A special group of early Christian glass ‘gems’ from Greece

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Abstract

Semi-precious stones are frequently depicted in Roman and early Christian works of art, such as wall mosaics, paintings and textiles. These depictions present them as either parts of jewelled frames, or as decorations in buildings, architectural elements like columns, or other objects like thrones, wreaths, shields, tables, crosses, book bindings, etc. They appear usually as green, blue and red in colour, mostly of oblong and oval shapes. The prototypes of these gems, or rather the glass rendering of them, is the focus of this chapter. Only recently discovered and otherwise unknown, these large-size (7 × 4 × 0.5 cm) emerald green glass gems deriving from six early Christian excavations in northern Greece and a harbour site in Constantinople, will be presented. Their use will be discussed in relation to their symbolic meaning connected to theological texts and to their representations in contemporaneous mural paintings and mosaics and textiles. Furthermore, Thessaloniki is identified as the production site of at least one type of these gems according to relevant finds from a late sixth-century glass workshop, while the distribution pattern of these products in the wider region of Thessaloniki’s hinterland will shed light on a facet of the circulation of glass objects on a regional trade level.

Introduction

Semi-precious stones are often depicted in Roman and early Christian works of art. They are presented either as part of the jewelled frame
of a scene, or in the decoration of buildings, as architectural elements or other objects. They appear usually green, blue and in red colour, mostly oblong, circular and oval, and they are always plain and smooth. The glass replicas of semi-precious stones are the theme of the present chapter. Newly found emerald green smooth glass gems from six early Christian excavations in northern Greece and a port in Constantinople are discussed. These gems are far larger than any known ring bezel gems, nor are they found in association with jewellery. A discussion of early Byzantine glass ring gems is beyond the scope of this chapter. Thessaloniki is identified as the production site of at least one type of these gems as evidenced by finds from a late sixth-century CE glass workshop. The distribution pattern of these products in the wider region of Thessaloniki’s hinterland is able to shed light on the circulation of these glass objects on a regional level.

**Glass workshop in Vasileos Irakleiou 44, Thessaloniki**

In the large and prosperous eastern Mediterranean port of Thessaloniki four early Christian secondary glass workshops are archaeologically attested. Only one workshop, that excavated from 44 Vasileos Irakleiou Street, is relatively well preserved. Parts of the building, the bases of several furnaces and substantial amounts of glass refuse have been unearthed (Antonaras 2014a, 95–113). The period of operation of the workshop is defined by a hoard of 50 small-denomination bronze coins, most of them of Justinian I (r. 527–65) and one of Tiberius II (r. 574–82), all of them struck in Thessaloniki’s mint (Dr Evangelos Maladakis pers. Comms.). The workshop was operating in the late sixth century, mostly producing stemmed beakers, some of which bear stamped letters and ligatures/numerals, as well as stemmed lamps and probably some forms of flasks or bottles. Among the glass-working refuse were also a few oblong, dark green gems, they are relatively large and quite unusual. These and other identical or very similar finds from seven further sites, mostly associated with early Christian basilicas, are the topic of this chapter, with the aim of investigating their production and distribution in the wider region of Thessaloniki and beyond, as well as their use and their symbolic meaning.

The gems were unearthed within the glass workshop, in the same layer as the refuse and a late sixth-century hoard of bronze coins (Figure 1.1). Although none of the extant finds appears to be unfinished or otherwise deformed, which would prove that it was worked
on that site, the fact that they were found within a glass workshop, among deformed vessels and other glass-working refuse, makes it probable that this type of gem was produced here as well. Scientific analyses, planned for 2017, will help to clarify the relation of the gems to raw glass unearthed in the workshop and also distorted vessels from the same pit. The excavations of the glass workshop at 45 Vasileos Irakleiou Street yielded three or possibly four oblong examples (measuring $c.7 \times 3 \times 1.8$ cm), all of them made of dark green translucent glass (Antonaras 2014a, 111, fig. 12.32).

The underside of the gems is rough, with many anomalies and small cavities, possibly echoing the relief of the surface on which firing took place, or more probably they are the result of the uneven change in temperature during the cooling of the mass of glass. Some of the oblong specimens have relatively anomalous ridges visible along the centre of the bottom side. The top is mildly convex, gradually sloping towards the edge of the undersurface. No tooling marks are visible in most of the gems, although this might simply indicate that the craftsman’s handling was subtle enough not to leave any traces on the finished product. For instance, on the oblong gem from Louloudies, a scar is visible along its length, which is particularly straight, compared to the majority of objects.

Figure 1.1  Glass gems from Vasileos Irakleiou 44, Thessaloniki. Dating from the second half of the sixth century.
with irregular sides. Furthermore, tooling marks are clearly visible along the long sides of the triangular find from Fourka (see Figure 1.4). It seems that the gems were originally discoid and were squeezed while hot into the oblong or triangular shape, probably by pinchers, the jaws of which left a scar along them.

A comparative examination of the examples under study indicates that the oblong gems have a length–width ratio of 2:1 (7 × 3 × 1.8 cm weighing c.27 grams). The almost square examples have a ratio of 1:1 (3 × 2 × 1.2 cm). The triangular measures 4.3 × 1.8–0.8 × 1 cm and it could have been shaped from an originally discoid piece. The oval example has a ratio of 1:1.5 (3.5 × 2.3 × 0.5 cm). While the circular specimen weighs c.6 grams and is larger than c.2.5 cm in diameter, being more than twice the size of usual ring gems.

Distribution range

Seven early Christian sites yielded the inlay gems discussed here; five from basilicas, and one each from a secular building and a port. Three of the sites were situated in Chalkidiki, the peninsula east of Thessaloniki; two of them in Pieria at the south-west of Thessaloniki at the foothill of Mount Olympos; one further to the south in Velika in Thessalian seashore, and one from Constantinople’s harbour. Most of the sites are situated within the province of Macedonia, between 50 to 150 km from the capital Thessaloniki. All of the sites are on the seashore and thus are relatively easily accessible from Thessaloniki by sea, appearing to present a commercial hinterland and in a way defining the range of the regional trade.

Solinos

Solinos is located on the east coast of Cassandra, on the south-western part of the Chalkidiki peninsula, south of the modern village of Kalithea. The site includes an early Christian cemetery and a three-aisled basilica. The basilica was built in the early fifth century and was ruined probably in the seventh century (Papangelos 1989–90, 171–82; Papangelos 1995). The glass finds from the excavation of the basilica comprise mostly window glass made with the blown cylinder technique, and to a lesser degree vessel fragments, mostly lamps (stemmed lamps), stemmed beakers and bowls, and a few drinking (stemmed and conical beakers) and pouring tableware vessels. The context of the finds is to the destruction phase of the complex dating to the late sixth or seventh centuries (Antonaras
The production date of the glass objects themselves vary, some of them date as early as the fourth century, although most of them were produced in the fifth–sixth centuries. Finally, a few glass beads and glass gems for the embellishment of precious objects conclude the picture of the finds from this site.

Two small, blue, discoid plano-convex gems were found (diameter 0.8, height 0.5 cm) as well as a slender cylindrical element and a blue rectangular tile or *crusta*. These were all made of glass of various colours and they seem to be part of a different production time or workshop, unrelated to the workshop from 44 Vasileos Irakleiou Street. Regarding the topic of this chapter, five glass gems unearthed in the ruins of the basilica should be particularly mentioned: four oblong, dark green gems. They appeared in three sizes, the largest and smallest of which measured 6 × 2 × 1 cm and 4 × 2.5 × 0.8 cm respectively, and appear identical to the ones from Thessaloniki (see Figure 1.2 and compare with Figure 1.1).

Ierissos

At the eastern end of Chalkidiki, at the beginning of the eastern most peninsula known as Athos or *Aghion Oros*, lies the Byzantine and modern town of Ierissos. Near the cemetery of the medieval town a large, three-aisled basilica has been partly excavated. It was founded in the fourth or fifth century and destroyed some time in the sixth century. It was decorated with wall paintings, opus sectile and mosaics. A cemetery
was formed in the late tenth and early eleventh century over the ruins of the basilica (Papangelos and Doukas 2008; 2011, 14–15).

The glass finds comprise loose tesserae, window panes made by the blown cylinder technique and fragments of lamps – handled bowls/lamps, a few stemmed lamps and a stemmed beaker. In addition, two similar examples of large gems were found (Figure 1.3). The first one is almost square, but otherwise quite similar to the finds from Thessaloniki, i.e. it is made of dark green translucent glass. It is slightly elongated, plano-convex, and half the length of the gems from Thessaloniki, measuring $3 \times 2 \times 1.2$ cm. The second gem is made of dark amber or olive
green glass, discoid with a diameter of 2.5 cm, identical to the discoid finds from Pieria (see *infra*, finds from Louloudies).

**Fourka**

In 2009 an early Christian basilica was excavated on the beach of the modern village of Fourka. This site was located on the west coast of Cassandra, on the south-western part of Chalkidiki. Apart from the usual anticipated object types – lamps, handled bowls, stemmed beakers and stemmed lamps – as well as a few flasks and jugs, one large triangular dark green glass gem was identified. It measures 4.3 × 1.8 – 0.8 × 1 cm (*Figure 1.4*). It appears to have been made using a discoid blank, which was squeezed and pulled out by pinchers. The scar of the jacks along its long sides is clearly visible, while the curved endings of the top and the base of the triangle bear all features of the free, natural shaping which is typical for objects shaped by firing.

**Louloudies**

An early Christian square fort was excavated a few kilometres south of Pydna at a site called Louloudies (Marki *1996*, 239, 243). It was founded overtop of a Roman station/*mansio* in the fifth century, most probably by the local episcope of Pydna who moved there when the Arian Goths moved into Pydna. In the second half of the seventh century the site was abandoned and several workshops operated in the ruined complex. At least three distinct glass workshops, probably melting down window

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**Figure 1.4** Glass gem, Basilica in Fourka, c. sixth century.
ThIngs thAt tRAvELLED

Panes and mosaic tesserae to produce new vessels, have been found. Glass droplets and moils are identified on site and confirm the local production of vessels. Also, many pieces of glass ‘cakes’ – slabs for the production of glass tesserae – are also found there (Marki 2002, 65–6). Regarding the glass gems, one oblong dark green example was found (6.7 × 2.3 x1.3 cm, 26.5 grams) and two circular examples, one dark green and the other yellowish green (both measuring 2.8 × 0.8 cm, weighing 5.6 and 6.1 grams respectively (Figure 1.5).

Dion

Dion, a large Macedonian city, is another site that yielded relevant finds, namely, in the excavation of a house in which a dark green, plano-convex, oblong glass gem was found (Figure 1.6; Mentzos et al. forthcoming). In addition, a discoid gem of the same type was unearthed in the excavation of the early Christian basilica of Dion, currently unpublished (Dr Sapho Tambaki pers. comms.).

Velika

Parts of the castle and the city walls of the early Christian site have been excavated by the local Ephorate of Antiquities (Sdrolia 2013). A dark green, oblong glass gem (5 × 2 cm) which is evidently a product of

Figure 1.5  Glass gems, Louloudies Kitrous, c. sixth century.
the workshop of Thessaloniki was located in a sixth-century context in the ‘Priest’s house’, a building connected to the early Christian basilica founded in the middle of the sixth century and abandoned either in the late sixth or in the first decades of the seventh century (Figure 1.7). The excavations are conducted by the University of Thessaly and the local Ephorate of Antiquities.

Figure 1.6   Glass gem, Dion, c. sixth century.  
Source: photo by A. Mentzos

Figure 1.7   Glass gem, Velika, c. sixth century.  
Source: photo by I. Varalis
Constantinople

These finds were the farthest from Thessaloniki, unearthed in southwestern Constantinople in the excavations at Yenikapi of the port of Theodosius. It is a dark green, plano-convex, oblong glass gem (6.1 × 2.4 × 1 cm) found in a layer dating between the fifth and the seventh century, and evidently presents another product of the Thessaloniki workshop (Atik 2009, 1–15, fig. 71; Figure 1.8).

Other sites

In Corinth, among the finds of the old excavations of the American School of Classical Studies, an object in the same spirit to the Macedonian ones, but of different, more subtle craftsmanship, has been recorded. It is an oval dark blue gem (3.5 × 2.3 × 0.5 cm) ascribed to the Roman period without any particular chronological details (Davidson 1952, 226, no. 791, pl. 101; Figure 1.9). It should be noted that objects of the same form and size are quite often encountered on wall mosaics of the early Christian period.

A few more examples of gems of a similar size and shape are known from Arles in France. Green, oval, square and rectangular examples have been identified as tiles for inlays, mostly dated between the first and fourth centuries CE (Foy 2010, 462–3, nos 944–9).
There is one object that contains 26 emerald green gems, seemingly identical to the ones we are researching, all in their original setting. It is an early fourth-century, silver-gilt, parade helmet from Berkasovo, which was decorated with 54 glass gems: 16 oblong and 10 lozenge emerald green gems, 10 circular and 8 lozenge undecorated glass nicolo gems and 10 oval agate-like glass gems (Manojlović-Marijanski 1964; Tijana Stanković-Pešterac and Stanko Trifunovic pers. comms). Furthermore, a late fourth-century parade helmet from Budapest contains more than 10 emerald green gems (Thomas 1973, 39–50).

Additional finds come from a church in Petra, Jordan, where there are indications of some similar rectangular and rounded finds. In one case, they are associated with one lock-plate of a chest or coffer. Fiema (2007, 616) describes them as ‘dark yellowish green, too thick to be window panes, generally of rectangular shape’. Furthermore, in another spot of the same church, excavations yielded many rectangular and discoid glass objects that appear to be very similar to the finds from Macedonia, according to the description of the excavator, which were presumably originally associated with other objects, such as wooden boxes or chests, possibly as inlaid decoration’ (Fiema 2007, 617). Finally, it should

Figure 1.9  Glass gem, Corinth, Roman period.
be noted that glass discs such as these, used for inlay work, were also reported from Byzantine levels at Jerash (Baur 1938, 546).

**Uses**

Gems were used from the earliest times in human history for their bright colours and their shiny appearance. Glass is thought to have been first invented in order to replicate precious and semi-precious stones, bearing the name *lithos chyte*, i.e. molten stone. Glass was used in the form of inlays and gems from the middle of the second millennium BCE in Elam and in Egypt (Stern and Schlick-Nolte 1994, 49, 142–9; Nenna 1995, 377–384; Ignatiadou 2007, 473–83). This was a tradition that was kept alive even in the Middle Ages, and this was particularly true for green, emerald-like, glass gems (Krueger 2011, 103–4 and references within). Furthermore, the production of glass substitutes of emeralds and other, yellow, white and blue semi-precious stones is well attested in the preserved alchemic recipes of Zosimos of Panopolis and Olympiodorus, who were active in the fourth–fifth century (Berthelot and Ruelle 1967 I: 83, II: 348).

In the Judaic tradition, semi-precious stones are chiefly mentioned in connection to the breastplate of the High-Priest (Exodus, xxviii, 17–20; xxxix, 10–13), the treasure of the King of Tyre (Ezekiel, xxviii, 13), and the foundations of the New Jerusalem (Tobit, xiii, 16–17), which was described in detail in the Book of Revelation (Rev, xxi, 18–21). Epiphanius of Salamis (Epiphanius, De duodecim qemmis in Migne 1886, vol. XLIII, col. 294–304) and Isidore of Seville (St. Isidore, De lapidibus in Migne 1857–66, vol. LXXXII, col. 570–80), both Christian writers, dealt with the stones and their magical features, classifying them according to Pliny’s system.

John’s description in Revelation of Heavenly Jerusalem as founded and built of precious stones is of great interest for our research because it is exactly this text and the overall picture of this realm that was illustrated in the mosaics of several early Christian churches. The interior of the church – especially the upper part of the building – renders Heavenly Jerusalem, and this is where we find the most realistic representations of our finds. This text offers the theoretical basis for the wide use of gems on ecclesiastical objects, as they were intended to reflect objects of Heavenly Jerusalem, which were imitated on profane objects of the imperial entourage and the highest social echelons. It should be mentioned that several gemmed gold imperial gifts have been recorded in written sources.
In the Liber Pontificalis, among the imperial and papal gifts alone, more than 28 gemmed objects are recorded in the period from the fourth to the seventh centuries. These are mostly vessels: calices and bowls (calices, scyphi, patenae), but also censers (thymiamaterium), crosses, altars and even the eyes of statues of angels (Duchesne 1886: Silvester. XIII 17, XVIII 12, 17, 22, 25; Xystus III 4; Hilarus III 3, VII 22, VIII 3, IX 1; Symmachus VII 1; Hormisdas X 5–6; Johannes I, VII 15–16; Gregory IV; Leo IV 46). Furthermore, fifth- to sixth-century imperial gifts to other important churches include gold gemmed crosses, an altar and a book (Kazhdan 1991, s.v. Gems, 828).

Further information referring to Byzantium and the imperial entourage can be found in the De cerimoniis aulae byzantine, a tenth-century compilation of several texts the earliest of which goes back to the sixth century (Kazhdan 1991, s.v. De Ceremoniis, 595–7). It is a book of ceremonial protocol at the court of the Byzantine emperor. In this work, at least 23 direct references to gemmed objects are recorded, most of them connected to the Emperor, or donated by the Emperor to dignitaries as symbol of their particular office. Gemmed gold crosses, swords, sceptres, cloths, belts, horse saddles and harnesses, batons and sticks, torques, whips and even a gemmed seat are mentioned (Constantinos and Reiske 1829, Batons: p. 10, l. 18, p. 81, l. 17–18, p. 91, l. 23, p. 100, l. 3, p. 105, l. 7, p. 167 l. 23–4, p. 172, l. 4, p. 574, l. 16–18, p. 640, l. 6–7, p. 721, l. 18–20; Cross: p. 25, l. 21–2; Sword: p. 80, l. 10–12, p. 167, l. 9–10, p. 188, l. 4, p. 188, l. 25. Sceptre: p. 187, l. 15. Dress-kolovi: p. 80, l. 10–12; Belts: p. 582, l. 10, p. 710, l. 21–2; Saddle and harness: p. 80, l. 25, p. 99, l. 15; Torques: p. 584, l. 4–5, p. 709, l. 20; Whip: p. 709, l. 1–2; Seat: p. 22, l. 23–4). Furthermore, the references to green and white crowns might also allude to a gemmed decoration (Constantinos and Reiske 1829, Crown: 188 l. 9–10, 190 l. 15–16, 581 l. 17–21). There are few surviving objects of this type, but apart from the silver gilt cross of Justin II (r. 565–78) donated to the Vatican, all the others were made or circulated outside the Byzantine empire’s borders. They are Lombard and Visigoth royal gifts and include book covers and votive crowns (Kazhdan 1991, s.v. Gems, 828 and further references within).

There are other uses of glass in architectural decoration in the Roman and early Christian period that can help in the contextualisation of the glass gems under study, for example, opus sectile and inserts in marble sculptures. Square green gems set in a yellow frame, imitating emeralds set in gold are depicted in the glass inlays of the sumptuous opera sectilia from the early second-century villa of Lucius Verus (r. 161–9) (Whitehouse 1997, 34, no. 6, see references within).
In the fifth century, pieces of glass were used in the opus sectile intarsia decorations, e.g. the folds of the curtains of the heavenly tribelon of Hagios Demetrios in Thessaloniki (Antonaras 2013, 193, plate 13). The gold-glass tiles in all their variants, simple and elaborate, were also in use on wall revetments (Antonaras 2009, 301–6 and references within; Antonaras 2013, 192–3, plate 12). Furthermore, it has been convincingly proposed that features of the art of jewellery were infused in the innovative works of the Constantinopolitan sculptors of the Justinian era (Pittarakis 2007, 69–70). This tendency was particularly expressed in St Polyeuktos, where carved imitations of gem inlays are visible. For example, in the net-like arrangement of carved gems with rectangular gems carved at the intersections (Harrison 1986, figs 130–1; Pittarakis 2007, 69–70, figs 3 and 6). Furthermore, real inlays of colourful stones and pieces of glass is attested in the same monuments, for example, at St. Polyeuktos, where amethyst-coloured lozenges, inlayed with opaque green and gold-glass pieces, were inserted into the shafts of columns that probably belonged to a ciborium or baldachin (Harrison 1986, 168–81; Pittarakis 2007, 70–2); at St Euphemia, where a band of rectangular and circular cavities that might have originally contained inlays are carved at the base of the columns from the apse (Pittarakis 2007, 72–3, fig. 9); and at St. John the Forerunner in the Hebdomon where there are columns with lozenge-shaped and triangular cavities for inserts (Pittarakis 2007, 73–4, fig. 10). This technique was used later during the tenth century in other monuments as well, for example, marble elements with cavities and glass inlays are found at Boukoleon palace and in part of the imperial palace in Constantinople (ninth to early tenth century), and also from Lips Church in Constantinople and from Preslav (Mundell Mango 2001, 24–5). These sites demonstrate the distribution of this technique. This type of inlayed decoration was probably imitating the painted motifs on the polychrome clay tiles, some of which were made with blue-green glaze (Mundell Mango 2001, fig. 9; cat. nos II.3–II.5, VI.3, VI.4, XIII.2)

The use of the glass gems under study could be best interpreted within this artistic context, as inlays quite probably on metal or wooden objects but not on architectural stone.

All our finds bear no remains of plaster or mortar on them and thus it is improbable that they were used in wall mosaic or opus sectile decoration. It seems more likely that they were used in the embellishment of some sort of movable object. Furthermore, the sides of the gems are not bevelled but rather vertical and no signs of scratches on the top
side of the gems are noticed, which would be indicative of a prong setting. Thus, we can assume that a bezel type of setting was used for the glass gems under discussion, similar to what we see in their representations on mosaics and textiles. The new Macedonian finds for the first time now offer clear archaeological evidence of the use of glass gems to create the sizable decoration on ecclesiastical objects. These glass gems had hitherto only been known through idealised representations on wall and floor mosaics, textiles, book illustrations and textual descriptions. These finds offer a new tool to perceive these depictions as actual objects from real life of the late Roman/early Christian world. For example, gem-stud thrones and borders are depicted on the woven decoration of extant opulent textiles, some of them clearly representing objects similar to our finds. Namely, red and green oblong gems are very clearly portrayed on a probably sixth-century textile in the collections of the Cleveland Museum of Art on the thrones of Christ and Virgin Mary (Weitzmann 1977, colour plate XIV, cat. no. 477; Fleigel 2012, 2). In addition, another textile in the same collection depicts two figures that are framed by a jewelled border comprised of blue ovals and green squares with the characteristic yellow rim forming the gold setting of the gems. This is also clearly visible on the previously mentioned textile (Cleveland Museum of Art 2016). In addition, some other Coptic textiles in the collections of the Museum of Byzantine Culture presents scenes of game with a mounted figure in the centre exhibiting a gem-studded harness (Antonaras 2004, 50–1) and the same decoration, supplemented with small gemstones is depicted on the emperor’s mount on the Barberini diptych (Weitzmann 1977, 35, cat. no. 28).

Furthermore, the examination of the representations on early Christian wall mosaics in monuments from Thessaloniki, Ravenna, Constantinople, Cyprus and Sinai and floor mosaic from Palestine suggests that glass gems were used in the decoration of: architectural elements – shafts of columns, arches, ciboria and chain-like bands that were framing entire scenes; furniture – thrones and pedestals; movable objects – gospel bindings, ecclesiastical vessels, shields, crowns, wreaths; and vestments, such as Christ’s halo, crosses and standards. Gems appear in these mosaics in six main shapes and three different colours (Table 1.1): large oblong (green and blue), large square (green, red), large and small oval (blue, red, green), large and small lozenge (green, blue), large and mainly small circular (green, blue) and small tear-shaped/triangular (green, red) ones. The most common among them are the green oblong examples, and blue oval and circular types (Figure 1.10).
Gemmed decorations are often represented on wall mosaics in Thessaloniki (Bakirtzis et al. 2012, particularly 48–237) and on wall mosaics in Ravenna (Bustacchini 1989; David 2013). In addition, they are found in the decoration on the transenna on the Apse of St Catherine in Sinai (Katz 2003) and in a sixth-century mosaic from Greater Syria, which belongs to Toledo Museum of Art (exhibited in the Metropolitan Museum of Art, NY, registration no. L. 2014–42).

It seems that there is a correlation in the frequency in which particular shapes and colours of gems appear in works of art and the quantities recorded among our finds. Oblong, circular and oval, blue and green gems are most numerous as finds and they are also the most frequently depicted on the mosaics and textiles. This hypothesis is quite logical, particularly if one takes into consideration that, as seen from most excavations, the colours of raw glass most easily accessible to glass workers were indeed predominantly green followed by dark blue. It is also interesting to note the tendency of the artists towards a realistic representation of their theme that urged them to avoid the use of the bright but single-coloured opaque glass – readily available in the area as preserved mosaics indicate – for these objects. Gems were made of transparent or translucent glass, depending on the thickness of the object, which would have created a far closer resemblance to actual semi-precious stones.

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Table 1.1 Colour, shape and size of glass gems in mosaics

16 THINGS THAT TRAVELLED
Conclusion

A new facet of the early Christian glass production has been unveiled and at least initially tackled. Several forms of large gems, which until now were perceived only as idealised depictions on sumptuous wall mosaics.

**Figure 1.10** Forms of gems depicted on mosaics from Thessaloniki and Ravenna and their glass prototypes.
and textiles, have been found in archaeological excavations. Hopefully this brief discussion will lead to a further enrichment of this corpus with finds from other monuments and other regions and reveal the true extent of this practice, which presumably reach far beyond Thessaloniki and its hinterland.

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EARLY CHRISTIAN GLASS 'GEMS' FROM GREECE


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