

## GLASS FINDS FROM THE ABBASID–FATIMID PERIODS ON DANNY MASS STREET, RAMLA

NATALYA KATSNELSON

In the course of two excavation seasons at Ramla (see Shmueli, this volume), 297 glass fragments were recovered and 118 of them could be attributed to a type.<sup>1</sup> Twenty-four items, which include common tablewares, luxury vessels and a mosaic-glass bead, were drawn and catalogued. They form a diagnostic assemblage, spanning the late eighth–early eleventh centuries CE (Figs. 1, 2).

Half of these fragments, which will be discussed below, were unearthed in an undisturbed fill (L228; Fig. 1), which contained a rich assemblage of pottery and stone objects dating to the late eighth–tenth centuries CE (see Shmueli, this volume). The rest of the diagnostic fragments (Fig. 2) originated in less secure contexts: a construction fill, a robbery trench and surface level. Contemporary with the vessels from L228, they complete the assemblage, adding to the range of forms and styles of decoration. Some of the types have so far been rarely found in excavations throughout the city.

The comparative material is mainly from other excavations at Ramla (Pollak 2007; Gorin-Rosen 2010) or other regions of Israel, e.g., Caesarea (Pollak 2000) and Tiberias (Lester 2004; Hadad 2008), as well as from the Serçe Limani shipwreck in Asia Minor (Bass et al. 2009). Occasional reference is made to other regions, such as Beirut (Jeninngs 2006), Egypt (Shindo 2000; 2004) and Mesopotamia (Kröger 1995), or to museum and private collections.

### THE FINDS

#### *Locus 228, Undisturbed Fill* (Fig. 1)

The thirteen fragments presented in Fig. 1—two blown bowls, a beaker, several bottles, a

jar and a lamp—were found in a sealed context below a paved courtyard (L228). With one exception, the plain and decorated vessels share a similar fabric, of colorless glass, mostly with a greenish hue, and black-silver weathering. The exception is a bottle made of blue glass (Fig. 1:4). This striking uniformity of fabric suggests that many of the vessels in this assemblage may have been produced in about the same period, probably between the ninth and tenth centuries CE, and quite likely in the same workshop.

*Cylindrical Bowls with Flat Base* (Fig. 1:1, 2).—Two versions of this type were discovered. Bowl No. 1 is small and shallow, with a slightly incurving rim; bowl No. 2 is larger and deeper. Traces of wheel-cut decoration lines, or possibly of exterior polishing, are visible on the surface of the latter. Plain and decorated bowls of this form, with a rim diameter almost equal to that of the base, remained in use from the late eighth to the eleventh centuries CE. They were a common type of tableware, with many variations on the shape, as can be seen, for example, in other excavations at Ramla (Pollak 2007:104–105, Fig. 3:13, 15, 16; Gorin-Rosen 2008:47, 48 [top right]; Jackson-Tal 2008:167, Fig. 6.111:1–5) and at Tiberias (Hadad 2008:167, Pls. 5.1:5, 9; 5.2:20–22, 24; 5.3:25). A parallel was found in the second stratum at al-Fustat, Egypt, in which most of the material is dated to the Fatimid period or earlier (Shindo 2000:234, Fig. 6:6).

Two similar bowls, one bluish green and the other made of colorless glass with a greenish tinge, were found at the site in an Early Islamic fill (Loci 212, 231; Fig. 2:1, 2; see discussion below).

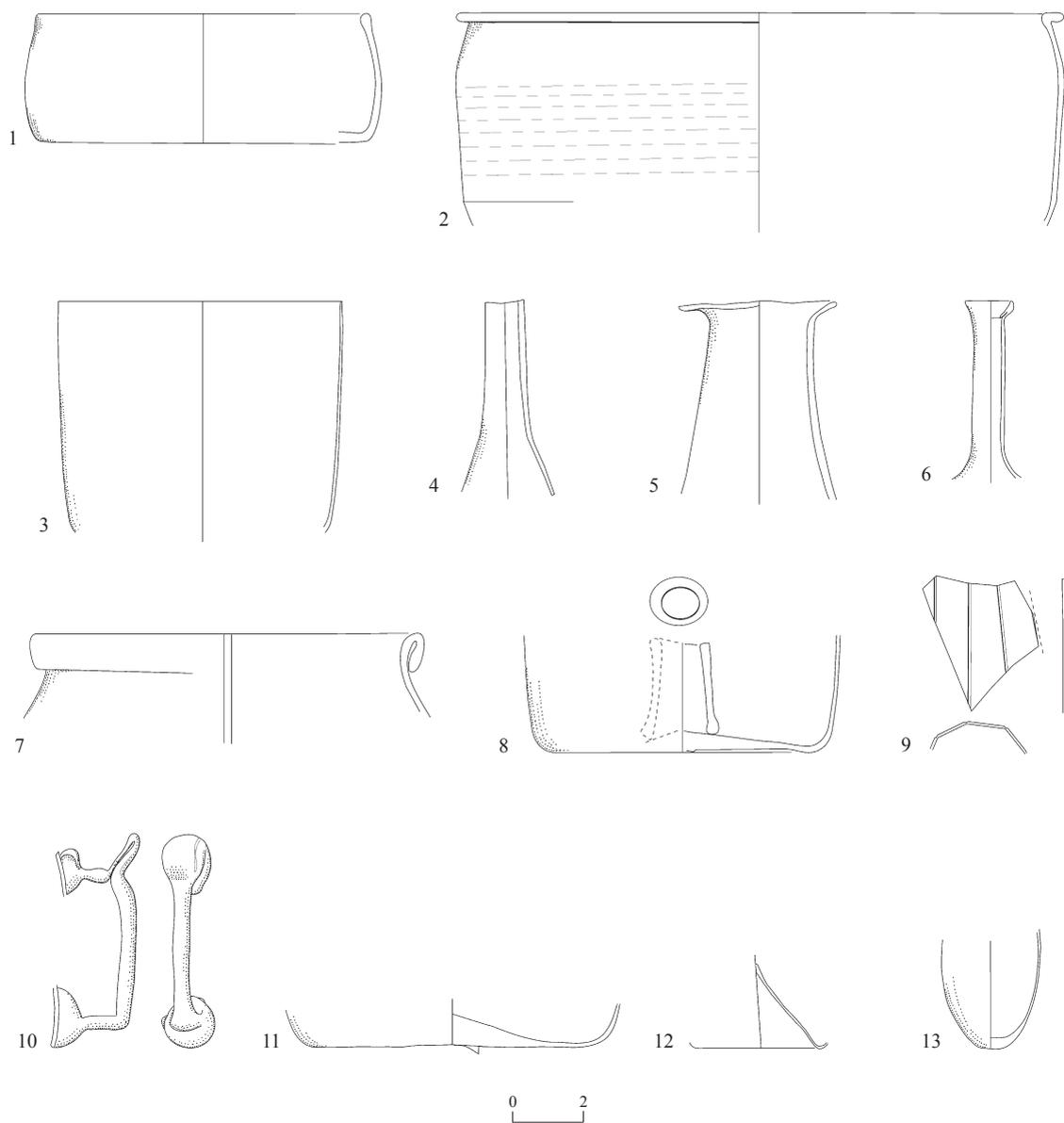


Fig. 1. The finds from L228.

*Cylindrical Beaker with Thin Plain Rim* (Fig. 1:3).— Although plain, the extremely thin, colorless, good-quality glass suggests that this may be a fragment of a luxury vessel comparable with the ninth–eleventh-centuries CE beakers with wheel-cut decoration that were found elsewhere in Ramla (Sion 2004:87, Fig. 18:7; Pollak 2007:111, Fig. 6:35–37; Gorin-Rosen 2010:251, Pl. 10.10:10, 11, with further

references to Caesarea, Nishapur and the Serçe Limani shipwreck therein).

The thin plain rim of beaker No. 4 is distinctive, with a narrow rounded lip and shallow bevel inside.

*Elongated Cylindrical Blue Bottle* (Fig. 1:4).— Bottles of this type, whose function is unclear, are recognizable by their blue color, narrow

◀ Fig. 1

No.	Type/ Subtype	Basket	Color	Weathering	Description
1	Bowl	4387	Colorless with greenish tinge	Black enamel-like crust, silver iridescence, bubbly	Rim and wall fragment; rim rounded, slightly incurving; vertical wall and beginning of flattened base
2	Bowl	4263	Colorless	Black-silver enamel-like crust, iridescence, severely pitted, bubbly	Rim and wall fragment; flaring rim, rounded and thickened; vertical wall; horizontal bands on lower body; remains of wheel-cut incisions or traces of polishing
3	Beaker	4263	Colorless	Iridescence, severe pitting, bubbly	2 fragments of rim and wall; very thin walls; upright, rounded rim, vertical wall, slightly convex, curving downward
4	Bottle	4325	Deep blue	Black-silver patches, iridescent film	Upper part; thick rim, unevenly cut-off/missing; narrow cylindrical neck, beginning of elongated body
5	Bottle	4387	Colorless with greenish tinge	Black enamel-like crust, silver iridescence	Rim and neck fragment; thick walls; rim unevenly rounded, flaring; wide neck tapering toward the top
6	Bottle	4263	Colorless with greenish tinge	Black and silver crust, iridescence, pitting	Upper part, rim partly missing; rim misshapen, partly folded; tall narrow cylindrical neck; beginning of shoulder
7	Jar	4263	Colorless with greenish tinge	Black-silver crust, iridescence	Rim and wall fragment; thick walls; rim out-folded, rounded and thickened; short mouth; wall splaying outward
8	Lamp	4456	Colorless with greenish tinge	Black-silver crust, iridescence, bubbly	Lower body, wall and base partly broken; cylindrical body; base flattened, thickened at the center; thick short wick-tube applied asymmetrically to the floor, with an opening on the side of the base; pontil scar: 1 cm
9	Bottle?	4325	Colorless	Silver patches, iridescence, severe pitting	Small neck/body fragment; thin walls, decorated with cut-off vertical facets
10	Handle	4225	Colorless with greenish tinge	Black and silver patches, iridescence, pitting	Handle with a small wall fragment; rectangular; rounded in cross-section; pinched with small thumb at the top
11	Bottle/ bowl	4263	Colorless with purplish tinge	Black and silver patches, iridescence	Base and part of wall; flattened base, thickened at the center; large pontil scar: 2.1 cm
12	Bottle	4263	Colorless with greenish tinge	Black and rusty enamel-like crust, iridescence, pitting	Small part of kicked base; thin walls
13	Bottle/ flask	4263	Colorless with greenish tinge	Black patches, iridescence, pitting, bubbly	Lower part; thin walls; oval-shaped body; convex base, pointed, thickened

neck with unfinished rim, thin uneven walls and convex base. Numerous examples, dated to the Abbasid period, were found at Ramla (Gorin-Rosen 2008:48, 49 [right]; 2010:227–228, Pl. 10.1:19, and see there further references to Caesarea and Nishapur).

*Bottle with a Short Funnel Mouth and Broad Neck* (Fig. 1:5).— This fragment, with a carelessly tooled rounded rim, may belong to a bottle of a simple shape. Variations of the type occurred in the Islamic world from the ninth–fourteenth centuries CE. The upper part

of a similar, large storage bottle, was found on Marcus Street, Ramla, from a sink pit that was dated to the tenth–eleventh centuries CE (Pollak 2007:123, Fig. 10:66, and see therein for a reference to the Serçe Limani shipwreck). A thick-walled Early Islamic bottle from the *souks* at Beirut may be a parallel to this one (Jennings 2006: Fig. 9.15:18).

*Bottle with a Narrow Flaring Rim and Tall Neck* (Fig. 1:6).— This small fragment of a short flaring rim may belong to a group of bottles with considerable variety in body-shape and size.

*Jar with Out-Folded Rim and Short Wide Mouth* (Fig. 1:7).— This fragment belongs to one of the most common variants of large storage jars. Many similar fragments that date to the Abbasid–Fatimid periods were found in Ramla and throughout Israel (Gorin-Rosen 2010:241–242, Pl. 10.7:4, and see therein further references to other excavations at Ramla, Yoqne‘am, Tiberias, Bet She‘an and Nishapur).

*Bowl-Shaped Oil Lamp* (Fig. 1:8).— The fragment shows a lower cylindrical body with a thickened flat base and an applied wick-tube. At least two subtypes of these lamps were found in other excavations at Ramla (Gorin-Rosen 2010:253, Pl. 10.11:3, and see there further parallels from the Umayyad to the Fatimid periods).

*Fragment Decorated with Vertical Lines* (Fig. 1:9).— No exact parallels for the design were found. The poor state of preservation made it difficult to identify whether the decoration is wheel-cut or mold-blown. Possible comparable vessels with a similar design include disk-rim bottles from Serçe Limani, a few of them with long vertical facets or cut-lines decoration on the neck instead of the more common pattern of deep spools (Cullen and Lledó 2009:201, 205–206, DR 145, 146, 151, 255–258, 312).

*Handle with Thumb-Rest* (Fig. 1:10).— Handles of this type are characteristic of the Abbasid

and Fatimid periods. Similar fragments, mainly of the Abbasid period, were found elsewhere at Ramla (Gorin-Rosen 2010:240, Pl. 10.6:26, and see therein further references to ‘Opher Park, Ramla, and to the Abbasid–Fatimid examples from Bet She‘an and Tiberias). The strictly vertical outline and square shape of handle No. 10 indicate that it was attached to a straight wall, e.g., the ninth–tenth-centuries CE cylindrical lamps from Nishapur (Kröger 1995:180–181, Nos. 232, 233). A similar handle was also found at Serçe Limani (Matthews and Lledó 2009:413, HN 8).

*Flat Base Thickened in the Center* (Fig. 1:11).— A plain base with the protruding scar of a pontil on its underside is typical of many bottles and bowls of the Early Islamic period.

*Bottle with Kicked Base* (Fig. 1:12).— This type of base, with the characteristic high kick in the center, is typical of Early Islamic bottles. The type seems to be similar to that of No. 6, above.

*Bottle with Convex Base* (Fig. 1:13).— The complete shape of this colorless bottle with thin walls is unknown. Parallels are scarce, and include a fragment of turquoise glass from Tiberias, for which no date is mentioned (Hadad 2008:171, Pl. 5.5:84, and see therein for further references to Abbasid–Fatimid Bet She‘an).

#### *Vessels from Various Fills* (Fig. 2)

Ten specimens from the Abbasid–Fatimid periods were found in non-stratified fills. They include two fragments with unusual decoration (Fig. 2:5, 9), and a rare mosaic-glass bead (Fig. 2:10).

*Cylindrical Bowls with Flattened Base* (Fig. 2:1, 2).— These two small bowls, slightly differing in size and in the form of the rim and base, are examples of the type discussed above (Fig. 1:1, 2), which was very popular at Ramla during the Early Islamic period.

*Bowl with Tong-Impressed Decoration* (Fig. 2:3).— This fragment of a small colorless bowl is ornamented with horizontal concentric ovals. The design was impressed with metal tongs, a common technique that was especially popular during the Abbasid period. Usually, this type of decoration is impressed both inside and out; No. 3 is a rare example of a design limited to the exterior. However, the motif of ovals is common and occurs elsewhere in Ramla (Gorin-Rosen 2010:242–244, Pl. 10.8:2, and see therein for discussion of the technique and further references to examples from the Abbasid–Fatimid periods, from Bet She’an and Nessana), and in the city of Tiberias, where vessels with similar designs came from Abbasid-period levels (Lester 2004:204–206, Fig. 7.14:174, 175). An interesting group of vessels with oval-shaped motifs was found in the *souks* at Beirut, and attributed to local Islamic-Medieval production (Jennings 2006:225–226, Fig. 10.5:1, 3, 6).

*Jar-Shaped Vessel, or Lamp* (Fig. 2:4).— This is an exceptional fragment, with a wide funnel-mouth decorated with a thin horizontal trail tightly wound below the rim. The trail is badly preserved, and the red color in it is visible only through the microscope. A small, colorless, applied drop beneath the rim and above the trail may be part of a small suspended handle, or perhaps, a glass-waste.

A group of similar fragments, with trailed conical tops, but no recognizable shape, was found in the early eleventh-century CE shipwreck at Serçe Limani (Bouchard 2009:401–405, TR 1–5; 19, 23, 24). This fragment may belong to an Early Islamic vase-shaped lamp, a form that precedes the mosque-lamps of the Ayyubid–Mamluk periods. A similar lamp-fragment with a blue trail was found in a salvage excavation at Ramat Raḥel, Jerusalem (Katsnelson, forthcoming [b]). Other examples found in Israel have plain rims. They include a lamp from the eighth–ninth centuries CE with eight trail-handles, found in the excavation

at the Ben Shemen interchange (Katsnelson, forthcoming [a]), and an intact Fatimid lamp with three handles from a hoard in Caesarea (Pollak 2000:241, Fig. 6:8). In the al-Sabah Collection of the Kuwait National Museum, there is a small globular lamp of Syrian or Iranian origin, which is dated to the eleventh century CE (Carboni 2001:167, Cat. 38b). It has a blue trail below the rim and six suspension handles attached to the body. Unfortunately, the context of lamp No. 9 does not narrow down the date-range for this piece.

*Bottle with Narrow Flaring Rim, Tall Neck, Bulbous Body and Kicked Base* (Fig. 2:5).— Usually made of thin, colorless glass, these so called ‘onion-bottles’ are distinguished by an unevenly tooled rim, a broad bulbous body and a high pushed-in base. Several complete bottles of this type and more than 200 fragments were recovered from the early eleventh-century CE shipwreck at Serçe Limani (Hentschel 2009:259–267). In our region, similar bottles were reported from the excavation on Marcus Street, Ramla, in contexts of the ninth–eleventh centuries CE (Pollak 2007:121, Fig. 10:63, 64, and see further references to Caesarea therein); in the city of Tiberias, in Fatimid-period levels (Lester 2004:185, Fig. 7.8:86, 88, 89); and in the Beirut *souks*, assigned to the Early Islamic period (Jennings 2006:211, Fig. 9.15:20, 21).

*Bottle with Bulged Rim and Short Neck* (Fig. 2:6).— The type is assigned to the Abbasid–Fatimid periods. A fragment of a closely related shape, but of another subtype, which was found in Ramla, was assigned to the Abbasid period (Gorin-Rosen 2010:237, Pl. 10.6:16, and see further references therein to Quseir al-Qadim and al-Fustat). A few examples from the city of Tiberias come from the late Fatimid-period level (Lester 2004:187, Fig. 7.8:96, 97). Forty-two examples of such ‘bubble-rim’ bottles, made of purple, yellow-green, amber-green and blue-green glass, with plain and decorated globular bodies,

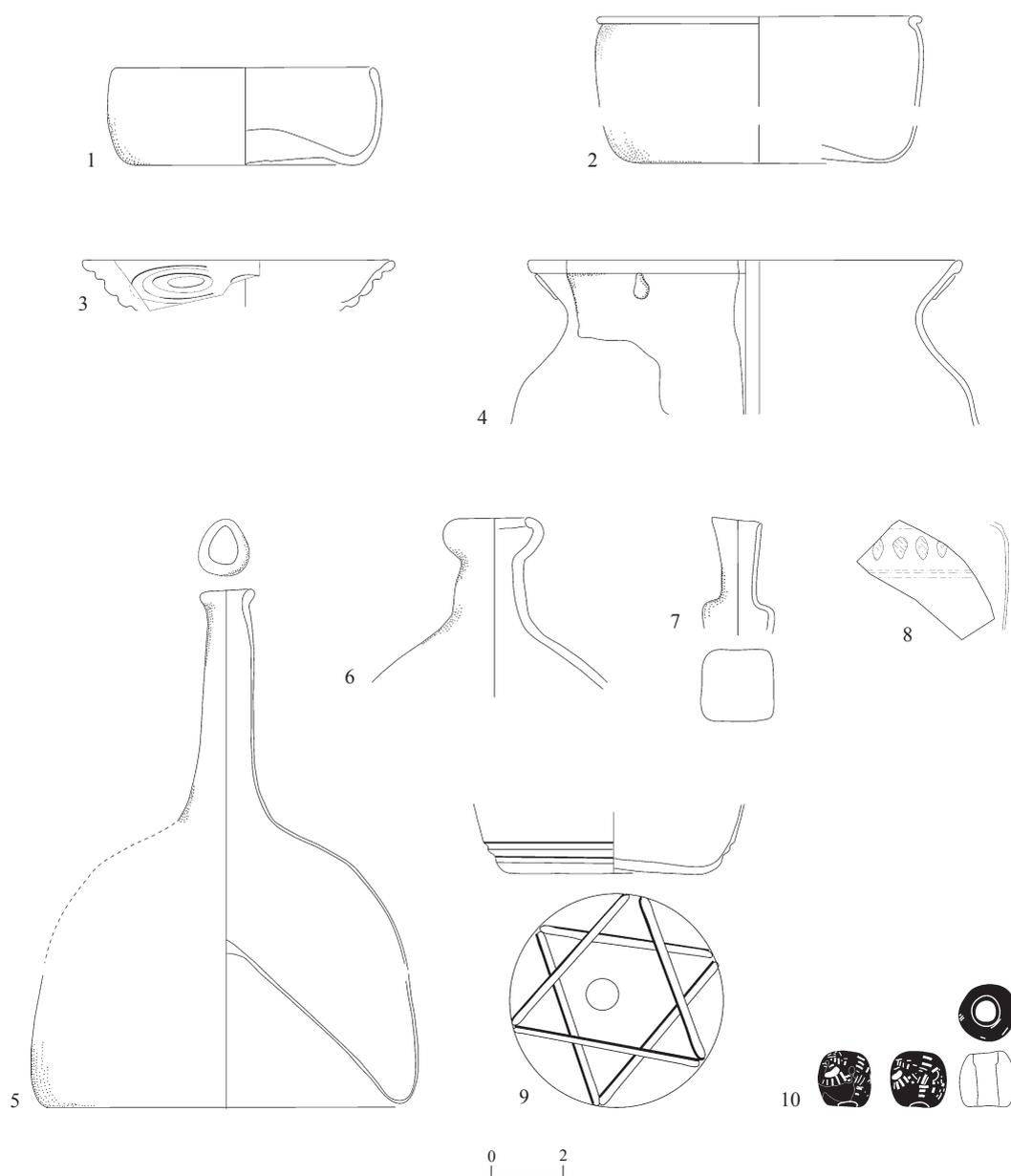


Fig. 2. Finds from various fills.

were found at Serçe Limani (Acién and Bass 2009:214–221).

*Bottle with Square-Sectioned Body* (Fig. 2:7).— The square shape of this small bottle was formed by tooling or blowing the glass into a simple mold. The type appears in Umayyad-period contexts, but was more common

during the Abbasid–Fatimid periods. Many such fragments were found in Ramla, as well as in other Early Islamic sites (Gorin-Rosen 2010:231–232, Pl. 10.5:4–6, and see further references therein). Bottle No. 7, which has an unevenly tooled rim, exhibits quite careless workmanship, probably indicating local production.

◀ Fig. 2

No.	Type	Locus	Basket	Color	Weathering	Description
1	Bowl	214 (Early Islamic courtyard)	4211	Greenish blue	Black crust, silver iridescence, bubbly	Complete profile, part of rim, body and base missing; rim rounded, incurving; vertical wall; base concave, flattened and thickened at the center; pontil scar: 1.2 cm
2	Bowl	231 (Early Islamic courtyard)	4230	Colorless with greenish tinge	Black enamel-like crust, iridescence	Upper and lower body, 2 fragments; rim rounded, thickened and flaring; vertical wall; flattened base thickened at the center
3	Bowl	261 (fill above floor; traces of robbery)	4497	Colorless with greenish tinge	Black and yellow patches, silver iridescence, pitting	Small rim and body fragment; rim rounded and flaring; slanting wall; stamped or pinched pattern of three concentric ovals below the rim
4	Lamp?	204	4066	Colorless with greenish tinge; reddish and colorless trails	Black and rusty crust on the interior, iridescence, pitting, bubbly	Rim, neck and body, 2 fragments; rim rounded, thickened and flaring; wide funnel mouth with almost no neck; convex walls; small remnants of applied, spirally wound trail in red; colorless drop above the trail, possibly trace of a small handle below the rim
5	Bottle	233 (robbery trench)	4277	Colorless with greenish tinge	Black patches, golden iridescence, pitting, sand deposits	Upper and lower parts, mended; misshaped; rim rounded, thickened, and flaring, flattened at the top; narrow neck, tall cylindrical, constricted at the junction with the rim; body bell-shaped, wide; base with very high kick
6	Bottle	201 (Early Islamic surface fill)	4130	Light greenish	Blackish-silver crust, iridescence, sand deposits	Upper part; thick wall; rim rounded, incurving, bulging around the mouth; short cylindrical neck; broadly out-splayed shoulder; body possibly globular
7	Small bottle	216	4177	Greenish blue	Black and rusty crust on the interior, iridescence, pitting	Upper part; thick walls; uneven rounded rim; tapering neck; beginning of rectangular body
8	Bottle	246 (fill above floor)	4547	Colorless	Iridescence	Thin-walled body fragment; beginning of shoulder and vertical wall; horizontal row of wheel-cut facets, uneven, small, oval-shaped (4 preserved), flanked by two horizontal grooves
9	Bottle	214, 248 (Early Islamic fill)	4314	Colorless with greenish tinge	Black and silver crust, iridescence	Base and lower body, mended of 2 fragments; flat base, thickened; vertical wall; two deep, horizontal, cut grooves surround the body just above the base; design of six-points star on the underside of the base, formed by two superimposed cut triangles; circular pontil scar: D 1.2 cm
10	Bead	214 (Early Islamic fill)		Reddish-brown ground; white, black and reddish canes	Black-yellow crust; severe pitting	Complete; mosaic-glass; pattern partly missing; wound; barrel-shaped with uneven broad cylindrical perforation; stepped at one end; unevenly-shaped eye canes applied haphazardly on reddish brown ground: black and reddish spots with outer rings made of white and black stripes

*Bottle with Shallow-Cut Facets and Grooves* (Fig. 2:8).— This small, colorless body fragment is possibly from an elaborately decorated bottle. A frieze of oval facets and grooves on the shoulder was apparently part of a complex design. Similar decoration on the shoulder, or at the transition from the base to the wall, appears on nine fragments of long-necked cylindrical bottles from the tenth century CE, which were found in the port city of Rāya in southern Sinai (Shindo 2004:25–28, Fig. 7:2–4, and see further reference therein to Nishapur). Shindo suggested that colorless vessels with cut decoration may have been imported as specialty goods, probably from the area of Syro-Palestine.

*Vessel with Cut Designs of Grooves and Star* (Fig. 2:9).— This is an ornamented colorless base (diam. 6 cm) of a luxury vessel, possibly a bottle. The design consists of a horizontal wheel-cut ridge between two grooves, surrounding the lower body close to the base, and a six-point star on the underside of the base. So far, there are no parallels for this motif from excavations in Israel, although beakers and bottles with wheel-cut horizontal grooves are common in the region. A yellowish brown base with a star-shaped pattern surrounding the pontil scar, similar to No. 9, was found at Beirut, and identified as an Early Islamic-period flask (Jennings 2006:204–205, Fig. 9.1:15). Another comparable example is a complete, colorless bottle (height 17.8 cm) with a flattened rim and a small globular body, which was dated between the tenth and twelfth centuries CE. It was discovered at al-Fustat, and was possibly manufactured in Egypt. The bottle has facets on the long neck, a horizontal

cut-off ridge above the base (diam. 6.9 cm) and a star-shaped motif on its underside, which resembles that of No. 9, but has eight points (Shindo 2000:234, Figs. 4, 5, and see further references therein).

*Mosaic Eye Bead* (Fig. 2:10).— Determining a date for this barrel-shaped bead (length 1.6 cm, diam. 1.5 cm), which has a carelessly executed eye-pattern and is poorly preserved, is problematic. Mosaic-glass beads from an undisturbed fill (c. 900 CE) in a house in al-Fustat, which are composed of multicolored eye and stripped canes, may be a parallel, albeit a more elaborate one (Pinder-Wilson and Scanlon 1987:71, Fig. 22).

## CONCLUSIONS

The assemblage from the excavation of an Early Islamic-period building on Danny Mass Street, Ramla, provides a new insight into the glass assemblage of the city during the Abbasid and Fatimid periods. The importance of this corpus lies in the fact that half of it was found in a sealed context, which could be dated to the late eighth–tenth centuries CE. This date is supported by the forms of the vessels, their decoration and the particular fabric of the colorless glass, and offers an interesting contribution to the issue of chronological and geographical distribution of Early Islamic-period glass wares. Moreover, a strong resemblance between a number of the glass forms from Ramla and the Serçe Limani shipwreck, which dates to the early eleventh century CE, suggests that the latter may have been exported from Ramla, or from a central glass workshop, e.g., at Caesarea, to Ramla, Serçe Limani and other places.<sup>2</sup>

## NOTES

<sup>1</sup> I wish to thank the excavator, Oren Shmueli, for inviting me to publish this material. Olga Shorr restored the glass vessels, and Carmen Hersh drew them.

<sup>2</sup> This was suggested by Yael Gorin-Rosen, following her research of Early Islamic-period glass from excavations in Ramla; for further discussion, see Katsnelson 2012: Fig. 10.

## REFERENCES

- Ación C.P. and Bass G.F. 2009. Bubble-Rim Bottles. In G.F. Bass, R.H. Brill, B. Lledó and S.D. Matthews. *Serçe Limani II: The Glass of an Eleventh-Century Shipwreck*. College Station, Tex. Pp. 215–221.
- Bass G.F., Brill R.H., Lledó B. and Matthews S.D. 2009. *Serçe Limani II: The Glass of an Eleventh-Century Shipwreck*. College Station, Tex.
- Bouchard J. 2009. Threaded Tops of Unknown Vessels. In G.F. Bass, R.H. Brill, B. Lledó and S.D. Matthews. *Serçe Limani II: The Glass of an Eleventh-Century Shipwreck*. College Station, Tex. Pp. 401–410.
- Carboni S. 2001. *Glass from Islamic Lands: The al-Sabah Collection, Kuwait National Museum*. New York.
- Cullen C.L. and Lledó B. 2009. Disk-Rim Bottles. In G.F. Bass, R.H. Brill, B. Lledó and S.D. Matthews. *Serçe Limani II: The Glass of an Eleventh-Century Shipwreck*. College Station, Tex. Pp. 191–213.
- Gorin-Rosen Y. 2008. Glass Vessels from the Ramla Excavations. *Qadmoniot* 135:45–50 (Hebrew).
- Gorin-Rosen Y. 2010. The Islamic Glass Vessels. In O. Gutfeld. *Ramla: Final Report on the Excavations North of the White Mosque* (Qedem 51). Jerusalem. Pp. 213–264.
- Hadad S. 2008. Glass Vessels. In Y. Hirschfeld and O. Gutfeld. *Tiberias: Excavations in the House of the Bronzes. Final Report I: Architecture, Stratigraphy and Small Finds* (Qedem 48). Jerusalem. Pp. 167–189.
- Hentschel F. 2009. Scent Sprinklers. In G.F. Bass, R.H. Brill, B. Lledó and S.D. Matthews. *Serçe Limani II: The Glass of an Eleventh-Century Shipwreck*. College Station, Tex. Pp. 259–267.
- Jackson-Tal R.E. 2008. Glass Vessels. In O. Tal and I. Taxel. *Ramla (South): An Early Islamic Industrial Site and Remains of Previous Periods (Salvage Excavation Reports 5)*. Tel Aviv. Pp. 166–184.
- Jennings S. 2006. *Vessel Glass from Beirut, BEY 006, 007 and 045* (Berytus 48–49). Beirut.
- Katsnelson N. 2012. The Glass Finds. In R. Toueg. Ramla, Ibn Sina School. *HA–ESI* 124 (September 4). [http://www.hadashot-esi.org.il/report\\_detail\\_eng.aspx?id=2066&mag\\_id=119](http://www.hadashot-esi.org.il/report_detail_eng.aspx?id=2066&mag_id=119) (accessed December 15, 2015).
- Katsnelson N. Forthcoming (a). The Glass Finds from the Ben Shemen Interchange. *'Atiqot*.
- Katsnelson N. Forthcoming (b). The Glass Vessels from Ramat Raḥel, Jerusalem. *'Atiqot*.
- Kröger J. 1995. *Nishapur: Glass of the Early Islamic Period*. New York.
- Lester A. 2004. The Glass. In D. Stacey. *Excavations at Tiberias, 1973–1974: The Early Islamic Periods* (IAA Reports 21). Jerusalem. Pp. 167–220.
- Matthews S.D. and Lledó B. 2009. Handles and Handle-Like Objects. In G.F. Bass, R.H. Brill, B. Lledó and S.D. Matthews. *Serçe Limani II: The Glass of an Eleventh-Century Shipwreck*. College Station, Tex. Pp. 411–415.
- Pinder-Wilson R.H. and Scanlon G.T. 1987. Glass Finds from Fustat: 1972–1980. *JGS* 29:60–71.
- Pollak R. 2000. Glass Vessels of a Fatimid Hoard from Caesarea Maritima. *Annales du 14<sup>e</sup> congrès de l'AIHV (Venezia-Milano 1998)*. Lochem. Pp. 238–242.
- Pollak R. 2007. Excavation in Marcus Street, Ramla: The Glass Vessels. *Contract Archaeology Reports* 2:100–133.
- Shindo Y. 2000. The Early Islamic Glass from al-Fustat in Egypt. *Annales du 14<sup>e</sup> congrès de l'AIHV (Venezia-Milano 1998)*. Lochem. Pp. 233–237.
- Shindo Y. 2004. The Islamic Glass Beaker with Wheel–Cut Decoration from Rāya, South Sinai. *Orient: Report of the Society for Near Eastern Studies in Japan* 39:18–38.
- Shmueli O. This volume. A Building from the Early Islamic Period on Danny Mass Street, Ramla (Hebrew).
- Sion O. 2004. An Early Islamic Period Settlement in Ramla. *'Atiqot* 46:67–92 (Hebrew; English summary, p. 133\*).