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Excavations at Rogem Gannim, Jerusalem: Installations of the Iron Age, Persian, Roman and Islamic Periods

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Rogem Gannim (map ref. NIG 21575/62925, OIG 16575/12925) is one of a group of large tumuli located on the outskirts of modern Jerusalem, about 5 km west of the Iron Age city (Fig. 1). These remarkable Iron Age constructions were first studied by the surveyors of the Palestine Exploration Fund (Drake 1874) and subsequently investigated by W.F. Albright in the early 1920s (Albright 1923). Rogem Gannim (Rujm et-Tarud; Tumulus No. 4), the largest and most prominent of the tumuli, was subjected to a brief trial excavation by Amiran in 1953 (Amiran 1958). In 1983, Barkay excavated more substantial probes at the base of the tumulus, in conjunction with construction in the nearby Gannim community center (Barkay 2003). The existence of rock-cut installations at the site adjacent to the tumulus had been noted by the early surveyors, and Kloner's Jerusalem survey provided further details on them (Kloner 2000:19*–20*; with references therein). The following report describes the remains uncovered near the tumulus by the Rogem Gannim Project in Community Archaeology between 2000 and 2006 (Greenberg and Cinamon 2000).[1] The installations cleared in the first season of excavation of this project, described by Sion (2002), are also incorporated in this report (Sion's numbering has been retained for the terraces, caves and cisterns identified in his excavations, but not for the winepresses).

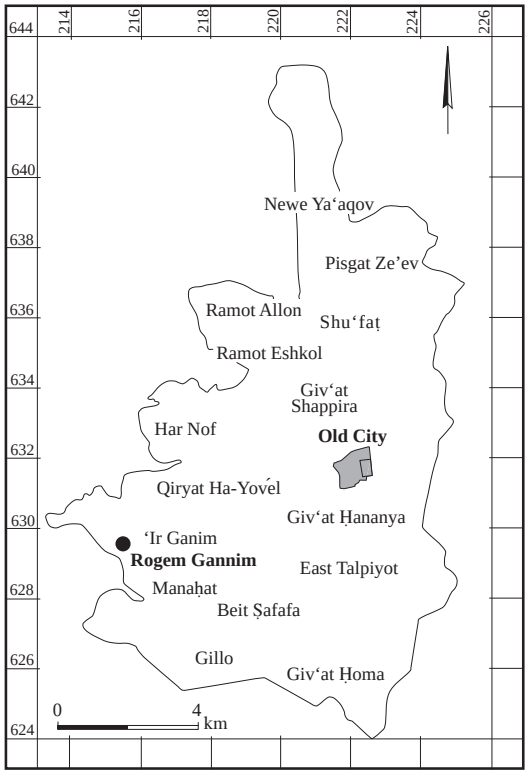

Fig. 1. Location map of Rogem Gannim within the municipal boundaries of modern Jerusalem.

Overview

Remains of rock-cut installations—wine-presses, caves and cisterns—have been discovered below Rogem Gannim, on the slopes and natural terraces extending in an arc from the northeast to the southeast, to a distance of about 20 m from the base of the tumulus (Figs. 2–4). The area of ancient activity appears to extend to the northwestern slope of the tumulus as well, in an area probed by Barkay, but presently covered with large quantities of construction refuse and excavation spoil. No freestanding architecture associated with the ancient remains at the site—which date to

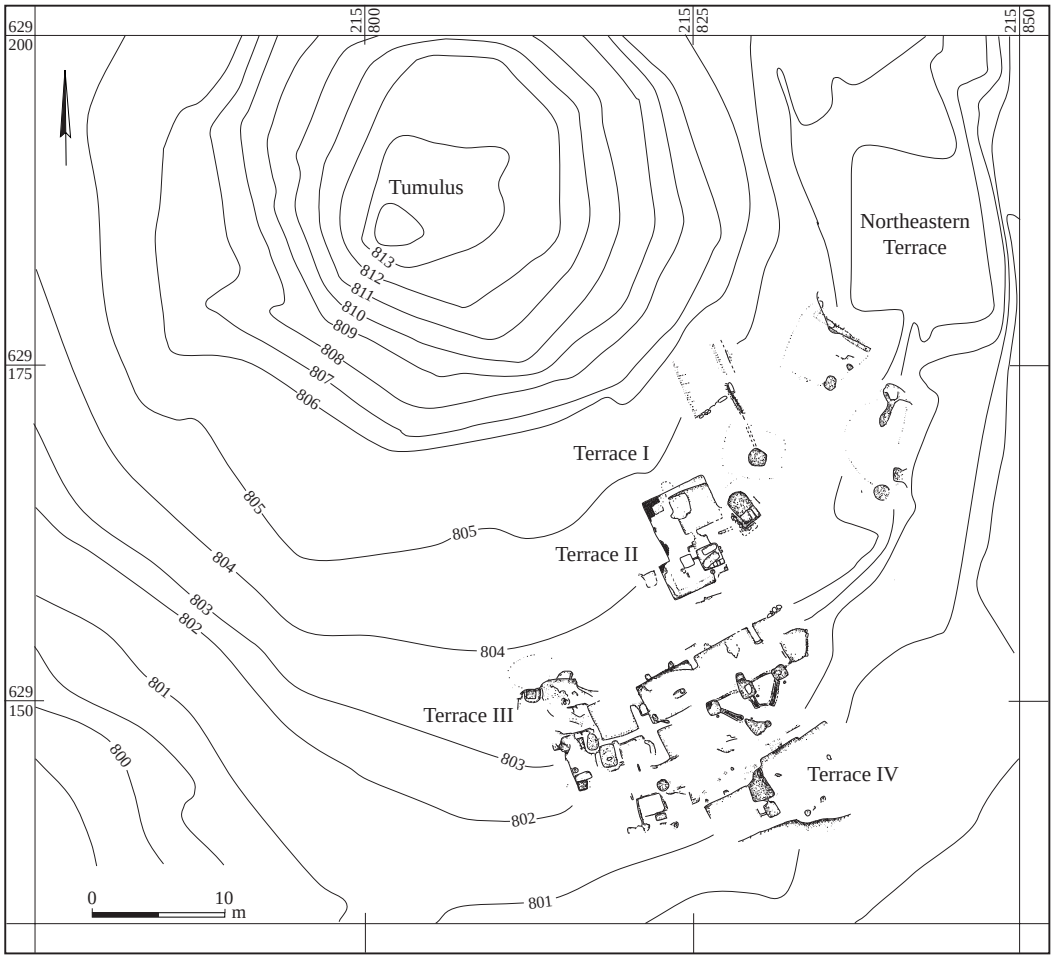

Fig. 2. Location map of the excavation areas in relation to the tumulus.

Fig. 3. General view of Terraces I–III from the top of the tumulus, looking south.

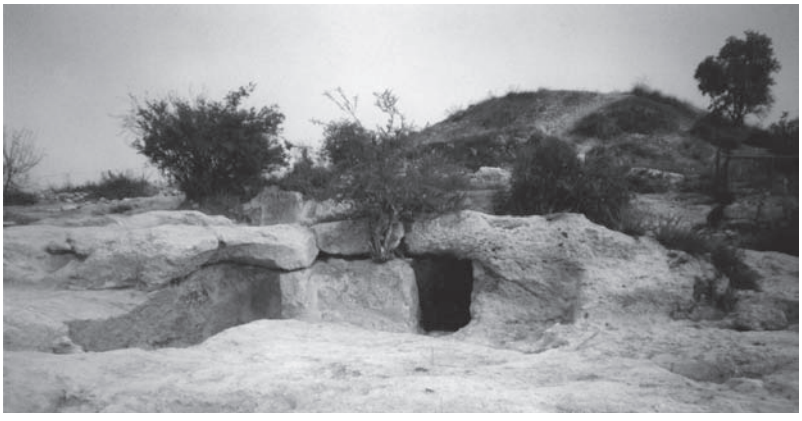

Fig. 4. The tumulus, viewed from the lowermost terrace (Terrace IV); entrance to Cistern 3 (L113) and Winepress 8 in foreground, looking northwest.

Table 1. Stratigraphic Overview

Stage	Period	Finds	Activity
I	Iron II (8th–6th c. BCE)	*In-situ* deposits with holemouth jars; fills with jars, few bowls and cooking pots; figurine; *lmlk* and rosette sealings	Collection of produce, wine production, construction of tumulus
II	Persian (6th–4th c. BCE)	Large quantities of pottery, mainly jars and bowls; lion and *yhd* sealings	Wine production in WP1–8
III	Early Roman (1st c. BCE–1st c. CE	Restorable vessels in Cave 1; bottom of jar in WP3	Modifications of Cave 1, including wall, entryway and plaster; remodeling of WP3 and probably of ritual bath (Cistern 2); quarrying on Terraces I, III; construction of W209
IV	Early Islamic to present	Restorable medieval vessels on surface in Cave 2; mixed finds in spoil heap near Cistern 1	Modification of WP1, 2 and Cistern 2; construction of feeding channel and periodic cleaning of Cistern 1; sporadic use of Cave 2 and construction of terraces

the Iron II, Persian, Early Roman and Islamic periods—has been identified, apart from a few retaining walls pertaining to a late phase of the caves and installations. A few low terrace walls are associated with pre-1948 Palestinian agricultural activity.

The site may be divided into two functionally separate areas: the southeastern slope (Terraces I–IV), occupied by a series of winepresses and associated fixtures, and the Northeastern Terrace, dominated by the entrances to two large caves and associated work and refuse areas. The underlying rock at the site consists of friable chalk, topped by a hard *nari* crust. Most of the myriad small stones evident in the excavation, however, appear to have been derived from the nearby limestone slopes, being the product of the construction of the tumulus itself and of stone clearance in the fields bordering the site.

Activity at the site began in Iron II, to which period the construction of the tumulus has also been dated. The Persian period appears to be well represented in the ceramic assemblage, and may have been the apogee of wine production. In the Roman period, only a single winepress appears to have been in use (WP3); construction of retaining walls with large chalk blocks, apparently quarried on-site, can be associated with this phase. Finally, sporadic use of the slopes and cisterns is attested from Early Islamic times to the present (see Table 1).

THE WINEPRESSES AND ASSOCIATED INSTALLATIONS

The basic winepress unit at Rogem Gannim appears to have consisted of a modest-sized treading floor, a settling basin and a collecting vat, accompanied by a cave or cistern-like space, possibly used for storage or fermentation. Remains of eight units of this type can be discerned on the southeastern slope, most of them compromised by later alterations and quarrying (Plan 1; Table 2).

Winepress 4 (Figs. 5, 6; Plan 1: Section 7–7)
This winepress comprises the best-preserved ensemble. A treading floor (L121; 2.9 × 3.0 m), furnished with a small niche in the back wall (presently occupied by a small tree), feeds into an oval settling basin (L111) and a rectangular collecting vat (L109). Just to the south is the opening of a large plastered cistern (L100). The floor, basin and vat were sealed with a hard-packed layer of soil and small stones that saved them from the alterations and quarrying that affected nearby Winepresses 5–7 (see below).

Table 2. Winepress Dimensions (meters)

Winepress	Terrace	Treading Floor	Settling Basin	Collecting Vat
1	I	3.4 × 4.6	-	-
2	I	3.5 × 4.0	-	-
3	II	3 × 3 (Phase 1) 5 × 5 (Phase 2)	- Square (0.9 × 0.9), 0.95 deep	- 1.6 × 1.7, 1.6 deep
4	III	2.9 × 3.0	Oval (0.8 × 1.2), 0.4 deep	1.1 × 1.7, 1.5 deep
5	III	3.0 × 4.5 (2 niches)	Square (1 × 1), 0.8 deep	*
6	III	3.1 × 4.5	Square (1 × 1), 1.3 deep	*
7	III	3.1 × ? (damaged)	Square (1 × 1), 1.1 deep	*
8	IV	3.0 × 3.4	Square (1 × 1)	1.5 × 2.9

* WP5–7 all feed into a large collecting vat, 2.3 × 2.6 m, 2.7 m deep. The vat and the settling basins all appear to have been altered, i.e., deepened or enlarged.

Fig. 5. Winepress 4, looking east.

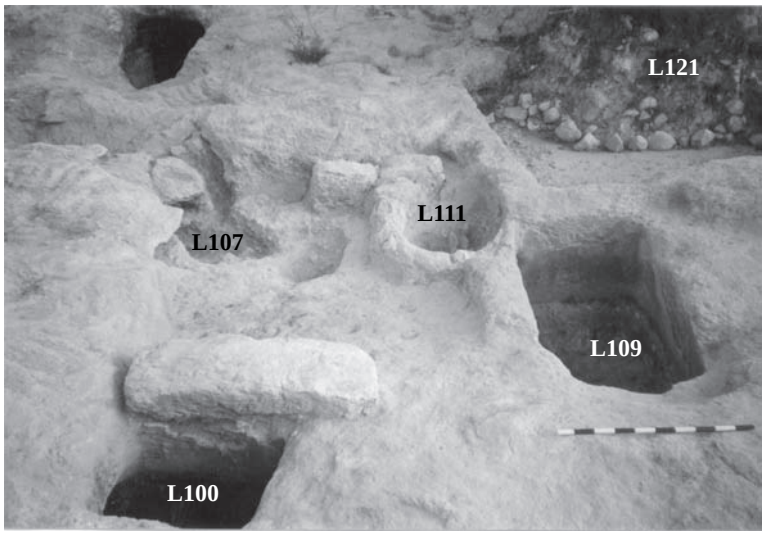

Fig. 6. Winepress 4 at right, looking north; L107 and Cistern 100 to its left.

This layer contained ceramic material dated no later than the Persian period.

The nearby cistern (L100) contained a massive fill composed mainly of small stones and potsherds that dated mostly to the Iron Age and Persian period. At the bottom of this fill lay a few pieces of Early Roman date, suggesting that the cistern went out of use at this time—which is most likely the time when alterations were made in various parts of the site (see, e.g., Cave 1, L108). The sherds in the fill (L100), which included a number of stamped jar handles, were markedly weathered. They seem to have originated within the quarrying debris and field clearance adjacent to the site.

Between the cistern and a small artificial cave (L107), used until recent times, was a small pocket of *terra-rossa* soil trapped within a partly collapsed rock overhang. Here we recovered partly restorable Iron II holemouth jars, perhaps indicating the initial phase of Winepress 4.

Remains of three additional treading floors (WP5–7; see below) were identified on the same rock ledge as Winepress 4 (Terrace III), as well as an additional ensemble (WP8) on the lowermost terrace (Terrace IV).

Winepress 8 (Plan 1: Section 5–5; see Fig. 3)
This winepress included a treading floor with a niched, rear rock wall, a square settling basin and a collecting vat. The latter two fixtures were plastered and appear to have been in use for an extended length of time. Evidence of possibly removed stairs in the northeastern corner of the collecting vat, and the quarrying away of the southern wall of the treading floor, suggest several phases of alteration that are difficult to date. To the east of Winepress 8 was the entrance into Cistern 3 (L113). It appears likely that this cistern underwent several modifications. At first, it may have served as a storage or fermentation cave. At some point it was modified to serve as a large collecting vat for the three floors of Winepresses 5–7 on Terrace III (Fig. 7). Later, the cave floor was quarried to a depth of about 3 m, the entrance was blocked and a large opening was cut into the top of the cave to convert it to a cistern, probably in post-Roman times. The fill from this space contained mixed refuse, which was mostly recent.

Fig. 7. Settling basins of WP5–7, with channels leading to Collecting Vat 113, looking north.

Winepresses 5–7

The three adjoining presses on Terrace III appear to have originally been carved to an identical plan, using the natural rock scarp as a back wall in which niches—two for each floor—were cut. However, later modifications have rendered their original configuration unclear. The easternmost press (WP7) was virtually obliterated by quarrying and by the subsequent construction of a terrace wall. The two remaining presses (WP5, WP6) had the front wall of their treading floors removed by quarrying, leaving a stump traceable only by the oblique pick marks visible along its entire length (Fig. 7, below the scale; see Plan 1: Section 6–6). The treading floors were damaged and are apparently about 0.1 m lower than their original level, as is evidenced by surviving portions of the original floors along the northern rock-cut wall. Nonetheless, it can be said that the three presses form a carefully planned ensemble: three treading floors served by three closely spaced settling basins (subsequently modified and deepened, it seems) that converge, by means of carefully carved channels furnished with recesses for roof slabs, on Cistern 3 (L113). Near each of the settling basins there is a small depression that appears to have served as a socket. We may imagine a frame of stakes and posts that supported an awning used during the grape-pressing season.

No certain date can be assigned to this ensemble. Our working assumption is that the quarrying that removed parts of the presses (a partly quarried block still remains in place in the western wall of WP5) was related to the construction of the wall blocking Cave 1 (see below), and is hence to be related to the Early Roman period, but other sequences are possible.

To the south of Winepresses 5–7, on Terrace III, was a bell-shaped pit (L103) and several carved and apparently natural depressions (Fig. 8). The pit has a vertical shaft that cuts through the hard *nari* crust and then widens to form the beginning of a bell-pit cut into the soft chalk. It bottoms out abruptly, giving the impression of never having been completed. The loose fill in the pit contained pottery dating to the Persian period at the latest. At the bottom of the pit were several large, but non-diagnostic, pieces of a storage jar that seem to be of a late Iron Age or Persian type. The pit is reminiscent of the numerous pits found by Pritchard in the 'winery' at el-Jib (Pritchard 1964), interpreted by him as fermentation cellars.

Fig. 8. Bell-shaped Pit 103, looking southwest; behind it, L110.

Fig. 9. Winepress 3, looking south.

The various nearby depressions could have had some industrial use, as they have the appearance of a platform, a sump and a collecting vat—all unfinished or damaged by quarrying. Of these, only L110 contained an undisturbed fill consisting of local reddish soil with Iron Age and perhaps Persian pottery.

Winepress 3

Located on Terrace II, this winepress is the largest of the installations at Rogem Gannim, showing at least two clear stages of construction (Figs. 9–11; see Plan 1: Section 4–4). In its latest phase, the entire installation was tiled in white mosaic set in plaster. Remnants of the mosaic floor could be observed along the northern and western edges of the press, and chunks of it—along with numerous tesserae—were found in the settling basin and collecting vat. The main part of the treading floor, about 5 × 5 m, lay north of the square settling basin (L104; 0.9 × 0.9 m, 0.95 m deep) and the perfectly aligned square

Fig. 10. Winepress 3: settling basin and collecting vat with stone rollers, looking west.

Fig. 11. Detail of stone rollers in the collecting vat.

collecting vat (L105; 1.6 × 1.7, 1.6 m deep). Both basins were well plastered in several layers, the topmost of which included crushed potsherds. Four steps were built along the southern wall of the collecting vat, and the 0.15 m deep channel connecting the two basins was well preserved. The press appears to have been deliberately demolished and put out of use. Large stones and chunks of mosaic flooring were tossed into the settling basin and two very large stone rollers were cast into the collecting vat (Figs. 10, 11). These slightly tapered stone cylinders measure 1.45 and 1.55 m long, and about 0.55 m in diameter. Their use is uncertain: they could have been employed in the winepress (as suggested by Amit and Baruch 2007), or perhaps served to crush olives in a modest olive-oil sideline. The bottom of a bag-shaped ribbed jar, seemingly of Roman date, lay on the floor of the settling basin, embedded in the hard matrix. Roman and Iron Age pottery was found in the collecting vat. Two cupmarks that served as jar stands were carved to the south of the collecting vat along with two additional recesses on its eastern edge.

The mosaic floor was founded in part on a crushed limestone fill. This fill was introduced in order to level out an earlier treading floor, 3 × 3 m in size, which must belong to the original period of construction of the Terrace II installations. Most elements of this earlier, Phase 1 winepress were quarried away in the second stage of construction. While the Phase 2 settling basin clearly could not have served the Phase 1 floor, it is possible that the later collecting vat subsumed the earlier. Another possibility is that the stepped basin (Cistern 2) lying to the east (see below) might have served as the collecting vat for the Phase 1 floor.

Just east of Winepress 3 lies Cistern 2, excavated by Sion in 1999. This plastered installation underwent several modifications (see Plan 1: Section 3–3). At one point, it was furnished with broad steps leading to its bottom. This suggests that it be identified as a ritual bath (*miqweh*) for the grape-treaders, an identification consistent with an Early Roman date for Winepress 3. Later on, the steps were removed and the cistern was re-plastered, probably serving to collect rainwater for the farmers and herders who seem to have camped at the site in post-Roman times.

A similar sequence applies to Cistern 1 and the adjoining space to its south. Here, the raised

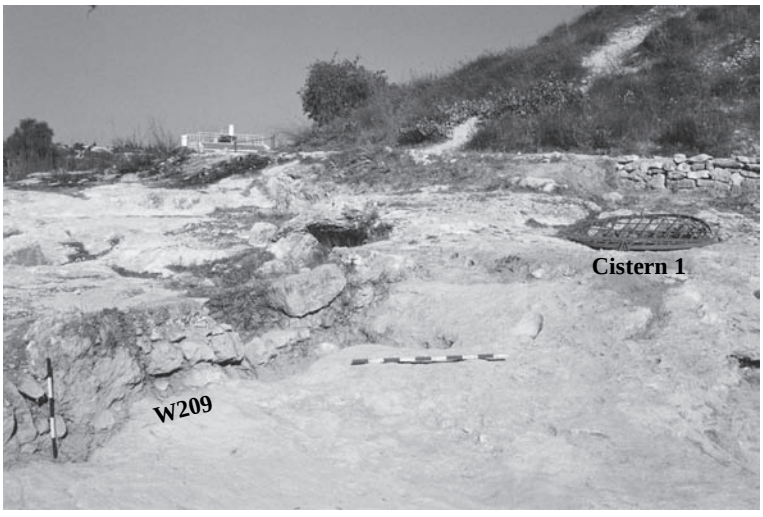

Fig. 12. Wall 209 at left, Cistern 1 at right, looking northwest.

rock platform of Terrace I was only slightly modified, probably due to the fact that Cistern 1 and Caves 1 and 2 occupy most of the space below this part of the terrace. Cistern 1 may originally have been carved as a collecting vat for Winepresses 1 and 2 (on Terrace I), but at some point it was enlarged and deepened to serve as a water cistern. To its south, the stone fence W209 (Fig. 12) had an opening to allow access to Cistern 2. The space enclosed by W209, as well as W209 itself, was subsequently covered by a large spoil heap (L206) composed of stones, some soil and various artifacts, which appears to represent the periodic cleaning-out of the cistern. This heap, alone among all the excavation contexts, seems to evince a continuity of use, with pottery of the Roman, late Byzantine/Early Islamic and medieval periods in evidence.

The haphazard construction of W209 corresponds with the similar construction of the channel, L120, and the late wall, W116, bordering Winepress 1 (see Plan 1: Section 2–2). These apparently served merely to channel rainwater to the cistern after the winepresses had gone out of use. The original configuration of Winepresses 1 and 2 is unclear, as they were both severely compromised by quarrying. In any case, the late use of the cistern post-dates the quarrying-away of the winepresses.

THE CAVES

Two large caves were excavated in the northeastern part of the site, both containing evidence for prolonged use in antiquity. Cave 1 was completely excavated, while Cave 2 was only partly excavated as of 2006. Both caves seem to have been natural cavities that were enlarged over the years. Large fig trees growing in the entrances to the caves hampered their excavation to some extent.

Cave 1 (Figs. 13–17)

This trapezoidal cave, measuring 4 m from entrance to back wall and 5.5 m wide, was apparently larger in antiquity, having suffered a collapse in its northern part. A wall (W112) was subsequently built across the entrance and a bent-axis corridor fashioned in the collapsed rock (L136), creating a rather confused mass of stones and rock slabs in front of the entrance. A doorway, 1.35 m wide, was built in W112, somewhat east of center.

During excavation, a layer of loose gray soil (L102), representing recent centuries,

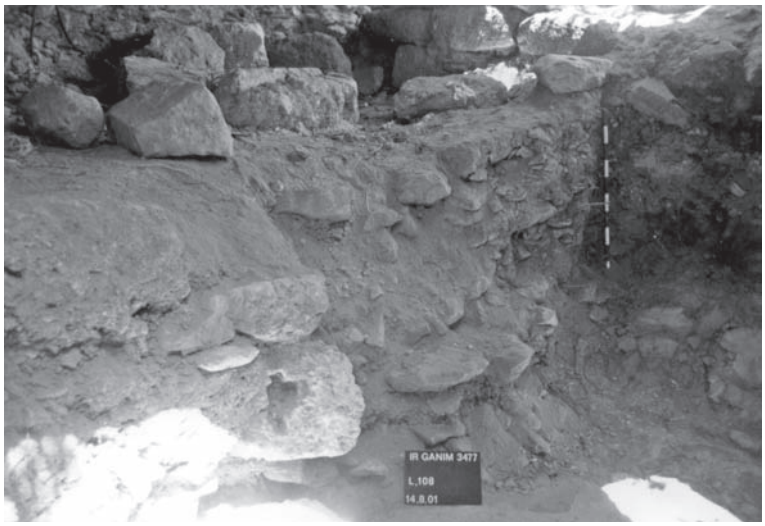

Fig. 13. Cave 1: section, looking north.

was found to overlie a sloping layer (L108) composed of soil and stone collapse from W112 (Fig. 13). Additional large stones lay on the floor of the cave, along with refuse representing the abandonment of the cave in the Early Roman period. Many of these stones were worked slabs, including a large grinding or crushing slab made of dense limestone and a carved doorpost(?) of soft chalk (Fig. 14). Beneath the stone collapse and the refuse thrown into the cave was a rather thin coat of plaster that covered most of the floor and climbed part-way up the walls. This plaster was necessary, as the walls of the cave, especially on the western side, are composed of extremely friable chalk. The floor dipped from north to south, being lowest beneath an opening cut into the roof of the cave in the southeastern corner.

Several niches and recesses were cut into the cave walls. These included two lamp niches, one in the southern wall and one in the eastern one (Plan 1: Section 1–1), a large arched niche in the middle of the back (southern) wall and a smaller rectangular recess to its right (Fig. 15; see Table 3). There was also a recess in the western wall of the cave, near W112, 2 m wide and 1 m deep.

Fig. 14. Cave 1: lower grinding slab (left) and chalk doorpost(?) (right) found in collapse.

Two perforations were made in the irregular roof of the cave, on either side of the entrance, allowing the suspension of fixtures. It therefore seems that the cave had at least two phases of use: first in an industrial capacity (the arched niche is reminiscent of niches found in the oil-press caves of Marissa [Kloner 2003a:57]) and then as a pool or cistern. In this latter phase, the

Fig. 15. Cave 1: niches in rear wall.

Table 3. Installations in Cave 1

Installation	Location	Dimensions	Notes
Arched niche	Rear wall, 1.4 m from W corner, base 1.85 m above floor	0.55 m wide at base, max. height 0.6 m	Shallow (max. depth 8 cm)
Rectangular niche	Rear wall, 0.3 m west of arched niche and just below it	0.43 m wide, 0.35 m high	Shallow (max. depth 15 cm)
Lamp niche	Rear wall, 0.9 m E of arched niche and even with its base	8 cm wide, 10 cm high	Damaged
Lamp niche	E wall, 1.7 m from SE corner, 1.95 m above floor	18 cm wide, 20 cm high	
Roof perforation	1.3 m S and 1.35 m E of E doorpost	D 3–4 cm	Anchor for rope or chain
Roof perforation	1.35 m S and 0.3 m W of W doorpost	D 3–4 cm	Anchor for rope or chain
Recess	In NW corner of cave	2 m wide, 1 m deep	
Opening	In roof at SE corner		Probably used for drawing water in cistern phase
Opening	In roof near E wall		

plaster allowed the retention of water only to a depth of 0.8 m or so, but this may have been sufficient, considering the size of the cave. We may assume that the cave entrance was blocked at this time, and the water drawn up from the large opening in the roof.

Wall 112 appears to have been founded on the rubble of the collapsed northern portion of the cave roof. It was crudely built of large chalk blocks that may well have been quarried from the winepress area. Its foundation course is somewhat more carefully constructed of elongated slabs. Wall 112 is bonded to the fieldstone retaining walls that approach it from the outside at right angles, forming the entrance corridor L136 (Fig. 16). A large slab forms a

Fig. 16. Cave 1: entrance passage (L136), looking southwest.

Fig. 17. Cave 1: plaster floor sloping down from the threshold, looking northeast.

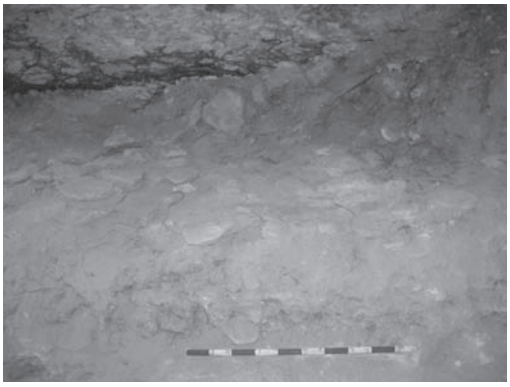

Fig. 18. Cave 2: stone pavement (L213), looking east.

threshold in W112, from which one descended, via a narrow step, to the cave floor about 0.6 m beneath the threshold. The gap between the floor of the cave and the foundation course and threshold in W112 was sloped and plastered (Fig. 17).

The one-meter-wide corridor (L136) extends northward about 3.5 m, partly bounded by fieldstone retaining walls and partly by hewn rock (probably remnants of the collapsed cave roof) until blocked by W210. A narrow passage in the bedrock at right angles to the corridor seems to mark the direction of approach to the corridor from the east. The floor of the corridor—an irregular pavement of fieldstones—slopes down from ground level to the threshold of the cave.

Finds in the earliest deposits in the cave, above the plaster floor, included partially restorable cooking pots and parts of jars, all dated to the first century CE. Similar pottery was recovered in the corridor.

Cave 2

This extraordinarily large cave, about 5 × 10 m in size, retains its original form. Only a small part of the roof has collapsed near the northern entrance. There is an additional approach to the cave on its eastern side. As a consequence, there was little modification of the cave and no construction associated with it. As excavation of this cave was hampered by the presence of large fig trees and their extensive root system, less than half of the cave has been excavated. Significantly, the cave yielded an occupation deposit (L208) and a partly stone-paved floor (L213) that may be attributed to the medieval period (Fig. 18). The deposit consisted of intermittent layers of gray soil with high organic content and chalky white roof-fall. Finds included *ṭabun* fragments, cooking ware, geometric-decorated and plain pottery, a glass

bracelet, a bone or ivory hairpin and two bronze fittings. These finds complement those of the L206 spoil heap of Cistern 1, illustrating the continued intermittent use of the site.

Beneath the floor was a soil fill (L216) that produced medieval, as well as Early Islamic pottery. In the northeastern corner of the cave, on the rock floor, a small cooking corner contained ash and pieces of a restorable late Iron Age cooking pot (see Fig. 22:1).

THE NORTHEASTERN TERRACE

North of the rock-fall and construction associated with Cave 1, the rock platform that forms the base of the large tumulus was cleared between the Cave 1 scarp and a low, post-Roman terrace wall (W202) that cuts W210. The northernmost part of the excavation reached the southernmost end of Barkay's 1983 trench, still partly visible at the base of the tumulus.

Excavation on the terrace revealed a number of rock-cut installations of uncertain use: a circular pit (L142; diam. c. 1.5 m, 1 m deep), a smaller depression adjacent to it (L143), several plastered cupmarks that could have served as jar supports, and another irregular shallow pit (L220; diam. c. 1 m; Fig. 19). While most of this area yielded mixed pottery, the area of the cupmarks and irregular pit, covered with a very loose, powdery deposit, contained Iron II pottery only. Barkay also noted a concentration of Iron II jar fragments at this location.

At the northern edge of the excavation, a crushed chalk floor began to emerge (L221), extending west toward the base of the tumulus. At that point, beneath a rock overhang, a concentration of red soil and stone slabs placed on their narrow ends marks some sort of installation, perhaps associated with the foundation of the tumulus (Fig. 20). Similar finds had been noted by Barkay, but the evidence is insufficient to form any opinion on the nature of the activity that created this deposit.

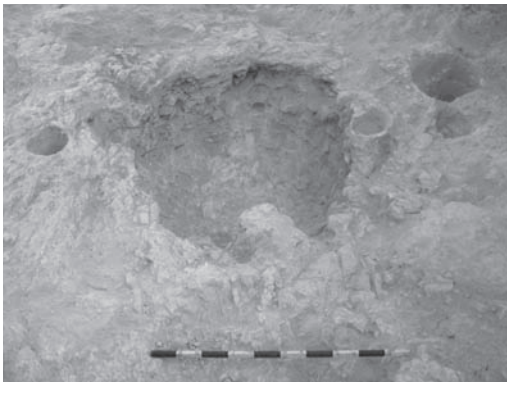

Fig. 19. Northeastern Terrace: pit (L220) and adjacent plastered cupmarks, looking west.

Fig. 20. Northeastern Terrace: plaster floor (L221) at right, and installation at base of tumulus, looking west.

POTTERY AND SMALL FINDS

In view of the limited number of sealed loci of any period, the ceramic finds will be presented typologically. Three groups are described: the early pottery of the Iron Age and Persian period, the Early Roman pottery, and the later pottery of the Early Islamic to medieval periods.

Early Pottery and Associated Finds (Figs. 21–25) The chronological framework of the pottery assemblage is defined by the stamped jar handles, which comprise the most clearly diagnostic elements. These handles range from the late eighth to the late fifth–early fourth centuries BCE, and a similar range in the other forms is to be expected as well. As the distinction between Iron Age and Persian pottery was not always clear, especially in the categories of jars, jugs and stands, types of uncertain attribution are presented separately in Fig. 23.

Iron Age.— The Iron Age pottery is typically of red to brown clay, usually red on the surface, with white grits in varying proportions.

There are relatively few bowls and kraters. They include red-slipped and burnished (but often badly worn) bowls with thickened or folded rims (Fig. 21:1–4), two-handled carinated bowls (Fig. 21:5), a fragment of a deep, burnished krater (Fig. 21:6) and rims of large open kraters (Fig. 21:7), all spanning the late-eighth to early-sixth centuries BCE. Lamps with medium-thick bases (Fig. 21:8, 9) and a handful of late Iron ‘En Gedi-type cooking-pot rims (Fig. 22:2, 3) were found. The nearly complete cooking pot (Fig. 22:1)

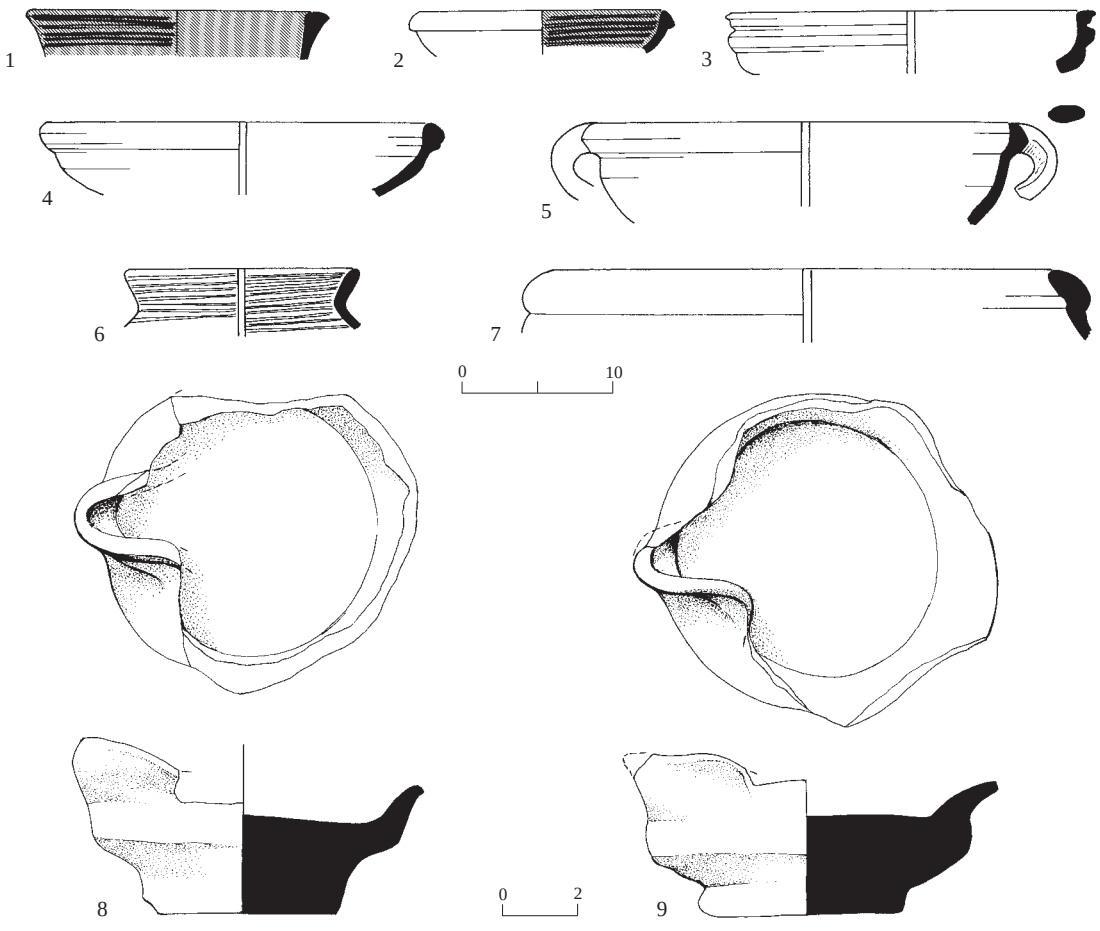

Fig. 21. Iron Age pottery.

◂ **Fig. 21**

No.	Vessel	Reg. No.	Locus	Description	Parallels
1	Bowl	765	100	Red clay, small white grits, reddish brown slip, wheel burnish ext. and rim	Edelstein 1998: Fig. 4.11:2 De Groot and Ariel 2000: Fig. 20:7
2	Bowl	761	100	Red clay, red slip, wheel burnish int.	Edelstein et al. 1998: Fig. 4.11:4 Edelstein 2000: Fig. 10:10
3	Bowl	850	100	Pink clay, large white grits	
4	Bowl	831	137	Red clay, white grits, traces of wheel burnish int. and rim	De Groot and Ariel 2000: Fig. 19:23 Edelstein 2000: Fig. 10:21
5	Bowl	544	110	Yellowish red clay, white grits, very worn surface	Edelstein 2000: Fig. 11:1
6	Krater	782	129	Red clay, wheel burnish ext. and rim	De Groot and Ariel 2000: Fig. 25:1, 2
7	Krater	921	204	Brown clay, white grits, red surface, wheel burnish rim ext.	Amiran 1958: Fig.13:6 Edelstein 2000: Fig. 11:1
8	Lamp	502	103	Red clay, white grits	Mazar and Panitz-Cohen 2001: Pl. 50:13–15
9	Lamp	555	105	Red clay, gray and white grits	

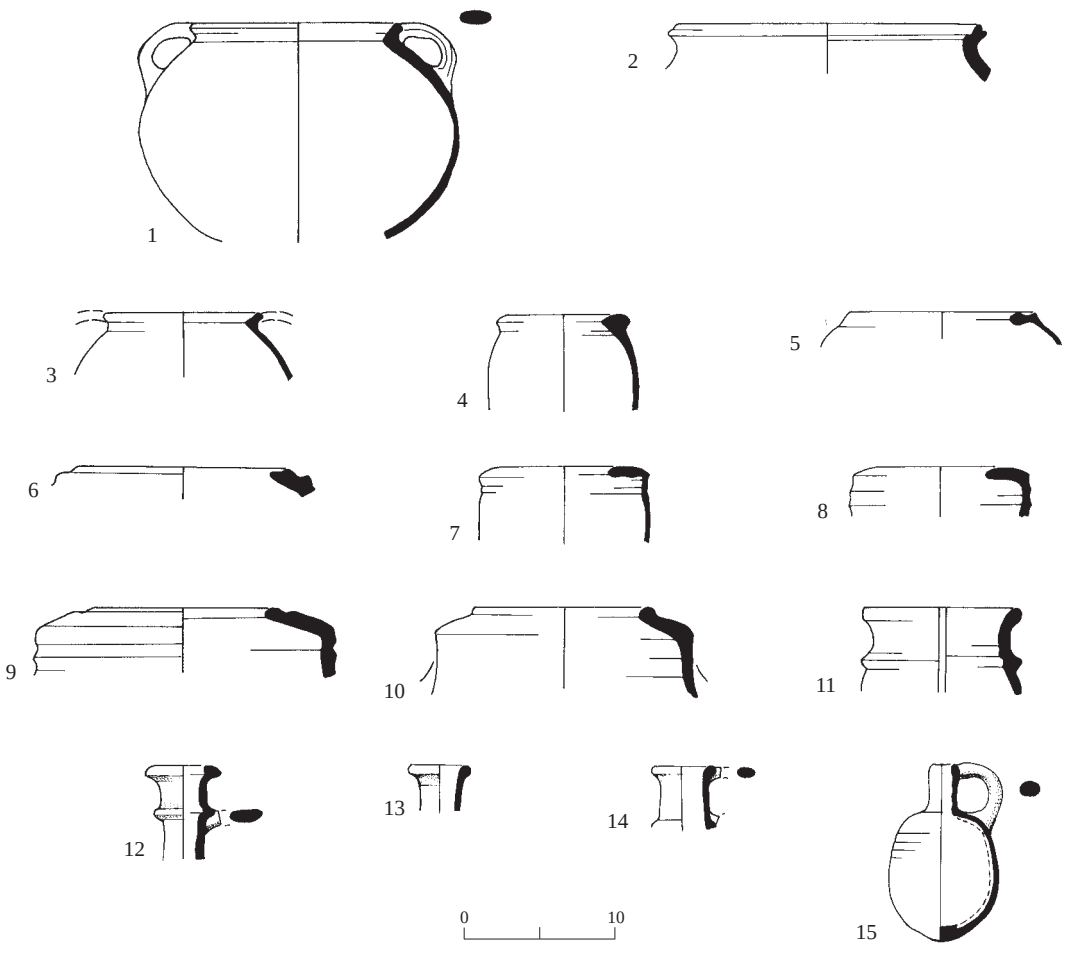

Fig. 22. Iron Age pottery.

◂ Fig. 22

No.	Vessel	Reg. No.	Locus	Description	Parallels
1	Cooking pot	1018-3	216	Reddish brown clay	Mazar and Panitz-Cohen 2001: Pl. 34:9 (rim), 10 (body)
2	Cooking pot	928	204	Dark brown clay, few white grits	Mazar and Panitz-Cohen 2001: Pl. 96:10
3	Cooking pot	857	141	Reddish brown clay, white and gray grits	Mazar and Panitz-Cohen 2001: Pl. 96:9
4	Jar	?	107	Red clay, many white grits	De Groot and Ariel 2000: Fig. 26:3, 5, 9, 12 Feig 2003: Fig. 19:4
5	Jar	722	107	Brown clay, white grits	Edelstein et al. 1998: Fig. 4.11:22 Edelstein 2000: Fig. 13:10
6	Jar	765	100	Brown clay, gray core, small white grits	Mazar and Panitz-Cohen 2001: Pl. 61:3
7	Jar	605	107	Pinkish brown clay, gray core	Edelstein 2000: Fig. 13:4 Feig 2003: Fig. 19:2
8	Jar	746	100	Buff clay, gray core, white grits	
9	Jar	761	100	Reddish brown clay, white grits, voids	
10	Jar	954-1	204	Pink to brown clay, red surface ext., light brown int. and shoulder	Mazar and Panitz-Cohen 2001: Pl. 36:2
11	Jug	737	100	Pink clay, gray core, fine white grits	Feig 2003: Fig. 19:6
12	Jug	506	105	Orange clay, gray core	De Groot and Ariel 2000: Fig. 10:5 Feig 2003: Fig. 19:7
13	Jug	503-1	103	Red clay, white grits	Shiloh 1986: Fig. 6:11
14	Jug	508	103	Red clay, white grits	
15	Juglet	G-92/2000	Surface	Red clay	Edelstein 2000: Fig. 12:11–13

Fig. 23 ▸

No.	Vessel	Reg. No.	Locus	Description	Parallels
1	Jar	954-2	204	Grayish brown clay, highly fired	Mazar and Panitz-Cohen 2001: Pl. 67:4, 5
2	Jar	756?	121	Gray clay	
3	Jar	746-1	100	Orange clay, white grits	De Groot and Ariel 2000: Fig. 20:8
4	Jar	773	130	Brown clay, white grits, voids	Ben-Arieh 2000: Figs. 15, 16
5	Jar	746-2	100	Brown clay, buff surface	
6	Jar	752	129	Red clay, white grits	
7	Jug	503-2	103	Light brown clay, white grits	
8	Stand	643	115	Buff clay, gray inclusions	Mazar and Panitz-Cohen 2001: Pl. 38:15
9	Stand	511	103	Reddish brown clay, gray core, white grits	Mazar and Panitz-Cohen 2001: Pl. 44:6, 7
10	Stand	765	130	Reddish brown clay, gray core, white grits	
11	Stand?	902	201	Brown clay, white grits	

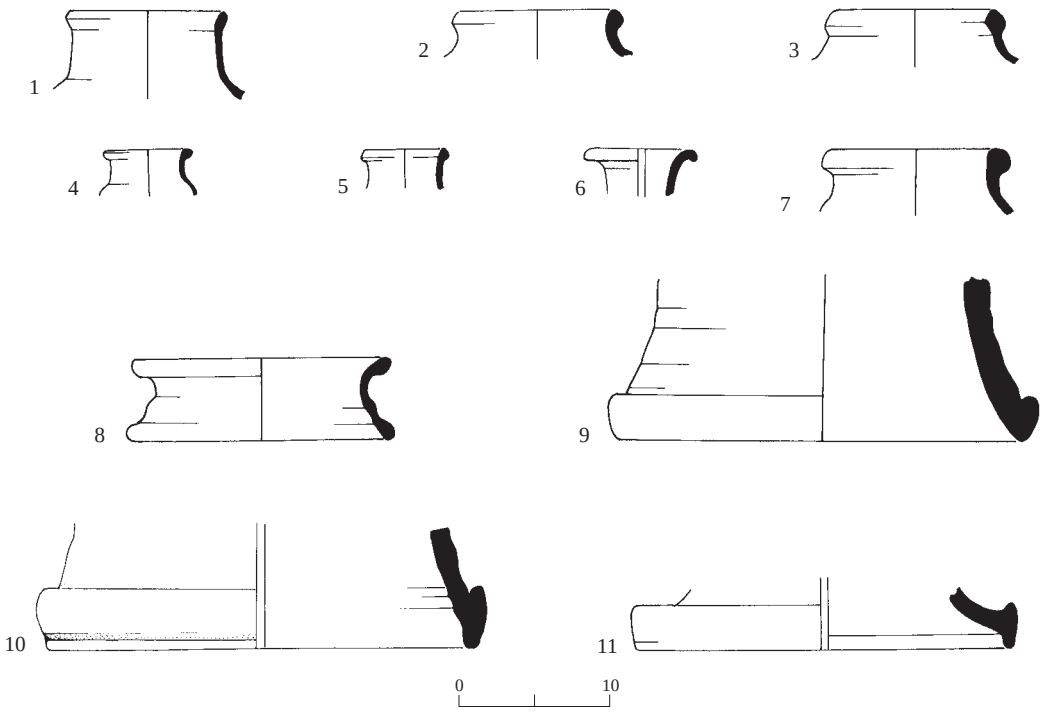

Fig. 23. Iron Age and/or Persian period pottery.

was recovered on the floor of Cave 2, along with pottery of far later periods. This late Iron II vessel appears to have been salvaged by the later inhabitants of the site and used by them as a stand or cooking hob.

By far, the dominant vessel in the Iron Age group is the holemouth jar. Several types are present, with the thickened hammerhead type (Fig. 22:4) apparently representing the earlier part of the trajectory, and the various thin-rimmed types (Fig. 22:5–9) covering the seventh and perhaps early sixth centuries (however, both types appear together in the only sealed Iron Age deposit, L107). Body fragments of *lmlk*- and rosette-type storage jars were fairly common, but only a small number of rims (Fig. 23:1–3) could be attributed to these types. Figure 22:10 is a rim of an amphora with a hint of a handle at the shoulder. Figure 22:12 is a decanter. The bag-shaped juglet with a very narrow neck (Fig. 22:15) is another late Iron II type.

The varied collection of stands (Fig. 23:8–11) complements that of the jars that would have been placed within them. However, some of these stands could belong to the Persian period.

Small finds associated with the late Iron Age (Table 4) include a fragmentary zoomorphic figurine (Fig. 24:1), a collection of hammer-stones (Fig. 24:2), various stone artifacts (Fig. 24:3–5), a group of perforated potsherds of unknown function (Fig. 24:6) and two stamped jar handles bearing rosette impressions (Greenberg and Cinamon 2006: 232, Nos. C1, C2).

The date of the Iron Age pottery cannot be pinpointed. The majority of the forms have parallels in the seventh century BCE or later, while some bowls can also be assigned an eighth-century BCE date. The presence of *lmlk* jars suggests a late eighth-century presence at the site (Greenberg and Cinamon 2006), but the continuance of such jars in the seventh century, especially in the Jerusalem region, cannot be ruled out (Na'aman 2001). In the final analysis, there is simply insufficient evidence to establish the precise date of the earliest occupation at the site.

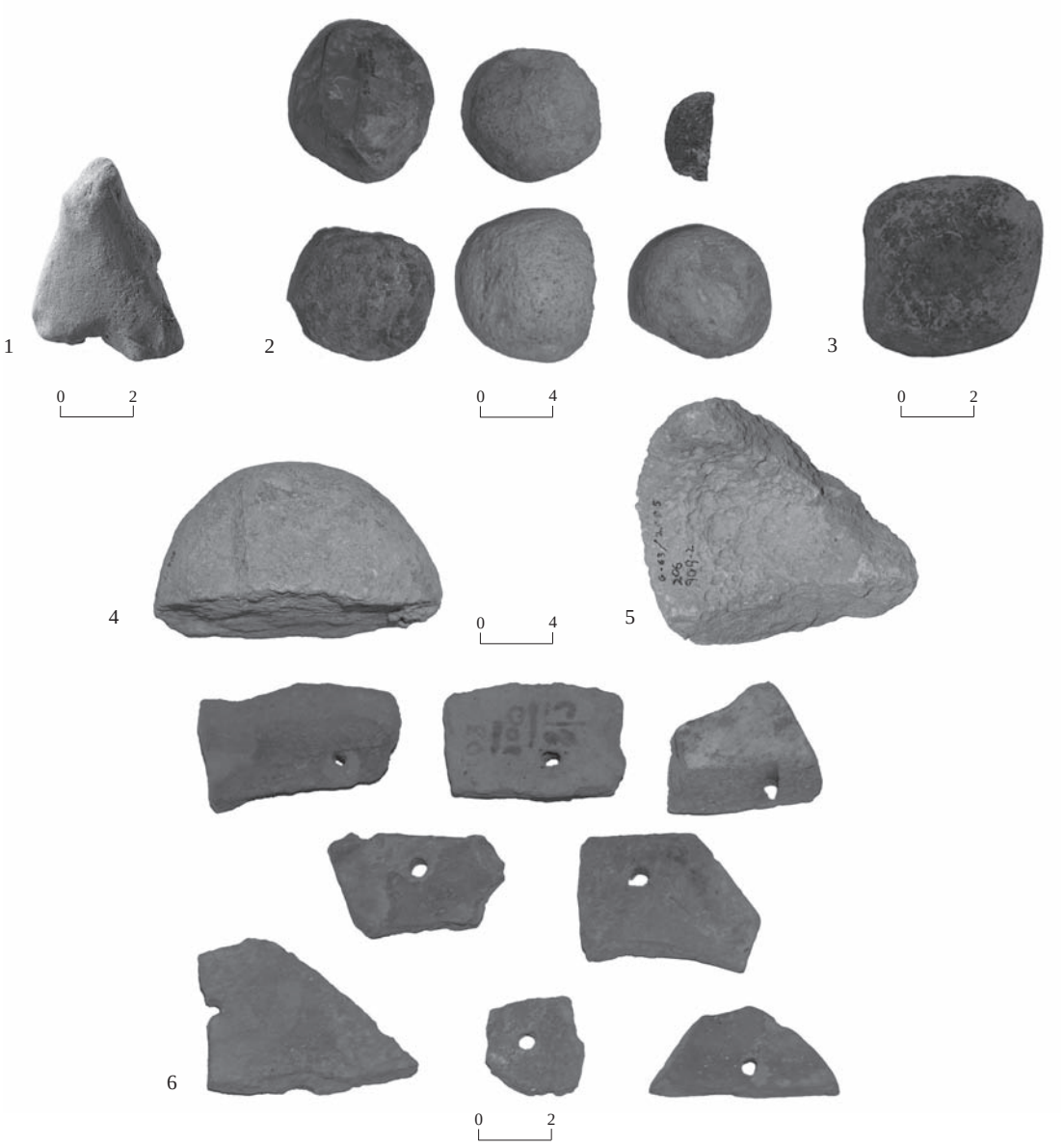

Fig. 24. Small finds attributed to the Iron Age.

Table 4. Iron Age: Small Finds

Type	Reg. No.	Locus	References and Remarks
Rosette-stamped handle	2000/1	Surface	Greenberg and Cinamon 2006:232, Fig. 3:C1
Rosette-stamped handle	827	136	Greenberg and Cinamon 2006:232, Fig. 3:C2
Animal figurine	853	100	Fig. 24:1; half a torso, red clay, white grits
6 hammerstones/scale weights	856, 909-1, 938, 942, 947, 956	204, 206, 137	Fig. 24:2; all broken, made of flint or hard calcareous limestone
Burnisher	1012	215	Fig. 24:3; limestone
Large weight(?)	-	206	Fig. 24:4; calcareous limestone; shaped with similar technique to smaller weights
Bowl	909-2	206	Fig. 24:5; calcareous limestone
Perforated sherds	-	-	Fig. 24:6; from various loci, 3–4 mm perforations on Iron Age/Persian jar sherds

Persian Period (Fig. 25).— The Persian pottery usually has a light surface color and contains a wider variety of inclusions—in terms of color and sorting—than the Iron Age pottery. Several thin-walled bowls with a carinated or wavy profile should be assigned a Persian date (Fig. 25:1–5). Mortaria (Fig. 25:6–8) are also attributed to this period, especially as they are rare in Iron Age assemblages in the region of Jerusalem (in contrast to sites farther west). Scores of nondescript, thickened jar rims ranging from round to rectangular in profile, of which Fig. 23:4–6 represents a typical sample, are assigned by default to the Persian period; presumably, they replace the holemouth jars as the principal receptacle for liquids produced in the presses.

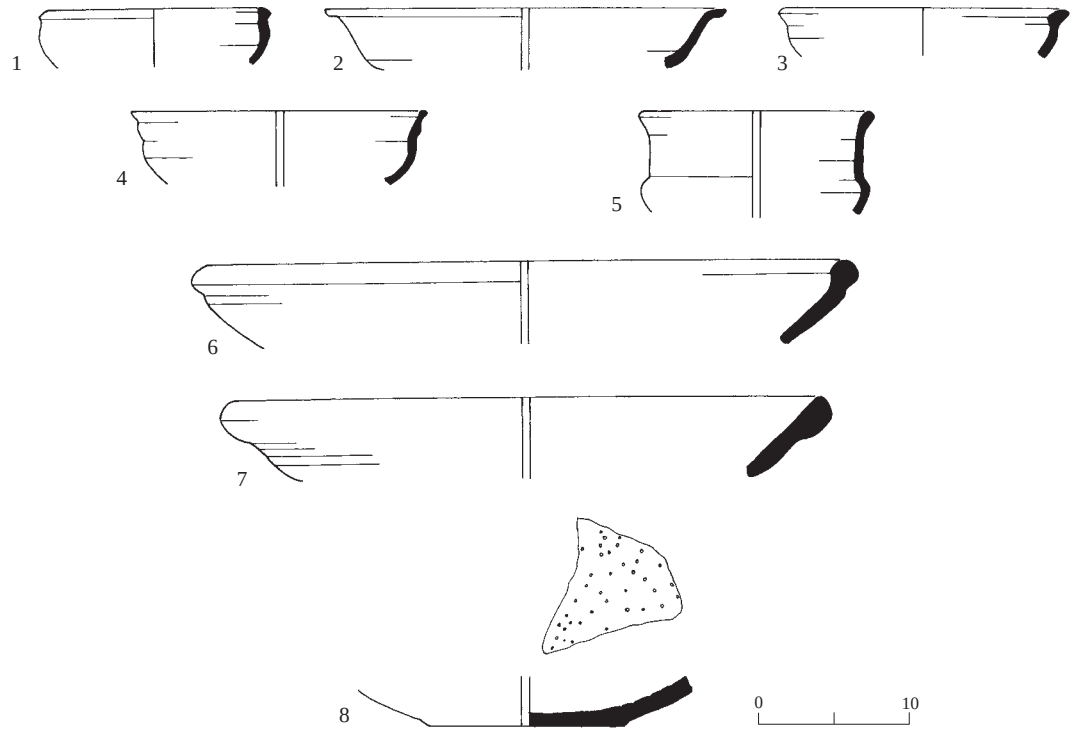

Fig. 25. Persian-period pottery.

No.	Vessel	Reg. No.	Locus	Description	Parallels
1	Bowl	766	129	Light brown clay	
2	Bowl	780	130	Orange clay, white grits	Ben-Arieh 2000: Fig. 6:1, 3
3	Bowl	874	137	Brownish red clay, gray core, few white grits	
4	Bowl	756	121	Brown clay, few brown grits	
5	Bowl	782	129	Red clay, gray core, white grits, buff surface	Ben-Arieh 2000: Fig. 6:13, 14
6	Mortarium	931	206	Pinkish buff clay, large white inclusions	
7	Mortarium	922	206	Pale green clay, gray inclusions	
8	Mortarium	925	206	Brown clay, large white inclusions, stippled interior	Ben-Arieh 2000: Fig. 6:10

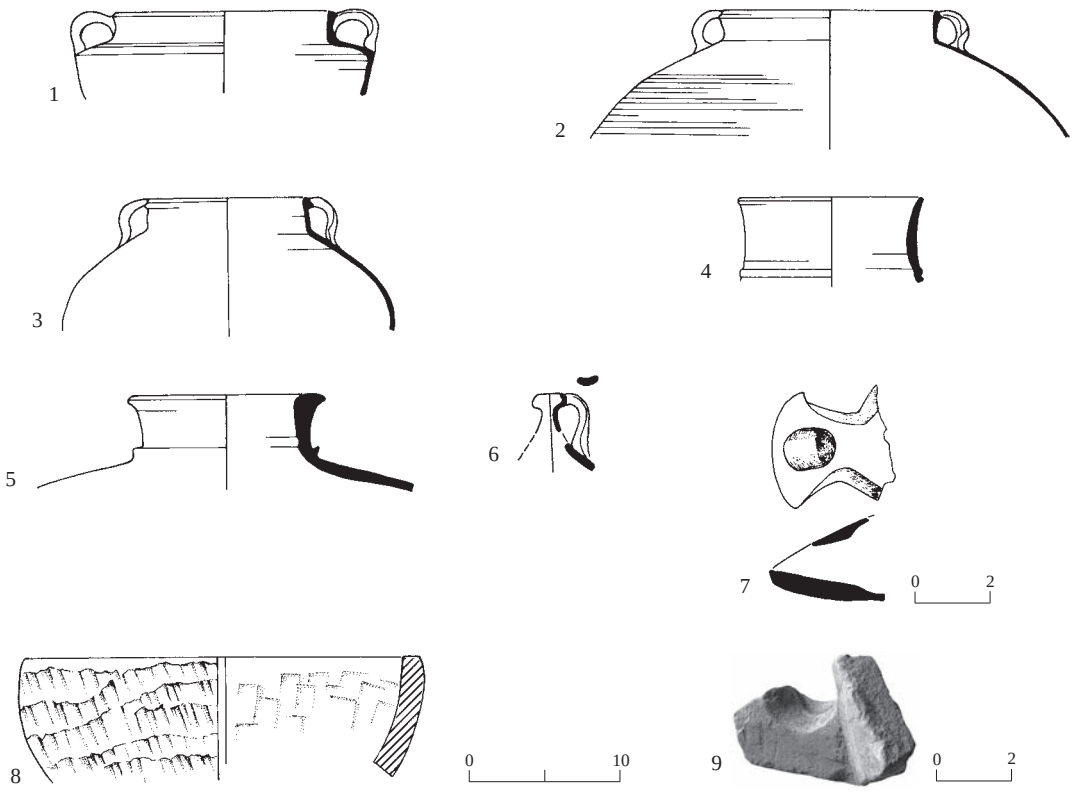

Fig. 26. Roman pottery and stone vessels.

No.	Vessel	Reg. No.	Locus	Description	Parallels
1	Cooking pot	618	108	Brick-red clay, brown core, soot ext.	Geva 2006: Pl. 4.10:21
2	Cooking pot	610	108	Brick-red clay, brown core	Geva 2006: Pl. 6.5:38
3	Cooking pot	630	108	Brick-red clay, soot ext.	Geva 2006: Pl. 6.10:12
4	Jar	761	100	Pinkish brown clay, gray core, fine grits	Geva 2006: Pl. 6.9:6
5	Jar	543	108	Brown clay, red core, fine white grits	Geva 2006: Pl. 6.5:3
6	Juglet	735	129	Pink clay	Geva 2006: Pl. 4.7:12
7	Lamp	735	129	Buff clay, soot at mouth	
8	Bowl	556	108	Chalk, chip-carved	Magen 2002: Fig. 3:60
9	Bowl	838	137	Chalk, chip-carved	As No. 8

Small finds from the Persian period include several handles stamped with a lion, *yh*, *yhd*, a possible *yhwd* and a *lyh'zr* impression (Greenberg and Cinamon 2006:232–233, Nos. D1, D2, E1, F1, G1–4, H, and p. 240).

Early Roman Pottery and Stone Vessels (Fig. 26) The diagnostic Roman material includes rims of cooking pots (Fig. 26:1–3), bag-shaped jars (Fig. 26:4, 5), juglets (Fig. 26:6) and lamps (Fig. 26:7), all attributable to the first century BCE–first century CE. The pottery is complemented by several fragments of chalk bowls (Fig. 26: 8, 9), mugs and a krater of the same period.

Later Pottery and Associated Finds (Figs. 27, 28) A number of bowl fragments from Cave 2 (e.g., Fig. 27:1–4, 10–12) appear to belong to

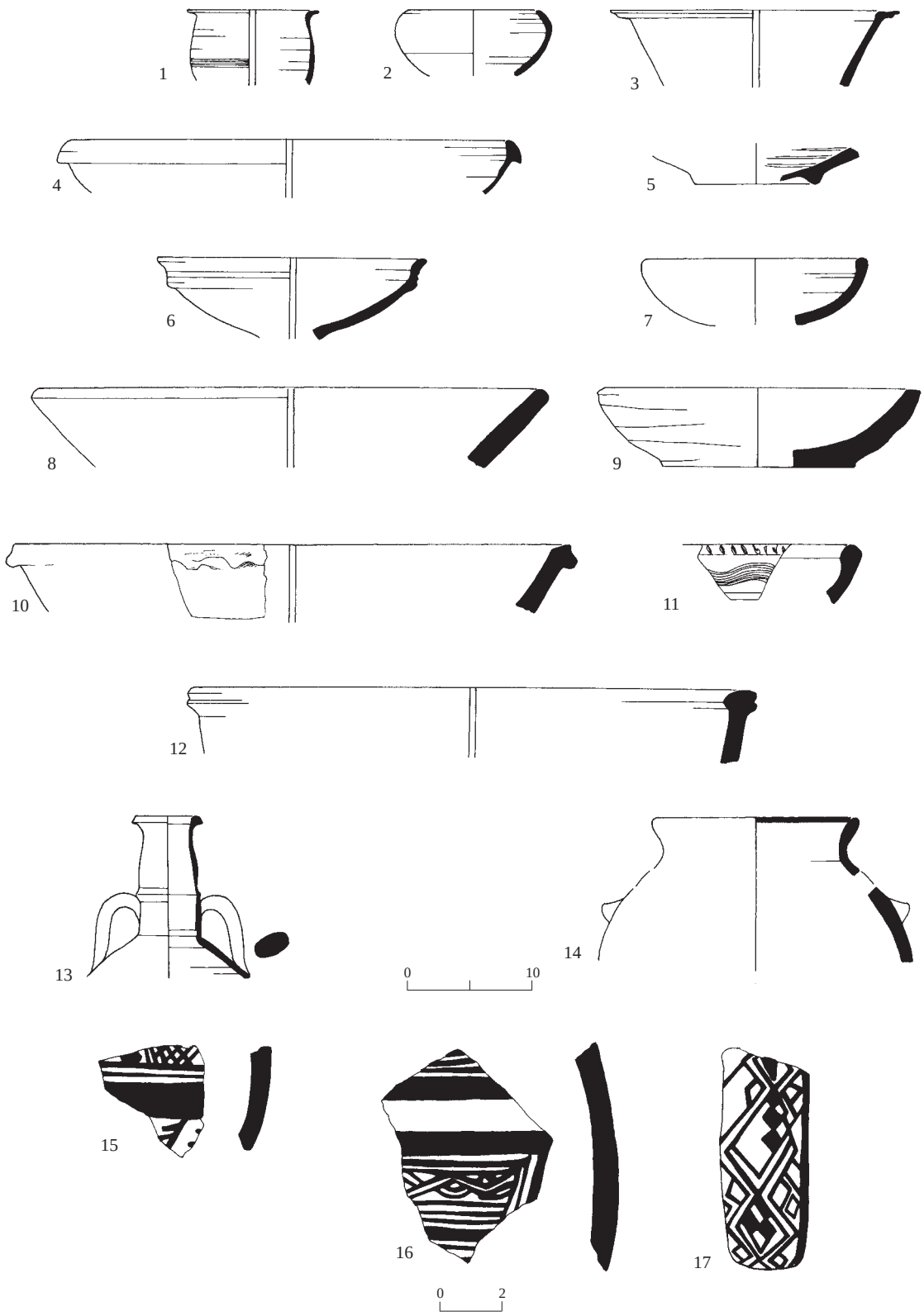

Fig. 27. Early Islamic and medieval pottery.

◂ **Fig. 27**

No.	Reg. No.	Vessel	Locus	Description	Parallels
1	933/3	Cup	208	Gray clay, fine combed decoration	Finkelstein 1997: Fig. 2:15
2	1018-1	Bowl	216	Buff clay, gray core, highly fired	
3	1018-2	Bowl	216	Red clay, gray surface, highly fired	
4	1032/1	Bowl	213	Light brown clay, pale brown surface, wet-smoothed ext.	Lazar 1999: Fig. 4:8
5	1020	Bowl	216	Red clay, gray core, wet-smoothed int., highly fired	
6	933	Bowl	208	White clay, few grits, voids	Lazar 1999: Fig. 4:3, 4
7	906/1	Bowl	201	Pink clay, white surface, few inclusions, voids	
8	1007/1	Bowl	213	Brown clay, many organic inclusions, handmade	Avissar and Stern 2005:84, Type II.1.4.1
9	934	Bowl	208	Pink clay, large white grits and organic inclusions, handmade	
10	1003/2	Bowl	213	Pink clay, gray core, many organic inclusions, soot on upper ext. and rim	Avissar and Stern 2005:88, Type II.1.2.1 Finkelstein 1997: Fig. 1:1, 6
11	1029	Bowl	214	Reddish brown clay, combed decoration	
12	1002	Bowl	213	Red clay, brown core, white inclusions	
13	1011	Flask	217	Reddish brown clay, white grits	
14	933/1	Cooking pot	208	Brown clay, white and micaceous inclusions, handmade	Avissar and Stern 2005:94, Type II.2.2.2
15	1002	Jug?	213	Brown clay, red-painted decoration on white slip	Avissar and Stern 2005: Fig. 47
16	933/2	Jar	208	Red clay, gray core, red-painted decoration on pale pink slip	
17	1032/2	Jar	213	Red clay, gray core, red-painted decoration on pale pink slip	

the Early Islamic period, although parallels are few and uncertain. The medieval pottery, originating mainly in Cave 2, is represented by both fine, unglazed wheel-made ware and coarse handmade ware. The former includes several bowls of well-levigated, well-fired, buff-colored ware (Fig. 27:5–7) and the neck of a flask in a fine, well-fired brown fabric (Fig. 27:13). Handmade ware includes coarse bowls (Fig. 27:8, 9), everted-rim cooking pots with crushed calcite temper (Fig. 27:14), and a few fragments of geometric-painted ware (Fig. 27:15–17).

Associated with this pottery was a fragment of a glass bracelet (Fig. 28:1) and bronze fittings—a handle or part of a lamp chain, perhaps—and a bone or ivory hairpin (Fig. 28:2).

Fig. 28. Early Islamic/medieval artifacts from Cave 2: part of a glass bracelet (1) and a bone hairpin (2).

DISCUSSION

In an earlier publication (Greenberg and Cinamon 2006), we discussed the implications of the administrative stamped jar handles found by the different excavators at Rogem Gannim for the political economy of Jerusalem in the eighth–fourth centuries BCE. Here we wish to focus on the function of the site itself, on its relation to other tumuli, and on its position in the agricultural hinterland of Jerusalem.

Late Iron Age Winepresses West of Jerusalem

While winepresses are notoriously difficult to date, there is growing evidence for the existence of an Iron Age type in the region west of Jerusalem (see Fig. 1). Thus far, the site of Beit Ṣafafa provides the most secure evidence for the early date of this type, which typically consisted of a rectilinear treading floor, a settling basin, a collecting vat and, nearby, a fermentation or storage cave. A prominent feature of most of the treading floors of this group is the niches cut into the back wall, intended to anchor pressing beams (Feig 2003: Plan 4). Apart from Beit Ṣafafa, presses of this type have been found to date at Manaḥat (Zehavi 1994: Fig. 78), near an Iron Age/Persian structure at Er-Ras (Edelstein 2000: Plan 6), within the Iron Age farmstead adjacent to the southeastern Iron Age tumulus of Giv‘at Massu’a (Ovadiah 1994: Fig. 86), and now at Rogem Gannim. While in some cases there is evidence for reuse of the presses and the adjacent installations in the Roman period or later, all share the primitive structural details that betray an early origin. Altogether, 35 presses may be associated with Iron Age/Persian activity within a 2 km radius of the midway point between Rogem Gannim and Beit Ṣafafa. Many of these appear in groups that evidently served a widespread area around each wine-production site.

Rogem Gannim and the Economy of Late Iron Age/Persian Jerusalem

The concentration of winepresses at Rogem Gannim, in proximity to a highly visible landmark (the tumulus), but with no evidence for habitation in the vicinity, highlights the prominent characteristics of late Iron Age/Persian settlement in the Refa’im Basin. With only tenuous evidence for an eighth-century presence at this and nearby sites, we suggest that wine production began in earnest during the seventh century BCE, and that it continued, perhaps with temporary interruptions, until the late fifth or early fourth century. As we have discussed elsewhere in greater detail (Greenberg and Cinamon 2006), a bimodal trend is evident in the seventh–fifth-centuries CE settlement: dispersal of habitation sites on the one hand and concentration of production locales on the other. Faust (2003) has noted that the dispersal of settlement in isolated farmsteads or loosely aggregated villages is indicative of a high level of security in the Jerusalem countryside at this time. Whether this was owed to the *pax Assyriaca* directly administered from Ramat Raḥel, as suggested by Na’aman (2001), or to the economic revival of Judah under Manasseh, as suggested by others (e.g., Finkelstein 1994), is immaterial. In either case, the remarkable growth of Jerusalem necessitated an expansion of rural settlement around it, and it was the task of the administration to provide security for such settlement.

It is becoming increasingly clear that economic specialization was practiced extensively in seventh-century Judah (Katz 1998; Finkelstein and Na’aman 2004), and the Jerusalem countryside was no exception. Recent work at the site of Moẓa (Greenhut 2006; Greenhut and De Groot 2009) illustrates cereal specialization in the Soreq Valley, as evidenced by the presence of dozens of grain silos, storage facilities and administrative buildings. In contrast, the Naḥal Refa’im farmsteads reveal evidence for neither grain storage nor animal husbandry. Here, all efforts were devoted to viticulture, and the concentration of winepresses at sites such as Manaḥat (16 presses), Massu’a (5 presses) and Rogem Gannim (8 presses), suggests collective

labor that may well have been overseen by state agents (Greenberg and Cinamon 2006).

Function of the Tumulus

The results of the Rogem Gannim excavations have an indirect bearing on the long-standing issue of the function of the tumuli west of ancient Jerusalem. In a separate study, Cinamon (2004) has shown that the tumulus phenomenon should be broken down into its constituent parts, rather than viewed as a unitary phenomenon. Judged by criteria of size, visibility, planning, associated structures and finds, only a handful of the 20-odd cairns described by Amiran (1958) should be understood as primary manifestations of the late Iron Age tumulus-building impulse. Excavations at several of these sites, and especially at Tumulus No. 4 (Amiran 1958), suggest that some tumuli were preceded by the construction of polygonal enclosures. These might be attributed to eighth-century activity aimed at concentrating produce as part of the preparations for the Assyrian siege (the phase associated with *lmlk* storage jars). The erection of the prominent tumuli is often accompanied by the construction of industrial installations, as at Rogem Gannim. As we connect the industrial activity with state-sponsored (or state-controlled) specialization, overseen from the administrative center at Ramat Raḥel (generally identified as ancient Bet Ha-Kerem, literally 'house of the vineyard'), it seems likely that the tumulus was used to establish a physical presence in the countryside and to promote communication across the Refa'im Basin (Fig. 29).

This agricultural-administrative interpretation of the function of the tumuli seems to fit best with the finds in hand, both architectural (enclosure, tumulus, winepresses and storage caves) and artifactual (quotidian pottery, consisting mainly of storage jars, relative abundance of stamped jar handles). Interpretations advanced in the past, whether mortuary or cultic, are presently not supported by the evidence.

Roman, Islamic and Medieval Presences

Following its abandonment at the end of the Persian period, the most significant presence at the site dates to the Early Roman period. At this time, at least one press (WP3) was remodeled, a ritual bath appears to have been hewn, and the collapsed Cave 1 was restored, plastered, and used as a cistern. Other parts of the site served as quarries for low-grade *nari* stone used in rural construction, both at the site itself and nearby. Winepress 3 was destroyed and put out of use when the large stone rollers were cast into its collecting vat, no later than the first century CE. We tend to associate the white mosaic floor of the press with this Roman phase, although a later date cannot be ruled out. The Roman-period presence can be associated with the many remains of rural settlement and industrial activity in the Refa'im Basin ascribed to 'Herodian' Jerusalem (Kloner 2003b:32).

Later activity at the site must have been sporadic. There is some evidence for post-Roman construction of small terraces and for the continued use of one or more cisterns. The later Roman to Early Islamic, medieval and early modern finds are probably to be associated with the seasonal presence of farmers and/or shepherds.

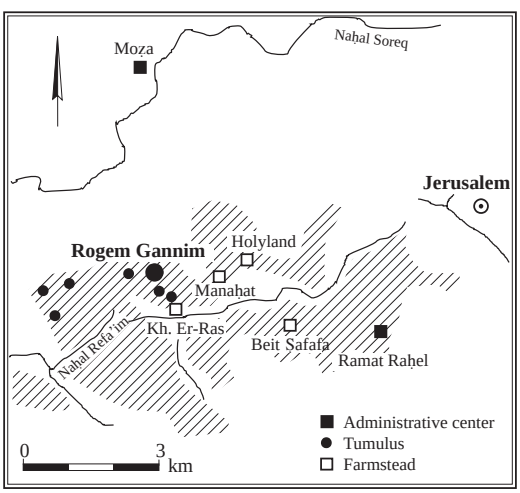

Fig. 29. Viewshed (hatched) from the tumuli above Naḥal Refa'im (map prepared by H. Cinamon).

APPENDIX 1: LOCUS AND WALL LIST

Locus No.	Location	Type	Content*	Remarks
100	Terrace III	Cistern	IA, Per, Rom	Rom on floor only
101	Terrace II	Treading floor	Rom	= WP3
102	Cave 1	Soil deposit	IA, Rom	Above L108
103	Terrace III	Cistern	IA, Per?	
104	Terrace II	Settling basin	Rom	= WP3
105	Terrace II	Collecting vat	IA, Rom; stone rollers	= WP3
106	Terrace III	Soil deposit	Non-diagnostic	
107	Terrace III	Soil deposit	IA, Per?	Restorable IA jars
108	Cave 1	Fill in cistern	Per, Rom	= L130; lower grindstone
109	Terrace III	Collecting vat	Per	= WP4
110	Terrace III	Stone-cut installation	IA, Per	
111	Terrace III	Settling basin		= WP4
112	Northeastern Terrace	Wall		Blocking Cave 1
113	Terraces III–IV	Vat/cistern	Modern	= Cistern 3
114	Terrace II	Soil deposit	Rom	Near Cistern 2
115	Terrace I	Treading floor	IA	= WP1
116	Terrace I	Wall		Late terrace wall
117	Terrace I	Wall		Blocks WP1
118	Terrace II	Wall		Borders Cistern 2
119	Terrace I	Soil deposit	Rom	
120	Terrace I	Channel		
121	Terrace III	Treading floor	IA, Per	= WP4
122	Terrace I	Treading floor	IA, Per, Rom	= WP2
123	Northeastern Terrace	Soil deposit	IA, Per, Rom	Above Cave 1 entrance
124	Terrace II	Spoil heap	Per, Rom, Med	= L206
125	Terrace III	Depression in treading floor	Non-diagnostic	= WP7
126	Terrace III	Treading floor	Non-diagnostic	= WP7
127	Terrace III	Rock surface	None	
128	Northeastern Terrace	Soil fill	Rom	Below L123
129	Northeastern Terrace	Corridor	(Per), Rom	Entrance to Cave 1
130	Cave 1	Fill in cistern	(IA, Per), Rom	= L108
131	Terrace II	Rock surface	Rom	E of WP3
132	Terrace I	Tumulus surface	Modern	Cleaning recent terrace above WP1
135	Cave 1	Cistern fill	Rom	= L130, L108
136	Northeastern Terrace	Corridor	IA, Per, Rom	= L129
137	Northeastern Terrace	Soil deposit	IA, Per, Rom, Modern	
138	Cave 1	Soil deposit	Rom	In entrance
139	Terrace II	Rock cavity	Non-diagnostic	

* IA = Iron Age, Per = Persian, Rom = Roman, Med = medieval, EIs = Early Islamic

APPENDIX 1: (cont.)

Locus No.	Location	Type	Content*	Remarks
140	Terrace III	Rock surface	None	W of WP4
141	Terrace IV	Rock surface	IA, Rom, EIs	E of WP8
142	Northeastern Terrace	Round installation	IA, Per, Rom?	
143	Northeastern Terrace	Rock-cut surface	Non-diagnostic	E of L142
201	Cave 2	Roof collapse and soil	Mixed up to modern	
202	Northeastern Terrace	Wall		Cuts W210; see L203
203	Northeastern Terrace	Terrace fill	IA, Per, Rom	Behind W202
204	Northeastern Terrace	Soil deposit	IA (Per, Rom)	Per, Rom only in topmost baskets
205	Northeastern Terrace	Soil deposit	Rom	In front of W202
206	Terrace II	Spoil heap	Rom, EIs	= L124; covers W209
207	Terrace I	Tumulus fill	IA	Probe in tumulus
208	Cave 2	Occupation surfaces	(Rom), Med	
209	Terrace II	Wall		
210	Northeastern Terrace	Wall		
211	Northeastern Terrace	Fill	IA, Rom	
212	Northeastern Terrace	Soil deposit	IA, Per, Rom	
213	Cave 2	Stone floor	EIs, Med	Below L208
214	Terrace III	Soil deposit	Med, many tesserae	
215	Northeastern Terrace	Soil deposit	IA, Per	Above floor L221
216	Cave 2	Soil deposit	IA, EIs, Med	Below L213; includes L217 and L218
219	Cave 2	Pit	IA, Med	Recent pit at cave entrance
220	Northeastern Terrace	Pit or installation	Non-diagnostic	Below L204
221	Northeastern Terrace	Floor		Below L215

NOTE

[1] The Rogem Gannim project is sponsored by the Gannim Community Council, the Israel Antiquities Authority and the Institute of Archaeology at Tel Aviv University. The chairman of the community council, Yuval Farjon, played a major role in all stages of the project. We also thank the previous chair, Meir Abitbul, volunteer activists Mike Leiter and Eli Barsheshet, the staff of the Bressler/Scheuer Community Center, the staff of the Center for Field Studies at Kibbutz Reshit, and numerous volunteers, especially from the neighborhoods of ʻIr Gannim, Qiryat Menaḥem and Givʻat Massuʼa, who contributed to the excavation and the preservation of the site. The excavation staff included the authors and, in 2006, Yonathan Mizrachi.

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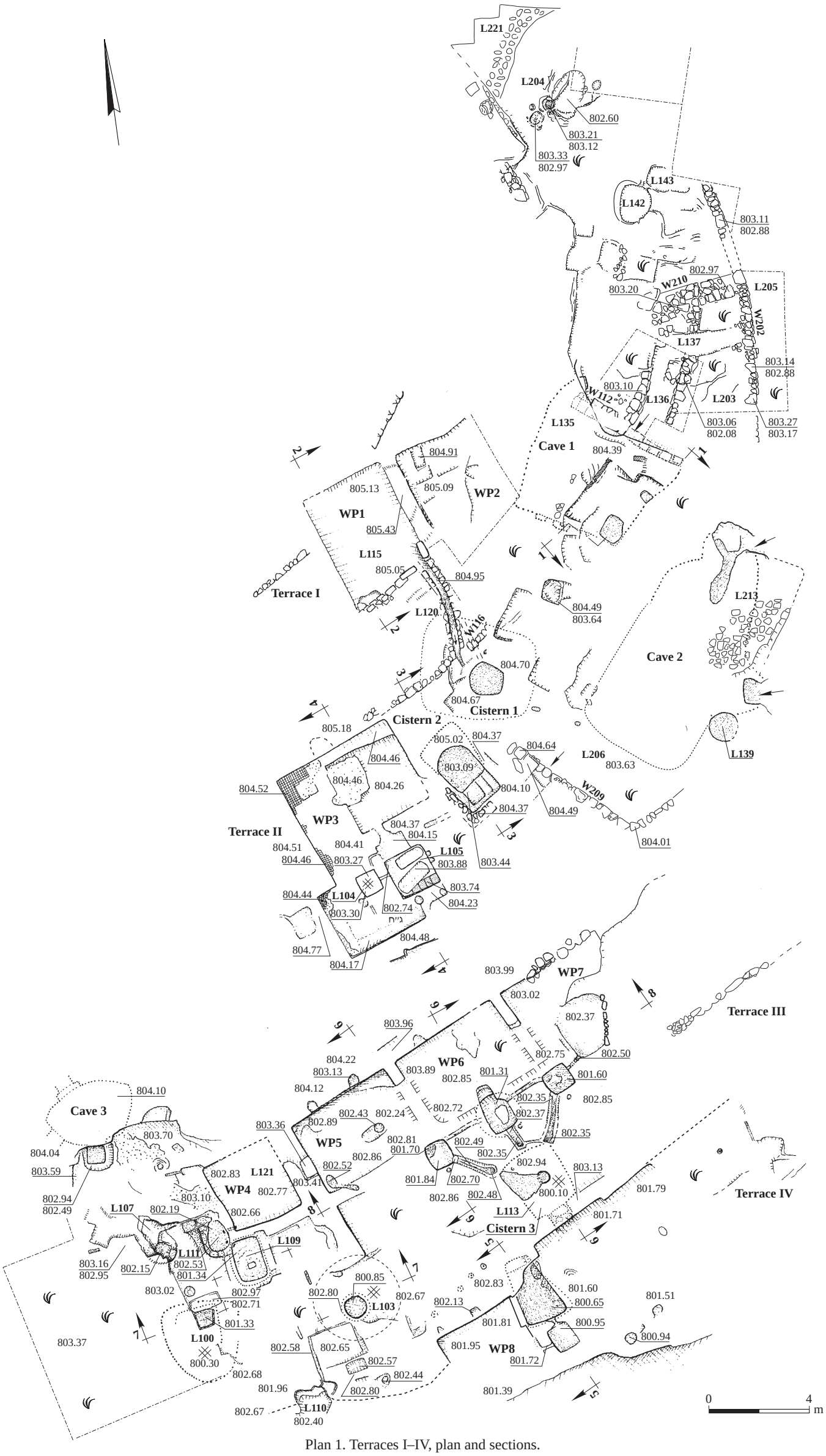
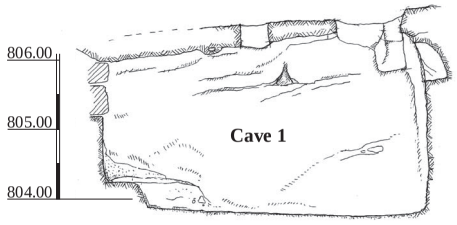


Plan 1. Terraces I–IV, plan and sections.



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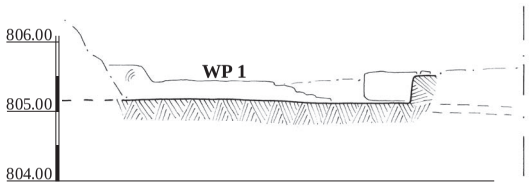

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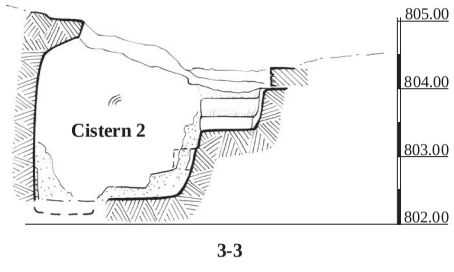

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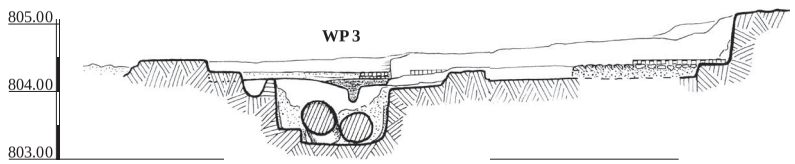

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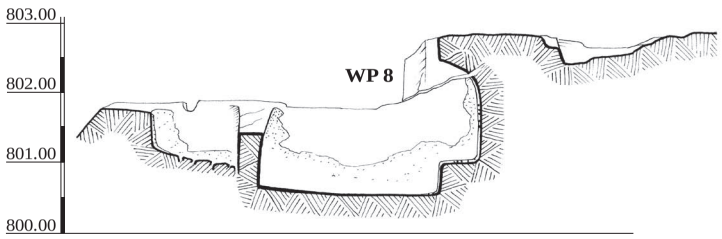

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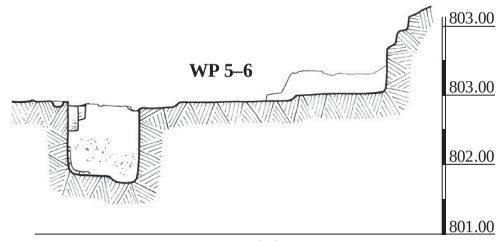

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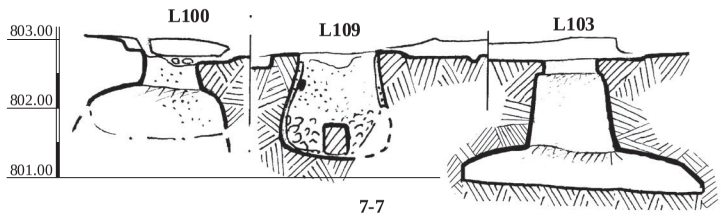

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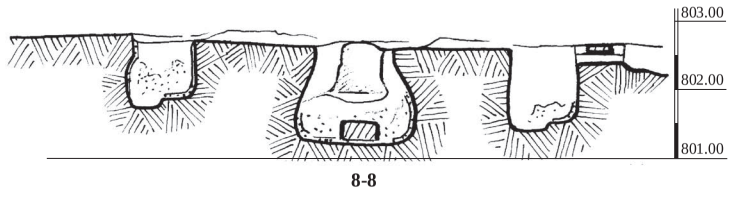

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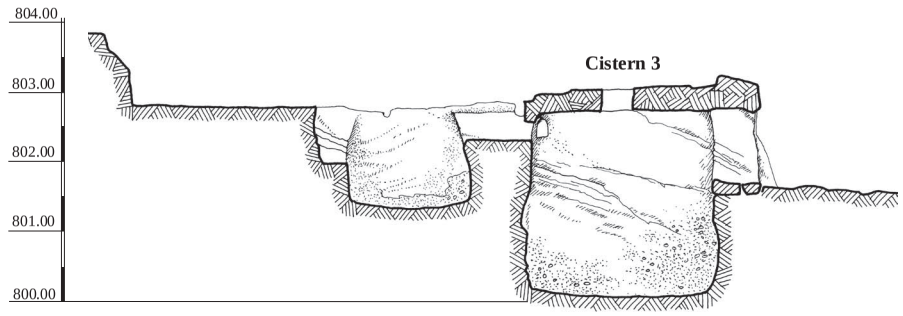

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