

THE GLASS VESSELS FROM KHIRBAT BURIN

Yael Gorin-Rosen

INTRODUCTION

The glass vessels presented in this report were excavated during three seasons conducted at Khirbat Burin in the eastern Sharon plain (see Kletter and Stern 2006; this volume).¹ They are discussed below in chronological and typological order based on the stratigraphy identified by the excavator. The fragments chosen for discussion and illustrated in this study are mainly those of the Mamluk period, as they are predominant at the site and until recently, only rarely mentioned in publications.

The pre-Mamluk glass vessels uncovered at Khirbat Burin present the most common types of the Late Roman and Byzantine periods (Fig. 1) and have been published already from other sites in the region; therefore, they are mentioned only briefly. Another group of vessels is from the Early Islamic period (Fig. 2), presenting small fragments of diagnostic types, known from other sites in the region. The importance of the glass assemblage from Khirbat Burin lies in the well-dated group of Mamluk vessels (Figs. 3–5), which comprises the main subject of this report.

The first season of excavation (1998) uncovered 110 diagnostic glass fragments of a wide range of vessel types, 19 of which are presented in this report (Table 1). The second season of excavation (1999) yielded only 15 diagnostic fragments, among them some very important vessels shown in Fig. 5:1, 2, as well as a few other, earlier vessels mentioned in the text (not illustrated; see Table 1). During the third season (2000), the largest number of diagnostic fragments was retrieved (Table 1), including mainly Byzantine and Early Islamic vessels.

¹ I wish to thank Raz Kletter for inviting me to study the glass finds from his excavations at Khirbat Burin. Olga Shorr restored the glass vessels and Michael Miles and Carmen Hersch drew them.

Table 1. Number of Glass Fragments Recovered per Excavation Season

Permit No./Season	N	Diagnostic Fragments	Figure
A-2957/1998	296	110	1:2–4, 7; 3:1–7; 4:1–9
A-3145/1999	40	15	1:5, 6; 2:4; 4:7; 5:1, 2
A-3188/2000	331	136	1:1, 8–10; 2:1–3
<i>Total</i>	<i>667</i>	<i>261</i>	<i>Total Illustrated: 32</i>

GLASS VESSELS

THE LATE ROMAN AND BYZANTINE PERIODS (Fig. 1)

Several diagnostic fragments are attributed to the Late Roman period, mainly the fourth century CE. These vessels belong to the most common types of bowls and beakers, which are widely distributed in the land of Israel and are already well-published. Most of these vessels are not illustrated here and are only briefly mentioned in the text below.

Three vessels of this period have been illustrated (Fig. 1:1–3). The first two (Fig. 1:1, 2) are dated to the fourth century CE. Bowl No. 1 was found in Sq K, in the Western Area, yielding a mix of pottery dated from the Late Roman to the Early Islamic periods (Kletter and Stern, this volume). Bowl No. 2 was found in a room (L135) attributed to Stratum IIa, dated to the Mamluk period (Kletter and Stern 2006:174, 210), although the vessel is of earlier date. The rim illustrated in Fig. 1:3 was found in L148 attributed by the excavator to Stratum III. Most of the pottery from this locus is dated to the Byzantine period (Kletter and Stern 2006:174). The rim is dated to the Late Roman period, but could also belong to the Byzantine period.

Byzantine glass vessels were unearthed in a few places at Khirbat Burin. These are very characteristic of the fifth and sixth centuries CE (Fig. 1:4–9). The two wineglass bases (Nos. 5 and 6) were found in L226, attributed by the excavator to Stratum III, yielding mainly Early Islamic material with some earlier finds as well (see Kletter and Stern, this volume). Bottle No. 7 is a surface find and the two other vessels (Nos. 8 and 9) were unearthed in Loci 334 and 335, where coins, dated from the third through the sixth centuries CE, were retrieved (see Kletter and Stern, this volume).

Shallow Bowl with Cut-Off Rim (Fig. 1:1).— This type of bowl was common during the Late Roman period, and is known as a ‘segmental bowl.’ The bowls are either plain or decorated with horizontal incisions or an incised pattern. Two similar bowls were found at Khirbat el-Ni‘ana, attributed to local production during the Late Roman–early Byzantine period (Gorin-Rosen and Katsnelson 2007:129, 132, Figs. 26:1; 29:1, 2; see further references therein to Ras el-‘Ein and Shekhem, both dated to the fourth century, and to Beirut, dated to the fifth century CE).

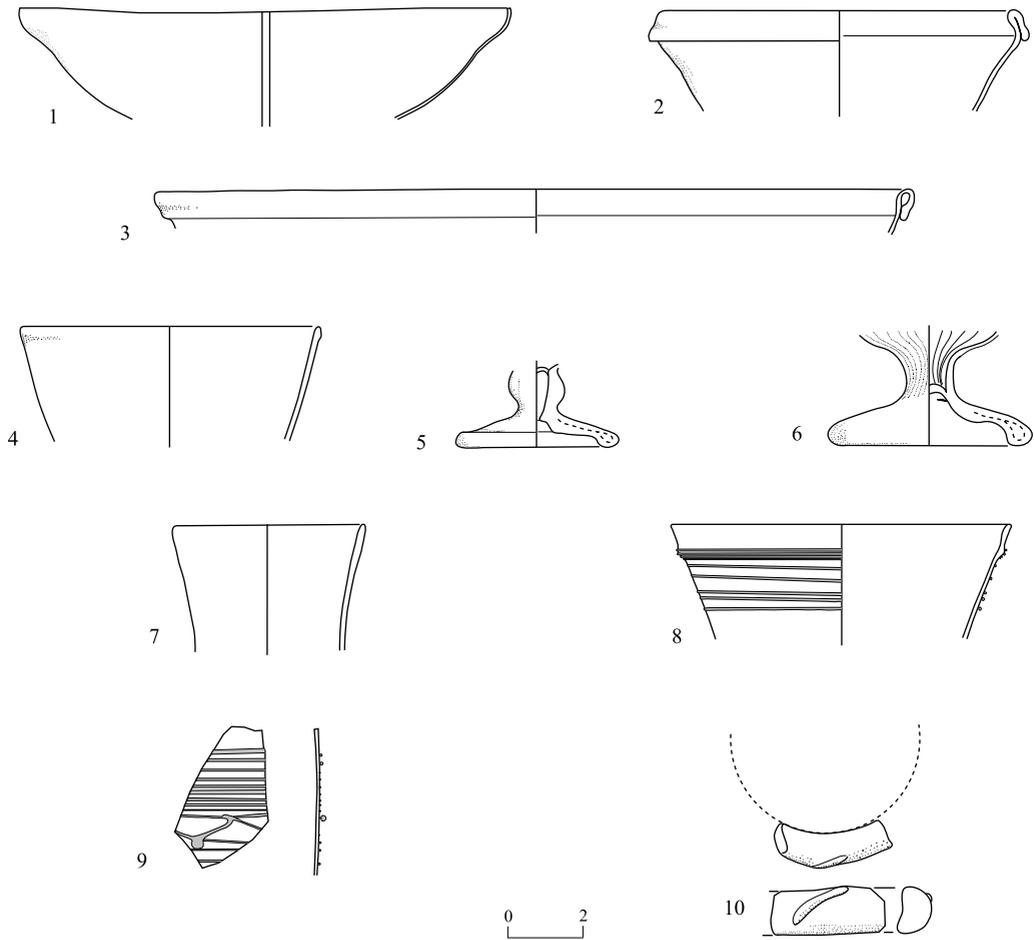


Fig. 1. Glass vessels from the Late Roman and Byzantine periods.

1. L345, B3253. Rim and wall fragment. Light green glass covered with silver weathering, iridescence and sand deposits. Rather clear glass with small bubbles. Uneven, upright cut-off rim. Curving wall with polishing marks on exterior. Rim diam.: 12.2 cm.

Bowls with Out-Folded Rim (Fig. 1:2, 3).— Bowls with out-folded rims were found in large quantities at Khirbat Burin during all three seasons of excavations. They were made of bluish and green-shaded glass, and they probably represent the Late Roman and early Byzantine occupation periods at the site.

The bowl illustrated in Fig. 1:2 is characterized by an incurving, out-folded rim and slanting wall. Its rather small size, the angle of the rim and the lack of an applied handle makes it likely to have been part of a Late Roman bowl rather than a Byzantine bowl-shaped oil lamp. A very similar bowl, dated to the fourth century CE, was found in the fill of a Roman painted tomb at Ashqelon (Katsnelson 1999:68*–69*, Fig. 1:4). Most of the Late

Roman bowls with similar rims are much larger and wider, as, for example, a bowl found at Jalame (Weinberg and Goldstein 1988:41–43, Fig. 4-3:26).

The rim fragment illustrated in Fig. 1:3 belongs to a very wide, open bowl attributed to the Late Roman period, although this type also extends into the Byzantine era. A similarly wide bowl was found at Jalame (Weinberg and Goldstein 1988:41–43, Fig. 4.3:28). Another similar bowl was found in a Late Roman–Byzantine burial cave at Bet She’an (Katsnelson 2014:52*, Fig. 14:7).

2. L135, B1224. Rim and wall fragment. Bluish green glass covered with sand deposits. Small deep bowl. Incurving out-folded rim. Slanting wall. Rim diam.: 9.6 cm.

3. L148, B1332. Small rim fragment. Bluish green glass covered with silver weathering, iridescence and sand deposits. Rather wide bowl. Upright out-folded hollow rim. Rim diam.: 20 cm.

Bowl with Horizontal Ridge (not illustrated).— This represents a very common type of bowl, mainly dated to the fourth century CE. A comparable bowl was found in L307, B3035. Similar bowls were found, e.g., at Khirbat el-Ni’ana, attributed to local production during the Late Roman–early Byzantine period (Gorin-Rosen and Katsnelson 2007:77–79, Figs. 1:6–9, and see further references therein). Many bowls of this type were unearthed in the glass workshop at Jalame, dated to the second half of the fourth century CE (Weinberg and Goldstein 1988:45–47, Fig. 4.3, and see further discussion and references therein).

Beakers with Solid Base (not illustrated).— This is one of the most characteristic vessel types of the Late Roman period, of which at least seven specimens were found during two seasons of excavations.² More than 18 beakers of this type were unearthed at Khirbat el-Ni’ana, attributed to local production at the site during the Late Roman–early Byzantine period (Gorin-Rosen and Katsnelson 2007:93, Figs. 8:3–9, 32:1, 2; and see further discussion and references therein).

Double-Kohl Tubes (not illustrated).— At least two fragments of double-kohl tubes were found during the excavations: one small, in-folded rim fragment (L226, B2157) and half of the lower part of another one (L370, B3368). Both undecorated vessels present the most common type of double-kohl tubes, which are dated to the Late Roman or Byzantine period. A rather large group of plain double kohl tubes was found at Khirbat el-Ni’ana, attributed to local production during the Late Roman–early Byzantine period (Gorin-Rosen and Katsnelson 2007:108–114, Figs. 17–21, and see further discussion and references therein).

² These fragments were found in Loci 102, 118, 140, 147, 338, 345 and 373.

Wineglasses (Fig. 1:4–6).— The most diagnostic vessel fragments recovered are those belonging to wineglasses with a tubular base and a beaded foot. One rim (Fig. 1:4) is probably of a wineglass, but it could also be part of a large bottle. Two bases (Fig. 1:5, 6) were found in L226, attributed by the excavator to Stratum III, yielding mainly Early Islamic material with some earlier finds as well (see Kletter and Stern, this volume). The vessel illustrated in Fig. 1:5 is plain and rather small, while the one represented in Fig. 1:6 is decorated with twisted mold-blown ribbing on the body and has a rather large foot.

Bases similar to Fig. 1:5 are common, see for example the base found at Khirbat el-Ni‘ana (Gorin-Rosen and Katsnelson 2007:93–94, Fig. 8:17, and see further references to Ashqelon and Jerusalem therein). Wineglasses with mold-blown decoration are not very common and only few have been published to date, e.g., a mold-blown base and foot unearthed in the Byzantine fill of the Roman painted tomb at Ashqelon (Katsnelson 1999:70*–71*, Fig. 2:12). A few fragments of this type were found in other loci (not illustrated).

4. L148, B1332. Fragment of rim and wall. Clear bluish glass. Fine fabric. Slightly slanting rounded rim. Rim diam.: 8 cm.

5. L226, B2148. Half base and complete foot. Greenish glass covered with sand deposits and iridescence. Hollow ring-base and foot, rounded on the connection with the body. Remains of pontil scar. Base diam.: 4.4 cm.

6. L226, B2157. Small fragment of base, complete foot and part of body. Light bluish glass covered with sand deposits and iridescence. Hollow ring-base and thick hollow foot, rounded on the connection with the body. Decorated with twisted mold-blown ribbing on the body. Base diam.: 5.4 cm.

Bowl-Shaped Oil Lamps with Hollow Conical Stems (not illustrated).— A few stems of bowl-shaped oil lamps were retrieved. These bases are dated to the Byzantine period. For a complete example of one such oil lamp, see the example from Khirbat el-Ni‘ana (Gorin-Rosen and Katsnelson 2007:116–117, Figs. 22:6; 37:4, and see further references to Nir Gallim, dated to the fifth and sixth centuries CE, Caesarea Maritima and Samaria therein). No remains of the typical late Byzantine types with beaded stems were found at Khirbat Burin.

Hollow conical bases of this type were found also in L115, B1110, and in L381, with a small fragment of the wineglass, as well as the incised blue glass preserved (Fig. 2:3), dated to the Early Islamic period.

Various Bottles (Fig. 1:7–9).— A few fragments of Byzantine bottles were found. The one illustrated in Fig. 1:7 is a surface find. It has a plain rim, while Fig. 1:8 is decorated with applied trails of darker color wound around the neck. Another fragment (Fig. 1:9) of a

trail-decorated neck presents a more complicated design of horizontal thin trails and a thin zigzag trail in-between.

Plain bottles similar to the one illustrated in Fig. 1:7 were found in the Byzantine fill of the Roman painted tomb at Ashqelon (Katsnelson 1999:72*–74*, Fig. 3:9–12). Bottles with thin blue trails like the one represented in Fig. 1: 8 were found in another excavation at Ashqelon, dated to the Byzantine period (Katsnelson and Jackson-Tal 2004:104–106, Fig. 2:9–10, and see further references therein).

7. L101, B1015. Small rim fragment. Yellowish green glass with darker streaks. Very bubbly glass. Low quality fabric. Slightly slanting rounded rim. Rim diam.: 5.2 cm.

8. L335, B3244. Small rim and neck fragment. Colorless glass decorated with turquoise glass trails. Covered with iridescence and sand deposits. Uneven rounded rim. Funnel mouth decorated with eight unevenly wound thin trails of turquoise glass. Rim diam.: 6 cm.

9. L334, B3187. Neck fragment. Colorless glass decorated with turquoise trails, covered with iridescence and sand deposits. Thin wall decorated with multiple horizontal thin trails with one zigzag trail in-between on the lower part.

Bracelet (Fig. 1:10).— This type of bracelet, identified by Spaer as ‘diagonally ribbed bracelets’ of the monochrome group (Spaer 2001:199, Nos. 447, 448, Pl. 33:447, 448), is dated to the Late Roman–Byzantine periods. It was found on the surface of the Western Area, where a mixture of Roman, Umayyad, Abbasid and Fatimid coins were uncovered (see Kletter and Stern, this volume), as well as an Early Islamic glass vessel (Fig. 2:1).

10. L363, B3339. Very small fragment. Dark color. Covered with sand deposits and pitting. Roughly semicircular cross-section. Only one protruding diagonal rib remains.

THE EARLY ISLAMIC PERIOD (Fig. 2)

The Early Islamic period is presented by some characteristic fragments, including bowls, decorated vessels and one alembic. The fragments presented in this section were found in loci attributed to Stratum III, where most of the poorly preserved architectural elements and pottery were dated to the Early Islamic period.

Vessel No. 1 was unearthed in L363, where coins dated to the Umayyad and Abbasid periods were found (see Kletter and Stern, this volume). Vessel No. 2 was found in Sq L, Stratum III, where a group of Early Islamic pottery vessels were uncovered, dated to the ninth–tenth centuries CE (see Kletter and Stern, this volume). Vessel No. 4 was found in L226, attributed by the excavator to Stratum III, including mainly Early Islamic, but earlier finds as well (see Kletter and Stern, this volume).

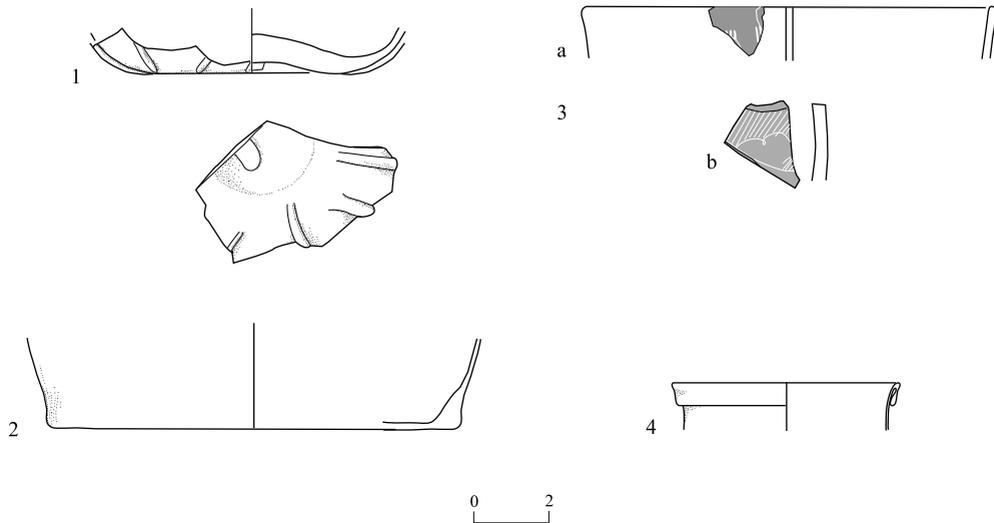


Fig. 2. Glass vessels from the Early Islamic period.

Vessel with Uneven Ribbed Decoration (Fig. 2:1).— This rather thick, uneven base was decorated with ribs on the lower part of the wall at the joint with the body. The ribs are not even and each one faces a different direction. They were probably made by mold-blowing. The fabric and quality of workmanship of this vessel, as well as its thickness, attribute it to the Early Islamic period. A deep cylindrical bowl with a thick base and mold-blown thick ribs on its lower part was found at Bet She'an in an Umayyad context (Hadad 2005:21–22, Pl. 4:82). Two bowls of this type unearthed at Khirbat el-Thahiriya and were dated to the Early Islamic period (Jackson-Tal 2012:59*–60*, Fig. 1:11, 12).

1. L363, B3339. Fragment of base and wall. Greenish blue glass covered with iridescence, pitting and sand deposits. Thick, concave base with crude scar with traces of glass and metal from the pontil. Remains of four uneven ribs on the lower part of the body down to the base.

Bowls with a Flat Base and Triangular Section at the Connection with the Wall (Fig. 2:2).— This type of base appeared during the Early Islamic period, mainly dated to the Abbasid period. A comparable base of a bowl with wheel-cut decoration was found at Bet She'an, in a wall of one of a group of houses of the Abbasid–Fatimid periods (Hadad 2005:38, Pl. 34:677). Two variants of this type were identified in the Youth Hostel site at Bet She'an: one is a big deep bowl with a triangular section base, similar in size to Fig. 2:2, and another smaller base, both dated to the Abbasid period (Katsnelson 2014:40*, Fig. 8:3, 6).

2. L317, B3166. Small fragment of base and wall. Green glass covered with weathering, iridescence, pitting and sand deposits. Flat base thickened around its perimeter, where it connected to the wall, triangular in section. Upright, rather thin wall.

Vessel with Incised Decoration (Fig. 2:3).— The two illustrated fragments probably belong to the same bowl. One is a small, thick rounded rim fragment with remains of incised short vertical lines in small groups (Fig. 2:3a). This type of decoration is well-known from similar bowls found at other sites, as well as from collections (see, for example, Carboni 2001:76–81). The second fragment is decorated with unclear design, which bears similarities to other vessels with incised decorations (Fig. 2:3b). An incised cylindrical bowl of dark blue glass from Bet She'an has both decorations below the rim and in a central frieze on the body. It is dated to the Abbasid period (Hadad 2005:38, Pl. 33:650).

This technique has been known for many centuries, dating back to Roman times. During the Islamic period, glass craftsmen used the same technique in different ways, and for different forms; sometimes the incisions look more like scratches. Decorations consist of vertical and horizontal bands accommodating floral and geometric designs, and, in some cases, Arabic inscriptions.

The distribution of incised decorations is quite wide in the East, including Egypt, Israel, Syria, Iraq, Iran, Armenia and China. Some of the vessels found in excavations are dated to the ninth century CE (see Kröger 1995:116–119 for discussion and further references; Carboni 2001:76–81; see also Hadad 2005:22–23, 37–38).

A rather large group of incised vessels was found at Bet She'an. The earliest two fragments were retrieved from Umayyad contexts, but the majority of the group is later, dating to the Abbasid and Fatimid periods (Hadad 2005:22–23, 37–38, Pls. 5:96–97; 33:650–663; 34:664–668, and see further discussion and references therein). A rather large fragment of a blue incised bowl was found at Tiberias (Lester 2004b:60–61, Fig. 5.1:7). Several fragments of vessels with incised decoration were found in Ramla, viz. at 'Opher Park (Gorin-Rosen and Katsnelson 2005:104, Fig. 1:8) and Herzl Street (Katsnelson 2009a: Figs. 8:9, 9), as well as in other salvage excavations (Gorin-Rosen 2008b:49–50, Color Pl. 1:8; 2010:245, Pl. 10.8:6).

3a, b. L381. Small fragment of rim and small body fragment. Dark cobalt blue glass covered with silver weathering, iridescence and pitting. Upright, thick rounded rim. Two groups of vertical incised lines, one with remains of three lines, the other with only two left. The body fragment is rather thick. Slightly curving wall with unclear pattern, like a cloud with vertical lines surrounding it. The pattern is carelessly incised.

Vessel with Tonged Decoration (not illustrated).— A very small body fragment of a bowl with horizontal ovals made by tonged technique was found at Khirbat Burin. This practice was introduced during the Umayyad period and continued into the Abbasid period. The vessels are decorated with a pair of tongs, forming impressions on both sides of the wall. Vessels with tonged decoration are usually open shapes, mainly bowls and beakers, with only very few examples which could also belong to bottles or jars with a wide orifice.

Many fragments were found in recent excavations in Israel, with a wide geographical distribution (for further discussion and references, see Lester 2004a:204–206; Hadad 2005:37; Gorin-Rosen 2010:242–245). Vessels with tonged decoration were found in Ramla (Gorin-Rosen and Katsnelson 2005:101, 103, Fig. 1:2; and see further references to Caesarea therein; Gorin-Rosen 2010:242–245, Pl. 10.8:1–5) and at Ḥorbat Ḥermeshit (Winter 1998:10*, 174, Fig. 2:10).

Our fragment is too small to reconstruct the complete vessel and its decoration pattern. Ovals in various sizes and arrangements were the most common shape used in this technique. For excavated examples dated mainly to the Abbasid–Fatimid periods, see Bet She’an (Hadad 2005:37, Pls. 31:615, 617–619; 32:630–640).

Alembic (Fig. 2:4).— This vessel type, also known as ‘cupping glasses,’ usually consists of a small bowl, with an out-folded or upright rounded rim and a long, tapering spout attached below the rim. Examples of alembics with both types of rims were found in Ramla, and have been dated to the Umayyad period (Gorin-Rosen 2010:227, Pl. 10.2:18–21, and see discussion of the type and references therein).

The small size of the rim illustrated in Fig. 2:4, as well as its delicate folding, are characteristic of this type of vessel. These are very common, found in many excavations in the country, usually in eighth–ninth centuries CE contexts.

A few other vessels of this type have been found in Ramla, in a cellar c. 50 m south of the White Mosque compound, within an eighth-century CE context (Gorin-Rosen 2008b:47, Color Pl. 1:4). Two other fragments, found during excavations conducted by Don Glick, were preliminarily published together with a suggested reconstruction (Gorin-Rosen 1999b:12–14, Fig. 1:19–21). Alembics were also found in Caesarea Stratum VIII, dated to 640–750 CE (see Pollak 1999:29*; 2003:165–166). A rather large group of alembics was uncovered at Bet She’an, some of these are dated to the Umayyad period, and others, to the Abbasid–Fatimid periods (Hadad 2005:29, 47–48, Pls. 23:453–455; 46:979–981, and see further references to other sites and collections therein).

Comparable vessels, identified as ‘cupping-glasses with folded lips’ were found in large quantities at al-Mina, Syria, and dated to the ninth–tenth centuries CE (Lane 1937:63, 66, Fig. 10:T). Others were found at Nishapur, dated to the tenth–eleventh centuries (Kröger 1995:186–188, No. 241–242), and at al-Fustat (Shindo 1992: Fig. 6-20:1, 2).

4. L226, B2157. Small fragment of rim and wall. Light greenish blue glass covered with silver weathering, iridescence and sand deposits. Upright out-folded rim, unevenly tooled. Very thin wall. Rim diam. 5.4 cm.

THE MAMLUK PERIOD (Fig. 3)

The Mamluk glass assemblage is rather heterogeneous. Most diagnostic is the group of decorated vessels with marvered trails, and one vessel with remains of enamel painting. Various other types concern plain vessels. They are associated with the architectural remains of the latest occupation in Stratum IIc, during the Mamluk period, and are contemporaneous with the pottery found in the same contexts. Most of the vessels presented below were found in L118, attributed to Stratum IIb. It is dated by the excavator to the Mamluk period, i.e., the late thirteenth to fourteenth centuries CE (see Kletter and Stern, this volume).

Vessels Decorated with Marvered Trails (Fig. 3:1–6)

The first and most diagnostic group of Mamluk glass vessels is that of marvered glass. The most characteristic feature is the vessels' dark colored body decorated mainly with white opaque trails which were applied to the exterior while hot and then marvered on a horizontal flat table or stone. The result was that the trails were fused into the wall of the vessels. In some exemplars, more trails were applied later on to the neck or below the rim, and these sometimes protrude from the wall. The vessels found at Khirbat Burin reflect two main groups: deep bowls and cosmetic bottles. Four of the vessels (Fig. 3:1–4) are of purple glass and two (Fig. 3:5, 6) are of blue glass, the latter decorated with white trails.

Bowl with Incurving Rim (Fig. 3:1).— The shape of this small bowl is very characteristic of the Mamluk period. The incurving rim and globular body, as well as the shallow, mold-blown wide ribs on the body and the additional marvered trails are very common (for a discussion and several examples of this type from Jerusalem, see Brosh 2014:913–914, Fig. 4:1–5, 7). Compared with some published parallels, it seems that the bowl illustrated in Fig. 3:1 is of particularly fine and delicate workmanship. Usually, these bowls are larger, with thicker rims and walls, and the decoration is less evenly applied. A bowl of similar shape with marvered horizontal trails on and below the rim was found at Ḥama, Syria (Riis 1957: Fig. 196).

1. L118, B1160. Rim and wall fragment. Purple glass with opaque white trails, covered with iridescence and pitting. Incurving, thickened, rounded rim decorated with a white thick horizontal trail on its edge and eight thinner trails below it. Mold-blown shallow slanting wide ribs are below these trails. Another group of short horizontal white fused-in trails are below the molded decoration. Rim diam.: 10 cm.

Deep Bowl with Wide Orifice, Thick Shelf-Like Rim Bent Outward (Fig. 3:2).— This wide open vessel has characteristic fabric and decoration; however, it presents a rare large subtype, which was not included in Brosh's (2014) typology of marvered glass from Jerusalem. A rim fragment of a comparable bowl was found at Ḥama (Riis 1957: Fig. 199).

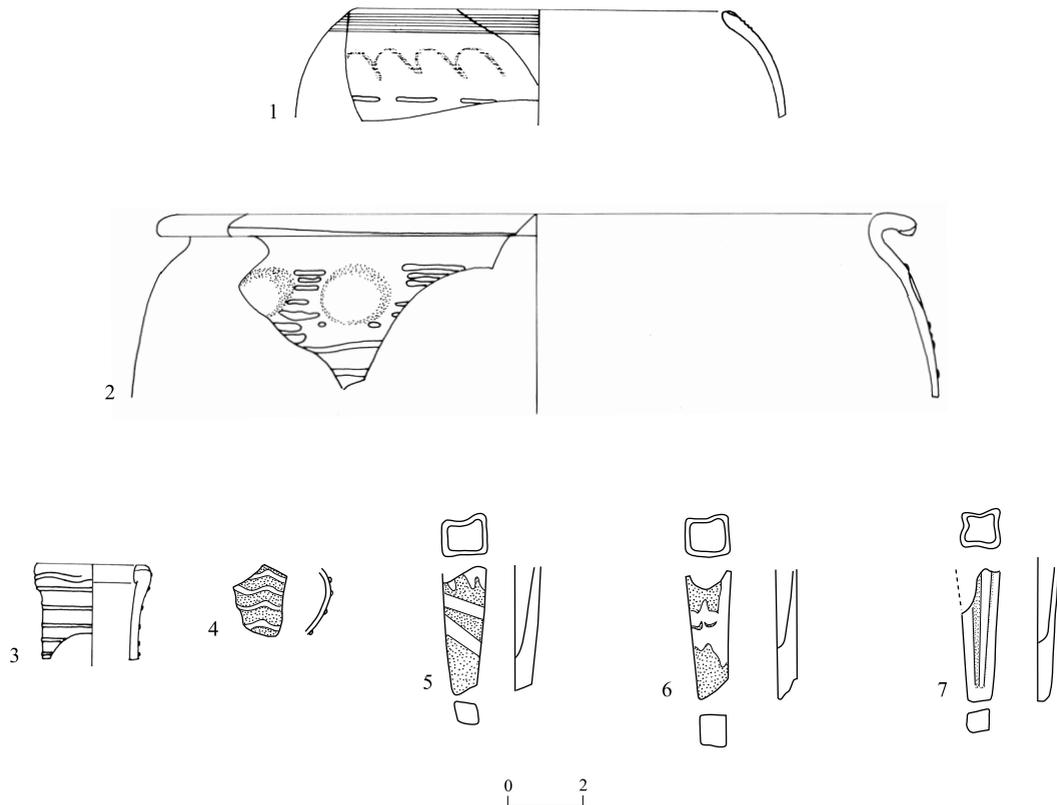


Fig. 3. Decorated glass vessels from the Mamluk period.

2. L114, B1180. Rim and wall fragment. Purple glass with opaque white and light green trails. Brown weathering, iridescence and severe pitting; wide mouth with thick shelf-like rim bent outward. An opaque grayish green trail is applied unevenly to the edge of the rim. Mold-blown indents on the wall below the rim. Marvered opaque white trails on the wall: short uneven horizontal lines between the indents, and uneven continuous trails below it. Rather thick wall, thinner further down to the bottom. Rim diam.: 20 cm.

Bottle with Horizontal Trails on the Rim and Neck (Fig. 3:3).— Based upon its typical color combination of purple and white, this bottle can be attributed to the marvered group, although the applied trails are protruding rather than fused-in. A bottle with similar decoration and colors was found in the fortification at Bet She'an, excavated by Adrian Boas (for illustrations, see Brosh 2005b: Fig. 10.2:13, 14). Bottles with similar horizontal trails on the rim and the neck were found in Jerusalem (Winter 2012: Fig. 4:10; Brosh 2014: Fig. 5:25).

3. L118, B1160. Rim and neck fragment. Purple glass with opaque white trails, covered with sand deposits. In-folded thickened rounded rim decorated with white thick horizontal trail on its edge and spaced thinner trails below it. Cylindrical neck. Rim diam.: 3 cm.

Bottle with Feather Decoration on Body (Fig. 3:4).— The body fragment illustrated in Fig. 3:4 probably belongs to the group of small cosmetic bottles with a tapering, square-sectioned body, like the ones represented in Fig. 3:5, 6. A rim and neck from a bottle of this type were unearthed at Khirbat el-Ni'ana, dated to the Mamluk period (Gorin-Rosen and Katsnelson 2007:147–148, Fig. 40:2, and see further references therein).

4. L126, B1206. Small body fragment. Purple glass with white trails. Low quality fabric. Thin curving wall with spaced, wavy protruding trails.

Bottles with Tapering Square-Section Body (Fig. 3:5, 6).— The illustrated bases (Fig. 3:5, 6) represent a very common type of cosmetic bottles, somewhat pyramidal in shape, with square bodies tapering to a pointed base. The necks are usually bulgy and the rim is upright, rounded or in-folded. These bottles are made of dark-colored glass, mainly purple or dark blue, but some dark green or brown, decorated with opaque white trails marvered into the body in various patterns. Four bottles of this type were unearthed in Area T of the Jewish Quarter excavations in Jerusalem and dated to the Mamluk period (Brosh 2005b:25–26, 45–47, Figs. 22:35; 23:8; 2014:916, Fig. 5:15, and see further references and discussion therein). Another similar base was found in the Jaffa Gate Excavations, Jerusalem (Ouahnouna 2014: Fig. 2:7). A rim and lower part of vessels of this type were found at Khirbat Ka'kul, dated to the Mamluk period (Gorin-Rosen 2006b:109, Fig. 2:6, 7, and see further references therein). A blue base of this type was found in excavations at Moshav Zerahya, 4 km east of Ashqelon, within a Mamluk glass assemblage (Katsnelson 2013: Fig. 17:4).

Comparable bottles were found in Mamluk strata at Bet Yerah (Brosh 1993:290–291), Yoqne'am (Lester 1996:121, Fig. XVII.12:3) and Giv'at Yasaf (Tell er-Ras) north of 'Akko (Gorin-Rosen 1999a:138–139, Fig. 1:9, and see therein further references to Hama, Syria, and Quseir al-Qadim). A base of this type was discovered at Mary's Well, Nazareth, and dated to the Mamluk period (Alexandre 2012:97–98, Fig. 4.6:6).

5. L118, B1288. Base fragment. Blue glass with white trails covered with iridescence and sand deposits. Uneven section, thickening downward. Thick base, knocked off diagonally.

6. L112, B1089. Base fragment. Blue glass with white trails covered with iridescence, pitting and sand deposits. Uneven section, thickening downward. Thick base, knocked off diagonally.

Vessel Decorated with Mold-Blown Ribs (Fig. 3:7).— The base fragment illustrated in Fig. 3:7 probably belongs to a small cosmetic vessel similar in shape to the bottles presented in

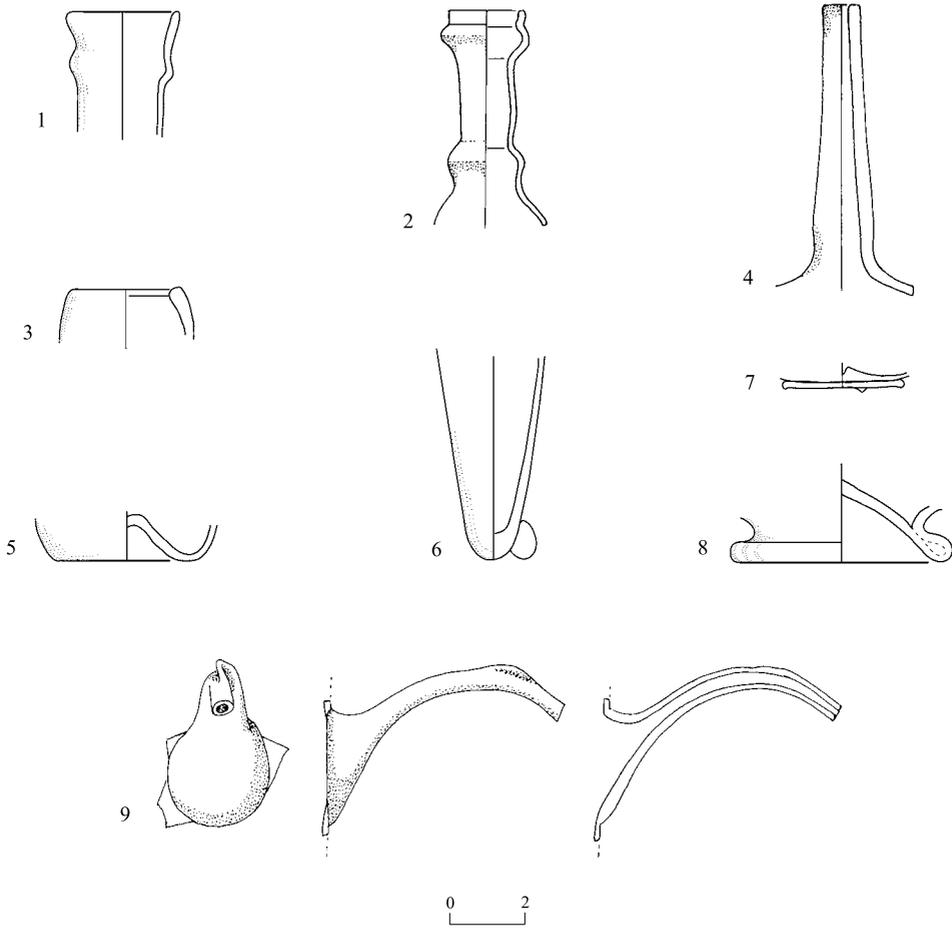


Fig. 4. Plain glass vessels from the Mamluk period.

Fig. 3:5, 6, but with a different type of decoration. Usually, the mold-blown bottles with a tapering base have an even, wavy, flower-shaped section, like the one found at Khirbat el-Baṭīya (Gorin-Rosen 2006a: 31*, 34*, Fig. 1:12, and see therein references to Ḥama, Baniyas and Ramat Ha-Nadiv), while the one from Khirbat Burin is rather simple and square in section. However, based on its shape, fabric and color it can be dated to the Mamluk period.

7. L112, B1056. Base fragment. Turquoise glass covered with iridescence, pitting and sand deposits. Thin wall, uneven, almost wavy section, thickened downward. Thick base, knocked off diagonally.

Plain Vessels (Fig. 4:1–9)

Bottles with a Bulge below the Rim (Fig. 4:1).— Bottles with an open fold below the rim are well-known from the medieval period. They are found in Crusader, Ayyubid and Mamluk assemblages. A bottle of this type was found at Apollonia-Arsuf within a glass assemblage

assigned to the last day of the castle in 1265 (Jackson-Tal and Tal 2013: Fig. 11:2). A few bottles of this type were found in the Jewish Quarter, Area X-4, within an assemblage assigned to the twelfth century CE (Brosh 2012: Pl. 15.1:G7–9). A similar rim-and-neck fragment was found at Bet She'an, dated to the Ayyubid–Mamluk periods (Hadad 2005:60, Pl. 51:1059). A bottle with a similar bulge was found in a non-stratified context at Beirut (Jennings 2006:233–234, Fig. 10.16:3, and see further discussion and references therein).

1. L101, B1015. Fragment of rim and part of neck. Purple glass covered with sand deposits, black weathering and pitting. Upright rounded rim with shallow bulge below it. Cylindrical neck. Rim diam.: 3 cm.

Bottle or Jug with Open Bulge below the Rim and on the Neck (Fig. 4:2).— A bottle of this type was found at Apollonia-Arsuf, dated to 1265 CE at latest (Jackson-Tal and Tal 2013: Fig. 11:1). Another one of this type was found in the Jewish Quarter, Area X-4, dated to the fourteenth century (Brosh 2012:415, Pl. 15.2:G36). A decorated Mamluk jug with a similar bulge below the rim and on the lower part of the neck was found in Jerusalem, in the Jewish Quarter, Area T, dated to the Mamluk period, thirteenth to fifteenth centuries CE (Brosh 2005a:188, Fig. 4). Brosh mentioned that this type of vessel is still being manufactured to this day in the workshops of Hebron. A similar rim and neck with remains of an additional handle was found at Bet She'an, and dated to the Ayyubid–Mamluk periods (Hadad 2005:60, Pl. 51:1065). A lentoid bottle with similar rim and neck was found in the Youth Hostel site at Bet She'an dated to the Ayyubid–Mamluk periods (Katsnelson 2014:46*–47*, 50*, Fig. 13:1). A contemporary vessel with a similar rim and neck with remains of an additional handle was also found at Bet She'an (Hadad 2005:60, Pl. 51:1065). Comparable bottles, albeit without handles, were found at Hama, dated from the eleventh to the fourteenth century CE (Riis 1957:36, 41, Figs. 45, 82).

2. L118, B1144. Complete rim and neck. Colorless glass covered with bronze color weathering, iridescence and pitting. Uneven upright rounded rim with open fold just below it; a cylindrical neck with an open fold in its lower part, above the connection with the shoulder. Rim diam.: 2 cm.

Bottle with Incurving Thick Rim (Fig. 4:3).— Only a very small fragment of this rim is preserved. However, based on its fabric and shape, it can be attributed to the Mamluk period.

3. L135, B1224. Very small rim fragment. Purple glass covered with black and silver weathering and iridescence. Incurving thick rounded rim. Rim diam.: 2.9 cm.

Sprinklers (Omoms, Qumqums; Fig. 4:4, 5).— Two fragments of different vessels represent this common Mamluk type. The one illustrated in Fig. 4:4 has a typical, tapering neck with

a very tiny opening at the top. The other, is an oval-shaped base of a smaller version (Fig. 4:5), or it may belong to a bottle with a lentoid body.

Neither fragment shows remains of any decoration, though this type of vessel is often adorned with small handles on the lower part of the neck or decorated in various techniques. These vessels were probably used as sprinklers for perfumed water, like rosewater. The manufacture of this vessel type became widespread under the Ayyubids and the Mamluks (twelfth–fourteenth centuries CE; Carboni 2001:150–151, and see further references therein).

Twenty vessels of this type were found in the Jewish Quarter, Area T, in Jerusalem, dated from the thirteenth to fifteenth centuries CE (Brosh 2005a:188, Figs. 1–3). A similar vessel dated to the Mamluk period was found in Ramla (Gorin-Rosen 2013:73*–74*, Fig. 1:4). Two sprinklers of this type were uncovered at Bet She'an, together with pottery and coins of the Mamluk period (Hadad 2005:61, Pl. 53:1090, 1091). Comparable sprinklers have been found in Beirut (Jennings 2006:232–233, Figs. 10.14:1, 3; 10.15:left, and see further discussion and references therein).

4. L109, B1016. Complete rim and neck. Colorless glass covered with brown and silver weathering, iridescence and pitting. Uneven thickened rounded rim. Rather thick neck and wall. Rim diam.: 1 cm.

5. L118, B1133. Part of base and beginning of wall. Colorless glass covered with thick black and silver weathering and pitting. Uneven oval base, probably from a vessel with lentoid body, like the *omom*. Pontil scar in its center. Base diam.: 3.8 cm.

Bottle or Flask with Conical Body (Fig. 4:6).— The fabric, color and context of this vessel indicate its attribution to the Mamluk period. A plain cosmetic bottle with a base like No. 6 was found in the Cardo in the Jewish Quarter excavations, Jerusalem, dated to the fourteenth century CE (Brosh 2012:415–416, Pl. 15.2:G35).

6. L118, B1288. Complete lower part of body. Yellowish olive-green glass partly covered with enamel-like white weathering, iridescence and pitting. Conical base with extra glass knob on one side on the lower part.

Vessel with Applied Small Disc Base (Fig. 4:7).— The fabric, color and shape of this discus base indicate its attribution to the Islamic period. It is rather small and not very common, and therefore, it is hard to date it to a more specific time frame. It was found inside *Ṭabun* E in Sq 3, attributed to Stratum I (see Kletter and Stern, this volume). The excavators are of the opinion that *Ṭabun* E may have been slightly earlier than, or contemporary with, the other three *Ṭabuns* A–C found in the same square and stratum.

7. L208, B2042. Almost complete disc. Colorless glass covered with black and silver weathering, iridescence and sand deposits. Uneven applied disc base with big, broken pontil scar. The disc edge is rounded. The bottom of the vessel is almost flat with a slight concavity in the center with a tiny hollow.

Vessel with Tubular Base (Fig. 4:8).— This type of base was common during the Crusader and Mamluk periods. The bases dating to the latter period are characterized by a very deep concavity, usually called ‘high kick’ and show careless workmanship.

They were widely distributed; see the examples from Jerusalem dated to the twelfth century and to the fifteenth century (Brosh 2014:414, Pls. 15.2:G17, G24; 15.5:G76, with further references therein), and from Safed (Z̧efat), dated to the Mamluk period (Katsnelson 2017: Fig. 1:8).

8. L113, B1072. Complete base and beginning of wall. Blue glass covered with black and silver weathering, iridescence and severe pitting. Hollow tubular base ring pushed in to uneven high kick bottom. Big pontil scar with traces of glass from the pontil. Low quality fabric and workmanship. Base diam.: 5.6 cm.

Spouted Vessel (Fig. 4:9).— The fragment illustrated in Fig. 4:9 is a rather large spout which could belong to a juglet, comparable to the one found within the Mamluk group of glass vessels deriving from Jerusalem, Jewish Quarter, Area T, mentioned above (Brosh 2005a:188, Fig. 4). Similar spouts, still unpublished, were found in a Mamluk pit in Ramla.³ The purple color of this spout corroborates its attribution to the Mamluk period and supports its identification as a jug’s spout rather than being part of an alembic or cupping glass, like the examples from the al-Sabaḥ collection of Iranian origin dated to the ninth–twelfth centuries CE (Carboni 2001:144–145, Cat. No. 34a, b).

Two spouts, identified as belonging to alembics, were found at Apollonia-Arsuf, within a glass assemblage dated to the last days of the Castle in 1265 CE (Jackson-Tal and Tal 2013:90–91, Fig. 13:4, 5).

9. L118, B1189. Complete spout. Purple glass covered with sand deposits, iridescence and severe pitting. Thin wall of vessel with applied spout. The spout is pinched close to the end, which has been cut-off. The opening is almost closed.

Special Objects (Fig. 5)

The two fragments presented here were found in loci attributed to Stratum IIa, dated by the excavators to the late twelfth–early thirteenth centuries CE, prior to 1265 (see Kletter

³ Excavated by Ofer Sion (Permit No. A-4929).

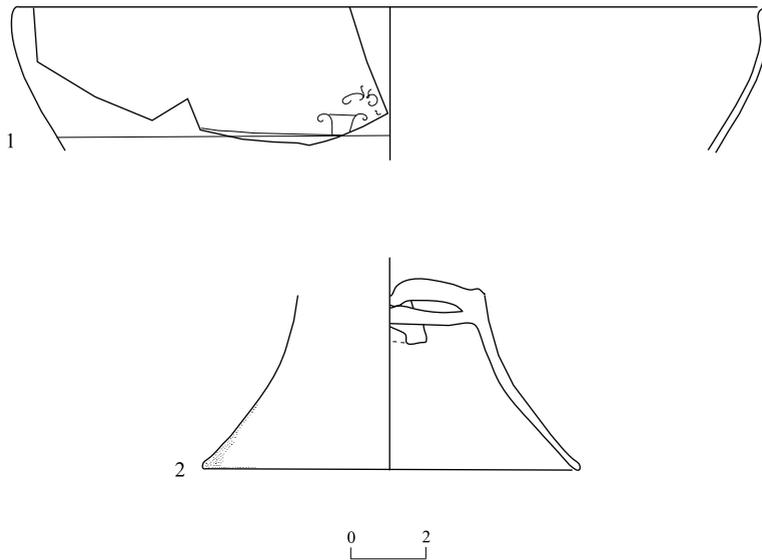


Fig. 5. Special glass finds from the Mamluk period.

and Stern, this volume). The one illustrated in Fig. 5:1 derives from a floor of this stratum (L224), while the other (Fig. 5:2) was retrieved from a room (L209) associated with Stratum IIa.

Vessel Decorated with Enamel Painting (Fig. 5:1).— The poorly preserved rim illustrated in Fig. 5:1 probably belongs to a fine, footed bowl decorated with enamel painting on the outer wall. Very vague remains of this paint are preserved on the wall, including a faint horizontal line and an unidentifiable design above it.

Glass vessels with enamel paint have been found already in Crusader settlements, such as Ḥorbat ‘Uza (Gorin-Rosen 2009:181–182, and see further discussion and references therein to a fragment from Monfort), ‘Akko (Gorin-Rosen, in Feig 2010: Fig. 7:4), and at Apollonia-Arsuf (Jackson-Tal and Tal 2013:90–95, Figs. 5–8). Another fragment from a ‘mosque lamp’ or footed bowl was unearthed in the Church of the Holy Sepulchre in Jerusalem (Winter 2012:337, Fig. 4:13).

Enamel glass bowls on a high foot are known from various collections; see for example the footed bowl from the L.A. Mayer Museum in Jerusalem (Hasson 1998: Color Pl. F), and the highly decorated tassa from the Metropolitan Museum collection, dated to the first half of the thirteenth century CE (Jenkins 1986:38–39, 56, No. 46). Another possible reconstruction is that of the marvered footed bowl in the Eretz Israel Museum collection, Tel Aviv (Brosh 2005b: Fig. 12:2).

1. L224, B2135, B2126. Three mended fragments. Rim and wall fragment. Colorless glass covered with black and silver weathering, iridescence and severe pitting. Thick rounded rim and thick curving wall. Slight remains of enamel painting on the wall. Rim diam.: 20 cm.

Vessels on a High Foot, Made from a Second Glass Blob (Fig. 5:2).— This type of base is widely used in a group of large, plain and highly decorated vessels known as ‘mosque lamps’ (for a further description of this type, see Alexandre 2012:95, 97; Gorin-Rosen 2017:147–148). Another vessel type, with a similar base, is the decanter with a long neck, usually richly decorated with enamels, e.g., a bottle from the Metropolitan Museum collection, dated by an inscription to the first half of the fourteenth century CE (Jenkins 1986:44–45, 56, No. 49) and the decanter from the al-Sabaḥ collection, dated to the mid-fourteenth century CE (Carboni 2001:366–367, Cat. No. 101, with further discussion and references therein).

A fragment of such a base was found at Khirbat ‘Adasa, north of Jerusalem, dated to the Mamluk period (Gorin-Rosen 2008a:131, Fig. 4:1, with further references to Fustat, Ḥama and the Benaki Museum collection, Athens). Similar bases were also found at Yoqne‘am and dated to the Crusader period (Lester 1996:214, Fig. XVII.16:2). Lester, based on twelfth- and thirteenth-century CE parallels from southern France, suggested that the Crusaders brought this type from the Occident to the Holy Land.

Several bases of this type were found in Crusader–Ayyubid and Mamluk assemblages from different sites in Jerusalem (Brosh 2012:401–402, 414, 417, Pls. 15.2:G23; 15.3:G45, within Crusader and Ayyubid contexts), Naẓerat (Nazareth; Alexandre 2012:95, 97, Fig. 4.6:2, 3, 5, Mamluk period) and Yafo (Gorin-Rosen 2017:147–148, Fig. 2:10, 11, Crusader period) and it is rather clear now that this type of base was very common for open vessels known as ‘mosque lamps’ from the Crusader and Mamluk periods. Comparable bases were also found in Beirut, identified there as folded pedestal bases, dated to the medieval period (Jennings 2006:235–236, Figs. 10.18:1; 10.19). A very similar base assigned to a mosque lamp, with a fine small hole in its center, is kept in the al-Sabaḥ collection, Kuwait (Carboni 2001:362, 364–365, Cat. No. 100a, fragment 257). The vessel at issue here was found in L209, dated by Kletter and Stern (this volume) to the end of the twelfth–early thirteenth centuries CE, prior to 1265.

2. L209, B2037, B2063; L216, B2072. Fragment of half a base and foot. Mended from several fragments, which were found in two different rooms. Colorless glass. Black and silver layers of weathering, iridescence and severe pitting. High footed base, rounded at its edge. The base was made from a second blob. A big air-bubble is confined between the applied base and the bottom of the vessel. On the underside of the base is a crude pontil scar like a thick glass disk. On the upper part inside the vessel there is a tiny tooled convexity, which was made during the connection of the second blob. Base diam.: 10 cm.

GLASS PRODUCTION

Meager diagnostic remains of a glass industry at the site were found during the last season of excavations in three separate loci. They include a chunk of raw glass in L309, a small fragment of glass debris in L359, and two small chunks of raw glass stuck to remains of the

furnace's bottom in L378. Glass production at the site was evidenced also in larger amounts of glass debris found in subsequent excavations conducted at the site by Uzi 'Ad.⁴

Surveys and salvage excavations conducted in the region unearthed considerable remains of glass-making activities. Some of these finds have already been briefly noted (Gorin-Rosen and Katsnelson 2007:146–147, Fig. 39) and some still await publication. Remains of primary and secondary glass production were found at Ḥorbat Biz'a and several sites in the region (Gorin-Rosen 2012:49*–52*, 59*–61*) and Baqa el-Gharbiya (Gorin-Rosen 2001:69*–70*, n. 3).

A rather large lump of raw, greenish blue glass (length 0.22 m), as well as other remains indicating glass production, were found in salvage excavations located on the northeastern slope of Tel Gat (Gorin-Rosen 2004b:26*; Sa'id 2004:26*). Another site in the region where large quantities of glass production remains were retrieved is Ḥorbat Mesar (Katsnelson 2009b). At Khirbat Jarrar numerous pieces of industrial debris, including glass drops, chunks of raw glass and overblows, were collected on the surface and dated to the Late Roman–early Byzantine periods (Gorin-Rosen 2004a:17*).

All the sites mentioned above are dated to the Late Roman and Early Byzantine periods and the four fragments found at Khirbat Burin probably belong to this stage as well, as they are characterized by colors and fabrics typical of that time span.

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⁴ The glass finds found at the site by Uzi 'Ad (Permit Nos. A-3326, A-5797) are being processed and studied by the author.

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