

KHIRBAT ER-RAS, JERUSALEM: IRON AGE AND OTTOMAN-PERIOD REMAINS

NURIT FEIG

Khirbat er-Ras is located on the northern bank of the Refa'im Valley, at the southern end of the Manaḥat (Malḥa) ridge, where Naḥal Manaḥat runs into Naḥal Refa'im (map ref. 21699/62801; Gibson 1977:30–31; Edelstein, Milevski and Auran 1998: Plan 2.1; Kloner 2000:30*, Site 39; Gadot 2011; Fig. 1). Previous excavations

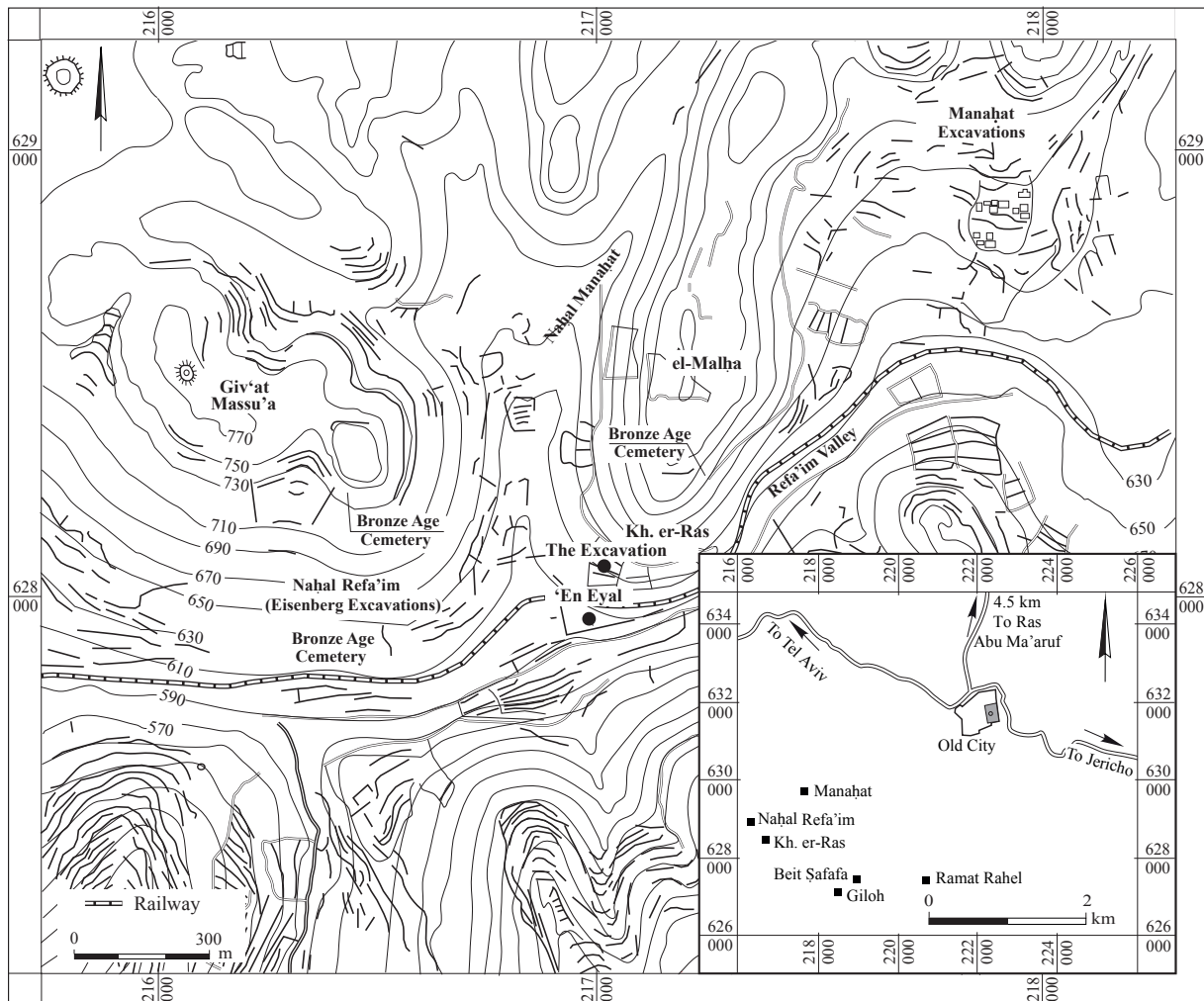
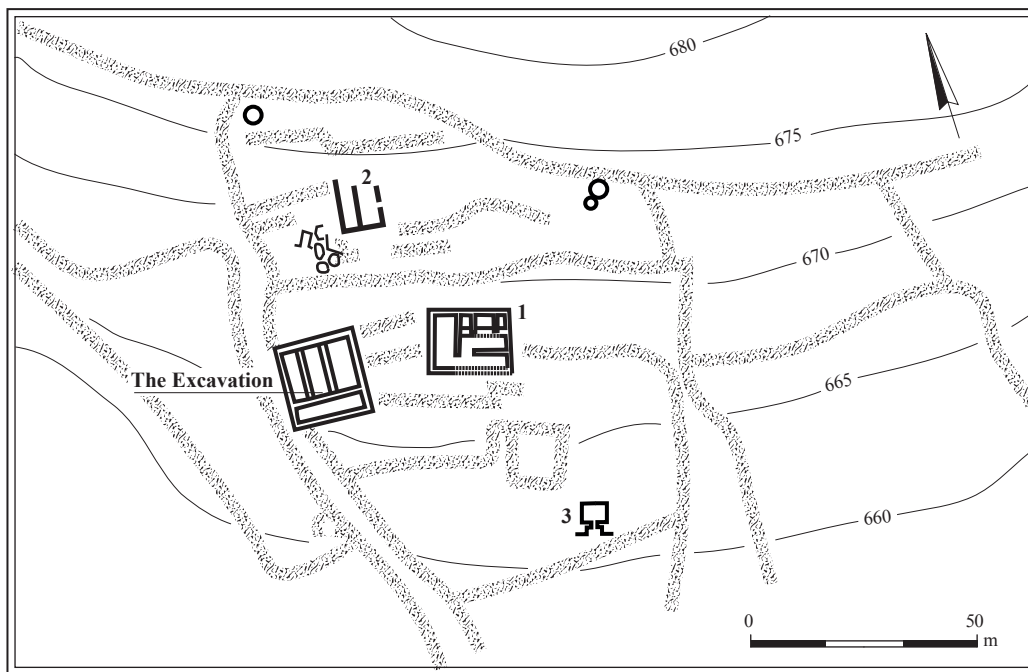


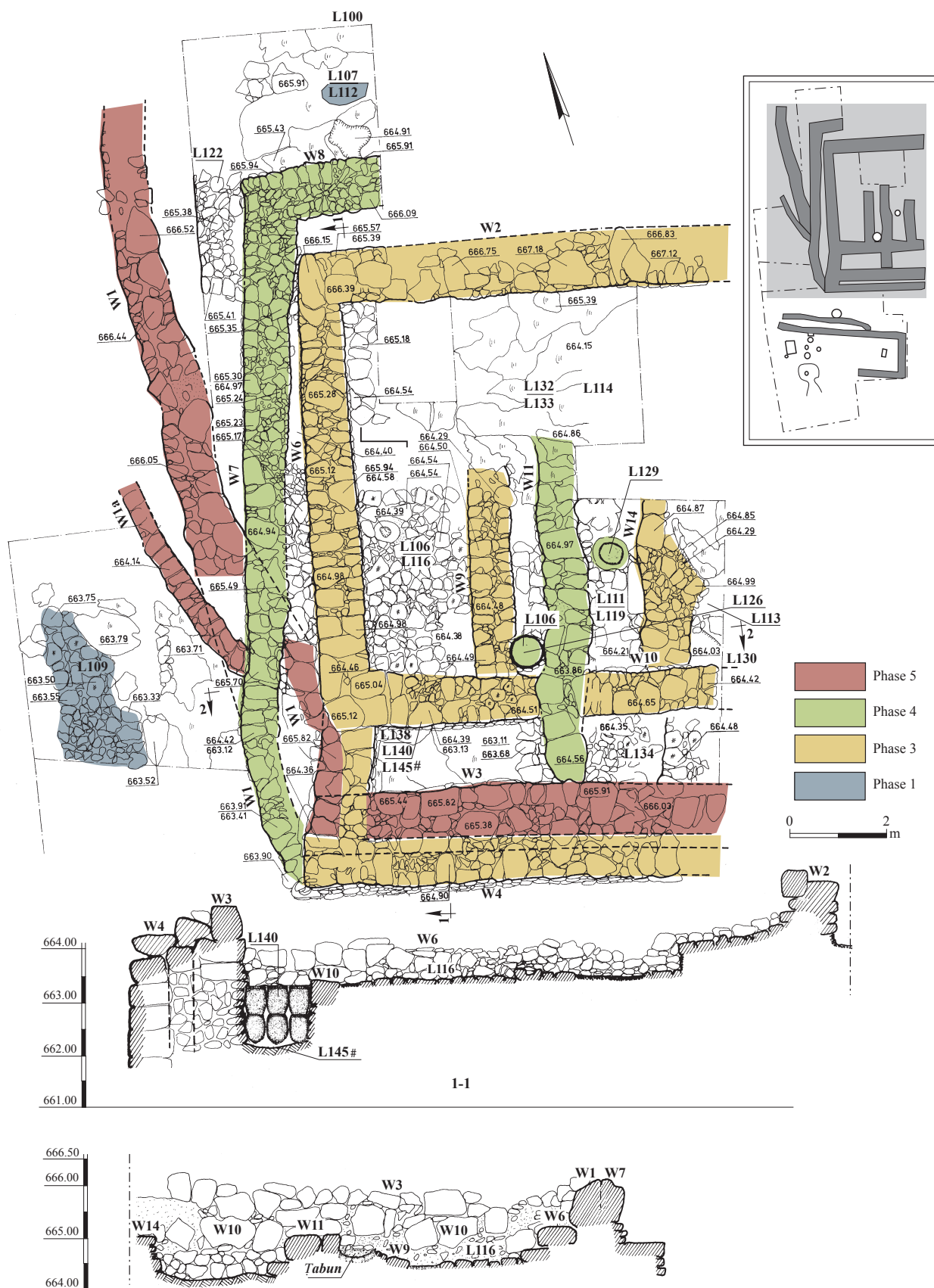
Fig. 1. Location map.

undertaken at the site uncovered a Four Room house located in what seemed to be a terraced enclosure, and identified as an Iron Age farmhouse (Plan 1:1; Edelstein 1981; Gibson and Edelstein 1985:139–143; Edelstein and Milevski 1994:9–10; Edelstein 2000). An additional structure, identified as a late Iron Age or Persian-period storehouse, was excavated to the northwest of the Four Room house (Plan 1:2; Zehavi 1993). During road construction in December 1993, the remains of a previously unknown structure were uncovered at the western edge of the terrace enclosure to the west of the Four Room house, and a salvage excavation ensued (15 × 30 m; Plan 1; Feig and Abed Rabu 1996; Feig 1996).¹

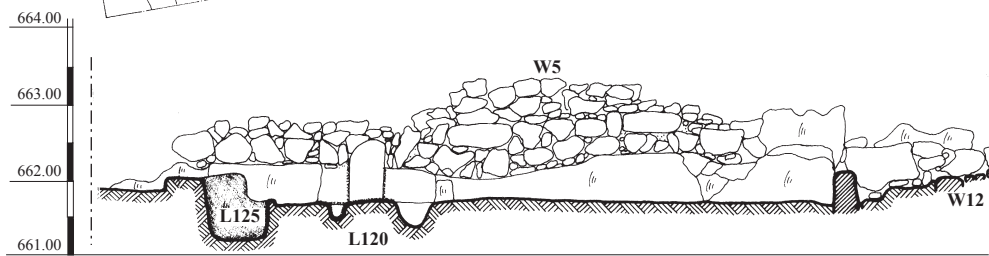
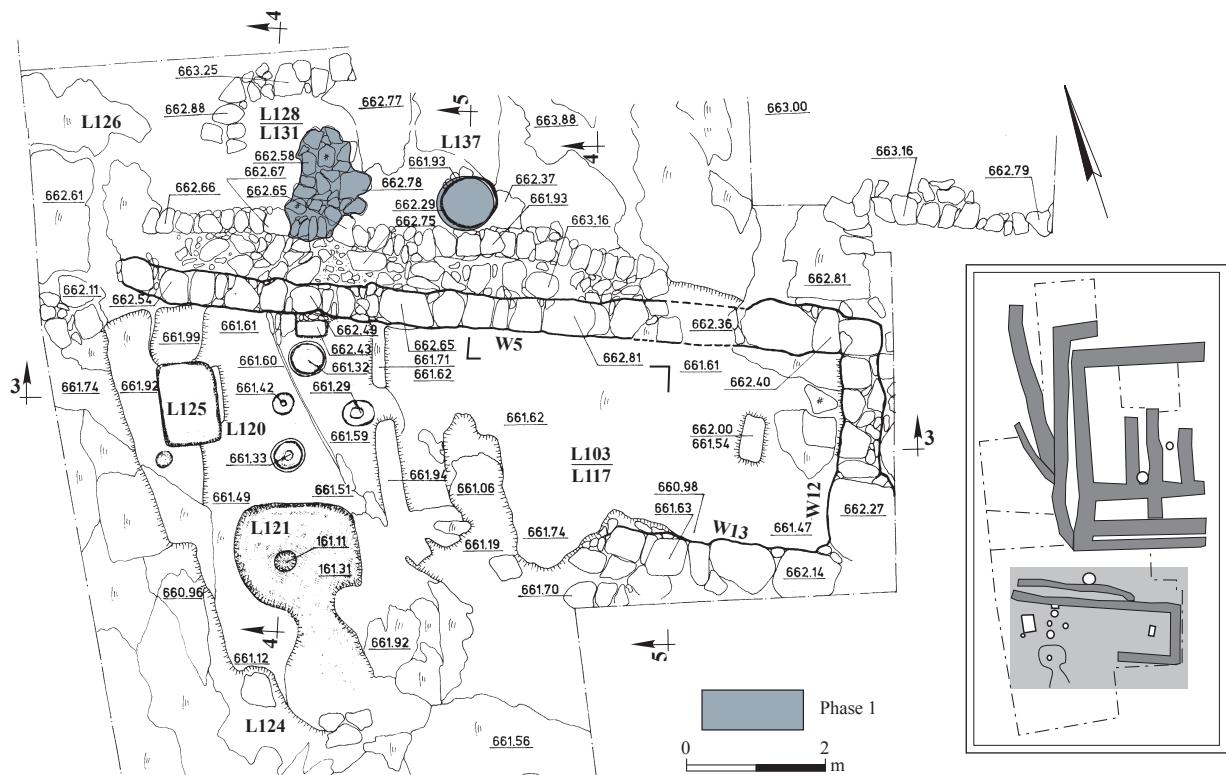
Stratigraphically, the excavation (Plan 2) revealed four or possibly five phases of occupation at the site: an installation and remains of pavements from the Early Bronze Age IV (Intermediate Bronze/Middle Bronze I; Phase 1); a possible reuse of the EB IV installation during the Middle Bronze Age IIB, with no evidence of architecture (Phase 2); an Iron Age Four Room house, possibly with an adjacent installation compound (Phase 3); a later building phase, which cannot be dated with certainty (Phase 4); and finally, reuse of the building alongside further construction during the Ottoman period (Phase 5). The nearby terrace walls date to this latter period as well. In addition, finds from the Persian and Hellenistic periods were found at the site, but these could not be related with certainty to a stratigraphical phase.



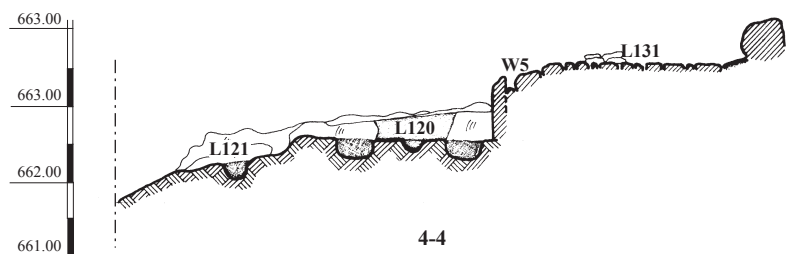
Plan 1. Excavations at Khirbat er-Ras.



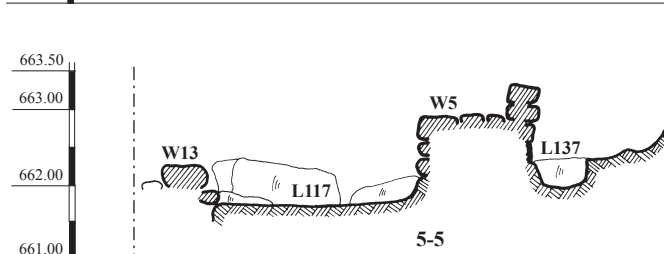
Plan 2. The excavation, plan and sections.



3-3



4-4



5-5

Plan 2. (cont.)

OCCUPATION PHASES

PHASE 1: THE EARLY BRONZE AGE IV

The EB IV remains were badly damaged by later activity at the site. To the south of the building was a circular installation (L137; diam. 0.8 m, 0.45 m deep; Fig. 2) lined with small- and medium-sized stones. It contained several flint tools and four restorable vessels: two jars (Fig. 7:5, 6) and two amphoriskoi (Fig. 7:7, 8). The installation was sealed by a fill that was excavated between two Iron Age walls (W4, W5).

Three areas with well-paved pebble floors that carried EB IV pottery sherds were uncovered: to the west of Installation 137 (L131; Fig. 2; pottery not drawn); in the western part of the excavation area (L109; Fig. 7:1); and in the northern part of the excavation (L112; pottery not drawn). These floors may have served as working areas. A few EB IV sherds were uncovered in a mixed fill over Floor 131 (L128; 7:4), within the destruction level of the Phase II storeroom (L140; Fig. 7:2, 3, 9) and in a fill within the Iron Age II courtyard (L114; not drawn).

PHASE 2: THE MIDDLE BRONZE AGE IIB

No architectural remains dating to the MB IIB were found. However, two MB IIB cooking-pot fragments (Fig. 8:2, 3) that were found in the upper part of Installation 137, above the EB IV vessels, and a jar fragment from this period from Pebble Floor 131 (Fig. 8:5) suggest that the EB IV installation and the nearby floor were reused

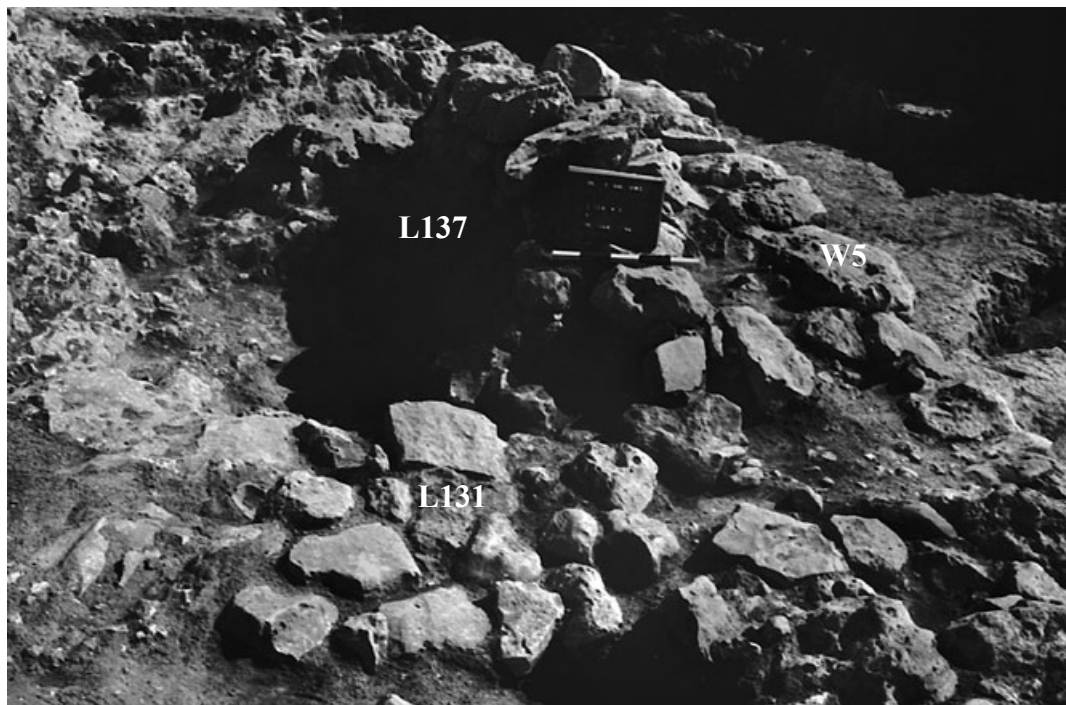


Fig. 2. Installation 137, Floor 131 and Wall 5, looking southeast.

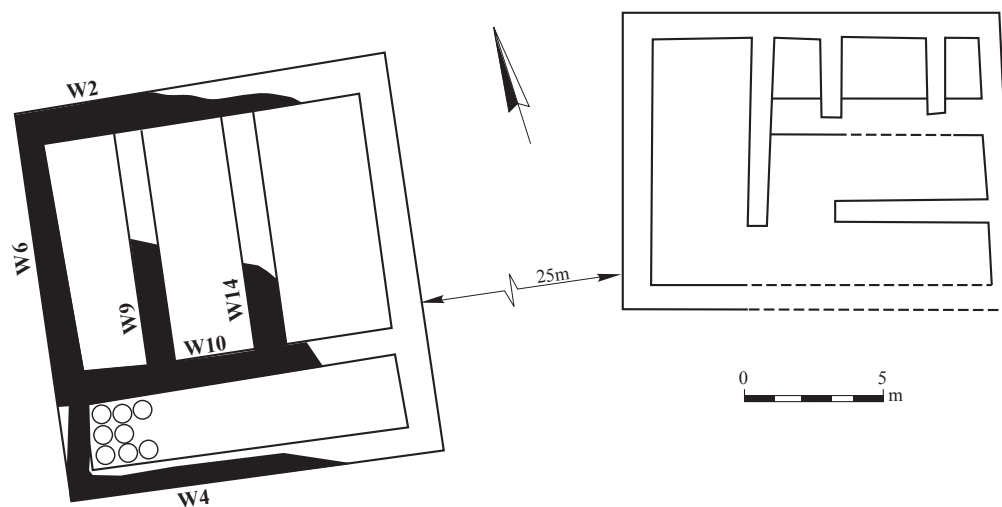
during this period. Several additional sherds—cooking pots (Fig. 8:1, 4) and a jar (Fig. 8:6)—dating to this period were found scattered in topsoil (L100, L103) and in a fill in the Iron Age II courtyard (L114).

PHASE 3: THE IRON AGE II

Following a hiatus lasting hundreds of years, the site was resettled during the Iron Age II, when a Four Room house was erected. In the next phase (Phase 4, see below), the date of which could not be ascertained, the house was converted into a structure with only two rooms. To the south of the building lay an installation compound, which most probably served during at least one of these two phases, although this could not be determined. Hence, the installation compound would be described following Phase 4.

A well-built Four Room house (Plans 2, 3), constructed on a general north–south axis, was found to the west of the Four Room house excavated by Edelstein (Gibson and Edelstein 1985:144–145). The walls were built either of two rows of field stones, or of a single row of large, well-hewn ashlar (up to 1 m in width). Ashlars seem to have been dismantled from the walls' upper courses for secondary use in an Ottoman-period wall (W3, see below); many additional ashlars were found scattered around the site. Nevertheless, most of the walls were preserved to the height of 2.0–2.5 m.

The central, open courtyard (L119) was flanked by two rooms (L113, L116; Fig. 3); all three spaces were probably of similar dimensions, although Room 113 was only partially excavated. Room 116 was paved with irregularly shaped flat stones; a stone bearing a cupmark was set near the western enclosing wall (W6). One circular basalt column (0.28 m diam.) was found in the courtyard fill (L139). It may have belonged to a row of columns that separated the courtyard from the eastern room, in which case W14 was only a foundation; the column was probably put to secondary use during phase 4. The wall enclosing the structure on the north (W2) was preserved to a height of only two courses (Plan 2: Section 1–1). Although this east–west wall runs along the



Plan 3. The Four Room house, schematic plan.



Fig. 3. Room 116, looking south.

same contour line as the northern wall of the Four Room house that lies to its east, no stratigraphic connection was found between the two, and they differed completely in their construction method: the eastern Four Room house was built of large boulders, whereas the Phase III Four Room house was built of medium-sized, rectangular stones.

The transverse, southern room (L145) was constructed as a partially subterranean room; its floor was 1.2 m below that of Room 116 and of Courtyard 119. The room was used for storage, as evident by 278 *in-situ* holemouth jars² found in its destruction level (L140), which was the only sealed locus in the building (by L138, see below). The storeroom was not full when destroyed, as its estimated capacity is 600 to 700 holemouth jars. Further evidence of this is that the holemouth jars were found concentrated near the western wall. The jars seem to have been placed in two- and three-tier stacks. Several jars were still standing, but most of them were found crushed as a result of a violent destruction. The holemouth jars found at the bottom of the locus (Type I; Fig. 10:1–4), making up the lower-tier vessels, were squat, and had thicker walls than the elongated and lighter holemouth jars found above them (Type II; Fig. 10:5–8). Thus, it seems that the lighter, Type II, jars were placed right on the rims of the heavier, Type I, jars.

A small number of potsherds belonging to bowls (Fig. 9:1–4), a krater (Fig. 9:5, 6), high-necked jars (Fig. 9:7–11), a jug (Fig. 9:12) and stands (Fig. 9:13, 14), as well as two upper grinding stones, one of them oval (Fig.

14:3), and four hammer stones (Fig. 14:4, 5, 7, 8), were found amongst the holemouth jar fragments; the high-necked jars were found at the very top of the destruction level in the storeroom.

The architectural plan of the building—a Four Room house—along with the holemouth jars and other finds from the storeroom indicate a chronological span from the mid-eighth through the mid-seventh centuries BCE. Other Iron Age II finds (seventh–sixth centuries), including a stamped *lmlk* handle (Fig. 11:17) were retrieved from mixed fills within the structure (Fig. 11:1, 8, 11, 17) and beyond its walls (Fig. 11:2, 3, 5, 7, 10, 12–16), as well as in topsoil (Fig. 11:4) and in accumulations right below topsoil (Fig. 11:5, 9).

PHASE 4

During this phase, the Four Room house was completely modified. The date of this phase could not be ascertained, but it followed the destruction in the storeroom and took place while the walls and destruction layer of the Four Room house were still visible. A pavement of irregular flagstones (L138) sealed the western part of the storeroom, c. 1.4 m above its original floor. It extended northward and up to W11, covering W9 and putting it out of use. Parallel to W6, a similarly built wall (W7) was erected, possibly to buttress W6. A wall (W8) forming a well-built, straight-angled corner with W7 and running parallel and north of W2 seems to have been built during this phase as well. A paved floor made of small stones (L122) abuts the corner of Walls 7 and 8. The floor carried several fragments of cooking pots (not drawn) and bowls, including a small bowl (Fig. 11:2) dated from the mid-seventh century to the end of the Iron Age. A north–south wall built of very large stones (W11) subdivided the house into two rooms. A thick yellowish dirt-beaten floor (L106) was clearly identified to the west of W11, 5–8 cm above the pavement in Room 116. Courtyard 119 was filled with boulders, possibly in an attempt to raise its floor level (L111). Wall 14 seems to have been reinforced on its western face. A *tabun* (L126; Fig. 4) was built in the western room above W9 and abutting W11. An oval installation (L129) was set in the eastern room: a stone sunk into the floor surrounded by two courses of field stones; due to its poor state of preservation its purpose remains unclear.

As no sealed locus could be associated with this phase, its date remains unclear. Pottery sherds recovered in fills within the building and near it, dating to the end of Iron Age II (seventh–sixth century BCE), may belong to this phase as well. However, the fill in Courtyard 119 included also a complete cooking pot (Fig. 13:3) and two large fragments of a jar (Fig. 13:4), both from the Hellenistic period, suggesting that this may be the date of Occupation Phase 4.

An Installation Compound (Fig. 5). A rock-cut installation compound was uncovered immediately to the south of the Four Room house. Three elements could be identified within the excavated area: a rectangular surface (L117; 3.0 × 6.5 m) enclosed by three walls (W5, W12, W13; up to 1.4 m high); a nearly square surface (L120) with four closely spaced, circular rock-cut basins (0.22–0.30 m deep), most probably simple oil presses (*bodedot*); and a



Fig. 4. *Tabun* 126, looking south.



Fig. 5. The installation compound, looking west.

rectangular collecting vat (L125; 1 m deep). Plaster remains were found to the north of Vat 125. Surface 120 may have been a winepress treading floor, as evident by adjacent Collecting Vat 125, but seems to have served as an oil press in secondary use by utilizing the slanted rock surface between the upper part of the compound, near W5, and a hewn rectangular depression (L121; Plan 1: Section 4–4) with a small circular sump cut near its center. The enclosure to their east may have served as a storage area for the produce of the installation.

Scattered on the two rock surfaces within the installation compound (L117, L120) were both Iron Age II and Persian-period finds. Although suggesting that the installations were used during these periods, most probably alongside the use of the Four Room house, these finds cannot provide a clear date for the compound, as is usually the case with installations. The Iron Age II finds include a holemouth jar (Fig. 11:14), which dates from the sixth century BCE at the very earliest and a stand fragment (Fig. 11:15); a figurine fragment (Fig. 12:2) was found in topsoil (L103), above Surface 117. All these finds were badly worn. The Persian-period finds included a bowl fragment (Fig. 13:1) and a handle bearing a seal impression of a lion (Fig. 13:7).

PHASE 5: THE OTTOMAN PERIOD

The Ottoman period settlers found part of the early structure in a rather well-preserved state. Since only few building stones were found in the fills, it seems that at least the southern wall (W4) was still standing almost to its full height (2.0–2.5 m). The new settlers probably dismantled the ashlar from its upper courses, and built a new wall (W3) along its northern face, up to W6. Wall 3 partially covered W4, but most of its width ran above the southern part of the storeroom, where it was laid on a bedding of small stones; this bedding was discerned only in a section cut through the wall. This construction resulted in a massive (2.25 m wide) stepped wall—W3 was higher (2 m preserved height) than the remains of W4—which served as a retaining wall for an agricultural terrace (Feig 1996:3–4, 6). The terrace fill contained Ottoman-period pottery shreds (not drawn). A crudely-built wide wall (W1; 1 m wide; Fig. 6) bordered the site to the east, as did a neatly-built wall that may have abutted it (W1a).



Fig. 6. Terrace wall (W1) and Wall 7, looking northeast.

THE FINDS

POTTERY

The Early Bronze Age IV Pottery (Fig. 7)

The EB IV pottery consists of several forms that are typical to Dever's (1980:48) Southern Family. These are characterized by the use of band-combing found on the bowls and on a jar (Fig 7:1–3, 6). Thumb-indented decorations, also characteristic of the period, are found on jars (Fig. 7:5) and cooking pots (Fig. 7:4; an identical vessel was found in a sealed EB IV locus at Nahal Refa'im; Emanuel Eisenberg, pers. Comm.). The deep bowl of the 'caliciform' pottery group (Fig. 7:2) belongs to Dever's (1980:47) Central Hill Family. It has parallels at Wadi ed-Dalieyh, where vessels belonging to the Southern Family were found alongside the Central Hill Family pottery, indicating a northern expansion of the Southern Family into the Jerusalem area late in the EB IV.

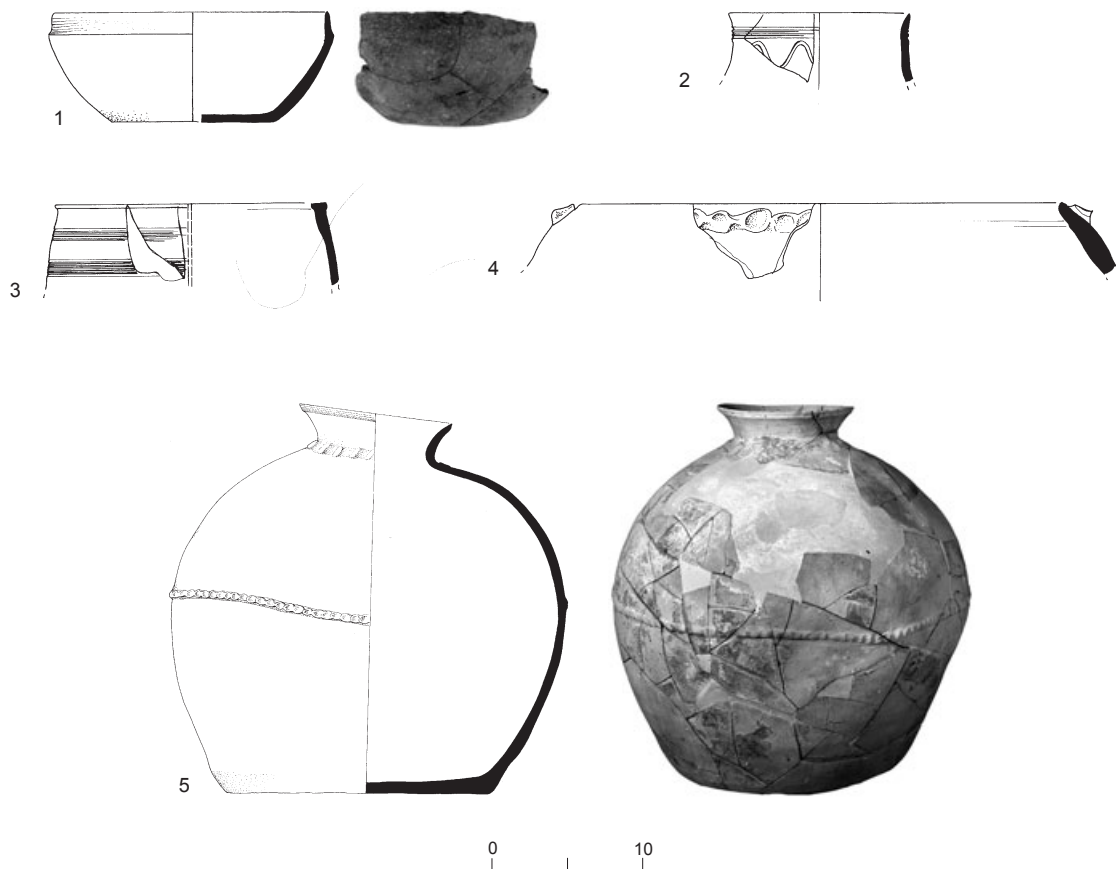


Fig. 7. Early Bronze Age IV pottery.

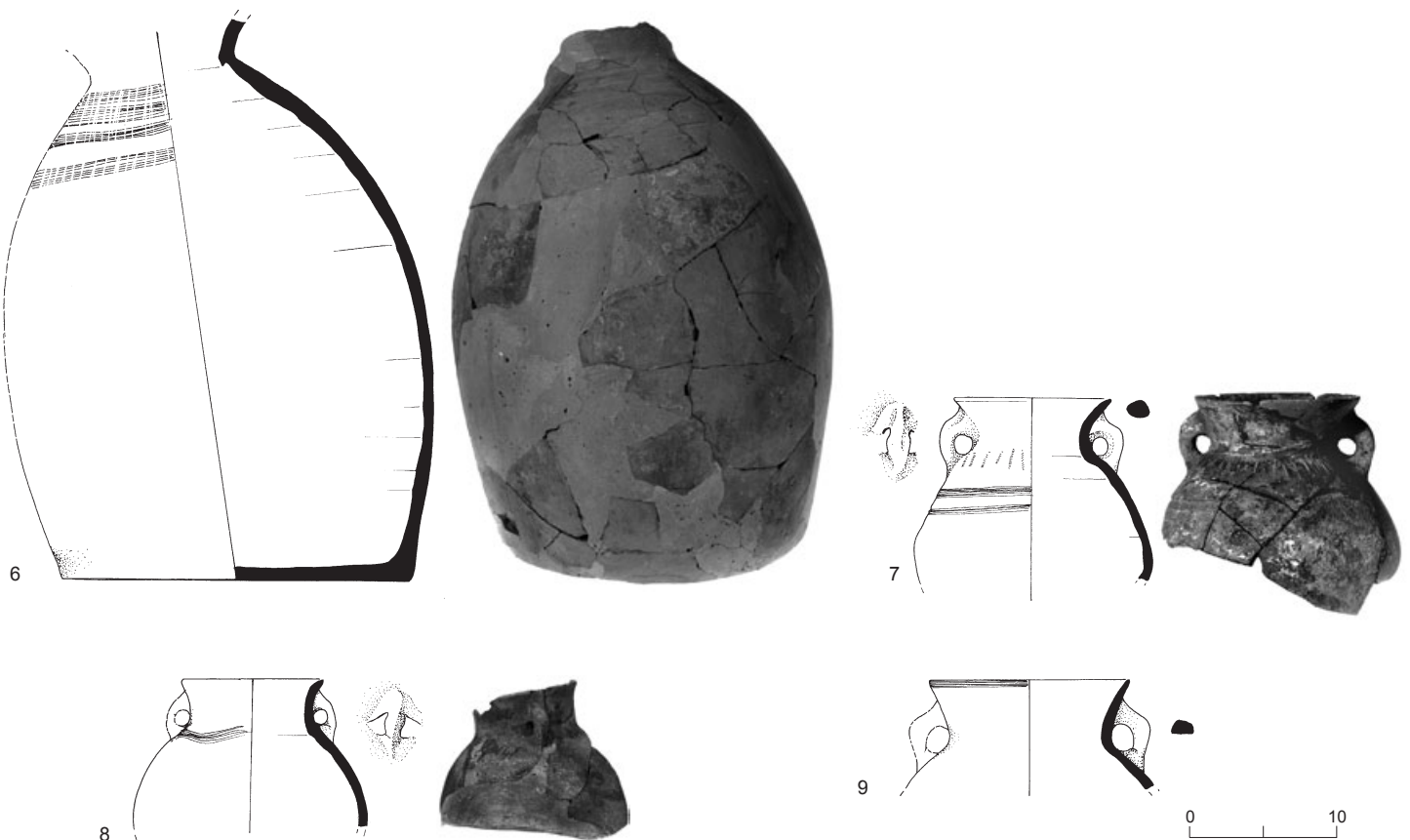


Fig. 7. (cont.).

No.	Vessel	Basket	Locus	Description	Parallels
1	Bowl	1097-1	109	Reddish yellow (7.5YR 7/6)	Jebel Qa'aqir (Dever 1981: Fig. 3:17); Mirzbaneh (Dever 1972: Fig. 4:3); Naḥal Refa'im (Eisenberg 1993:86)
2	Bowl	1210-2	140	Reddish yellow (7.5YR 7/6)	Tell Beit Mirsim (Albright 1933: Pl. 3:3, 8); Naḥal Refa'im (Eisenberg 1993:86); Ras Abu Ma'aruf (Seligman 1995: Fig. 4:1); Wadi ed-Daliyeh (Lapp 1974: Pl. 9:3, 4); Jebel Qa'aqir (Dever 1981: Fig. 3:2)
3	Bowl	1237-1	140	Light reddish brown (5YR 6/4)	Tell Beit Mirsim (Albright 1933: Pl. 3:4); Naḥal Refa'im (Eisenberg 1993:86)
4	Cooking pot	1142-7	128	Reddish yellow (5YR 7/6)	Dever 1980: Fig. 4:20; Richard 1980: Fig. 2:2; Wadi ed-Daliyeh (Lapp 1974: Pls. 9:13; 10:8); Naḥal Refa'im (Eisenberg 1993:86)
5	Jar	1193-9	137	Reddish brown (5YR 5/4), few grits	Naḥal Refa'im (Eisenberg 1993:86); Manahat (Edelstein 1998: Fig. 4.1:5, 6); Wadi ed-Daliyeh (Lapp 1974: Pls. 1:4; 2:9)
6	Jar	1193-8	137	Reddish brown (5YR 5/4), few grits	Lachish (Tufnell 1958: Fig. 67:466–471); Tell Beit Mirsim (Albright 1933: Pl. 2); Wadi ed-Daliyeh (Lapp 1974: Pls. 2:12; 3:14); Jebel Qa'aqir (Dever 1981: Fig. 3:5); Naḥal Refa'im (Eisenberg 1993:86); Manahat (Edelstein 1998: Fig. 4.1:5, 6)
7	Amphoriskos	1193-6	137	Very pale brown (10YR 7/3)	Dever 1980: Fig 4:3; Tell Beit Mirsim (Albright 1932: Pl. 45:2); Ras Abu Ma'aruf (Seligman 1995: Fig. 4:4)
8	Amphoriskos	1193-7	137	Light brown (7.5YR 6/4), soot marks	Dever 1980: Fig 4:3; Tell Beit Mirsim (Albright 1932: Pl. 45:2); Ras Abu Ma'aruf (Seligman 1995: Fig. 4:4)
	Amphoriskos	1235-1	140	Pink (7.5YR 7/4)	Dever 1980: Fig 4:3; Tell Beit Mirsim (Albright 1932: Pl. 45:2); Manahat (Edelstein 1998: Fig. 4.1:16)

Middle Bronze Age Pottery (Fig. 8)

The small assemblage of cooking pots (Fig. 8:1–4) and jars (Fig. 4:5, 6) comprises forms that were common in the Jerusalem area during the MB IIB period.

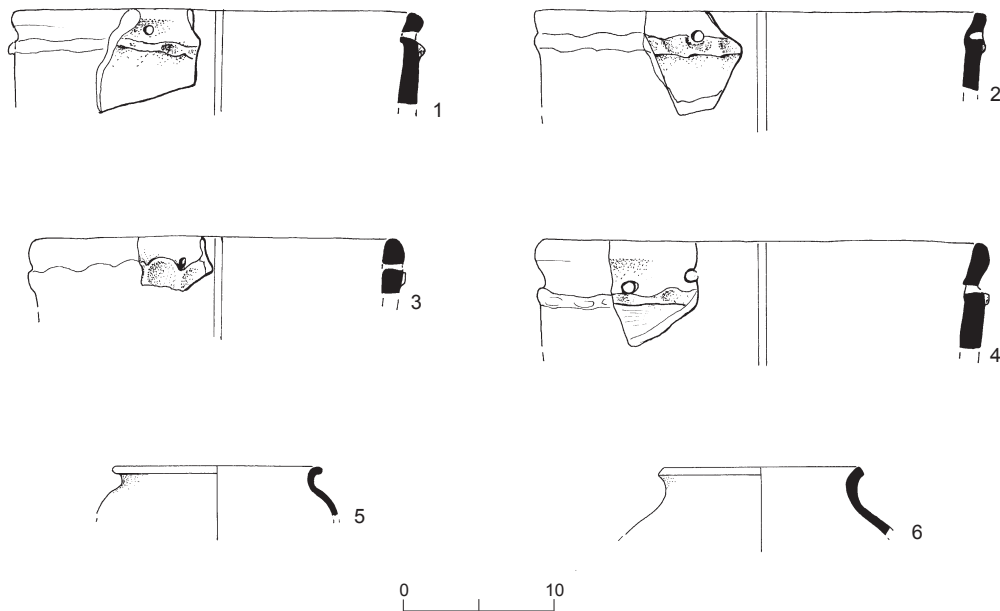


Fig. 8. Middle Bronze Age IIB pottery.

No.	Vessel	Basket	Locus	Description	Parallels
1	Cooking pot	1199-7	103	Light yellowish brown (10YR 6/4)	Shechem (Cole 1984: Pl. 23:a–d); Naḥal Refa'im (Eisenberg 1993:93); Manahat (Edelstein 1998: Fig. 4.5:3–6); Tell el-Hayyat (Falconer, Magness-Gardien and Metzger 1984: Fig. 18:8)
2	Cooking pot	1193-4	137	Reddish gray (5YR 5/2)	Shechem (Cole 1984: Pl. 23:a–d); Naḥal Refa'im (Eisenberg 1993:93); Manahat (Edelstein and Milevski 1994: Fig. 11:5; Edelstein 1998: Fig. 4.5:3–6)
3	Cooking pot	1193	137	Pink (7.5YR 7/4), white grits	Shechem (Cole 1984: Pl. 23:a–d); Naḥal Refa'im (Eisenberg 1993:93); Manahat (Edelstein 1998: Fig. 4.5:5); Barguta (Kochavi 1979: Figs. 11:7; 18:14)
4	Cooking pot	1001-4	100	Reddish brown (5YR 5/4), many white grits	Manahat (Edelstein 1998: Fig. 4.5:6); Naḥal Refa'im (Eisenberg 1993:93); Tell el-Hayyat (Falconer, Magness-Gardiner and Metzger 1984: Fig. 18:7)
5	Jar	1156	131	Reddish yellow (7.5YR 7/6), well levigated	Naḥal Rea'im (Eisenberg 1993:93); Tell el-Hayyat (Falconer, Magness-Gardien and Metzger 1984: Fig. 19:10)
6	Jar	1069-1	114	Pink (7.5YR 7/4), white and gray grits	Naḥal Refa'im (Eisenberg 1993:93); Tell el-Hayyat (Falconer, Magness-Gardien and Metzger 1984: Fig. 19:10)

Iron Age Pottery (Figs. 9–12)

Bowls (Figs. 9:1–5; 11:1–7).— Four types of bowls were identified. The first type (Figs. 9:1; 11:7) with carinated walls and a sharply everted rim (Fig. 9:1), continues the tradition of the Lachish, Stratum IV bowls, and is dated to the eighth century BCE (Zimhoni 1990:44–45, Group B16). The bowl in Fig. 11:7 is earlier. This vessel was

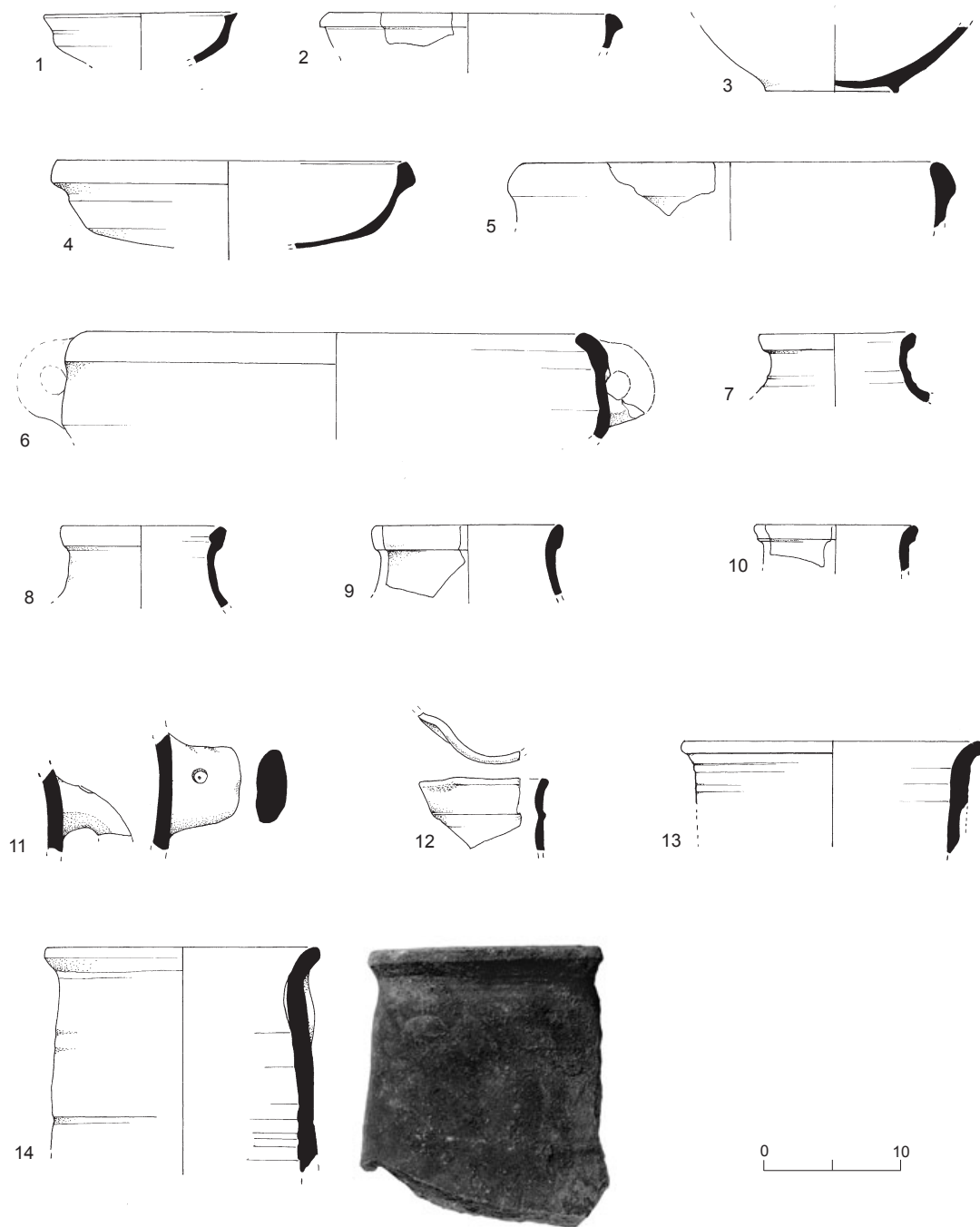


Fig. 9. Pottery from the storeroom (L140).

◄ Fig. 9

No.	Vessel	Basket	Description	Parallels
1	Bowl	1210-1	Reddish yellow (7.5YR 6/8)	Ophel (Mazar and Mazar 1989: Pl. 2:31); Tell Beit Mirsim (Albright 1932: Pl. 65:20b); Lachish (Tufnell 1953: Pl. 79:42, 43, 55; Zimhoni 1990:44, 45, Group B16)
2	Bowl	1214-2	Reddish yellow (5YR 6/6)	Ophel (Mazar and Mazar 1989: Pl. 25:18–20); Giloh (Mazar 1990: Pl. 11:5); Beit Şafafa (Feig 2003: Fig. 17:2)
3	Bowl	1273-1	Yellowish red (5YR 5/6), white grits	Tell Beit Mirsim (Albright 1932: Pl.63:1–3); Beit Şafafa (Feig 2003: Fig. 17:16); Ophel (Mazar and Mazar 1989: Pl. 25:22)
4	Bowl	1279-1	Reddish yellow (5YR 6/6)	Ramat Raḥel (Aharoni 1964: Pl. 17:38); Beit Şafafa (Feig 2003: Fig. 17:7)
5	Krater	1279-3	Reddish yellow (5YR 6/6)	Ramat Raḥel (Aharoni 1964: Pl. 11:19–21); Ras Abu Ma‘aruf (Seligman 1994: Fig. 5:8); Beit Şafafa (Feig 2003: Fig. 8:2); Lachish (Tufnell 1953: 128, Pl. 102:647); Ophel (Mazar and Mazar 1989: Pl. 26:2)
6	Krater	1210-3	Reddish yellow (5YR 6/8)	Ras Abu Ma‘aruf (Seligman 1994: Fig. 6:7); Bet Shemesh (Grant 1938: Pl. 64:24)
7	Jar	1221-2	Brown (7.5YR 7/6)	‘En Gedi (Mazar, Dothan and Dunayevsky 1966: Fig. 9:14, 11); Kh. Abu et-Twein (Mazar 1981: Fig. 4:25); Ramat Raḥel (Aharoni 1962: Pl. 29:2)
8	Jar	1214-4	Reddish (5YR 5/2), gray grits	‘En Gedi (Mazar, Dothan and Dunayevsky 1966: Figs. 9:14; 11)
9	Jar	1221-1	Reddish yellow (5YR 6/8)	‘En Gedi (Mazar, Dothan and Dunayevsky 1966: Fig. 9:14; 11); Kh. Abu et-Twein (Mazar 1981: Fig. 4:28, 29)
10	Jar	1214-1	Reddish yellow (5YR 6/8), few grits	‘En Gedi (Mazar, Dothan and Dunayevsky 1966: Figs. 9:14; 11); Kh. Abu et-Twein (Mazar 1981: Fig. 4:24)
11	Jar	1279-2	Light red (5YR 6/4), handle decorated with concentric circles	Ophel (Mazar and Mazar 1989: Pl. 23:17)
12	Jug	1221-3	Yellowish red (5YR 5/6)	Be’er Sheva‘ (Aharoni 1973: Fig. 68:18)
13	Stand	1214-3		Herzog and Singer-Avitz 2015: Fig. 2.4.18:4
14	Stand	1237-2		Herzog and Singer-Avitz 2015: Fig. 2.4.18:4

found in an eighth-century BCE assemblage at the Ophel (L6015). A second type of bowls has a folded rim (Figs. 9:2, 4). A third type is the most common at the site: a small bowl with a turned-over rim; its walls were either rounded or slightly carinated (Fig. 11:1–3). Both these types are very common at Lachish, Strata III and II, and are attributed to the eighth – early sixth centuries BCE. The fourth type, also fairly common at the site, was a bowl with carinated walls and an everted rim (Fig. 11:4–6). Both types are often found in eighth-century BCE contexts, but they continued to be in use up to the end of the Iron Age.

Kraters (Figs. 9:5, 6; 11:16).— The kraters are large and deep, with slightly curved, thick walls. Two or four handles are attached to the folded rim. These vessels have parallels at various sites and date from the eighth to the early sixth centuries BCE.

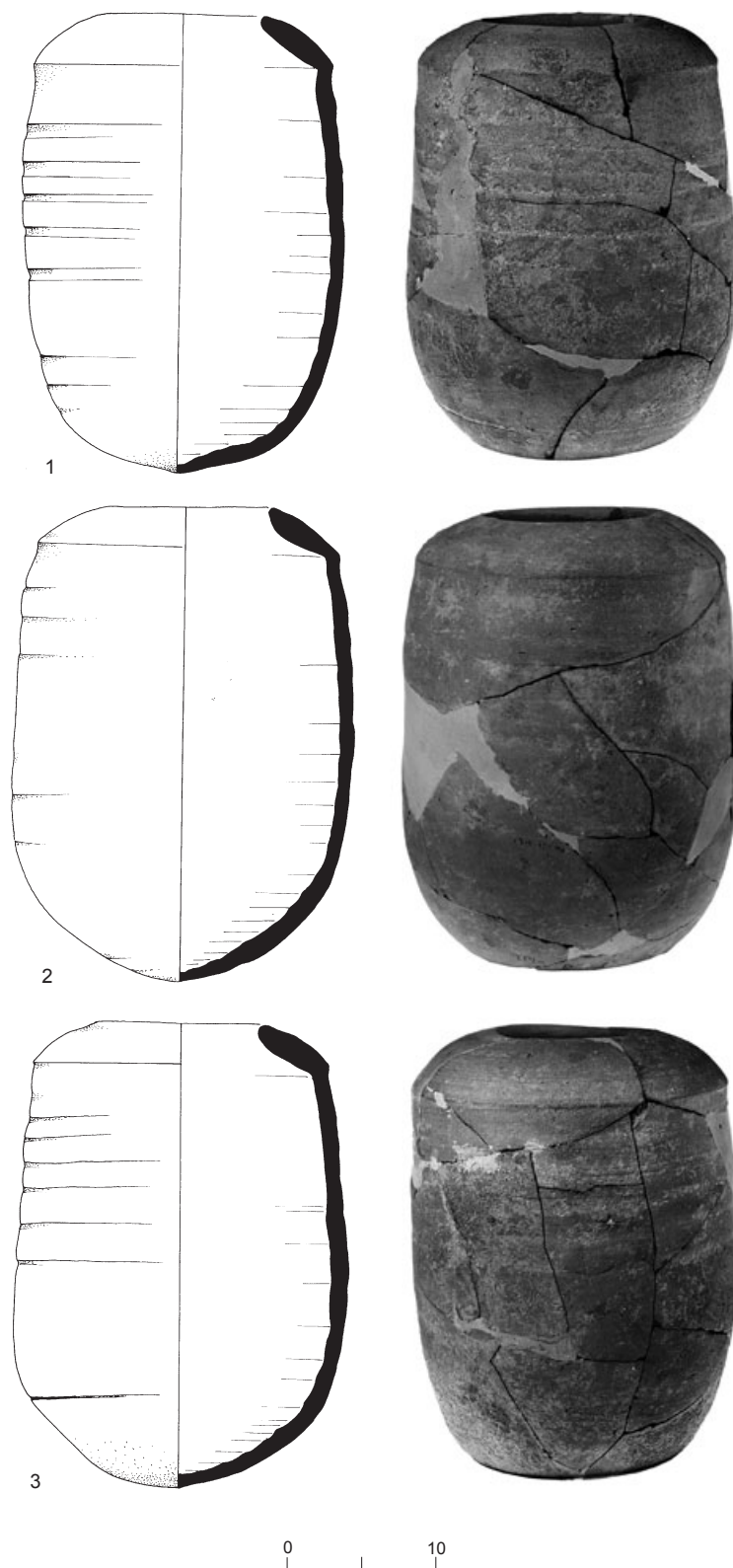


Fig. 10. Holemouth jars from the storeroom (L140).



Fig. 10. (cont.).

No.	Basket	Description	Parallels
1	1275-101	Dark brown (7.5YR 5/6), few grits	Lachish (Tufnell 1953: Pl. 97:543)
2	1257-102	Dark brown (7.5YR 5/6), few white grits	See No. 1
3	1245-103	Light reddish brown (5YR 6/4), white grits	See No. 1
4	1251-104	Reddish yellow (7.5YR 6/6), large white grits	Tel 'Eton (Zimhoni 1985: Fig. 4.2:4); Tell Beit Mirsim (Albright 1932: Pl. 52:3-5)
5	1242-105	Pink (7.5YR 7/4)	Bet Shemesh (Grant 1938: Pl. 45:27)
6	1221-106	Yellowish red (5YR 5/6)	Kh. er-Ras (Edelstein 2000: Fig. 13:3)
7	1261-107	Reddish yellow (7.5YR 7/6)	Beit Şafafa (Feig 2003: Fig. 20:2); Kh. er-Ras (Edelstein 2000: Fig. 13:6)
8	1275-108	Yellowish red (5YR 5/6)	Ophel (Mazar and Mazar 1989: Pl. 27:13)

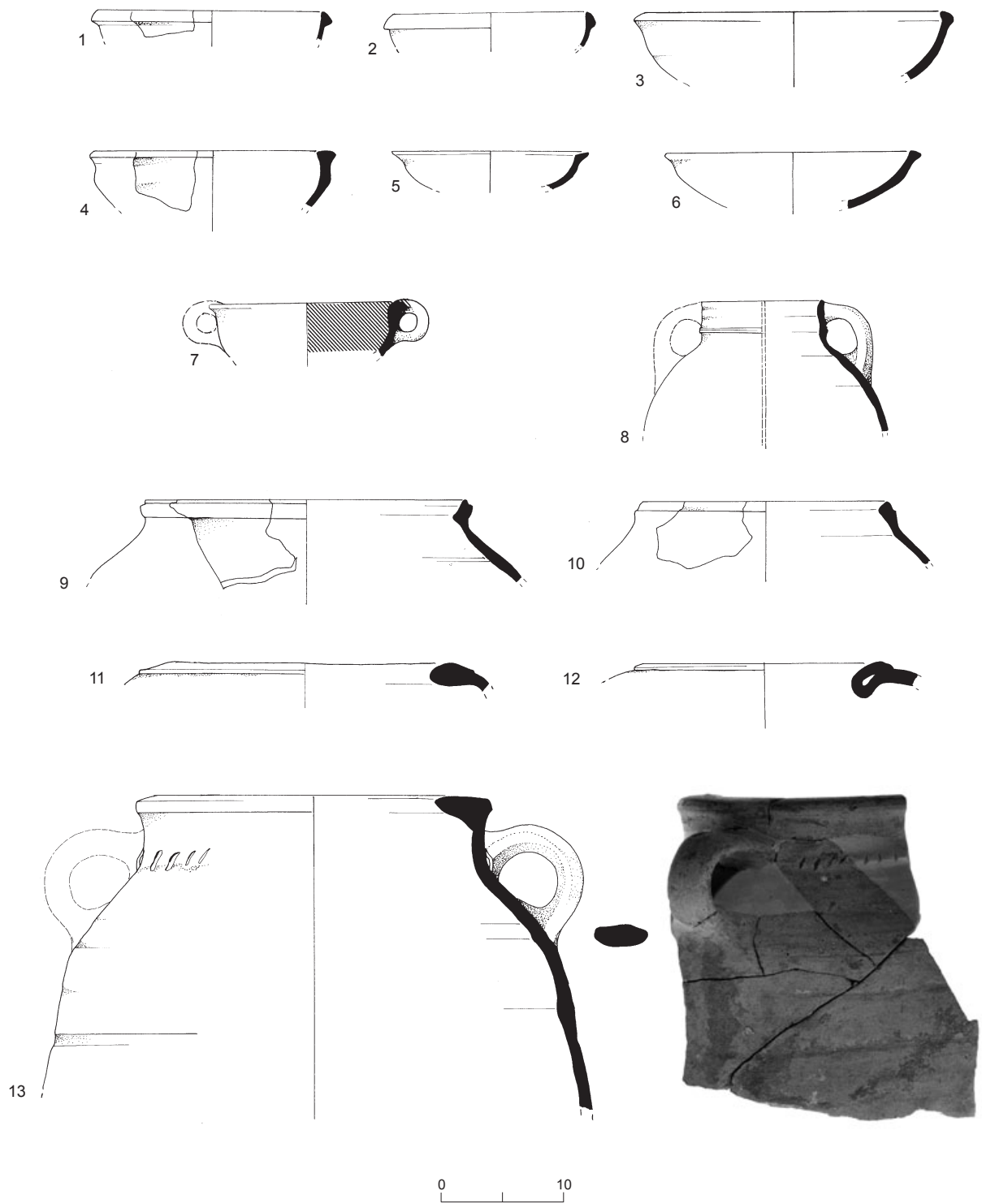


Fig. 11. Iron Age II pottery.

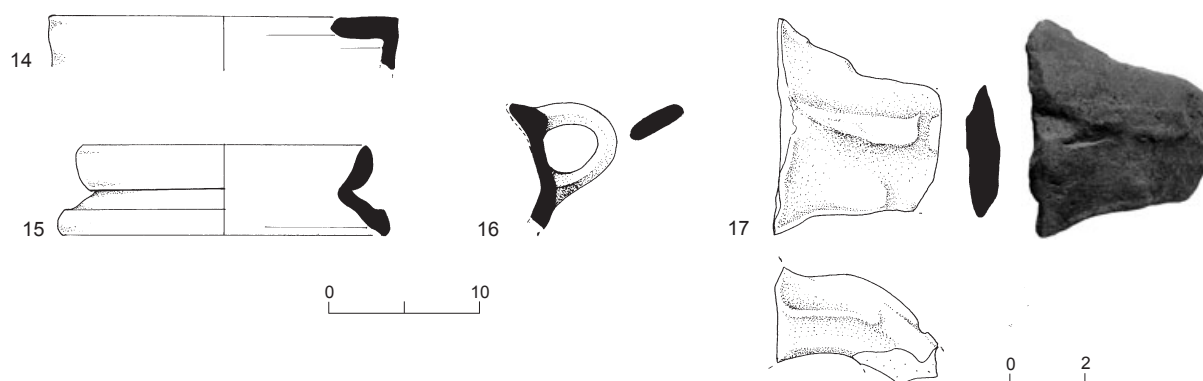


Fig. 11. (cont.).

No.	Vessel	Basket	Locus	Description	Parallels
1	Bowl	1091-5	119	Reddish yellow (5YR 6/6), red slip and burnish on the rim	Ramat Raḥel (Aharoni 1964: Pl. 16:45); Kh. Abu et-Twein (Mazar 1981: Fig. 3:1)
2	Bowl	1095-4	122	Yellowish red (5YR 5/6), many white grits	Ramat Raḥel (Aharoni 1962: Pl. 11:13); Ophel (Mazar and Mazar 1989: Pl. 7:4); Tell Beit Mirsim (Albright 1932: Pl. 62:19)
3	Bowl	1194-4	W7	yellowish red (5YR 5/6), many gray and white grits	Tel 'Eṭon (Zimhoni 1985: Fig. 5:7)
4	Bowl	1008-13	100	yellowish red (5YR 5/6), few white grits	Beit Šafafa (Feig 2003: Fig.17:11); Lachish (Zimhoni 1990:44–45)
5	Bowl	1017-8	104	Yellowish red (5YR 5/6), large white grits	Ramat Raḥel (Aharoni 1962: Pl. 11:4; 1964: Pl. 16:31); Ophel (Mazar and Mazar 1989: Pl. 2:34); Tell Beit Mirsim (Albright 1932: Pl. 66:3); Ras Abu Ma'aruf (Seligman 1994: Fig. 5:4)
6	Bowl	1194-3	W7	Reddish yellow (5YR 6/8), few white grits	Ophel (Mazar and Mazar 1989: Pl. 25:6); Giloh (Mazar 1990: Pl. 11:4); 'En Gedi (Mazar, Dothan and Dunayevsky 1966: Fig. 15:1)
7	Bowl	1136-4	128	Reddish yellow (7.5YR 6/6), internal red slip	Ophel (Mazar and Mazar 1989: Pl. 25:23); Ramat Raḥel (Aharoni 1962: Pl. 11:16); Kh. Abu et-Twein (Mazar 1981: Fig. 3:15); Lachish (Tufnell 1953: Pl. 102:656)
8	Cooking Pot	1266-1	133	Yellowish red (5YR 5/6), white grits	Ramat Raḥel (Aharoni 1962: Pl. 11:22); Ophel (Mazar and Mazar 1989: Pl. 27:3 [red slipped]); Bet Shemesh (Grant 1938: Pl. 64:27); Lachish (Zimhoni 1990: Fig. 5:6, 8); Kh. er-Ras (Edelstein 2000: Fig. 11:8)
9	Cooking Pot	1017-1	104	Dark brown (7.5 YR 4/3)	Ramat Raḥel (Aharoni 1962: Pls. 11:24; 20:8); 'En Gedi (Mazar, Dothan and Dunayevsky 1966: Fig. 18:4, 5)
10	Cooking Pot	1141-2	128	Brown (7.5YR 5/4), many white grits	Giloh (Mazar 1990: Pl. 11:13); Ramat Raḥel (Aharoni 1964: Pl. 35:10); Lachish (Zimhoni 1990: Fig. 5:2)
11	Pithos	1061-5	114	pale brown (10YR 6/3), large gray and white grits	Ophel (Mazar and Mazar 1989: Pl. 6:16); Ras Abu Ma'aruf (Seligman 1994: Fig. 6:4); Tel 'Eṭon (Zimhoni 1985: Fig. 4:14); Bet Shemesh (Grant 1938: Pl. 65:10)
12	Pithos	1233-2	109	Reddish yellow (7.5 YR 7/6)	Ophel (Mazar and Mazar 1989: Pls. 15:27; 27:11) Tel 'Eṭon (Zimhoni 1985: Fig. 4:14); Kh. Abu et-Twein Mazar 1981: Fig. 5:4); Beit Šafafa (Feig 2003: Fig. 20:1); Kh. er-Ras (Edelstein 2000: Fig. 13:11)
13	Holemouth Jar	1233-3	109	Very pale brown (10YR 7/4), black and white grits	Be'er Sheva' (Aharoni 1973: Pl. 58:33–36)
14	Holemouth Jar	1085 - 109	120	Very pale brown (10YR 7/4)	Ramat Raḥel (Aharoni 1962: Fig. 29:9)
15	Stand	1155-2	117	Reddish yellow (7.5 YR 7/8), white grits	Ramat Raḥel (Aharoni 1962: Pl. 11:40); Lachish (Aharoni 1975: Pl. 45:7)
16	Krater handle	1136-2	128	Reddish yellow (7.5YR 6/6), few grits	Tell Beit Mirsim (Albright 1932:Pl. 60:3), Beit Shemesh (Grant 1938: Pl. 64:9); Beit Šafafa (Feig 2003: Fig. 18:3)
17	Handle bearing <i>lmlk</i> seal impression	1124-8	119		

Cooking pots (Fig. 11:8–10).— Pot 8 is a globular, closed cooking pot with a small mouth and a high, grooved neck. This type is typical of Lachish, Stratum III, and is dated to the eighth century BCE. Pot 9 is open and shallow, with a wide mouth and a grooved everted rim. This type is well represented in assemblages from the seventh and sixth centuries BCE in Judah. Pot 10 is open and shallow, with a ridged rim. This type appeared throughout the eighth century BCE.

Jars (Figs. 9:7–10).— These jars, with a high neck, a thick rim, angular shoulders, a sack-shaped body and two loop handles attached to the shoulders belong to a family that appeared in the second half of the seventh century BCE.

Pithoi (Fig. 11:11, 12).— The two fragments have heavy inverted rims. These vessels are known from eighth-century BCE contexts (Zimhoni 1985:78).

Holemouth Jars (Figs. 10; 11:13, 14).— More than 300 holemouth jars were found in the excavation, 278 of them in the storeroom (L140; Fig. 10). This vessel first appeared during the eighth century BCE and was common in Judah. Two main types were identified in the storeroom, both with a straight body: Type I (N = 137), a squat vessel with a rounded rim, thick walls and a slight inward inclination at the base (Fig. 10:1–4); and Type II (N = 141), an elongated vessel with thinner walls and a rim that turns sharply inward and has a protruding outer-edge (Fig. 10:5–8). Type II is much lighter than type I, and the diameter of its mouth is larger than that of Type I. Most holemouth jars of both types have a similar capacity, ranging between 6.8 and 7.3 liters. The sturdiness of the Type I holemouths explains their use in the lower tier of jars stacked up in the storeroom.

A holemouth with a vertical upper wall and a rim turned sharply horizontal is the only type which is represented by a single sherd, found to the west of the structure (Fig. 11:14). In Moza, this type comprised almost 90% of the holemouth jar assemblage; the rest belong to Subtype A–C (Greenhut and De Groot 2009: Fig. 5.8:36). The Holemouth Jar in Fig. 11:13 has carinated shoulders with one ridge and a swollen body. Such jars usually have four handles and a very shallow ring base. This jar type is very common in Judean sites of the seventh and sixth centuries BCE. It replaced the eighth-century BCE storage jar that had three ridges on its shoulder.

Stands (Figs. 9:13, 14; 11:15).— Two fragments (Fig. 9:13, 14) are probably the lower part of cylindrical stands; their full height could not be determined. As both stands were found in the storeroom, they may have been used for stabilizing holemouths or other jars. The stand in Fig. 11:15 was common in the late Iron Age II period, and is found in Judean sites.

Figurines (Fig. 12).— Two fragments of clay figurines — one zoomorphic, one anthropomorphic — were found. The first represents the full length of an animal's torso (Fig. 12:1), perhaps a horse, the most frequently

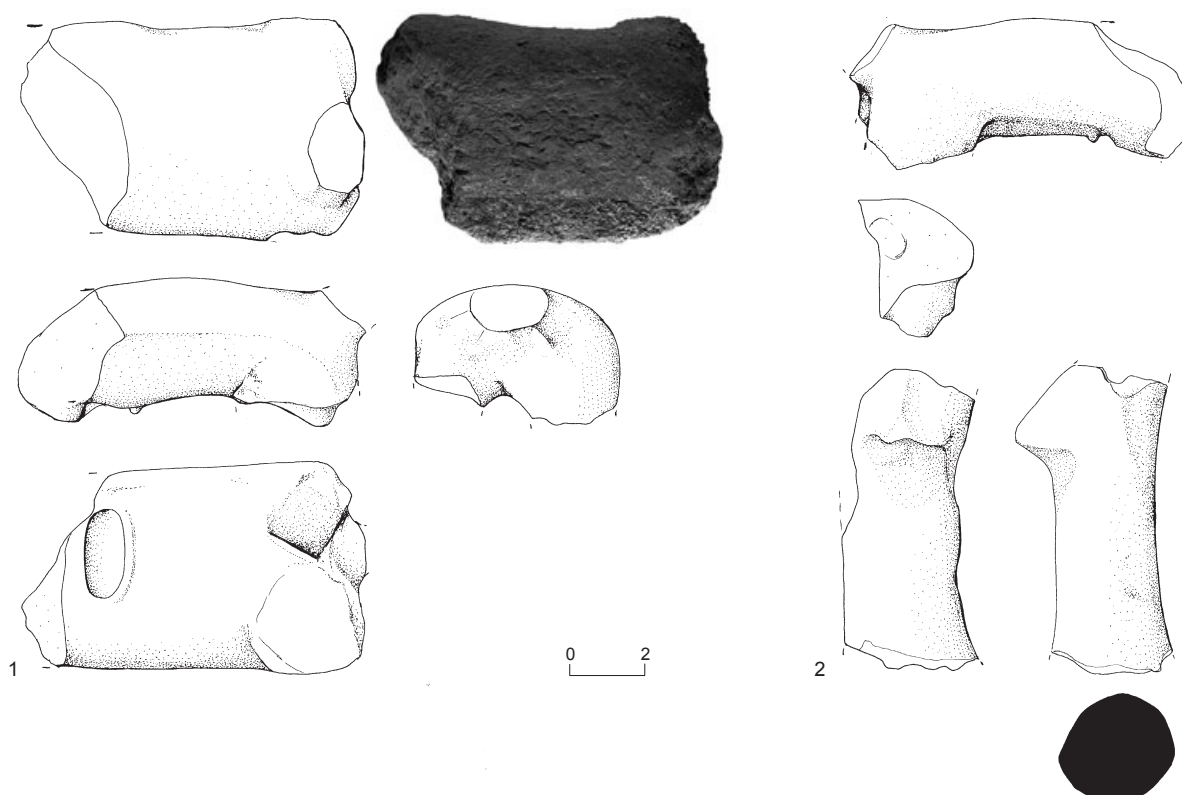


Fig. 12. Figurines.

No.	Item	Basket	Locus
1	Animal figurine	1157F	103
2	Human figurine	1234F	109

represented animal (82 %) among animal figurines found at the City of David (Gilbert-Peretz 1996:38). This fragment might belong to Type B3a (Gilbert-Peretz's 1996:31, Fig. 17:5, 6), which dates from the Iron Age II (eighth–sixth century BCE).

The second fragment (Fig. 12:2) resembles a solid, pillar-like torso of a woman clutching her breast; only part of one breast was preserved. Both her hands and head are missing. This is a pillar figurine Type A3a2 (Gilbert-Peretz 1996: Fig. 12:7), a type which is quite common. These figurines first appeared in the eighth century BCE, and have a chronological span extending to the sixth century BCE (Gilbert-Peretz 1996:37–38).

The resemblance of the two figurines to types found at the City of David and the site's proximity to Jerusalem may suggest that these figurines were produced at a workshop in the city (Gilbert-Peretz 1996:39).

lmlk seal (Fig. 11:17).— A jar handle bears a two-winged *lmlk* seal, which is traditionally dated to the late eighth century BCE. It seems to belong to Type IIb (unclear stamp), which Lipschits, Sergi and Koch (2010) argue appeared only after 701 BCE (Finkelstein 2012). This dating, however, was rejected by Ussishkin (2011).

Pottery from the Persian and Hellenistic Periods (Fig. 13)

Bowls (Fig. 13:1, 2).— Both fragments are of mortaria from the Persian period. Bowl 2 had a thick base and bears a worn decoration with triangular impressions.

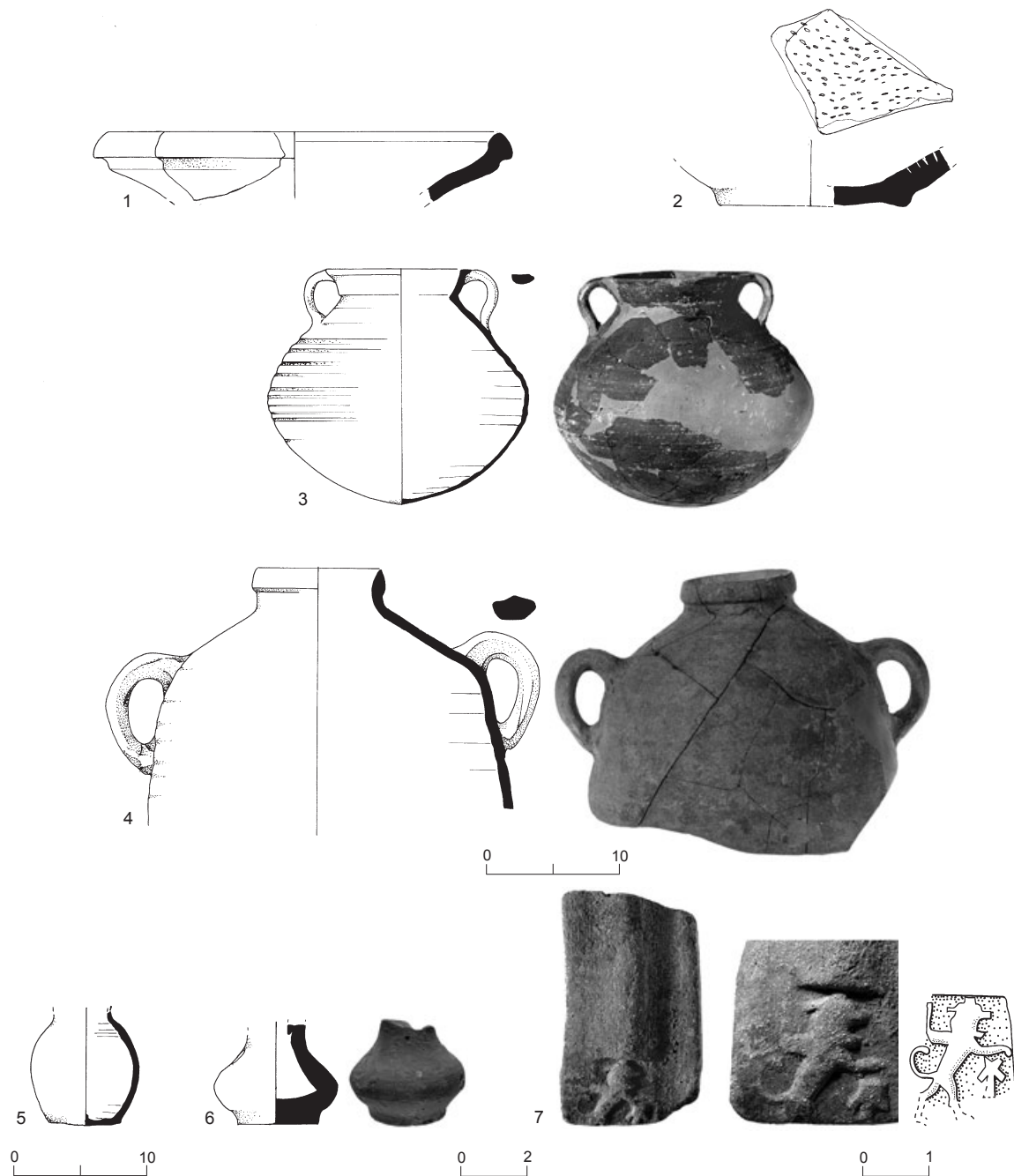


Fig. 13. Pottery from the Persian and Hellenistic periods.

◄ Fig. 13

No.	Vessel	Basket	Locus	Description	Parallels
1	Bowl	1165-10	117	Pink (7.5 YR 7/4)	Tel Mevorakh VI–IV (Stern 1978: Fig. 4:16)
2	Bowl	1170-3	103	Light yellowish brown (10YR 6/4)	
3	Cooking Pot	1165-2	119	Red (2.5 YR 4/6), soot marks	Maresha (Levine 2003: Fig. 6.6:72); Ashdod, 3b (Kee 1971: Fig. 10:7); Tirat Yehuda (Yeivin and Edelstein 1970: Fig. 8:6); Jason's Tomb (Rahmani 1967:87, Fig. 16:4)
4	Jar	1165-1	119	Reddish yellow (5YR 6/6), white grits	Maresha (Levine 2003: Fig. 6.7:80); Gezer (Gitin 1990: Pl. 43:22, Type 164B)
5	Juglet	1168	134	Yellowish red (5YR 5/6), white grits	Ashdod, Area A 3b (Kee 1971: Fig. 18:7); Bet Zur (Lapp and Lapp 1958:23, Fig. 4:2)
6	Ointment pot	1026	106	Dark brown (7.5 YR 5/6), white and gray grits	Dor (Guz-Zilberstein 1995:373, Fig. 6.25:9, 12); Tel Anafa (Berlin 1997: Pl. 15, PW 129)
7	Handle bearing Seal impression	1158-1	117		

Cooking pot (Fig. 13:3).— This complete pot is squat and angular, with a plain rim, a slightly out-turned neck and a convex base. Such cooking pots are known from the early Hellenistic period in Ashdod, from the middle of the second century BCE at Tirat Yehuda and from around 100 BCE at Jason's Tomb in Jerusalem.

Storage Jar (Fig. 13:4).— This jar has a short neck, angular shoulders, two handles and an ovoid body. This type is the most common jar found at Maresha. It dates from the second half of the second century to mid-first century BCE.

Juglet (Fig. 13:5).— The flat-based juglet belongs to Lapp's (1961:184) Type B. A Juglet of this type was found in a Hellenistic assemblage dating to the late second and early first centuries BCE at Ashdod (Kee 1971:48).

Ointment Pot (Fig. 13:6).— This minute vessel with a relatively wide mouth has been designated as Type A by HersHKovitz's (1986:46–47, Fig. 3, Type D). It has been found at sites ranging in date from the third to the first century CE. HersHKovitz (1986:50) suggests that the content of such miniature vessels was used for medicinal purposes.

Seal Impression (Fig. 13:7).— A handle fragment bears a seal impression depicting a lion standing on its hind legs with both front legs stretched out in a style reminiscent of Achaemenian seal ornamentations. Next to the lion is an object, probably an altar (Stern 1982:210–212). Similar seal impressions found in unclear contexts at Ramat Raḥel and Gibeon were dated by Stern to the end of the sixth century BCE. During the renewed excavations at Ramat Raḥel, 77 stamped jar handles bearing a lion impression were found. They have been dated to the very beginning of the Persian period, and a recent iconographic study hints to their association with

the Assyrian-Babylonian world of the sixth century BCE and thus possibly with the Babylonian administrative system (Lipschits 2013)

LOOMWEIGHTS (Fig. 14:1, 2)

The two loom weights are made of unfired clay. They are doughnut-shaped with a vertical perforation. Similar weights are known from almost every Iron Age II site (eighth–sixth century BCE). At City of David, Strata XII–X, they comprises 59.3% of the loomweights made of unfired clay (Shamir 1996:136, 140–145).

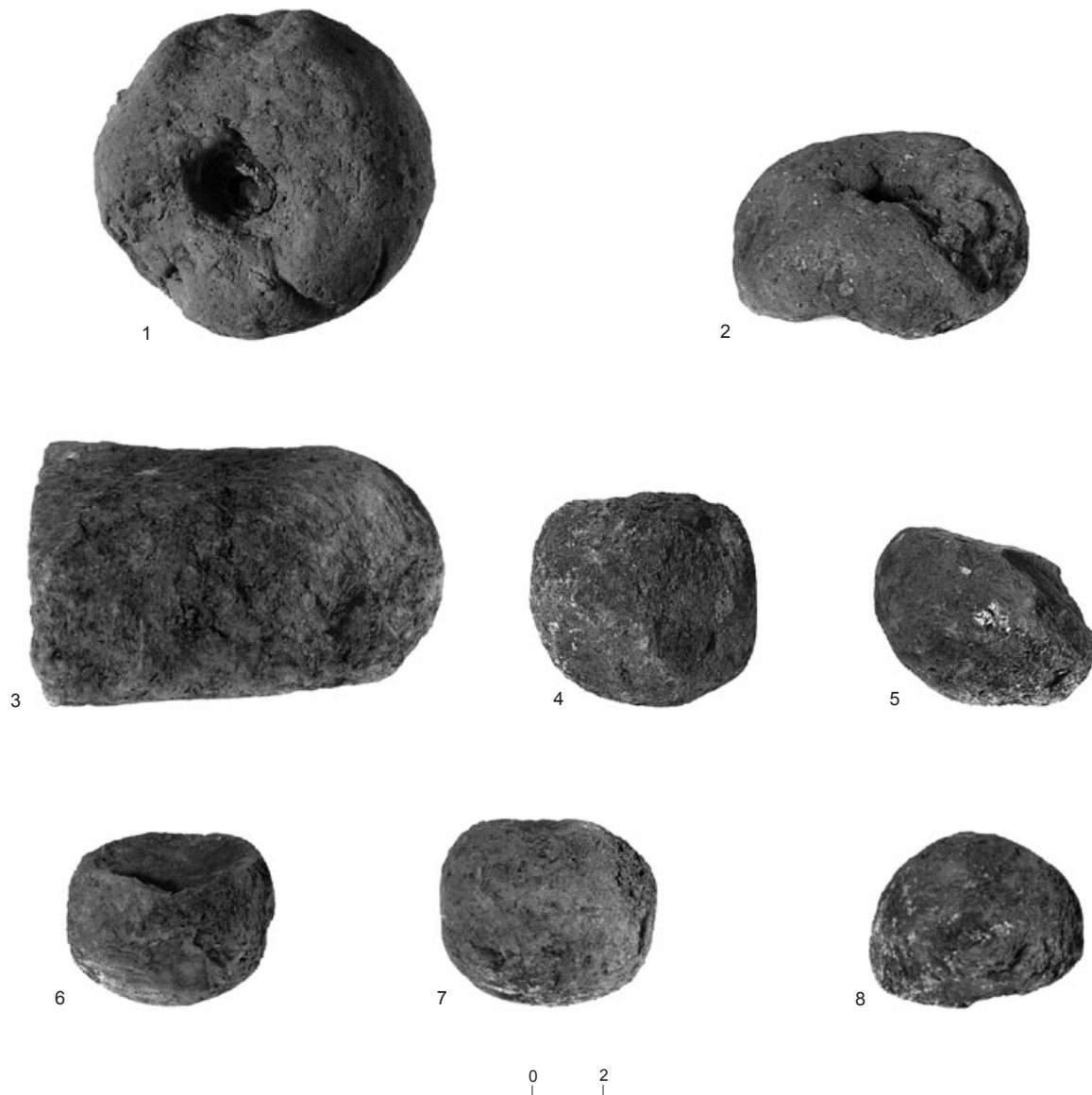


Fig. 14. Clay and stone objects.

◀ Fig. 14

No.	Item	Basket	Locus	Description
1	Loom weight	1203-2	136	Unbaked clay
2	Loom weight	1203-1	136	Unbaked clay
3	Upper Grinding Stone	1251-1	140	Basalt
4	Hammerstone	1235-1	140	Flint
5	Hammerstone	1235-2	140	Flint
6	Hammerstone	1135-17	103	Flint
7	Hammerstone	1222-2	140	Flint
8	Hammerstone	1222-1	140	Flint

STONE OBJECTS (Fig. 14:3–8)

Two fragments of upper grinding stones made of hard crystalline limestone were found; one of them is oval in shape (Fig. 14:3; Hovers 1996:178, Table 3). Five flint hammer stones (diam. 4.5–6.0 cm; Fig. 14:4–8) were found. Three are spherical (Fig. 14:4–6), one is cuboid (Fig. 14:7) and another is of an irregular shape (Fig. 14:8). These implements may have been used for crushing olives as part of the olive-oil production in the *bodedot* within the installation compound (see conclusions on the storing of olive oil in the storeroom [L140/L145]). However, as these tools did not change in shape over millennia, they cannot be associated with any of the occupation phases at the site. At the nearby site of Manaḥat, for example, the MB IIB Stratum yielded 206 hammer stones, comprising 54% of all the tools from that period (Milevski 1998:71–72, 76).

THE FLINT ARTIFACTS

Ofer Marder

The flint artifacts from Khirbat er-Ras were selectively collected from the surface and the EB IV loci. The raw material utilized for the manufacture of the items comprises fine-grained grayish-brown and purple flint. This material is typical of the Campanian outcrops in the Jerusalem area, and can be found in the immediate vicinity of the site (Rosen 1998).

The waste material is dominated by flakes; blades are rare (Table 1). Cores are absent, probably because of the excavation retrieval methods. It might be, however, due to the site's location, 500 m to the east of the Bronze Age site of Naḥal Refa'im, where the knapping of flint took place (see Fig. 1; Eisenberg 1993).

Most of the 16 tools found at the site are ad-hoc, comprising borers, notches, and retouched flakes (Table 2). Among the diagnostic tools are two sickle blades. One is complete, with both edges truncated and triangular in section, with fine denticulation and gloss along the working edge. The second is a backed fragment with signs of sheen on the working edge. Unfortunately, these two blades, like the ad-hoc items, are not sufficiently diagnostic to allow a precise chrono-typology identification of the collection. The backed sickle blade, however, may be

Table 1. Flint-Waste Frequencies

Type	N	%
Primary elements	19	21.1
Flakes	65	72.2
Blades	5	5.6
Core Trimming Element	1	1.1
<i>Total debitage</i>	<i>90</i>	<i>100</i>
Chunks	11	26.2
Chips	31	73.8
<i>Total debris</i>	<i>42</i>	<i>100</i>
Debitage	90	60.8
Debris	42	28.4
Tools	16	10.8
<i>Total</i>	<i>148</i>	<i>100</i>

Table 2. Flint-Tool frequencies

Type	n	%
Sickle blades	2	12.5
Notches and denticulates	6	37.5
Borers	2	12.5
Retouched flakes	4	25.0
Varia	2	12.5
<i>Total</i>	<i>16</i>	<i>100</i>

ascribed to the Chalcolithic period, although this period is not represented by any archaeological remains at the site.

To conclude, there is not enough evidence to date the flint collection from the site. Since the site is situated on agricultural terraces, flint objects could have originated from different time periods, and deposited within the terrace fills. At Manaḥat, approximately 1.5 km to the northeast (see Fig. 1), flint objects were found in mixed loci, in which items from the Pottery Neolithic, Chalcolithic, EB IV and MB II periods were represented (Rosen 1998). The Khirbat er-Ras finds seem to be similarly mixed.

SUMMARY AND DISCUSSION

The site was first settled during the Early Bronze Age IV, and with two gaps, each lasting several hundred years, it was resettled in the Middle Bronze Age IIB and again in the Iron Age II. During the Ottoman period, part of the Iron Age II structures was reused to constructed terraces and stone fences.

The availability of water in the Refa'im Valley (see Fig. 1)—the stream that ran through the valley and the springs that dot it, including the nearby 'En Eyal ('En Yalu; 'En Ya'al)—was the main reason for the extensive settlement along the valley during the EB IV and MBII B periods (Eisenberg 1993; Edelstein, Milevski and Aurant 1998). Khirbat er-Ras, the site of Naḥal Refa'im, 200 m to the west, and Manaḥat, up the hill from the site, where an EB IV cemetery was uncovered (Edelstein and Eisenberg 1984:51–52), all belonged to this strip of settlement along the streambed. The site at Manaḥat (30 dunams) was almost completely eroded (Edelstein 1993:98–102; Edelstein, Milevski and Aurant 1998:14–36). At Naḥal Refa'im (50 dunams) building remains, along with their content, were better preserved (Eisenberg 1993). The EB IV site of Naḥal Refa'im was founded in the last quarter of the third millennium BCE, following the collapse of urbanization in the EB III. Evidence of husbandry and agriculture, building and pottery-making at that site indicate that its population was sedentary. The

nearby cemetery that probably served the settlement was discovered on the western slope of Manaḥat (Zehavi 1993). Additional EB IV settlements, both in the Jerusalem area, such as Naḥal Zimra (Pisgat Ze'ev; Seligman 1995; Meitlis 1991), and in other areas, such as Tel Yosef (Zori 1977:26, 152), Sha'ar Ha-Golan (Eisenberg 1980:12), Lachish (Tufnell 1958:44–45), Jericho and Iktanu (Prag 1986:61–64), likewise suggest that the EB IV people were only semi-nomads.

The MB IIB remains found in the excavation were very scant. They may relate to part of a building dating to this period that was discovered under the courtyard of the neighboring Four Room house (Edelstein 2000:42–44). These MB IIB remains formed part of a chain of settlements along the valley. A large MB IIB village was established at the nearby site of Naḥal Refa'im (Eisenberg 1993:95), and the excavations at Manaḥat revealed both a large MB IIB village (30–40 dunams) and a cemetery from this period (Eisenberg 1993:95; Edelstein, Milevski and Auran 1998:130). The village yielded well-planned structures, comprising a central courtyard surrounded by rooms up to two stories in height (Edelstein, Milevski and Auran 1998:130–133). Similar features were found at other MB IIB sites, such as Naḥal Zimra (Meitlis 1991), Tell Beit Mirsim (Level D; Albright 1933:39–42, Pl. 51) and Bet Shemesh (Rooms 4, 5, 18, 19; Grant 1934: Pl. XXVI).

During the Iron Age II period, the Refa'im Valley was part of the rural hinterland of Jerusalem. During this period, Khirbat er-Ras was most probably a village with well-built Four Room houses and agricultural installations for the production of wine and oil. The Four Room house unearthed in the excavation suggests that the earlier interpretation of the similar structure unearthed by Edelstein as a single farm unit was incorrect, and in fact both houses were part of a village comprising additional dwellings.

This type of settlement was common from the eighth century to the early part of the sixth century BCE, as has been revealed in three other sites in the vicinity of Jerusalem: Naḥal Zimri (Meitlis 1991), Ras Abu Ma'aruf (Seligman 1994:73–74) and 'Alona (Wexler-Bdolah 1999). These sites consisted of several Four Room houses, rather than a single farm house surrounded by an agricultural area. Following Meitlis's (1993:97–99) study of the biblical term 'courtyard house' in the context of Iron Age villages, it is suggested that the site at Khirbat er-Ras consisted of up to 5 or even 7 structures. The rich Iron Age II assemblage from Khirbat er-Ras fits well the picture of an eighth–sixth centuries BCE villages in the Jerusalem hinterland (Feig 2000).

Most of the ceramic assemblage dates from the later part of the Iron Age. This is born out of Edelstein's (2000) nearby excavation as well. Similarly, the *lmk* handles found at the site and in Edelstein's excavation are dated by some scholars to the seventh century BCE, and the rosette-stamped handle from Edelstein's excavation is dated to the final stage of the Iron Age (Edelstein 2000:47, 54–56). Nevertheless, the ceramic assemblage also includes vessel types from the eighth century BCE, indicating that the settlement at er-Ras was established during that century.

The agricultural installations—a winepress that was put out of use by the hewing of *bodedot*—which were probably contemporary with the Four Room house, suggest the production of wine and olive oil. The storeroom

that contained 278 holemouth jars and several other vessels and tools points to large quantities of stored produce, probably of local production. The village may have marketed its produce in nearby villages and in Jerusalem, whose population and size expanded three or four fold following the fall of Samaria in 721 BCE (Broshi 1974:21).

Although scholars consider holemouth jars to have been fit vessels for both olive oil and wine, it is possible that the main product stored in the holemouth jars found in the storeroom was olive oil. This is suggested by the absence of lids in the storeroom, since lids must be used to assure the preservation of wine but are not required in the case of olive oil. The paucity of *lmlk* jar handles at the site—only one was found in the excavation, and just one more was found in Edelstein's excavation, along with a rosette-stamped handle (Edelstein 2000:47, 54–56)—may serve as additional evidence for the production of oil. This stands in contrast to Moza, where the contents of the holemouth jars was most probably some type of grain, as suggested by the presence of granaries at the site (Greenhut and De Groot 2009:219–220).

While the finds do point to an agricultural economy, no evidence was found for terracing of the hillside during the Iron Age. Furthermore, the section cut through the northern wall of the Four Room house (W2) indicated that it was neither the continuation of the terrace wall excavated by Edelstein to the east and dated to the Iron Age (Edelstein 2000:61) nor built in the method described by Gibson and Edelstein (1985:145) as typical of ancient terrace walls.

Although no architecture can be attributed with certainty to the Persian or Hellenistic periods, pottery dating from these periods was unearthed during the excavation. A structure identified as a storehouse and dated to the late Iron Age and Persian period was unearthed up the hill from the site (Zehavi 1993; Plan 1:2); this may explain the Persian-period pottery sherds found at the site, including the handle bearing a seal impression dated to the sixth century BCE, possibly associated with the Babylonian regime. The well-preserved Hellenistic-period ceramic finds, which include a complete cooking pot and two large fragments of a storage jar, may indicate human activity at the site during this period, and possibly date Phase 4. However, they may also be associated with Building 1 and a cave (Plan 1:3), located 30–70 m to the east and southeast, which were reused during the Hellenistic and Early Roman periods (Edelstein 2000:57–61).

The terrace wall (W3) and the stone-built fence (W1) unearthed in the excavation were dated with certainty to the Ottoman period. The builders of the terrace wall made use of the Iron Age remains, as it was clearly superimposed on the earlier walls. The date of the terrace wall, this stratigraphy and the lack of any evidence for associating the northern wall of the Iron Age Four Room house with the terrace wall identified by Edelstein to its east, all preclude an early date for the terracing and the building of the stone fence at the site. Furthermore, they suggest that the date of such terracing is the Ottoman period (for a similar conclusion, see Gadot et al. 2015). Ottoman-period remains were uncovered in nearby sites. These include numerous pottery sherds and terraces, which were found at Manaḥat (Milevski, personal communication) and on the upper slope of the site, in the village of el-Malḥa, which was occupied up to 1948.

NOTES

¹ The excavation (Permit No. A-2083), undertaken in December 1993 and January 1994 on behalf of the Israel Antiquities Authority, was directed by the author with the aid of Omar Abd Rabu (area supervisor). Assistance was provided by Gil Zuberi (administration), Avraham Hajian (surveying and drafting), Natalia Zak (plan drawing), Lucia Milevski (pottery restoration), Sarah Aurant (manuscript typing), Carmen Hersch (pottery drawing) and Sando Mandrea, Clara Amit and Yael Raviv (photography).

² The number of holemouth jars found in the storeroom and in the rest of the structure was determined following restoration and a careful count and measurement of rims.

REFERENCES

- Aharoni Y. 1962. *Excavations at Ramat Raḥel I: Seasons 1959 and 1960* (Centro di studi semitici, serie archeologica 2). Rome.
- Aharoni Y. 1964. *Excavations at Ramat Raḥel II: Seasons 1961 and 1962* (Centro di studi semitici, serie archeologica 6). Rome.
- Aharoni Y. 1973. *Beer Sheba I: Excavations at Tel Beer-Sheba 1969–1971 Seasons* (Tel Aviv University Institute of Archaeology Publications 2). Tel Aviv.
- Aharoni Y. 1975. *Lachish V: Investigations at Lachish: The Sanctuary and the Residency* (Tel Aviv University Institute of Archaeology Publications 4). Tel Aviv.
- Albright W.F. 1932. *The Excavation of Tell Beit Mirsim in Palestine I: The Pottery of the First Three Campaigns* (AASOR 12). New Haven.
- Albright W.F. 1933. The Excavation of Tell Beit Mirsim IA: The Bronze Age Pottery of the Fourth Campaign. *AASOR* 13:55–127.
- Berlin A.M. 1997. The Plain Wares. In: S.C. Herbert ed. *Tel Anafa II, i: The Hellenistic and Roman Pottery* (JRA Suppl. S. 10). Ann Arbor. Pp. ix–xiv, 1–214.
- Broshi M. 1974. The Expansion of Jerusalem in the Reigns of Hezekiah and Menasseh. *IEJ* 24:21–26.
- Cole, D.P. 1984. *Shechem I: The Middle Bronze IIB Pottery*. Winona Lake.
- Dever W.G. 1972. Middle Bronze Age I Cemeteries at Mirzbāneh and ‘Ain Sāmiya. *IEJ* 22:95–112.
- Dever W.G. 1980. New Vistas on the EB IV (MB I) Horizon. *BASOR* 237:35–64.
- Dever W.G. 1981. Cave G26 at Jebel Qa‘aqr: A Domestic Assemblage of Middle Bronze I. *Eretz-Israel* 15:22*–33*.
- Edelstein G. 1981. Jerusalem, Kh. er-Ras. *HA* 77:28–29 (Hebrew).
- Edelstein G. 1993. Manahat — A Bronze Age Village in Southern Jerusalem. *Qadmoniot* 103–104:96–102 (Hebrew).
- Edelstein G. 2000. A Terraced Farm at Er-Ras. *‘Atiqot* 40:39–63.
- Edelstein G. and Eisenberg E. 1984. Jerusalem, ‘Emeq Refa’im. *ESI* 3:51–52.
- Edelstein G. and Milevski I. 1994. The Rural Settlement of Jerusalem Re-Evaluated: Surveys and Excavations in the Repha’im Valley and Mevasseret Yerushalayim. *PEQ* 126:2–23.
- Edelstein G., Milevski I. and Aurant S. 1998. *Villages, Terraces and Stone Mounds: Excavations at Manahat, Jerusalem, 1987–1989 (The Rephaim Valley Project)* (IAA Reports 3). Jerusalem.
- Eisenberg E. 1980. Sha’ar Ha-Golan. *HA* 73:12 (Hebrew).
- Eisenberg E. 1993. Naḥal Repha’im — A Bronze Age Village in South-Western Jerusalem. *Qadmoniot* 103–104:82–95 (Hebrew).
- Feig N. and Abd Rabu O. 1996. Jerusalem, Khirbet er-Ras. *ESI* 15:74–75.
- Feig N. 1996. New Discoveries in the Rephaim Valley, Jerusalem. *PEQ* 128:3–7.
- Feig N. 2000. The Environs of Jerusalem in the Iron Age II. In S. Ahituv and A. Mazar eds. *The History of Jerusalem: The Biblical Period*. Jerusalem. Pp. 38–41 (Hebrew).

- Feig N. 2003. Excavations at Beit Şafafa: Iron Age II and Byzantine Agricultural Installations South of Jerusalem. *'Atiqot* 44:191–238.
- Falconer S.E., Magness–Gardiner B. and Metzger M.C. 1984. Preliminary Report of the First Season of the Tell el-Hayyat Project. *BASOR* 255:49–74.
- Gadot Y. 2011. The Rural Settlement Along Nahal Rephaim from the Middle Bronze Age Until the Hellenistic Period: A Fresh Look from Kh. Er-Ras. In E. Baruch, A. Levy-Reifer and A. Faust eds. *New Studies in Jerusalem* 17. Ramat Gan. Pp. 43–61 (Hebrew; English summary).
- Gadot Y., Davidovich O., Avni G., Avni Y., Avraham A., Kisilevitz S., Ein-Mor D. and Porat N. 2015. The Formation of a Mediterranean Terraced Landscape: The Case of Nahal Refa'im, Jerusalem. In G.D. Stiebel, O. Peleg-Barkat, D. Ben-Ami and Y. Gadot eds. *New Studies in the Archaeology of Jerusalem and its Region: Collected Papers* 9. Jerusalem. Pp. 118–142 (Hebrew).
- Gibson S. 1977. Jerusalem, Kiryat Yovel — Manahat. *HA* 61–62:31–32.
- Gibson S. and Edelstein G. 1985. Investigating Jerusalem's Rural Landscape. *Levant* 17:139–155.
- Gilbert-Peretz D. 1996. Ceramic Figurines. In D.T. Ariel and A. De Groot eds. *Excavations at the City of David 1978–1985 Directed by Yigal Shiloh IV: Various Reports* (Qedem 35). Jerusalem. Pp. 29–84.
- Gitin S. 1990. *Gezer III: A Ceramic Typology of the Late Iron Age II, Persian and Hellenistic Periods at Tell Gezer* (ANGSBA III) (2 vols.). Jerusalem.
- Grant E. 1934. *Ain Shems Excavations (Palestine) III: Rumeileh Being Ain Shems Excavations (Palestine)* (Biblical and Kindred Studies 5). Haverford, Pa.
- Grant E. and Wright G.E. 1938. *Ain Shems Excavations (Palestine) IV: Pottery* (Biblical and Kindred Studies 7). Haverford, Pa.
- Greenhut Z. and De Groot A. 2009. The Pottery. In Z. Greenhut and A. De Groot. *Salvage Excavations at Tel Moza: The Bronze and Iron Age Settlements and Later Occupations* (IAA Reports 39). Jerusalem. Pp. 61–114.
- Guz-Zilberman B. 1995. The Typology of the Hellenistic Coarse Ware and Selected Loci of the Hellenistic and Roma Periods. In E. Stern. *Excavations at Dor. Final Report I, B: Areas A and C; The finds* (Qedem Reports 2). Jerusalem. Pp. 289–433.
- Hershkovitz M. 1986. Miniature Ointment Vases from the Second Temple Period. *IEJ* 36:45–51.
- Herzog Z. and Singer-Avitz L. 2015. Iron Age IIA–B: Judah and the Negev. In S. Gittin ed. *The Ancient Pottery of Israel and its Neighbors from the Iron Age through the Hellenistic Period* I. Jerusalem. Pp. 213–256.
- Hovers E. 1996. The Groundstone Industry. In D.T. Ariel and A. De Groot eds. *Excavations at the City of David 1978–1985 Directed by Yigal Shiloh IV: Various Reports* (Qedem 35). Jerusalem. Pp. 171–203.
- Kee H.C. 1971. Area A — The Hellenistic Strata: The Pottery. In M. Dothan ed. *Ashdod II–III: The Second and Third Seasons of Excavation, 1963, 1965, Soundings in 1967 ('Atiqot [ES] 9–10)*. Jerusalem Pp. 44–64.
- Kloner A. 2000. *Survey of Jerusalem: The Southern Sector* (Archaeological Survey of Israel). Jerusalem.
- Kochavi M. 1979. Aphek-Antipatris, Tel Poleg, Tel Zeror and Tel Burga: Four fortified Sites of the Middle Bronze Age IIA in the Sharon Plain. *ZDPV* 95:121–165.
- Lapp P. 1961. *Palestinian Ceramic Chronology 200 B.C.–A.D. 70*. New Haven.
- Lapp P. and Lapp N. 1958. A Comparative Study of a Hellenistic Pottery Group from Beth-Zur. *BASOR* 151:16–27.
- Lapp P.W. and Lapp N.L. eds. 1974. *Discoveries in the Wādī ed-Dāliyah* (AASOR 41). Cambridge, Mass.
- Levine T. 2003. Pottery and Small Finds from Subterranean Complexes 21 and 70. In A. Kloner. *Maresha Excavations Final Report I: Subterranean Complexes 21, 44, 70* (IAA Reports 17). Jerusalem. Pp. 73–130.
- Lipschits O. The Rural Settlement in Judea in the Sixth Century B.C.E.: A Rejoinder. *PEQ* 136:99–107.
- Lipschits O., Sergi O. and Koch I. 2010. Royal Judahite Jar Handles: Reconsidering the Chronology of the *Imlk* Stamp Impressions. *Tel Aviv* 37:3–32.
- Mazar A. 1980. *Excavations at Tell Qasile I: The Philistine Sanctuary: Architecture and Cult Objects* (Qedem 12). Jerusalem.
- Mazar A. 1981. The Excavations at Khirbet Abu et-Twein and the System of Iron Age Fortresses in Judah. *Eretz-Israel* 15:229–249 (Hebrew; English summary, pp. 83*–84*).

- Mazar A. 1990. Iron Age I and II Towers at Giloh and the Israelite Settlement. *IEJ* 40:77–101.
- Mazar B., Dothan T. and Dunayevsky I. 1966. Ein-Gedi: The First and Second Seasons of Excavations, 1961–1962 (*'Atiqot* [ES] 5). Jerusalem.
- Mazar B. and Mazar E. 1989. *Excavations in the South of the Temple Mount: The Ophel of Biblical Jerusalem* (Qedem 29). Jerusalem.
- Meitlis I. 1991. Jerusalem, Wadi Zimra. *ESI* 10:125–127.
- Meitlis I. 1993. The *Hatzer* at Wadi Zimri — Ground Uses in the Jerusalem District at the End of the First Temple Period. In Z. Erlich ed. *Shomron and Benjamin 3: Studies in Historical Geography*. Ofra. Pp. 91–99 (Hebrew).
- Milevski I. 1998. The Groundstone Tools. In: G. Edelstein, I. Milevski and S. Aurant. *Villages, Terraces and Stone Mounds: Excavations at Manahat, Jerusalem, 1987–1989* (IAA Reports 3). Jerusalem. Pp. 61–77.
- Na'aman N. 1987. The Negev in the Last Century of the Kingdom of Judah. *Cathedra* 42:4–15 (Hebrew).
- Prag K. 1986. The Intermediate Early Bronze–Middle Bronze Age Sequences at Jericho and Tell Iktanu Reviewed. *BASOR* 264:61–72.
- Rahmani L.Y. 1967. Jason's Tomb. *IEJ* 17:61–113.
- Richard S. 1980. Toward a Consensus of Opinion on the End of the Early Bronze Age in Palestine–Transjordan. *BASOR* 237:5–34.
- Rosen S. 1998. The Chipped Stone Assemblage. In G. Edelstein, I. Milevski and S. Aurant. *Villages, Terraces and Stone Mounds: Excavations at Manahat, Jerusalem, 1987–1989* (IAA Reports 3). Jerusalem. Pp. 78–88.
- Seligman J. 1994. A Late Iron Age Farmhouse at Ras Abu Ma'aruf, Pisgat Ze'ev A. *'Atiqot* 25:63–75.
- Seligman J. 1995. Shaft Tombs of the Early Bronze Age IV at Pisgat Ze'ev (Ras Abu-Ma'aruf) — Jerusalem. *'Atiqot* 27:191–197.
- Shamir O. 1996. Loomweight and Whorls. In D.T. Ariel and A. De Groot eds. *Excavations at the City of David 1978–1985 Directed by Yigal Shiloh IV: Various Reports* (Qedem 35). Jerusalem. Pp. 135–170.
- Shiloh Y. 1986. A Group of Hebrew Bullae from the City of David. *IEJ* 36:16–38.
- Stern E. 1978. *Excavations at Tel Mevorakh (1973–1976) I: From the Iron Age to the Roman Period* (Qedem 9). Jerusalem.
- Stern E. 1982. *Material Culture of the Land of the Bible in the Persian Period 538–332*. Jerusalem.
- Stern E. 1995. *Excavations at Dor. Final Report I, B: Areas A and C; The Finds* (Qedem Reports 2). Jerusalem.
- Tufnell O. 1953. *Lachish (Tell ed Duweir) III: The Iron Age* (The Wellcome Archaeological Research Expedition to the Near East Publications III) (2 vols.). London–New York–Toronto.
- Tufnell O. 1958. *Lachish (Tell ed Duweir) IV: The Bronze Age* (The Wellcome Archaeological Research Expedition to the Near East Publications IV) (2 vols.). London–New York–Toronto.
- Usishkin D. 2011. The Dating of the *Imlk* Storage Jars and Its Implications: Rejoinder to Lipschits, Sergi and Koch. *Tel Aviv* 38:220–240.
- Wexler-Bdolah S. 1999. 'Alona. *ESI* 19:68*–70*.
- Yeivin Z. and Edelstein G. 1970. Excavations at Tirat Yehuda. *'Atiqot (HS)* 6:56–67 (Hebrew; English summary, p. 6*).
- Zehavi A. 1993. Manahat, Jerusalem. *ESI* 12:66–67.
- Zimhoni O. 1985. The Iron Age Pottery from Tel 'Eton and its Relation to the Tel Lachish, Tell Beit Mirsim and Arad Assemblages. *Tel Aviv* 12:63–90.
- Zimhoni O. 1990. Two Ceramic Assemblages from Lachish III and II. *Tel Aviv* 17:3–52.
- Zori N. 1977. *The Land of Issachar Archaeological Survey*. Jerusalem (Hebrew).