

TRACES OF GLASSMAKERS IN THE ROMAN PROVINCE OF DALMATIA

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Fragments of a minimum of ten glass cups have been discovered in Dalmatia in recent decades, all ascribed to the renowned glassmakers Ennion and Aristreas.

Ennion's only recently known cups in Dalmatia came from the military camp in *Tilurium* (Gardun) and from the *temenos* of the *Augusteum* in *Narona* (Vid)¹. Both cups are made of dark-blue glass. The cup from *Narona* (fig. 1.1) has been preserved without its bottom, while a fragment of a cylindrical vessel decorated with thick vertical grooves with rounded ends arranged between horizontal ribs comes from Gardun (fig. 2.8). There are also pieces of such cups, possibly two, made of transparent yellow glass², found in *Narona* in 1985 during rescue excavations conducted by the Archaeological Museum in Split along a section of the regional water supply pipeline running from Prud to Korčula via the Pelješac Peninsula, east of the Vid-Prud and Metković-Ljubuški, i.e. *Salona-Narona-Bigeste*, roads (fig. 1.2)³. The other glass cups from this site, made of dark-blue glass, are also in pieces (fig. 1.7)⁴. Since an early necropolis was also found at this site, it may be assumed that the cups were grave goods. Their fragmentary condition indicates the destruction of the cemetery during the construction phases which followed the urban expansion of *Narona*.

The signature of Ennion, the most recognized maker of mould-blown glass vessels, has been preserved on over thirty articles. Ennion was probably a Hellenized Semitic name. It is possible that he worked in Sidon, but certainly somewhere in Syrian-Palestinian territory⁵. It would appear, judging by the dated finds, that the earliest mould-blown tableware was made precisely by Ennion⁶. Vessels

with his signature in Greek script have been found throughout the Mediterranean, and on the northern shores of the Black Sea, which indicates the measure of his success as a glassblower and entrepreneurial merchant⁷. The majority of cups with Ennion's signature were found in Italy, so it was long believed that at some point the master had moved from Sidon to Northern Italy⁸. New discoveries elsewhere in the West suggest another possibility: the exchange of moulds between workshops involving trade over great distances⁹.

The *Narona* cup (fig. 1.1) is decorated with geometric and plant motifs preserved in two bands across the cylindrical body. In the first band below the rim, there are two rectangular inscription fields amidst palmettes, circlets, columns and stars. The inscriptions, in four lines, are rather worn, but they may be ascribed to Ennion, the best known glassblower of the first half of the first century AD. In one field the inscription reads ENN[I]/ΩNEΠ/OIHCE/N (*Ennion epoiesen; made by Ennion*), while the other reads MNHΘH/OAΓO/PAZΩ/N (*Mnethe ho agorazon; May the buyer remember*), which is a Greek translation of a typical Semitic blessing, a phrase which often appears on the signatures of artisans¹⁰. The lower band is decorated with thick, vertical and gently diagonal grooves with rounded ends arranged between horizontal ribs. A direct analogy to the *Narona* cup is a cup with one small handle from the Adria-Cavàrzere area¹¹, and another, made of green glass from Tremithus, Cyprus¹². A cup made of yellow glass from Ribnica in Slovenia (*Romula*, Pannonia) belongs to the same group¹³. All four were probably blown into the same mould. It is possible that the cup from Tarragona also belongs

to the same group¹⁴. A similar fragment comes from Mogador (Morocco)¹⁵. The yellow-glass cups from *Narona* (Water Pipeline excavation, 1985), judging by the preserved portions of the band decoration with columns and circlets and the vertical grooves with rounded ends in the lower band below the horizontal ribs, belong to the same type and they are possibly from the same mould. Traces of a handle have been preserved on one part of the cup (fig. 1.2).

The differences between the close analogies lie in the size or diameter of the mouth and the differing arrangements of the inscription, as on the fragment from Ribnica: MNH./OAGOP/AZQN (the last N is above the Ω). This indicates small changes in moulds for the same type of cup, and there were certainly more, while the differences may be due to repairs to the mould or production of a new mould. There is still no way to know if workshops or their branches moved, or whether workshops exchanged moulds¹⁶.

The cup fragment from *Burnum* is also made of yellow glass (fig. 1.3), and it probably belongs to the same type of cup, Harden's type A1i, judging by the preserved parts of the second and third lines of the four-line inscription [MNHΘH/OAG]O/[PAZ]Ω/[N], the portion of the ornaments to the right of the vertical tabulae line (probably palmettes), and the vertical grooves with rounded ends below horizontal ribs¹⁷. Ennion's cups were found in *Burnum* in 2004 and 2007 during examination of the amphitheatre, below the southern entrance, in a layer of cracked limestone fill used to build the structure¹⁸.

More fragments of Ennion's cups were discovered in Gardun (figg. 1.4-5, 2.8)¹⁹. Two Ennion cups were probably found, which together with the find of a fragment published in *Tilurium I* (fig. 2.8) points to the possibility of the existence of three Ennion cups at the site itself²⁰. The *Tilurium* cups belong to the rare examples found outside of Northern Italy, although not out of their range. The cup fragment²¹ made of almost colourless glass with a greenish hue, bearing an inscription field (*tabula ansata*) bordered by vertical grooves, and a rounded bottom embellished by vertical grooves with alternating rounded and arrowhead tips, is similar in terms of colour, shape and decoration to the *Narona* cup made by Aristes the Cypriot, Ennion's adherent, a master of fine tableware (fig. 1.4)²². However, the preserved portion the

inscription recalls another master, Ennion; the last N in the first line is, namely, the last N in his name, and the last I in the second line is the last I in ΕΠΟΙΕΙ. The inscription on the cup therefore testifies that ENNION ΕΠΟΙΕΙ, 'Ennion made me'. This was probably a cup with two handles, Harden's type A2iv. The Ennion cups in Turin²³ and Newark²⁴ are analogous to this one from Gardun. The aforementioned cups may be dated to the second quarter of the first century AD²⁵ like his other cups found in *Dalmatia*. It is possible that this Ennion cup was imported from Northern Italy, although, to reiterate, the matter of a possible workshop or branch of Ennion's in Italy has not been resolved²⁶. Also found in Gardun were fragments of probably another Ennion cup, made of transparent dark-blue glass, Harden type A2iv (fig. 1.5)²⁷. Preserved are a fragment of a cylindrical body with five preserved vertical ribs grouped into pairs, with the transition into a subsequent field bordered by a horizontal rib, and the bottom of a cup with parts of a peripheral and internal concentric rib also preserved. The arrangement of the ribs recalls the aforementioned Ennion cup from Gardun, as well as the cups in Turin and Newark. Insofar as this is not an Ennion cup, that Gardun cup, in line with Larese's reasoning, may be attributed to a Northern Italian workshop which imitated the master's style²⁸.

The azure glass cup fragments from *Burnum* (fig. 1.6), which has a vertical rim with inwardly-cut and polished edge and a frieze made of grape vine and ivy tendrils framing a three-line inscription in the *tabulae ansatae* ENN[IΩN]/ΕΠΟ[IH]/CE[N] and vertical grooves with rounded edges in the lower band below the horizontal ribs, belong to Harden's type A2i, like the two cups from the grave in Cavàrzere, near Adria, the cup from Bagnola, Brescia, and the cups in Corning and the Metropolitan Museum²⁹, as well as those from Refrancore (Asti)³⁰ and Kalsdorf³¹.

Vessel fragments made of transparent azure glass decorated with alternating open and closed palmettes in the band at the bottom (or shoulder), protruding circlets between two horizontal ribs, with two additional horizontal ribs dividing the diagonally moulded portion of the vessel from the cylindrical portion, and a band of vertical grooves with rounded ends come from *Narona* (fig. 1.7). These are elements of decoration of Ennion's amphorae from Kerch

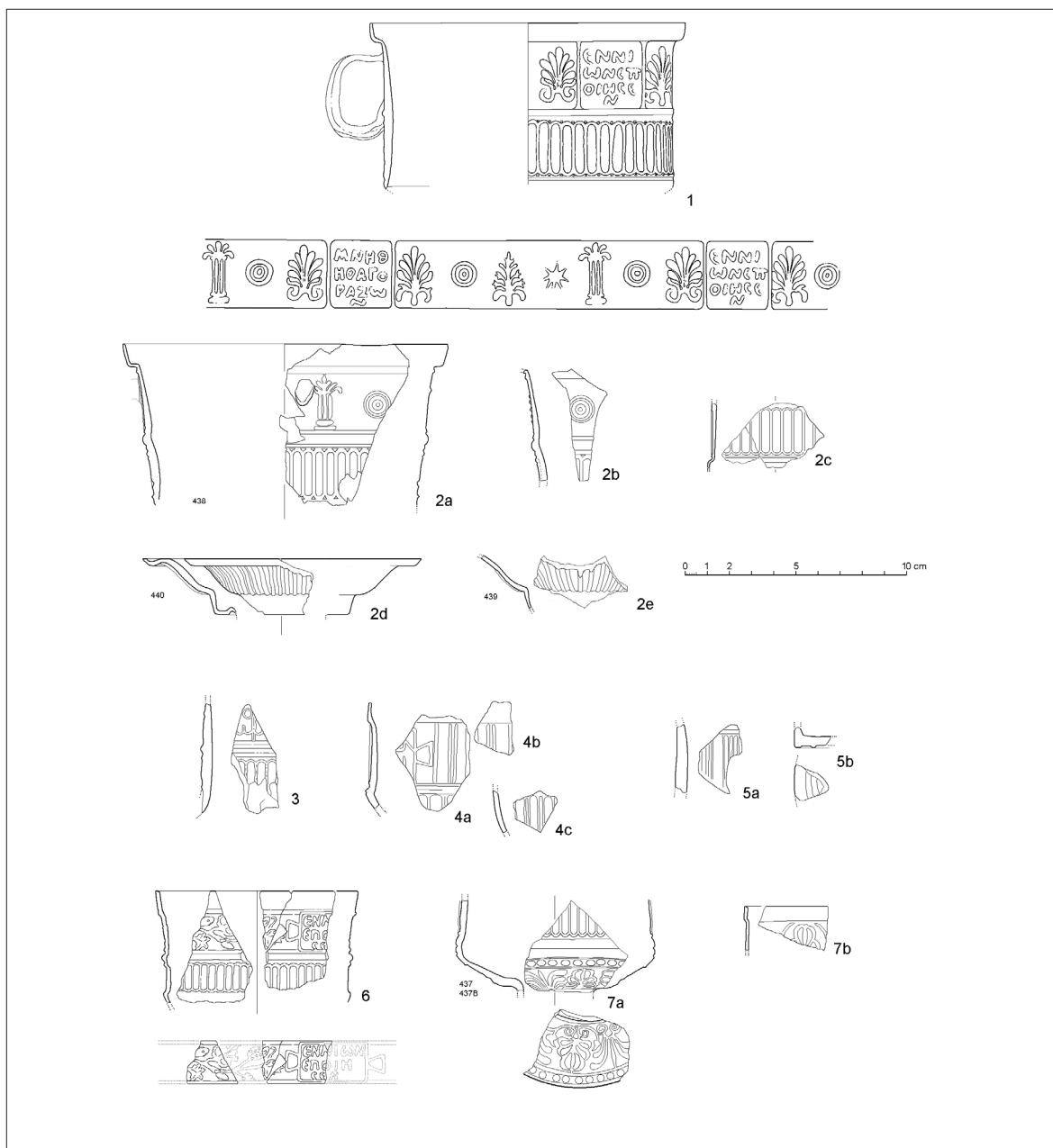


Fig. 1. Fragments of Ennion's vessels.

(Harden's type A5), held in the Hermitage³², the jugs from Kerch and from an unidentified site, also in the Hermitage, and the Aquileian and Jerusalem jugs of Harden's type A4³³. The question of who crafted these unsigned jugs remains open; several of them bear visible traces of a mould, which is not characteristic of Ennion's work³⁴. It would nevertheless appear that this is a cylindrical cup, of which a rim fragment with polished edge and decorations of closed and possibly open palmettes have been preserved, and not an amphorae or jug, a characteristic Oriental product of Ennion³⁵.

The fragment from Gardun (Croatia) is too small to allow for its attribution to some narrower grouping among Ennion's cups with one or two handles (fig. 2.8)³⁶. The same applies to the as-yet unpublished fragment of a cup made of yellow glass, with straight rim and inwardly-cut diagonal edge and a partially preserved inscription [M]NHΘ[H/O]AΓO[/PA]ZN[Ω] from the Archaeological Museum in Split, from an unidentified Dalmatian site (fig. 2.9)³⁷. Cup fragments that are too small for any certain attribution also come from *Burnum* (fig. 2.10). Insofar as these fragments can be attributed to Ennion's works, then they can be classified as Harden's A2iv, having more modestly organized decoration with vertical grooves around the *tabulae ansatae* bearing the inscription ENNIΩN EΠOIEI in two lines, with vertical grooves with alternating rounded and arrowhead tips below horizontal ribs in the lower band, and two handles and a diagonally cut rim. The aforementioned Gardun cups, and the Turin and Newark cups are all analogies. Since the inscription has not been preserved, and given the decorative sample and vessel type, Borzić has left open the possibility of attributing the *Burnum* cup to Aristéas³⁸.

Aristéas signed three cups, one of them from the *Augusteum* in *Narona* (fig. 2.11)³⁹. This is a cup with cylindrical body made of transparent blue-green glass. The cup's decoration is divided into four bands: between two horizontally grooved bands, there is an inscription field (*tabula ansata*) in the central band, surrounded by vertical grooves with rounded ends, a rounded bottom decorated with a series of vertical grooves and alternating rounded and arrowhead tips. This was probably a cup with two handles⁴⁰. One can read from the preserved parts of the three-line inscription the following:

[APIC]TEA/[CKY]ΠΡΙΟ/[CE]ΠΟΙΕΙ (*Made by Aristéas the Cypriot*). Aristéas, Ennion's adherent, a master of fine tableware, signed himself as 'the Cypriot'⁴¹ on the *Narona* cup and the cup from the Constable-Maxwell Collection, and without an accompanying toponym on the olive-green cup in the Strada Collection in Pavia⁴².

These cups can be dated to the second quarter of the first century AD⁴³.

The inscription on the handles of the *skyphos*⁴⁴ made of yellow glass from the *Augusteum* in *Narona* is so worn that which of the Sidonians signed it cannot be ascertained (fig. 2.12)⁴⁵. There were six glassmakers who added the toponym *Sidon* or the toponymic designation "Sidonian" affixed their signatures in seals on such cups: Annios, Aristoon, Artas, Eirenaïos, Neikoon and Philippos. Most of the seals bear the name of Artas. This toponym may be a designation of a place of birth rather than a place of work, or it may have been used as a guarantee of quality by referring to the name of a renowned glassmaking centre. Since most handles with seals affixed were found in Rome, it is assumed that they had workshops in Rome or in Northern Italy in the first century AD, or that they in fact introduced glassblowing to Rome⁴⁶.

Also worth mentioning is the large azure-white glass (imitation chalcedony) cameo featuring a portrait of Livia, found on the western platform of the cellae of *Narona's Augusteum* (fig. 2.13)⁴⁷. Livia is portrayed with a so-called Italic hairstyle of the Late Republican era, with a forehead knot (*nodus*), a braid crossed over her pate, and a bun at the back of her head. The small glass cameo in the Musée d'art et d'histoire in Geneva is similar to the *Narona* cameo⁴⁸. A fragmentary glass cameo made of imitation onyx, bearing Livia's portrait, the Marbourn Hill type, in the British Museum⁴⁹, and the cameo (made of opaque white glass on a dark background) from Berlin are analogous to the *Narona* cameo⁵⁰. It should be further noted that there are similar chalcedony cameos: Livia's portrait in leftward profile on the white-grey cameo in the Devonshire Collection⁵¹, the rightward profile of the empress on the white-brown cameo Roger cameo in the Cabinet des Médailles in Paris⁵², and her portrait in leftward profile on a white-brown cameo, formerly in The Hague, and now in the Royal Coin Cabinet in Leiden⁵³. Vollenweider asserted that the first cameo

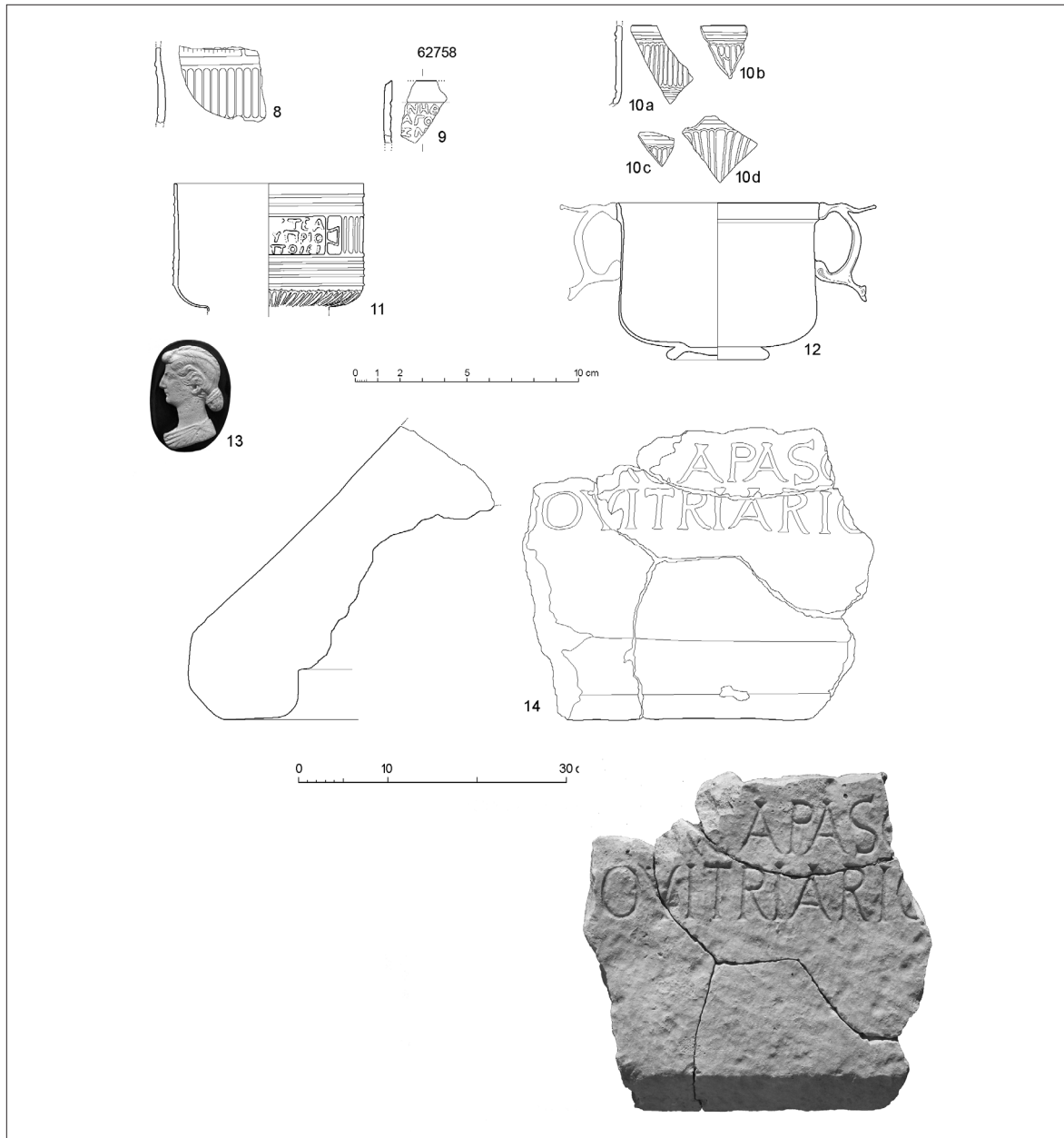


Fig. 2. Vessel's fragments of famous glassmakers Ennion, Aristeas, and a Sidonian glassmaker, cameo made by Dioscurides's son, a and a sarcophagus fragment of a Salonitan local glassmaker *Paschasius*.

was the work of Dioscorides, while the other two cameos from the Tiberian era may be the work of his sons⁵⁴. The Roger cameo belongs to Fabbrini's type I. b of official portraits of the empress⁵⁵. The bust of Livia from Fayum⁵⁶ – the model for the *Narona* marble Livia⁵⁷ – is in the same group as the Roger cameo. The marble bust of Livia from *Narona* indicates academic treatment⁵⁸. The academism of the portrait on the cameo from *Narona* is emphasized by the use of colour – a white portrait on an azure base. The marble Livia also has a hairstyle with the characteristic forehead *nodus*, a cross-over braid and hair to the sides curled like locks. It has been dated to the second and third decades, the Tiberian era⁵⁹. The *Narona* glass Livia with youthful appearance and the *nodus* hairstyle probably originated in Rome during the Tiberian era, and it is possibly the work of one of the sons of Diocurides. Dioscorides was associated with the Julian family for decades during the latter half of the first century BC⁶⁰. In the 20s BC he made a seal for Augustus which bore the latter's image. At the time of the Ara Pacis he engraved portraits of the ladies of the imperial house in stone and glass⁶¹. He had three sons: Eutyches, Hyllus and Herophilus, who were active during the Tiberian era⁶². Worth mentioning here is the glass cameo bearing a portrait of Tiberius, held in the Kunsthistorisches Museum in Vienna, which was signed by Herophilus⁶³.

In *Salona*, a workshop was discovered on the western end of the forum, although it is not known at what point between the first and fourth centuries AD it functioned as a glass production facility⁶⁴. Furthermore, the composition of the chemically analyzed glass vessels from this site generally correspond to Northern Italian glass, while the composition of the compound in the refining vat, i.e. the composition of the glass cast-offs, corresponds either to a specific Early Roman glass of Italian or Oriental origin, which may be explained by the activity of glassmakers from the eastern sections of the Empire in *Salona*, who used their traditional glass compounding formulas, or they re-melted glass from Oriental workshops for re-use⁶⁵. The uniformity of the chemical components of Roman glass from different regions and from different times but with the same raw material origins may also be explained by the hypothesis on the use of glass in only a few pri-

mary workshops during the Roman imperial period. This hypothesis is consistent with the fact that numerous glassmaking furnaces discovered at sites in the Western Empire were secondary workshops, in which the glass was shaped⁶⁶. The *Salona*-types of glass vessels have not yet been ascertained.

There are several other proofs of glass production in *Salona*. A fragment of a sarcophagus was discovered in the Early Christian cemetery in Manastirine bearing an inscription of a glassmaker named Paschasius or Pascasius (fig. 2.14)⁶⁷. A marble mould with a depiction of a gladiator and an inscription was discovered in *Salona* in 1884, at a site below Japirkove kuće, in the south-east necropolis (fig. 3.15)⁶⁸. At first it was assumed that the mould was used to place imprints on bread distributed in the *Salona* amphitheatre, so that the Miscenius Ampliatus mentioned in the inscription would be the bakery owner; then it was believed that the mould was used to make metal plaques as souvenirs of the games organized in the *Salona* amphitheatre by a patron named Miscenius. Today it is maintained that the mould was used to make the bottoms of glass bottles⁶⁹, with a form and scene, if not content, most similar to the bottles from Linz bearing the signature of the glassmaker Sentia Secunda, who worked in Aquileia⁷⁰, and the bottle from the Strada Collection with a portrayal of a gladiator on the bottom⁷¹. These are bottles with a rectangular cross-section and two handles (Isings 90). As on the bottles from Linz and the *Salona* product (mould, bottle), the name of the producer/glassmaker is indicated in the nominative case with the verb *fecit*. What Sentia Secunda was in Aquileia, so too Miscenius Ampliatus was *facit* in *Salona*. And he made, in this author's opinion, glass bottles filled with oil for the victors in the arena. This is indicated by the palm branch to the left of the gladiator, and the portrayal at the bottom of a similar bottle with rectangular cross-section from Caersws, on which a laurel wreath is shown next to the gladiator⁷². Given the cognomen of Miscenius, Ampliatus, it can be assumed that he was a freedman, and following Hirschfeld's interpretation, the *Salonas* in the last line of the inscription may mean that he was a *Salona* native. Thus, besides Paschasius, another glassmaker, Miscenius, has been discovered in *Salona* (in which a glass-making workshop was found). Given the similar



Fig. 3. Mold for bottles with the name of the local Salonitan glassmaker *Miscenius Ampliatus* and a lamp with the names of glassmakers *Trellus* and *Athenius*.

examples of bottles with rectangular and square bottoms, and the moulds for making bottles with square cross-sections, the *Salona* mould has been dated to the last quarter of the first century and the second century AD. This is the only thus-far known (found, noted) mould for the bottoms of square bottles of a rare type, with figural portrayals depicting gladiators.

Portrayals of glassmaking workshops in which glass was blown have been preserved on three lamps from the third quarter of the first century AD, which are contemporaneous with the spread of glassblowing techniques from the Ferrara region (Prati di Monestirolo, Italy), from *Asseria* (*Dalmatia*), and from Spodnje Škofije, near Školarice (Slovenia: *Regio X*)⁷³. Shown are glassmaking furnaces with horizontally closed sections for heating, and glassmakers who, it would appear, are blowing through ceramic pipes which they could easily make themselves – this could in fact explain the rapid spread of glassblowing techniques. The lamp from *Asseria* has engraved on it the names of two glassblowers, freed slaves: [Tre]llus and Athenius, his assistant, whose name suggests Athenian origin, either of himself or his ancestors (fig. 3.16)⁷⁴. The lamp is (Northern) Italian in origin; it is possible that all three were made in the same mould⁷⁵.

Something may also be discovered from the inscriptions⁷⁶ on the bottoms of *balsamaria* and square recipients in the territory of Roman Dalmatia in the second half of the first century to the third century AD (figg. 4.17-27). The personal names on the bottoms of the recipients are the names of the producers of the vessels themselves and/or their contents, or the owners of the workshops. On the bottoms of *balsamaria* in *Dalmatia* (*Argyrunum*), according to Fadić the following names of content producers can be read: RVFINI – of Rufinius (fig. 4.17); AVOLUMNIIVARI – of A(ntonius) Volumnius Ianuarius (fig. 4.18)⁷⁷. Notable here is the abbreviation QDE/LPF from the bottom of a Zadar *balsamarium*, of which the three letters of the name in the first line may be resolved with an inscription from the bottom of a square bottle from Almese (Turin): Q. DANI EVHELPISTI from Q(uintus) Danus Euhelpistus (fig. 4.19)⁷⁸. Some hold that the names in the nominative case designate the producer, while names in the genitive case probably designate the workshop owner⁷⁹. In this vein,

some names on the bottoms of Dalmatian square recipients are in the nominative or also in the nominative: BLASIV[S], from L. Aemilius Blasius, on the bottom of a Zadar example is the sole example in the nominative (fig. 4.22), while the remaining three Dalmatian examples have names in the genitive: BLASII - L. AEMILI from *Argyrunum* (fig. 4.20); AEMILI/BLASII from *Asseria* (fig. 4.21); and LA/EM/IBL/ASI from *Volcera* (fig. 4.23)⁸⁰. SALVIVS GRATVS (fig. 4.25)⁸¹, from C. Salvius Gratus – the name on the bottom of another, also Zaton example, is in the genitive C. SALVI GRATI (fig. 4.24), which may indicate the name of the master, the workshop owner, as well. Cn. Pompeius Cassianus is a name confirmed on glass bottoms only in the genitive; two bottoms are from Northern Italy, one is from Zadar: POMPEI (fig. 4.26)⁸². According to some, this is most likely a matter of the makers of the recipients, because the name of the producer of the contents and other information thereon were probably written on labels affixed to the bottles, such as, for example, the *pittacia* described by Petronius⁸³. According to others, the seals pertain to the producers of the contents⁸⁴. Also worth mentioning here is the find of a packed glass vessel in a shop in *Herculaneum*, among which there was an empty glass bottle bearing the name P. GESSI AMPLIATI on the bottom. The fact that a bottle packed for sale was empty indicates that the name to which *fecit* was added (as with the aforementioned Sentia Secunda) does in fact refer to the glass workshop rather than the contents⁸⁵. Insofar as the hypothesis on names in the nominative case as designations of the glassmaker and names in the genitive as designations of the workshop owner is correct, then why the names are sometimes written in the nominative and sometimes in the genitive remains unexplained. It is possible that the recipient maker sometimes also produced the content (a frequent notation)⁸⁶ or even that he was the owner of the workshop, or at one point in his career became the workshop owner. Perhaps a precise dating of the vessels with signed variants of the same name may help in an at least partial solution to these hypotheses and uncertainties. Insofar as these are glassmakers, their products in *Dalmatia* were imported from Italy, although some have hypothesized the existence of Dalmatian branches of Blasius and Pompei, and other potential provincial centres of L. Emilius

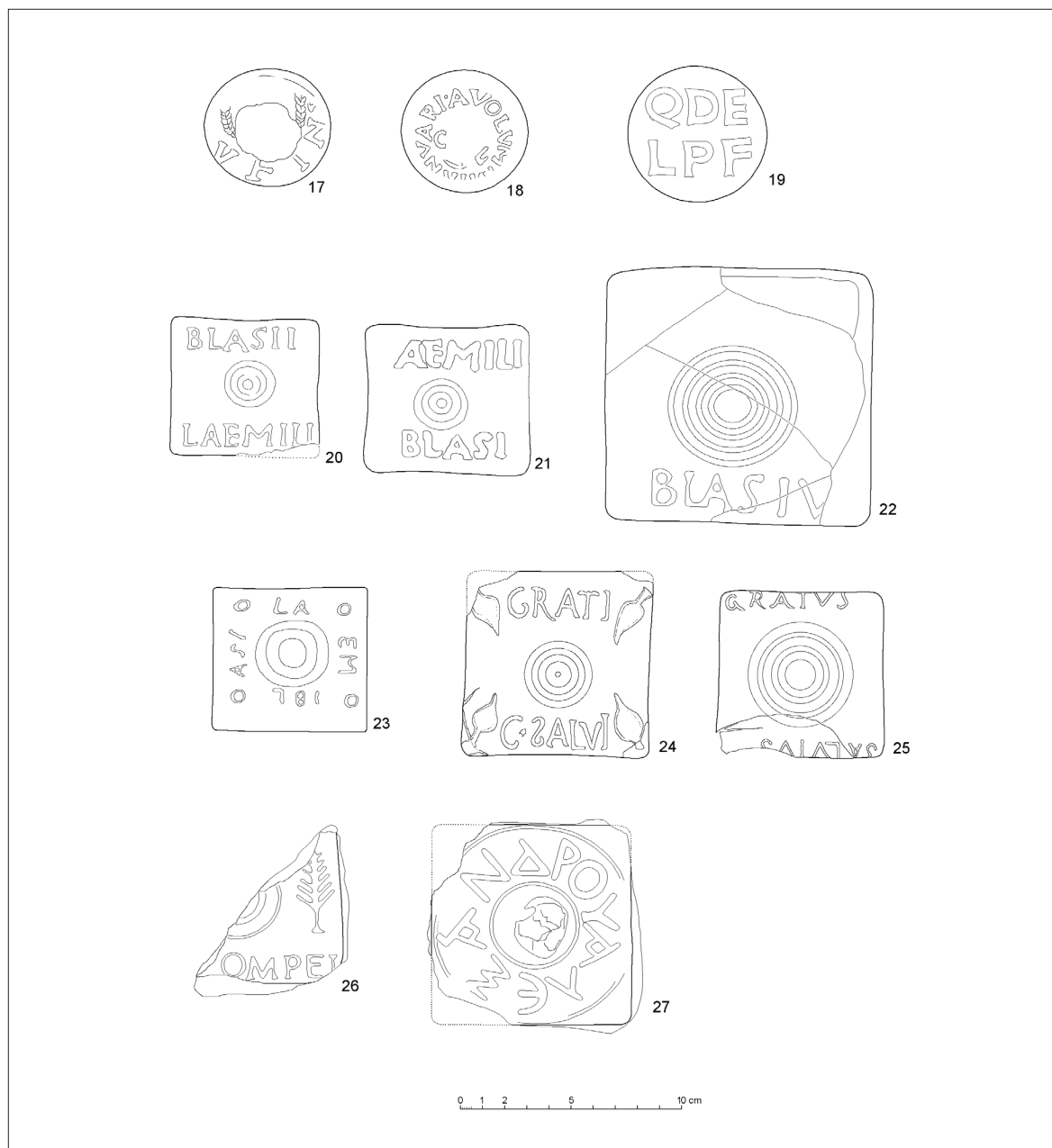


Fig. 4. Name of the italic glassmakers on the bottom of glass vessels.



Fig. 5. Map of *Dalmatia* with the sites mentioned in the text.

Blastus and C. Salvius Gratus farther afield from the assumed Italic or Northern Italic centre⁸⁷ One bottom of a glass bottle bearing the name of another glassmaker, Alexandros, in Greek, in the genitive came from *Dalmatia*, from Resnik near Trogir, like the remaining known examples; the location of his workshop is not known (fig. 4.27)⁸⁸.

NOTES

* I would like to thank Branko Pender for producing the illustrations.

¹ Gardun (*Tilurium*): storage site: Faculty of Arts and Letters, Zagreb, and the Trilj Territorial Museum: inv. no. GAR 00 192; BULJEVIĆ 2003, cat. no. 142, p. 336, pl. 14. 10; BULJEVIĆ 2005, fig. 1, p. 95; BULJEVIĆ 2007, Fig. 4, pp. 167-168; Vid

(Narona): storage site: Narona Archaeological Museum: inv. no. 2046: BULJEVIĆ 2004d, pp. 186, 188, cat. no. 7; BULJEVIĆ 2004b, p. 56, cat. no. 7; BULJEVIĆ 2005, fig. 2, p. 95; BULJEVIĆ 2007, fig. 5, pp. 167-168.

² Narona: Narona Archaeological Museum: inv. no. 438, 439, 440; fragment of bottom, inv. no. 440 probably belongs to the cup under inv. no. 438, while the bottom fragment, inv. no. 439, may belong to another cup of this type, possibly the fragment registered under 438; five pieces of a vessel do not connect, and the bottom under inv. no. 440 has a cut, polished edge, like another fragment (fluted) made of three pieces which do not connect, and are recorded under inv. no. 438.

³ BULJEVIĆ 1999, 250. I would like to thank Hrvoje Manenica for allowing me to publish that portion of the materials from the Water Pipeline dig which can be ascribed to the renowned glassmakers.

⁴ Narona: Narona Archaeological Museum: inv. no. 437 and 424; this is one or two vessels.

⁵ STERN 1995, pp. 69, 71-72, notes 66-69.

⁶ STERN 1995, p. 70, note 48; p. 71, notes 55-57; MCCLELLAN 1983, p. 73-76.

⁷ STERN 1999, pp. 457-458, note 70.

⁸ HARDEN 1935, p. 165.

⁹ STERN 1995, p. 71, notes 62-65; MCCLELLAN 1983, pp. 75-76.

¹⁰ STERN 1995, pp. 71-72, note 59 (mnesthe – a sub-standard aorist optative in the passive sense; agorazno – agorazon – present participle of agorazein – to buy); MCCLELLAN 1983, p. 72, note 6.

¹¹ HARDEN 1935, p. 165, Alia; CONTON 1906; KISA 1908, BONOMI 1996, p. 150, cat. no. 352.

¹² HARDEN 1935, p. 165, Alib.

¹³ LAZAR 2004, cat. no. 17; VIDRIH PERKO 2003.

¹⁴ PRICE 1974, fig. 1. 1, cat. no. 3, p. 69.

¹⁵ PRICE 1974, p. 69, note 27; MCCLELLAN 1983, p. 75, note 31.

¹⁶ LAZAR 2005, fig. 3 and 4, pp. 40-41; cf.: HAYES 1975, pp. 29-30; STERN 1995, p. 71; MANDRUZZATO 2007, 186-187.

¹⁷ BORZIĆ 2008, pp. 92, 93-94, fig. 1 and 2, cup 1.

¹⁸ BORZIĆ 2008, pp. 92, 97-99.

¹⁹ Fragments analyzed for the book by Z. Buljević: BULJEVIĆ c.s., cat. no. 189-191, and cat. no. 192-193.

²⁰ Thus, accompanying the published fragment: BULJEVIĆ 2003, cat. no. 142, p. 336, P. 14. 10; BULJEVIĆ 2005, fig. 1, p. 95; BULJEVIĆ 2007, pp. 167-168, fig. 4.

²¹ BULJEVIĆ c.s., cat. no. 189: GAR 02, 328, P. 02/8; fragments under cat. no. 190: GAR 02, 398, P. 02/8 and cat. no. 191 GAR 02, 329, P. 02/8 belong to the same cup.

²² BULJEVIĆ 2004b, cat. no. 8; BULJEVIĆ 2004d, pp. 186, 189, cat. no. 8; BULJEVIĆ 2005, p. 95, fig. 3; BULJEVIĆ 2007, pp. 168-169, fig. 6.

²³ Found with a silver coin of Claudius from 46 AD in a grave near the S. Giorgio chapel near Carezzano (Vercelli): CONTON 1906, fig. 11, pp. 12-13; HARDEN 1935, A2iv, p. 167, P. XXVIII. 4; CALVI 1965, fig. 4, p. 12; AUTH 1976, p. 65, cat. no. 58.

²⁴ AUTH 1976, p. 65, cat. no. 58.

²⁵ STERN 1995, pp. 71-72, note 78; MANDRUZZATO 2007, p. 186.

²⁶ MANDRUZZATO 2007, pp. 186-188.

²⁷ BULJEVIĆ c.s., cat. no. 192-193; CONTON 1906, fig. 11, pp. 12-13; HARDEN 1935, A 2 iv, p. 167, P. XXVIII. 4; CALVI 1965, fig. 4, p. 12; AUTH 1976, p. 65, cat. no. 58; LARESE 2004, 18, P. CXIX, 513; MANDRUZZATO 2007, fig. 1b.

²⁸ LARESE 2004, p. 18, P. CXIX. 513.

²⁹ BORZIĆ 2008, pp. 93, 94, fig. 3-5, cup 2; HARDEN 1935, p. 166, 2i a-d; WHITEHOUSE 2001, cat. no. 482, pp. 18-19; LARESE 2004, P. XL. 353, p. 18; BONOMI 1996, p. 150, cat. no. 353.

³⁰ FACCHINI 1998, fig. 2, p. 26.

³¹ GLÖCKNER 1999.

³² KISA 1908, fig. 274; HARDEN 1935, A5, p. 168.

³³ HARDEN 1935, A4, p. 168; MANDRUZZATO 2007, fig. 3a1, 3a2, 3a3, p. 188; MANDRUZZATO, MARCANTE 2005, cat. no. 146, p. 22; ISRAELI 1983, fig. 2 and 3, pp. 66-67; STERN 1995, p. 70, note 51.

³⁴ CALVI 1968, pp. 98-99, fig. 2; ISRAELI 1983, pp. 67-68, note 10; STERN 1995, p. 70, note 51; MANDRUZZATO 2007, 188.

³⁵ MANDRUZZATO 2007, 187-188

³⁶ HARDEN 1935, pp. 165-167, A1 and A2; BULJEVIĆ 2003, cat. no. 142, p. 336, P. 14. 10; BULJEVIĆ 2005, fig. 1, p. 95; BULJEVIĆ 2007, pp. 167-168, fig. 4.

³⁷ Inv. no. AMS-62758; cf. MANDRUZZATO 2007, p. 185, fig. 1; MANDRUZZATO, MARCANTE 2005, cat. no. 203.

³⁸ BORZIĆ 2008, pp. 93, 95, fig. 6 and 7, cup 3; HARDEN 1935, p. 167; CONTON 1906, 13.

³⁹ Storage site: Narona Archaeological Museum: inv. no. 2047: BULJEVIĆ 2004d, pp. 186, 189, cat. no. 8; BULJEVIĆ 2004b, p. 56, cat. no. 8; BULJEVIĆ 2005, p. 95, fig. 3; BULJEVIĆ 2007, fig. 6, pp. 168-169.

⁴⁰ Similar to Ennion's cup: AUTH 1976, p. 65, cat. no. 58; GROSE 1974, pp. 37-38, fig. 1. 8, fig. 2.

⁴¹ STERN 1995, p. 72, note 71-75.

⁴² STERN 1995, p. 72, note 76; *The Constable-Maxwell Collection* 1979, pp. 10, 157-160, cat. no. 280; CALVI 1965; STERN 2000, p. 165, fig. 1: There is a possibility that the fragment from Magdalensberg (Austria) is an Aristeas cup, dated, based on context, to the Augustan era, making it the earliest evidence of mould glassblowing.

⁴³ STERN 1995, p. 71-72, note 78.

⁴⁴ BIAGGIO SIMONA 1991, 6.5., pp. 93-94, pl. 9, fig. 44; GOETHERT-POLASCHEK 1977, shape 29a, p. 40; CALVI 1968, pl. 7. 1, cat. no. 160, p. 64; ISINGS 1957, form 39, pp. 55-56.

⁴⁵ Storage site: Narona Archaeological Museum: inv. no. 2060: BULJEVIĆ 2004d, pp. 186, 192, cat. no. 21; BULJEVIĆ 2004b, cat. no. 21; BULJEVIĆ 2005, p. 96, fig. 4.

⁴⁶ WHITEHOUSE 1997, cat. no. 132-149, pp. 91-101; STERN 1995, pp. 68-69; 94-95; STERN 1999, p. 444.

⁴⁷ Storage site: Narona Archaeological Museum: inv. no. 2087: BULJEVIĆ 2004a; BULJEVIĆ 2004c; BULJEVIĆ 2005, pp. 96-97, fig. 5.

⁴⁸ VOLLENWEIDER 1979, cat. no. 206 on p. 196; pl. 62, fig. 206, 3 and 3a.

⁴⁹ WALTERS 1926, p. 357, cat. no. 3813, pl. XXXIX; FABBRINI 1961, p. 665; POULSEN 1962, p. 68, no. 7, type D; VOLLENWEIDER 1979, p. 196, note 9.

⁵⁰ FURTWÄGLER 1896, no. 11214, pl. 68; VOLLENWEIDER 1972-74, pp. 283, pl. 166. 10; VOLLENWEIDER 1979, p. 196, note 8; BARTMAN 1999, cat. no. 93, p. 188.

⁵¹ VOLLENWEIDER 1979, p. 196, note 3; VOLLENWEIDER 1966, pp. 59, 113, pl. 59. 2.

⁵² BABELON 1896, p. 1476, note 6; BERNOULLI 1886, p. 105; VOLLENWEIDER 1966, p. 64, note 90, pp. 68, 117, pl. 74. 1.

⁵³ BERNOULLI 1886, p. 105, pl. XXVII, 7; VOLLENWEIDER 1966, p. 73, note 58, p. 64, note 90, p. 120, pl. 84. 1.

- ⁵⁴ VOLLENWEIDER 1979, p. 196, note 5; VOLLENWEIDER 1966, p. 73.
- ⁵⁵ FABBRI 1961, p. 666.
- ⁵⁶ POULSEN 1951, p. 427/428, no. 615; BILLETDAVLER 1907, L, 615; POULSEN 1962, no. 34, pl. LII-LIV, pp. 65-71, type C; found together with Augustus and Tiberius: POULSEN 1951, August: p. 423/424, no. 610 and Tiberius: p. 431/432, no. 623; BILLETDAVLER 1907, XXXIX, 610 and L, 623.
- ⁵⁷ CAMBI 2000, p. 38, note 217-219; cat. no. 28, pl. 27; POULSEN 1962, p. 68, no. 16 and 17, type C; for group see: POULSEN 1951, August: pp. 423/424, no. 610 and Tiberius: pp. 431/432, no. 623; BILLETDAVLER 1907, XXXIX, 610 and L, 623.
- ⁵⁸ CAMBI 2000, p. 103.
- ⁵⁹ MARIN 2001, fig. 27, p. 106, note 86; CAMBI 2000, p. 38, note 217-219, cat. no. 28, pl. 27; POULSEN 1962, p. 68, no. 17.
- ⁶⁰ *Recent Resarch* 1990, p. 125, note 16.
- ⁶¹ GOLDSTEIN 1982, p. 8; PLIN., NH, 37, 8; *Recent Resarch* 1990, p. 125, note 17.
- ⁶² BREGLIA 1959, p. 290.
- ⁶³ ZAZOFF 1983, p. 316, note 58, pl. 91. 1; EICHLER, KRIS 1927, p. 59, cat. no. 12, pl. 6; BERNOULLI 1886, pl. XXVI, 5.
- ⁶⁴ AUTH 1975, p. 147; CLAIRMONT, VON GOZENBACH 1975, pp. 58-63, note 37-41, pl. 4 and 8, fig. 30-36, C6-7, D6-7; cat. no. 21, pl. 64, p. 230; Cambi points to the discovery of the remains of moulding glass at the Ilinac site, east of this workshop: CAMBI 1976, p. 148, note 54.
- ⁶⁵ AUTH 1975, p. 147, notes 12 and 100; BRILL 1975.
- ⁶⁶ STERN 1999, p. 454.
- ⁶⁷ [A]RCA PASC(H)ASI/O VITRIARIO: Archaeological Museum in Split: inv. no. 28B; CIL III, 9542; Bull. Dalm. 1884, p. 69, no. 26; EGGER 1926, p. 99, n. 208; CABROL, LECLERCQ 1950; CAMBI 1976, p. 148, note 55; ŠAŠEL 1986, no. 2487, pp. 285-286; BALDONI 1987, p. 28, note 25; FADIĆ 1998, p. 76; BULJEVIĆ 2002, p. 389; BULJEVIĆ 2005, p. 98, fig. 6.
- ⁶⁸ Archaeological Museum in Split: inv. no. A 826; CIL III: 8831; Bull. Dalm. 1884, pp. 165-166, no. 34; HIRSCHFELD, SCHNEIDER 1885, p. 16, no. 25; *Catalogo della mostra archeologica* 1911, p. 48; DYGGVE 1933, pp. 89-90, 95, no. 32, fig. 44, 48; CAMBI 1979; SANADER 2001, pp. 26-29, no. III; BULJEVIĆ 2005, p. 98, fig. 7.
- ⁶⁹ BULJEVIĆ 2004e.
- ⁷⁰ NOLL 1949, p. 27, 28, fig. 72 (G 99a); fig. 73 (G 99c); RUPRECHTSBERGER 1982, pp. 164, 165, cat. no. 246 a-b; STERN 1999, fig. 23-25, p. 457, note 68.
- ⁷¹ GASPARETTO 1973, p. 34, fig. 19; MIRABELLA ROBERTI, TAMASSIA 1964, pp. 13, 14, 50, cat. no. XI. 1, P. VII, top.
- ⁷² ARNOLD 1989, pp. 44, 45, no. 89.
- ⁷³ Archaeological Museum in Split: inv. no. Fc 1094; ABRAMIĆ 1959; BALDONI 1987; STERN, SCHLICK-NOLTE 1994, pp. 25, 82, fig. 54; STERN 1999, pp. 446, 455, 457, fig. 7, note 69; BULJEVIĆ 2002, p. 388, fig. 1; BULJEVIĆ 2005, fig. 8, p. 100, FADIĆ 2001, pp. 470-472, 474, 492, fig. 15; FADIĆ 2002, p. 398, 400, fig. 4; LAZAR 2003, p. 211, fig. 56; LAZAR 2004, fig. 15, p. 28, cat. no. 25; LAZAR 2006.
- ⁷⁴ According to Fadić, the name of one glassmaker is written in a two-part name formula, wherein the name Athenio indicates his Oriental origin, while the double name formula indicates his freedman status.
- ⁷⁵ LAZAR 2006, p. 232.
- ⁷⁶ FADIĆ 2006b, p. 155; BULJEVIĆ 2005, pp. 100-101, fig. 9-12; FADIĆ 2001, pp. 469-470, 490-491; FADIĆ 2002, p. 398; FADIĆ 1998, p. 76.
- ⁷⁷ FADIĆ 2001, pp. 421-426, fig. 9. 3 and 4; FADIĆ 1998, p. 81, cat. no. 42.
- ⁷⁸ TABORELLI 1998, P. II, 2 and 3; FADIĆ 2001, pp. 421, fig. 9. 1.
- ⁷⁹ LEHRER JACOBSON 1992, p. 42, note 21; ROTTLOFF 1999, p. 47, note 14; for something slightly different, see STERN 1999, p. 469.
- ⁸⁰ LAZAR 2008, p. 72, P. 9. 5; BUORA 2007a; BULJEVIĆ 2007, fig. 2. 1-4, p. 166; LAZAR 2006a, CRO 5 and CRO 11; FADIĆ 2006a, cat. no. 56; BULJEVIĆ 2005, p. 100, note 55, fig. 12. 1-4; FADIĆ 2001, pp. 429-432, fig. 10. 1-4; FADIĆ 1998, p. 87, cat. no. 125; CESELIN 1997, pp. 146, 152-153, 156, note 43 and 44, 174-175, cat. no. 33-35, P. VII. 33 and 34, P. VIII. 35.
- ⁸¹ LAZAR 2008, pp. 71-72, P. 9. 6; BUORA 2007a; BULJEVIĆ 2007, fig. 2. 5-6, p. 166; BULJEVIĆ 2005, p. 100, fig. 12. 5-6, note 56; FADIĆ 1998, 87; GLUŠČEVIĆ 1991, cat. no. 12 and 13, pp. 155-158; FADIĆ 2001, pp. 432-434, fig. 10. 5 and 6.
- ⁸² BULJEVIĆ 2007, fig. 2. 7, p. 166; BULJEVIĆ 2005, p. 100, fig. 12. 7, note 57; FADIĆ 2001, pp. 426-429, fig. 10. 7; FADIĆ 1998, 87, cat. no. 128.
- ⁸³ MASSEROLI 1998, p. 44, note 47; ROFFIA 1993, p. 149, note 5; DE TOMMASO 1990, p. 25, note 36.
- ⁸⁴ TABORELLI 1983, 25, 57-58, 65-68; TABORELLI 1985, pp. 198, 199; TABORELLI 1996.
- ⁸⁵ STERN 1999, p. 468, note 151; p. 471.
- ⁸⁶ MASSEROLI 1998, p. 44, note 46.
- ⁸⁷ FADIĆ 2002, p. 398; ROTTLOFF 2006; GLÖCKNER 2006, pp. 189-190; AMREIN 2006, p. 210, CH 31; BUORA 2007a; BUORA 2007b; ROTTLOFF 2007; LAZAR 2008, p. 72; LAZAR 2006c, H 21; LAZAR 2006b, fig. 81.
- ⁸⁸ FADIĆ 2006b; cf. LEHRER JACOBSON 1992, p. 39, cat. no. 1.

ABSTRACT

A significant trace was left behind in the Roman province of *Dalmatia* from the first to third centuries by glassmakers whose names are known, whether their wares were imported or produced locally. Fragments of glass cups made, and signed, by Ennion and Aristes were found in the *Augusteum* and Water Pipeline excavations in *Narona* (Vid, near Metković), in *Tilurium* (Gardun) and in *Burnum* (Ivoševci, near Kistanje). A *skyphos* was found in the *Augusteum* in *Narona*, the product of one of the six Sidonians. A glass cameo was found in the same temple, possibly the work of one

of the three sons of Dioscorides. Two glassmakers were active in *Salona*, a certain *Paschasius* or *Pascasius*, and probably *Miscenius Ampliatus*. The work of the glassmakers *Trellus* and *Athenius* is associated with *Asseria* (Podgrade near Benkovac). It should be added that there is a possibility that the personal names on the bottoms of *balsamaria* and vials are in fact the names of glassmakers, so *Argyrunum* (Starigrad), *Iader* (Zadar), *Asseria*, *Volcera* (Bakar) and Zaton are linked to these names: Rufinius, A(ntonius) Volumnius Ianuarius, Q. Danus Euhelpistus, L. Aemilius Blasius, C. Salvius Gratus, Cn. Pompeius Cassianus, while Resnik is associated with Alexandros (Ἀλεξάνδρος). If these are glassmakers, their vessels were imported into *Dalmatia* from (Northern) Italy. Also noteworthy here is the hypothesis on the *Dalmatian* branch of the workshops of Blasius and Pompeius.

Key words: *Dalmatia*, Roman glass, glassmaker.

Tracce di maestri vetrai nella provincia romana della Dalmazia

Dal I al III secolo d. C. i produttori di vetro, i cui nomi sono noti, hanno lasciato una traccia significativa nella provincia romana della Dalmazia, sia che le loro merci fossero importate o prodotte localmente. Frammenti di coppe, prodotte e firmate da Ennion e Aristeas sono state rinvenute negli scavi dell'Augusteo e dell'acquedotto di *Narona* (Vid, presso Metković), a *Tilurium* (Gardun) e a *Burnum* (Ivoševci, presso Kistanje). Uno *skyphos*, prodotto da uno dei sei vetrai di Sidone, è stato rinvenuto nell'*Augusteum* di *Narona*. Un cammeo in pasta vitrea, forse opera di uno dei tre figli di Dioscorides, nel medesimo tempio. A *Salona* erano attivi due maestri vetrai, un certo *Paschasius* o *Pascasius*, e probabilmente *Miscenius Ampliatus*. L'opera dei fabbricanti di vetro *Trellus* e *Athenius* è associata ad *Asseria* (Podgrade presso Benkovac). Si dovrebbe aggiungere la possibilità che i nomi di persona sul fondo di balsamari e fiale siano effettivamente quelli dei maestri vetrai. Così *Argyrunum* (Starigrad), *Iader* (Zara), *Asseria*, *Volcera* (Bakar) e Zaton sono connessi a questi nomi: Rufinius, A(ntonius) Volumnius Ianuarius, Q. Danus Euhelpistus, L. Aemilius Blasius, C. Salvius Gratus, Cn. Pompeius Cassianus, mentre Resnik è unita ad Alessandro. Se questi furono produttori di vetro, i loro prodotti furono oggetto di importazione dall'Italia (settentrionale). È parimenti qui degna di nota l'ipotesi di un ramo dalmata delle officine di Blasius e di Pompeius.

Parole chiave: Dalmazia, vetro romano, maestri vetrai.

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