

HELLENISTIC AND CRUSADER REMAINS AT MONTMUSARD, ACRE ('AKKO)

FANNY VITTO

In May 1979, soundings carried out 200 m north of the city wall of present-day Old 'Akko, c. 60 m from the sea (map ref. NIG 20685/75905, OIG 15685/25905; Fig. 1), revealed architectural remains and pottery vessels attributed to the Hellenistic and Crusader periods (Vitto 1980).¹

THE EXCAVATION

The excavation commenced following the discovery of architectural remains, including plastered 'cisterns', vaulted halls, and pottery from the Hellenistic and Crusader periods, that came to light during the construction of a residential complex on the eastern side of Ha-Hagana Street (letter dated April 2, 1979, from Yehuda Ben-Yosef, Regional Inspector of Antiquities, in IAA archives). Cores (0.2–0.3 m in diameter) drilled by the construction company from surface to bedrock had yielded fragments of Hellenistic amphoras, including

several stamped handles.² By the time the excavation began, bulldozers had removed a one-meter-thick layer of soil to an elevation of 2.5 m asl.

Three 4 × 4 m squares (D5, E7, E8) were opened in the northeastern part of the construction site, where two of the 'cisterns' were visible. In Sq E8, *kurkar* bedrock was reached at 0.54 m asl, while in Sq E7, 5 m to the north, excavation was stopped at 0.17 m without encountering the natural *kurkar* layer. The excavation revealed two strata with architecture (Plan 1).

Stratum II: The Hellenistic Period

Remains of this stratum were found in all three squares. They consist of walls, 0.6 m wide, running east–west and north–south (W7, W8, W9, W10), set directly on the *kurkar* bedrock. They were built of fieldstones averaging 0.15–0.30 m on one side of the wall and 0.10–0.15 m on the other—apparently interior—side, with rubble in between. In Sq E8, W8 was preserved to a height of five courses, i.e., 0.93 m above the bedrock (Fig. 2). In Sq E7, four courses of W7 were preserved, resting on a foundation 0.7 m wide. A beaten-earth floor (0.67 m asl) adjoins W7 to the south (L9; Fig. 3). In Sq D5, two walls, W9 and W10, form a corner in the southeastern part of the square (Fig. 4). A layer of reddish sand with pebbles had accumulated from the base of these walls to their preserved tops. They contained fragmentary imported amphoras dating from the last third of the third century to the third quarter of the second century BCE, as well as third–second century BCE pottery lamps, cooking vessels and bowls.

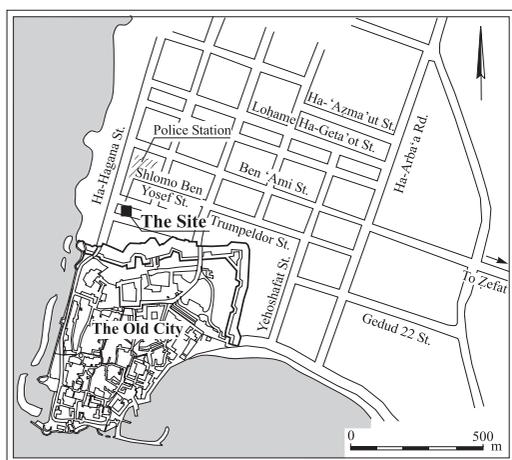
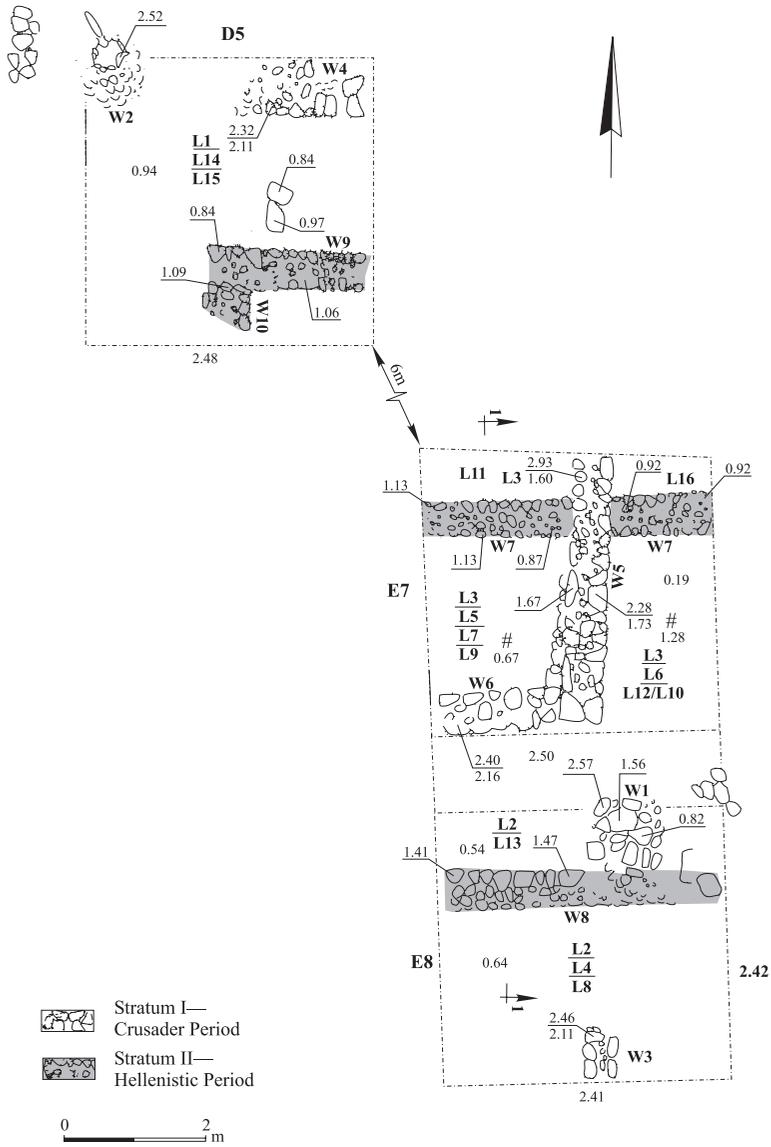


Fig. 1. Location of excavation.



Plan 1. Plan and section of the excavation area.

Abandonment of the Site

The walls of Stratum II were found covered by a layer of reddish sand, 0.6–1.0 m thick. Mixed pottery from the Hellenistic and Crusader periods was collected from this layer, but no architectural remains were found. This suggests that the site was abandoned some time in the second half of the second century BCE; subsequently, the walls slowly collapsed and were covered with wind-blown sand.

Stratum I: The Crusader Period

The walls of Stratum I were built above this layer of sand, at c. 2.11 m asl. They are 0.6 m wide, made of two rows of partly dressed stones (0.3–0.4 × 0.2–0.3, height 0.5 m) with rubble in between. In Sq E7, W5, running north–south,

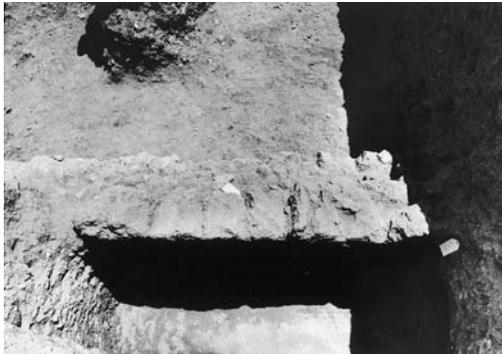


Fig. 2. Square E8: W8, looking south.

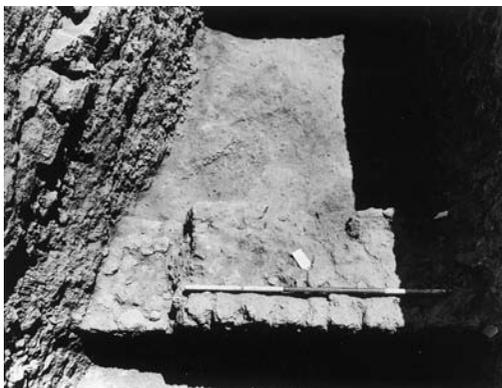


Fig. 3. Square E7: W7 and the beaten-earth floor (L9) to the south, looking south.

was preserved to the height of one course. It stands on a foundation 0.75 m wide, consisting of two courses of partly dressed stones (0.3–0.5 m × 0.3–0.5 m, height 0.2–0.3 m). Wall 6, also preserved to the height of one course, but without foundations, abuts W5 from the west (Fig. 5). In Sq E8, one course of a 0.7 m long portion of W3, running north–south, was preserved. A 0.15 m thick ash layer, containing a large quantity of animal bones, was found east of this wall, near its base (2.11–2.26 m asl). The fill from the top of the wall to its base contained Crusader pottery (L2). In Sq D5, a 2 m segment of W4, one course high (0.21 m), was preserved



Fig. 4. Square D5: W9 and W10 forming a corner, looking east.



Fig. 5. Square E7: W5 and W6 forming a corner, and W7 (Str. II), looking northwest.

running east–west. The red-brown earthen fill from the top of W4 to its base (L1 and upper part of L14) contained pottery dating to the Crusader period (mostly late twelfth–thirteenth centuries CE).

Two square openings (0.4 × 0.4 m) surrounded by fieldstones appeared at the level of the post-bulldozer surface: W1 (2.57 m asl) near the northern balk of Sq E8 (Fig. 6), and W2 (2.52 m asl) in the northwestern corner of D5 (Fig. 7). The openings led to bell-shaped cisterns or vaulted structures filled with earth and stones, which could not be excavated due to danger of



Fig. 6. Square E8, opening of a cistern/vaulted structure (W1), looking southwest.

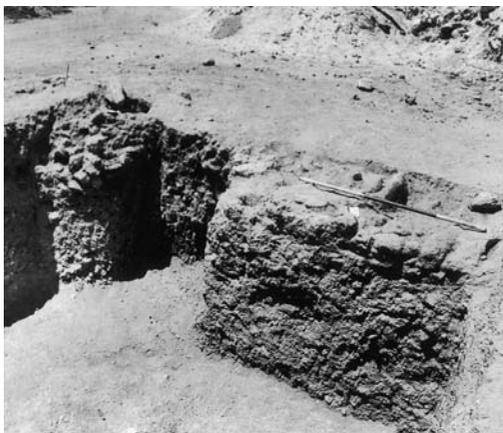


Fig. 7. Square D5, opening of a cistern/vaulted structure (W2) and W4, looking northwest.

collapse. Their dating is therefore unclear, but probably Crusader.

POTTERY

The pottery from the excavation can be attributed to two periods, Hellenistic and Crusader, corresponding to the two architectural strata found at the site. Most of the Hellenistic pottery was found in the sand layer associated with the architectural remains of Stratum II, while the Crusader-period pottery was recovered in the red-brown earthen fill of the later structures. However, since these layers sloped, a number of baskets contained mixed Crusader and Hellenistic pottery.

Hellenistic Pottery

The Hellenistic pottery includes a large number of imported wares: amphoras from Rhodes (the majority), Chios, Cos, Knidos, Cyprus, North Africa and probably the Aegean and Italy (see Ariel, this volume); a lamp, probably imported from Rhodes; and bowls from Campania, Knidos, and probably also from Rhodes and Cyprus. The local products consist mostly of cooking vessels, unguentaria and a few small bowls which imitate the imported ones. The pottery repertoire is typical of the third and second centuries BCE. The stamped amphoras can be more accurately dated from the last third of the third century to the third quarter of the second century BCE.

Cooking Vessels (Fig. 8)

Five examples of cooking vessels were found, falling into four types: two closed types—cooking pots—and two open types—casseroles.

High-Necked Cooking Pot (Fig. 8:1).—Globular cooking pot with a straight, slightly flaring high neck and a plain rim, very shallow ribbing outside, and loop handles drawn from the rim to below the shoulder. This is a very common type, a variant of Lapp's Type 71.1 A–H (Lapp 1961:184–186), found at many

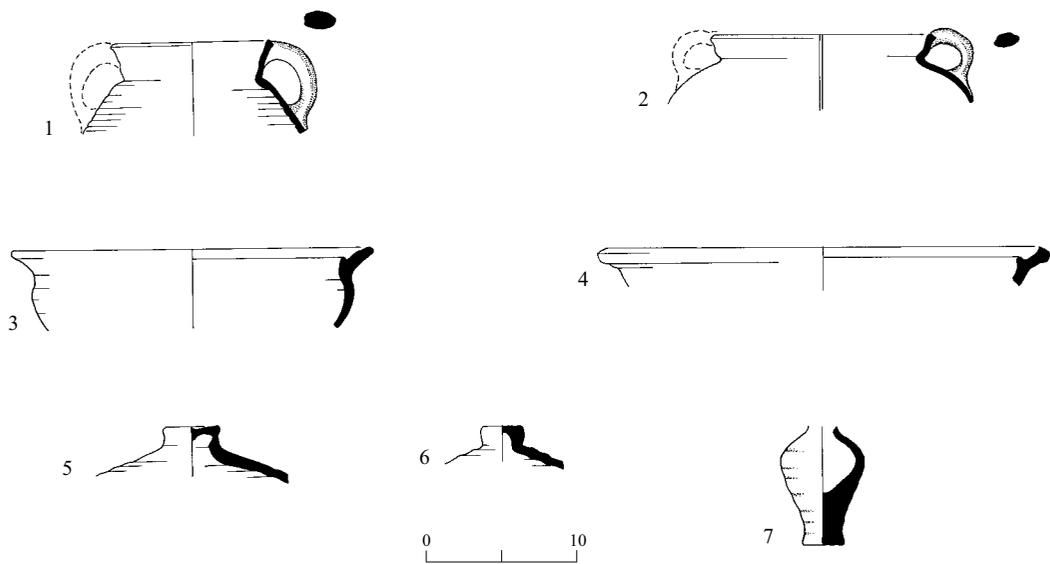


Fig. 8. Hellenistic cooking vessels, lids and unguentarium.

No.	Reg. No.	Locus	Type	Description
1	20-13	9	High-necked cooking pot	Reddish-brown fabric 2.5YR 4/4, black core, many small white grits
2	16-7	Core drilling	Low-necked cooking pot	Red fabric 2.5YR 5/8, gray core, a few small white and gray grits
3	20-1 (joins with 37-2)	9 (joins with 12)	Casserole	Reddish-brown fabric 5YR 5/4, gray core, sandy surface, many medium and small white grits
4	37-3	12	Casserole	Red fabric 10R 5/6, small white grits, burnt on exterior
5	29-1	8	Lid	Red fabric 10R 4/8, well leigated, a few tiny white and gray grits, thick wall
6	29-9	8	Lid	Red fabric 10R 5/8, medium and small white grits
7	33-4	15	Unguentarium	Very pale brown fabric 10YR 8/4

sites, e.g., 'Akko (Dothan 1976: Fig. 30:14), Tell Keisan (Briend 1980:107, Pl. 11:3, with further references), Dor, Phase 4a (Guz-Zilberstein 1995:298, Fig. 6.17:3) and Yoqne'am (Avissar 1996a:51–52, Fig. X.3:8).

Suggested date: first half of the second century BCE (Lapp, Briend, Avissar and Guz-Zilberstein all suggest dating it to the second century BCE).

Low-Necked Cooking Pot (Fig. 8:2).— Cooking pot with a short, flaring neck, small loop handles from rim to shoulder, rising slightly above the level of the rim. This type was an inland import.

For parallels see 'Akko (Dothan 1976: Fig. 30:13) and Tell Keisan (Briend 1980:107–108, Pl. 11:5).

Date: second century BCE.

Angled-Rim Casserole with Plain Lip (Fig. 8:3).— Casserole made of sandy fabric, with a rounded body and an upwardly angled rim ending in a plain lip. For parallels see 'Akko (Dothan 1976: Fig. 30:12) and Tell Keisan (Briend 1980:107–108, Pl. 11:6). In the opinion of Berlin (1997b:12, and n. 40), this type may have been produced in the 'Akko region.

Date: second century BCE.

Angled-Rim Casserole with Squared Lip (Fig. 8:4).— Casserole made of gritty fabric, with an upwardly angled rim that curves in and ends in a squared lip. For parallels see Yoqne‘am (Avisar 1996a:53–54, Fig. X.4:3) and Tel Anafa (Berlin 1997b:99–100, Pl. 31: PW 249–251).

Date: second century BCE.

Lids (probably of cooking vessels; Fig. 8:5, 6).— Two examples with a flat knob were found in L8. For parallels see Lapp 1961: Type 61; Samaria (Kenyon 1957:232, Fig. 41:22); Tell Keisan (Briend 1980:108, Pl. 11:10) and Dor (Guz-Zilberstein 1995:302, 371, Fig. 6.24:4–9).

Date: second century BCE.

Unguentaria (Fig. 8:7)

Three unguentaria were found in Loci 6, 14 and 15. This is a widespread vessel of local manufacture, small and plain with a flat, string-cut base, a short rounded body and thick walls. For parallels see ‘Akko (Fortuna 1966:508, Fig. 38; Dothan 1976: Fig. 27:19; Tzaferis 1986:268, 279, Fig. 5:10), Tirat Yehuda (Yeivin and Edelstein 1970: Fig. 7:20), Tell Keisan (Briend 1980:111, Pl. 14:17d, 19) and Dor (Guz-Zilberstein 1995:304–305, Type UG2b, Fig. 6.26:12, 16, 19, with further references).

Date: third–second centuries BCE.

Bowls (Fig. 9)

Fragments of about forty black and red-slipped bowls—both imported and local types—were

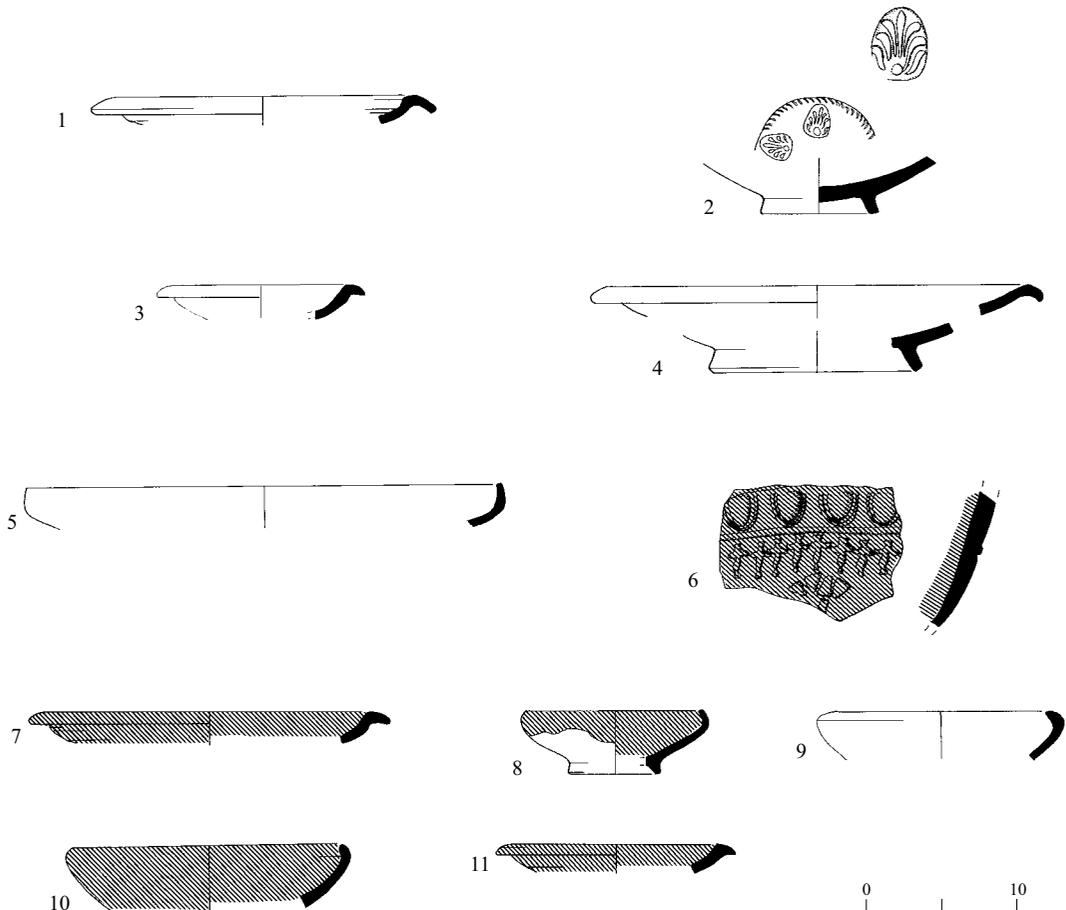


Fig. 9. Hellenistic bowls.

found in all three squares, mostly in Loci 4, 8, 9, 12 and 14.

Campanian Bowls A (Fig. 9:1–3).— Fig. 9:1 has a curved, drooping rim with a diameter of 18 cm; for parallels see Morel 1986:464, Fig. 1. This bowl dates to the second century BCE, probably the second half of the century. Fig. 9:2 has a ring base with stamped palmettes (2 of 4 extant) surrounded by one row of rouletting on the interior; for parallels see Morel 1986:467, Fig. 8:37, who suggests dating these bowls to the first half of the second century BCE. Fig. 9:3 has an out-turned rim (diam. 14 cm). Although its form is that of a Campanian Bowl A, similar to those found, for example, at 'Akko (Tzaferis 1986:268, 278, Fig. 4:1; Morel 1994:99, Pl. 10:1262), its reddish-yellow fabric and its dark reddish-brown matt slip suggest that it is probably not of Campanian origin (Jolanta Mlynarczyk, pers. comm.).

Date: first half of the second century BCE.

Fishplate BSP (Black-Slipped Predecessor of Eastern Sigillata).— Fig. 9:4 is a BSP fishplate Type 1, reconstructed from two pieces: an upper part with a drooping rim (diam. 30 cm) and a ring base. For parallels see 'Akko (Dothan 1976:32–33, Fig. 30:2), Dor, Phase 4a (Guz-Zilberstein 1995:291, Fig. 6.3:12), Yoqne'am (Avisar 1996a:48–49, Fig. X.1:13) and Tel Anafa, Stratum HELL 2B or 2C (Slane 1997:275–276, Pl. 1: FW4).

Date: first half of the second century BCE.

Eastern Sigillata A (ESA) Bowl.— Fig. 9:5 has a low upturned rim with a slightly inturned lip (diam. 32 cm). For parallels see Hayes 1985:14–15, Pl. I:8, Form 3; Tel Anafa (Slane 1997:285–287, Type 13, Pl. 6: FW 62–64, 66).

Date: second–first centuries BCE.

Eastern Relief Bowl (formerly labeled 'Megarian Bowl').— Fig. 9:6 is a body fragment of a bowl decorated with a row of ovolo, a line,

◀ Fig. 9

No.	Reg. No.	Locus	Type	Description
1	18-12	14	Campanian bowl A	Light red fabric 10R 6/6, glossy black slip on interior and exterior 7.5YR 2/0
2	18-9	14	Campanian bowl A	Light red fabric 10R 6/6, glossy black slip on interior and exterior
3	11-8	14	Campanian bowl A (imitation?)	Reddish-yellow fabric 7.5YR 8/6, dark reddish-brown 5YR 3/2 matt slip
4	29-5, 7	8	Fishplate BSP	Reddish-yellow fabric 7.5YR 8/6, dark reddish-brown slip 5YR 3/2
5	12-5	4	Eastern Sigillata A bowl	Reddish-yellow fabric 5 YR 8/4, glossy red slip 2.5 YR 4/8
6	28-12	14	Eastern relief bowl	Reddish-yellow fabric 7.5YR 8/6, red slip 10R 5/8
7	7-3	14	Color-coated fishplate	Reddish-yellow fabric 5YR 7/6, small mica and lime grits, red slip 2.5YR 5/8 on interior and exterior
8	24-6	11	Imported bowl with incurved rim	Reddish-yellow fabric 5YR 7/6, dull dark reddish-gray 5YR 4/2 matt slip on interior, drips on exterior, no slip on base
9	23-9	8	Imported bowl with incurved rim	Reddish-yellow fabric 5YR 7/6, dull, very dark gray 7.5YR 3/0 matt slip on interior and exterior
10	5-2	3	Imported bowl with incurved rim	Reddish-yellow 5YR 7/6, dull, weak-red 10R 4/4 matt slip
11	30-2	11	Locally-manufactured bowl with out-turned rim	Reddish-yellow fabric 5 YR 8/4, tiny white and mica grits, matt red slip 2.5 YR 4/8

a row of pendant drops, and probably acanthus leaves. This is a very common decoration on bowls from Near Eastern sites, e.g., Yoqne'am (Avissar 1996a:48–50, Fig. X.1:30, Photo X.1). Formerly known by the misleading term 'Megarian bowls', they are now assigned to the family of 'Eastern Terra Sigillata A' (ESA), since most agree that they were produced in eastern workshops. There is, however, no consensus as to the exact location of the workshops. Gunneweg, Perlman and Yellin (1983:98, Fig. 22:2) have suggested an eastern Cypriot workshop on the basis of Neutron Activation Analysis, although Guz-Zilberstein (1995:212–214, Fig. 5.5:8, with further references) rejected this and attributed this ware to Syrian workshops (see also Cornell 1997:409, Pl. 1:5–9 Group ii). J. Mlynarczyk (pers. comm.) would rather suggest a Rhodian origin.

Date: second century BCE.

Color-Coated Fishplate.— Fig. 9:7 has an out-turned rim (diam. 24 cm). It is perhaps an import from Knidos (J. Mlynarczyk, pers. comm.). For a parallel form, see Hayes 1985:13–14, Pl. 1:1, Form 1 (different fabric).

Date: second century BCE.

Imported Bowls with Incurved Rim (Fig. 9:8–10).— Fig. 9:8 is a small bowl with a diameter of 12 cm and a disc base. Fig. 9:9 is larger, with a diameter of 16 cm, and Fig. 9:10 has a diameter of 18 cm. These bowls were made in eastern Mediterranean workshops; Figs. 9:8 and 9:9 were probably imported from Cyprus (J. Mlynarczyk, pers. comm.). For parallels see 'Akko (Dothan 1976:32–33, Fig. 30:4–6; Tzaferis 1986:268, 278, Fig. 4:3–6), Samaria (Crowfoot 1957a:248–251, Fig. 49:7–13), Tell Keisan (Briend 1980:109, Pl. 13:1), Yoqne'am (Avissar 1996a:48–49, Fig. X.1:1–3), Tel Anafa (Slane 1997: Pl. 17: FW 176–178, 309) and Yavne-Yam (Vitto 1998:121, Fig. 15:2–4, with further references).

Date: third–second centuries BCE.

Locally Manufactured Bowl with Out-Turned Rim.— Fig. 9:11 has a diameter of 16 cm, and can be paralleled with examples at Samaria (Crowfoot 1957a:262–263, Fig. 55:810–811) and Dor (Guz-Zilberstein 1995:293, Fig. 6.4:10–15, 17, with further references).

Date: third–second centuries BCE.

Lamps (Fig. 10)

Two lamps were found, each of a different type. Fig. 10:1 (diam. 5 cm, height 3 cm) is molded with a circular reservoir, a rounded shoulder, the rim set off from the shoulder by a groove, a small filling hole (diam. 1 cm), and a concave disc base with an *alpha* incuse on the base. The nozzle is missing.

This is a very unusual example of a mold-made lamp imitating wheelmade lamps. J. Mlynarczyk, who kindly drew my attention to the unusual character of this lamp, suggests that the fabric probably comes from the same source as the Phoenician semi-fine ware (Berlin 1997b:9–10; Slane 1997:272). For lamps of similar shape, but wheelmade, see Broneer 1977:18–19, Pl. 3, Type VIII; Athens, Kerameikos (Scheibler 1976:26–30, Type RSL 4), Tell Keisan (Briend 1980:110, Pl. 14:1–2) and Dor (Rosenthal-Hegginbottom 1995:236, Fig. 5.14:6–7, Type 6). For *alpha* marks, see Mlynarczyk 1997: Figs. 199–200.

Date: third century BCE.

The lamp in Fig. 10:2 (3.5 cm high, diam. 8 cm) has a circular reservoir with a pronounced angulation between the upper and lower parts, a slightly sunken central filling-hole (diam. 1.3 cm) surrounded by a broad rim and a ridge, a pierced lug on the upper left and a raised concave disc base. The nozzle is missing. This appears to be an import from Rhodes. For parallels see Samaria (Crowfoot 1957b:367, Fig. 85:6); Athenian Agora (Howland 1958:99–101, Pls. 15, 41: Type 32), Athens, Kerameikos (Scheibler 1976:51–52, Pls. 48–49, Type FSL2: No. 283), Tell Keisan (Briend 1980:110, Pl. 14:4), Dor (Rosenthal-Hegginbottom 1995:236,

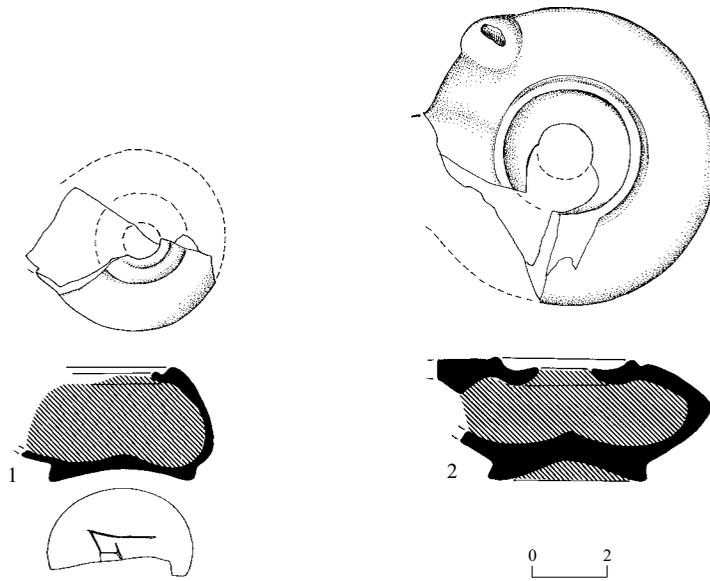


Fig. 10. Hellenistic lamps.

No.	Reg. No.	Locus	Type	Description
1	37-4	12	Lamp	Pink fabric 7.5YR 8/4, faint remains of red slip 2.5YR 5/8
2	7-9	14	Lamp	Reddish-yellow fabric 7.5YR 8/6, red slip 10R 4/6

Fig. 5.15:2, Type 9) and Yoqne‘am (Avisar 1996c:188, No. 4).

Date: second half of the third century BCE. Rosenthal-Hegginbottom dates it to 260–220 BCE, Scheibler to 250–225 BCE and Howland from the mid-third to the beginning of the second centuries BCE.

Byzantine Pottery

Two worn rims (not illustrated) of Phocaean Red Slip Ware: PRS3 E and F, dated by Hayes (1972) to the late fifth–sixth centuries CE, were found in L6 and L12; they show evidence of having been immersed in water.

Crusader-Period Pottery

The diagnostic pottery from the Crusader period consists of unglazed wares ('Acre Bowls', amphoras, a jug), glazed cooking vessels (frying pans and deep cooking pots), glazed

bowls and oil lamps. Examination of the glazed vessels indicates that more than half of them were imported, mostly from Cyprus, but also from the Byzantine and Aegean areas, from the North Syrian coast (Port St. Symeon), and from Italy. This assemblage can be dated to the end of the twelfth–thirteenth centuries CE.

Unglazed Ware

'Acre Bowl' (Fig. 11:1).— This bowl has a hemispherical body and a short ledge rim. Stern (1997:37–38) suggests that bowls of this type were mass produced locally—kiln wasters have been found in the Hospitaller complex—and that they were used as 'cheap' pottery for feeding the sick and pilgrims in 'soup kitchens'.

Date: thirteenth century CE.

Amphoras (Fig. 11:2, 3).— Two examples were found. The amphora in Fig. 11:2 has basket handles flanking a small vertical neck. For parallels, see Istanbul, Saraçhane (Hayes

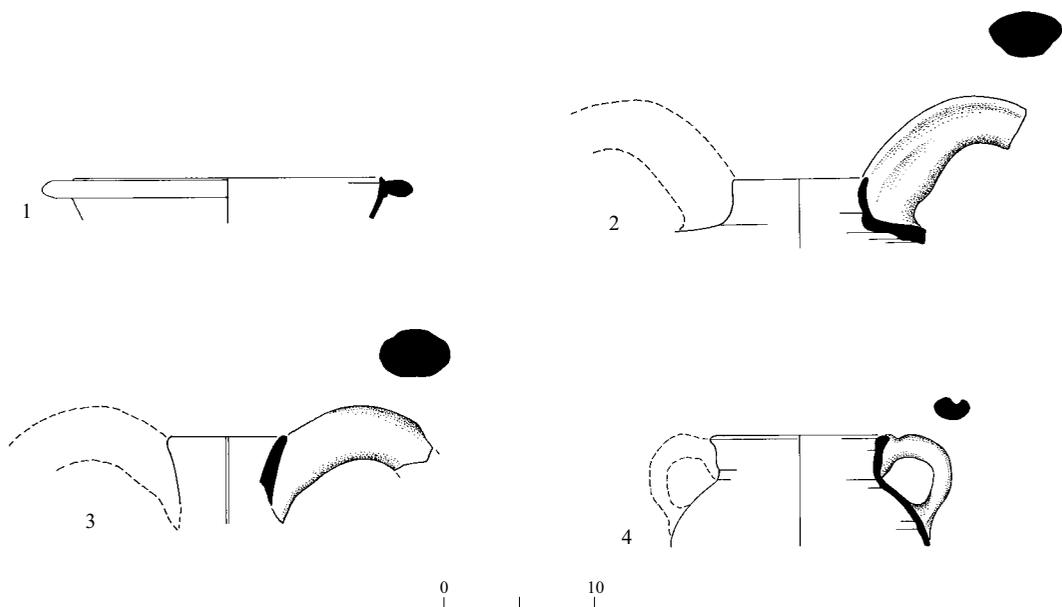


Fig. 11. Crusader-period unglazed ware.

No.	Reg. No.	Locus	Type	Description
1	32-4	Surface	'Acre bowl'	Red fabric 10R 5/8, gray core, large white grits, coarse
2	14-8	6	Amphora	Reddish-yellow fabric 5YR 7/6 outside, section: 5YR 7/8, well levigated, a few small white grits and small mica
3	18-5	14	Amphora	Reddish-yellow fabric 5YR 7/6, section: yellowish red 5YR 5/8, well levigated, a few small mica
4	4-6	2	Two-handled jug	Light red fabric 10R 6/8

1992:74, 76–77, Fig. 26:12, Type 67), although these are non-micaceous. At Saraçhane, they were found in late twelfth-century contexts. The amphora in Fig. 11:3 has basket handles attached to a high narrow neck. For parallels see Alpözen, Özdás and Berkaya 1995:119; 'Atlit (Pringle 1986a: Pl. 4) and 'Akko: one example was found in the sea (Zemer 1977:82–83, No. 74) and another at the 'Courthouse site' (Stern 1997:38–39, Fig. 4:10, with further references). *Date*: late twelfth–thirteenth centuries CE. Hayes dates this type at Saraçhane to the mid-twelfth–early thirteenth centuries CE (Hayes 1992:74, 76, Fig. 26:10, Pl. 13c, Type 61).

Two-Handled Jug (Fig. 11:4).— This jug has a straight neck and a slightly thickened rim. For a variant of this type, see Caesarea (Boas

1992:164, Fig. 77:6), where it was found in Locus 4034, which contained material from the Abbasid to the Crusader periods.

Date: Crusader period?

Glazed Cooking Vessels (Fig. 12)

Globular Cooking Pots with Everted Rim (Fig. 12:1–4).— Eight examples were found in various loci, mostly large, a few of a smaller type. All are made of a well-levigated red fabric with a short everted rim. The large type (Fig. 12:1, 2) has a high loop handle, while the small type (Fig. 12:3, 4) has a small loop handle. Parallels to both types are found at 'Akko (Stern 1997:40–42, Fig. 5:22–29).

Date: end of the twelfth–mid-thirteenth century CE.

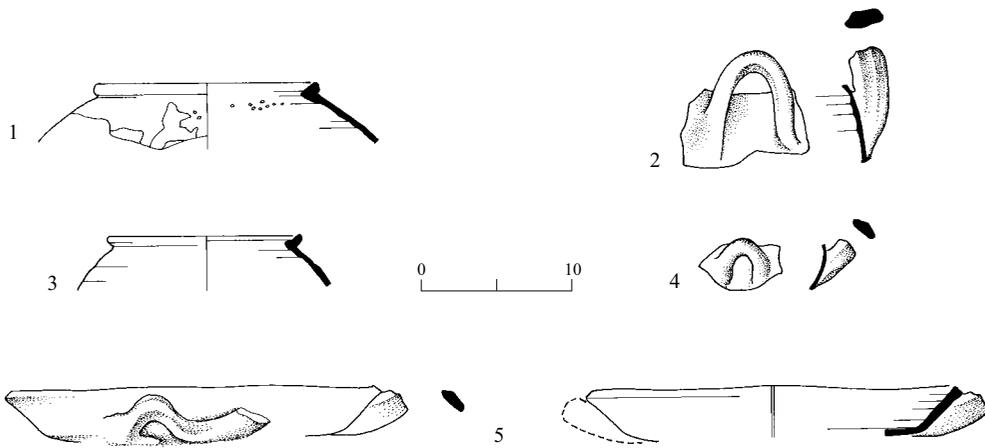


Fig. 12. Crusader-period cooking vessels.

No.	Reg. No.	Locus	Type	Description
1	30-10	11	Globular cooking pot	Red fabric 10R 4/8, well levigated, splashes of brown glaze
2	10-8	6	Globular cooking pot	Red fabric 10R 4/8, well levigated
3	4-12	2	Globular cooking pot	Red fabric 10R 4/8, well levigated
4	18-16	7	Globular cooking pot	Red fabric 10R 4/8, well levigated
5	8-6	4	Frying pan	Weak red fabric 10R 4/3 outside, red section 7.5R 5/8, brown glaze inside (rim excluded)

Glazed Frying Pan (Fig. 12:5).— Some eight examples were found in Loci 1, 2, 4, 5, 6 and 11. They have a flat base, a shallow body with a square rim, two handles placed below the rim and two small triangular ledge handles (intended apparently to hold the vessel on a cooking stand). A brown glaze covers the interior of the pan but not the rim. For parallels see Yoqne'am (Avisar 1996b:142–143, Type 15, with further references).

Date: second half of the twelfth–mid-thirteenth centuries CE.

Glazed Bowls

Some forty-six glazed bowls were found, falling into various local and imported types.

Bowls with Monochrome Gritty Yellow Glaze.— Four examples of bowls with a slight carination below the rim have a very thin wash, a gritty surface and a glaze in various shades of

yellow. One example has an everted rim (Fig. 13:1; diam. 15 cm). For parallels see Caesarea (Pringle 1985: Fig. 3:14) and Yoqne'am (Avisar 1996b:90–91, Fig. 13.22:3, Type 34). Three examples from L5 and L14 have ledge rims (Fig. 13:2; diam. 15 cm). For parallels see Yoqne'am (Avisar 1996b:90–91, Fig. XIII.22:2, Type 34) and 'Akko (Stern 1997:43–45).

Date: last quarter of the twelfth–mid-thirteenth centuries CE.

Bowls with Painted Decoration Under Gritty Yellow Glaze (Fig. 13:3).— One bowl has a low ring base, painted on the interior with a brown spiral pattern under a gritty pale yellow glaze. For parallels see Yoqne'am (Avisar 1996b:91, Type 38).

Date: first half of the thirteenth century CE.

Local Sgraffito Glazed Bowls (Fig. 13:4, 5).— Two examples are decorated with a sgraffito

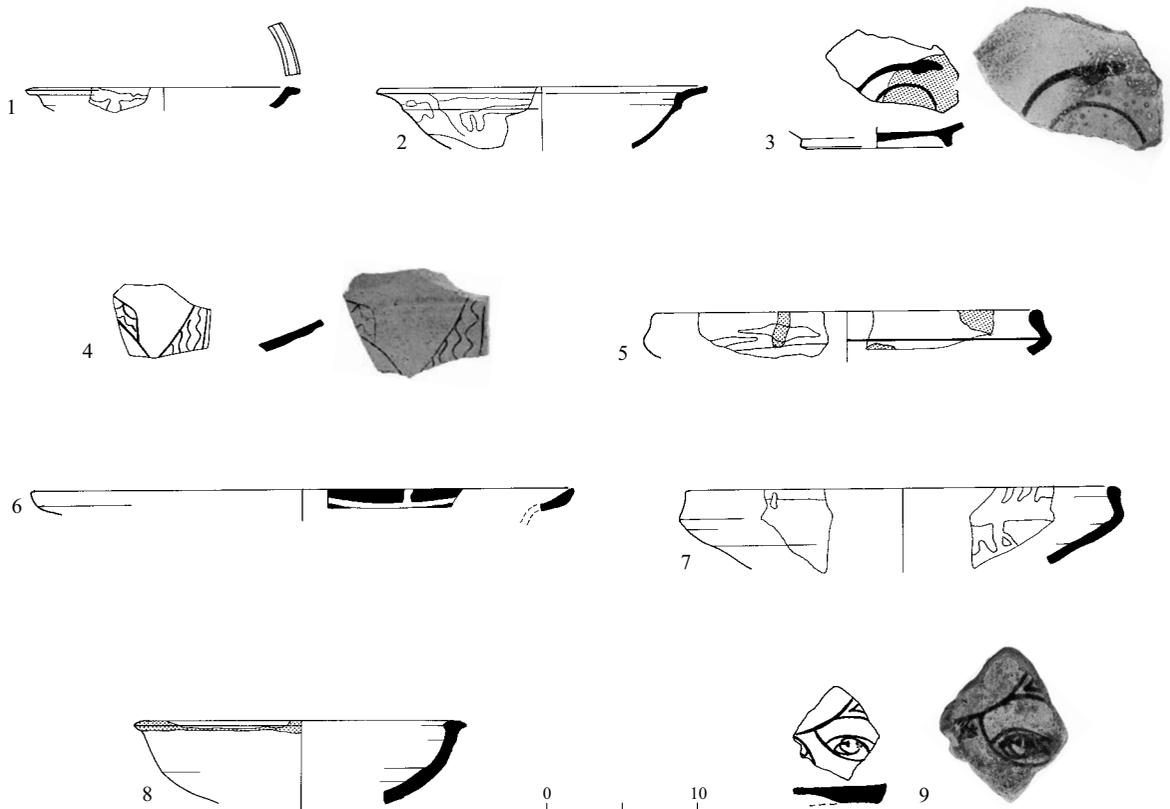


Fig. 13. Crusader-period glazed bowls.

pattern under a yellowish glaze. The many grits in the fabric of the bowl in Fig. 13:4 caused the cracking of the glaze. The fine sgraffito pattern represents a wheel with triangular rays filled with wavy lines. For parallels see Caesarea (Pringle 1985: Fig. 10:54) and Yoqne'am (Avissar 1996b:93–94, Type 40). The bowl in Fig. 13:5, carinated with a rounded rim, also has greenish splashes. For parallels see Caesarea (Pringle 1985:183–186) and Yoqne'am (Avissar 1996b:94–95, Fig. 13.31:1, Type 42).

Date: first half of the thirteenth century CE.

Local Yellow Slip-Painted Bowls (Fig. 13:6, 7).— Four examples of this type were found in Loci 2, 5, 6 and 12. They are decorated with white slip-painted straight and wavy lines under a yellowish glaze. The bowl in Fig. 13:6 with a ledge rim has parallels at Yoqne'am (Avissar 1996b:96–97, Fig. 13.32:3, Type 44), dated to

the late twelfth–thirteenth centuries CE. The carinated bowl in Fig. 13:7 also has parallels at Yoqne'am (Avissar 1996b:96–97, Fig. 13.32:4, Type 44), dated to the thirteenth century CE.

Monochrome Green-Glazed Bowl with Flattened Out-Turned Rim (Fig. 13:8).— One example of a slightly carinated bowl with a green glaze on the interior and on the rim has parallels at 'Akko (Edelstein and Avissar 1997:130, Fig. 1:1).

Date: c. thirteenth century CE.

Brown-Painted Bowl with Opaque Turquoise Glaze (Fig. 13:9).— One body fragment has a dark brown painted decoration under an opaque turquoise glaze.

Early Thirteenth-Century Aegean Sgraffito Bowls (Fig. 14).— Fifteen examples were found in Loci 3, 5, 6, 7, 8, 10, 11 and 14,

◀ Fig. 13

No.	Reg. No.	Locus	Type	Description
1	5-1	3	Bowl with monochrome gritty yellow glaze	Red fabric 2.5YR 5/8, medium-sized white grits; yellow glaze over a very thin whitish wash inside and on the rim, spilling over the rim
2	9-4	5	Bowl with monochrome gritty yellow glaze	Red fabric 2.5YR 5/8, medium-sized white grits; yellow glaze over a very thin whitish wash inside and on the rim
3	21-3	10	Bowl with gritty yellow glaze and painted decoration	Red fabric 2.5YR 5/8, small white grits; irregular whitish wash inside, dripping outside; brown painted decoration (spiral pattern) inside under gritty pale yellow glaze
4	21-11	10	Local sgraffito glazed bowl	Red fabric 2.5YR 5/8, many gray and white grits; white wash inside; fine sgraffito decoration (wheel with triangular rays containing a wavy pattern) under yellowish glaze inside with splashes outside
5	4-2	2	Local sgraffito glazed bowl	Red fabric 2.5YR 5/8, small white grits; white wash inside, on the rim and irregular outside; sgraffito under yellowish glaze with greenish splashes
6	14-4	6	Local yellow slip-painted bowl	Red fabric 2.5YR 5/8, medium-sized and small white grits; white slip-painted decoration of straight and wavy lines under yellowish glaze inside and on the rim, green splash on the rim
7	2-2	2	Local yellow slip-painted bowl	Red fabric 2.5YR 5/8, medium-sized and small white grits; white slip-painted decoration under yellowish glaze inside and on the rim
8	8-5	4	Monochrome green glazed bowl with flattened out-turned rim	Reddish-yellow fabric 5YR 7/6, white grits; whitish slip inside, green glaze inside and over the rim
9	10-11	6	Brown painted bowl with opaque turquoise glaze	Pale yellow fabric 2.5Y 8/4, small red grits; dark brown decoration, opaque turquoise glaze inside and outside

exhibiting various rims: plain (Fig. 14:1), incurved (Fig. 14:2, 3), thickened and incurved (Fig. 14:4), wide ledge (Fig. 14:5). Fourteen have a pale yellow glaze and one, pale green (Fig. 14:3). The deeply incised decorative motifs include: straight and curved lines (Fig. 14:3, 4), 'lotus flowers' (Fig. 14:7), cross-cancelled squares separated by a triple vertical line (Fig. 14:5; see Megaw 1975:38, Pls. 15:2, 16:1, 17:2; Armstrong 1991:345), and a latticework pattern (Fig. 14:8).

The base of this type of bowl is a low, often stepped, ring base (Fig. 14:6). The low ring base of a large bowl (Fig. 14:9), with a heavily pitted surface, probably also belongs to this type.

For parallels see Megaw 1975, Armstrong 1991; Boas 1994:104; as well as Yoqne'am (Avisar 1996b:110–111, Type 72) and 'Akko (Stern 1997:58).

Date: first half of the thirteenth century CE. It should be noted that at St. Mary of Carmel (1247–1291 CE), this type is absent (Pringle 1984:94).

Thirteenth-Century Cypriot Sgraffito Ware (Fig. 15:1–3).— Three examples of this type were found. They are carinated bowls with a concave rim, a high ring-base with an out-turned lip and a deeply-incised geometric decoration under a thin pale greenish-yellow glaze. Marks of the tripod stands, placed between the bowls in the kiln, are visible on the interior of the bases. For parallels see Yoqne'am (Avisar 1996b:111–112, Fig. 13.57:2–4, Type 73) and 'Akko (Stern 1997:51–52, Fig. 10).

Date: early thirteenth–fourteenth centuries.

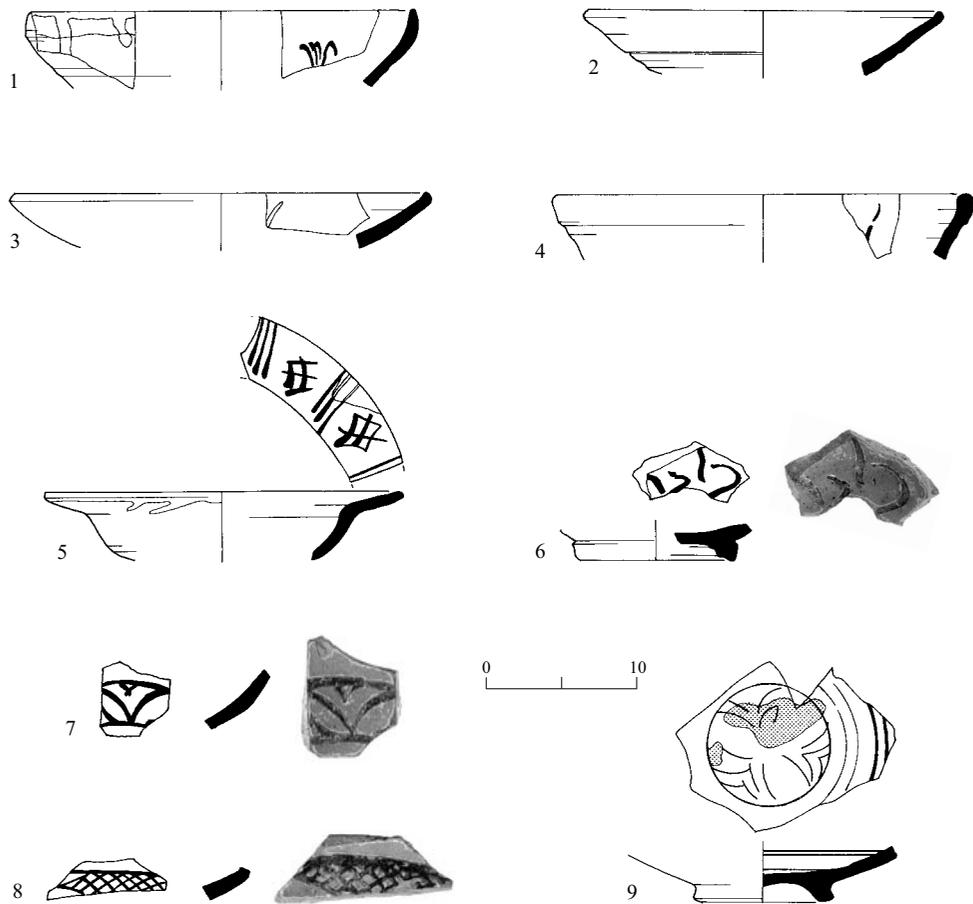


Fig. 14. Early thirteenth-century Aegean sgraffito bowls.

No.	Reg. No.	Locus	Description
1	11-7	14	Reddish-yellow fabric 5YR 6/6, medium-sized and small white grits; pale yellow slip inside and over the rim, wash outside; pale yellow glaze inside, dripping outside with deeply incised design
2	9-15	5	Red fabric 2.5YR 5/8, small white grits; white slip inside and over the rim, very thin white wash outside, pale yellow glaze inside and outside
3	22-3	14	Red fabric 2.5YR 5/8, white grits; white slip inside and over the rim, thin pinkish wash outside; pale green glaze inside and on rim, dripping outside, with deeply incised linear decoration
4	5-7	3	Red fabric 2.5YR 5/8, small and medium-sized white grits; pink slip inside and wash outside; pale yellow glaze inside and over the rim with deeply incised linear design
5	29-11	8	Light red fabric 2.5YR 6/6, small and large white grits; pink slip inside and wash outside; pale yellow glaze inside and over the rim with deeply incised decoration of lines and cross-cancelled squares
6	13-3	7	Reddish-yellow 5YR 6/6, white grits; white slip inside; light yellow glaze inside with deeply gouged sgraffito decoration of curved lines
7	14-6	6	Reddish-yellow fabric 5YR 6/6, small white grits; white slip inside; yellow glaze inside, with deeply gouged sgraffito decoration of 'lotus flowers'
8	9-22	5	Light red fabric 2.5YR 6/6, medium-sized white grits; white slip inside; yellow glaze inside and out, gouged sgraffito net pattern inside
9	9-6	5	Red fabric 10Y 5/8, small white grits; white slip inside; geometric sgraffito decoration under very pale yellow glaze with splashes of green inside; surface heavily pitted

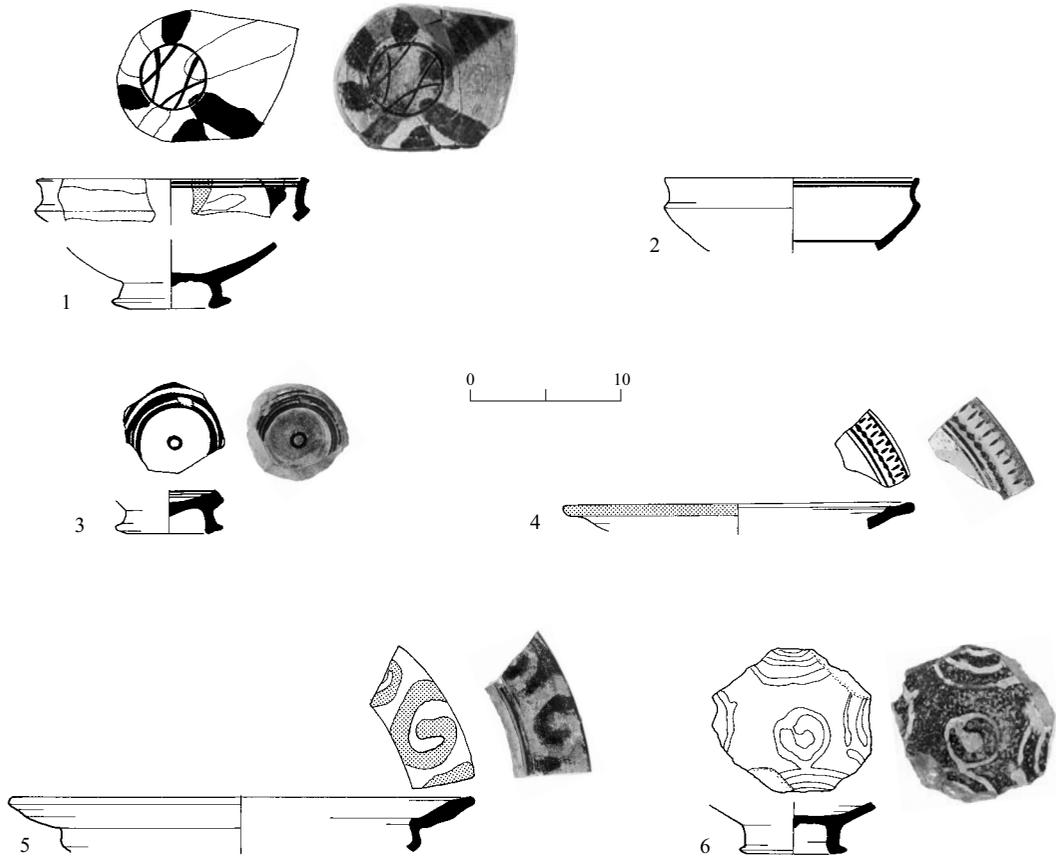


Fig. 15. Thirteenth-century Cypriot sgraffito ware and slip-painted ware.

No.	Reg. No.	Locus	Type	Description
1	4-1, 4-8	2	Thirteenth-century Cypriot Sgraffito Ware	Red fabric 10R 5/6, a few small white grits; white wash inside and over the rim; deeply incised sgraffito decoration (horizontal line on rim, crossed lines within circle on base inside) under thin pale greenish-yellow glaze with dark yellow and green splashes inside and over the rim, dripping outside; marks of tripods visible on the interior of the bowl
2	29-19	8	Thirteenth-century Cypriot Sgraffito Ware	Red fabric 10R 5/6, very small white grits; white wash inside and over the rim; deeply incised decoration (two horizontal lines on rim) under thin pale greenish-yellow glaze inside
3	38-1	Surface	Thirteenth-century Cypriot Sgraffito Ware	Reddish-yellow fabric 5YR 6/6, a few small white grits; white wash inside; deeply incised decoration of circles on base under thin pale greenish glaze; marks of tripods visible on the interior of the bowl
4	10-13	6	Cypriot Sgraffito Ware?	Reddish-brown fabric 5YR 4/3, well levigated, well fired; white slip inside and outside; deeply cut sgraffito decoration inside and on rim under light yellow glaze inside and out
5	9-11	5	Thirteenth-century Cypriot Slip-Painted Ware	Red fabric 2.5YR 5/8, medium-sized and small white grits; white slip-painted; decoration of spirals on rim under a green glaze on the inside and over the rim, spilling on the outside
6	32-1	Surface	Thirteenth-century Cypriot Slip-Painted Ware	Red fabric 2.5YR 5/8, small white grits; slip-painted decoration of spirals under light yellow glaze inside, drips outside

The bowl in Fig. 15:1 has a decoration of horizontal lines on the rim and crossed lines within a circle on the interior of the base. Fig. 15:2 has a double horizontal line on the rim, and Fig. 15:3 has a decoration of circles on the interior of the base (cf. Boas 1994:108–111, Fig. 6: top right photograph). The bowl in Fig. 15:4 has a broad ledge rim with a deeply cut sgraffito decoration inside and on the rim. No exact parallels were found but its fabric suggests that it was imported from Cyprus (Edna Stern, pers. comm.).

Thirteenth-Century Cypriot Slip-Painted Ware (Fig. 15:5, 6).— Two examples were found. One (Fig. 15:5) has a ledge rim with a white slip-painted decoration of spirals under a green glaze. For parallels see ‘Akko (Stern 1997:48, Fig. 8:67, 68). Fig. 15:6 is the high base of a bowl with an out-turned lip, decorated on the interior with slip-painted spirals under a light yellow glaze. For parallels see Boas 1994:108–111, Fig. 6: top left photograph; Yoqne’am (Avisar 1996b:112, Type 74) and ‘Akko (Stern 1997:48, Fig. 8:72).

Date: early thirteenth–fourteenth centuries CE.

Port St. Symeon Ware (Fig. 16:1).— A single ledge rim was found, decorated with a sgraffito geometric design under a very pale yellow glaze with splashes of green, dark yellow and brown on the interior and on the rim. For parallels see Yoqne’am (Avisar 1996b:113–114: Fig. 13.59:3, Photo 13.43, Type 75).

Date: first half of the thirteenth century CE (c. 1200–1268 CE).

Zeuxippus Ware (Fig. 16:2).— One example was found, decorated with sgraffito concentric circles, thin on the interior and wider on the exterior, under a very pale greenish transparent glaze. For parallels see ‘Akko (Stern 1997:52–54).

Date: last decades of the twelfth century–first decades of the thirteenth century CE.

Proto-Maiolica (Fig. 16:3).— One sherd of a hemispherical bowl with a flat, slightly concave rim, has a painted decoration of loops in manganese and blue on the rim and a triple line surrounding a rosette on the interior. The fabric and the decoration point to a Salentine origin (Brindisi area), the main production center of Proto-Maiolica Ware imported into the Latin

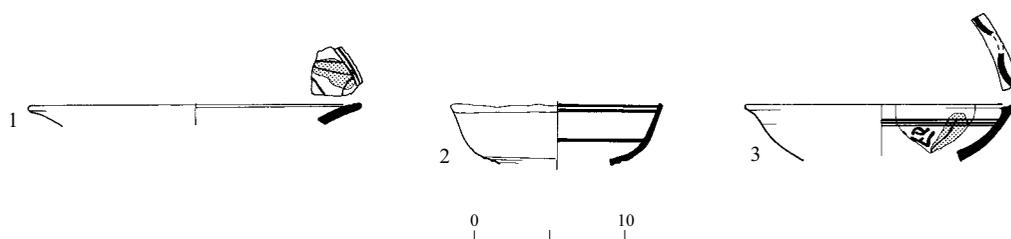


Fig. 16. Port St. Symeon, Zeuxippus and Proto-Maiolica wares.

No.	Reg. No.	Locus	Type	Description
1	2-5	2	Port St. Symeon Ware	Reddish-yellow 7.5YR 7/6, very small red grits; white slip inside; sgraffito geometric decoration under very pale yellow glaze with splashes of green, dark yellow and brown inside and on rim
2	5-4	3	Zeuxippus Ware	Red fabric 2.5YR 5/8, well levigated, very few white and red grits; white slip inside and outside; very pale greenish transparent glaze inside and partly outside, sgraffito decoration of concentric circles, thin inside, wider outside
3	5-9	3	Proto-Maiolica	Pale yellow fabric 5Y 8/3, well levigated (very small brown and white grits); eroded opaque white glaze inside and over the rim; painted decoration in manganese and blue: on rim—black loops, inside—triple black line surrounding rosette made of blue petals bordered by a black line

Kingdom of Jerusalem; recent research has shown that Salentine Proto-Maiolica Ware amounts to 88% of the total Proto-Maiolica fragments discovered at 'Atlit, the remainder coming from Sicily, northern Puglia, and probably Calabria (Riavez 1998). The decoration of the present bowl is a variant of that seen on a bowl from 'Atlit (Pringle 1982: Pl. 9b; Riavez 1998: Pl. 6: PP037), and from 'Akko (Stern 1997: Fig. 14:104).

Date: thirteenth century CE.

Unclassified Glazed Bowls (Fig. 17:1, 2).—Two bowls are included in this category, apparently imports but of uncertain origin. Fig. 17:1 is a bowl with a straight rim and an opaque white glaze with a splash of light green on the interior and over the rim. Fig. 17:2 is the low ring base of a bowl with traces of green and yellow glaze on the base, apparently from having stood

on another bowl in the kiln. It is probably an import from Byzantium.

Date: twelfth century CE?

Glazed Juglet (Fig. 17:3).— This is part of the neck (rim missing) and the body of a juglet with a dark green glaze on the exterior.

Handmade Vessel with Painted Geometric Decoration (Fig. 17:4).— A body fragment of a jar, made of a coarse fabric, is burnished outside and has a brown-red painted geometric decoration. For parallels see the Red Tower (Pringle 1986b:140–142) and Yoqne'am (Avissar 1996b:168–169, Type 28).

Date: this jar type is usually dated to the 'Crusader–Mamluk' period; its presence here in a thirteenth-century-CE context suggests a Crusader dating.

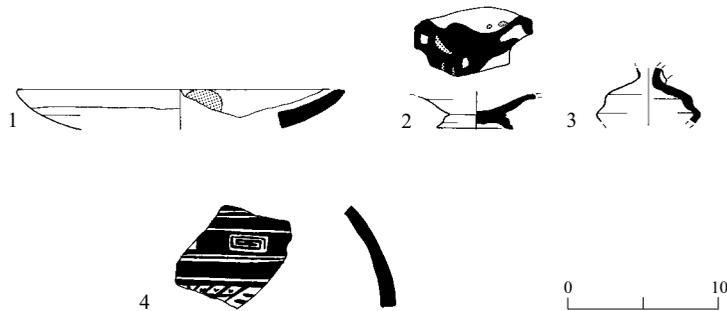


Fig. 17. Miscellaneous Crusader-period pottery

No.	Reg. No.	Locus	Type	Description
1	9-13	5	Unclassified glazed bowl, apparently imported	Light red fabric 2.5YR 6/8, mica, small and medium-sized white grits; opaque white glaze with splash of light green inside and over the rim
2	5-6	3	Unclassified glazed bowl, probably imported from Byzantium	Pinkish-white fabric 7.5YR 8/2, very small black and red grits, smoothed surface outside and base; pale yellow glaze with dark brown decor and green splashes inside; traces of green and yellow glaze on the base, apparently from having stood on another bowl in the kiln
3	8-1	4	Glazed juglet	Pale yellow fabric 2.5Y 8/4, light red section 7.5R 6/6; white slip, dark green glaze outside
4	2-1	2	Handmade vessel with painted geometric decoration	Reddish-yellow fabric 5YR 8/6; white and brown grits, coarse, outside burnished, brown-red painted geometric decoration

Lamps (Fig. 18).

Five fragmentary lamps were found, falling into four types.

Channel-Nozzle Lamp (Fig. 18:1).— This nearly-complete lamp with the missing handle was made from a very worn mold. It has a pointed oval shape, biconical in section, with a flat base and a large oval filling-hole (diam. 1.7–2.3 cm) surrounded by two very low ridges, hardly visible because of the worn mold. Soot is visible on the nozzle. The shoulders are

decorated with a scroll pattern, each scroll containing three dots in relief, apparently a relic of a scroll motif enclosing bunches of grapes; on the channel are four dots in relief.

Date: no exact parallels are known, but channel-nozzle lamps with a filling-hole surrounded by two ridges are usually found in contexts from the Umayyad–Abbasid period till the tenth–early eleventh centuries (see Rosenthal and Sivan 1978:129–139). See also parallels at Yoqne‘am (Avisar 1996c:191–194) and Bet She‘an (Hadad 1997:169–178).

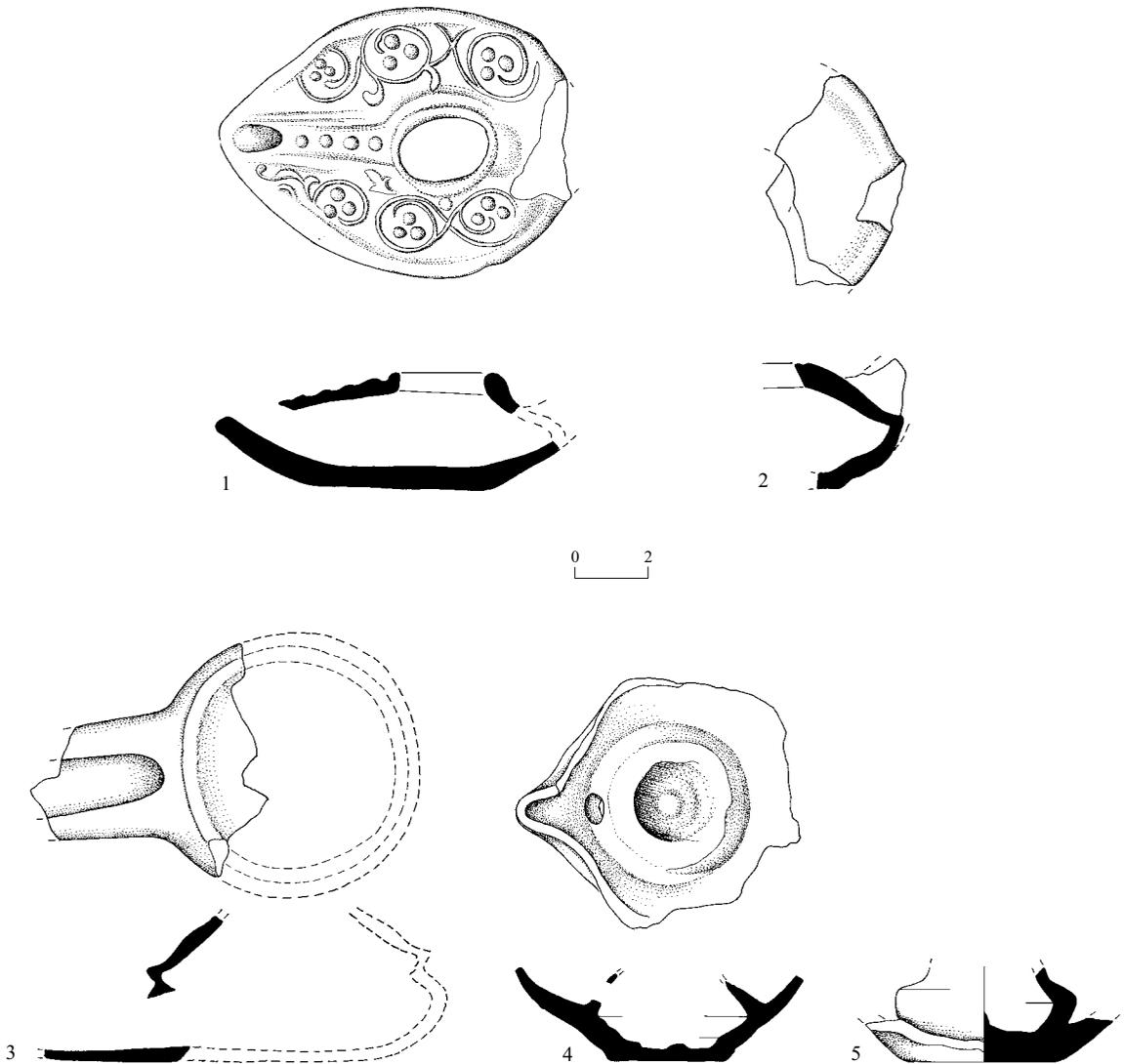


Fig. 18. Crusader-period lamps.

◀ Fig. 18

No.	Reg. No.	Locus	Type	Description
1	15-1	6	Channel-nozzle lamp	L 10 cm, W 7 cm, H 3.5 cm. Light red fabric 10R 6/6, large white grits, very coarse cracked surface
2	4-9	2	Coarse oval lamp	Light red fabric 10R 6/6, white grits, very coarse fabric, entirely blackened outside
3	27	14	Glazed wheelmade lamp	L c. 12 cm, W 6.5 cm. Very pale brown fabric 10YR 8/4; light green glaze covering the whole surface
4	17-1	7	Saucer lamp	L c. 8 cm, W 7 cm Light brown fabric 7.5YR 6/4
5	12-3	4	Saucer lamp	Reddish-yellow fabric 5YR 7/6

Coarse Oval Lamp (Fig. 18:2).— The back part of the reservoir is preserved, entirely blackened outside, with a flat base and a broken handle.

Glazed Wheelmade Lamps (Fig. 18:3).— The front part of the reservoir and part of the nozzle are preserved. The circular reservoir is made of two parts, separately turned on the wheel; the elongated nozzle has a large wick hole. The entire surface is covered with a light green glaze. For parallels see Yoqne'am (Avissar 1996c:195–196: Nos. 32–37).

Date: twelfth–first half of thirteenth centuries CE.

Saucer Lamps (Fig. 18:4, 5).— Two examples were found. The lamp in Fig. 18:4 is almost complete, with the handle broken. Soot is visible on the nozzle. It was wheelmade in two parts: the bottom part in the shape of a round saucer on a flat base, the upper part with a large oil container, pinched for the wick. For parallels see Kennedy 1963: Pl. 29:797, Type 25; Caesarea (Brosh 1986: Fig. 6.1); Yoqne'am (Avissar 1996c:197, Fig. 15.37, No. 41); and Bet She'an (Hadad 1999: Figs. 5:19, 10:36). Avissar dates this type to the late twelfth–first half of the thirteenth centuries CE, while Hadad dates it to the second quarter of the thirteenth–fourteenth centuries CE. The lamp in Fig. 18:5 has a flat base with an omphalos inside and a fairly thick wall. This is a variant of lamps found at Yoqne'am (Avissar 1996c:197, Fig. 15.38, No. 42) and Bet

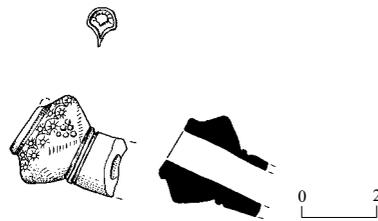


Fig. 19. Ottoman clay tobacco pipe (Chibouk).

Reg. No.	Locus	Description
32-7	Surface	D 1 cm (shank opening). Fine gray fabric, hard fired, reddish-brown slip on the outside, highly burnished

She'an (Hadad 1999: Fig. 5:20), dated to the late twelfth–fourteenth centuries CE.

OTHER FINDS

Ottoman Clay Tobacco Pipe (Chibouk)

The only Ottoman find from the site consists of a fragmentary tobacco pipe found on the surface (Fig. 19). Only the shank is preserved. It has a protruding, broad triangular-shaped wreath (with wavy lines of rouletting and rayed dots impressed on it) and a stepped-ring termination. It is made of fine gray fabric, with a reddish-brown, highly-burnished slip.

Date: nineteenth century CE (based on the red-burnished slip, see Simpson 1993:18, with further references).

Metal Finds

Iron Arrowhead (Reg. No. 38, L8; Fig. 20).—The arrowhead (preserved length 6.5 cm, width 1.5 cm) consists of a solid, tapering, four-sided, pyramidal head and a broken tang with round section (diam. 0.3 cm). For parallels see Montfort (Dean 1927: Fig. 53:N,P), Kokhav Ha-Yarden (Ben Dov 1975:107) and Yoqne'am (Khamis 1996:219, Fig. 18.1:5, with further references).

Date: Crusader period.

Glass

Only one diagnostic glass fragment clearly dating to the Hellenistic period was found in

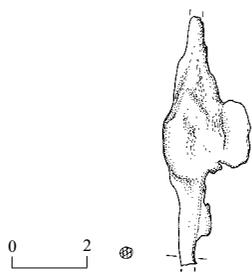


Fig. 20. Crusader iron arrowhead.

the excavation (Fig. 21:1). However, evidence of glass production was discovered in Sq E7, consisting of a pale greenish glass slag (Fig. 21:2), a peacock-blue chunk of raw glass (Fig. 21:3), and a fragment of *kurkar* covered by a layer of melted pale greenish glass (Fig. 21:4), which may have belonged to the upper structure of a glass furnace. Although the chunk of peacock-blue glass comes from a basket containing mostly Crusader-period wares, this particular color is unknown among glass vessels of that period, being characteristic of Late Hellenistic and Early Roman glass (Yael Gorin-Rosen, pers. comm.). The dating of the two pale greenish fragments is uncertain. These were found in the same square (E7), at about the same elevation as the peacock-blue glass (c. 1.28 m asl), in baskets of which most of the pottery dated to the Crusader period, but which showed some contamination with finds from Stratum II, such as a Rhodian stamped handle (Ariel, this volume: Catalogue No. 2). Evidence of Crusader glass production has been found in several excavations conducted in recent years in 'Akko, and Gorin-Rosen is of the opinion that many of the Crusader glass vessels found in 'Akko may have been produced

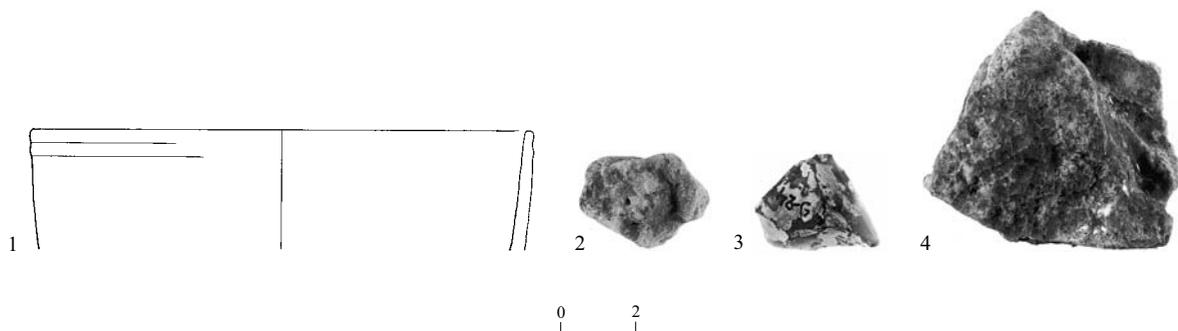


Fig. 21. Glass finds.

No.	Reg. No.	Locus	Square	Type	Description
1	28-16	14	D5	Syro-Palestinian cast grooved bowl	Pale green glass, covered with a thick layer of silverish and white crust; severely pitted and iridescent
2	13-11	7	E7	Glass slag	Pale greenish glass
3	9-24	5	E7	Glass chunk	Peacock-blue glass
4	10-14	6	E7	<i>Kurkar</i> fragment with layer of glazing	<i>Kurkar</i> covered with a layer of pale greenish glazing

locally (Gorin-Rosen 1997:75, 84: n. 3). The Hellenistic to Roman-period glass industry in the area of 'Akko and at the mouth of the River Belus is well documented by contemporary written sources (Pliny *NH* 36:190; Strabo 16:2, 25; Tac. *Hist.* 5:7; Jos *Bell.* 2:189). These few remains may constitute the only material evidence so far of this glass industry in Hellenistic–Roman 'Akko.

Syro-Palestinian Cast Grooved Bowl (21:1).— This rim and wall fragment belongs to a deep cast bowl with a straight rim, rounded at the tip, and a thick wall. Two horizontal grooves are engraved below the rim, on the outside. For parallels see Weinberg 1961: Type 2:389–390, Fig. 3:10, Pl. 95:10 and Grose 1979: Group A:55–59.

Date: first half of second–mid-first centuries BCE.

DISCUSSION AND CONCLUSIONS

The Hellenistic Period

The date of Stratum II is suggested by the pottery finds and, in particular, by the stamped amphora handles (Ariel, this volume), dating to the period between the last third of the third century BCE and the third quarter of the second century BCE. Despite the limited excavation, the discovery of walls and floors along with the pottery repertoire suggests that this was a built-up area. This is noteworthy since past excavations north of the Old City had revealed primarily a large Hellenistic–Roman cemetery extending along the Mediterranean coast.³ The discovery of building remains north of the city walls may thus help to determine the boundary between this cemetery and the built-up area of Hellenistic times. In March 1953, a very broad wall (at least 3.5 m wide), built of ashlar, was found at a depth of c. 1.8 m in the western part of Yosef Trumpeldor Street during the construction of the 'New Tax Office'. Z. Goldman, who examined the wall and collected a large quantity of Hellenistic pottery sherds there, suggested identifying it as the Hellenistic

city wall (Report No. 28 dated 5.3.1954, in File 'Akko-North, IAA Archives; and pers. comm. on 9.12.1999). If so, then the building remains discovered during our excavation were located in the northern part of the Hellenistic city, c. 200 m south of the city wall, and the cemetery extended along the coast north of the Hellenistic city wall.

Dothan's twelve seasons of excavations at 'Akko between 1973 and 1989 have shown that after it was reestablished by Ptolemy II Philadelphus in c. 280 BCE, the city—renamed Ptolemais—was extensively enlarged and shifted from the tell westward (Dothan 1976; 1985; Kashtan 1988). The earliest stamped amphoras found at our site correspond with the Ptolemaic period of the town. However, most of the pottery and amphoras seem to date to the period of Seleucid rule, when Ptolemais was in a particularly privileged situation. The latest stamped amphora handles recovered during the excavation date to the third quarter of the second century BCE. The same is true for the rest of the pottery assemblage. Noteworthy in this assemblage is the absence of late second–first centuries BCE pottery types and, above all, of Phoenician semi-fine pottery. Berlin (1997a:79–80) dates the appearance of the semi-fine ware in the Southern Levant to the second half of the second century BCE (125 BCE at the latest at Tel Anafa, 130 BCE at Shiqmona and the second half of the second century BCE at Dor). Pottery from the late second–first centuries BCE has been attested in other excavations at 'Akko. For example, quantities of semi-fine ware and stamped amphora handles of the late second–first centuries BCE were recovered during the excavations in Areas TB and TC of the Courthouse Site, some 400 m to the east of our site (Berlin 1997a:86, n. 6; Hartal 1997a; Messika 1997; Gerald Finkielsztejn, pers. comm.). The absence of semi-fine ware in our excavation and the date of the latest stamped amphoras may thus suggest that the excavated area was abandoned in the second half of the second century BCE, although the reason for this still needs to be elucidated.

Post-Hellenistic Period

No architectural or ceramic remains were found dating from the end of the second century BCE until the Crusader period (except for two obviously intrusive water-worn sherds found in Crusader-period loci). After the site had been abandoned the Hellenistic structures were covered with sand.

Crusader Period

The site was rebuilt in Crusader times, its builders unaware of the presence of earlier structures. This was the location of a quarter known as 'Montmusard', the first suburb built beyond the northern city wall of 'Akko (see Jacoby 1979; 1982). Contemporary documents suggest that between 1115 and 1120, a few houses were built to the north of the city wall, probably near a sacred tomb, which may have given its name to the quarter, *Mont Mazâr*, i.e., the hill of the sacred tomb. It kept its rural character until about 1187, when it expanded considerably, and again after 1191 when Acre became the political center of the Latin Kingdom of Jerusalem. Acre was now a hub for transit commerce and attracted many pilgrims as well as Latin and Oriental Christians who had fled the cities captured by the Muslims. This new population overflowed beyond the city walls and settled in the new suburb of Montmusard (Jacoby 1982:206–210). Most of the pottery repertoire recovered during the excavation consists of types which are typical of the end of the twelfth to the first half of the thirteenth century CE, e.g., the thin-walled glazed globular cooking pots (see Stern 1997:40–42), Aegean sgraffito bowls, bowls with a monochrome gritty yellow glaze and others with painted decor under a gritty yellow glaze, local sgraffito glazed bowls, Port St. Symeon ware, Zeuxippus ware, saucer lamps and glazed wheelmade lamps. This dating would correspond with the main period of construction of the suburb of Montmusard. Between 1198 and 1212, an outer wall was built to surround the new quarter. In 1234, most of the quarter of Montmusard is said to have been destroyed by a fire (Rey 1888:6).

The layer of ashes (0.15 m thick) found near the base of Wall 3 may be connected with this event. This destruction might also explain the absence in our excavation of pottery types characteristic of the second half of the thirteenth century (such as thick-walled cooking pots, see Stern 1997:40–42), although the final abandonment of the quarter was probably the result of the Mamluk raids on the extramural suburbs of Acre in 1263 and 1266 (Pringle 1995:84).

Kedar (1997) and Boas (1997) have identified, on an aerial photograph taken in 1923 by the Royal Air Force, a street flanked by rows of small shops that runs parallel to the shoreline, about midway between the northwestern tower of present-day Old 'Akko and the tower located at the northwestern corner of the 'Outer Wall' encompassing Montmusard (Frankel 1987). They explained it as a 'market street', probably the *Ruga Betleemitana* (Bethlehem Street) appearing on fourteenth century maps (Marino Sanudo's plan drawn in 1321 and Bishop Paulinus of Pozzuoli's map published in 1329, see Dichter 1973:16–30; Hartal 1997b: Figs. 1, 2). A large part of this street was apparently destroyed when 'Akko's police station was built there in 1940. Makhoully and Johns (1946:66–67) mentioned "the rubble foundations of a long building like a bazaar", discovered during the construction and they noted that similar foundations were still visible south of the police station, along the seashore. Our soundings seem to be located some 40 m south of the southern extremity of this *Ruga Betleemitana*. If so, then the walls discovered during our excavation belonged to the area marked as *Sancta Caterina* (Saint Catherine) on medieval maps.

In 1291, Acre was captured by the Mamluks and largely destroyed. It was not rebuilt until the twentieth century CE. Except for a fragmentary smoking pipe dating to the Ottoman period found on the surface, nothing has been discovered in our excavation post-dating the thirteenth century CE.

Appendix 1. Locus List

Loc.	Str.	Sq	Elev. Top	Elev. Bottom	Locus Above	Locus Below	Description	Baskets	Findings
1	I	D5	2.48 (surface after layer removed by bulldozer)	(base of W4)	-	14	Brown earth	1, 3, 6	Crusader: glazed frying pan
2	I	E8	2.46 (surface after layer removed by bulldozer = top of W3)	(base of W3)	-	4	Brown earth; in SE of square, E of W3: ash layer	2, 4	Animal bones near W3 Crusader: glazed frying pan, glazed cooking pot, local slip-painted bowl, local sgraffito bowl, 13th c. Cypriot sgraffito ware, Port St. Symeon bowl, handmade vessel with painted decor, jug, coarse oval lamp
3	I	E7	2.50 (surface after layer removed by bulldozer)	(top of W5)	-	5, 6	Brown earth	5	Animal bones Crusader: monochrome gritty glazed bowl, early 13th c. Aegean sgraffito bowl, Zeuxippus Ware, Proto-Maolica bowl, unclassified glazed bowl (Byzantium?) Hellenistic: imported slipped bowl
4	I-II	E8	2.11 (base of W3, i.e., below ash layer)	(top of W8)	2	8, 13	Brown earth; in W part of Sq: sand	8, 12	Many animal bones In earth (E part of Sq): Crusader: glazed frying pan, glazed juglet, monochrome glazed bowl, saucer lamp In sand (W part of Sq): Hellenistic: ESA bowl, Rhodian amphora
5	I	E7	2.28 (top of W5)	(base of W5)	3	7	W of W5 and N of W6 (inside building): brown earth	9	Animal bones; glass chunk Crusader: glazed frying pan, monochrome gritty glazed bowl, local slip-painted bowl, 3 early 13th c. Aegean sgraffito bowls, 13th c. Cypriot slip-painted bowl, unclassified glazed bowl Hellenistic: Rhodian amphora
6	I	E7	2.28 (top of W5)	(base of W5)	3	10	E of W5: brown earth	10, 14, 15	Crusader: glazed frying pan, 2 glazed cooking pots, brown painted bowl, early 13th c. Aegean sgraffito bowl, 13th c. Cypriot sgraffito bowl, local slip-painted bowl, amphora, channel-nozzle lamp Byzantine: worn PRS3 Hellenistic: unguentarium, Rhodian amphora <i>Kurkar</i> fragment with layer of glaze
7	I-II	E7	1.73 (base of W5)	(floor)	5	9	W of W5 and N of W6 (inside building): brown earth	13, 17	Crusader: glazed cooking pot, early 13th c. Aegean sgraffito bowl, saucer lamp Hellenistic: Italian amphora glass slag
8	II Cont.	E8	1.47 (top of W8)	(end of excavation)	4	-	S of W8: sand	19, 23, 29, 34, 35	Crusader: early 13th c. Aegean sgraffito bowl, 13th c. Cypriot sgraffito bowl, iron arrowhead Hellenistic: 2 lids of cooking vessels, fishplate BSP, imported slipped bowl; 3 Rhodian, 1 Chian, 1 Aegean and 1 Italian amphoras

Locus List (cont.)

Loc.	Str.	Sq	Elev. Top	Elev. Bottom	Locus Above	Locus Below	Description	Baskets	Find
9	II	E7	1.13 (top of W7)	0.67 (end of excavation)	7	-	S of W7 and W of W5: sand in W part, some brown earth in E part	20	Hellenistic: high-necked cooking vessel, casserole, slipped bowl, Rhodian amphora
10	I	E7	1.73 (base of W5)	1.13 (top of W7)	6	16	E of W5 (outside building?): brown earth	21	Crusader: gritty yellow and painted decor bowl, local sgraffito bowl, early 13th c. Aegean sgraffito bowl Hellenistic: Aegean amphora
11	II Cont.	E7	1.13 (top of W7)	0.17 (end of excavation)	7	-	N of W7: brown earth	24, 30	Crusader: glazed cooking pot, glazed frying pan, early 13th c. Aegean sgraffito bowl Hellenistic: 2 slipped bowls
12	II	E7	1.28 (floor)	1.13 (top of W7)	10	16	E of W5: brown earth	25, 31, 37	Byzantine: worn PRS3 Hellenistic: casserole, slipped bowl, lamp
13	II	E8	1.47 (top of W8)	0.54 (end of excavation = <i>kurkar</i>)	8	-	N of W8: sand	-	No diagnostic finds
14	I-II	D5	2.11 (base of W4)	1.06 (top of W9)	1	15	Brown earth	7, 11, 18, 22, 27, 28	Crusader: monochrome gritty glazed bowl, 2 early 13th c. Aegean sgraffito bowls, amphora, glazed wheel made lamp Hellenistic: unguentarium, 3 Campanian A bowls, color-coated fishplate, eastern relief bowl, glass-cast grooved bowl, lamp; 3 Rhodian, 1 Cypriote and 1 North African amphoras Hellenistic: unguentarium, amphora
15	II	D5	1.06/1.09 (top of W9 and W10)	0.84 (end of excavation)	14	-	Sand	33	Hellenistic: unclassified amphora
16	II	E7	1.13 (top of W7)	0.19 (end of excavation)	12	-	Sand	-	Hellenistic: unclassified amphora
Core Drillings							c. 1 m in diam., c. 3 m deep, through archaeological strata and penetrating into <i>kurkar</i>	16	Hellenistic: low-necked cooking vessel; 2 Rhodian, 1 Knidian, and 1 unclassified amphoras
Surface							After layer removed by bulldozer before excavation		Ottoman: tobacco pipe Crusader: 'Acre bowl', 13th c. Cypriot slip-painted bowl, 13th c. Cypriot sgraffito bowl Hellenistic: 1 Rhodian and 1 Phoenician amphoras

cont. = contaminated

NOTES

¹ The excavation (Permit No. A-832) was conducted between the 11th and 23rd of May 1979, under the direction of the author on behalf of the Israel Department of Antiquities and Museums (IDAM, today—IAA) with the assistance of Laura Cavaillon-Bassan and nine workers from southern Lebanon. Yehuda Ben-Yosef, IDAM Regional Inspector of Antiquities, assisted in the organization of the excavation. Field photographs were taken by the author. Field plans were made by Israel Vatkin and inked by Fiona Reznik. The “Rassco” Rural and Suburban Settlement Company Ltd. financed the work and after the excavation built an S-shaped row of cottages on the site. The metal finds were cleaned by Ella Altmark. Irena Lidsky drew the finds, Tsila Sagiv and Clara Amit photographed them, and Carmen Hersch prepared the plates. Advice was received from the following: Yael Gorin-Rosen on the glass vessels, Jolanta Mlynarczyk (Polish Academy of Sciences) and Tikva Levine on the Hellenistic pottery, Miriam Avissar, Adrian Boas and Edna Stern on the medieval pottery, and Varda Sussman on the lamps. Shimon Gibson read the typescript and made useful comments. The author extends her most sincere thanks to all. This article was written in 1999; no bibliography or information from excavations subsequent to that date has been included.

² In a letter to Moshe Prausnitz (IDAM District Archaeologist), Yehuda Ben-Yosef described the exposed remains as follows “plastered cisterns, one of them with a vaulted roof, built of stones, and two

vaulted halls, apparently from the Crusader period”. He collected “two Rhodian handles with Greek stamps, and pottery sherds from the Hellenistic and the Crusader periods”. Fragments of Hellenistic amphoras including “Rhodian stamped handles” were recovered in the core-drillings (IAA Archives, File ‘Akko, Permit No. 832, April 2, 1979).

³ In 1961 and 1962 tombs were uncovered, mainly at map ref. 1571/2600–01, and soundings showed that they belonged to a cemetery extending further to the south and north in a c. 1 km wide band (see Fortuna 1964a–c; 1966: Fig. 1). Glazed pottery vessels and coins dating to the twelfth and thirteenth centuries were discovered above some of the tombs (Fortuna 1996:450–451). In 1967, excavations conducted from map ref. 15715/26020 northward revealed that from the end of the Persian period and until the third century CE, the cemetery of ‘Akko-Ptolemais extended north of the city walls, along the seashore until the Mizra’ Hospital, and even further northward (Tzaferis 1986:266, Fig. 1). In 1989, Hellenistic tombs were excavated at map ref. 1571/2600 (Feig and Eisenberg 1991) and in 1992 seven cist-tombs of the Hellenistic period were uncovered at map ref. 15690/25943, at the western end of Lohame Ha-Geta’ot Street (Lieberman-Wander, Tatcher and Muqari 1999). The location of the excavation shown in Lieberman-Wander, Tatcher and Muqari 1999: Fig. 1 is wrong and should be c. 400 m further north. My thanks to Eliezer Stern for providing me with the correct map reference.

REFERENCES

- Alpözen T.O., Özdas A.H. and Berkaya B. 1995. *Commercial Amphoras of the Bodrum Museum of Underwater Archaeology: Maritime Trade of the Mediterranean in Ancient Times*. Bodrum.
- Ariel D.T. This volume. Stamped Amphora Handles and Unstamped Amphora Fragments from Acre (‘Akko).
- Armstrong P. 1991. A Group of Byzantine Bowls from Skopelos. *Oxford Journal of Archaeology* 10:335–347.
- Avissar M. 1996a. The Hellenistic and Early Roman Pottery. In A. Ben-Tor, M. Avissar and Y. Portugali. *Yoqne‘am I: The Late Periods* (Qedem Reports 3). Jerusalem. Pp. 48–59.
- Avissar M. 1996b. The Medieval Pottery. In A. Ben-Tor, M. Avissar and Y. Portugali. *Yoqne‘am I: The Late Periods* (Qedem Reports 3). Jerusalem. Pp. 75–172.
- Avissar M. 1996c. The Oil Lamps. In A. Ben-Tor, M. Avissar and Y. Portugali. *Yoqne‘am I: The Late Periods* (Qedem Reports 3). Jerusalem. Pp. 188–197.
- Ben-Dov M. 1975. Crusader Fortresses in Eretz-Israel. *Qadmoniot* 8:102–113 (Hebrew).
- Berlin A. 1997a. From Monarchy to Markets: The Phoenicians in Hellenistic Palestine. *BASOR* 206:75–88.

- Berlin A. 1997b. The Plain Wares. In S.C. Herbert ed. *Tel Anafa II: The Hellenistic and Roman Pottery* (JRA Suppl. S. 10). Ann Arbor. Pp. 1–211.
- Boas A. 1992. Islamic and Crusader Pottery (c. 640–1265) from the Crusader City (Area TP/4). In R.L. Vann ed. *Caesarea Papers: Straton's Tower, Herod's Harbour, and Roman and Byzantine Caesarea*. Ann Arbor. Pp. 154–166.
- Boas A. 1994. The Import of Western Ceramics to the Latin Kingdom of Jerusalem. *IEJ* 44:102–122.
- Boas A. 1997. A Rediscovered Market Street in Frankish Acre? *'Atiqot* 31:181–186.
- Briend J. 1980. Vestiges hellénistiques. In J. Briend and J.-B. Humbert eds. *Tell Keisan (1971–1976): Une cité phénicienne en Galilée*. Fribourg. Pp. 101–116.
- Broneer O. 1977. *Terracotta Lamps* (Isthmia 3). Princeton.
- Brosh N. 1986. Ceramic Remains: Pottery of the 8th–13th Centuries C.E. (Strata 1–3). In L.I. Levine and E. Netzer. *Excavations at Caesarea Maritima 1975, 1976, 1979: Final Report* (Qedem 21). Jerusalem. Pp. 66–89.
- Cornell L.A. 1997. A Note on the Molded Bowls. In S.C. Herbert ed. *Tel Anafa II,i: The Hellenistic and Roman Pottery* (JRA Suppl. S. 10). Ann Arbor. Pp. 407–416.
- Crowfoot G.M. 1957a. Hellenistic Pottery, General List. In J.W. Crowfoot, G.M. Crowfoot and K.M. Kenyon. *Samaria-Sebaste III: The Objects*. London. Pp. 235–272.
- Crowfoot G.M. 1957b. Lamps, and an Early Stone Lamp Holder. In J.W. Crowfoot, G.M. Crowfoot and K.M. Kenyon. *Samaria-Sebaste III: The Objects*. London. Pp. 365–378.
- Dean B. 1927. The Exploration of a Crusaders' Fortress (Montfort) in Palestine. *Bulletin of the Metropolitan Museum of Art* 22:5–46.
- Dichter B. 1973. *The Maps of Acre: An Historical Cartography*. Acre.
- Dothan M. 1976. Akko: Interim Excavation Report. First Season, 1973/4. *BASOR* 224:1–48.
- Dothan M. 1985. Ten Seasons of Excavations at Ancient Akko. *Qadmoniot* 69–70:2–14 (Hebrew).
- Edelstein G. and Avissar M. 1997. A Sounding in Old Acre. *'Atiqot* 31:129–136.
- Feig N. and Eisenberg E. 1991. Akko, Hellenistic Necropolis. *ESI* 9:16–17.
- Fortuna M.T. 1964a. Akko nelle sue vicende storiche dalle origini all'occupazione romana. *Istituto Lombardo (Rend. Lett.)* 98:171–182.
- Fortuna M.T. 1964b. Considerazioni economiche desunte da risultati di scavo. *Istituto Lombardo (Rend. Lett.)* 98:203–212.
- Fortuna M.T. 1964c. Scavo di una necropoli ellenistico-romana ad Akko (Israele). *Bibbia e Oriente* 6:263–266.
- Fortuna M.T. 1966. Campagne di scavo ad Akko 1961–1962. *Memorie dell'Istituto lombardo* 29:442–578.
- Frankel R. 1987. The North-Western Corner of Crusader Acre. *IEJ* 37:256–261.
- Gorin-Rosen Y. 1997. Excavations of the Courthouse Site at 'Akko. Medieval Glass Vessels (Area TA). *'Atiqot* 31:75–85.
- Grose D.F. 1979. The Syro-Palestinian Glass Industry in the Later Hellenistic Period. *Muse* 13:54–65.
- Gunneweg J., Perlman I. and Yellin J. 1983. *The Provenience, Typology and Chronology of Eastern Terra Sigillata* (Qedem 17). Jerusalem.
- Guz-Zilberstein B. 1995. The Typology of the Hellenistic Coarse Ware and Selected Loci of the Hellenistic and Roman Periods. In E. Stern ed. *Excavations at Dor, Final Report IB. Areas A and C: The Finds* (Qedem Reports 2). Pp. 289–433.
- Hadad S. 1997. Oil Lamps from the Third to the Eighth Century C.E. at Scythopolis-Beth Shean. *Dumbarton Oaks Papers* 51:147–188.
- Hadad S. 1999. Oil Lamps from the Abbasid through the Mamluk Periods at Bet Shean, Israel. *Levant* 31:202–224.
- Hartal M. 1997a. Excavation of the Courthouse at 'Akko: Introduction. *'Atiqot* 31:1–2.
- Hartal M. 1997b. Excavation of the Courtyard Site at 'Akko: Summary and Historical Discussion. *'Atiqot* 31:109–114.
- Hayes J.W. 1972. *Late Roman Pottery*. London.
- Hayes J.W. 1985. Sigillate Orientali. In *Atlante delle forme ceramiche II: Ceramica fine Romana nel bacino Mediterraneo (tardo ellenismo e primo impero)* (Enciclopedia dell'arte antica classica e orientale). Rome. Pp. 1–96.
- Hayes J.W. 1992. *Excavations at Saraçhane in Istanbul II: The Pottery*. Princeton.
- Howland R.H. 1958. *Greek Lamps and Their Survivals: The Athenian Agora IV*. Princeton.
- Jacoby D. 1979. Crusader Acre in the Thirteenth Century: Urban Layout and Topography. *Studi medievali, 3a serie* 20:1–45.
- Jacoby D. 1982. Montmusard, Suburb of Crusader Acre: The First Stage of Its Development. In B.Z. Kedar, H.E. Mayer and R.C. Smail eds. *Outremer. Studies in the History of the Crusading Kingdom of Jerusalem*. Jerusalem. Pp. 205–217.
- Jos. Bell.: Josephus Flavius. *Bellum Iudaicum* (H.St. J. Thackeray transl., Loeb Classical Library). London 1927–1928.

- Kashtan N. 1988. Akko-Ptolemais: A Maritime Metropolis in Hellenistic and Early Roman Times, 332 BCE–70 CE, As Seen Through the Literary Sources. In I. Malkin and R.L. Hohlfelder eds. *Mediterranean Cities: Historical Perspectives*. Pp. 37–53.
- Kedar B.Z. 1997. The Outer Walls of Frankish Acre. *'Atiqot* 31:157–180.
- Kennedy C.A. 1963. The Development of the Lamp in Palestine. *Berytus* 14:67–115.
- Kenyon K.M. 1957. Pottery: Hellenistic and Later. A. Hellenistic Pottery I. Stratified Groups. In J.W. Crowfoot, G.M. Crowfoot and K.M. Kenyon. *Samaria-Sebaste III: The Objects*. London. Pp. 217–234.
- Khamis E. 1996. The Metal Objects. In A. Ben-Tor, M. Avissar and Y. Portugali. *Yoqne 'am I: The Late Periods* (Qedem Reports 3). Jerusalem. Pp. 218–235.
- Lapp P. 1961. *Palestinian Ceramic Chronology: 200 B.C.E.–A.D. 70*. New Haven.
- Lieberman-Wander R., Tatcher A. and Muqari A. 1999. Graves of the Hellenistic Period on the 'Akko Seashore. *'Atiqot* 37:169–173 (Hebrew; English summary, p. 178*).
- Makhoul N. and Johns C.N. 1946. *Guide to Acre*. Jerusalem.
- Megaw A.H.S. 1975. An Early Thirteenth-Century Aegean Glazed Ware. In G. Robertson and G. Henderson eds. *Studies in Memory of David Rice*. Edinburg. Pp. 34–45.
- Messika N. 1997. The Hellenistic Terracotta Figurines from Areas TB and TC. *'Atiqot* 31:121–128.
- Mlynarczyk J. 1997. *Alexandrian and Alexandria-Influenced Mould-Made Lamps of the Hellenistic Period* (BAR Int. S. 677). Oxford.
- Morel J-P. 1986. Céramiques à vernis noir d'Italie trouvées à Délos. *BCH* 10:461–493.
- Morel J-P. 1994. *Céramique campanienne I–II*. Paris.
- Pliny NH: *Naturalis Historia* (Loeb Classical Library). London 1938–1963.
- Pringle D. 1982. Some More Proto-Maiolica from 'Athlit (Pilgrims' Castle) and a Discussion of Its Distribution in the Levant. *Levant* 16:104–117.
- Pringle D. 1984. Thirteenth Century Pottery from the Monastery of St. Mary of Carmel. *Levant* 16:91–111.
- Pringle D. 1985. Medieval Pottery from Caesarea: The Crusader Period. *Levant* 17:171–202.
- Pringle D. 1986a. Pottery as Evidence of Trade in the Crusader States. In G. Airdi and B.Z. Kedar eds. *I Comuni italiani nel regno crociato di Gerusalemme*. Genoa. Pp. 449–475.
- Pringle D. 1986b. *The Red Tower (al-Burj al-Ahmar)*. London.
- Pringle D. 1995. Town Defences in the Crusader Kingdom of Jerusalem. In I.A. Corfis and M. Wolfe eds. *The Medieval City Under Siege*. Woodbridge. Pp. 69–121.
- Rey E.-G. 1888. Supplément à l'étude sur la topographie de la ville d'Acre au XIIIe siècle. *Mémoires de la Société nationale des antiquaires de France* 49:1–18.
- Riavez P. 1998. *'Athlit (1217–1291). Ceramiche italiane nel Mediterraneo orientale*. Tesi di Laurea, Univ. of Trieste. Trieste.
- Rosenthal-Hegginbottom R. 1995. Imported Hellenistic and Roman Pottery. In E. Stern ed. *Excavations at Dor, Final Report IB. Areas A and C: The Finds* (Qedem Reports 2). Jerusalem. Pp. 183–288.
- Rosenthal R. and Sivan R. 1978. *Ancient Lamps in the Schloessinger Collection* (Qedem 8). Jerusalem.
- Scheibler I. 1976. *Griechische Lampen* (Kerameikos. Ergebnisse der Ausgrabungen XI). Berlin.
- Simpson St. J. 1993. Turkish Clay Pipes: A Review. *Society for Clay Pipe Research Newsletter* 39:17–23.
- Slane K.W. 1997. The Fine Wares. In S.C. Herbert ed. *Tel Anafa II,i: The Hellenistic and Roman Pottery* (JRA Suppl. S. 10). Ann Arbor. Pp. 247–393.
- Stern E. 1997. Excavation of the Courthouse Site at 'Akko: The Pottery of the Crusader and Ottoman Periods. *'Atiqot* 31:35–70.
- Strabo. *The Geography of Strabo* (H.L. Jones transl., Loeb Classical Library). London 1949–1969.
- Tac. Hist.: Cornelii Taciti *Historiarum libri* (C.D. Fisher ed.) (*Scriptorum classicorum bibliotheca Oxoniensis*). Oxford 1910.
- Tzaferis V. 1986. The Ancient Cemetery of Akko-Ptolemais. In M. Yedaya ed. *The Western Galilee Antiquities*. Tel Aviv. Pp. 266–280 (Hebrew).
- Vitto F. 1980. 'Akko. *HA* 73:38–39.
- Vitto F. 1998. Maḥoza d-Yamnin: A Mosaic Floor from the Time of Eudocia? *'Atiqot* 35:109–135.
- Weinberg G.D. 1961. Hellenistic Glass Vessels from the Athenian Agora. *Hesperia* 30:380–392.
- Yeivin Z. and Edelstein G. 1970. Excavations at Tirat Yehuda. *'Atiqot* 6:56–67 (Hebrew; English summary, p. 6*).
- Zemer A. 1977. *Storage Jars in Ancient Sea Trade*. Haifa.