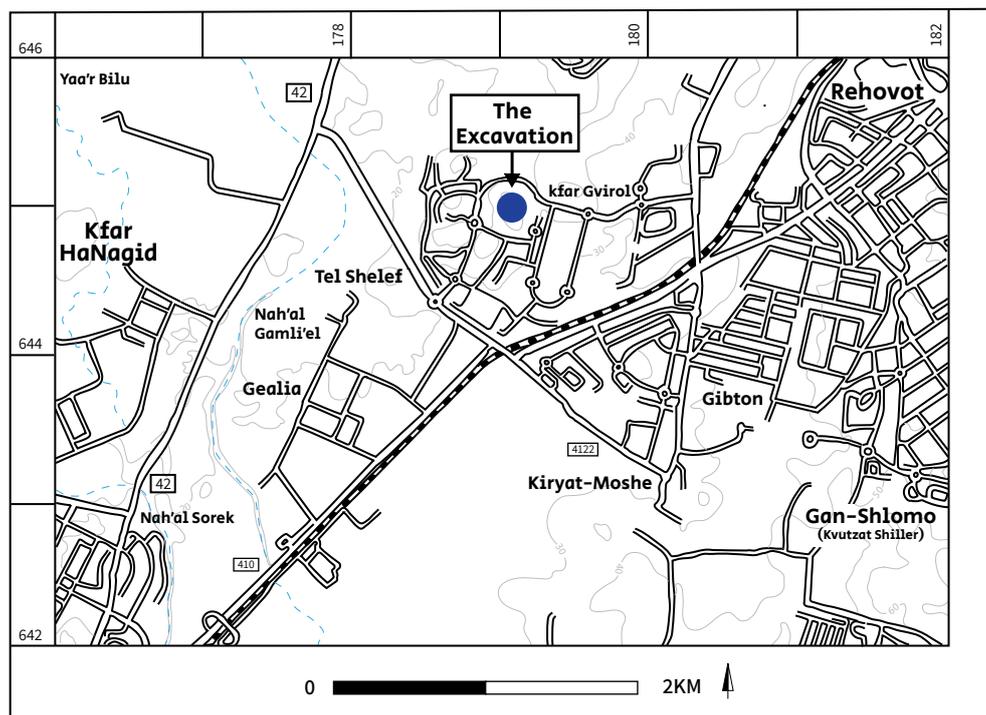


Figure 1. Location map.

¹ The excavation was directed by Achia Kohn-Tavor, Rona S. Avissar Lewis, and Ron Kehati of Y.G. Contract Archaeology Ltd, under the academic auspices of the Hebrew Union College-Jewish Institute of Religion, Jerusalem (Permits B422/2014, B431/2015, B438/2015). Areas were supervised by Ariel Vinderblum. Surveying was carried out by J. Rosenberg, E. Cohen, and A. Kohn-Tavor and photography by the excavators. The expedition's staff included A. Tsipin (pottery drawings), K. Raphael (Ceramic finds), and N. Amitai Preiss (numismatics).

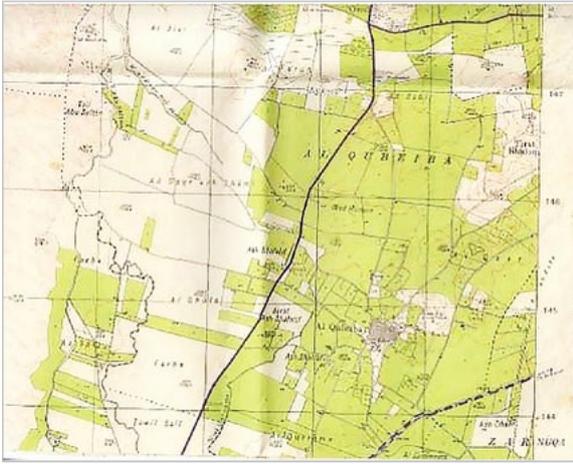


Figure 2. The village al-Kubeibeh and its surrounding lands (Survey of Palestine 1943a).

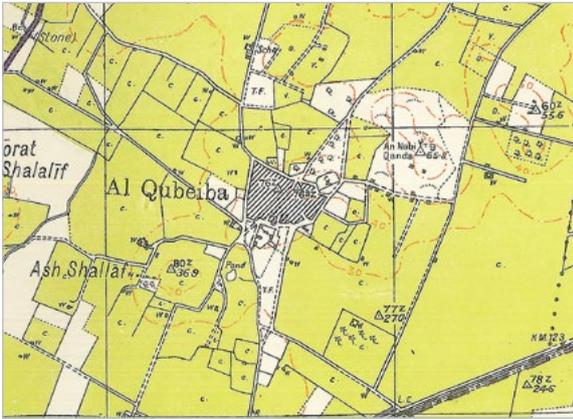


Figure 3. Al-Kubeibeh, Ash Shallaf and Nebi Qanda (Survey of Palestine 1943a).



Figure 4. The tomb of Nabi Ganda (or Qanda), 1940 (Sites of the War of Independence, Kubeibeh).

perhaps the dome of the nearby *Weli* (sheikh's tomb) Ganda. The village is situated on a hillside, at the southern end of the local kurkar ridge, next to the breach created by the Sorek stream (*Nahal Sorek*). To the west, south and east of the kurkar hills are fertile alluvial soils that have been cultivated for generations. The map from the Mandate period indicates dozens of wells in the fields and orchards that surrounded the village (Figs. 2–3), which provided water to the fields and the flocks. To the west of the village was the coastal road (now Route 412), and to the east was the Yavne–Ramla road. During World War I, a railway line was constructed east of the village. The village was inhabited until recently.

About half a kilometer west of the site is Tel Shelef, which was inhabited during the Middle Bronze Age II and up until the Persian period. About three hundred meters east of the village is a hill with a water reservoir on it, constructed on the tomb of a-Nabi Ganda (or Qanda). For many generations the tomb was identified as the burial site of Gad ben Ya'akov (without any archaeological evidence; Fig. 4). The tomb was destroyed both by quarrying and by construction of the reservoir. During previous excavations, remains of walls, a cistern, tombs, and sherds from the Early Islamic, Mamluk, Ottoman and modern periods were unearthed near the sheik's tomb (Fischer and Taxel 2006).

Another unnamed site, located about half a kilometer south of al-Kubeibeh, gave up sherds from the Byzantine and Early Islamic periods (al-Qubeiba [Southeast], Fischer & Taxel 2008: 27). Two other rescue excavations at this site uncovered finds from the Persian, Hellenistic, Late Roman, Byzantine, and Umayyad periods. Irrigation canals dating to the Ottoman period were also discovered, but we think they may also date to the Mandatory period (Volynsky and Talmi 2011; Volynsky 2014).

Sketch II.

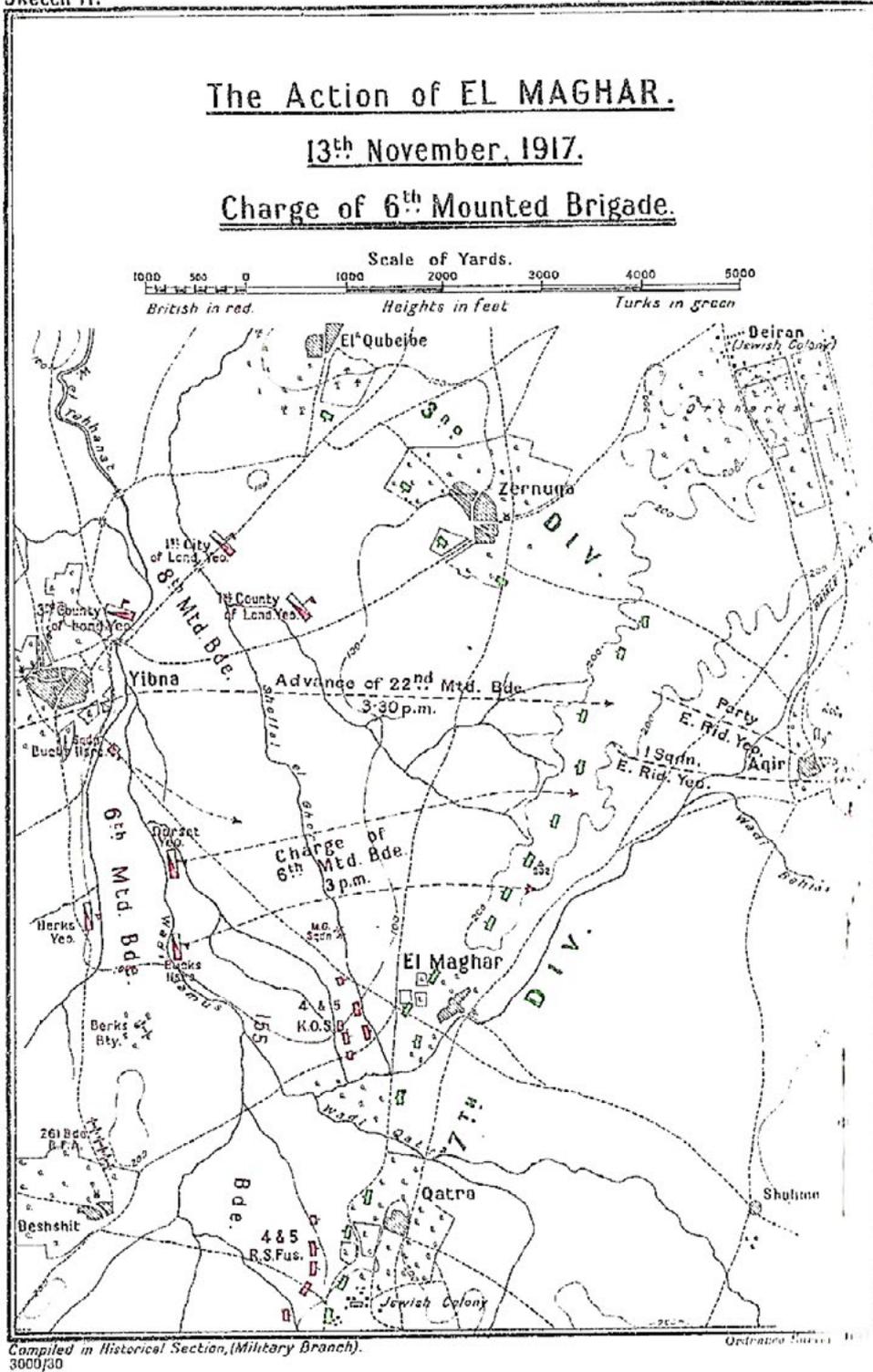


Figure 5. Map of the Battle of Maghar (Falls 1992, Sketch II).



Figure 6. The excavation areas marked on the 1946 village map (Survey of Palestine 1943b).

In the current excavations, we found a few Iron Age sherds, probably brought from Tel Shelef, to the south, and several marble fragments, originating in the unnamed site to the south.

Historical Background

The village of al-Kubeibeh appears on the Palestine Exploration Fund (PEF) map published in 1880. South of the village, the Battle of Maghar took place on November 13, 1917 (Fig. 5).

The village was mapped and documented in 1946 as part of the Mandate Village Survey (Fig. 6). The structures uncovered in the current excavations can be located on this map. Following the War of 1948, immigrant families from Yemen and Morocco were housed in the village buildings (Benjamin 2006). Over the years these buildings were renovated and rooms were added. Most of the village land was sold for development as part of an evacuation-construction program. Evacuation

and construction progressed gradually, during which time the area was inspected by the Israel Antiquities Authority. Selected building remains were then excavated.

The antiquities registry of the present site indicates the remains of buildings, agricultural installations, and sherds from the Byzantine and Early Islamic periods. A survey conducted by Fischer and Taxel (2006) registered sherds from the Early Islamic, Medieval, Ottoman and modern periods, as well as marble items. Several salvage excavations have been conducted in the village of al-Kubeibeh, all within a compound in the southern part of the village designated for new residential buildings. Buildings from the Late Ottoman and Mandatory periods were found in these excavations (Jakoel 2012; Arbel et al. 2013; Jakoel 2016). Several tombs associated with the village were excavated south of the current excavation (Degot 2005).

THE EXCAVATION

Area A

Area A is located at the southern edge of the village. The main finds in the excavation are the foundations of buildings from the British Mandate, which were in use until the early 2000s, and appear on current maps (Buildings A-D; Figs. 7–8). This is an interesting test case of an excavation that can be cross-referenced with modern maps.

The natural soil in the area is sandy brown *hamra*, which sometimes gets a gray tint from the organic matter that is washed into it from above. Several garbage pits were established prior to construction. In some places, walls seal the pits (Fig. 9). The pits contain ash, bones, metal fragments, glass, and pottery, all dating to the Late Ottoman or Mandate period. At a later stage, the village expanded into this area, and the use of the garbage pits stopped.

The buildings

Building A (12 x 7 m) was located in the southeastern part of the excavation area. It is a rectangular structure divided into two chambers (W1-W4). Its northern part was not excavated. The foundations, 0.1–0.3 m high, are made of small kurkar stones filling a foundation trench. Adjacent to the northern wall is a small section of floor made of smoothed concrete. This is the only floor that survived in Area A. A parallel wall (W5) was found west of Building A, but no connection was found between the two.

Building B, located at the center of the area, is the largest of the buildings (25 X 17 m). Its northern part extends beyond the excavation area. The construction method is similar to that of Structure A, and in places the foundations were strengthened with reinforced concrete containing seashells. The building is R-shaped, with two rows



Figure 7. Buildings in Area A in early 2000 and their location according to the government map website on Dec. 12, 2014.



Figure 8. Area A at the end of the excavation, general view to the west.

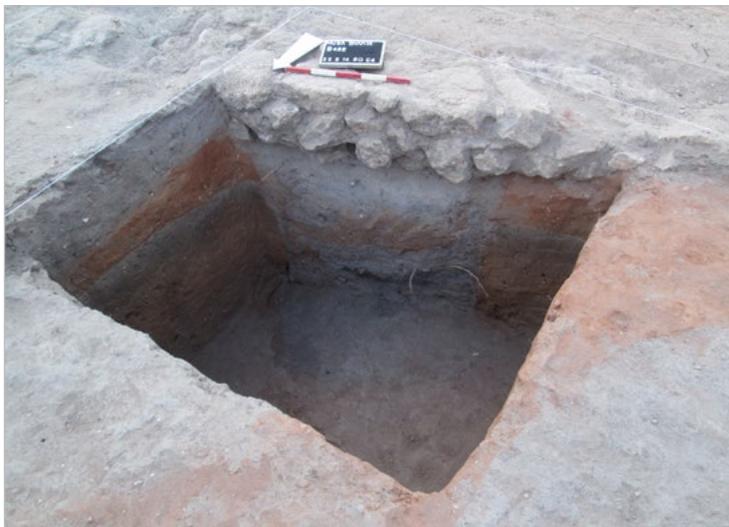


Figure 9. Area A, looking south: Square C4, Garbage Pit 112 sealed by Wall 2.

of rooms (W7-W11-W16) in the eastern wing and one row (W6-W8) in the southern wing. Next to the foundations was a plastered rectangular pit filled with fragments of floor tiles. The pit may have preceded the structure or may have been used during construction (L180).

Another room was later attached to the east side of Building B; it was built on foundations of dressed kurkar stones above the remains of a structure cast in concrete (W12-W13-W14). A similar addition was found in Area C1 (see below).

Three garbage pits were found inside and south of the building, into which barrels were sunk to serve as septic tanks, probably in the second half of the twentieth century (L144, L141, L141). The entire structure is surrounded on the east and south by a modern PVC sewer pipe, which drains into a sewer pipe located slightly south of the excavation (not shown; exposed in Squares F9-F8-D7-C5).

Located to the west and next to Building B, Building C was built in the same way (7 X 10 m). According to the latest maps (Fig. 7), Buildings B and C either formed one single building or were connected over the years. One row of rooms (W19-W22) was exposed, but its northern part exceeded the excavation area. In the foundations of Buildings B and C is a red *hamra* constructive fill.

The foundations of Building D were only partially preserved. This structure rests on the western side of Building C. The foundations are built of dressed kurkar stones in secondary use, fragments of kurkar stones, and concrete combined with an iron pillar. The infrastructure is comprised of small stones, beneath which is a gray fill containing many “Marseille” tile fragments. The superstructure was completely removed before the excavation.

An open area was revealed in the eastern part of the excavation field. The western part of the excavation was damaged by late garbage pits.

Area B1

Area B1 was covered with earth and foundations were put down before the excavation, a fact that damaged buildings and made the excavation process difficult. The fill was removed before the excavation. According to the village map and long-time neighborhood residents, these are the remains of the al-Kubeibeh mosque, at the southern end of the village (Fig. 6). The mosque was later converted into a synagogue, which collapsed in the 1980s (testimony of residents and Benjamin 2006: 87).

Most of the structure was demolished below floor level, leaving mainly its foundations. The depth of the foundations and the depth of the destruction correspond to the topographic slope, from northwest to southeast. The structure extends beyond the excavation area. Beneath the building, middens were found on the virgin *hamra* soil, on the outskirts of the 19th century village, dating prior to the erection of the mosque.

Two main elongated rooms were identified. Here too, foundations are constructed of small kurkar stones, usually bonded with mud and, in some cases, with gray concrete. The average depth of the foundations is about half a meter. Deep foundation pillars were found in the corners of the walls, in their center, and in the center of the rooms, reaching a depth of 1.5 m below the level of the floors. Some of the foundations abut these pilasters.

In the center of the western portion, small wall sections were preserved to a height of 0.25 m. The surviving sections are made of kurkar ashlar, coated with white plaster painted blue and green. The floors are made of gray plaster smoothed over a layer of yellowish plaster, with no substrate. In the corner of one of the walls was a square hewn stone — the base of a cross vault.

According to the size of the pilasters' foundations, it is possible to reconstruct a building with



Figure 13. Area B1, looking west: the corner of Walls W205 and W204, the base of the pillar and patches of the plaster floor.



Figure 14. Area B1, foundation of Wall 205 and the base of the pilaster (W261), looking east.

a southern room measuring approximately 7 x 14 m with two cross vaults, and a northern room measuring approximately 9 x 11 m with a single cross vault. In the sections that survived above the floors we found piles of rubble with finds dating from the middle of the 20th century to the 1980s. The many Marseille roof tiles in the rubble are evidence of the building's destruction.

Area B2

Prior to the excavation, a road that crossed the excavation area from east to west was removed. The road was paved with asphalt over a crushed limestone substrate, typical of the Mandate period. The road appears on the village map, across the southern side of the village. (Fig.6).

Middens occupied most of the squares, located on the outskirts of the village of al-Kubeibeh. The artifacts dated to the 19th and 20th centuries CE: Gaza Ware vessels, porcelain vessels, pipes, glass vessels, metal objects, and Marseille roof tiles.

Several modern pits (from the 1970s and 1980s) penetrated the midden fills. In the northernmost squares, we made out sections of kurkar stone foundations of three walls, filling excavated foundation trenches. The foundations were relatively wide (0.5–1.0 m), probably to better base the buildings on the unconsolidated midden fills. The foundations of these walls are integrated with the existing buildings alongside the excavation area (Fig. 15).

Area C1

This area is located at the top of the hill, at the northern edge of the village (Fig. 14).² The hill is of kurkar bedrock and on the eastern slope there was also some yellow sand. The excavation revealed planting pits, middens, and the foundations of buildings. The planting pits are of two types: those dug into soft sand (four, in Squares 2, 5, 9, 10), and those hewn into the kurkar rock (three, in Squares 3, 7, 8; Fig.10). In all of them a fill of sand mixed with gray organic matter was traced, as well as tree roots. A few sherds, including black Gaza Ware sherds, were found in the pits.

The building stood on the south-eastern part of the hill (Square 1, Fig. 14). Once again, only the foundations (of a similar technique to those



Figure 15. Area B2, The wall foundations in the northern area looking northeast.

described above) have survived. These foundations surrounded two adjoining rooms, most of which were exposed. In the northwest is a corner of another room of which only a small part remains. This corner is made of blocks of concrete with a seashell matrix, similar to the finds in Building B in Area A. Most of these foundations contained no finds, except for one concentration of sherds of Gaza Ware, Coarse Ware, and pipes.

Area C2

Area C stretches along a narrow east-west strip of open field, one of the few remaining fields at the site. To the north and east, the ancient strata were removed when the area was prepared for construction, probably in the 1980s. In the south, the remains were removed after a rescue excavation conducted by the Israel Antiquities Authority (Arbel et al. 2012).

Remains of buildings dating to the British Mandate period were found in the excavation. The buildings are constructed in the same methods as in other areas, i.e. walls made of medium-sized kurkar stones bonded with mud, coated with white plaster. The floors are plastered with smoothed cement plaster on a kurkar substrate and crushed seashells. Sections of a row of rooms were exposed,

² Prior to the rescue excavation, a test excavation was conducted at the site by the Israel Antiquities Authority (Jakoelel 2016).



Figure 16. Location of Areas C1 and C2: general view to the north, before the excavations of Area C2.

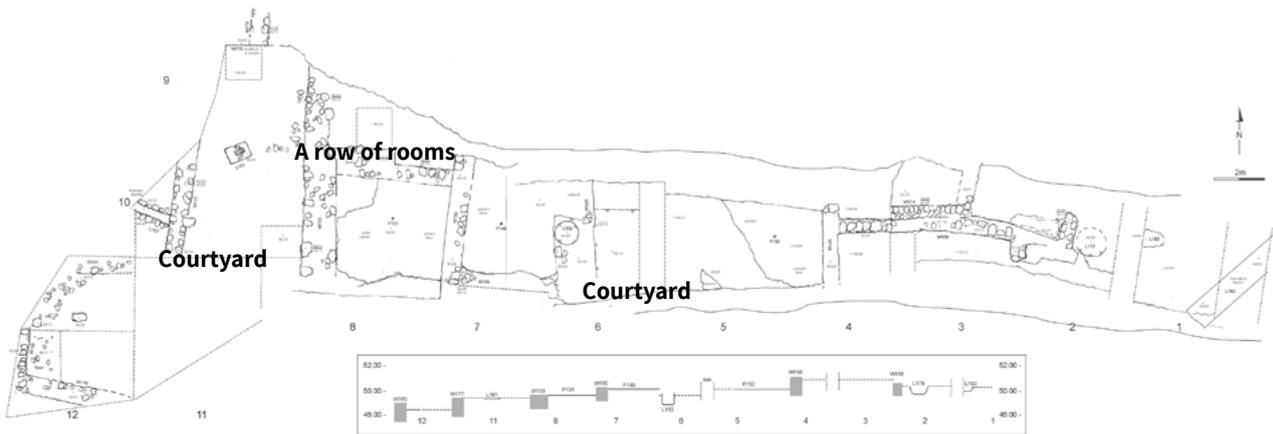


Figure 17. Plan of area C2.

with preservation ranging from the height of the foundations to 0.7 m above the floors (Fig. 17). No openings were found. It is interesting that the height of the floors is not uniform. Some of the walls were found without an external face, indicating that they were dug down into the fills that preceded the construction.

To the east and west of the rooms were open courtyards. A drainage ditch was found in the western courtyard, as well as a cast concrete pit toilet installation (Fig. 19). The rectangle was laid on a pit lined with concrete-cast rings. The superstructure of the toilets was not preserved. To the west of the courtyard, the foundations of another structure, below floor height, were partially

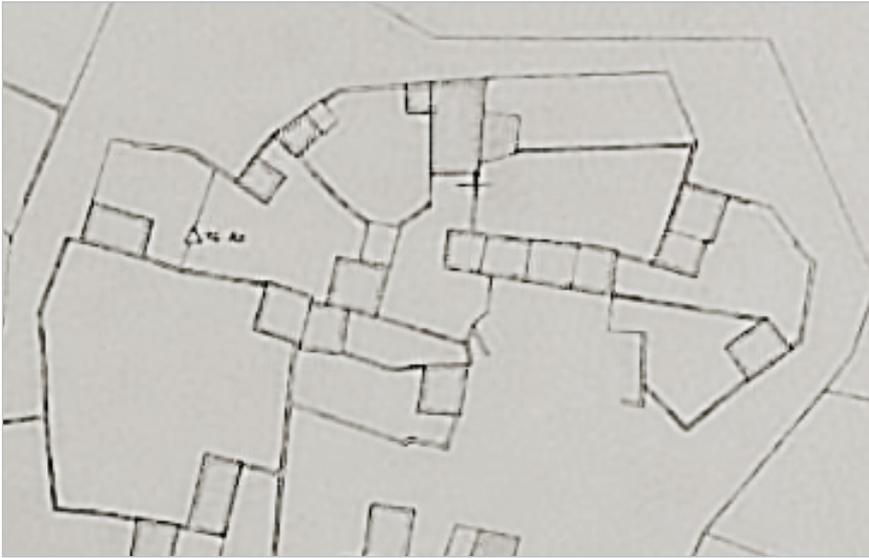


Figure 18. Area C2 showing the walls that were excavated against the background of the 1946 village map (Palestine Village Survey, Serial No. T/51/116).



Figure 19. Area C2, pit toilets looking northwest.



Figure 20. Area C2: a bowl buried in the rubble.



Figure 21. Area C2: a rifle bayonet.

exposed. To the east of the building was a simple kurkar stone wall that divided the courtyard to the north and south. The height of the courtyard was higher than the height of the floor of the eastern room. Adjacent to the courtyard wall to the north were the foundations of another building. This division of rooms and courtyards is evident in the plans of many villages in the village survey maps.

Due to the low preservation (0.2–0.5 m) it is difficult to follow the plans of the buildings, but the restoration of the building can be completed according to the village map from 1947 (Fig. 18). On the map one can identify the row of buildings from east to west, as well as the courtyards adjacent to them. It is interesting to note that according to the map, the rooms are not of the same ownership:

the western room belongs to the western courtyard. The second room belongs to the courtyard to the north. The third and fourth rooms belong to courtyards to the south (demolished in the past). The courtyard wall to the east delimits the courtyard of a fifth neighbor, whose house existed to the northeast. A section of the southern wall of this building was exposed adjacent to the courtyard wall. The foundations of the building to the west of the excavation area belonged to a neighbor who had a courtyard facing west. Without the historical sources at our disposal, it is likely that the row of rooms would have been interpreted as belonging to the same owner.

According to the finds above the floors, the building was demolished shortly after the War of 1948. The walls collapsed on the floors and pits were formed in the floors themselves. A few tools were found under the rubble (Fig. 18); the structure was emptied of most of the objects before its demolition. Among other things, several bullet casings from the years 1941 and 1943 were found, which were apparently fired when the village was conquered during Operation Barak (May 27, 1948). A rifle bayonet was also found, which may be related to this battle. The buildings in the other excavation areas continued to be used after the 1948 war and were demolished decades later; these produced no finds from the Mandate period.

Area D

Only two excavation squares were excavated in this area, with the buildings themselves removed prior to the excavation. The finds are similar to those of Area A. The small scale of the excavation and the poor preservation do not allow us to determine the nature of the architecture. A concrete floor (Floor 102), 3 cm thick with a substrate layer of pebbles, probably of a Mandate structure, was exposed in Square 1. This floor cuts a stone wall (three courses) next to which were late Gaza Ware vessels from the late Ottoman period. In



Figure 22. Area C2: parts of plumbing with the insignia of the British royal house.



Figure 23. Area C2: a plow and a spoon.



Figure 24. Area C2: a bullet casing manufactured in 1941.

the second square, sections of walls were

discovered, and above them a collapse, with fragments of Marseille roof tiles.

THE SMALL FINDS

The main finds are iron utensils of various types: cutlery, agricultural tools, hinges, locks, and plumbing parts (Figs. 22–24). In addition, many

glass objects were found, some of which have the name of the manufacturing company stamped on them.

SUMMARY

According to the artifacts gleaned in the excavation, the village of al-Kubeibeh was founded in the 19th century CE. The center of the village was located on the southern slope of the hill. We could not identify buildings that were founded

in the nineteenth century, but it is possible that some of the excavated buildings were founded then. In addition, planting pits were found, due to the inability of the local sand to support cultivated trees.

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- %D7%94%D7%9E%D7%A6%D7%A8%D7%99-%D7%91%D7%9E%D7%99%D7%A9%D7%95%D7%A8-%D7%94%D7%97%D7%95%D7%A3-%D7%94%D7%93%D7%A8%D7%95%D7%9E%D7%99%D7%92%D7%96/%D7%A7%D7%91%D7%99%D7%91%D7%94-2/). (Hebrew, accessed Dec. 15, 2021).
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The Islamic Coins from Tell Musa Shahin — al-Kubeibeh

Nitzan Amitai-Preiss

Three Ottoman coins were unearthed in the excavation of the site of Tell Musa Shahin — al-Kubeibeh, reported in this volume. Most of the remains unearthed during the 2014–2016 excavations are remnants of the al-Kubeibeh village, from the Late Ottoman and British Mandate periods. Parts of a few houses and the village's mosque were unearthed.

The three Ottoman period coins unearthed at the site, described below, precede the date of the establishment of the village. The coins could have been lost by people who came to visit the nearby tomb called Qabr al-Nabi Ganda, or Kanda (Kohn-Tavor, Avisar-Lewis and Kehati, this volume p. 231). To reiterate: all the coins gleaned were minted long before the 19th–20th century occupation of the village.

THE CATALOGUE (FIG. 1)

1. Ottoman, Selim II, 974 A.H./1566–1567 C.E. (reigned 974–982 A.H./1566–1574 C.E.), Haleb
Locus 232, Field no. 2044
Obv.:
سلطان
سليم شاه
بن سلطان
سليمن حان
—————
Rev.:
عز نصره
ضرب
حلب
سنة
974 = ٩٧٤
AR, Akche, 0.78 gr, 12 mm, ↓
Cf. Sultan 1977, 1: 123, No. 1186.
2. 16th–17th centuries, Misr
Locus 105, Field no. 1012
Obv.: مصر
المحروسة
Rev.: A stylized flower attached to a circle's edge with two leaves.
AE, 9.28 gr, 22 mm
Cf. Valentine 1911: 31, Pls. 14–15.
3. Probably 16th century, minted at Misr
Locus 229, Field no. 2035
Obv.: Worn.
Rev.: Since it is a very thick coin, it probably had a stylized flower attached to a circle's edge with two leaves.
AE, 7.83 gr, 19 x 18 mm
Cf. Kabaklari 1998: 420, Nos. 12-Msr-10 and 12-Msr-11.
Cf. Amitai-Preiss 2008: 222, No. 33.



Figure 1.

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Tell Musa Shahin — al-Kubeibeh: The Pottery from a 19th-20th Century Village

Kate Raphael

The excavations at the village of al-Kubeibeh revealed the foundations of buildings from the British Mandate period. The pottery displayed in this report dates from the 19th to the mid-20th century CE, and represents the Arab village community of al-Kubeiba. The dominant pottery in this assemblage is the common domestic Black Gaza Ware. Other vessels include *Ibriq* drinking jugs, storage jars, mortars for grinding small amounts of spices and herbs, and cooking vessels. All the above were locally produced and used throughout the Ottoman period and well into the first half of the twentieth century. All the vessels are well-known types and are found across the country in both urban and rural sites.

Alongside the common local Gaza Ware, is a small group of porcelain coffee cups and plates. The latter were imported from Europe to Palestine in the early 19th-20th centuries (for a short history

of hard-paste porcelain vessels see de Vincenz 2020). The coffee cups are decorated with white and blue, or multi-colored floral and geometric designs, against a solid white background. The plates have geometric or floral designs of various qualities. Most of the published porcelain vessel types were found in excavations of the Ottoman levels in Jaffa, a bustling Mediterranean port, published by de Vincenz (2020). Although porcelain was imported, it seems to have been relatively inexpensive and could be afforded by village folk. Although coffee was known since the 16th century, it is more than likely that as coffee became affordable and was widely consumed in villages, porcelain coffee cups followed suit and made their way into domestic village assemblages.

The following report is arranged in typological order.

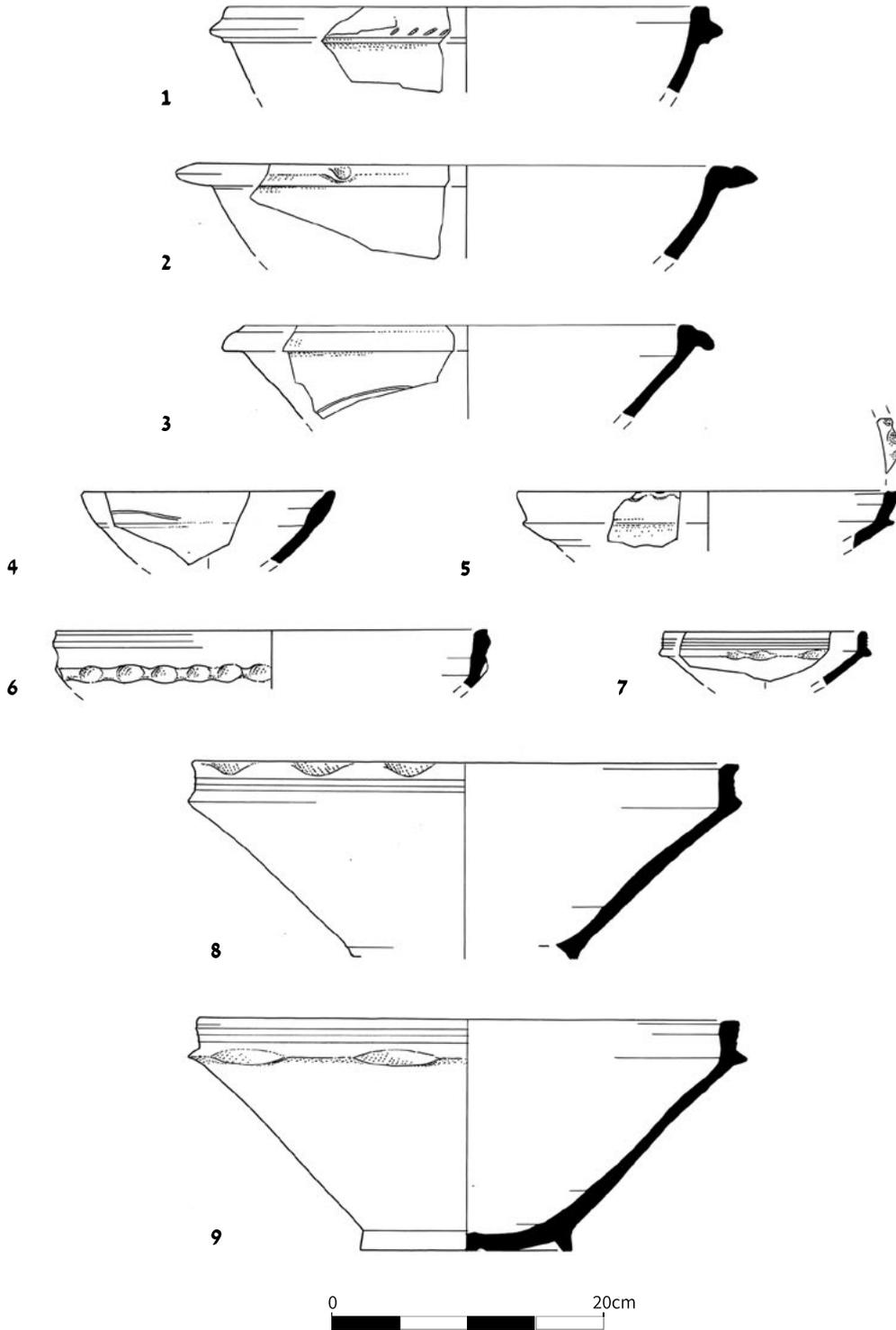


Figure 1. Decorated Black Gaza basins and bowls.

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No.	Form	Locus	Basket	Description
1	Basin	Topsoil	2040/1	Protruding step rim, incised lines along the outside of the rim. Parallels: Israel 2006: Fig. 183.
2	Basin	106	1007/1	Protruding rim triangular in section decorated with incised dots on the rim. Parallels: Jaffa; de Vincenz 2017b: Fig.2:7.
3	Basin	113	4016/1	Grooved rim incised dots along the rim. resembling the above.
4	Bowl- <i>zebdiye</i>	Topsoil	2030	Thick grooved rounded rim. Parallels: Israel 2006: Fig.207.
5	Bowl	Topsoil	2000	Dark gray fabric round thick rim combed with a wavy line decoration. Parallels: Jaffa, de Vincenz 2020: Fig.1: 1
6	Bowl	143	1058/2	Wide shallow bowl, ridges below the rim; thumb indentation, decorative band.
7	Bowl- <i>zebdiye</i>	143	1058/6	Ridged inverted rim. Parallels: Israel 2006: Figs. 210, 215.
8	Basin	156	1053/4	Fine ridges below the rim, decorated with incised half-moons on the rim. Parallels: Kfar Gvirol, Arbel et al. 2013: 9:16; Ashqelon, Kobrin 2019: Fig.6:1-2.
9	Basin	143	1058/1	Similar to the above, slightly different decorations.

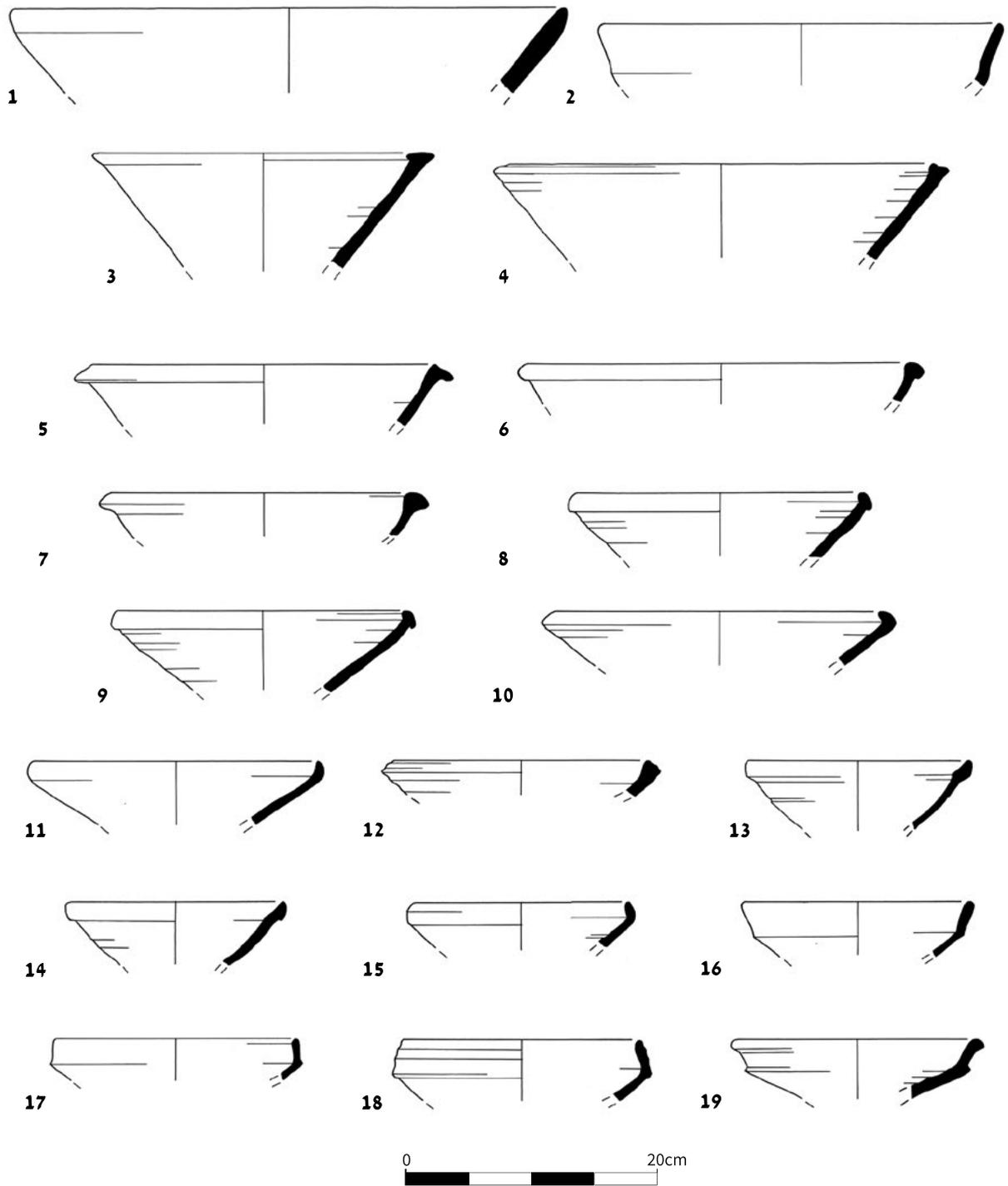


Figure 2. Black Gaza bowls and basins.

Figure 2. Black Gaza bowls and basins.

No.	Form	Basket	Locus	Description
1	Basin	1074/2	163	Plain rim, straight-angle walls. No parallels found.
2	Basin	2011/1	206	Plain rim, almost straight-walls, rounded lower section. Parallels: Jerusalem, 'Adawi 2013: Fig. 9:3.
3	Bowl	1064	148	Flat rounded rim. Parallels: Jaffa, Arbel 2016: Fig. 8:1.
4	Bowl- <i>masbarat</i>	1020/2	119	Thick grooved rim with a protruding ridge below. Parallels: Ashqelon, Peretz 2017: Fig. 6: 4.
5	Basin	1025/9	106	Used for kneading dough. The shelf rim is grooved Parallels: Israel 2006: Fig. 179.
6	Basin	1007/7	106	Resembling the above with slightly thicker rim. Parallels: Israel 2006: Fig. 187
7	Bowl- <i>kash- kul</i>	207/1	206	Thick triangular rim. Parallels: Jaffa, Kletter 2004: Fig. 10:2.
8	Bowl	1007/3	106	Straight walls, thick rim, similar to vessel below.
9	Bowl	1025/4	106	Straight walls groove under the rim. Parallels: Israel 2006: Fig. 191.
10	Bowl- <i>kash- kul</i>	1025/8	106	Inverted rim. Parallels: Israel 2006: Fig. 220
11	Bowl- <i>kash- kul</i>	1058/3	143	Inverted rim slightly pointed edge. Similar to no. 7.
12	Bowl	1025/10	106	Thick rim and walls. Relatively shallow vessel.
13	Bowl- <i>kash- kul</i>	1014/3	113	Thick rounded rim. Parallels: Israel 2006: Fig. 219.
14	Bowl- <i>kash- kul</i>	1014/3	113	Thick rounded rim. Parallels: similar to previous vessel.
15	Bowl	2047/2	Topsoil	Inverted, rounded rim. Parallels: Jaffa, de Vincenz 2017b: Fig. 2: 5.
16	Bowl	2036/1	234	Plain rim, upper part of the bowl has almost straight walls. Lower part curved. Parallels: Israel 2006: Fig. 212.
17	Bowl	1016/3	113	Plain straight rim. Parallels: Israel 2006: Fig. 210.
18	Bowl- <i>zeb- dyia</i>	1024	Topsoil	Ridged inverted rim. Parallels: Israel 2006: Fig. 187.
19	Bowl- <i>kash- kul</i>	2047	Topsoil	Rim flaring outward with a ridge below. Parallels: Israel 2006: Fig. 225.

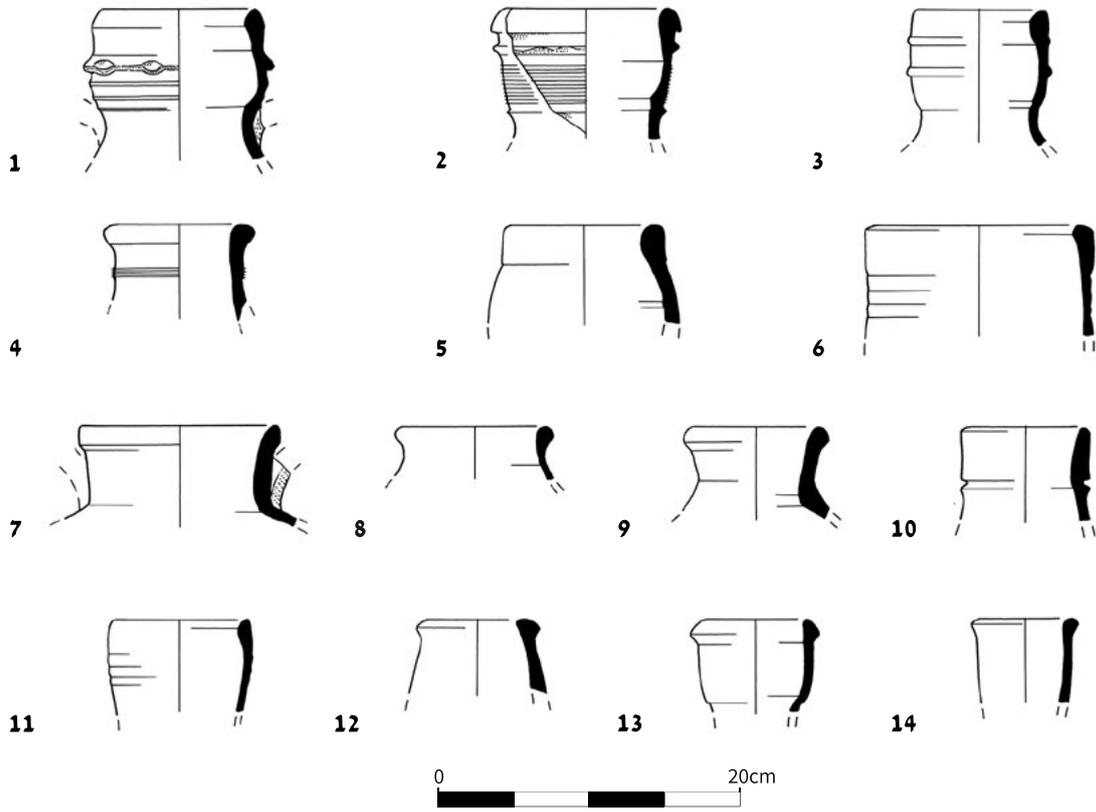


Figure 3. Storage jars and jugs.

Figure 3. Storage jars and jugs.

No.	Form	Basket	Locus	Description
1	Jar- <i>jarra</i>	1040	Topsoil	Prominent ridge below rim. Handle stretching from the base of the neck to the shoulder. Parallels: Israel 2006: Fig. 59.
2	Jar- <i>jarra</i>	1166	Topsoil	Prominent ridge below rim and fine grooves along the neck. Parallels: Jaffa, de Vincenz 2020a: Fig. 1:3.
3	Jar- <i>jarra</i>	1025	106	Thick rim, long cylinder neck slightly swollen. Parallels: Israel 2006: Fig. 61–62.
4	Jar- <i>Assaliya</i>	0000	237	Used for carrying water. Thick rim with an almost straight neck. Parallels: Israel 2006: Fig. 84.
5	Jar	0000/3	237	Thick rounded rim slightly swollen cylinder neck.
6	Jar	1069/2	160	Storage jar, used according to Israel for storing drinking water. Parallels similar but not identical: Israel 2006: Fig. 88.
7	Jar	2023	Topsoil	Short slightly flaring neck with handles that start at the bottom of the neck and stretch to the shoulders. Parallels: Jerusalem, 'Adawi, 2013: Fig. 9:4.
8	Jar	1020/3	119	Short neck thick rounded rim Parallels: Jaffa, Arbel 2016: Fig. 8:4.
9	Jar	2032/1	Topsoil	Short neck thick rounded rim Parallels: Ashqelon, Peretz 2017: Fig. 6:24.
10	Jar	2014	Topsoil	Wide band rim, with a groove directly below it.
11	Jar	1025/7	106	Thick rim slightly swollen cylinder neck with grooves. Parallels: Jaffa, Arbel 2016: Fig. 8:5.
12	Jar	2042	Top soil	Rounded rim plain slightly swollen neck Parallels: Ashqelon, Peretz 2017: Fig 6:38.
13	Jug- <i>ibriq</i>	1047/3	152	Rim triangular in section. Neck slightly swollen Parallels: Israel 2006: Fig. 138.
14	Jar	1020/1	119	Narrow slender neck slightly flaring rim Parallels: Ashqelon, Peretz 2017: Fig. 6:38.

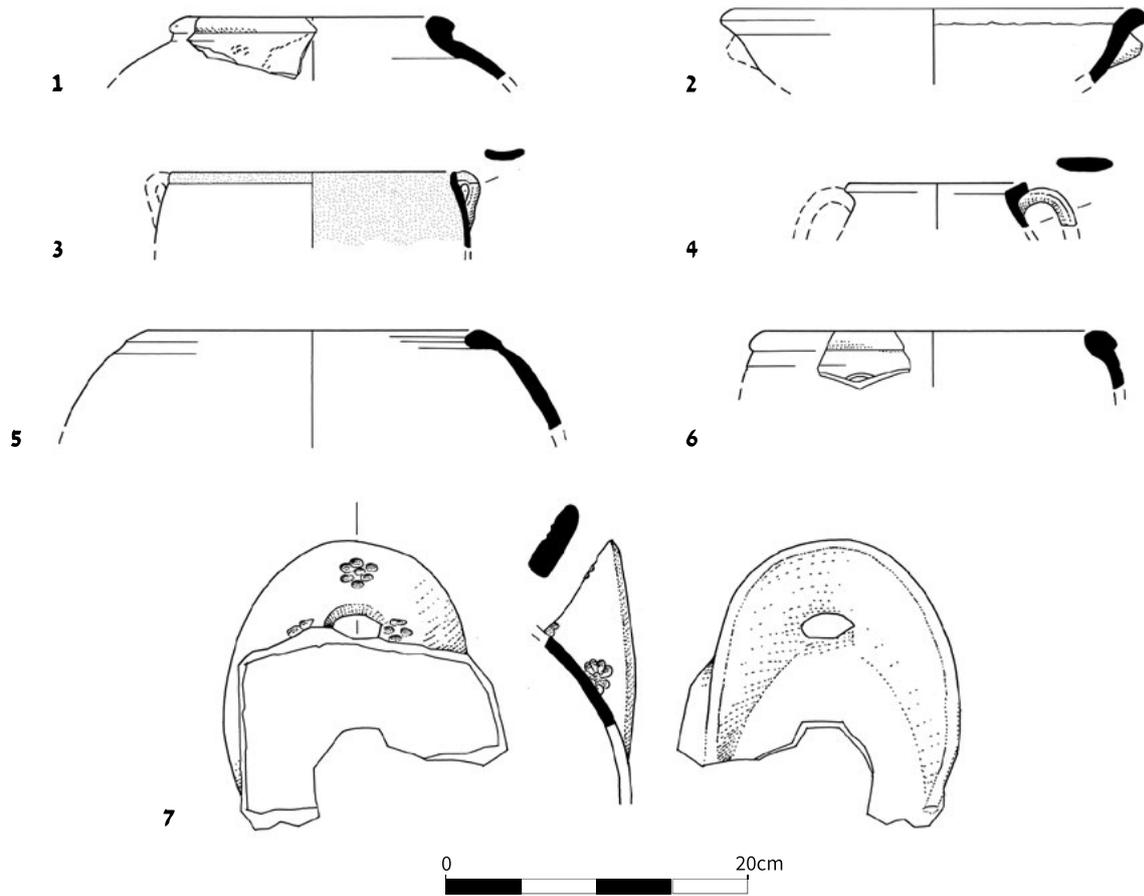


Figure 4. Cooking pots.

No.	Form	Basket	Locus	Description
1	Cooking pot	1025/2	106	No neck, thick rim, globular body. Similar vessels are known from the late Mamluk period and continue into the Ottoman period. Parallels: Safed, Dalali-Amos and Getzov 2019: Fig. 59:2.
2	Frying pan	2027	Topsoil	Short neck, thick rim, globular body with horizontal handles. Similar vessels are known from the late Mamluk period and continue into the Ottoman centuries. Parallels: Safed, Dalali-Amos and Getzov 2019: Fig. 58:2.
3	Cooking pot	1010	Topsoil	Thin very short neck, handles begin at the rim and are very small. Parallels: Israel 2006: Fig. 246
4	Cooking pot- <i>Burnije</i>	1035	Topsoil	Angled rim handle starting from below the rim. Parallels: Israel 2006: Fig. 248.
5	Cooking pot	2036/1	Topsoil	Whole mouth thick rounded rim. Globular body.
6	Cooking pot	2047/1	240	No neck, thick rounded rim. Parallels: Ramla, Stern and Toueg 2016: Fig.6:3.
7	Cooking pot-handle	1157	150	Large ear shaped cooking handle. Parallels: Ramla, Stern, Toueg and Shapiro 2019: Fig. 58:9.

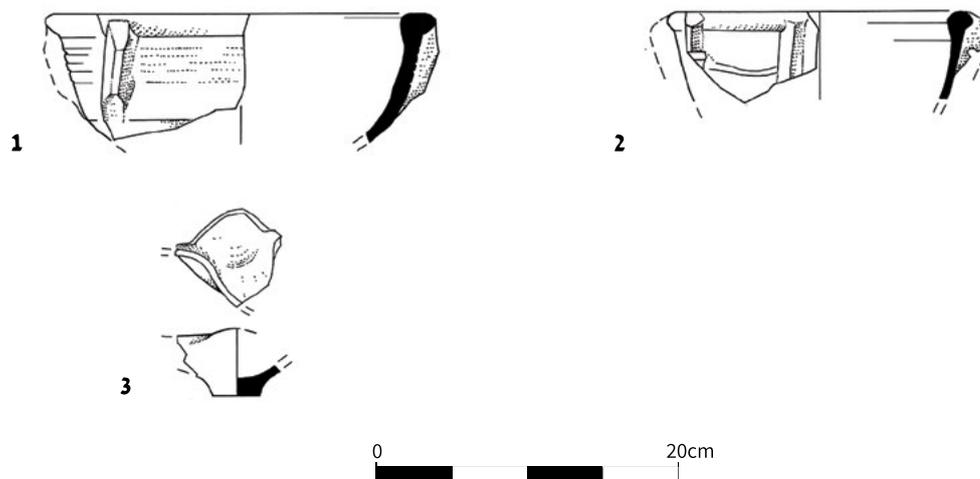


Figure 5. Black Gaza mortars and oil lamp.

No.	Form	Basket	Locus	Description
1	Pestle	1127/1	Topsoil	Protruding rim thick walls with 4 fin-shaped handles. Parallels: Israel 2006: Fig. 192.
2	Pestle	2007/1	Topsoil	Similar to above.
3	Oil lamp	1163	Topsoil	An open, flat-based vessel pinched at three corners. Similar lamps were used in the Bronze Age. This form, according to de Vincenz, returns during the Mamluk period (de Vincenz 2017a: 348). Parallels: Israel 2006: Fig. 266; Jaffa, de Vincenz 2020b: Fig. 15:4.

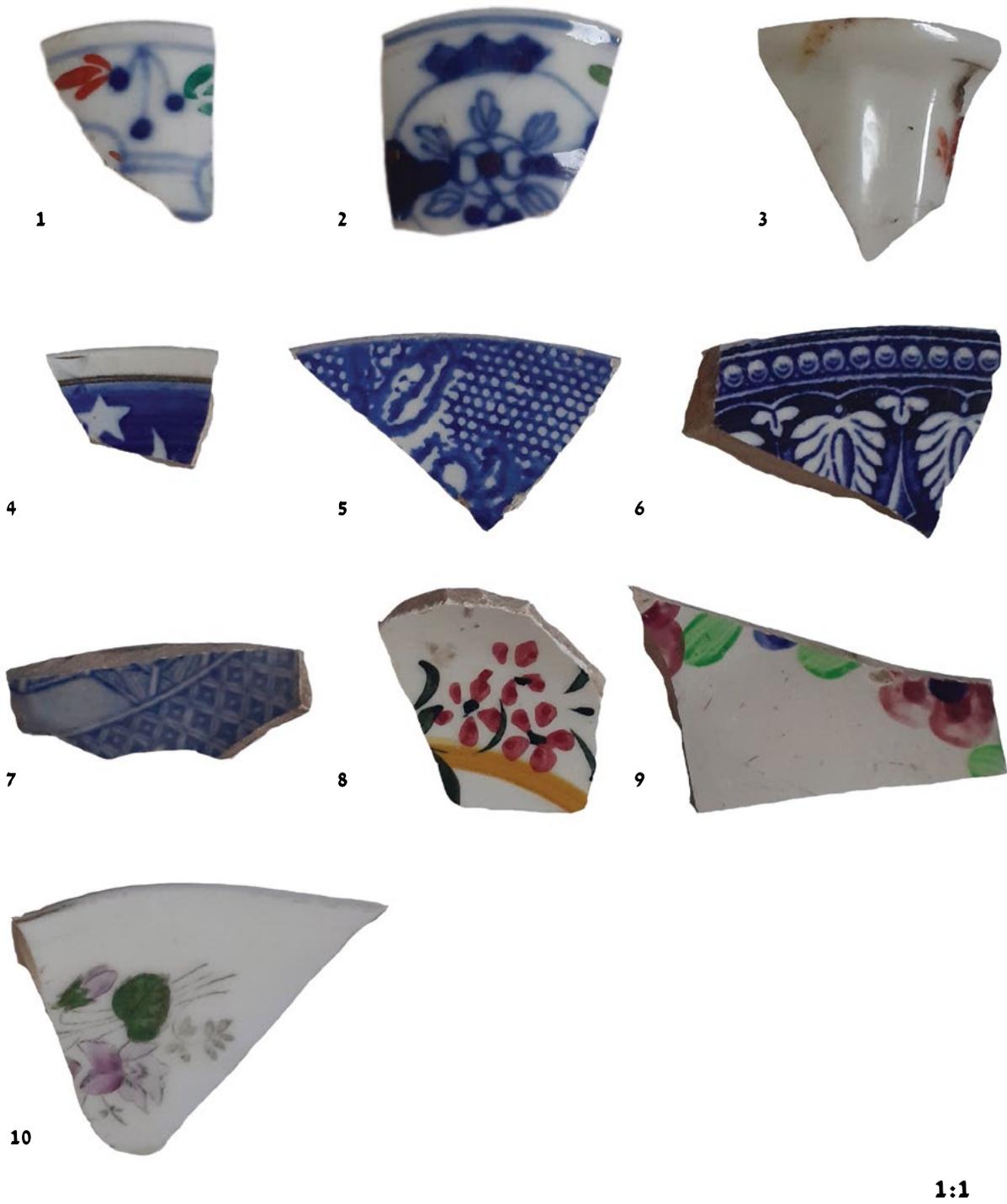


Figure 6. Porcelain coffee cups and plates.

Figure 6. Porcelain coffee cups and plates.

No.	Form	Basket	Locus	Description
1	Coffee cup	1047/2	152	Floral decoration on the external side, inner rim decorated with a blue band and floral designs Parallels: Jaffa, de Vincenz 2020a: Fig. 5:8.
2	Coffee cup, Kūtabaya	1050	Topsoil	Dense floral decoration on the external side in blue and green. Decorated on the inside with two parallel blue lines. Parallels: Jaffa, de Vincenz 2020a: Fig. 5:6.
3	Coffee cup <i>Kūtabaya</i>	1047/5	152	White hard paste. Thick ribbed walls. With remnants of fine floral red design on the external side.
4	Coffee cup (?)	2026	Topsoil	Decorated with white star and crescent against a dark blue background. Solid white on the outside. Parallels: Jaffa, Vincenz 2019: Fig. 1:5.
5	Plate	2041/1	Topsoil	White hard paste, blue checkered and floral design on the inside. Solid white on the outside Parallels: Jaffa de Vincenz 2015: Fig. 1:9.
6	Plate	1005	Topsoil	Dense decoration in dark blue with white palm leaves design. Solid white on the outside. Parallels: Jaffa, de Vincenz 2020a: Fig. 1:10.
7	Plate	1040	Topsoil	Imported hard paste plate with geometric diamond shaped design in blue and white. Solid creamy-white color on the outside. Parallels: Jaffa, de Vincenz 2020a: Fig. 5:4.
8	Plate	1031	Topsoil	Crude floral design in yellow, red, black and green.
9	Plate	1050	Topsoil	Crude floral design in red, black, blue and green against a cream background.
10	Plate	2011/1	Topsoil	Fine pink, green and gray floral pattern against a pure white background. Solid white on the outside.

SUMMARY

The ceramics displayed above represent a domestic assemblage of an Arab village community from the late Ottoman and British Mandate periods. Locally made, these vessels underwent relatively few changes throughout 400 years of Ottoman rule. Some are known from the late Mamluk period (14th-15th centuries CE), and then continued to serve rural populations until the mid 20th century. Porcelain coffee cups and plates gradually made their way into the villages as coffee became the dominant cultural drink.

Apparently, coffee symbolized, above all, hospitality, but was also attributed medicinal traits (Mossensohn-Shefer 2014: 23–25). Although Gaza ware continued to be produced well into the second half of the 20th century, it seems that domestic ceramic tableware was gradually replaced by simple glass dishes which became widely available. Thus, the above assemblage is quite significant as it represents the last phase of the ubiquitous use of ceramic domestic vessels.

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