

THE GLASS FINDS FROM BET SHE'AN (YOUTH HOSTEL)

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INTRODUCTION

Approximately 2000 glass fragments were retrieved from the excavation at the site of the youth hostel at Bet She'an (see Sion, this volume).¹ Most of the finds are small fragments of blown glass, assigned to a wide chronological timespan, from the late third to the fifteenth centuries CE.² A number of fragments survived with a complete profile or were restored. Two vessels were found intact; surprisingly, one of them, a jar, was found in a disturbed occupation level (Fig. 7:1). A small group of glass vessels was uncovered in the burial cave (Fig. 14). The rest of the glass was retrieved from fills and debris within the buildings. Therefore, the chronological division of the artifacts discussed and illustrated below is based on typological grounds (Figs. 1–14).

Four chronological groups were identified: Late Roman–Byzantine; late Byzantine–Umayyad; Abbasid; and Ayyubid–Mamluk. Their dating is based mainly on a comparison with parallels from well-stratified sites, as well as on the glass fabrics.³

The earliest examples (Figs. 1–5, 14) are dated from the late third to the fifth centuries (Strata VIII–VII). A comprehensive study of the glass from this period at Bet She'an is in process (Winter, in prep.). Only a few vessels were published from controlled excavations at the site (e.g., Agady et al. 2002; Hadad 2006:626–628; Winter 2011). Therefore, parallels are mainly given from well-dated sites, such as Jalame (Weinberg and Goldstein 1988) and Akhziv (Syon 1998), from burial caves (Gorin-Rosen 2000) and collections. Those referred to are the Franciscan collection from

Nazareth (Bagatti 1967) and the Pennsylvania University Museum collection (FitzGerald 1931; Fleming 1999). The latter includes many vessels that are said to have originated in the Northern Cemetery of Bet She'an.

Although there is no clear evidence of a Late Roman glass workshop at Bet She'an, there is no doubt that a glass factory like the one found at Jalame operated in its vicinity. It is noteworthy that in the Byzantine period, a glass workshop existed near the northern city gate (Gorin-Rosen and Winter 2010:177–178). A large amount of glass-working debris, similar to that found at Jalame, was recently discovered in a fourth–fifth-century context at Khirbat Turbinat, a Roman–Byzantine settlement in the center of the Jezreel Valley, 4 km from 'Afula. This site could possibly have been a glass production center that served the Bet She'an region.⁴

The majority of the finds are assigned to two occupation periods: the seventh–mid-eighth centuries (Strata IV–V; Figs. 6, 7) and the eighth–tenth centuries (Stratum III; Figs. 8–11). Parallels were found at Bet She'an (Hadad 2005; Winter 2011); at sites around the Sea of Galilee, such as Kursi (Barag 1983), Tiberias (Lester 2003; 2004) and Ḥammāt Gader (Cohen 1997; Lester 1997); in cities of the Decapolis, such as Pella (Smith and Day 1989; O'Hea 1992; 1993) and Jerash (Meyer 1988); and at other Jordanian sites (Dussart 1998).

Parallels from a wider area are referred to only if they contribute more information concerning typology, dating or distribution (e.g., Caesarea—Pollak 2003; Ramla—Pollak 2007; Gorin-Rosen 2010; Beirut—Jennings

2006; and Fuṣṭaṭ—Scanlon and Pinder-Wilson 2001; Shindo 2003).

Only a few items (Figs. 12, 13) can be associated with Stratum II, dated to the late twelfth–fifteenth centuries.

The variety of finds offers extensive information concerning types of vessels in use at Bet She'an and local glass manufacturing. Vessels of all periods are made mainly of either natural-colored or decolorized blown glass. The Early Islamic glass also includes strong tinges, such as cobalt blue, dark purple and olive green. A fragment of a rare vessel made of two different colors of glass was also unearthed (Fig. 9:4).

The repertoire is rich, combining simple domestic types and luxury wares, cosmetic or medical vessels, and oil lamps. A few beads, pendants and tesserae were also discovered, but are not discussed. Comparisons with finds from other excavations at Bet She'an and elsewhere in Israel show that our assemblage includes both well-known vessels and some less familiar ones. The group of Early Islamic vessels is of particular interest, distinguished by various shapes and ornamentation (Figs. 6–11). The decorative techniques include mold-blown, trailed, impressed and incised designs, while other types of cut-glass are absent. In addition, minor remnants of glass production activity, consisting of a few chunks of raw glass, were uncovered in Buildings I, II and IV (see Fig. 15).

GLASS FINDS FROM THE BUILDINGS

Late Roman–Byzantine Vessels (late third–fifth centuries CE; Figs. 1–5, 14)

The largest quantity of these vessels was found within the 'burial enclosure' courtyard (see Sion, this volume: Plan 1: Courtyard) and in the burial cave (see Fig. 14). They include common shapes and decorating styles known mainly from fourth-century contexts in the region, some of which continued to occur during the fifth century. The group comprises bowls (Figs. 1; 2:1–3), beakers (Fig. 2:4–11), bottles and juglets (Fig. 3) and miscellaneous vessels (Figs. 4, 5).⁵

Bowls (Fig. 1).— The bowls are shallow and deep, with rounded or folded rims and a hollow ring base. Bowl No. 1 is a shallow bowl with a rounded rim. Versions of similar bowls were discovered at Bet She'an and attributed to the Byzantine period (Hadad 2006: Fig. 19.1:4–7). This form was very popular in the Galilee during the Late Roman period, for example in Burial Cave 1 at Khirbat el-Shubeika (Gorin-Rosen 2002:290, Fig. 1:1, and see further references therein).

Three bowls (Nos. 2–4) have a horizontal ridge below the rim and probably a hollow ring base. Many similar bowls with shallow or deep shapes were found in the north of Israel, mostly retrieved from fourth-century burial caves in the western Galilee (for a detailed discussion, see Winter 2010:145, Fig. 1:1).

The walls of bowls 5 and 6 have a double-fold. A similar bowl, generally dated to the Byzantine period, was unearthed at Bet She'an (Hadad 2006: Fig. 19.2:16). Other parallels were collected from the late fourth-century factory dump at Jalame (Weinberg and Goldstein 1988:53–54, Fig. 4-15:109, 111, 112). More parallels come from the fourth-century burial on Mt. Gilbo'a (Gorin-Rosen 1999a:65*, Fig. 8:8).

Fragment No. 7 belongs to a large vessel with a double-folded rim, forming a broad collar. A similar fragment, assigned to the Byzantine period, was found at Tel Bet She'an (Hadad 2006: Fig. 19.1:17). Parallels from the fourth–early fifth centuries are known from Ḥorbat Rozez, situated on the southeastern slope of Ramat Ha-Nadiv (Winter 2010:147–148, Fig. 1:5, 6, and see further references therein). A complete shallow bowl with a hollow ring base from Burial Cave 2 at Khirbat el-Shubeika was ascribed to the fourth century (Gorin-Rosen 2002:303–305, Fig. 1:1, and see further references therein).

Bowls and Beakers with a Cut-Off Rim (Fig. 2:1–7).— Several variations of open vessels with cut-off rims were uncovered, among them hemispherical, S-shaped bowls (Nos. 1, 2), a

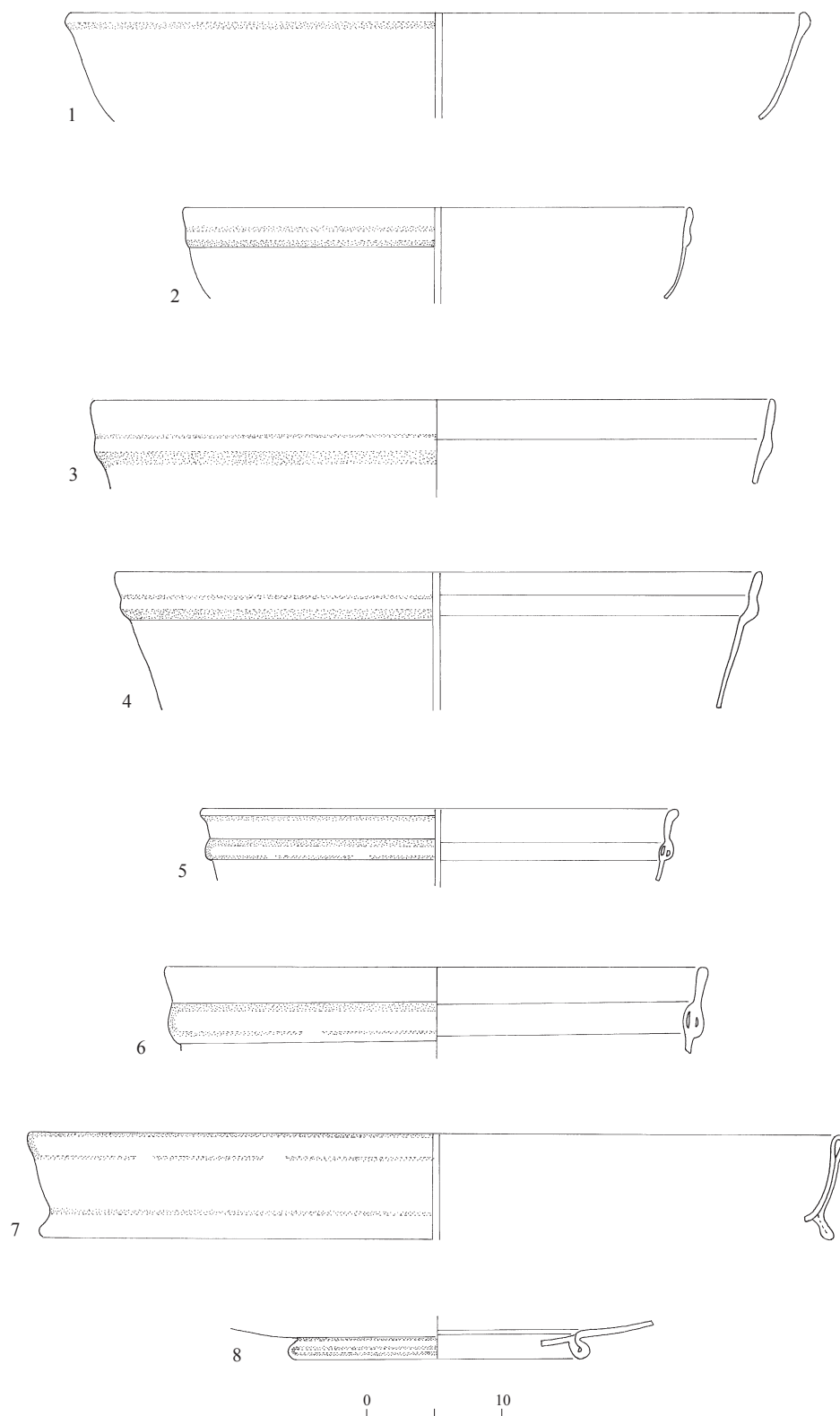


Fig. 1. Late Roman-Byzantine bowls.

◄ Fig. 1

No.	Locus (Building/Room)	Basket	Color	Weathering	Comments
1	24 (Courtyard)	153	Bluish green	Silver iridescence, pitting	
2	24 (Courtyard)	153	Yellowish green	Silver iridescence	Thick-walled body
3	17 (Courtyard)	94	Greenish	Silver-black patches, iridescent film	Long horizontal bubbles
4	24 (Courtyard)	166	Greenish blue	Silver iridescence, lime deposits	Thick-walled body
5	24 (Courtyard)	153	Colorless with greenish tinge	Silver iridescence, severe pitting	
6	24 (Courtyard)	166	Greenish blue	Silver iridescence, severe pitting	Marks of ext. polishing below rim
7	93 (I/above W36) 100 (I/10)	385, 387	Greenish	Silver iridescence, pitting, lime deposits	Thick-walled body, black impurities
8	24 (Courtyard)	153	Greenish	Silver iridescence, pitting, lime deposits	

Fig. 2 ►

No.	Type	Locus (Building/Room)	Basket	Color	Weathering	Comments
1	Bowl	17 (Courtyard)	74	Colorless with bluish green tinge	Milky and black patches, silver iridescence, severe pitting	Thick-walled body, rim ground, ext. polishing below rim
2	Bowl	98 (I/4)	410	Colorless with greenish tinge	Iridescence	Thick-walled body, fine fabric, rim ground
3	Bowl/ beaker	24 (Courtyard)	128	Colorless	Milky and black patches, silver iridescence, severe pitting	Thin-walled body, unfinished rim
4	Beaker	24 (Courtyard)	128	Colorless with greenish blue tinge	Silver iridescence, pitting	Thin-walled body, unfinished rim
5	Beaker	24 (Courtyard)	128	Colorless with greenish blue tinge	Milky and silver patches, iridescence, pitting	Thin-walled body, wheel-polished rim
6	Beaker	93 (I/above W36)	378	Colorless, turquoise drops	Milky and silver patches, iridescence, pitting	Applied drops
7	Beaker	24 (Courtyard)	166	Greenish	Silver iridescence, pitting, lime deposits	Pontil scar: 1.3 cm
8	Beaker	24 (Courtyard)	128	Colorless with bluish green tinge, turquoise trail	Silver crust, iridescent film	Small black impurities, applied trail
9	Beaker	10 (Surface)	40/2	Colorless with yellow and purple streaks	Black-silver crust, strong iridescent film, pitting	Pontil mark: 1.3 cm
10	Beaker	14 (Courtyard)	38/5	Greenish blue	Silver iridescence	Pontil mark: 1.3 cm
11	Beaker	51 (Courtyard)	242	Almost colorless with greenish blue tinge	Milky crust, silver iridescence	Pontil scar: 1.5 cm

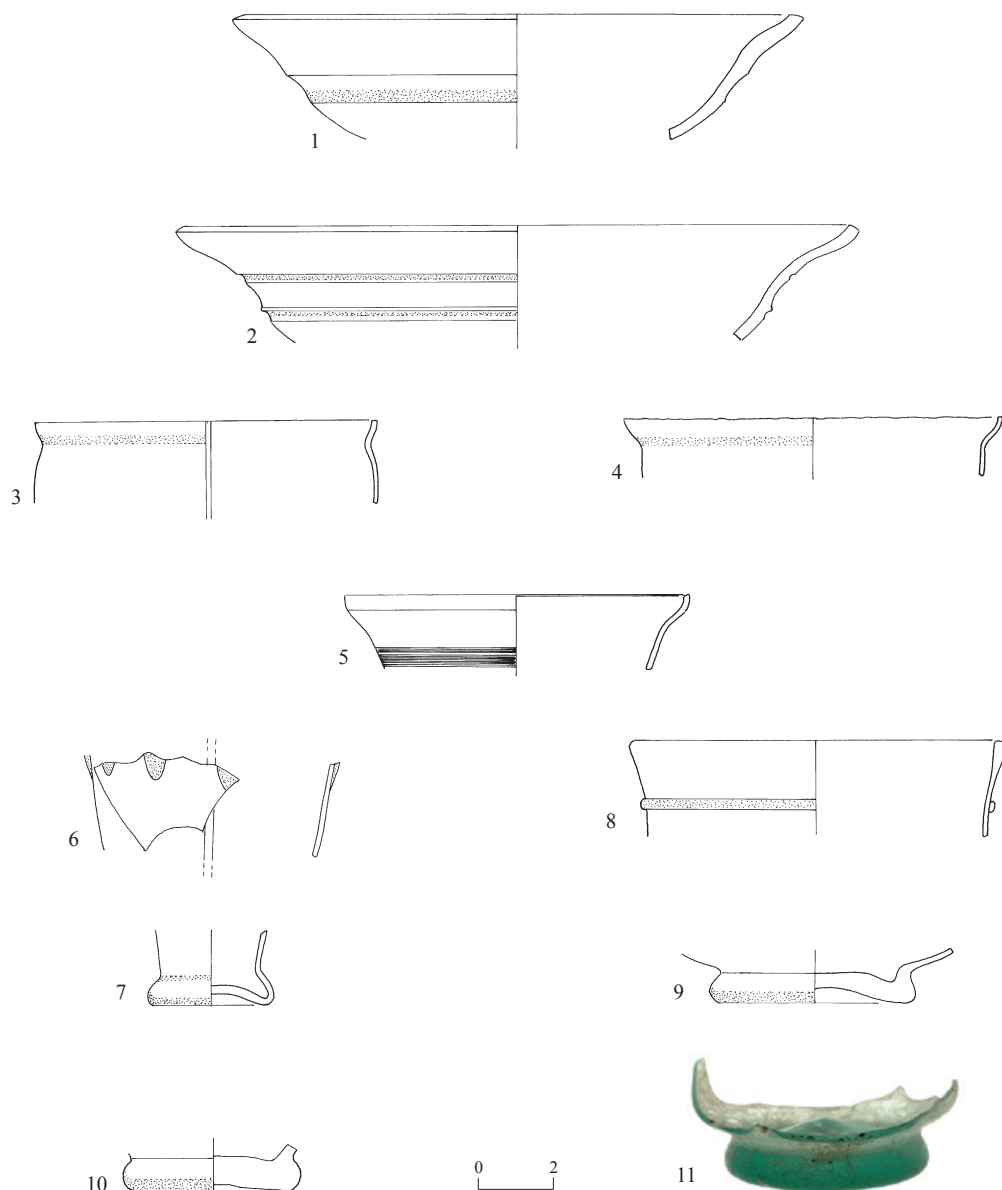


Fig. 2. Late Roman-Byzantine bowls and beakers.

rounded bowl or beaker (No. 3), and cylindrical (No. 4) and conical (Nos. 5–7) beakers. Some of these vessels are decorated with a wheel-cut linear design (Nos. 1, 2, 5), and one, with applied blobs (No. 6). All these shapes may be attributed to the fourth century. They were made of colorless glass and manufactured without the use of a pontil. Most of these types were

produced at Jalame, where they were collected alongside production waste (Weinberg and Goldstein 1988:86–99). Fourth-century bowls and beakers with cut-off rims are not a frequent find in sites in northern Israel. However, a great variety of such vessels is known from Beirut, where most of them were dated to the late fourth–fifth centuries (Jennings 2006:84–

102). Many similar vessels were also found in Jordan, in levels dating to the fourth through the early sixth centuries at 'Ain ez-Zâra and in later levels at Jerash (Dussart 1998:61–62, Pl. 4:24–31).

The main features of Nos. 1 and 2 are thick walls with a cut-off and wheel-polished rim, flaring broadly outward. Bowl No. 1 bears a wide horizontal groove mid-body. Number 2 has a similar groove, framed by two narrow ones. In the Bet She'an region, such bowls are known chiefly from the late fourth-century glass factory at Jalame (Weinberg and Goldstein 1988:94–96, Fig. 4-49:483–484, and see further references therein). Number 3 is a small bowl or a beaker with a plain body, thin, rounded walls and an unfinished, curving rim. A bowl of this type, preserved with a convex bottom, was retrieved from the fourth–sixth-century settlement at Ḥorbat Sumaq (Jacobson 1999:333, Fig. 1:1). A large group of similar fragments, defined as hemispherical cups, was found in Beirut, where they were dated to the fourth–fifth centuries (Jennings 2006:86–88, Figs. 5.3, 5.4).

Beakers with cut-off rims (Nos. 4–7) are a common type, possibly used as oil lamps. Conical beaker No. 5 is distinguished by its wheel-polished rim, decorated with a band of shallow abraded lines. Fragment No. 6 bears another type of common decoration: turquoise oval blobs applied to the wall. Variations of both designs on colorless, greenish and yellowish beakers, but mainly with cobalt-blue blobs, were manufactured at Jalame (for a discussion of their manufacture method, distribution and function, see Weinberg and Goldstein 1988:87–91, Figs. 4-46; 4-47:439, 440, 446). Among the very few published parallels from the north of Israel are a deep bowl from the Roman baths at Ḥammât Gader (Cohen 1997: Pl. III:6) and a conical beaker discovered at Banias, in the earlier phase of the 'Street of Shops' (Gorin-Rosen and Jackson-Tal 2008:147, No. 20). Number 7 is a flattened version of a conical beaker base. Two similar bases were found at Akhziv (Syon 1998: Fig. 15:7, 8). A conical

beaker from Karanis, decorated with incisions and blue blobs, is a scarce complete parallel for this form (Harden 1936: Pl. 16:457).

Beakers with a Solid Base (Fig. 2:8–11).— These fragments belong to one of the most common types of fourth-century drinking vessels. This type was produced in large quantities at Jalame (Weinberg and Goldstein 1988:60–61, Fig. 4-23). A complete profile of a similar beaker was discovered in the burial cave (see discussion below; Fig. 14:6). These beakers, with a rounded rim and thin, vertical or slightly concave walls, are decorated with a horizontal trail, often contrasting the main color of the body (e.g., No. 8). Numbers 9–11 are solid disc bases, the most characteristic part of these beakers. A similar base was found in the pottery workshop at Bet She'an, together with a fourth–fifth-century coin (Winter 2011:356, Fig. 12.4:1, and see further references within).

Bottles and Juglets with a Funnel-Shaped Mouth (Fig. 3).— Several variations of this type were found. Number 1 is a bottle with a funnel-shaped mouth, a short cylindrical neck and a narrow, cylindrical body. These bottles were common in third–fourth-century burial complexes, such as the Northern Cemetery at Bet She'an and Tomb XV at Ḥanita, as well as at Gush-Ḥalav and Samaria (for a complete shape and further references, see Israeli 2003: No. 317).

Numbers 2 and 3 belong to bottles with a folded (No. 2) or rounded (No. 3) rim, a short funnel-shaped mouth and a narrow cylindrical neck. The date of these fragments is uncertain; they may be Late Roman or later. Two intact bottles with similar rims, partly rounded and partly folded, were found in the burial cave, which is dated to the late third–fourth centuries (see Fig. 14:1, 2).

Numbers 4–6 are juglets with a short, pinched mouth and a rounded rim, decorated with a spiral trail. Similar fragments, dated to the fourth–early fifth centuries, were found in burial caves at Bet She'an (Gorin-Rosen

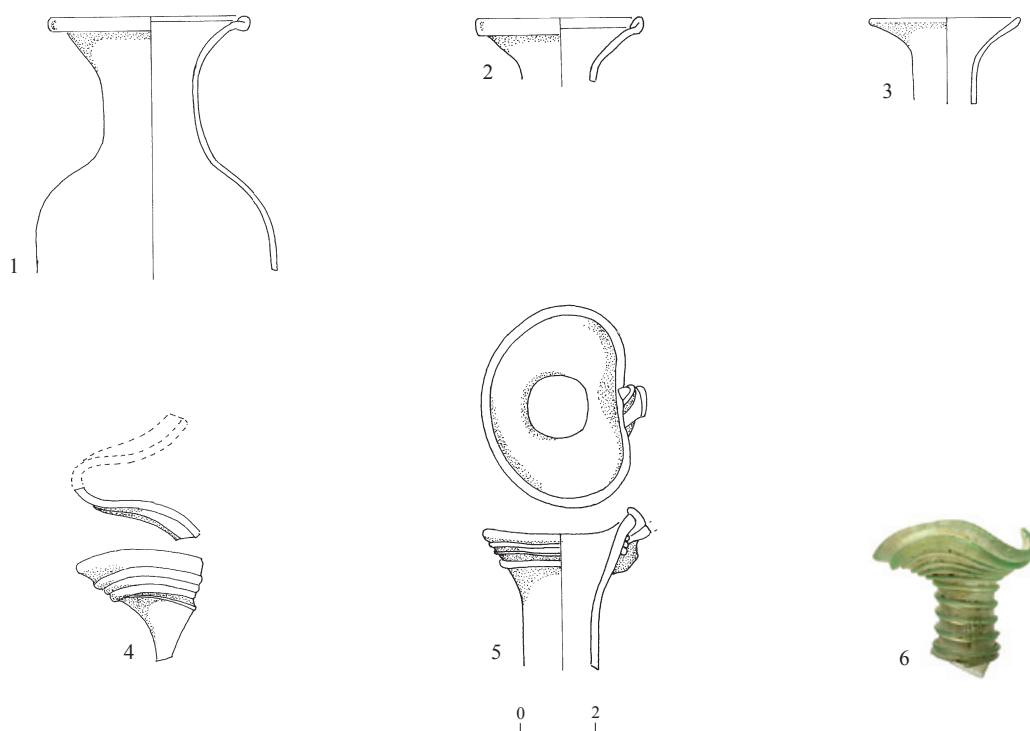


Fig. 3. Late Roman-Byzantine bottles and juglets.

No.	Type	Locus (Building/Room)	Basket	Color	Weathering	Comments
1	Bottle	103 (I/15)	405	Olive green	Iridescence, lime crust	
2	Bottle	14 (Courtyard)	38/5	Bluish green	Silver iridescence, pitting	
3	Bottle	24 (Courtyard)	134	Bluish green	Silver iridescence, pitting	
4	Bottle/ juglet	17 (Courtyard)	66/4	Bluish green	Silver iridescence	Pinched and trailed
5	Juglet	24 (Courtyard)	128	Bluish green, turquoise handle, red strikes	Silver iridescence, pitting	Uneven trailed rim, small black impurities
6	Juglet	72 (II/4)	287	Almost colorless with greenish tinge	Silver iridescence, soil deposit	Pinched and trailed, small black impurities

2000:64*, Fig. 2:20) and Khirbat el-Shubeika (Gorin-Rosen 2002:309, Fig. 3:19–20). A similar vessel with a thin, tightly wound trail is in the Pennsylvania University Museum

collection; it originated from the Northern Cemetery of Bet She'an, dated to the mid-late fourth century (Fleming 1999:113–114, Fig. E.58).

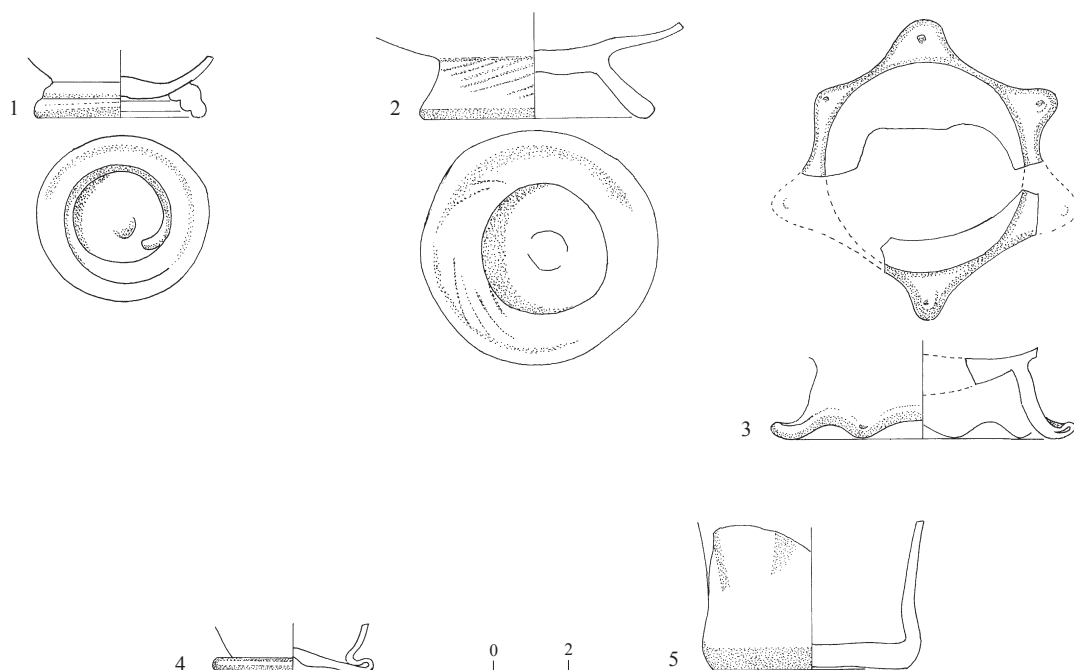


Fig. 4. Late Roman-Byzantine miscellaneous.

No.	Type	Locus (Building/Room)	Basket	Color	Weathering	Comments
1	Trail-wound base	24 (Courtyard)	153	Bluish green	Black and silver patches, iridescence	3 coils of trail, pontil mark: 1.0 cm
2	Solid-ring base	14 (Courtyard)	48/3	Greenish blue	Silver iridescence, pitting, lime deposits	Uneven marks of tooling on ext. and int., pontil mark: 1.2 cm
3	Pinched base	17 (Courtyard)	66/4	Yellowish green	Milky patches, iridescence	Marks of hook tooling
4	Pushed-in base	102 (I/11)	3415	Bluish green	Black and silver patches, iridescence, severe pitting	Pontil mark: 0.8 cm
5	Flattened base	102 (I/11)	3415	Yellowish green	Black crust, iridescence, pitting	Thick-walled body, pontil mark uncertain

Miscellaneous (Fig. 4).— Fragment Nos. 1–3 represent three different types of bases, which could belong to either or open vessels. Number 1 is a small trail-wound base, probably of a bottle or a beaker. A bottle with a similar base, found in the northern cemetery of Samaria, was dated by Barag to the fourth century and

onward (Crowfoot 1957:410, Fig. 94:13; Barag 1970:203, Fig. 44, Type 14). Number 2 has a solid ring base of a common fourth-century type, distinguished by diagonal tooling marks on both sides (for a discussion, see Weinberg and Goldstein 1988:58, Fig. 4-20). A bowl with a similar base was unearthed at Akhziv (Syon

1998: Fig. 14:4). Several monochrome vessels similar to Nos. 1 and 2 were uncovered in the stairwell leading to the burial cave (L71) and above the courtyard of the 'burial enclosure' (L74; not illustrated); a bichrome fragment was found in Room 5 in Building II (L65; not illustrated). The latter has a yellowish body and a deep peacock-blue trail-wound base.

The form of vessel No. 3 is uncertain. Its base was tooled with six uneven scallops at the edge. Four pincher marks, in the shape of small indents, are visible on the lower part of the ring. Vessels with similar bases are rare. Among the random examples from Israel are fragments from the fourth-century pool (Ras el-'Ein) at Shekhem (Shechem; Sarig 2009:28, Pl. 18:4) and from Stratum II in the village of 'En Gedi, dated to the fourth–seventh centuries (Jackson-Tal 2007: Pl. 7:1, and see further references therein, including an unpublished base fragment found near the Roman–Byzantine theater at Bet She'an).

Number 4 is a pushed-in base with a low, hollow ring. It is difficult to date the fragment precisely. It may belong to a Roman beaker, or perhaps to a flask. Number 5 is the massive lower part of a vessel, distinguished by its thickened, flat base and conical body, with shallow, vertical indents. Possible parallels are complete jugs and a bottle with a tall indented body from fourth-century tombs at Bet She'an (FitzGerald 1932: Fig. 10: third from the left on top row; Bagatti 1967: Fig. 5:119; Fleming 1999:99–100, Fig. E.47:a; Pl. E.99).

Jars (Fig. 5:1–3).— Number 1 is a globular jar, characterized by a vertical rim with a bulging ridge. These jars often have short handles on the rim and a zigzag-trail decoration in turquoise or blue on the body, as on fragment Nos. 2 and 3.

Trailed jars from the third–fifth centuries are common in the region, especially in burials (Barag 1970:152–153, Fig. 34, Types 11-1–13-1). However, only few trailed jars have been published from the Galilee, for example from Cave 2 at Khirbat el-Shubeika (Gorin-Rosen 2002:304, Fig. 1:4); these jars

were not a Jalame product (Weinberg and Goldstein 1988:82). A similar zigzag-trail decoration appears on an uncommon footed bowl, discovered in a fourth-century tomb at Bet She'an (FitzGerald 1932: Fig. 10: top, fourth from left; IAA Reg. No. 1932.171).

Kohl Tubes (Fig. 5:4, 5).— Number 4 presents the upper and lower parts of a plain vessel with double, yellowish green tubes and two short, bluish green handles. A similar, small fragment, with no certain date, was found at Ḥorbat Rozez (Winter 2010:153, Fig. 4:1, and see parallels therein). Other northern parallels with a trailed body come from fourth–fifth-century burial caves at Bet She'an (Fleming 1999:99–100, Pl. E.98; Gorin-Rosen 2000: Fig. 2:24); Roman–Byzantine tombs at Khirbat el-Kerak (Delougaz and Haines 1960: Pl. 50:11, 12, 17, 18); and the fourth–sixth-century agricultural settlement at Ḥorbat Raqit on Mt. Carmel (Jacobson 2004:248–249, Pl. XII:1–5). Number 5 is a rare version of these cosmetic containers; it has four small tubes (for a discussion, see Barag 1970:179, Fig. 39, Type 11).

Spoon (Fig. 5:6).— A double-walled, small, oval bowl, which was part of a spoon, was preserved. Glass spoons are generally dated from the Roman period onward. Excavated parallels in Israel are rare: two specimens from Samaria (not illustrated; Crowfoot 1957:420, and see references therein to Late Roman Karanis); a fragment dated from the fifth to the early seventh centuries in Be'er Sheva' (courtesy of P. Fabian); and a recently published fragment with a hollow handle from an Abbasid–Fatimid context in Khirbat el-Thahiriya near Ben Shemen (Jackson-Tal 2012:68*–69*, Fig. 3:53, and see discussion and references therein).

Late Byzantine–Umayyad Vessels (seventh century–749 CE; Figs. 6, 7)

Most of the glass fragments dated to the Byzantine period were found in a very poor

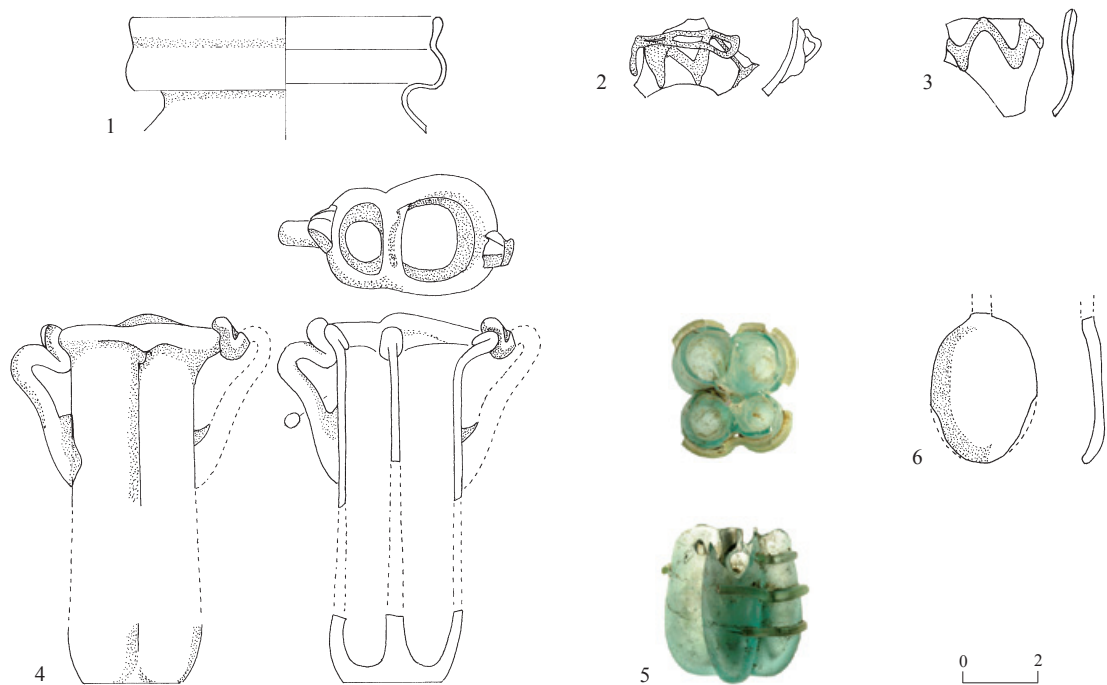


Fig. 5. Late Roman–Byzantine jars, kohl tubes and a spoon.

No.	Type	Locus (Building/Room)	Basket	Color	Weathering	Comments
1	Jar	24 (Courtyard)	134	Greenish yellow	Milky patches, silver iridescence, lime deposit	
2	Jar	93 (I/above W36)	378	Colorless, turquoise trail	Milky patches, silver iridescence	
3	Jar	24 (Courtyard)	153	Colorless with bluish green tinge, bluish green trail	Silver crust, pitting, lime deposits	
4	Kohl tube	93 (I/above W36)	378	Yellowish green body, bluish green handles	Silver iridescence, pitting, lime deposits	Two uneven tubes, pontil mark: 1.2 cm
5	Kohl tube	51 (Courtyard)	242	Light greenish blue, pale greenish trail	Silver iridescence	Mended, four uneven tubes, trailed, pontil mark: 1.2 cm
6	Spoon	12 (II/8)	12/7	Bluish green	Black patches, iridescent film, pitting	External polishing below rim

state of preservation, and are therefore not included in this report. They comprise typical oil lamps, wineglasses and bottles from the local repertoire, also known from other excavations

at Bet She'an (Agady et al. 2002:483–492; Hadad 2006; Winter 2011).

The vessels presented below are dated generally from the seventh century onward.

They were collected from all buildings. Some of them reflect a Byzantine tradition, while others present distinctive shapes of the Umayyad period that continued to appear later.

Bowl-Shaped Lamps and Wineglasses (Fig. 6:1–5).— Number 1 is a small, out-folded rim of a bowl-shaped lamp with short handles (only one was preserved). Number 2 is a handle fragment. Both belong to a well-known bowl-shaped type with three suspended handles, which appeared in the eastern Mediterranean during the Byzantine period. It became one of the most popular lighting devices in the Early Islamic period. Parallels from Bet She'an were collected from Byzantine (Hadad 2006: Fig. 19.4:58), Umayyad and later levels (Hadad 2005: Pls. 22:413–423; 45:951–957). These lamps were also found at Ramla (Gorin-Rosen 2010:222, Pl. 10.1:11, 12).

Fragment Nos. 3–5 are lower parts of wineglasses. Number 3 has a short beaded foot with a solid base. Many variations of such wineglasses are reported from Umayyad contexts at Bet She'an (Winter 2011:346, Fig. 12.1:7–9, and see further references therein). Number 4, which belongs to the same type as No. 3, has tooling marks on its base. Wineglasses with similar marks on the base were found in Cave 2 at Khirbat el-Shubeika, dated to the seventh–early eighth centuries (Gorin-Rosen 2002:314–316, Fig. 7:36). Goblets with a similar tooled base were retrieved from late Byzantine/Umayyad layers at Jerash (Meyer 1988:199, Fig. 9:a–c), while at Tiberias they appeared in Abbasid Strata IV–III (Lester 2004:173–174, Fig. 7.2:34, 35). Number 5 has a hollow ring base, decorated with short ribbing. It was blown into a mold and possibly had a ribbed pattern on the body. A similar wineglass was discovered in an Umayyad glass workshop at Beirut (Foy 2000a: Fig. 14:1).

Wineglasses with a solid or hollow ring base were a widespread type in the Syro-Palestinian region during the Byzantine and Early Islamic periods. The shiny, highly translucent, greenish blue fabric, characteristic of these bases,

indicate that they should be dated to Umayyad period.

Bowls and Beakers with Trailed and Pinched Designs (Fig. 6:6–13).— These ornamented fragments illustrate decorative styles assigned to the beginning of the Islamic period. This group features many similarities with the Umayyad-period ornamented vessels unearthed at Ramla, north of the White Mosque (Gorin-Rosen 2010). Fragment No. 6 is a deep bowl, beaker or lamp of olive-green glass with yellow streaks. It is decorated with alternating, vertically applied notched trails and uneven short ribs or pinches. A comparable fragment of green glass with a wavy yellowish brown trail, but lacking ribs, is known from Ramla (Gorin-Rosen 2010:219, Pl. 10.2:2). Another example from Ramla is a shallow bowl or lamp with a loop handle (Gorin-Rosen 2010:222–223, Pl. 10.3). Number 7 is made of a thick trail, pinched with uneven protrusions or ribs. Similar handles were uncovered in the Umayyad and Abbasid–Fatimid layers at Bet She'an (Winter 2011:356, Pl. 12.3:12, and see further references therein).

Number 8 is a small, flattened bluish loop applied to a colorless body. It may be a tiny rounded handle for suspension or a trailed decoration. A few similar handles were retrieved from the Umayyad 'Street of Shops' at Bet She'an (Hadad 2005:28, Pl. 21:394–396) and in the 'House of the Bronzes' at Tiberias, dated to the Umayyad period or later (Hadad 2008:174, Pl. 5.7: 116, 117). Another Umayyad bowl, found in Ramla, bears a horizontal row of similar loops applied around the body (Gorin-Rosen 2010: Pl. 10.2:3a).

Fragment No. 9 is made of blue glass and is decorated with large, vertical pinches above a flattened base. A beaker with two rows of a similar decoration, found at Khirbat el-Shubeika, was attributed to the Umayyad period (Gorin-Rosen 2002:299, Fig. 7:53). Pinched motifs were very popular at our site, as well as in the Umayyad level at Bet She'an (Hadad 2005: Pl. 4:78–82; Winter 2011:350, Pl. 12.1:23).

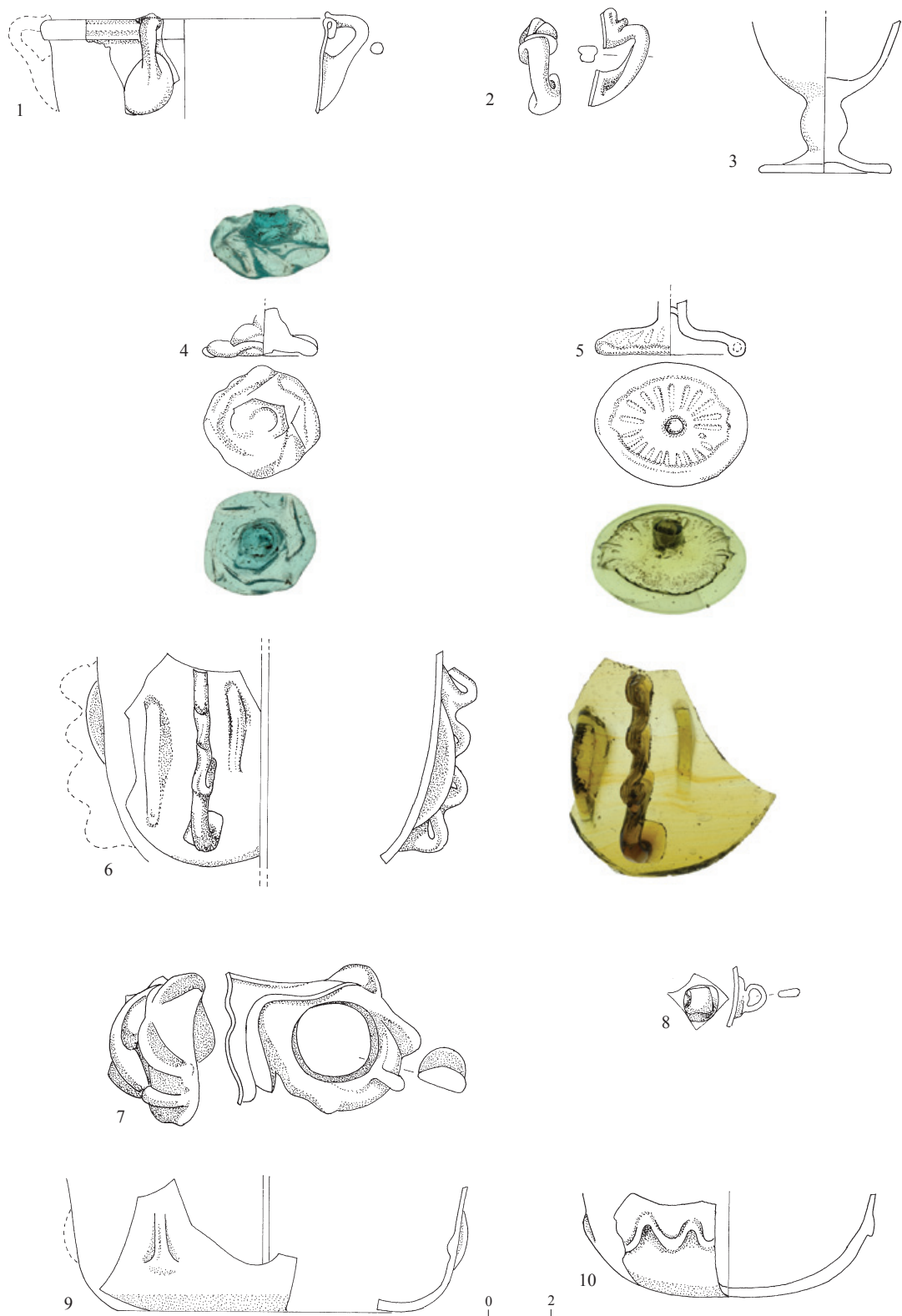


Fig. 6. Late Byzantine-Umayyad oil lamps, wineglasses, bowls and beakers.

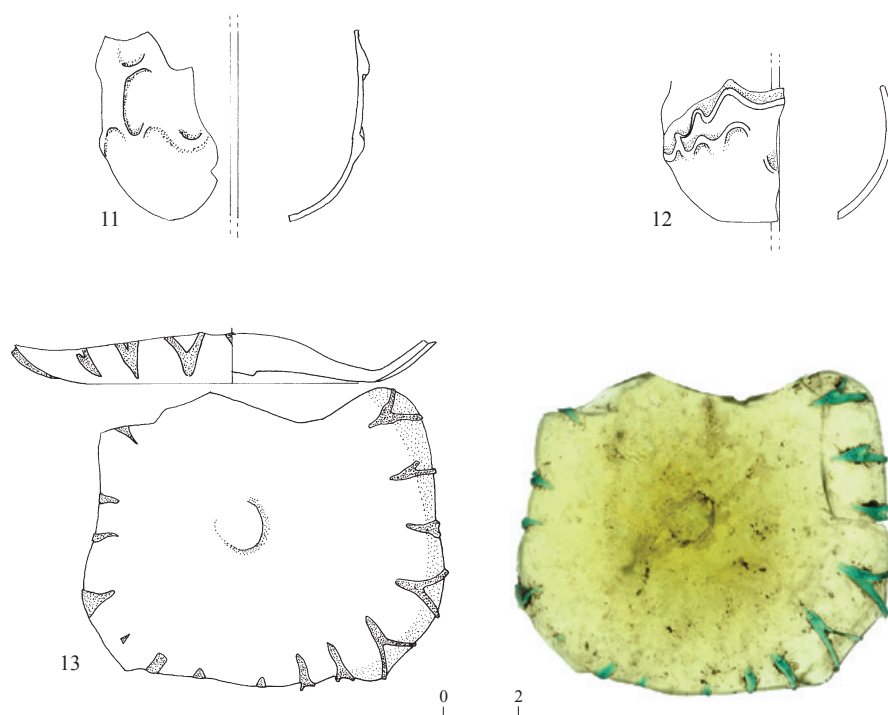


Fig. 6. (cont.)

No.	Type	Area	Locus (Building/ Room)	Basket	Color	Weathering	Comments
1	Bowl-shaped lamp	B	520 (III/2)	1104	Greenish blue	Iridescent film, pitting	One handle preserved
2	Bowl-shaped lamp	A	93 (I/above W36) 100 (I/10)	385, 387	Bluish green	Silver iridescence, pitting	Only handle preserved
3	Wineglass	C	1004 (IV/2)	2025	Bright greenish blue	Silver iridescence, pitting	
4	Wineglass	B	560 (I/20)	1365	Greenish blue	Iridescence	Shiny fabric, pontil scar: 1.0
5	Wineglass	B	539 (I/9)	1336	Yellowish green	Iridescence	Shiny fabric, small black impurities, bubbly
6	Bowl	A	39 (II/7)	148/2	Olive green with yellow streaks	Almost no weathering	Shiny fabric, bubbly, trailed and pinched
7	Bowl	B	507 (Between Buildings I and III)	1015	Colorless with bluish green tinge	Silver crust, pitting, lime deposits	Only handle preserved
8	Bowl	B	520 (III/2)	1118	Colorless with blue streak on handle	Silver iridescence	Thin-walled body, tiny loop
9	Bowl	A	35 (II/8, Pit B)	167/1	Bluish	Iridescent film, soil deposits	Pinched

◀ Fig. 6. (cont.)

No.	Type	Area	Locus (Building/ Room)	Basket	Color	Weathering	Comments
10	Beaker	A	7 (Fill)	45	Greenish	Iridescence, pitting	Pinched, bubbly, pontil mark: 0.8
11	Beaker/ bottle	A	12 (II/8)	27	Almost colorless with greenish blue tinge	Iridescence, pitting, small lime deposits	Pinched, bubbly
12	Beaker/ bottle	A	12 (II/8)	44/1	Yellowish	Iridescence, pitting	Pinched, bubbly
13	Bowl	A	24 (Courtyard)	157	Yellowish green, turquoise trail	Silver iridescence	Thick-walled, trailed, pontil mark: 1.5

Fragment Nos. 10–12, in greenish, bluish and yellowish hues, are decorated with asymmetrically ruffled designs. Number 10 probably belongs to a beaker with a thickened convex base. Two fragments (Nos. 11, 12) are thin walls of either beakers or possibly bottles. Their decoration was probably formed by applied trails, smoothed by heat or pinched on the glass parison (sphere) during the initial stage of blowing.

Base No. 13, thickened in the center, is decorated with a contrasting turquoise trail, applied in a zigzag pattern. The trail starts from the bottom upward to the body. This type is not common in the Islamic period in Israel. Similar bases and rim fragments, decorated with zigzag trails were discovered at Fustaṭ, where they were dated to the eighth century. These motifs are possibly a continuation of a decoration which appeared on Byzantine trailed jars, similar to the types discussed above (Fig. 4:13; for a discussion, see Foy 2000b:162–163, Fig. 14:2–7). A small salvage excavation at Khirbat el-‘Asfura in Rehovot revealed a bluish green base of an eighth-century bowl or lamp, decorated with bicolored trails in patterns similar to Nos. 10 and 13 (Ajami 2008: Fig. 6).

Jar and Bottles (Fig. 7:1–6).— Jar No. 1 is one of the few intact vessels retrieved from the site. It is small (height 4.6 cm) and has a short funnel neck with an infolded rim and a globular body, decorated in the middle with ten pronounced notches set horizontally. Parallels from contexts of the sixth–mid-eighth centuries were found at Kursi (Barag 1983:37–38, Fig. 9:7 [a plain jar]), Caesarea (Pollak 2003:165, Fig. 1:13), Umm er-Rasas (Piccirillo and Alliata 1994:287, No. 9; Pl. XXX:4), Pella (Smith and Day 1989:102, Pl. 51:21) and Jerash (Dussart 1998:93, Pl. 19:9). These parallels suggest that two other jars, discovered in the Roman baths of Ḥammāt Gader, should also be attributed to the same period (Cohen 1997:413, Pl. IV:5, 6).

Numbers 2 and 3 belong to short-necked bottles with an infolded rim, flattened on top. Versions of similar bottles with squat globular bodies were unearthed in the pottery workshop at Bet She’an, which operated from around 700 until the earthquake of 749 (for a discussion of the type, see Winter 2011:348, Pl. 12.1:10–14).

Bottle No. 4 demonstrates a different subtype with a rounded rim and a wide cylindrical neck. Umayyad examples are known from Bet She’an (Hadad 2005:23–24, Pl. 7:108, 109).

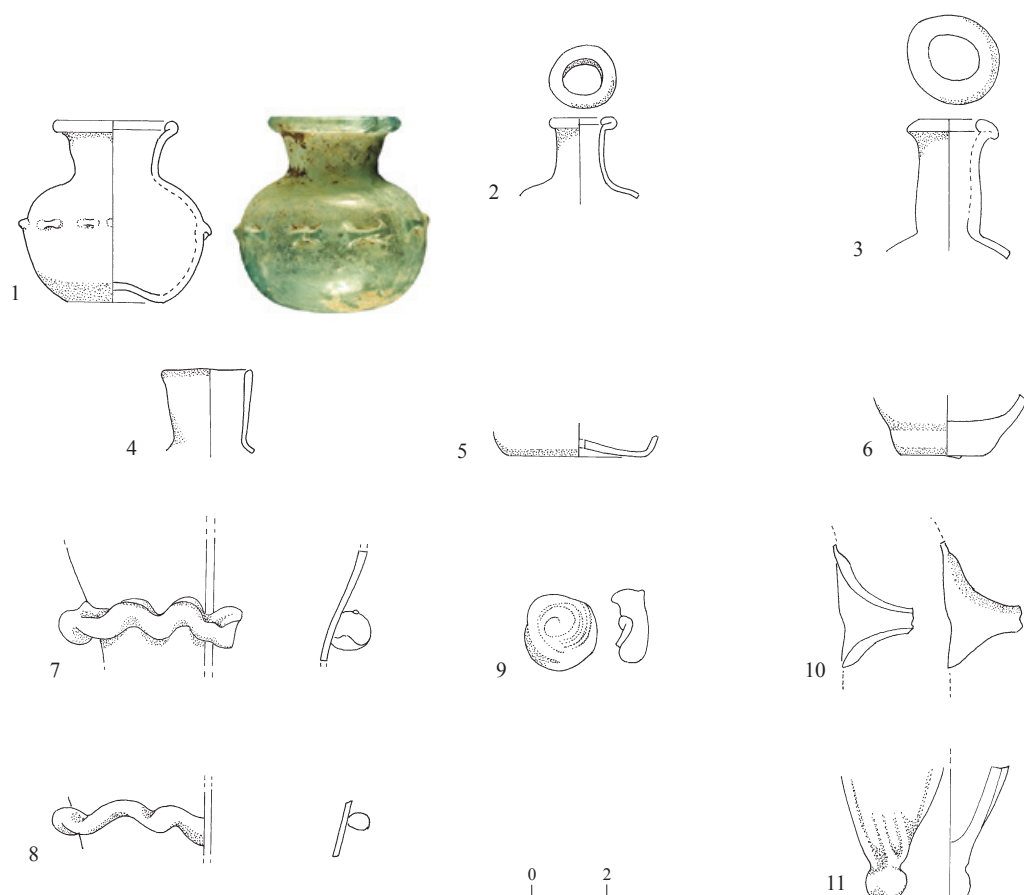


Fig. 7. Late Byzantine–Umayyad jar and bottles.

No.	Type	Area	Locus (Building/ Room)	Basket	Color	Weathering	Comments
1	Small jar	B	536 (III/2)	1206	Greenish blue	Iridescent film, pitting	Intact sloppy rim, pinched, bubbly
2	Small bottle	A	94a (I/10)	398	Almost colorless with greenish blue tinge	Milky-silver patches, iridescence, pitting	Thin-walled body
3	Small bottle	A	12 (II/8)	27	Bluish green	Silver-black crust, iridescence, severe pitting	Thick-walled body
4	Small bottle	A	98 (I/4)	414	Greenish blue	Milky crust, pitting	Thin-walled body
5	Small bottle	A	98 (I/4)	414	Bluish green	Pitting, lime deposits	Thin-walled body
6	Small bottle	B	35 (II/8)	167	Bluish green	Silver iridescence, pitting	
7	Bottle	A	101 (I/D)	394	Greenish blue	Silver iridescence	Trailed
8	Bottle	A	94a (I/10)	398	Greenish blue	Milky-silver iridescence	Trailed
9	Stamped bottle	B	500 (Surface, between Buildings I and III)	1000	Bluish green	Iridescence, pitting	Trailed knob, small black impurities

◄ Fig. 7. (cont.)

No.	Type	Area	Locus (Building/ Room)	Basket	Color	Weathering	Comments
10	<i>Alembic</i>	A	24 (Courtyard)	128	Greenish blue	Silver iridescence, pitting	
11	Flask	B	500 (Surface, between Buildings I and III)	1000	Greenish blue	Iridescence, lime deposits	Mold-blown

Two bases—one disc-shaped (No. 5), the other flat (No. 6)—possibly belong to small bottles. The latter form is less common, but appears on two Umayyad decorated bottles from Bet She'an (Hadad 2005:25, 27, Pls. 14:281; 16:354) and in two other contemporary beakers or bowls from Ramla (Gorin-Rosen 2010:220, Pl. 10. 1:7, 8).

Bottles with Applied Wavy Trail Decoration (Fig. 7:7, 8).— The two bottles have a thick, wavy trail wound around a tall funnel neck. A wide diversity of such bottles from the Umayyad-period levels at Bet She'an helps to restrict their date to no later than the early eighth century (for a discussion and parallels, see Winter 2011:348–349, Pl. 10.1:19, 20).

Bottle with Applied Glass Patch (Fig. 7:9).— Vessels decorated with disk-shaped applications were part of a local production in the Umayyad period (Gorin-Rosen 2010:226–227, Pl. 10.2:17). Number 9 is a small circular stamp wound from a trail. It may be part of a stamped bottle, attached to an infolded rim. Many examples of similar bottles were uncovered in Umayyad-period Bet She'an, alongside many other inscribed stamps. Hadad suggested that these stamped bottles were possibly produced at Bet She'an (Hadad 2005:25–27, Pls. 15; 16:308–315).

Alembic (Fig. 7:10).— This small fragment— walls with a spout—belongs to so-called *alembic*, a cup-shaped vessel with a small

ovoid body and a long spout. The type is found in many Early Islamic sites. The majority of the local examples comes from eighth-century contexts (for a discussion, see Gorin-Rosen 2010:227, Pl. 10.2:18–21). Similar examples from Bet She'an were found in the Umayyad-period level, and others do not postdate the Fatimid period (Hadad 2005:29, 47–48, Pls. 23:453–455; 46:979–981). The fabric of No. 10 may indicate that it belonged to an Umayyad-period vessel.

Mold-Blown Flask (Fig. 7:11).— This is the lower part of a flask with a thick conical body. It is decorated with mold-blown, twisted ribs and has a small knob at the base. No exact parallels were found; however, its shiny, greenish blue fabric and rough ribbing suggest a date in the Umayyad period.

Abbasid Vessels (late eighth–tenth centuries CE; Figs. 8–11)

This group, retrieved mainly from Buildings I–III, includes plain, every-day vessels and ornamented luxury vessels. Their shape, style of decoration and fabric implies an Abbasid-period date. A number of fragments might date slightly earlier or later. The absence of tenth–eleventh-century coins (see Bijovsky and Berman, this volume) indicates that this group should be dated to no later than the tenth century.

Plain Bowls and Beakers (Fig. 8).— A few plain bowls and beakers of common tableware

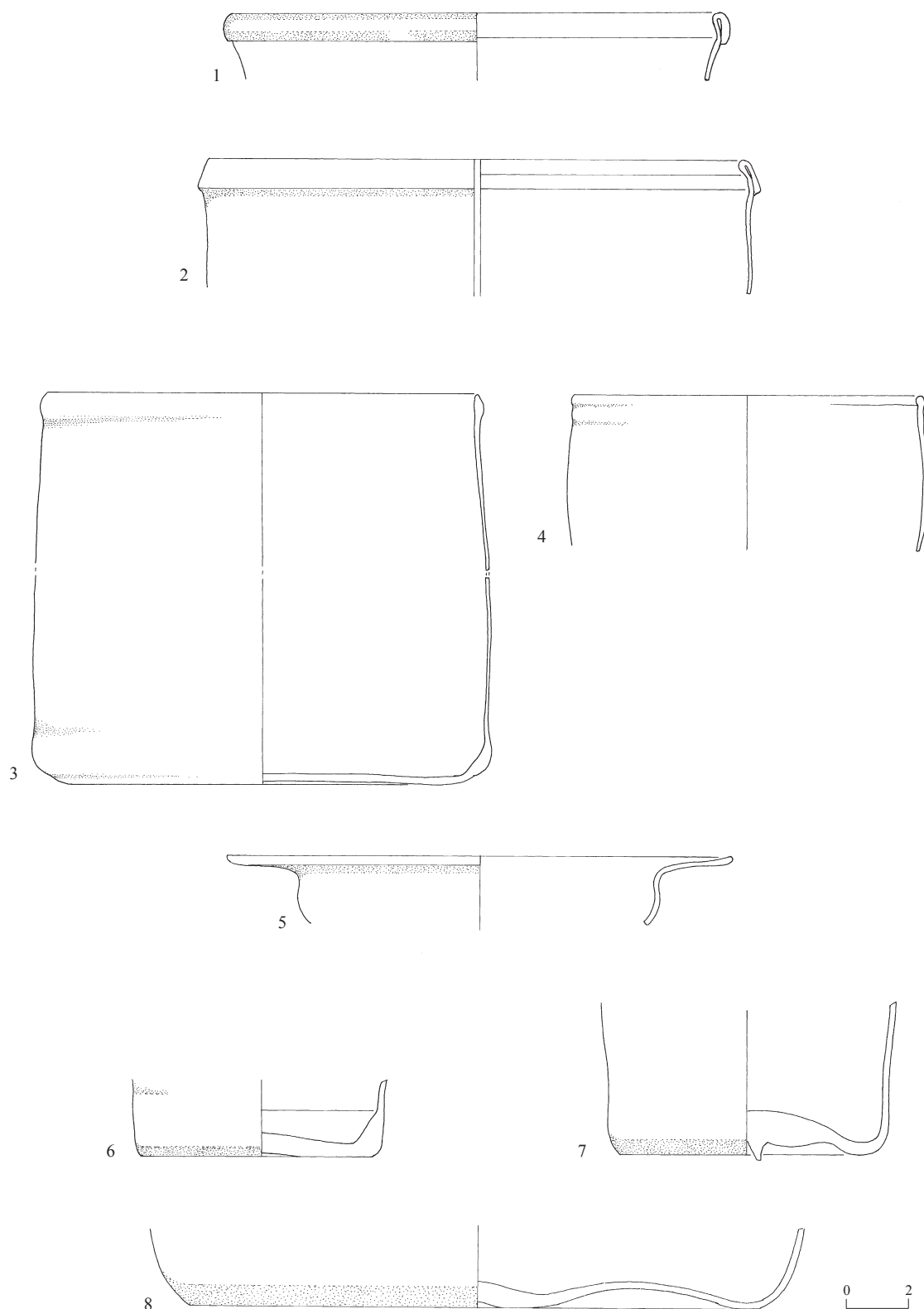


Fig. 8. Early Islamic-period plain bowls.

◄ Fig. 8

No.	Area	Locus (Building/ Room)	Basket	Color	Weathering	Comments
1	A	14 (Courtyard)	38/5	Greenish blue	Silver iridescence, pitting	
2	A	12 (II/8)	27	Dark olive yellow	Black enamel-like crust, silver iridescence	
3	A	30 (II/8)	130	Colorless with yellowish tinge	Iridescence	Mended from many parts, thickened rim and base
4	B	510 (III)	1021	Colorless with greenish tinge	Black and silver patches, iridescent film	Long horizontal bubbles
5	B	103 (I/15)	510	Pale greenish	Black-silver crust, severe pitting	
6	B	571 (I/K, Pit G)	1383	Greenish blue	Silver-blackish patches, iridescent film, pitting	Thickened base, pontil mark: 1.0
7	B	571 (I/K, Pit G)	1383	Greenish blue	Silver-blackish patches, iridescent film, pitting	Thickened base, pontil scar: 1.7
8	B	571 (I/K, Pit G)	1383	Greenish blue	Lime-silver crust, iridescent film, pitting	Pontil scar: 1.5

types were registered. They include deep cylindrical vessels with thickened, flattened and concave bases and a shallow bowl with a broad, horizontally flared rim (No. 5). These vessels were locally produced during the Early Islamic period.

Numbers 1 and 2 have a slightly thick, out-folded, incurved rim. They represent a continuation of Roman–Byzantine glass traditions, but differ in fabric and workmanship. Similar fragments occurred in the Umayyad period at Bet She'an (Hadad 2005:21, Pl. 3:58–62). At Ramla, they are dated from the eighth to the eleventh centuries (Pollak 2007:101, Fig. 1:2, 7, 8).

Numbers 3 and 4 are deep cylindrical bowls with a rounded, upward rim and a shallow horizontal ridge. Both are made of fine-quality, colorless glass. This type of bowl is well-known, mostly from the Abbasid period (Gorin-Rosen 2010:228–229, Pl. 10.4:1). The almost complete example of bowl No. 3 is rare. It has a flat bottom and a characteristic triangular section joining the body, similar to

bowl No. 6. Two more examples of this type, one greenish and the other colorless with a yellowish hue, were found in Building II (L30, L35; not illustrated).

Number 5 is a colorless, shallow bowl with a wide, horizontally splayed rim. It is an uncommon type in Israel. However, hundreds of similar vessels are known from the early eleventh-century shipwreck at Serçe Limani (Matthews 2009: Figs. 6-3, 6-4).

Numbers 6–8 are the lower parts of cylindrical bowls. They were found in a pit dug from an Umayyad floor in Building I (L571; see Sion, this volume: Plan 5). Number 8 belongs to a large bowl with a concave base. Numbers 6 and 7 are smaller. This shape first appeared in the Umayyad period (Wilson and Sa'd 1984:75, Fig. 572). A bowl with a flat bottom was unearthed in the Abbasid level of a pottery workshop at Bet She'an (Winter 2011:254, Fig. 12.3:5). Cylindrical bowls and beakers with similar bases were standard at Fustat during the eighth–tenth centuries (Scanlon and Pinder-Wilson 2001:21–23, 28–29, Figs. 1; 2:7c, d).

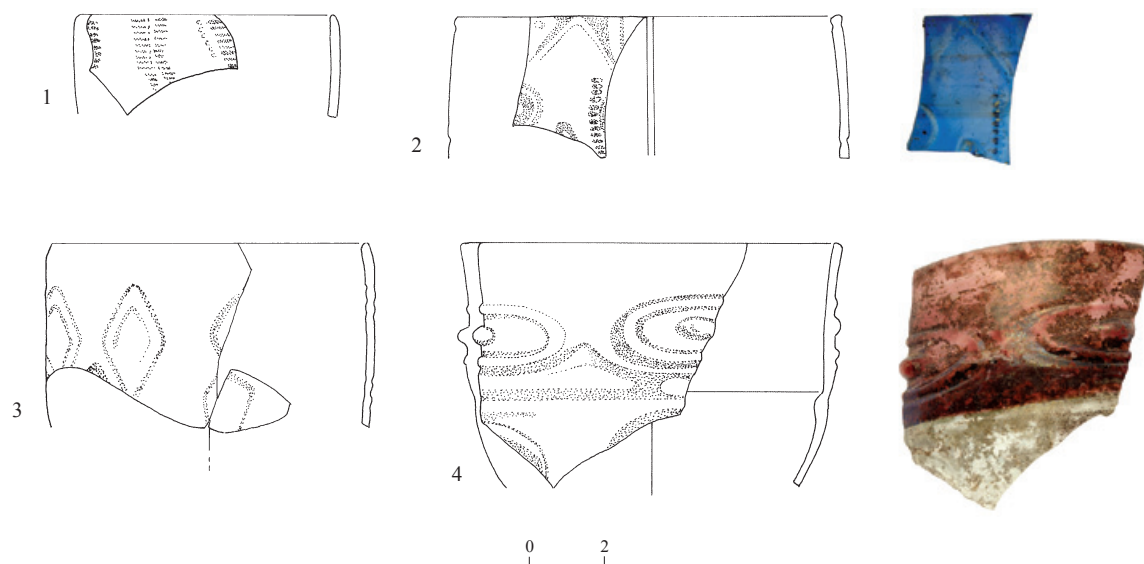


Fig. 9. Early Islamic-period bowls with impressed decoration.

No.	Area	Locus (Building/Room)	Basket	Color	Weathering	Comments
1	E	1549 (I/7)	3139	Deep greenish	Iridescence	Fine fabric, small black impurities
2	B	501 (Surface above III/1)	1172	Deep blue	Pitting	
3	B	569 (I/9)	1381	Colorless with bluish green tinge	Milky-silver crust, small black patches, iridescent film, severe pitting	Bubbly
4	E	1549 (I/7)	3139	Purple and colorless	Black-rusty patches, iridescence	Two bicolored parts, fine fabric

Vessels with Impressed Decoration (Fig. 9).—Four cylindrical bowls with a decoration impressed with metal tongs were unearthed in Buildings I and III. Three bowls (Nos. 1–3), which vary in their rim diameters, share a slightly lopsided shape and an irregularly repeated decoration, visible on both sides of the vessels. The smallest bowl (No. 1) is decorated below the rim with bands of irregular double dashes, vertically set. It might be part of a more complex design, as in bowl No. 2, which is ornamented with circles, dashes and rhombi. Number 3 has a repeated design of lozenges set in irregular intervals.

Similar bowls appeared at Bet She'an, mainly in the Abbasid period, and were

probably in use no later than the tenth century (Winter 2011:352, Fig. 12.3:1, 2). The tonging of vessels was one of the most widespread glass decoration techniques at Bet She'an. The large amount of these vessels found in the city indicates local production (see discussion in Hadad 2005:37, 65–67; Pls. 31–33:608–648).

Number 4 is a more refined vessel, distinguished from the vessels discussed above by its larger size and better quality of decoration. A design of concentric ovals with a central boss appears in relief on the exterior, with no impression on the interior. The fragment belongs to a rare type of vessel, made of two differently colored glass blobs: purple and colorless. Similar vessels are known mainly from collections, both

public and private (Carboni 2001:102, Fig. 92). Few examples were discovered in excavations. These include a bottle from Abbasid–Fatimid Bet She'an, which is made of light purple and blue glass with a design similar to that of No. 4 (Hadad 2005: Pl. 41:851). Another comparable fragment of purple and colorless glass was unearthed in Early Islamic Stratum I at Ḥorbat Hermas (Gorin-Rosen 2006:34*, Fig. 1:4). Hadad mentions that 'two-part vessels' are a rare find, probably because of the complex technique they required. According to Hadad, three of the seven vessels found at Bet She'an were manufactured in Baghdad; the origin of the others is unknown (Hadad 2005:42–43). Gorin-Rosen proposed that some could have been produced in Syria, Israel, Egypt and perhaps, also Iran (Gorin-Rosen 2006:236).

Vessels with Mold-Blown Decoration (Fig. 10).— This group includes six vessels, generally attributed to the Early Islamic period, found in Buildings I–III. Numbers 1–3 bear ribbed, mold-blown designs. This style of decoration was especially popular during the Byzantine period, but continued also in the Early Islamic period.

Number 1 is the lower part of a thick-walled flask, decorated with spiral ribbing, first blown into a mold and then pinched into a rosette-shaped mold with six uneven petals. No parallels were found. The shiny fabric in bright bluish green color and its decoration suggest a date in the eighth century.

Two bases (Nos. 2, 3) are decorated with vertical shallow ribbing, spreading upward. Number 2 is probably a globular bottle with a concave base. Its fabric and ribbing style resemble Umayyad mold-blown vessels from Bet She'an (Hadad 2005:27, Pl. 16:317–322). Number 3 is made of colorless glass. It seems to be a bowl with a thickened flat base, similar to the bowls from the Abbasid–Fatimid levels at Bet She'an (Hadad 2005: Pl. 31:605–606).

Numbers 4 and 5 may belong to beakers or bottles decorated with regular lozenges organized in a honeycomb pattern. Number 4

has a flattened base, decorated with an eleven-petal rosette. A similarly decorated beaker is known from an Umayyad context at Bet She'an (Hadad 2005:22, Pl. 4:86). However, the majority of the vessels with mold-blown honeycomb motifs occurred in the city during the mid-eighth–eleventh centuries (Hadad 2005:36, 41, Pl. 30:587, 594, 595).

Number 6 is the lower part of a cylindrical bottle, made of yellowish glass with purple streaks. Its decoration consists of asymmetric, elongated lozenges. Parallels made of yellowish and colorless glass were found at Bet She'an (Hadad 2005: Pl. 40:833) and Ramla (Gorin-Rosen and Katsnelson 2005:111, No. 38), in late eighth–eleventh-century levels.

Plain and Decorated Bottles (Fig. 11).— This group consists of common types of bottles and flasks, cosmetic and medical vessels, as well as a rare jug.

Fragment Nos. 1–5 are of short-necked small bottles. Number 1 belongs to a very specific type, which is characterized by horizontal ridges tooled at the neck. These bottles are usually small, with a plain or decorated body. They vary in the number and deepness of ridges on their necks. They are very common in eighth–ninth-century levels at Bet She'an (for a discussion and parallels, see Winter 2011:354–355, Fig. 12.3:7, 8).

Fragment No. 2 is a thin-walled bottle with an upright rounded rim, a wide, short neck and the beginning of a widely spread shoulder. A similar fragment, made of light purple glass, was found in an Abbasid–Fatimid context at Bet She'an (Hadad 2005:40, Pl. 36:715, and see therein further references to Yoqne'am).

Number 3 features a small rectangular bottle with an elongated body and a transition between the walls and the beginning of a flat base. This type occurred in Umayyad contexts at Bet She'an, but is most characteristic of the ninth century (for a discussion and parallels, see Winter 2011:355, Fig. 12.3:9).

Bottle No. 4 has a hexagonal body and a thickened, flat base. Its massive walls were

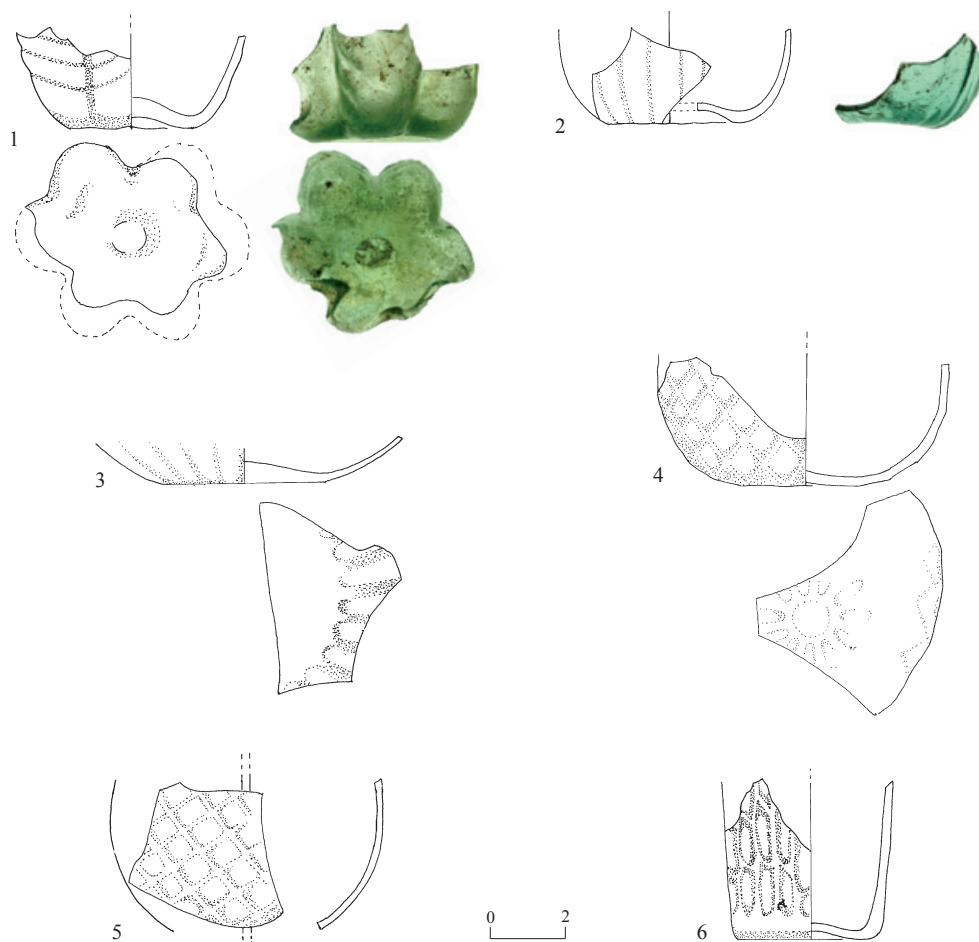


Fig. 10. Early Islamic-period vessels with mold-blown decoration.

No.	Type	Area	Locus (Building/ Room)	Basket	Color	Weathering	Comments
1	Flask	B	511 (Between Buildings I and III)	1040	Bluish green	Silver patches, milky crust, pitting	Pontil mark: 1.0
2	Bottle	A	518 (III/under Pit 509)	1052	Greenish blue	Iridescence	Bubbly
3	Bowl	B	513 (III/3)	1111	Colorless	Iridescent film	Thin-walled
4	Beaker/ bottle	B	548 (I/D)	1274	Almost colorless with greenish blue tinge	Iridescence, pitting, lime deposit	Shiny fabric, bubbly, pontil mark: 1.0 cm
5	Beaker/ bottle	A	12 (II/8)	27	Almost colorless with greenish blue tinge	Small black patches, iridescence, pitting	Thin-walled body, bubbly
6	Bottle	B	548 (I/D)	1274	Colorless with strong purplish tinge	Black and silver crust, iridescent film	Pontil mark: 0.8 cm



Fig. 11. Early Islamic-period bottles and other closed vessels.

probably mold-made, then cut into facets after the glass was cold. A similar bottle was found at Ḥammad Gader, where it was dated to the ninth century (Lester 1997:438, Pl. 1:15). Similar flasks with a tall narrow body and a faceted neck were found at Fuṣṭaṭ, in ninth–tenth-

century contexts (Scanlon and Pinder-Wilson 2001:87–88, No. 41:c–e).

Number 5 is an octagonal bottle with indent decoration on the sides. It is a luxurious vessel, made of blue glass. A bottle with indented sides, but square in section, was found at Fuṣṭaṭ, in

◀ Fig. 11

No.	Type	Area	Locus (Building/ Room)	Basket	Color	Weathering	Comments
1	Small bottle	B	105 (I/10)	420	Greenish blue with green streaks	Silver iridescence, pitting	Ridged neck
2	Bottle	B	510 (III)	103	Pale greenish	Gray-silver crust, iridescence, pitting	
3	Small bottle	B	518 (III/ under Pit 509)	1052	Bluish green	Milky-silver crust, iridescence, severe pitting	Rectangular thick-walled body
4	Bottle	E	1532 (I/1)	3078	Colorless	Black-silver crust, iridescence, pitting	Hexagonal thick-walled, pontil scar: 1.5 cm
5	Bottle	B	501 (Surface, above III/1)	1037	Deep blue	Iridescent film, pitting	Octagonal thick-walled, indented bubbly, small pontil scar
6	Bottle	B	547 (I/K)	1270	Colorless with yellowish tinge	Silver-black crust, iridescence, pitting	Uneven rim, vertical bubbles
7	Bottle	B	560 (I/20)	1365	Greenish yellow	Milky-silver iridescence, severe pitting	Uneven rim, thin-walled body
8	Flask	B	501 (III/1)	1037	Blue	Silver iridescence, pitting	Uneven
9	Flask	B	520 (III/2)	1104	Greenish blue	Milky-silver iridescence, pitting	Mold-blown, thickened base
10	Miniature vial	E	1520 (I)	3647	Colorless with yellow tinge	Silver-black crust, pitting	Intact, thickened base with pontil mark
11	Jug	A	90 (Burial cave; intrusive?)	1021	Colorless	Black and silver patches, strong iridescent film	Mended from many parts, fine fabric

an undisturbed pit dated to the ninth–tenth centuries (Scanlon and Pinder-Wilson 2001: Fig. 21:a).

Numbers 6 and 7 are tall-necked bottles with a flaring rim. Versions of similar rims, dated to the late Byzantine–Umayyad periods and later, were found at Jerash (Meyer 1988:202, Fig. 9:O–Q). Our bottles may be assigned to the Abbasid period, based on their glass fabric and weathering.

Number 8 is the small, uneven lower part of a thin-walled flask used from the mid-eighth through the eleventh centuries (Lester 2003:161). This type, often made of deep-blue glass, was widespread in the Islamic world, but

seems to have been uncommon at Bet She'an. It is characterized by a small, cut-off, rimless opening; a bubble-shaped elongated body; a narrow cylindrical neck; and a rounded base. Similar bottles from Ramla are dated to the Abbasid period at the latest (Gorin-Rosen 2010:227–228, Pl. 10.1:19). Two hundred of these bottles, dated to the ninth–tenth centuries, were found at Raya, in southern Sinai. One of them has fiber “trails around the neck, and the neck of another is wrapped with cloth” (Shindo 2003:180, Fig. 1:7).

Fragment No. 9 belongs to an elegant mold-blown tubular flask, with a long tapering body decorated with flutes, and a thickened elliptical

base. A very similar fragment was found at Fuṣṭaṭ, with coins dated to the late eighth–early ninth centuries (Scanlon and Pinder-Wilson 2001:49, Fig. 21d).

Number 10 is a miniature lentil-shaped vial with an infolded rim, which was preserved intact (height 3.7 cm). Similar miniature bottles (height 4 cm or less), dated to the Abbasid–Fatimid periods, were found at Bet She'an (Hadad 2005:39, Pl. 35:689–690). Many similar vials, lentil-shaped or tubular, were recovered at Tiberias in Strata III–I, dated to the late ninth–eleventh centuries. One of them, with a liquid capacity of 0.5 cu cm, was found in a shop, dubbed a pharmacy, which dates from the late tenth to the early eleventh centuries. Lester suggested that vessels of this type were used for concentrated contents, such as essences or medications (Lester 2003:161–162, Fig. 4:39–43, and see further references and discussion therein).

Number 11, a jug of which the upper and lower parts were preserved, features an unusual form. It has a short, wide-funnel neck and a tall, cylindrical body, and is distinguished from other bottles by its large size. Small remains of a handle, possibly pinched, are visible below the rounded rim. Two horizontal ridges, pinched on the upper part of the neck, are characteristic of this jug. Several partly preserved examples of this type come from the Serçe Limani shipwreck (Kenesson 2009:306–307, JG 25–28, and see therein further references to a tenth-century jug from Egypt). Our jug is the first to be published from Israel.⁶ Its clear and colorless glass of fine quality may indicate that it was imported and that it is possibly later than other bottles of this group.

Ayyubid–Mamluk Period Vessels (Figs. 12, 13)

A number of fragments represent Late Islamic types, including jars that started to appear already in the Early Islamic period. Most of them were found in an undisturbed storage pit in Building I (L540; see Sion, this volume:

Plan 6). Its content is dated mainly to the thirteenth century, according to the underglazed painted faience bowls found there (see Avissar, this volume).

Jars (Fig. 12).— The four fragments in Fig. 12 are characterized by a wide mouth, a short neck and a globular or cylindrical body. They differ in form, size, shape of rim and in the quality of the glass.

Numbers 1 and 2 represent a globular subtype. Both have an unevenly rounded rim, almost lacking a neck. Parallels from Bet She'an occurred in Abbasid–Fatimid levels (Hadad 2005: Pl. 43:891–893) and at Tiberias, in Fatimid Stratum I (Lester 2003: Fig. 7.4:46, 47). Comparable plain or decorated jars are a typical find in the Serçe Limani shipwreck glass assemblage. The excavators called them 'fish bowls' because of their shape: a wide splayed rim and a short concave neck above a sloping shoulder (Hentschel 2003:311–312, Fig. 27-2).

Numbers 3 and 4 represent two subtypes of large, cylindrical storage containers. Number 3 has a widely splayed, infolded rim, while No. 4 features an upward out-folded rim, a shorter neck and a wider body. Gorin-Rosen suggested that these large jars were used for sugar production during the Crusader, Ayyubid and Mamluk periods (for a discussion and parallels from Bet She'an, see Gorin-Rosen 2010:241–242, Pl. 10.7:4, 5).

Bottles (Fig. 13).— The most characteristic features of these fragments are bulges on the mouth, below the flared rim or on the neck. Many bottles of this type are known from Hama (Riis 1957:35, Figs. 39–45). They are also typical of Bet She'an, mainly recovered from Ayyubid–Mamluk contexts (Hadad 2005: Pl. 51:1058–1067).

Two bottles (Nos. 1, 2) demonstrate simple, daily-ware forms, of which complete shapes are as yet unpublished. Bottle No. 1 is made of yellowish glass and has an uncommon lentoid body. Its tall neck carries two bulges: one below the rim and one above the junction of the neck

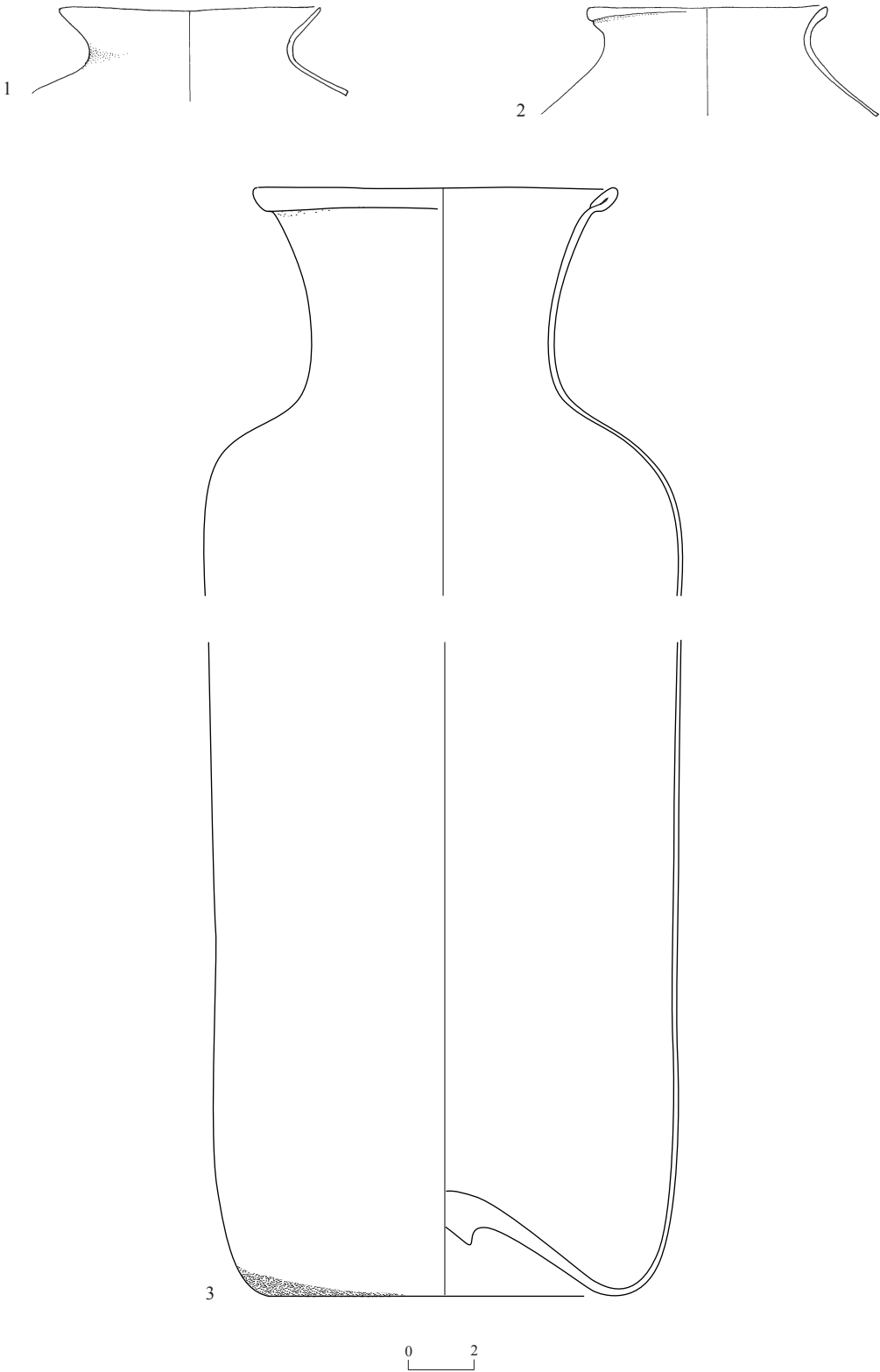


Fig. 12. Islamic-period jars.

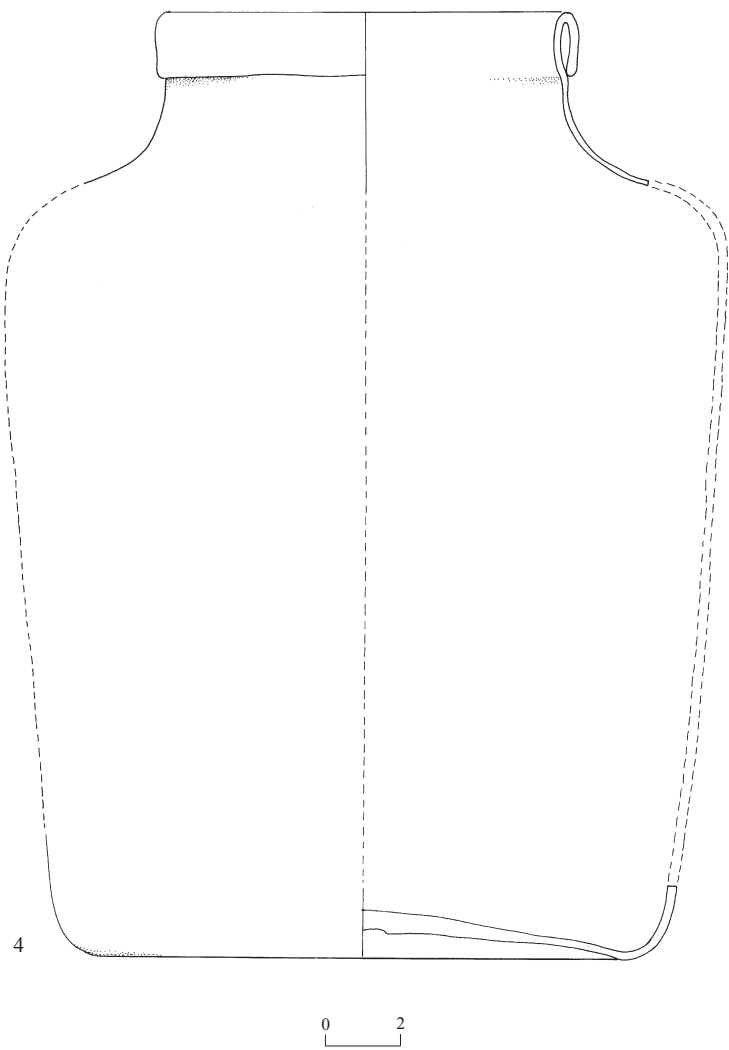


Fig. 12. (cont.)

No.	Area	Locus (Building/ Room)	Basket	Color	Weathering	Comments
1	B	540 (I)	1256	Colorless with bluish green tinge	Black-silver patches, iridescence, pitting	
2	B	540 (I)	1256	Colorless with bluish green tinge	Black-silver patches, iridescence, pitting	Uneven rim
3	B	540 (I)	1256	Almost colorless with greenish blue tinge	Black-silver patches, pitting	Two parts, mended
4	A	88 (Courtyard, Pit A)	262	Colorless with yellow- greenish tinge	Black patches, iridescence	Two parts, thick- walled body, pontil scar: 2.5 cm

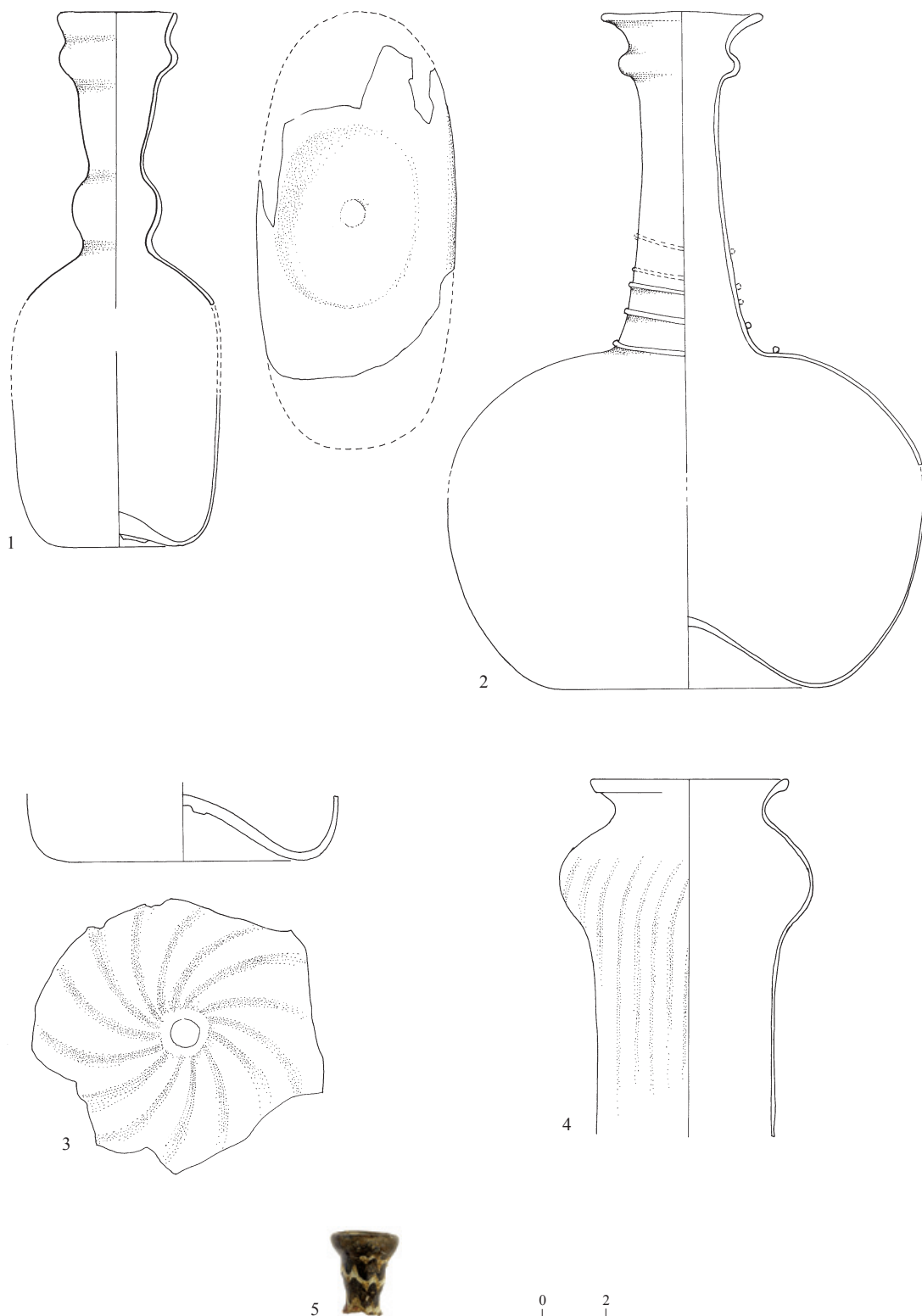


Fig. 13. Late Islamic-period bottles.

◀ Fig. 13

No.	Area	Locus (Building/ Room)	Basket	Color	Weathering	Comments
1	B	540 (I)	1273	Yellowish	Iridescence	Lentoid
2	B	540 (I)	1273	Light bluish green	Iridescent film	Possibly mold- blown, trailed
3	B	540 (I)	1273	Colorless with bluish tinge	Black patches, silver iridescence, pitting	Mold-blown, pontil scar: 0.8 cm
4	B	540 (I)	1273	Colorless with bluish green tinge	Black and silver patches, iridescent film, rounded bubbles	Mended, many fragments, thin- walled body, mold- blown
5	B	547 (I/K)	1307	Dark translucent purple, white opaque trail	Black enamel-like crust, iridescence, pitted, lime deposit on int.	Marvered glass

and the body. Another base, but of a smaller bottle, was found in the same context (B1269; not illustrated). Number 2 is a large bottle with a broad bulbous body and a tall trailed neck. On its base are hardly visible marks of ribbing, indicating that it was probably mold-blown. Upper parts of similar bottles, including a trailed one, were unearthed in twelfth-century contexts of the Jerusalem Cardo (Brosh 2012: Pl. 15.1:G7–G12).

Numbers 3 and 4 are decorated with a spiral, mold-blown ribbing. Both are colorless, but with different hues of glass. Base No. 3 possibly belongs to a bottle. Its ribbed decoration starts at its center and continues up onto the walls. A similar fragment was found in Fatimid Stratum II at Tiberias (Lester 2004: Fig. 7.13:168).

Fragment No. 4 is exceptional. It is a thin-walled vessel with a short, flared, rounded rim and a tall, cylindrical neck, widely bulged at the top. No parallels are known, but a possible pottery counterpart may be the *arbarello* jars, examples of which are known in Israel from Crusader 'Akko (Stern 2012: Pl. 4.31:1–4).

Number 5 is a typical Islamic-period bottle, which was used for kohl. It is made of purple translucent glass, marvered with a white opaque trail. Many of these bottles have a pyramid-

shaped body with a solid bottom part. In Israel, they are found mainly in Ayyubid–Mamluk strata, such as at Bet Yerah, Yoqne'am, Giv'at Yasaf (Tell er-Ras) and Bet She'an (for parallels and a discussion, see Gorin-Rosen 1999b:138–139, Fig. 1:9).

GLASS VESSELS FROM THE BURIAL CAVE

Eight vessels, including a few unidentified fragments, were retrieved from the burial cave (Fig. 14; see Sion, this volume: Plan 2). Two bottles (Nos. 1 and 2), of which No. 1 is almost complete (height 6.8 cm), come from a secure context on the floor of the tomb's *arcosolium* (B382). They possibly indicate the earliest phase of burial, dated from the late third to the early fourth centuries. Both vessels, probably of local production, share a small size and an uneven flared rim, a short funnel mouth, a tall cylindrical neck and a plain bulbous body with a flattened base. Parallels are scarce; they were found in Burial B at Loḥame Ha-Geṭa'ot, dated to the first half of the fourth century (Peleg 1991:136, Figs. 6:1; 9:2–4), and in Tomb 64 at Pella, ascribed to the late third or fourth century (Smith and McNicoll 1992:139–141, Pls. 96:10, 11; 97:c,

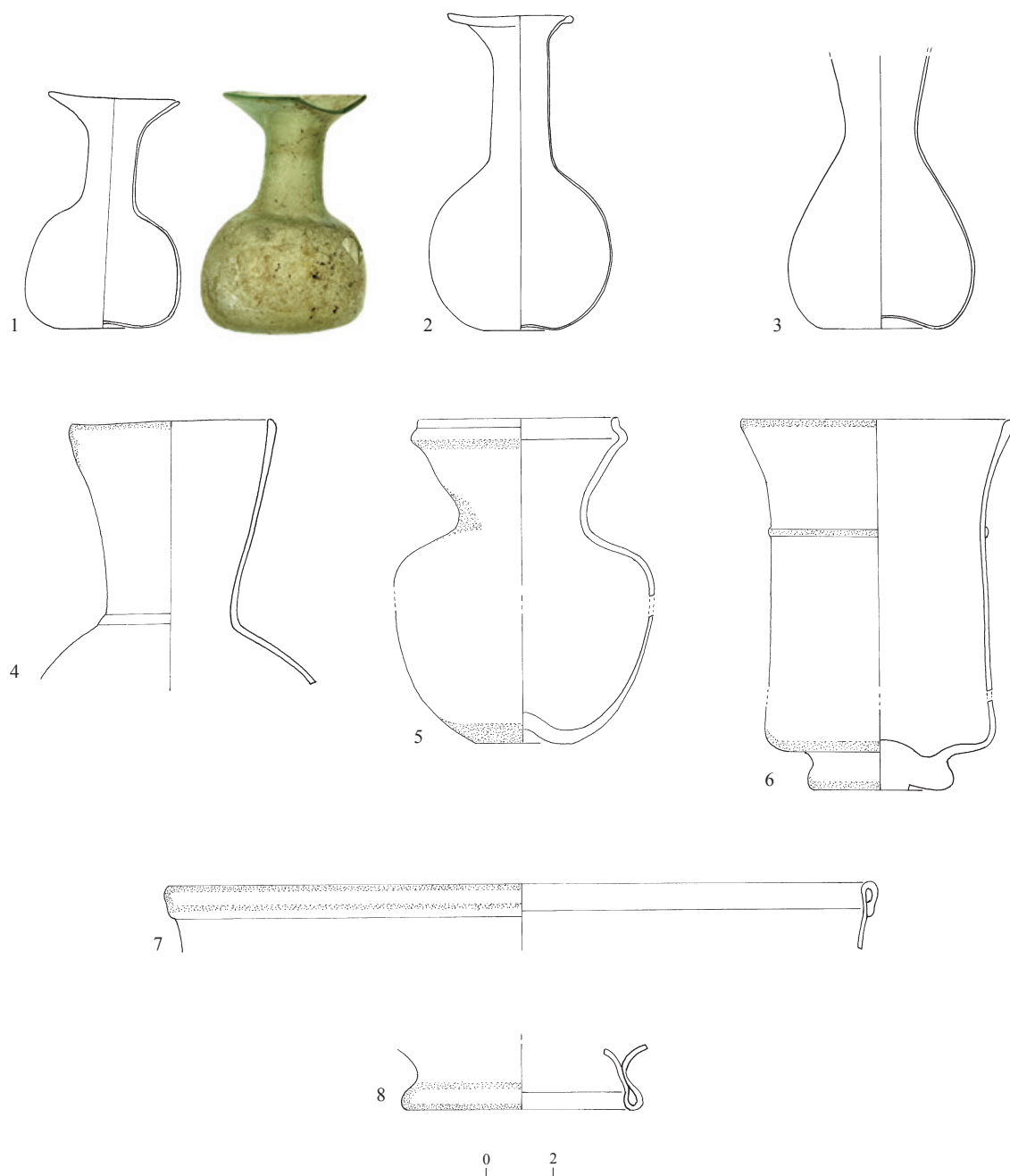


Fig. 14. Late Roman-Byzantine vessels from the burial cave.

d). The peculiar form of our bottles, as well as the quality of their fabric, imply a late third-early fourth-century date.

Piriform bottle No. 3 was retrieved from a *kokh* (L89). The bottle's shape and the quality

of the glass suggest a Byzantine-period date. The rest of the vessels were recovered from a fill in the burial chamber (L86; B254), and can be dated only generally, from the fourth century onward.

◀ Fig. 14

No.	Type	Locus	Basket	Color	Weathering	Comments
1	Bottle	85	382	Greenish	Dark and white patches, iridescence, pitting, elongated bubbles on rim and body	Mended, complete profile, thin-walled body
2	Bottle	85	382	Almost colorless with bluish green tinge	Large black impurities on rim and mouth, elongated bubbles, iridescence	Mended, many parts, complete profile, thin-walled body, fine fabric
3	Bottle	89	273	Almost colorless with greenish tinge	Dark and white patches, iridescence, black impurities	
4	Bottle	86	254	Bluish green	Dark and silver patches, black impurities, bubbly	Mended, thick-walled body
5	Jar	86	254	Purple	Black-silver crust, iridescent film	Mended, thick-walled body, pontil mark: 0.7 cm
6	Beaker	86	254	Colorless with yellowish green tinge, turquoise trail	Black patches, iridescence, pitting	Mended, long horizontal bubbles, pontil scar: 1.5 cm
7	Bowl	86	254	Colorless with bluish green tinge	Iridescence, pitting lime deposit	
8	Bowl	86	254	Colorless with bluish green tinge	Iridescence, pitting, lime deposit	

Bottle No. 4 has a rounded rim and a tall, funnel neck with a pronounced constriction at its base. Bottles with similar broad flaring necks were found in Tomb XV at Hanita, dated to the third–mid-fourth century (Barag 1978:27, No. 54, and see further references therein) and in a burial cave at Bet She'an from the fourth–fifth centuries (Gorin-Rosen 2000:64*, Fig. 1:14); however, no exact parallels to No. 4 were found.

An almost complete purple jar (No. 5; height c. 9.5 cm) is uncommon in this group. It has a globular plain body and a wide, funnel neck with an unusual horizontal ridge below the incurved rim. A very similar jar was uncovered at Tel Bet She'an (FitzGerald 1931:42, Pl. 39:30). It is attributed to the Late Roman period, although it was found among other glass vessels dated much later (Barag 1970:150–151, Fig. 33, Type 6).

Vessel No. 6 demonstrates the complete profile of a solid base beaker, with a rounded rim and a cylindrical body. It is decorated with a horizontal turquoise trail, applied below the rim. Similar rim- and base-fragments were collected in other contexts at the site, and were dated by parallels to the fourth–early fifth centuries (see discussion above, Fig. 2:8–11).

Fragment Nos. 7 and 8 are the upper and lower parts of a deep bowl with a vertical rim folded outward and a high, hollow ring base. Similar fragments, dated to the Byzantine period, were found at Bet She'an (Hadad 2006:626, Fig. 19.1:11–14). Two small rim- and handle-fragments of a bowl-shaped oil lamp were found in the same locus (not illustrated; see above, Fig. 6:1, 2). These fragments reflect the last phase of the burial, assigned by the excavator to the fifth century.

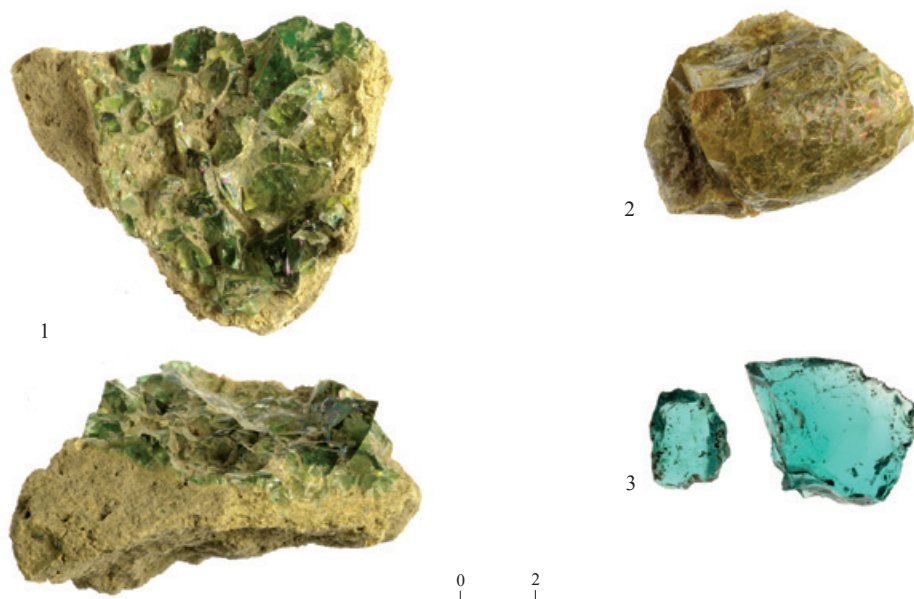


Fig.15. Glass debris.

No.	Type	Area	Locus (Building/ Room)	Basket	Measurements (cm)	Color	Weathering
1	Stone with glass remains	C	1015 (IV/ Pit A)	2078	H 4.8 L 9.8 W 7.8	Translucent greenish	Silver iridescence
2	Glass cake	A	27 (II/7)	106	H 4.4 L 6.0 W 6.2	Dull olive green	Silver iridescence, pitting, impurities, bubbles
3	Two small glass chunks	B	523 (I/7)	1137	H 1.0–2.2 L 2.4–4.6 W 1.8–3.5	Translucent bright greenish blue	Iridescence

GLASS DEBRIS (Fig. 15)

Three specimens of raw glass were discovered in different areas of the excavation. Number 1 is a large stone fragment containing small chunks of greenish glass. Its shape and material imply that it originated in glass furnace debris. Fragment No. 2 comprises layers of yellow and olive-green glass of uneven consistency, with many bubbles. Its fabric and form, with a rounded edge and a flattened bottom, indicate that it may be a glass cake, an ingot or a pre-manufacturing element. Number 3 has two small chunks of shiny, greenish blue glass.

Compared with other glass assemblages discovered at Bet She'an (Winter 2011:358–360), the small amount of raw-glass chunks and the absence of other kinds of glass waste do not provide sufficient data to attest to a glass workshop at the site.

SUMMARY AND CONCLUSIONS

Four main groups of glass vessels were presented. The first includes vessels from the late third–fifth centuries, associated mainly with Building I and the 'burial enclosure'. The types are very common in Israel, although not

all those from Bet She'an have been published. The second group consists of vessels dated to the end of the Byzantine, but mainly, to the Early Islamic period, found in all areas, but mostly in storerooms in Building II. This group is strikingly similar to the finds from other excavations in the city, as well as the entire country, and includes a few newly-discovered versions of local types, expanding the glass repertoire of Bet She'an. An interesting feature of the Early Islamic group is a fairly broad range of ornamented types, although the absence of luxury vessels adorned with cut-decorations should be mentioned.

The Late Islamic vessels found at the site are represented by a few domestic types, dated to the Ayyubid-Mamluk periods. Few published parallels originated in excavated contexts.

The finds from this excavation add a significant contribution to the glass typology of Bet She'an. The variety of examples from the various periods provides, for the first time, a general perspective of local glassware over a broad timespan. To date, no remnants of a glass-working furnace or glass debris have been uncovered at Bet She'an, with the exception of a small, Late Byzantine glass studio on the outskirts of the city (Gorin-Rosen and Winter 2010:177–178). However, there are sparse indications of glass activities in the later levels of the Early Islamic period (Hadad 2005; Winter 2011), suggesting that most of the discussed types may have been produced in local workshops.

NOTES

¹ I wish to thank the excavator, Dr. Ofer Sion, for inviting me to research and publish the glass finds; Alla Nagorsky, for the discussion of the finds from the tomb; Yael Gorin-Rosen and Ruth E. Jackson-Tal, my colleagues, for their helpful assistance; Olga Shorr, for the glass conservation; Irena Lidsky, for drawing the glass finds; and Clara Amit and Marianna Salzberger, for photographing them. The late Michael Miles drew many of the vessels. Special thanks are due to Shoshana Israeli for her editing.

² All dates in this article are CE.

³ Based on extensive research of glass finds conducted over the years on behalf of the IAA Glass Department, lead by Yael Gorin-Rosen.

⁴ The material from this site has not been unpublished yet. The excavation was directed by Abdalla Mokary and the report will be published by Dr. Walid Atrash; the glass was registered by Yael Gorin-Rosen.

⁵ The assemblage includes vessels uncovered in the tomb. They are discussed below as a separate group (Fig. 14).

⁶ Unfortunately, the context in which this vessel was found is unclear. It is listed as coming from the Byzantine-period burial cave. If so, the fragment must be intrusive.

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