

EXCAVATIONS AT KHIRBAT MARMITA

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Khirbat Marmita lies on a hill close to the Hartuv quarry (map ref. NIG 2013–15/6304–06; OIG 1513–15/1304–06; Fig. 1). Owing to the expansion of the quarry, excavations were carried out in the industrial zone of Kh. Marmita (Plan 1);¹ the settlement itself was on a lower hill, and thus, outside the scope of this investigation.

Working for the Survey of Western Palestine in the nineteenth century, Conder and Kitchener (1883, III:120) described Khirbat Marmita as “Modern ruined walls”. A survey at the site, carried out by the British Mandatory Department of Antiquities in 1929, noted

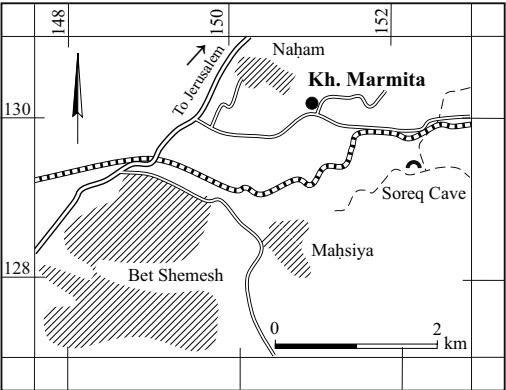
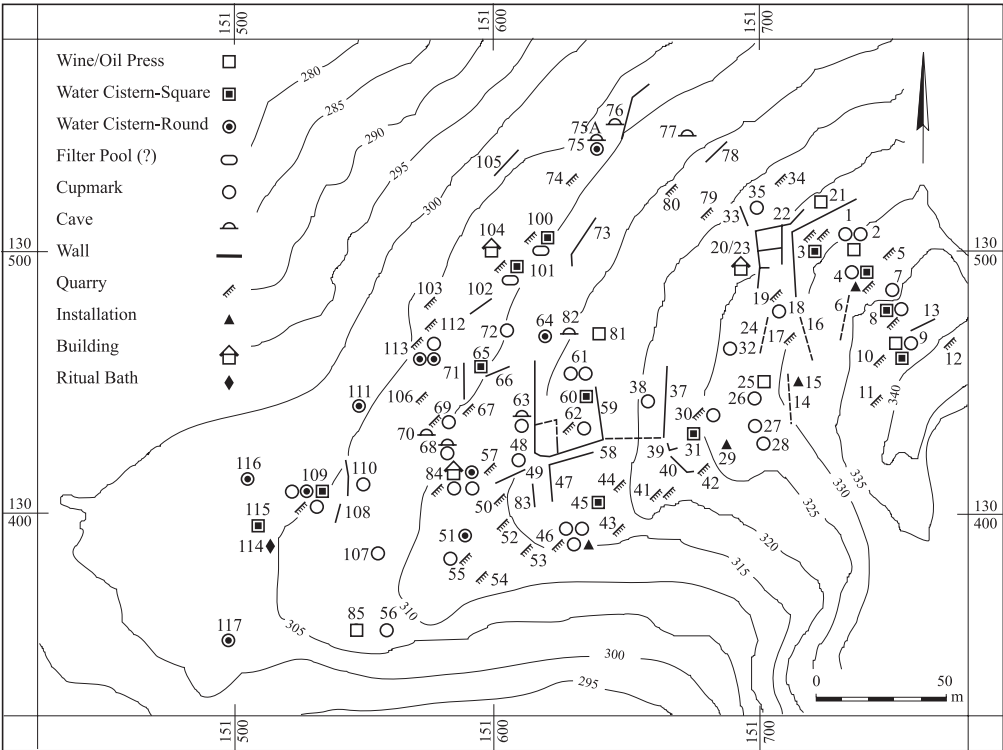


Fig. 1. Location map of Kh. Marmita.



Plan 1. Site location.

“ruins, caves, cisterns, rock-cuttings, stone with cup-marks” (IAA Mandatory archive, File: Kh. Marmita). The stone was further described as a “stone alter ([sic]; ?)”, with a recommendation to acquire it for the museum. Visiting the site in 1934 the inspector D. Baramki wrote that the walls on the site were ancient, in contrast to Conder and Kitchener.²

Kh. Marmita is located in Santonian and Touronian limestone and chalk, with beds inclining westward. The top formation of the area is *ghareb* of the Maastrichtian age, 15–40 m thick. It is composed of yellowish marly chalk and is slightly phosphatic in its lower part; several meters of *nari* overlay it (Lasman and Soudri 1970:1–6).

All the installations at Kh. Marmita are quarried into bedrock and are presented in groups, including winepresses, an oil press, cupmarks, quarries and other features (Fig. 2); their description follows the three building complexes excavated at the site.

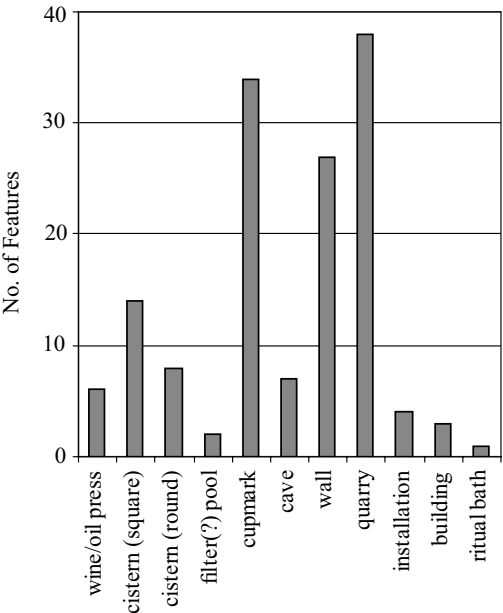
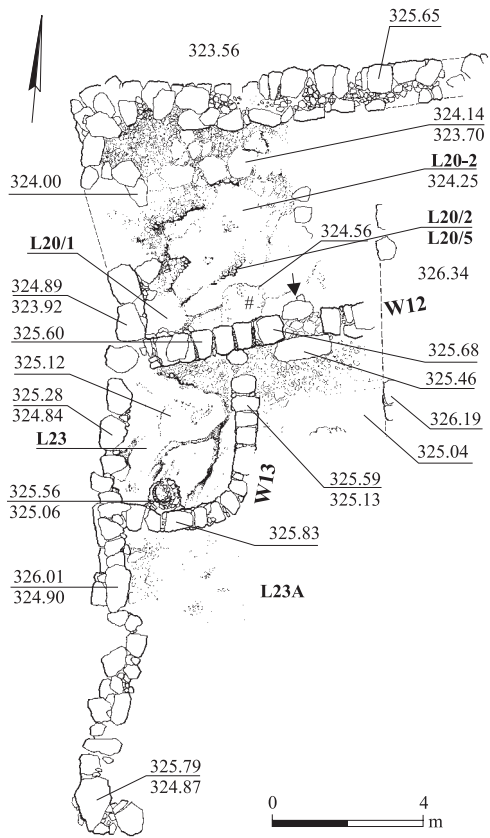


Fig. 2. Diffusion of sites by categories.

THE BUILDINGS (SITES 20/23, 84, 104)

Building 20/23 (Plan 2)

The building, composed of two rooms, was uncovered near the top of the hill.³ The northern room (L20) was the best preserved. A fill of packed stones, soil and potsherds was set on the sharply sloping bedrock as a floor bedding (L20/2, L20/5). A patch of a hard lime floor on the bedrock remained in the southeastern corner (L20/1). Wall 12, preserved four courses high, separated the northern and southern (L23) rooms. A small curved wall (W13), which enclosed a poorly preserved *tabun* with double walls, was exposed in Room 23. The lower part of the *tabun* was sunk into floor level, which was not preserved in this room. The fill below this



Plan 2. Building 20/23.

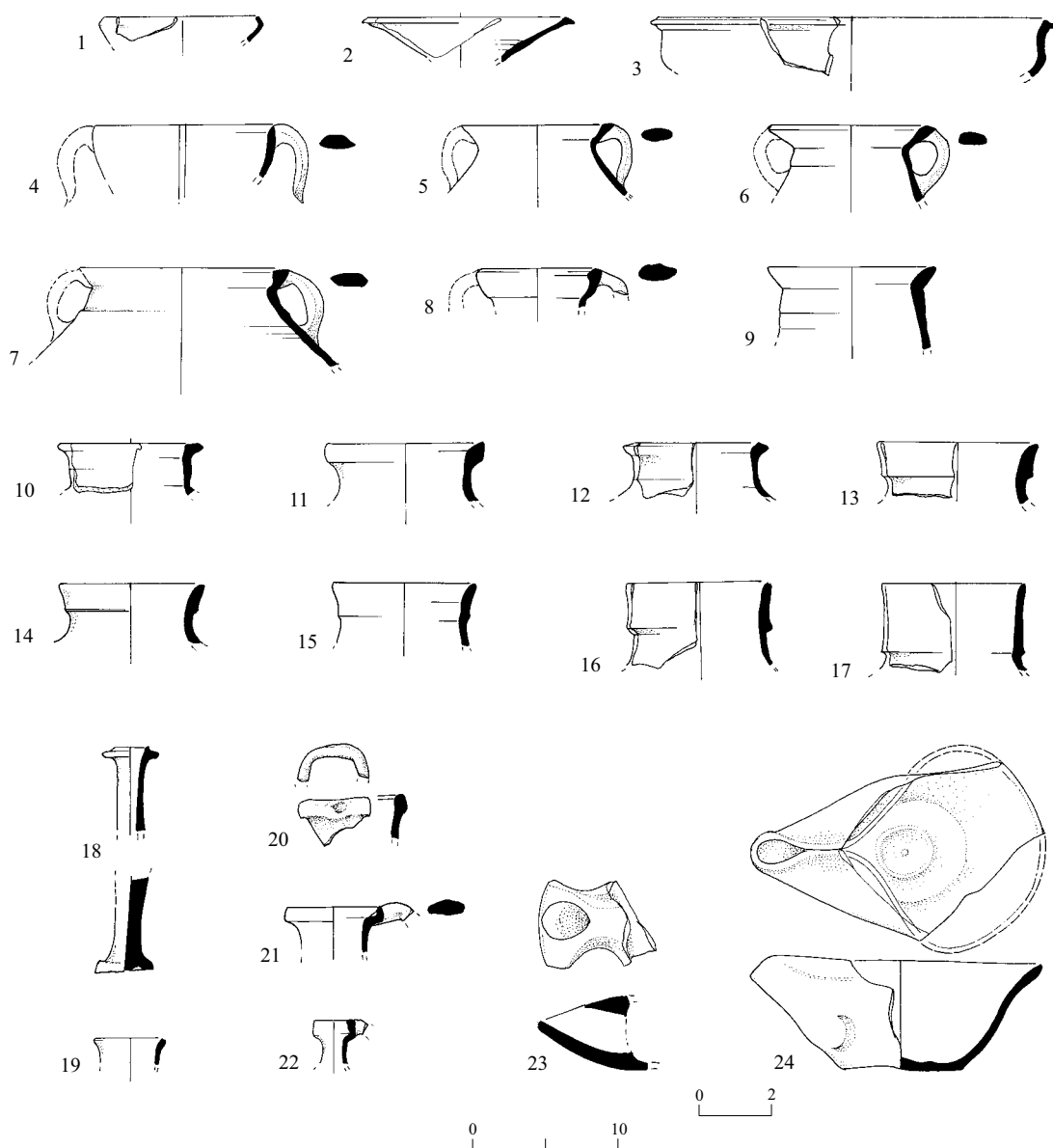


Fig. 3. Pottery vessels from Building 20/23.

level was excavated to bedrock and contained numerous Hellenistic potsherds, dating from the first half of the first century BCE (Fig. 3).⁴

Building 84 (Plan 3; Table 1)

The two rooms of Building 84 (D, F) were part of a large complex, which included other installations and a quarry (Plan 3). The northern

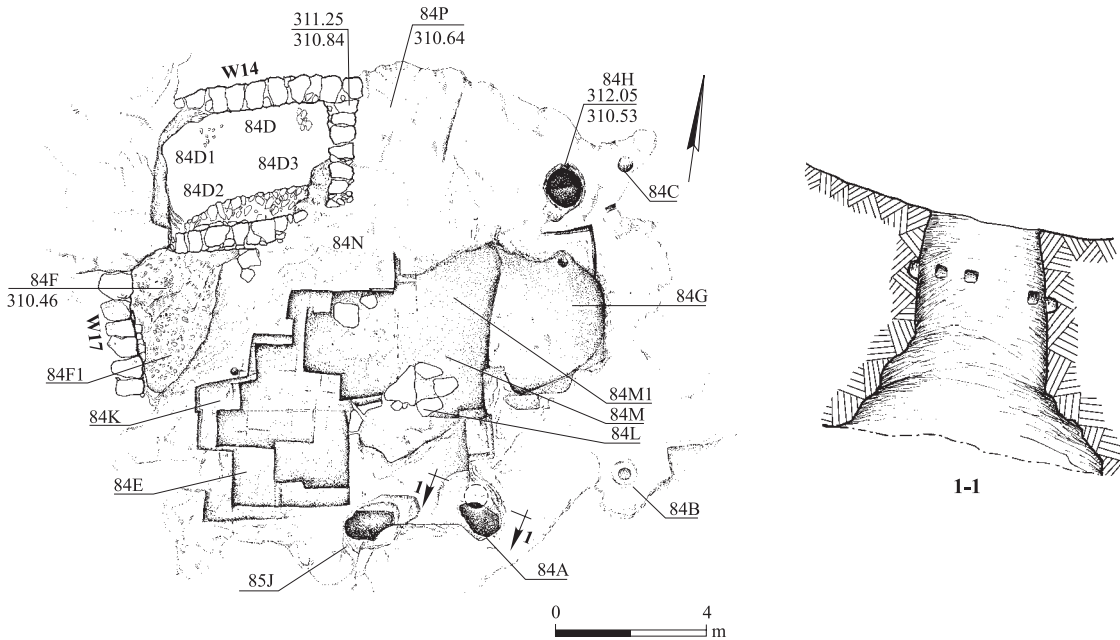
wall (W14) of the larger room (84D) stood three courses high (Fig. 4). The floor layer (310.83 m asl) was composed of packed lime chips and contained many potsherds, as well as two fragments of flat grinding stones. The packed fill below this floor also revealed a large quantity of potsherds. A broken shell (*Acanthacardia taberculata*) was found in Room 84D.⁵ This

◀ Fig. 3

No.	Vessel	Reg. No.	Locus/Site	Class	Comments
1	Bowl	108/2	20/3	B2	2.5YR 7/6 light red
2	Bowl	111/10	20/2	B5	5YR 5/1 gray
3	Bowl	111/11	20/2	B6	7.5YR 8/4 pink
4	CP	113/4	23/2	CP7a	5YR 5/8 yellowish red
5	CP	118/1	23/1	CP5b	5YR 5/4 reddish brown
6	CP	105/2	20/1	CP5c	2.5YR 5/2 weak red
7	CP	119/1	20/2	CP5a	5YR 5/6 red
8	CP	123/1	23A	CP4	2.5YR 5/8 red
9	SJ	116/3	20/2	SJ17	7.5YR 8/4 pink
10	SJ	111/8	20/2	SJ9a	7.5YR 8/4 pink
11	SJ	119/10	20/2	SJ14a	7.5YR 8/2 pinkish white
12	SJ	119/1	20/2	SJ9b	2.5YR 6/6 lightly red
13	SJ	105/3	20/1	SJ12a	7.5YR 8/4 pink
14	SJ	109/11	20/2	SJ12	7.5YR 7/3 pink
15	SJ	114/1	23/1	SJ11b	7.5YR 7/6 reddish yellow
16	SJ	117/4	23/2	SJ11a	5YR 7/4 pink
17	SJ	119/3	20/2	SJ10	7.5YR 7/6 reddish yellow
18	Fusi. Ung.	108/3+ 108/4	20/3		7.5YR 7/4 pink 7.5YR 7/2 pinkish gray
19	Jug	122/1	23/2	J5a	7.5YR 8/3 pink
20	Jug	114/2	23/1	J9a	10YR 8/2 very pale brown
21	Juglet	111/7	20/2	Jg2a	10YR 8/3 very pale brown
22	PIF1	122/2	23/2	PIF12	5YR 8/3 pink; core 10YR 6/8 brownish yellow
23	Lamp	111/2	20/2	L3	7.5YR 8/4 pink
24	Lamp	121/3	23/1	L1	7.5YR 8/4 pink



Fig. 4. Room 84D, looking east.



Plan 3. Site 84, plan and section.

Table 1. Features of Building 84

84 A	Water cistern, circular top
84 B	Cupmark
84 C	Cupmark
84 D	The northern room
84 E	Quarry
84 F	The southern room
84 G	Quarry of enigmatic nature
84 H	A round, carved pit, may be a refuse
84 J	A tub-shaped quarry
84 K	A small quarry for large stone blocks
84 L	Small area enclosed by a wall(?)
84 M	The area between 84G and 84K
8 N	The area east of 84F
84 P	The passage between 84D and 84H

shell is prevalent in the Mediterranean Sea and is regarded as a symbol of the sun. It could have belonged to a piece of jewelry. Room 84F was

irregular in shape; its western wall (W17) stood two courses high. Fragments of basalt and stone vases together with many potsherds overlaid the floor, at 310.96 m asl (Fig. 5). The 0.3 m thick makeup fill above bedrock and below this floor also yielded numerous ceramic fragments.

A roughly hewn circular pit (84H; diam. c. 1 m, depth 1.2 m) at the northeastern corner of the complex (Fig. 6) contained a large number of broken pottery and stone vessels. The majority of potsherds belonged to store jars and cooking pots, but small vessels were present as well. This feature may have been a refuse pit for broken pots, as none of the fragments could be restored to complete vessels.

The late Hellenistic-period potsherds from sites 84D, 84F and 84H (Fig. 7) are contemporary with those from Building 20/23, while the stone vases indicate a slightly later date, toward the end of the first century BCE.

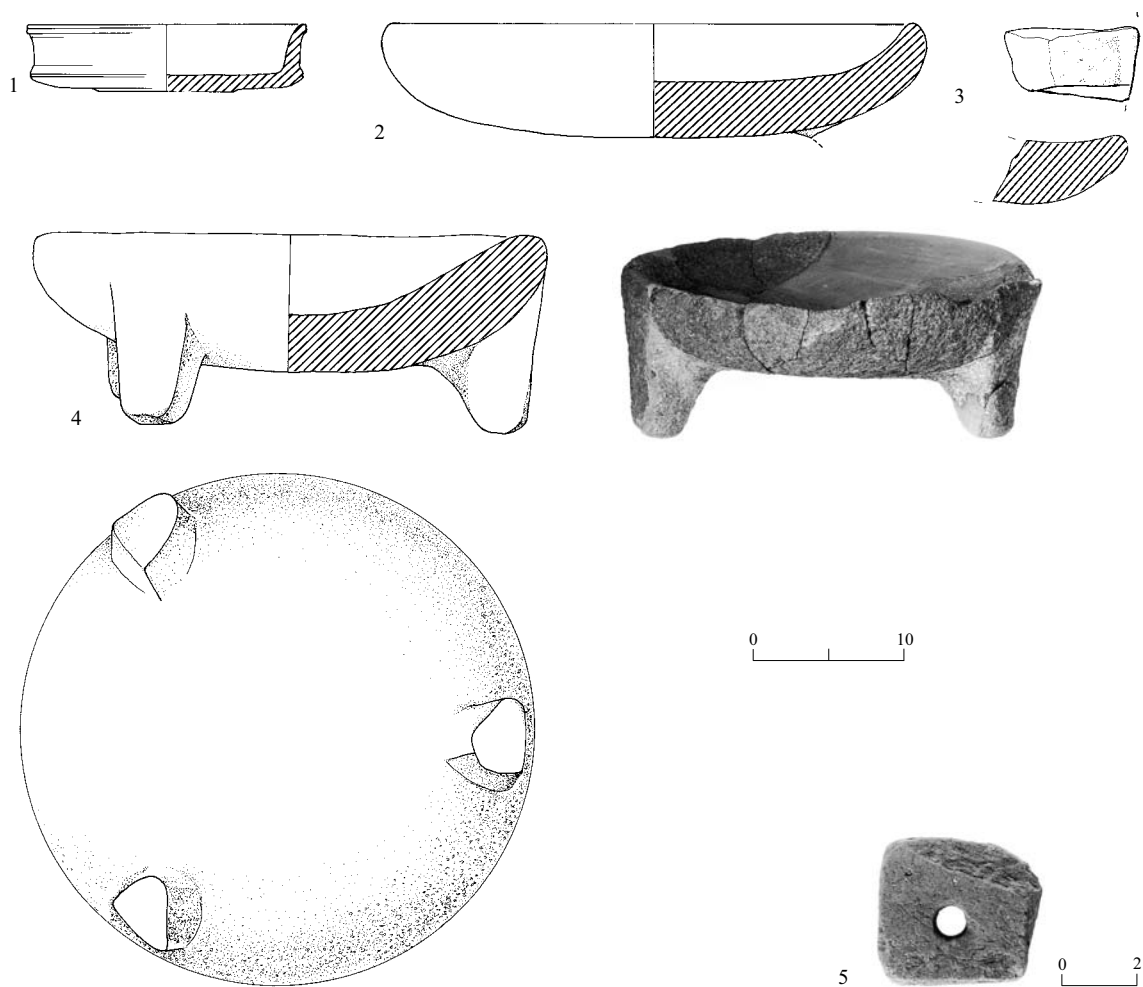


Fig. 5. Stone vases from 84D, F, H.

No.	Vessel	Reg. No.	Locus/Site	Comments
1	Bowl	318/1	84F	Limestone
2	Bowl	312	84F	Basalt
3	Bowl	469/1	84D1	Basalt
4	Bowl	422	84H	Basalt; tripple-legged
5	Weight	437	84M	Half broken



Fig. 6. Looking into 84H.

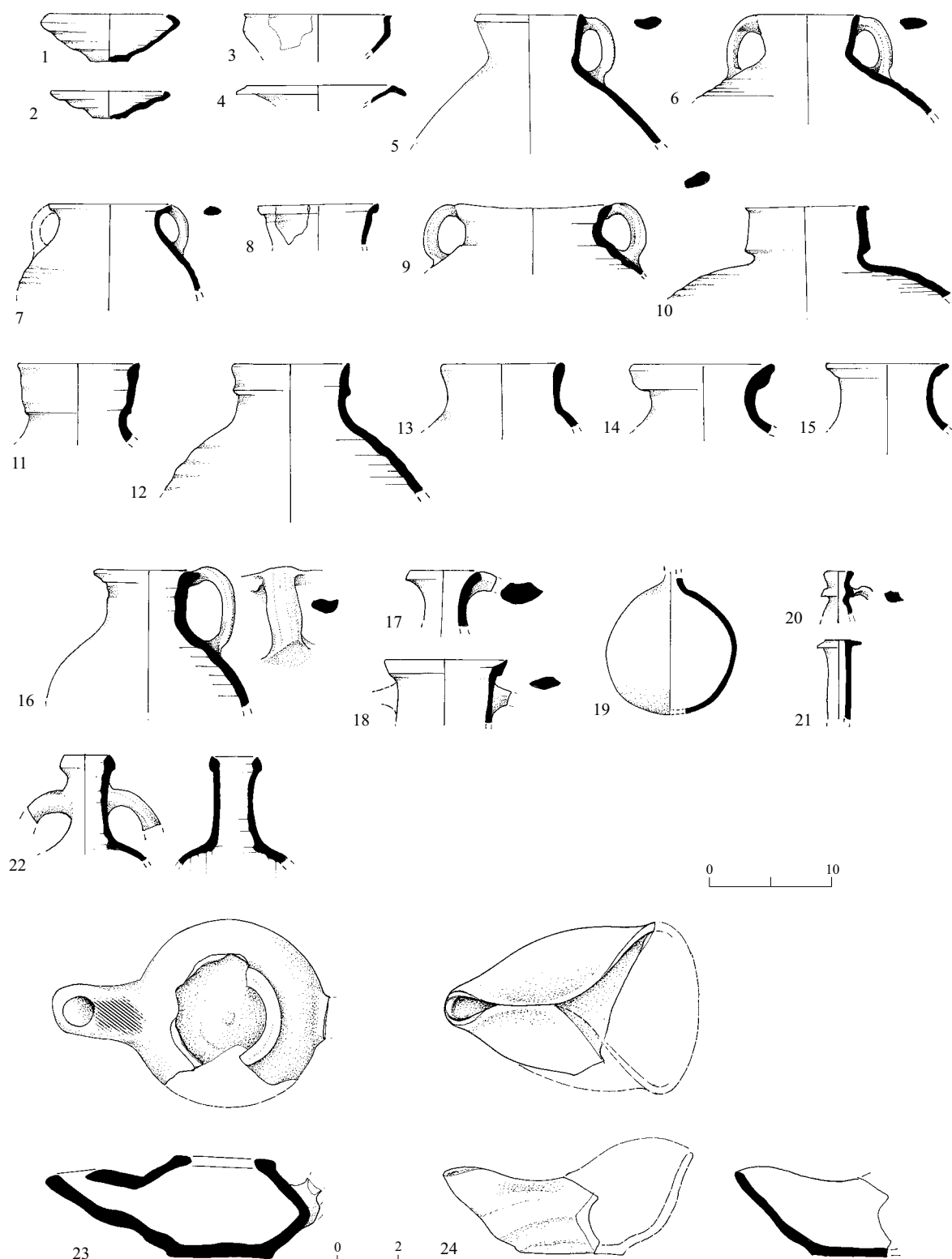


Fig. 7. Pottery vessels from 84D, F, H.

◀ Fig. 7

No.	Vessel	Reg. No.	Locus/Site	Class	Comments
1	Bowl	413/2	84D	B2	2.5YR 6/6 light red
2	Bowl	419/3	84F	B1	5YR 7/4 pink
3	Bowl	466/1	84D3	B4	7.5YR 7/4 pink
4	Bowl	415/3	84H	B5	7.5YR 6/1 gray
5	CP	429/1	84H	CP8	2.5YR 5/6 red
6	CP	413/1	84D	CP7	5YR 5/4 reddish brown
7	CP	428/1	84F	CP11	10YR 4/1 dark gray
8	CP	281/2	84D	CP14	5YR 5/4 reddish brown
9	CP	433/1	84H	CP5	10YR 4/6 dark yellowish brown
10	SJ	282/4	84D	SJ6	7.5YR 7/4 pink
11	SJ	287/1	84D	SJ5	5YR 7/6 reddish yellow
12	SJ	424/3	84H	SJ11	2.5YR 7/6 light red
13	SJ	406/4	84F	SJ3	7.5YR 6/1 gray
14	SJ	415/2	84H	SJ13	7.5YR 8/3 pink
15	SJ	404/4	84F	SJ13b	5YR 6/4 light reddish brown
16	Jug	430/1	84H	J2	2.5YR 6/6 light red
17	Jug	424/4	84H	J5	7.5YR 8/3 pink
18	Jug	445/1	84D1	J8	7.5YR 8/3 pink
19	Juglet	431/1	84H		7.5YR 7/3 pink
20	Juglet	403/3	84F	Jg3	7.5YR 5/1 gray
21	Fusi. Ung.	416/1	84H		7.5YR 8/3 pink
22	PIF1	428/2	84F	PIF12	7.5YR 8/2 pinkish white
23	Lamp	419/4	84F	L1	7.5YR 7/6 reddish yellow
24	Lamp	414/3	84H	L2	7.5YR 5/1 gray

Building 104 (Plan 4)

Building 104 is composed of rooms surrounding a courtyard. This structure was probably a farmhouse, wherein a large selection of pottery vessels, stone vases, metal artifacts, and a few coins and glass fragments was found.⁶ The outer yard of the house, enclosed by W102 to the south, was probably used for livestock. A large room in the south (104/1) had an entrance at the southwestern corner (Fig. 8) and a floor layer of packed lime-chips. The western wall of the house (W19) stood two courses high; the lowest course was set directly on bedrock. However, in Room 104/1 it only had one course of stones, whereas the southern (W18) and northern (W21)



Fig. 8. Room 104/1, looking west.

walls had survived two courses high. The floor layer covered a packed fill, as rich in potsherds as the floor layer itself. Nevertheless, since the



Plan 4. Building 104 and Sites 100, 101, 102.

identified floor layer was close to the surface, it could have been below the original floor level of the room. North of Room 104/1 were two more rooms, 104/2 and 104/3; the latter was a small, square space, surrounded with a curved partition wall (W23) built of small stones and filled with broken store jars (Fig. 10) and a limestone basin (Fig. 11:11), which may have been used as a pantry.

The rooms on the northern side of the building seem to have been more domestic in function (Fig. 9). Rooms 104/5 and 104/6 could have been a single room divided by small partitions. The floor layer in Room 104/5 was laid directly over bedrock, which was rather high and flat on this side of the building. A section of the floor was covered with ashes, inside which two cooking pots were lying. Nearby was an odd funnel



Fig. 9. Building 104, looking west.

with many other fragments of pottery vessels, mostly of a utilitarian nature. Several flat grinding stones overlaid the floor of Room

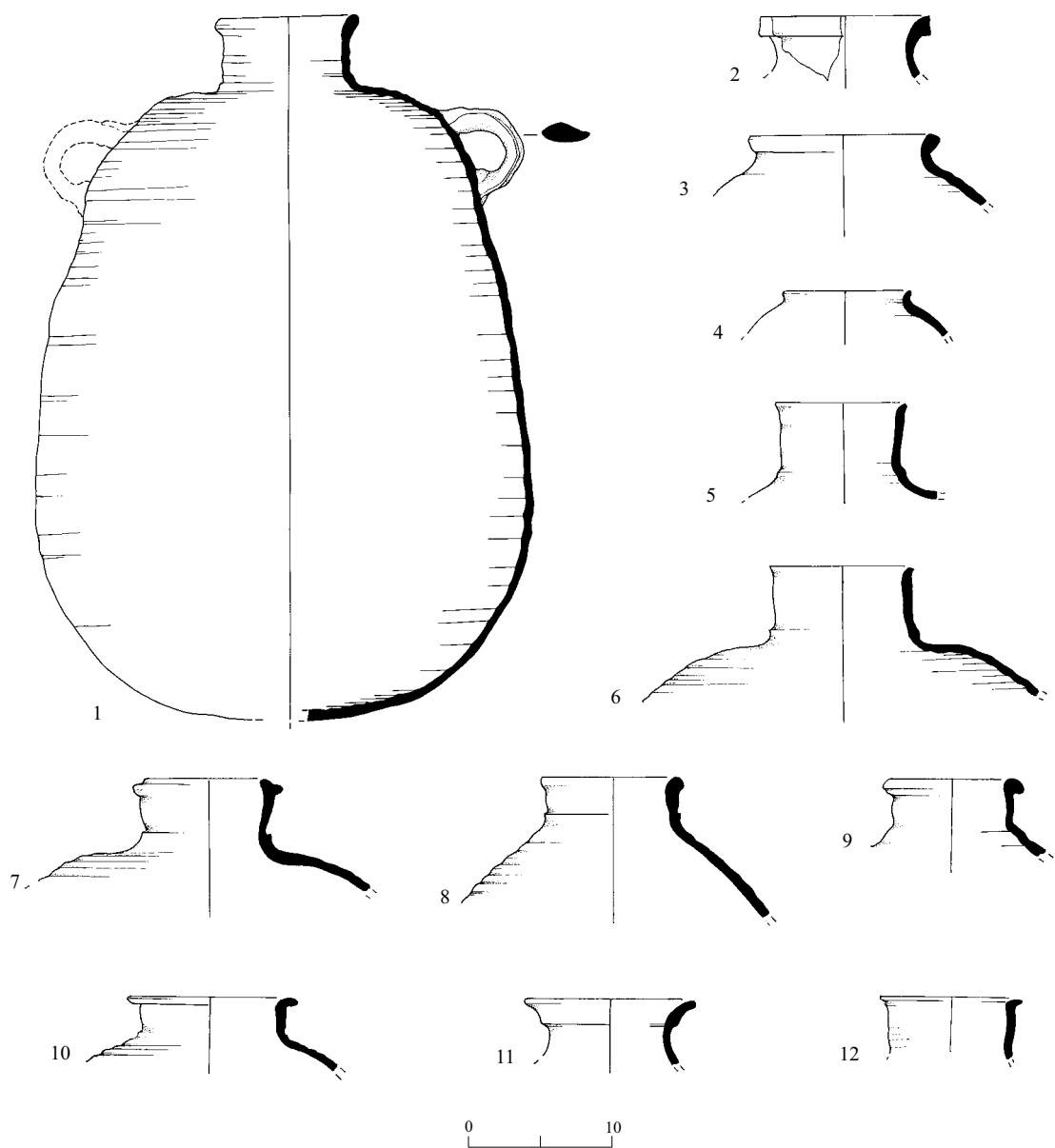


Fig. 10. Store jars from Building 104.

◄ Fig. 10

No.	Vessel	Reg. No.	Locus/Site	Class	Comments
1	SJ	243/2	104/3	SJ1	10YR 7/2 light gray
2	SJ	265/2	104/III	SJ14	5YR 7/6 reddish yellow
3	SJ	247/1	104/3	SJ15	10YR 7/4 very pale brown
4	SJ	257/4	104/5	SJ16	10YR 8/3 very pale brown
5	SJ	288/3	104/2A	SJ4a	2.5YR 7/8 light red
6	SJ	238/1	104/3	SJ4	10YR 7/2 light gray
7	SJ	292/2	104/2A	SJ7	10YR 7/4 very pale brown
8	SJ	238/2	104/3	SJ2	2.5YR 5/6 red
9	SJ	271/3	104/III	SJ8	10YR 7/3 very pale brown
10	SJ	305/1	104/7	SJ9	5Y 8/2 pinkish white
11	SJ	263/1	104/II	SJ13a	10YR 8/3 very pale brown
12	SJ	244/1	104/2	SJ18	5YR 7/6 reddish yellow

Fig. 11 ►

No.	Vessel/Object	Reg. No.	Locus/Site	Comments
1	Cup	250/1	104/5	Limestone; handle
2	Cup	228/1	104/3	Limestone
3	Cup	300/1	104/7	Limestone
4	Cup	283/2	104/6	Limestone
5	Cup	277/2	104/6	Limestone
6	Cup	278	104/6	Limestone
7	Weight	232	104/3	Lead
8	Disc	306/1	104/7	Stone
9	Bowl	246/1	104/1	Limestone; base
10	Bowl	256/1	104/5	Limestone
11	Basin	242	104/3	Limestone
12	Hilt(?)	288/1	104/2	Metal

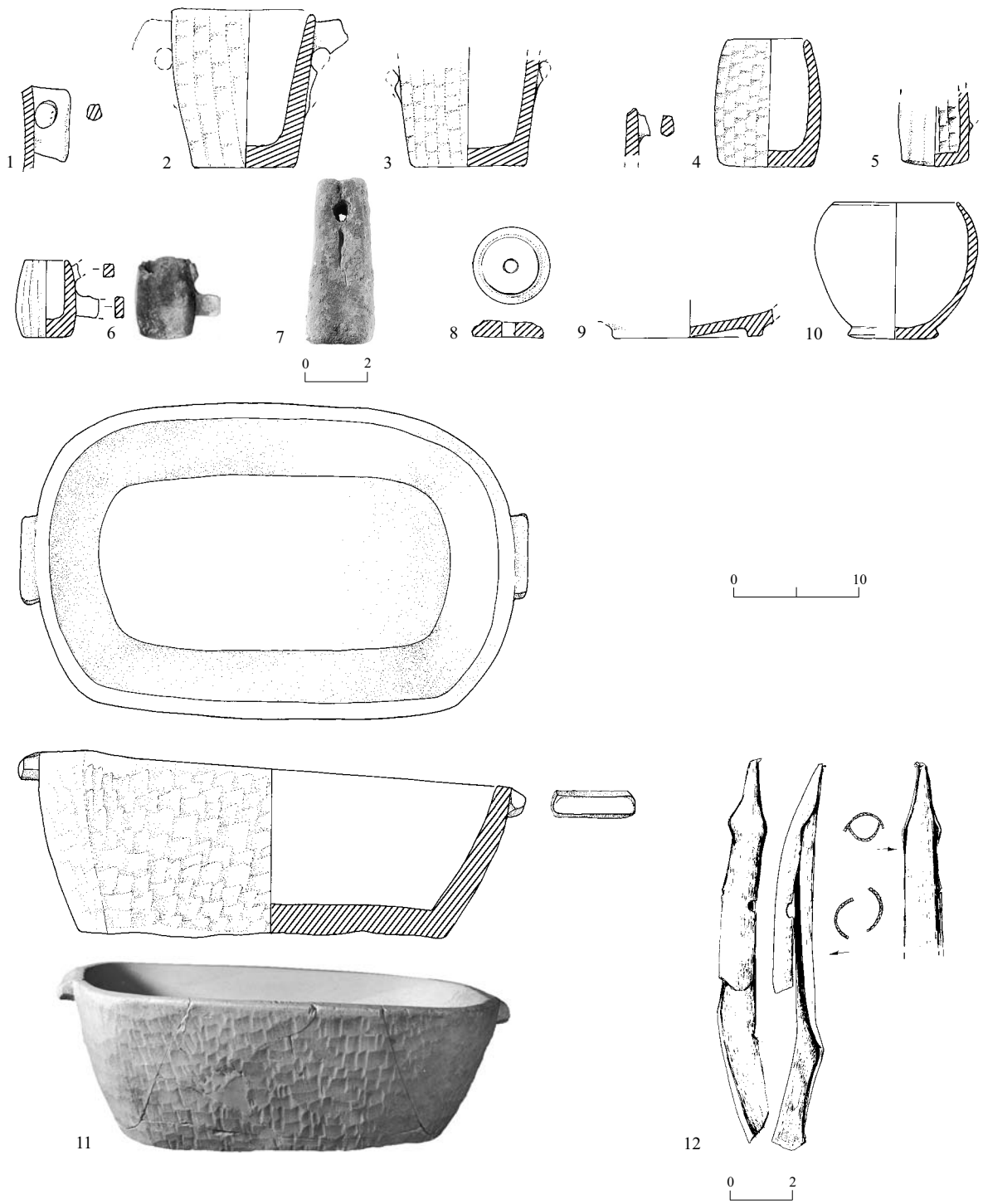


Fig. 11. Stone vases and metal finds from Building 104.

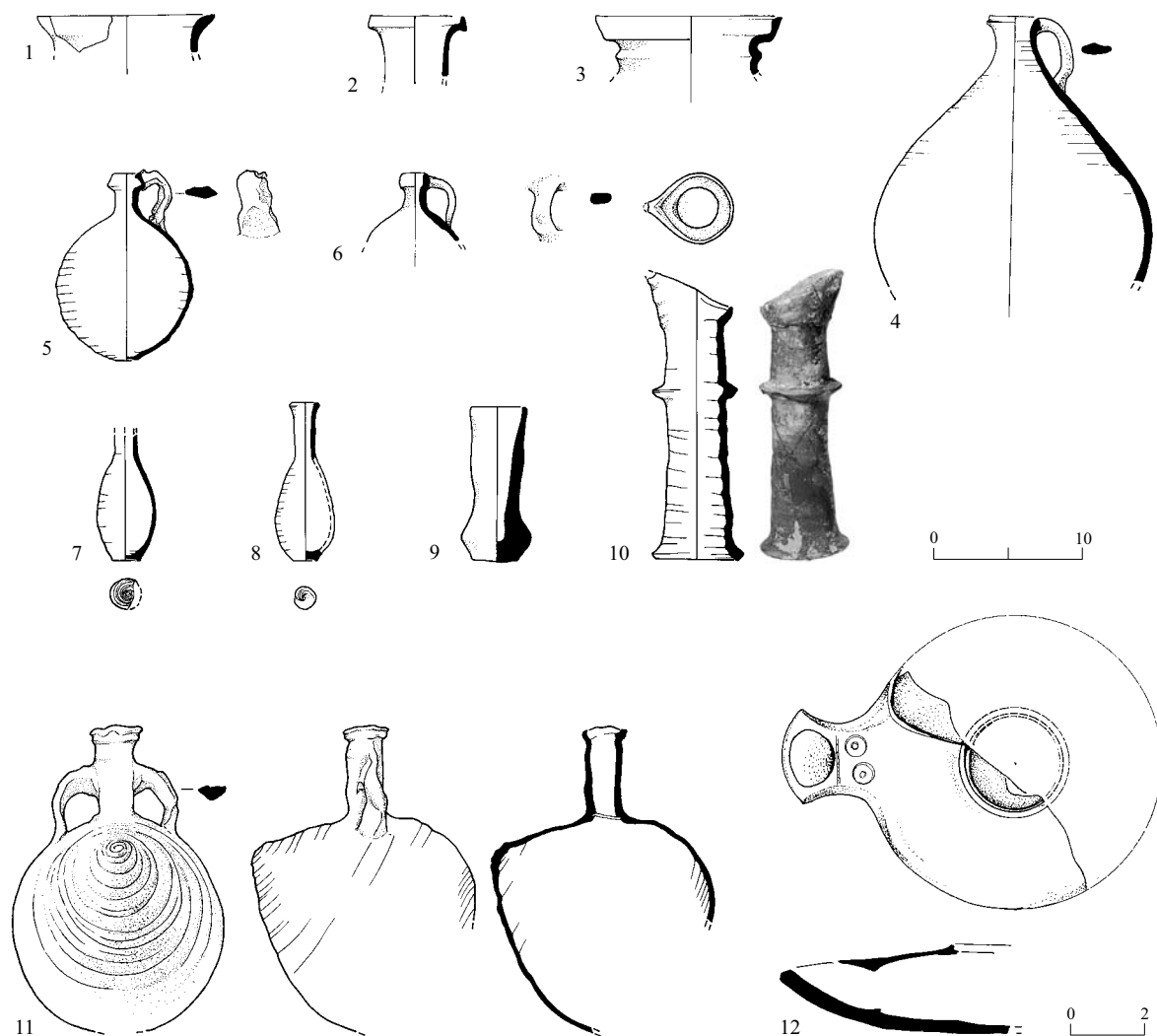


Fig. 12. Jugs, juglets and other finds from Building 104.

No.	Vessel	Reg. No.	Locus/Site	Class	Comments
1	Jug	224/1	104/1	J3	5YR 7/6 reddish yellow
2	Jug	271/4	104/III	J9	10YR 7/3 very pale brown
3	Jug	251/2	104/4	J10	2.5YR 7/6 light red
4	Jug	299/2	104/7	J6	5YR 4/3 reddish brown
5	Juglet	252/1	104/5	Jg2	5YR 7/6 reddish yellow
6	Juglet	266/1	104/5A	Jg1	7.5YR 5/1 gray
7	Juglet	227/2	104/3		7.5YR 7/4 pink
8	Juglet	259	104/5	Jg4	7.5YR 6/6 reddish yellow
9	Kohl bottle	292/1	104/2A		2.5YR 6/6 light red
10	'funnel'	283/1	104/6		2.5YR 4/1 dark reddish gray
11	Pilgrim flask	256/3	104/5	PIF11	7.5YR 5/1 gray
12	Lamp	243/3	104/3	L3a	7.5YR 7/4 pink

Fig. 13 ▶

No.	Vessel	Reg. No.	Locus/Site	Class	Comments
1	Bowl	234/1	104/1	B3	10YR 8/3 very pale brown
2	CP	256/2	104/5	CP3	2.5YR 5/8 red
3	CP	257/2	104/5	CP1	5YR 5/4 reddish brown
4	CP	256/4	104/5	CP6	10R 5/6 yellowish brown
5	CP	258/1	104/5	CP2	2.5YR 5/6 red
6	CP	247/3	104/3	CP12	2.5YR 6/4 light reddish brown
7	CP	301/2	104/III	CP10	2.5YR 5/8 red
8	CP	234/2	104/1	CP4a	2.5YR 5/6 red
9	CP	299/5	104/7		5YR 5/8 yellowish red
10	CP	247/2	104/3	CP13	5YR 5/6 yellowish red
11	CP	238/3	104/3	CP3a	2.5 YR 5/6 yellowish red

Table 2. Dispersion of Ceramic Vessel Types in Building 104

	104/1	104/2	104/3	104/5	104/6	104/7	104/II	104/III	104/IV
Bowl	9	1	1	3	2		1	1	
Cooking pot	20	10	7	14	4	7	6	12	1
Store jar	22	25	21	18	9	7	7	19	1
Jug	7	5	4	2	1	7	2	8	
Juglet	2	1	5	6	2	1	1	2	1
Pilgrim flask				1					
Lamp	1	2	3	1		1			
Fusifform unguentarium	3							1	
Kohl bottle		1							
Funnel					1				

104/6; nearby was a large, oval-shaped dish, which appeared to have been a baking pan put directly over coals or fire. The pan, made of mud mixed with a large amount of straw, was sun dried. Once it was placed on fire, the foods cooked, as did the vessel itself. The partially fired pan was very brittle and disintegrated upon removal. Inside the pan was a small limestone measuring cup, fairly blackened (Fig. 11:6). A jug (Fig. 12:4) was lying on the floor of Room 104/7, covered by the lower broken half of a store jar. Rooms

104/5 and 104/6 may have served as the food-preparation area of the house.

The dispersion of ceramic vessels among the different rooms of Building 104 is shown in Table 2. A considerable number of cooking pots was found in Room 104/1 (Table 2; Fig. 13:8). Store jars were prominent in the western rooms, 104/1, 104/2 and 104/3 (see Fig. 10), while most bowls were in Room 104/1.

Several adult specimens of the land snail (*Buliminus labrosus*) were found in Rooms 104/5 and 104/6 (see n. 6). The habitat of this snail is

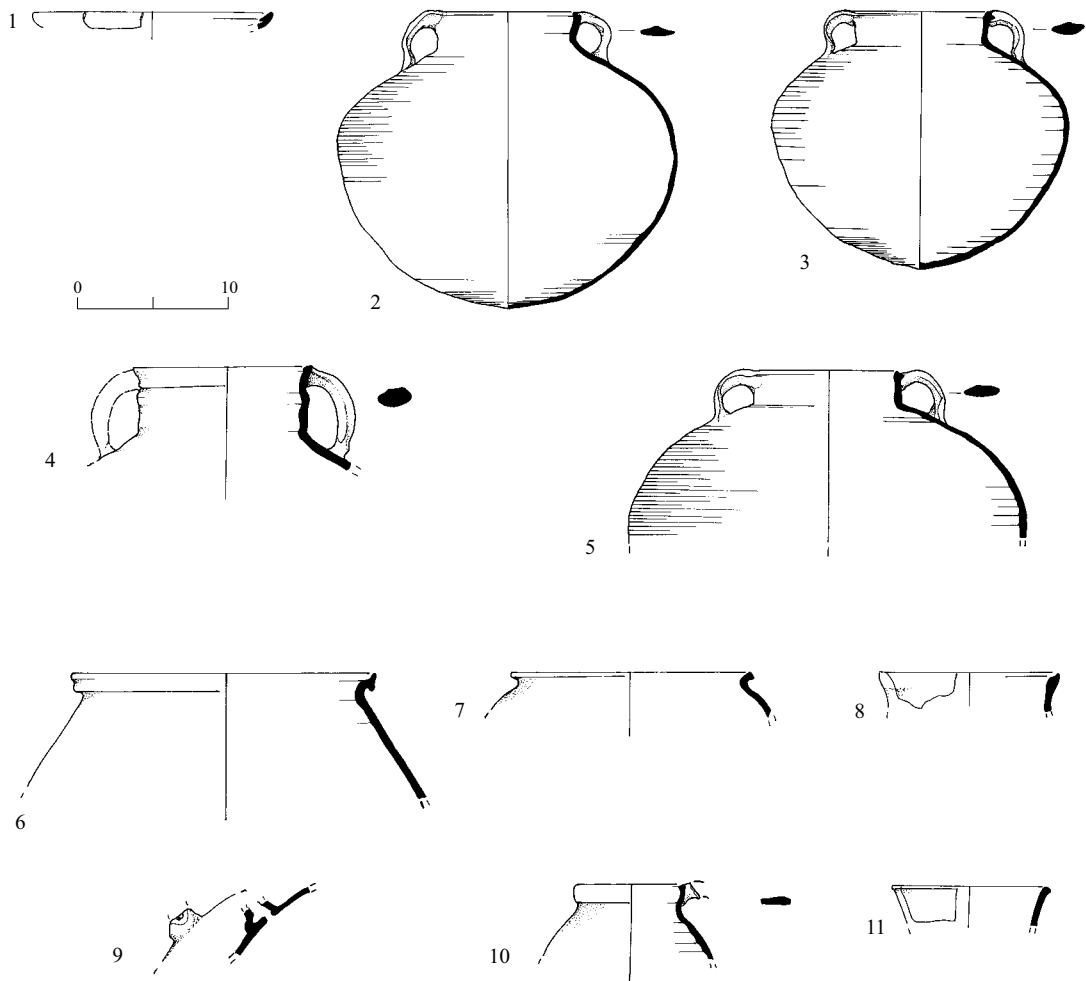


Fig. 13. A bowl and cooking pots from Building 104.

the mountain and Mediterranean areas of Israel. It exists in rocky fissures and its presence in the rooms is regarded as a natural phenomenon, not related to the history of the site.

The rich pottery assemblage of Building 104, as well as its plan and disposition, support the idea that this was, most likely, a farmhouse, dating to the first century CE.

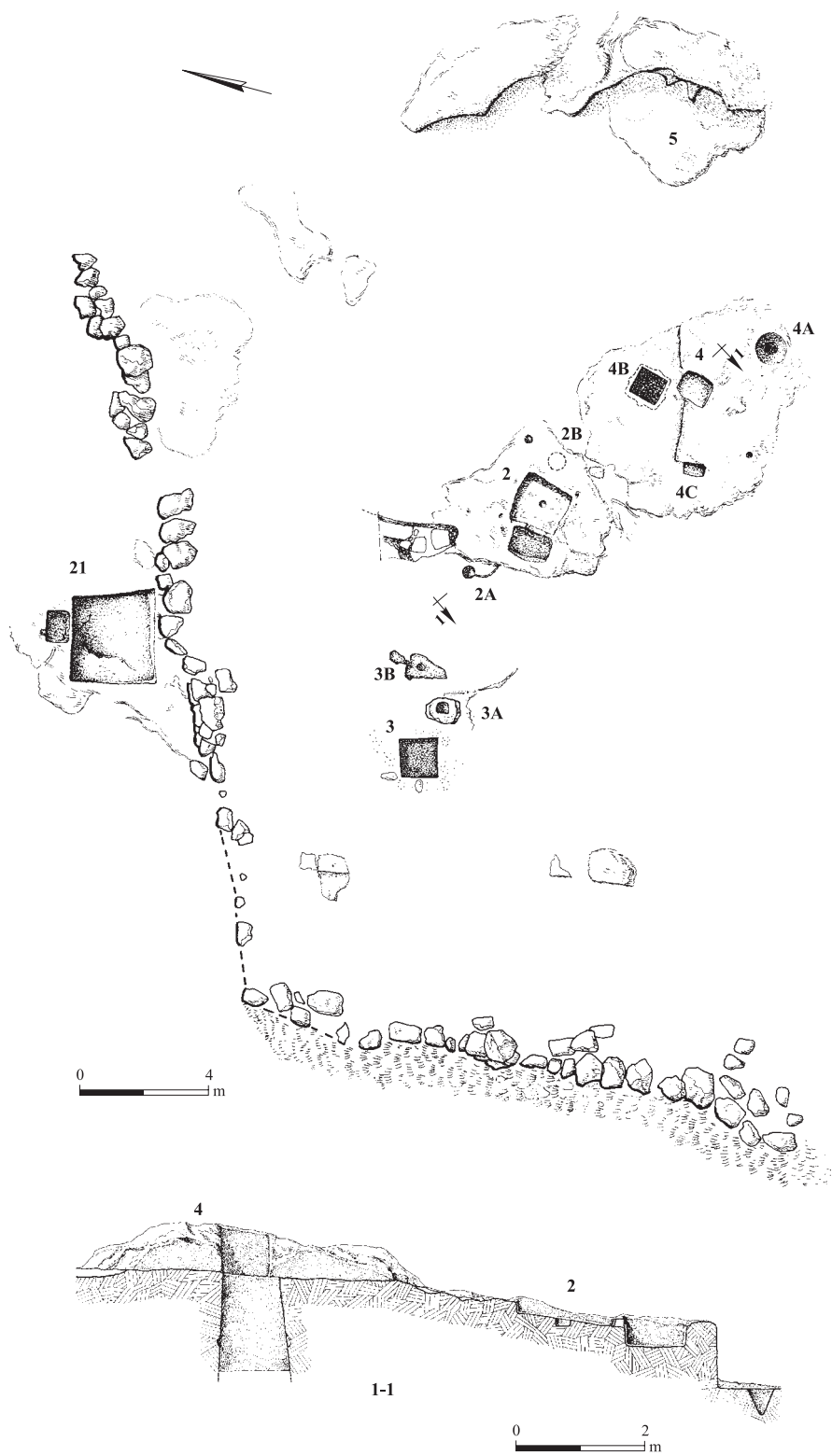
THE INSTALLATIONS

Winepresses (Nos. 2, 21, 25, 81, 85; Plans 5–8; Table 3)

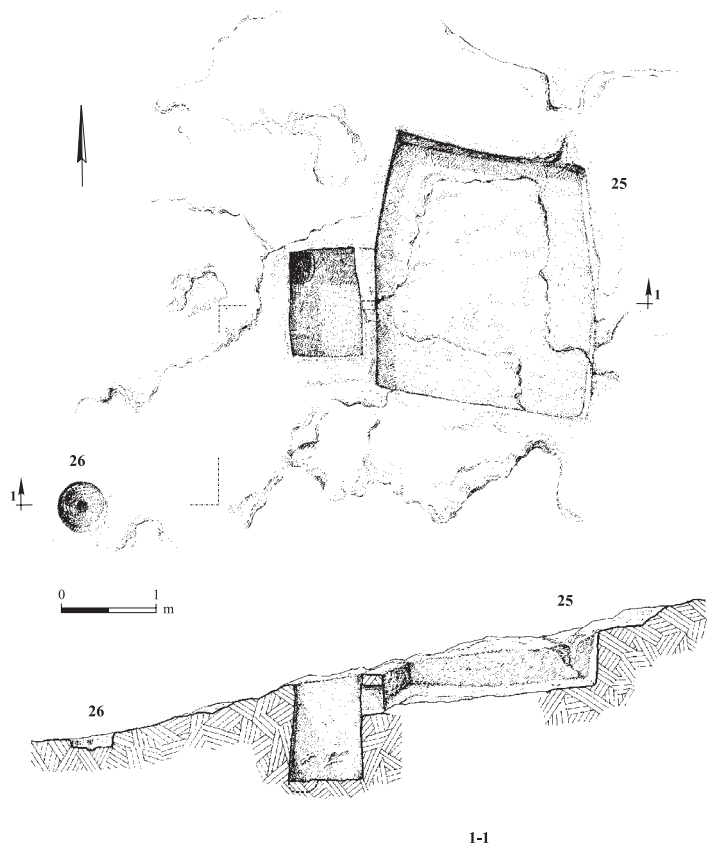
The five winepresses at Kh. Marmita belong to the simple type, widespread throughout the country in the Roman–Byzantine periods

(Ahlstrom 1978:21; Frankel 1999:51). The cisterns associated with the winepresses were probably utilized for storing the jars in which the wine fermented, a process that required a cool and dark place (Frankel and Ayalon 1988:25, Figs. 31, 53). Nearby cupmarks could have been used either for holding a store jar or as a place to prepare the lime that was sometimes added to the grape must, giving a brighter color to the extracted juice (Frankel and Ayalon 1988:31).

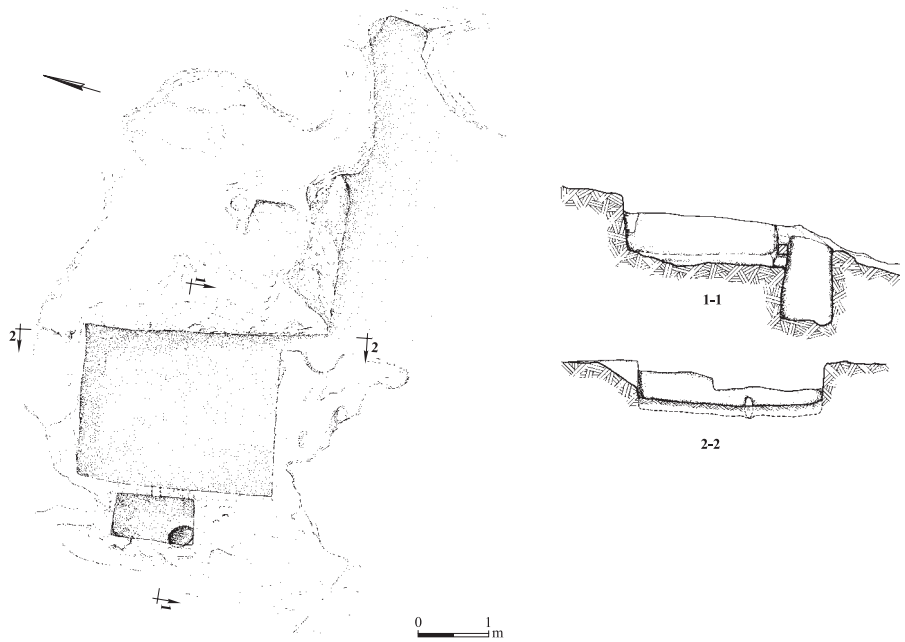
Two of the winepresses had a sunken cavity in the center of the treading floor (Nos. 2 and 81; Table 3; Fig. 14), which was used to collect a small amount of juice, extracted during a secondary crushing of the grape skins and stalks



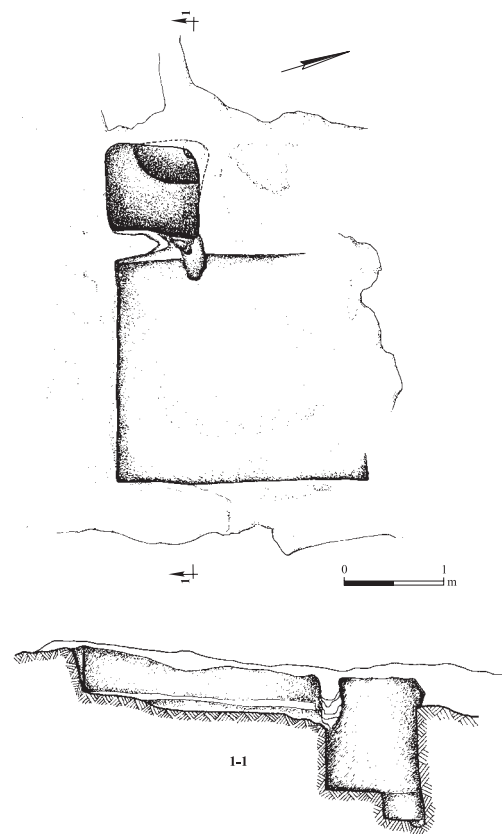
Plan 5. Sites 1, 2, 3, 4, 5, 21; section of Sites 2 and 4B.



Plan 6. Plan and section of Sites 25, 26.



Plan 7. Site 81, plan and sections.



Plan 8. Site 85, plan and section.



Fig. 14. Winepress 2.



Fig. 15. Winepress 81.

Table 3. Winepresses

	Winepress 21 (Plan 5)	Winepress 25 (Plan 6)	Winepress 81 (Plan 7; Fig. 15)	Winepress 85 (Plan 8)
Treading floor measurements (m)	2.4 × 2.7	2.3 × 2.7	1.50 × 1.75; depth 0.55	2.3 × 2.5; depth 0.4
Treading floor area (sq m)	6.48	6.21	2.62	5.75
Collection vat measurements (m)	0.7 × 1.0	0.72 × 1.13	1.15 × 0.60; depth 1.1	0.9 × 0.9
Collection vat volume (cu m)			0.76	
Cavity in center of treading floor			+	
Connection—floor and vat	Circular hole, side	Circular hole, center	Elongated hole, center	Deep channel, center
Settling pit in vat floor			+	Square, with small cavity in its corner
Cistern/cave nearby	+(3)		+(82)	
Cupmark nearby		+(26)		+(56)

(Frankel 1999:54). These cavities are thought to be the *tappuah* mentioned in the Mishnah (Frankel and Ayalon 1988:29).

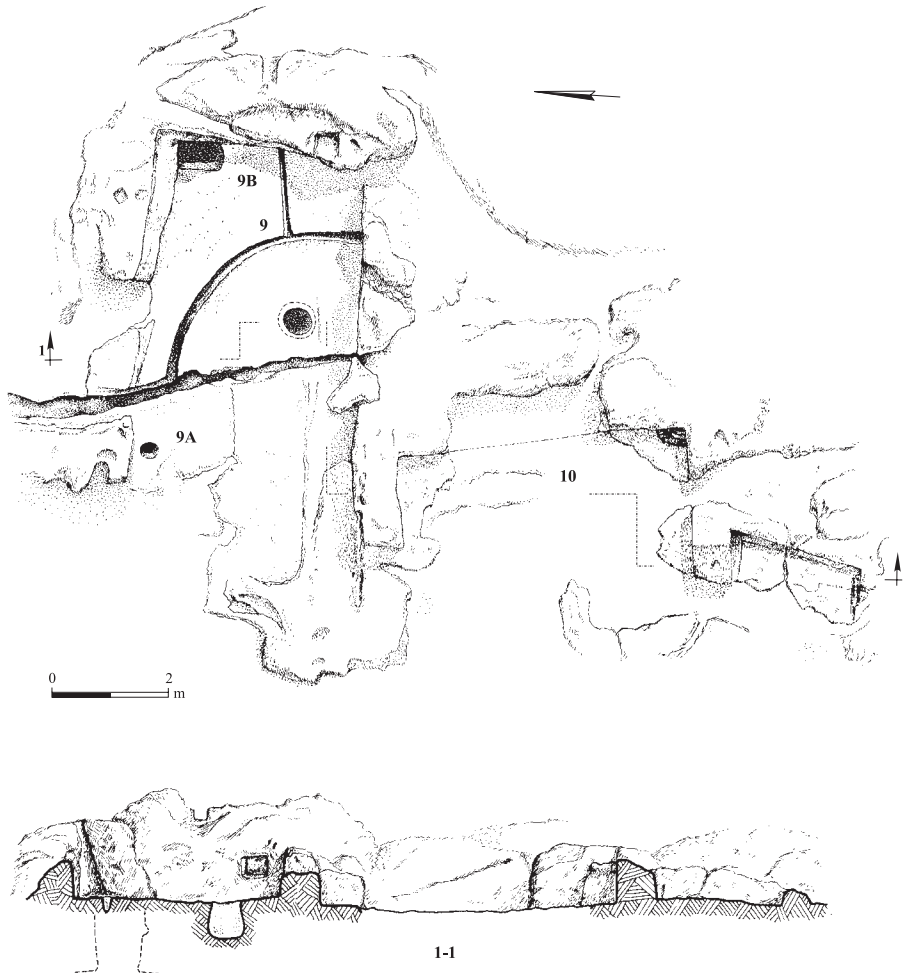
The treading floor of Winepress 81 contained several large segments of stone columns. It was not certain whether the columns were originally associated with the winepress, or had rolled down from the top of the hill (Fig. 15). These cylindrical stones could have been used for crushing grapes, instead of treading (Frankel and Ayalon 1988:43). Another possible option was to use them as weights over the mats that contained the grapes, also for supplementary crushing.

Two further features deserve mention. A quarried tunnel led from the collection vat of Winepress 2 toward the edge of the rock and

down the cliff escarpment into a deep, conical cupmark (see Plan 5). Settling pits seem to have fulfilled a useful function, yet they existed in only two winepresses. The pit in Winepress 85 was complex, having a rectangular shape, with a small cavity in its corner, which was probably intended for a further collection of the must that flowed with the juice from the treading floor.

Oil Press (No. 9; Plan 9)

Several features of this installation indicate it was a lever and weight press. A square niche, c. 0.2 m above the rock floor (0.4×0.4 m; 0.1 m deep), was hewn in the eastern rock face. A circular vat (diam. 0.45 m, depth 0.65 m) was sunk into the rock floor, 2.6 m from the niche.



Plan 9. Sites 9, 10, plan and section.

Channels were cut in the rock floor, along the eastern and southern faces of the installation; one channel extended in a curve from the southern scarp to the west (Fig. 16). Another channel extended eastward, connecting to the eastern cistern that had a rectangular top.

Weights for attaching to the lever were not detected near the press or nearby. How the cistern functioned in relation to the press is not entirely clear. The distance between the vat and the niche seems excessive for a lever and weight press, since pressure on the olives increases the closer the vat lies to the niche (Frankel 1999:61). Nevertheless, as the vat is located just over 2.5 m from the niche and if we assume the lever was double this length (Eitam 1979:151), the downward pressure from the lever with its weights would suffice for the extraction of oil.

Several other elements associated with oil crushing were found at random. A partially broken crushing basin was above Cistern 111



Fig. 16. Oil press 9.



Fig. 17. Crushing basin over Cistern 111.

(Fig. 17). As this stone basin weights several tons, its original location must have been nearby.

A simple oil press, known as *bodeda*, was discerned near Quarry 113 (Fig. 18). This stone is nearly square in shape and c. 0.2 m high. Its upper surface has an outer groove that surrounds short, interconnected and shallow inner grooves, leading to a small cavity in its corner. To use, a small amount of olives was put in the cavity and crushed with a stone. The olive pulp was then put on top of the press, to be further crushed with the help of a heavy rock. The extracted oil would flow in the upper grooves to the outer groove and then, into the cavity (Frankel, Avitsur and Ayalon 1994:29).

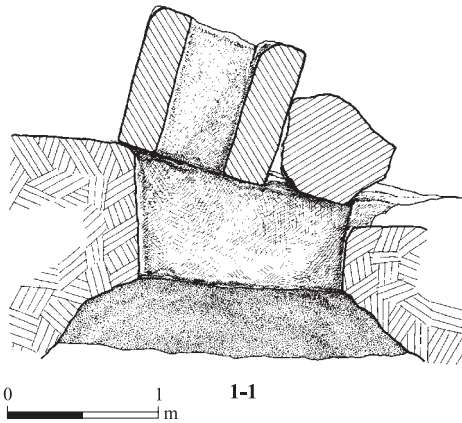
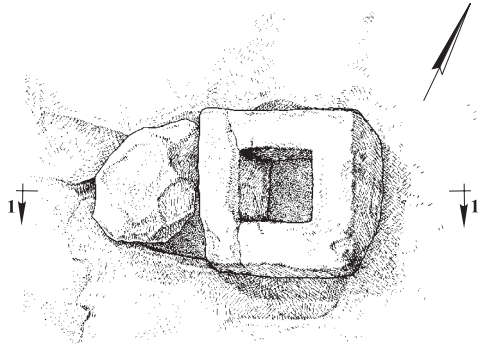
Two screw bases were discovered over cisterns and one was detected after a detonation in the quarry (Fig. 19).⁷ The base above Cistern 65



Fig. 18. A simple oil press (*bodeda*).



Fig. 19. A screw base stone.



Plan 10. Cistern 65, plan and section.



Fig. 20. A screw base above Cistern 116.



Fig. 21. Cistern 3.

(Plan 10) has a square-shaped perforation in its center, whereas the base over Cistern 116 (Fig. 20) has a circular hole within a square depression and three small cavities on its upper surface.

Cisterns (Plans 5, 9–12)

The cisterns at Kh. Marmita have either square or circular shafts; they are located close to installations or buildings, but also exist independently (Table 4). The cisterns with the circular shaft were concentrated on the lower slope of the hill and were usually independent features.

Among the square-shaft cisterns, two were adjacent to winepresses (Cistern 3; Fig. 21). The others were probably used to collect rainfall, as well as runoff. Three of the cisterns were associated with quarries (Cistern 31; Plan 11). Quarrying stone blocks was a major occupation in Kh. Marmita and the need for water is one

explanation for the relatively large number of cisterns. Three cisterns have small recesses cut in their shafts, most likely providing easier access. It is noteworthy that these recesses are found only in the cisterns that are assumed to have served as storage space for the winepresses and the oil press.

Three features do not fit the above categories of cistern shafts, yet are considered related to cisterns. A shallow, circular cistern (84A; see Plan 3) appears to be a pool rather than a cistern, as it was partly covered and could have kept water fairly cool. An oblong-shaped shallow cistern (84J) has an elongated cavity in its center. Our first impression was that it may have been used as a bathtub; however, as it is located near the quarry, it probably held water for the removal of stone blocks (Fig. 22). A small circular pool, similar to the oblong

Table 4. Water Cisterns

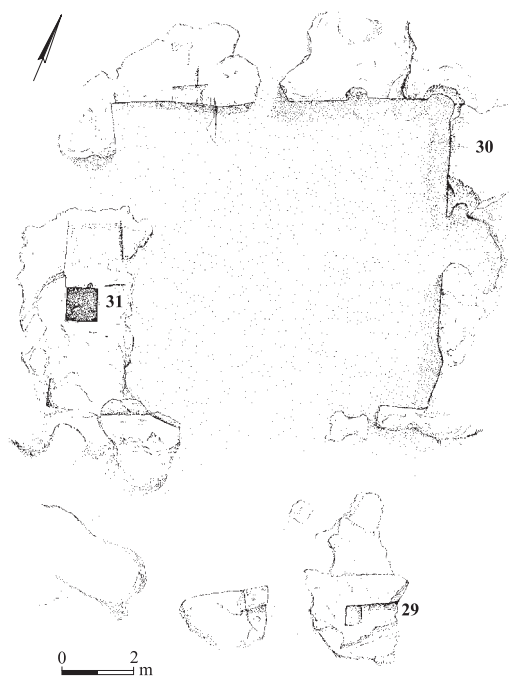
Cistern No.	Plan No.	Shaft Size (m)	Recessed Indentations in Shaft	Adjacent to	Free Standing	Comments
<i>Square Shafts</i>						
3	2	1.10 × 1.15	+	Winepress 21		
4	2	0.82 × 0.90	+	Winepress 2		
8	7	0.90 × 0.90		Quarry 8		Shaft height 1.3 m
9A	6	0.50 × 0.85	+	Oil press 9		Shaft height 1.25 m
31	8	0.80 × 0.85		Quarry 30		
45					+	Shaft height 3.6 m; inner space plastered
60					+	
65	9	1.2 × 1.4			+	Short shaft 0.6–0.8 m; large screw base over top
100		0.8 × 0.9		Building 104		Shaft height 2 m
101		0.7 × 0.9		Building 104		Shaft height 2 m
109	10	1.4 × 1.8		Quarry 109		
113	11	0.80 × 0.85		Quarry(?) 113		
115					+	
<i>Circular Shafts</i>						
51					+	
64					+	
75					+	
109	10	diam. 1.05 m		Quarry 109		Half of a round stone with center perforation
111					+	
	Rectangular crushing basin over top of cistern					
116					+	Large square stone with center hole and two small cavities on upper surface
117					+	Fig tree inside



Fig. 22. Basin/Cistern 84J.

cistern, though better executed, was accessed via a short staircase (Cistern 113D; diam. 0.85 m, depth 0.65 m; Plan 12). This pool's function is not entirely clear.

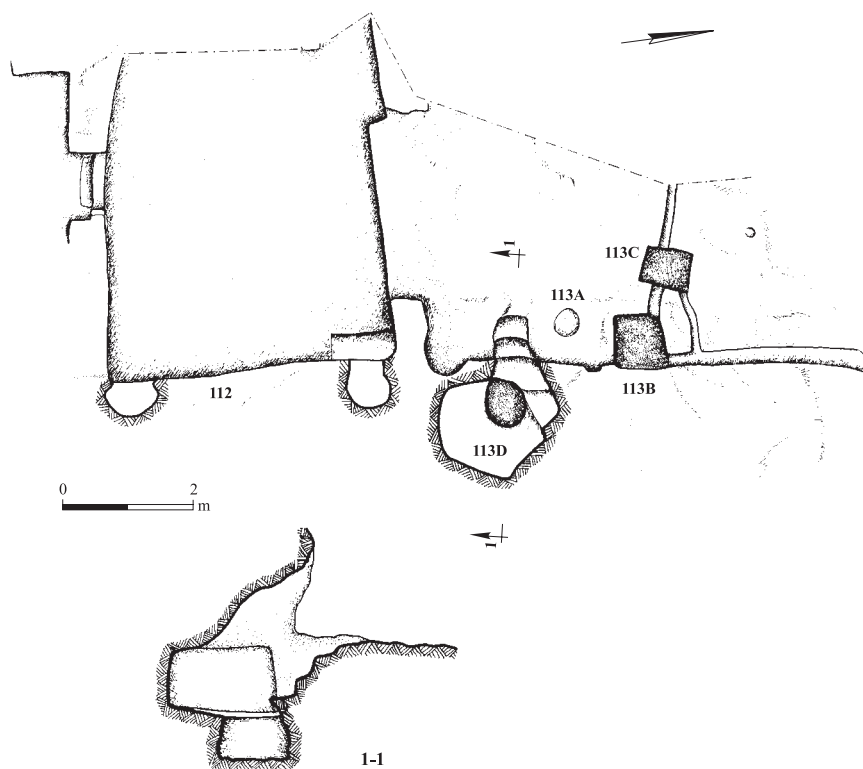
Three rectangular pool installations are also associated with the cisterns. The first is a rectangular pool (100A; 0.65 × 0.85 m, depth 0.45 m; see Plan 4) that has a small cavity cut into its floor (Fig. 23). We did not find any direct connection between this pool and the large cistern (100), or the channel (100B) going into it. The channel (0.2 m wide, 0.25 m



Plan 11. Sites 29, 30, 31.



Fig. 23. Water pool 100A.



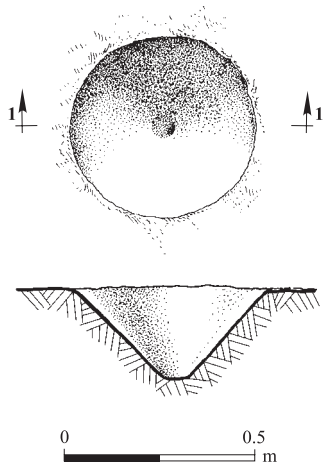
Plan 12. Sites 112/113, plan and section.

deep) extended over five meters in a southwest direction and ended at a rock escarpment. The purpose of this pool is unclear. The second rectangular pool (101A; 0.5×0.7 m, 0.35 m deep) has an open channel with a concave floor connecting it to a large cistern (101). Another channel (101B; 0.14 m wide, 0.12 m deep) begins at the pool and extends in an east–west direction for c. 4.5 m into what appears to have been the inner courtyard of Building 104. Unlike Pool 100A, this pool seems to have functioned as a settling pool, as the water probably came via the channel (101B) to the pool and into the cistern. Its proximity to Building 104 raises the question whether the water was intended for the people or perhaps for the livestock they kept. The third is a rectangular pool (113C; Plan 12) that could have been a settling pool. It has an

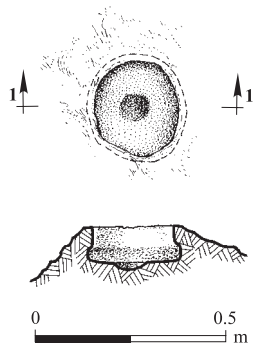
incoming channel on the west and two exit channels on its eastern side. One leads into the cistern (113B), and the other, extending east, merges with another north–south channel, hewn at the base of the rock escarpment.

Cupmarks (Table 5)

Thirty-three cupmarks are the next most frequent feature at Kh. Marmita. They comprise 17 conical (Plan 13) and 13 hemispheric shapes (Fig. 24), several with flat bottoms (Plan 14), and three cupmarks of irregular shape. Their average diameter is 0.38 m and average depth is 0.26 m. The smallest could contain less than 3 liters, while the largest—over 45 liters.⁸ The average volume for both types is c. 15 liters. The largest conical cupmark (48; Fig. 25) is practically a cistern and can hold over 41



Plan 13. Cupmark 28, plan and section.



Plan 14. Cupmark 27, plan and section.

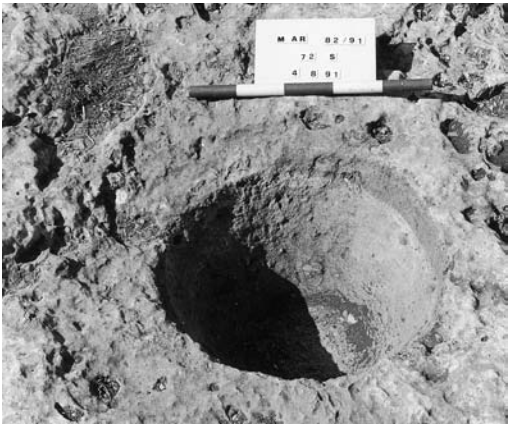


Fig. 24. Cupmark 72.



Fig. 25. Cupmark 48.

Table 5. Cupmarks

Cupmark No.	Plan No.	Fig. No.	Diam. (m)	Depth (m)	Volume (liter)	Type	Associated
2A	5		0.40	0.40	15.1	Conical	Winepress 2
2B	5		0.24	0.16	3.6	Rounded	Winepress 2
4A	5		0.35	0.10	2.9	Conical	Cistern 4
7			0.44	0.18	22.1	Rounded	
8A			0.27	0.25	4.3	Conical	Cistern 8
9	9		0.30	0.10	7.0	Rounded	Oil press 9
18			0.30	0.16	7.0	Rounded	Quarry 19
26	6		0.52	0.30	36.4	Rounded	Winepress 25
27	14		0.23	0.10	3.2	Rounded-flat	
28	13		0.48	0.24	13.0	Conical	
30A			0.28	0.24	5.7		Quarry 30
32			0.26	0.15	4.6	Rounded	
35			0.51	0.27	16.5	Conical	
38							Wall 37
46B			0.34	0.29	7.9	Conical	Installation 46
46C			0.28	0.20	5.7	Rounded	Installation 46
46D			0.48	0.25	13.6	Conical	Installation 46
48		25	0.60	0.49	41.6	Conical	
55A			0.35	0.27	7.8	Conical	Quarry 55
56			0.25	0.21	3.1	Conical	
61			0.30	0.35	7.4	Conical	
61A			0.56	0.26	45.5	Rounded-flat	
62A			0.30	0.28	5.9	Conical	Quarry 62
63B			0.44	0.27		Irregular	Cave 63
68A			0.50	0.42	32.4	Rounded-flat	Cave 68
72		24	0.51	0.28	34.4	Rounded-flat	
84B	3		0.32	0.32	7.7	Conical	Quarry 84
84C	3		0.40	0.29	10.9	Conical	Quarry 84
107			0.50	0.27	32.4	Rounded	
109A	15		0.34	0.30	8.2	Conical	Quarry 109
109B	15		0.34	0.38	10.4	Conical	Quarry 109
110A			0.55	0.28	43.1	Rounded-flat	Wall 110
113A	12		0.37			Conical	Cistern 113

liters. Sixty-five percent of the cupmarks are associated with other features (Fig. 26).

Cupmarks are not well understood. Numerous interpretations are discussed by Ahlstrom (1978:44–45). Examination of cupmarks at Kh. Marmita indicates they were basically small, industrial features, used independently or in conjunction with the larger, more complex installations.

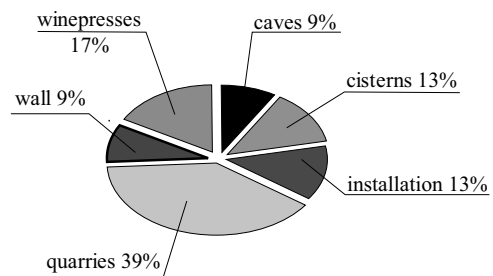


Fig. 26. Cupmark associations with other elements.

Cupmarks at Kh. Marmita are most often found near quarries. Since the size of the average cupmark is too small to be utilitarian in the quarrying process, perhaps they were used for placing water jugs. The walls with cupmarks nearby seem to have been animal pen enclosures, in which case the cupmarks could have functioned as water troughs. Two caves had cupmarks near their entry. One of these was probably used for burial (63A), which may indicate that the cupmark might have fulfilled some task in a mortuary rite. The other cave (68) was indiscriminately used for habitation and the cupmark could have served several purposes, such as holding a water jug, or serving as a mortar for grinding seeds. Cupmarks were an integral part in the function of winepresses and other installations; those near cisterns were, undoubtedly, used to hold a jar or jug. The large

average size of cupmarks in Kh. Marmita fits such a solution. Cupmarks could have been used for other purposes as well, but taking in account the nature of the site, practicality is the main key in attempting to explain the different functions of this feature in the field.

Caves (Nos. 63A, 68, 70, 75A, 76, 77, 82; Plan 1)
Six of the presently empty, natural caves at Kh. Marmita were used for habitation up to recent times. One cave (63A) might have been used for burial, but its clearing was suspended due to technical reasons.⁹ Cave 70 was hewn into the rock escarpment. To the north of the circular entrance and along the rock was a short stretch of stone paving; between the small stones was an intact lamp (Fig. 27:6). Four stairs comprising large stones descended in a curve into the cave (Fig. 28), which had a rounded ceiling and a

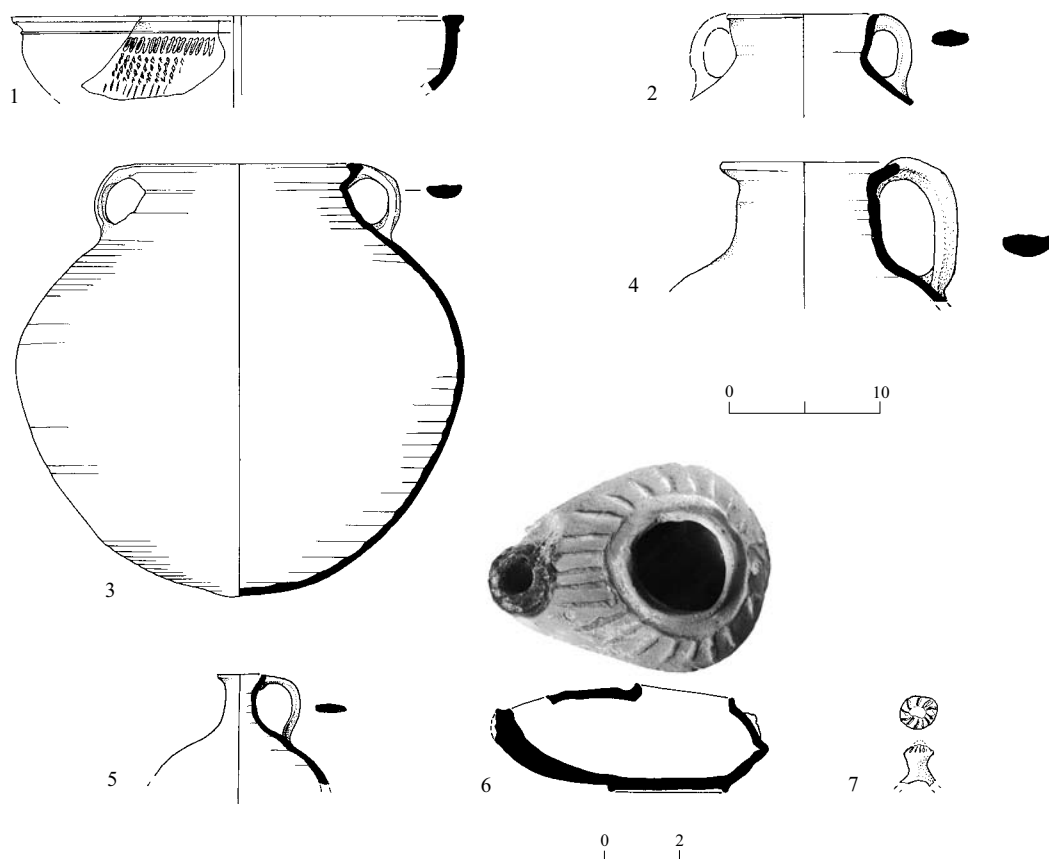


Fig. 27. Pottery vessels from the various sites.

◀ Fig. 27

No.	Vessel	Reg. No.	Locus/Site	Class	Comments
1	Bowl	451/2	69A	B7	10YR 8/4 very pale brown
2	CP	103/7	2	CP9	2.5YR 4/4 reddish brown
3	CP	472	69C	CP4	2.5YR 5/6 red
4	Jug	436/3	69B	J1	10YR 7/4 very pale brown
5	Jug	270/2	63A	J7	5YR 5/3 reddish brown
6	Lamp	402	70-I		5YR 6/6 reddish yellow
7	Handle	296	110A		7.5YR 8/2 pinkish white



Fig. 28. The entrance of Cave 70, with curving stairs, looking from inside.

partial stone pavement, similar to the paving outside. The inner stone paving yielded no pottery or other finds. A wall of large rocks, two courses high, was close to the pavement on its north. The stone pavement overlaid a hard lime surface, extending over the entire cave. A stone wall was founded above the lime surface in the recessed southern side of the cave. It was constructed from large stones at the bottom and smaller ones toward the top. The wall did not conceal any opening or recess behind it and its purpose was enigmatic. Beneath the hard lime surface was a rectangular, plastered pool (Fig. 29). Its floor was not reached and its total size is unknown. This feature might be interpreted as a ritual bath, although there is no evidence



Fig. 29. A plastered pool inside Cave 70.



Fig. 30. Wall 110.

to corroborate this assumption. The paucity of pottery fragments in the cave makes it difficult to determine either its purpose or date. A few body sherds of a large jar that were found within the southern wall and the lamp discovered outside the entry (Fig. 27:6) point to a date later than the main habitation period at Kh. Marmita.

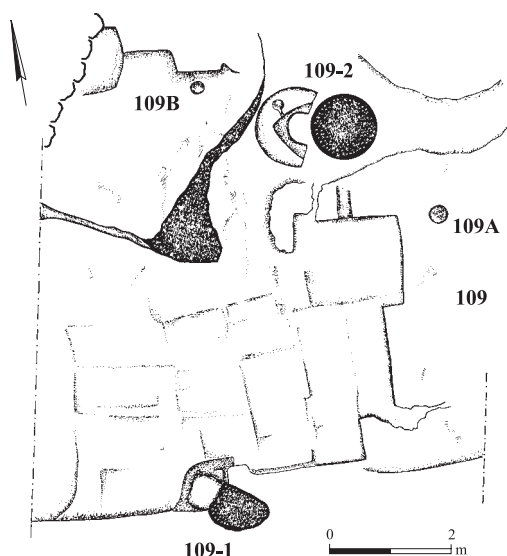
Walls (Nos. 1, 6, 13, 14, 16, 22, 24, 33, 37, 39, 40, 47, 49, 58, 63, 66, 71, 73, 76, 78, 83, 102, 104, 105, 108, 110; Plan 1)

Walls are widespread all over the hill of Kh. Marmita. Most were one or two courses high and might have been terrace walls (W37). Several walls, three to five courses high (see W110; Fig. 30) formed a corner and were associated with cupmarks. These were probably animal-pen enclosures for livestock (W102).

Quarries (Nos. 3–5, 8, 10–12, 17, 19, 30, 34, 41–44, 46, 50, 52–55, 57, 62, 67, 69, 74, 79, 80, 84, 100, 101, 103, 106, 109, 112, 113; Plan 1)

The quarries vary in size and many were associated with water cisterns (No. 30; see Plan 10) and cupmarks (No. 109; Plan 15); naturally, water was a necessity for hewing masonry. Stairs and channels are also included in this category.

Evidence of the hewing process was best observed at Site 84K (Fig. 31). The blocks were uniform in size (0.70–0.73 m long, 0.42–0.50 m wide). Each block was marked by narrow



Plan 15. Site 109.



Fig. 31. Quarry 84K.

grooves that indicated severance channels, which is a method known as early as the Iron Age (Shiloh and Horowitz 1975:37–48). Severance channels were discerned in Quarries 46, 103 and 109. Above Quarry 69 was a cavity in bedrock, where a complete cooking pot was found (see Fig. 27:2). A circular rock-hewn cavity in front of the quarry contained several pebbles and the top part of a jug (see Fig. 27:5).

A staircase (11) was discovered near the top of the excavated installations. Two similar, yet smaller staircases (50, 57; Fig. 32) were cleaned on the lower slope. These staircases appear to have led from the settlement area to the industrial zone.



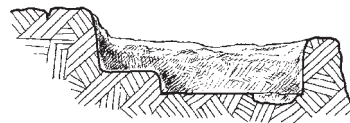
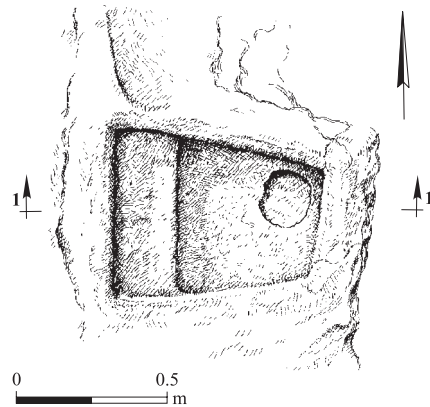
Fig. 32. Staircases 50 and 57.

Installations (Nos. 4, 15, 29, 46, 112, 113; Plan 1)
Features that did not fit within the previous groups were assembled under this category. Two conical cupmarks with a flat bottom and a small round cavity in their center (4A; see Plan 5 and 46E) have a wide rim around the top perimeter. Site 4A had a diameter of nearly 1 m, while Site 46E was approximately half that size, with a flat rim (diam. 0.55 m). The characteristic wide rim seems to be ideal for a sieving net; therefore, these installations were probably used for sifting. The shallow rim (height c. 5 mm) of these installations differs from the mortar or basin installations without a rim mentioned by Eitam (1993:70).

A pool-like installation, tapering southward (Site 15; length 0.7 m, width at north 0.6 m, width at south 0.32 m; Plan 16) has a step on the northern end (0.18 m wide, 8 cm high), 0.2 m below its top. The bottom surface has a round cavity in the southeastern corner (diam. 0.18 m, 5 cm deep).

Number 29 is a small, square installation (0.45×0.55 ; 0.15 m deep), with a small circular cavity in its eastern corner (diam. 0.2 m). It is feasible that both installations were used for crushing olives.

Two apsidal niches are hewn in the eastern rock escarpment of Site 112 (Plan 12). The space is enclosed with a wall on the southern



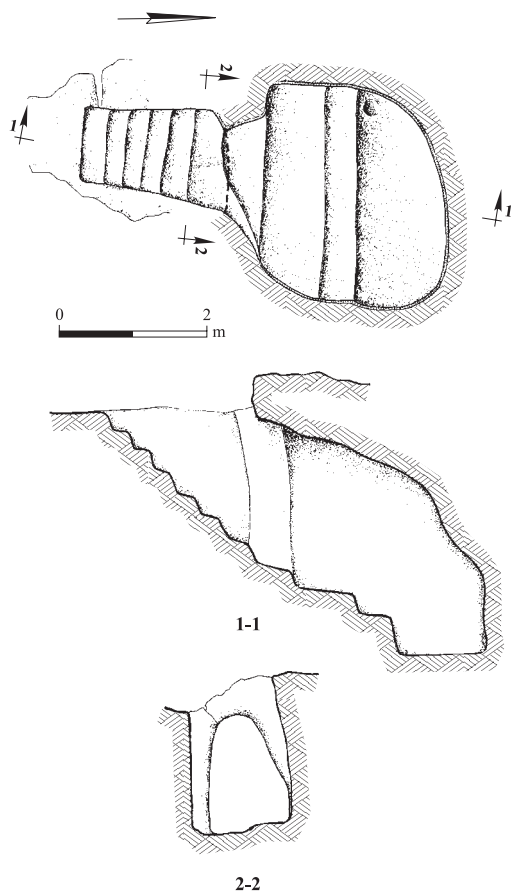
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Plan 16. Site 15, plan and section.

side. A short rock buttress separated it from Site 113, which included the water-related features, i.e., cisterns, pools and channels. Although this compound installation was not completely excavated, it has several features that may indicate an oil press.

Miqwe (No. 114)

The single, partially destroyed *miqwe* (ritual bath) at Kh. Marmita was located on the lower slope, entirely hewn into the natural bedrock (Plan 17). The bath and the ceiling were hemispherical—a common shape in rock-hewn, stepped water installations (Reich 1990:50). The wide staircase consisted of nine steps. The arched entrance to the bath was behind the sixth step. The upper stairs were narrow (width 0.2–0.3 m) and the lower stairs were wider; the eighth was the widest. The immersion basin was nearly 0.5 m deep; a cupmark was located on its western corner, close to the ninth step. When the *miqwe* was filled with rain water that covered the lowest steps, it allowed the people using the bath to be at different levels and still be immersed in water (Reich 1990:55).¹⁰



Plan 17. Site 114, plan and sections.

The occurrence of a ritual bath in conjunction with an industrial zone is not unusual and its association with wine and oil production seems to be in line with the Judaic laws of purity (Reich 1990:124).

POTTERY AND OTHER FINDS

The pottery assemblage from Kh. Marmita includes samples from the buildings and the installation sites. As a means to facilitate the distinction between the ceramic diversity in the buildings and the sites, the pottery vessels were arranged in type classes (i.e., bowls, cooking pots etc.) and within each, the vessels were numbered consecutively. This is not a typological corpus.

Bowls.— Classes B1 (Fig. 7:2) and B3 (Fig. 13:1) are similar; B1 comes from Buildings 20/23 and 84 and B3 is from Building 104. B3 continues uninterrupted into the Herodian period and seems to disappear in the first century CE (Bar-Nathan 1988:121).¹¹ B2 (Figs. 3:1; 7:1) is a dominant type both in Hasmonean and Herodian contexts and appears in all three buildings. B5 (Figs. 3:2; 7:4) continues the tradition of the Hellenistic ‘fish plate’ that seems to disappear in the last third of the first century BCE. B5 (Fig. 7:9) was found in Buildings 20/23 and 84, but not in Building 104. B6 (Fig. 3:3) is a krater that can be generally affiliated with the Krater 1a type (Bar-Nathan 1988:104).

Cooking Pots. Variations of the ‘Herodian cooking pot’ are displayed by CP1 (Fig. 13:3), CP2 (Fig. 13:5), CP3 (Fig. 13:2), CP3a (Fig. 13:11) and CP14 (Fig. 7:8), which appear after 30 BCE and continue into the first century CE (Bar-Nathan 1988: Type 2c). Building 104 contained large numbers of these cooking pots. In contrast, the earlier short, concave, everted rim-type cooking pot, namely CP4 (Figs. 3:8; 27:3), CP5 (Fig. 7:9), CP5a (Fig. 3:7), CP5b (Fig. 3:5) and CP5c (Fig. 3:6), are most prevalent in Buildings 20/23 and 84 and rare in Building 104. Two fragments of the typically Herodian-period form CP 6 (Fig. 13:4) were retrieved from Building 84. Variations of the high-neck cooking pot, for example CP7 (Fig. 7:6), CP7a (Fig. 3:4), CP8 (Fig. 7:5) and CP9 (Fig. 27:2), dominant in Hasmonean contexts, continued, in small numbers, into the Herodian period, until it eventually disappeared at the end of the first century BCE (Bar-Nathan 1988:98). Cooking kraters with three different rims were recorded: an everted rim (CP10; Fig. 13:7), a flaring rim with inner groove for a cover (CP11; Fig. 7:7) and a triangular rim with an inner gutter (CP12; Fig. 13:6). The three rim variations seem to have coexisted, yet the triangular profile is predominant in Herodian times and the first century CE. The everted rim seems to have disappeared at the end of the first century BCE (Bar-Nathan 1988:104). The mini cooking pot

with one handle (CP13; Fig. 13:10) remained unchanged throughout the Hasmonean and Herodian periods and the first century CE (Bar-Nathan 1988:102, Type 3). A body fragment from a closed-type cooking pot with a spout on its shoulder was found in Room 104/7 (see Fig. 13:9). Analogies for this pot were not traced in the Herodian period or the first century CE.

Store Jars.— Four variations of the store jar with a ridge at the base of the neck, SJ1 (Fig. 10:1), SJ2 (Fig. 10:8), SJ4 (Fig. 10:6) and SJ4a (Fig. 10:5), were found in Building 104. This type is unknown in contexts preceding 31 BCE and is characteristic of the Herodian period and the first century CE (Bar-Nathan's Type 7; 1988:70). Two similar fragments, SJ5 (Fig. 7:11) and SJ6 (Fig. 7:10), were found in Building 84. Four store jars from the same period, SJ7 (Fig. 10:7), SJ8 (Fig. 10:9), SJ9 (Fig. 10:10) and SJ18 (Fig. 10:12), came from Building 104 (Bar-Nathan's Type 9; 1988:74). The most popular type of store jar in the Hasmonean period has a 'square' rim (SJ10–SJ12a; Figs. 3:13–17; 7:12) that is usually divided into a short, medium or long type, all of which appear in the three buildings (Table 6).

The proportions at Kh. Marmita are somewhat dissimilar to those encountered at Jericho (Bar-Nathan 1988:72–73), probably the outcome of different regional workshops. SJ13 (Fig. 7:14), SJ13a (Fig. 10:11) and SJ13b (Fig. 7:15) seem to have developed from the thicker flaring rim that was familiar in Hasmonean contexts, as opposed to the finer and thinner flaring rim, which is common to Herodian contexts. SJ14 (Fig. 10:2) and SJ14a (Fig. 3:11) belong to a type that is known as early as the second century BCE and seems to have continued into the first century BCE, but not into the Herodian period (Bar-Nathan 1988: 67, Type 3). SJ15 (Fig. 10:3) and SJ16 (Fig. 10:4) seem to be a combination of a krater and a store jar. SJ17 (Fig. 3:9) is an early form in Hasmonean contexts (Bar-Nathan 1988:64, Type 1).

Jugs.— Jugs with a wide neck and a prominent, everted rim, J1 (Fig. 27:4), J2 (Fig. 7:16) and possibly J3 (Fig. 12:1), were found in all three buildings at Kh. Marmita, and in Herodian contexts at Jericho (Bar-Nathan 1988:84, Type 7). The small jug with a narrow neck and an everted rim, J5 (Fig. 7:17), J5a (Fig. 3:19) and J7 (Fig. 27:5), seems to be the most popular shape in Kh. Marmita, present in all three buildings in similar numbers, though no complete specimen was found. J6 (Fig. 12:4) is a late type that first appears in Herodian contexts, and continues into the first century CE. Bar-Nathan (1988:75, Type 1) claims that variations of the jug with a triangular rim, occasionally with an inner gutter, J8 (Fig. 7:18), J9 (Fig. 12:2), J9a (Fig. 3:20) and J10 (Fig. 12:3), was the most popular and prevalent type from the first century BCE to the first century CE.

Juglets.— One complete cup-rim juglet with a convex body and base and others with convex, flat or ring bases conform to Jg1 (Fig. 12:6), Jg2 (Fig. 12:5) and Jg2a (Fig. 3:21). Although this type is known from the second century BCE, the genuine cup-rim is found only in the first century BCE (Bar-Nathan 1988:86). The rare juglet with a ridge in the middle of its neck (Jg3; Fig. 7:20) is mainly found in Herodian and first century CE contexts (Bar-Nathan 1988:86, Type 3).

Fusiform Unguentarium.— This form is one of the most common vessel shapes in the Hellenistic world. Its shape remained steady for over one hundred years, although minor changes occurred in the second century BCE, when the body was shortened and the base became longer.

Table 6. Proportions of the 'Square' Rim Store Jars in the Buildings

Rim Type	Building 20/23	Building 84	Building 104
Short (SJ12)	12%	68%	20%
Medium (SJ11)	20%	44%	36%
Long (SJ10)	few	few	none

The shape still appears in Herodian contexts, but seems to have disappeared at the end of the first century BCE. At Kh. Marmita, fragments of this vessel type were primarily recorded in Building 84 (Fig. 7:21), and to a lesser extent, in the other two buildings.

Piriform Unguentarium.— This shape replaced the fusiform type from the Herodian period to the first century CE. Some Herodian contexts contain both the fusiform and the piriform shapes, but in the first century CE, the piriform type prevails. One piriform unguentarium was uncovered in Building 104 and two fragments came from Building 84.

Pilgrim Flask.— The pilgrim flask has an asymmetric body and twisted handles, extending from the middle of neck to the shoulder. This form remains practically the same throughout the first century BCE and the first century CE. PIF11 (Fig. 12:11) has a slightly thick everted rim and was found in Building 104; PIF12 (Figs. 3:22; 7:22) has a thickened straight rim and was discovered in the early Buildings 20/23 and 84.

Lamps.— Three lamp types were found in Kh. Marmita. L1 (Figs. 3:24; 7:23) is the folded and pinched, wheel-made lamp, known as the Hasmonean lamp. L2 (Fig. 7:24) is mold-made, with a long nozzle and red paint, which had mostly flaked off, also known as the Judean radial lamp. L3 (Fig. 3:23) is the wheel-made, knife-pared type, known as the 'Herodian' lamp and L3a (Fig. 12:12) is a variation of it. The Hasmonean lamp came from Buildings 20/23 and 84; it was completely absent in Building 104. The molded lamp was found only in Building 84 and the pared (Herodian) lamp came from Building 104, though fragments were found in Buildings 20/23 and 84 as well. L1 was the popular shape in the second and first centuries BCE and seems to have disappeared around 30 BCE or slightly later. L2 is known in Herodian contexts and in Jewish levels and tombs. The common radial grooved decoration

around the filling hole is lacking in the lamp from Kh. Marmita and no analogies to a red painted Judean lamp could be found. The molded, radial lamps of local Judean manufacture seem to have been in vogue in the first century BCE and continued into the Herodian period. The pared, Herodian lamp first appeared at the end of Herod's reign, i.e., the last decade of the first century BCE and continued into the first century CE (Barag and HersHKovitz 1994:47).

Funnel.— An odd vessel, having a cylindrical shape with a flaring base and a cut-away top with a flaring rim, pinched at the higher side, was found in Building 104 (Fig. 12:10). The clay is dark gray with evident rills on the body. A thick ridge encircles the body at about 2/3 of the vase height. It is suggested that the funnel was used for pouring from one vessel into another; a sieving mesh may have been used and was tied below the ridge, to keep it in place.

The diffusion of pottery vessels among the three buildings (Table 7) shows clearly that Buildings 20/23 and 84 share a large number of pottery types, whereas Building 104 seems to be slightly later and contains pottery types that were not detected in the other two complexes. Several pottery types found in the early and late buildings indicate that the inhabitants of the later building could have used the former buildings, albeit sporadically.

Stone and Basalt Vases

Fragments of stone vases have been found in Buildings 84 and 104, as well as in several other sites (Table 8). The largest number of stone vases came from Building 104, the majority of which were mugs.¹² The mugs, in different sizes, were handmade with the help of a chisel, gouge and mallet. One diminutive cup (Fig. 11:6) was found inside the baking pan on the floor of Room 104/6 and was blackened by fire. This object appears to be more of a small coffee mug than a measuring device. Another hand-chiseled vase carved in the same manner

Table 7. Vessel Type-Classes in the Buildings and Various Sites

Class	20/23	84	104	Various Sites	Analogies
B1	1	2		2 (74, 114)	Loffreda 1980: Pl. 97:46
B2	2	6	2	1 (112)	de-Vaux 1954: Fig. 2:10.11; Lapp 1978: Fig. 77:16
B3			6		Lapp 1978: Fig. 77:19
B4		1		1 (69C)	Bar-Nathan 1981: Pl. 6:9; 1988: Type 7b
B4a	1	1	1		
B5	1	5			Corbo and Loffreda 1981: Pl. 35:21; Lapp and Lapp 1968: Fig. 23:12
B6	1	1			
B7				1(69A) 'Megarian' bowl	
CP1			8	2 (100A, 112)	Bar-Nathan 1981: Pls. 5:2.3.4, 9:7.9; 1988: Pl. 35:11
CP2			18	3 (112)	
CP3			7		
CP3a			21	5 (63A, 69C, 101A, 112, 114)	
CP4	4	1	1	1 (69C)	Lapp 1978: Fig. 79:3, 4, 16
CP4a		15	4	6 (W39, 69B, 69C)	Lapp 1978: Fig. 78:11–13
CP5		6			Lapp 1968: Pl. 71:8; Lapp and Lapp 1968: Fig. 27:7
CP5a	1	6	3		
CP5b	1	6	2	1 (69C)	
CP5c	1	5			
CP6		2	8	1 (112)	Bar-Nathan 1981: Pl. 5:10
CP7	2	15	1		Bar-Nathan 1988: Type 1; Lapp and Lapp 1968: Fig. 27:1–4; Lapp 1978: Fig. 78:1, 3, 4
CP7a	4	10	1	2 (69C, 100A)	
CP8	1	25		1 (69A)	
CP9	2	5		2 (2, 59A)	
CP10		1	2		Bar-Nathan 1988: Type Krater 1a, Pl. 24:1; Krater 1b, Pl. 24:2, 3; Krater 2, Pl. 24:5
CP11		3	3	2 (63A)	
CP12			1		
CP13			2		Rahmani 1967: Fig. 16:4
CP14	1	7	1	1 (69)	Lapp 1978: Fig. 79:11
SJ1			4	2 (63A, 112)	Bar-Nathan 1981: Pl. 3:9, 14
SJ2			5		
SJ3		1	4	1 (69C)	Lapp 1978: Pl. 73:28
SJ4			6	3 (100A, 102, 112)	Lapp 1968: Pl. 70:13.14; Bar-Nathan 1981: Pl.3:11
SJ4a			19	3 (63A, 112)	
SJ5		2			Lapp 1968: Pl. 69:18
SJ6		1			Lapp 1978: Pl. 72:31; Rahmani 1967: Fig. 17:4
SJ7			4		Bar-Nathan 1981: Pl. 3:5
SJ8			2	1 (101A)	Loffreda 1980: Pl. 93:9; Bar-Nathan 1981: Pl. 3:2
SJ9			4		Bar-Nathan 1981: Pl. 2:1.2
SJ9a	1	2	1		Lapp 1968b: Pl. 70:32
SJ9b	3	3		1 (69B)	Lapp 1968b: Pl. 69:11

Table 7. (cont.)

Class	20/23	84	104	Various Sites	Analogies
SJ10	3	5		2 (59A, 112)	Lapp 1968a: Pl. 69:15–17; Lapp 1978: Pl. 72; de-Vaux 1954: Fig. 1:4; Loffreda 1980: Pl. 92:1–5
SJ11	7	12	23	7 (W39, 63A, 69, 69A, 101A, 114)	
SJ11a	7	7	8	7 (56, 63A, 69, 69A, 101A, 114)	
SJ11b	3	18		8 (W39, 69, 69C, 74, 102, 113B)	
SJ12	7	57	23	13 (2, 59A, 69, 69C, 74, 109, 112, 113, 114)	
SJ12a	7	20			
SJ13		4	6		Lapp and Lapp 1968: Fig. 22:6; Corbo and Loffreda 1981: Pl. 57:14
SJ13a		4	3	3 (56, 63A, 113C)	Bar-Nathan 1981: Pl. 9:1; 1988: Pl. 34:1
SJ13b	1	21	3	2 (69C)	
SJ14	1	3	11		Bar-Nathan 1988: Pl. 33:3
SJ14a	1	18		5 (2, 69B, 69C, 70-II, 74)	de-Vaux 1954: Fig. 1:2; Lapp 1978: Pl. 73:9
SJ15	1		2	8 (63A, 69, 69B, 74, 114)	
SJ16		3	1	2 (69B, 69C)	
SJ17	1	4		1 (112)	Lapp 1968: Pl. 70:28
SJ18			7	2 (63A)	Lapp 1968: Pl. 70:13
J1		4		6 (69B, 70-II, 112, 114)	Lapp 1978: Pl. 75:11; Bar-Nathan 1981: Pl. 4:7
J2	1	8	2	1 (69)	Lapp and Lapp 1968: Fig. 25:5; Lapp 1978: Pl. 75:25
J3			6		Lapp and Lapp 1968: Fig. 25:4
J4	2	6	7		de-Vaux 1956: Fig. 2:1; Loffreda 1980: Pl. 94:13
J5	6	5	4	6 (63A, 69B, 100A, 102)	
J6			2		Bar-Nathan 1981: Pl. 6:14
J7		1	2	1 (63A)	Bar-Nathan 1981: Pl. 6:25
J8		2			
J9			5	1 (109)	Corbo and Loffreda 1981: Pl. 94:14; Bar-Nathan 1981: Pl. 4:8, 27
J9a	1	3	1		Corbo and Loffreda 1981: Pl. 94:15
J10			2	1 (69C)	de-Vaux 1956: Fig. 1:5
Jg1		1	1		Lapp 1978: Pl. 76:17; Loffreda 1980: Pl. 97:56
Jg2			15		de-Vaux 1953: Fig. 3:1; Corbo and Loffreda 1981: Pl. 58:10.11
Jg2a	2	7		1 (69C)	de-Vaux 1954: Fig. 6:2
Jg3		1			Bar-Nathan 1988: Pls. 2:13, 22:7; Avigad 1983:184, Fig. 211
Fusiform Ung.	2	7	4	4 (59, 69, 102)	Rahmani 1967: Fig. 15
Piriform Ung.		2	5		Rahmani 1967: Fig. 13:1–3; Lapp and Lapp 1968: Fig. 29:11; Avigad 1983:128, Fig. 124
PIF11		1	1		Bar-Nathan 1981: Pl. 9:11
PIF12	1	1			Lapp and Lapp 1968: Fig. 23:1; Lapp 1978: Pl. 76:4
L1	5	12			Rahmani 1967: Fig. 9:1–3; Lapp and Lapp 1968: Fig. 29:4

Table 7. (cont.)

Class	20/23	84	104	Various Sites	Analogies
L2		4			
L3	1		1	2 (63A)	de-Vaux 1956: Fig. 4:14; Rahmani 1967: Fig. 9:10, 11; Lapp 1978: Pl. 81:12, 13
L3a		1	7		Corbo and Loffreda 1981: Pl. 58:22; Bar-Nathan 1981: Pl. 8:4
Bottle			1		Avigad 1983:128, Fig. 124
'Funnel'			1		

Table 8. The Diffusion of Stone Vases through the Buildings and Various Sites

Site	Reg. No.	Locus/Site	Vase	Part	Site	Reg. No.	Locus/Site	Vase	Part
<i>Building 84</i>	282/3	84D	Mug	Body		258A/1	104/I	Mug	Base
	312	84F	Basalt bowl	Rim		260/1	104/5	Mug	Rim and body
	318/1	84F	Bowl			262/1	104/1A	Mug	Body
	403/1	84F	Bowl	Base		267/1	104/1A	Bowl	Body
	404/1	84F	Bowl	Base		271/2	104/III	Mug	Base
	422	84H	Basalt bowl			273/1	104/1A1	Mug	Body
	448/2	84D1	Mug	Rim		275/1	104/III	Mug	Rim
	460/1	84D4	Bowl	Rim		277/2	104/6	Mug	Base
	460/2	84D4	Bowl	Base		278	104/6	Mug	
	460/3	84D4	Bowl	Base		279/2	104/II	Bowl	Base
	469/1	84D1	Basalt bowl	Body		283/2	104/6	Mug	Base and body
	484/1	84K	Mug	Rim		289/2	104/7	Bowl	Body
	484/2	84K	Goblet-shaped bowl	Base		291/1	104/2A	Mug	Body
						294/1	104/2A	Mug	Rim
<i>Building 104</i>	228/1	104/3	Mug			300/1	104/7	Mug	Base
	242	104/3	Basin			300/2	104/7	Mug	Body
	246/1	104/1	Bowl	Base		314/1	104/7	Mug	Rim
	246/2	104/1	Mug	Body	<i>Various Sites</i>	201/1	A33	Goblet-shaped bowl	Rim
	250/1	104/3	Mug	Handle		221/1	101A	Mug	Rim
	253/1	104/1	Mug	Base and body		297/1	112	Goblet-shaped bowl	Body
						315/1	113C	Mug	Base
	255/2	104/3	Mug	Body		319/1	112	Bowl	Base
	256/1	104/5	Goblet-shaped bowl						

as the cups is the basin with two bar handles (Fig. 11:11; Avigad 1983:132, Fig. 131). The flat bowls and one goblet-shaped bowl (Fig. 11:10) were made on a simple bow lathe and were thus more delicate, thinner and of better quality.

The fewer stone vases in Building 84 include more of the lathe-made bowls than the hand-chiseled mugs. The goblet-shaped bowls of both buildings conform to Magen's Type A-1 and the flat bowls fit Type A-2a (Magen 1988:44–45). Building 84 also contained three basalt bowls, one of which is a complete tripod mortar (Fig. 5:4; Avigad 1983:127, Fig. 123).

Stone vases began to appear in archaeological contexts of the second half of the first century BCE and continued to be in vogue up to the destruction of the temple in 70 CE. Subsequently, and until the Bar Kokhba Revolt (132–135 CE), stone vases are found sporadically, and are of a much lower quality than the earlier ones. Most

likely, these were used by Jews who kept strict purity laws in anticipation of the rebuilding of the temple in Jerusalem (Magen 1994:256). The center of stone-vessels manufacture was in Jerusalem and its immediate vicinity; it seems that the stone vases of Kh. Marmita were brought from Jerusalem. Signs for stone-vase production were not evident on the site. Stone vases were utilized in and around the Temple of Jerusalem, but also emerged in small agricultural communities, indicating they were used by all strata of the Jewish population (Magen 1988:108).

Glass Vessels

Fragments of glass vessels were mainly found in Buildings 84 and 104, as well as in several other sites. Noteworthy among the finds are a small bracelet and two fragments of bowls. The glass fragments date from the Hellenistic to the Byzantine periods (Table 9).¹³

Table 9. The Glass Fragments

No.	Reg. No.	Locus/site	Comments
1	277/1	104/6	Spherical body, mended from many fragments; greenish glass; thick rounded base; Early Roman
2	295	104/7	Fragments of a tubular, base-ring bowl; severely pitted, iridescent; Early Roman
3	279/1	104/1	Green, small fragment of a cast ribbed bowl with horizontal groove inside; one rib remained; Late Hellenistic–Early Roman
	253/2		Bluish-green wineglass with hollow, tubular ring base; Byzantine
4	446/1	69	Base and body fragment, severely pitted
5	474/1	69C	Two body fragments
6	442/1	70	A fragment of a modern oil lamp used by tomb robbers
7	477/1	70	Six body fragments of a bottle; Byzantine fabric; also a small fragment of a probable glass inlay (Barag 1978:5–7, Fig. II)
8	426/1	70S	Small fragment of handle, probably part of a basket-handled kohl tube; Byzantine
9	478/1	70	Four body fragments; Byzantine
10	303/1	84D	Small body fragment; early fabric
11	286/1	84D	Small body fragment; early fabric
12	448/1	84D1	Small body fragment
13	412/2	84F	Conical rim fragment of a bowl, cast green and grooved; Grose's Group A (Grose 1979:55–59); severely pitted; Hellenistic
14	313/1	84F	Small body fragment; early fabric
15	404/2	84F	Small body fragment; early fabric
16	419/1	84F	Body or rim fragment, cast with one groove; Early Roman
17	407/1	84J	Bottle rim with open ridge; pitted; Late Roman
18	444/1	84M	Body fragment
19	214/1	100A	A twisted bracelet fragment, colored, with a white string

Metal Artifacts

The metal artifacts of Kh. Marmita comprised mainly iron objects, tools and nails that were poorly preserved and several items made of other metals (Table 10). Other than the broken iron objects, two items are noteworthy. The first is a lead weight, pyramidal in shape, weighing 150 grams (Fig. 11:7). It was found in Room 104/3, thought to be a pantry. The weight may have been used for commodities. The second object Fig. 11:12 is tentatively described as a hilt. It is a folded bronze sheet, pointed at one end and broken in the center. It has a pierced hole close to the fold line, at about one third of its preserved length.

SUMMARY AND CONCLUSIONS

Building 20/23 is the earliest of the three buildings at Kh. Marmita. Late Hasmonean pottery was discovered in its two rooms, as well as a single fragment of a Herodian lamp. No stone vases were found in this building and the single coin that belonged to Antiochus VII

Sidetes (132/1 BCE; Sokolov, this volume: No. 1) appears to be residual. This building seems to be associated with the winepresses and oil press at the top of the hill and may have served the workmen in these installations. The building is dated on the basis of pottery to the first half of the first century BCE.

The Late Hasmonean and Herodian-period pottery in the rooms of Building 84 and the complex provide a similar date as Building 20/23, though it extends somewhat later. Stone vessels in the rooms, and the basalt mortars might indicate that the rooms were used as habitation quarters. No coins were found, but the glass fragments also dated to the late Hellenistic and the Early Roman periods. The residents of complex 84 were undoubtedly involved with the stone quarry that was discovered in the midst of the complex, which dates from 60 to 10 BCE.

Building 104 is the best preserved and most elaborate farmhouse at the site. The large number of broken iron tools and nails could indicate that the house had a wooden ceiling or a second story that was supported by wooden beams. A pen wall (W102) and an elaborate water system is indicative of herding. The pottery dates from the Herodian period to the first century CE. The large number of stone vases from the building may indicate that the inhabitants of the house kept the rules of purity current at the time in Jerusalem and its environs (Magen 1994:252 ff.). The glass fragments from the building are similarly dated to the Early Roman period. Two coins recovered from the building date from the middle of the first century CE; one of these dates from the second year of the Jewish revolt, 67 CE (see Sokolov, this volume: Coin No. 3). The third coin is from the time of Alexander Jannaeus, which antedates the building by c. 100 years and might have been an heirloom (see Sokolov, this volume: No. 2). This building was constructed in c. 30 BCE and was partly contemporaneous with Building 84. It continued to exist throughout the first century CE, at least until 67 CE.

Table 10. The Metal Objects

Reg. No.	Locus/Site	Object
232	104/3	Lead weight
237/1	114	Bracelet
251/1	104/4	Fragments of iron tools and nails
252/3	104/5	Fragments of iron tools and nails
255/1	104/3	Fragment of iron knife
257/3	104/5	Fragments of iron tools and nails
262/2	104/1A	Fragment of iron knife
283/3	104/6	Fragments of iron nails
285/1	104/2A	Fragments of iron nails
288/1	104/2A	A metal hilt(?)
289/1	104/7	Fragments of iron tool
295/2	104/7	Fragment of iron nail
307/1	84E	Fragments of iron tools
412/1	84F	Fragment of iron tool
477/1	70	Fragment of iron object
479/1	70B	Fragment of iron object

Concerning the chronology of the various installations, the ritual bath (Site 114) shows a long chronological span and must have been quarried in the late Hasmonean period, contemporary with Building 20/23. It probably continued to be used by the residents of Buildings 84 and 104. It is noteworthy that neither stone vessels nor any other finds were recovered from the ritual bath, except for some odd potsherds. On the surface of Quarry 109, a late coin from the fifth century CE was found. It may be associated with the Byzantine and even Early Islamic potsherds that were discovered at several installations in Kh. Marmita.

The excavated section of the site indicates that Kh. Marmita was a Jewish settlement. The earliest habitation seems to be from the

beginning of the first century BCE, during the reign of Alexander Jannaeus (103–76 BCE). Since Kh. Marmita was well within Judea, the reasons behind the establishment of a new Jewish settlement might have had to do with the socio-economic conditions at the time. The settlement continued to exist throughout the tumultuous times that befell Judea during the decline of the Hasmonean kingdom and the rise of Herod. A change in labor patterns is evident, from wine and oil production to cattle grazing, while stone quarrying might have continued sparingly. Residents of Kh. Marmita might have been involved in the first Jewish Revolt, as indicated by the coin of the revolt's second year. The site was probably abandoned and destroyed sometime thereafter.

NOTES

¹ Prior to the excavations, the site was surveyed by Harley Stark, who documented the different features in a very useful manner. The first season of excavations took place in July 1990 (License No. G-35/90; map ref. NIG 2011/6304; OIG 1511/1304), on behalf of the Israel Antiquities Authority. Gideon Solimany assisted in the field and excavated the large winepress at Ḥorbat Ḥaroz, which was given an independent permit at a later date and was published separately (Solimany 2003:115:57*–58*). Valentin Shorr acted as the surveyor and Carmen Hersch drew the pottery. We sincerely thank Mr. Alex Ha-Naor, chief engineer of the Nesher Industries, who was invaluable in his extended assistance throughout our three seasons at the site. The second season lasted from July to August 1991 (License No. G-82/91). Assisting in the field were Immanuel Tzaferis (administration), Israel Vatkin, Razvan Niculescu and Rachel Graff (surveying and drafting), and Sandu Mendrea (field photography). Further assistance was extended by Danni Weiss, Zvi Greenhut, Boaz Zissu and the Nesher–Hartuv plant personnel, in particular the director, Mr. Uzi Sapir and the ever-gracious Rosy Adiri, his secretary. The third season was carried out during July–August 1992 (License No. G-86/92). Assistance was extended by

Immanuel Tzaferis (administration), Israel Vatkin, Pavel Gertopsky, Razvan Niculescu and Silvia Krapiwko (surveying and drafting), Sandu Mendrea (field photography), Stella Flit (pottery restoration, second and third seasons together), Marina Zeltzer and Carmen Hersch (pottery drawing), Ella Altmark (metallurgical laboratory), Helena Sokolov (numismatics), Natalia Zak (drafting and final plans), and Yael Gorin-Rosen (glass finds). Many thanks are extended to them all.

² The stone with cupmarks was found in the same location as described in 1929. It has been loaned by the IAA to the Nesher–Hartuv quarries, together with several other stone elements that are currently exhibited in front of the quarry's offices.

³ A preliminary report on this house was published by the author (Gershuny 1992).

⁴ I wish to thank Rachel Bar-Nathan, who examined the pottery and made some very valuable suggestions.

⁵ Thanks are due to Frida Ben-Ami for examining the shell and snail remains.

⁶ A preliminary report of Buildings 84 and 104 was published by the author (Gershuny 1995).

⁷ The screw base is on loan to the Nesher–Hartuv quarry (IAA No. 1993-1644).

⁸ Calculated values for volumes of a hemispheric and cone are approximate; the volume of a hemisphere is $\frac{2}{3} \pi r^3$ and the volume of a cone is $\frac{1}{3} \pi r^2 h$.

⁹ Work in the cave was suspended due to the mysterious illness of the workmen digging the cave, as well as the intervention of ultra-orthodox Jewish factions that violently protested the excavation of the cave.

¹⁰ The size of the immersion pool, as well as the staircase leading into it, would allow at least two people to use the *miqwe* simultaneously.

¹¹ Since this report was written before 2000, the only relevant reference was Bar-Nathan 1988. Meanwhile, the final and complete version has been published (Bar-Nathan 2002), but is too late to be used in this report.

¹² The term “measuring cup” is not used here since it is a misnomer (Magen 1988:76).

¹³ I owe sincere thanks to Yael Gorin-Rosen for her comments on the glass fragments.

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