

BIBLIOGRAPHY

- BONAČIĆ-MANDINIĆ 2006: M. Bonačić-Mandinić, Aes rude i ostava sjevernoafričkog novca iz Arheološkog muzeja u Splitu, *Vjesnik za arheologiju i povijest dalmatinsku* 99, Split, 2006, 195-205.
- DUNCAN 1993: G. L. Duncan, Coin Circulation in the Danubian and Balkan Provinces of the Roman Empire, A. D. 294-578, Royal Numismatic Society, Special Publication no. 26, London, 1993.
- GRGIN 1932: A. Grgin, Skupni nalaz rimskih novaca iz Garduna, *Vjesnik za arheologiju i historiju dalmatinsku* L (1928-29), Split, 1932, 26-29.
- MIRNIK 1983: I. Mirnik, Skupni nalazi novca iz Hrvatske III – Skupni nalaz afričkog brončanog novca i aes rude iz Štikade”, *Vjesnik Arheološkog muzeja u Zagrebu* 15, Zagreb, 1983, 149-174.
- ŠEPAROVIĆ 2003: T. Šeparović, Nalazi novca, in (ed. Mirjana Sanader) *Tilurium I, Istraživanja – Forschungen 1997-2001, Zagreb 2003*, 189-207.
- ŠEPAROVIĆ 2011: T. Šeparović, Novac s Garduna u Muzeju Cetinske krajine, *Arheološka istraživanja u cetinskoj krajini, Izdanja Hrvatskog arheološkog društva* 27, Zagreb, 2011, 49-67.
- ŠEPAROVIĆ 2009: T. Šeparović, Osvrt na legijske denare Marka Antonija s posebnim naglaskom na nalaze toga novca u sjevernoj Dalmaciji”, *Archaeologia Adriatica* 2, Zadar, 2009, 269-274.
- ŠEPAROVIĆ in print: T. Šeparović, Numizmatički nalazi. In: M. Sanader – D. Tončinić – Z. Buljević – T. Šeparović, *Tilurium III. Istraživanja 2002-2006. godine*.
- ZANINOVIĆ 2007: M. Zaninović, Ilirsko pleme Delmati, Šibenik, 2007.

Zrinka Buljević

PROJECT TILURIUM - GLASS FINDINGS¹

Zrinka Buljević
Arheološki muzej u Splitu
Zrinsko-Frankopanska 25
HR-21000 Split
CROATIA
zrinka.buljevic@armus.hr

Glass findings from Gardun attest to the continuity of life since the Augustan Age. Its quantity and quality is best documented from the period of the 1st century AD, however findings stretch from throughout the period of the entire Empire, and there are also medieval findings. It is clear that the army here was also part of a demanding market where glass workshops meet the needs for the most luxurious products.

**CAST GLASS
MOSAIC GLASS**

Several fragments of a ribbed bowl were found in Gardun (Isings f. 3), just like those that were produced in Syrian-Palestinian and Roman-Italic workshops in the second half of the 1st century BC and in the 1st century AD (No. 1). The fragments from Gardun are probably of Roman-Italic production from the Augustan Age. Italic examples were namely distributed exclusively for Italy or for civilian and military settlements founded by Augustus or his immediate successors in the neighboring western provinces.

Fragments of smooth bowls and those with wavy sides also have Italian analogies (No. 2). Ribbon mosaic glass appear in the first half of the 1st century BC. Most of the dated ribbon mosaic glassware dates from the Augustan Age, and are mostly bowls that have no base-rings, as opposed to its Hellenistic predecessors. These vessels from Gardun were probably imported from Italy in the Augustan Age.

¹ The results presented derived from a scientific project (Roman Military Camps in Croatia), conducted with the support of the Ministry of Science, Education and Sports of the Republic of Croatia.

MONOCHROME GLASS

Found in Gardun were plenty of fragments of Roman monochromatic ribbed bowls (Isings, f. 3) that developed from Hellenistic Syrian-Palestinian prototypes (No. 3). The Gardun fragments of shallow and deep bowls are primarily in natural shades of greenish colored glass. The ribbed bowls of Gardun are probably imported from Italy - namely, Rome, northern Italy (Aquilaia) or Campania, but possibly also from the Syrian-Palestinian area. Only one such bowl from Gardun is kept at the Archaeological Museum in Split.

A fragment of a linear-cut bowl (No. 4) belonging to a bowl type that was widespread throughout the Mediterranean basin and produced on the Syrian-Palestinian coast and in Italy found its way to Gardun at the turn of the 1st century BC into the 1st century AD.

A fragment of a handle from a rectangular tray (No. 5) belongs to the type confirmed in Italy and the Western Mediterranean in the first half of the 1st century AD.

A fragment of a dish (No. 6), and fragments of a bowl made from transparent glass on base-rings probably originated from some Eastern (Egyptian or Syrian) workshop, and analogous findings in Dura-Europos from the second half of the 1st century AD also point to this.

Only a funnel neck bottle was preserved in Gardun (No. 7), an example of Islamic glass, possibly of Iranian origin, from the 8th - 10th centuries AD, through either Byzantine intermediation or direct contact between the Croats and the Islamic world.

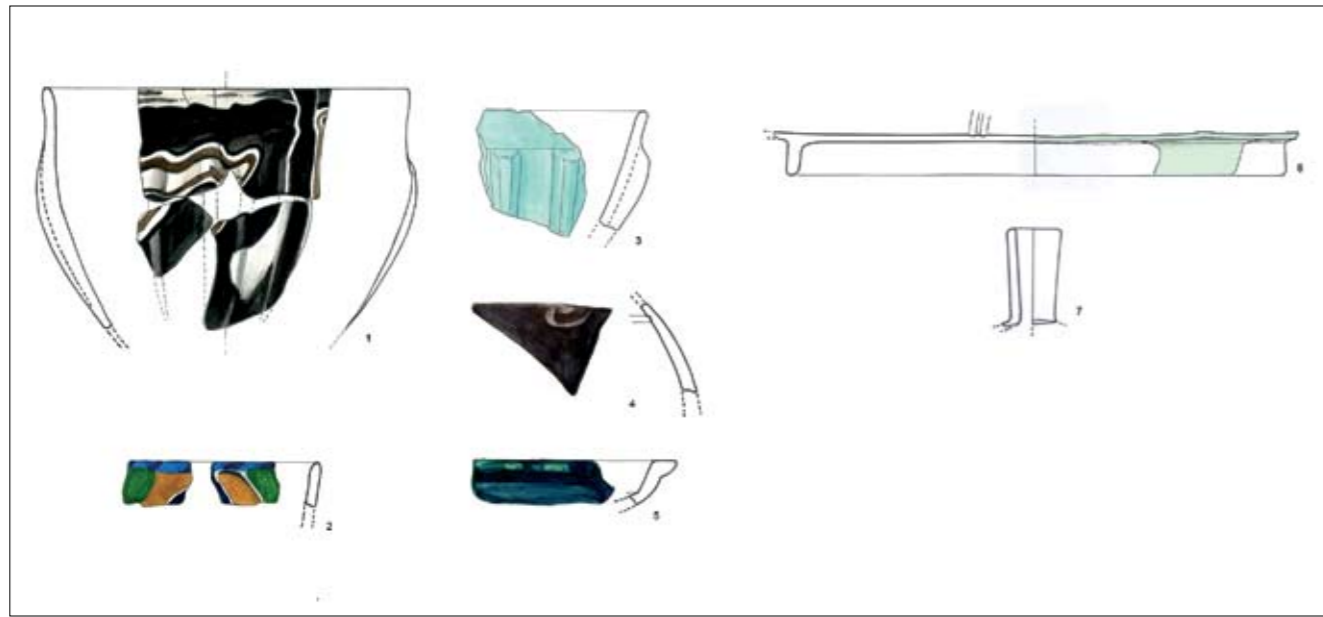


Fig. 1. Cast Glass.



Fig. 2. Free-blown Glass.

FREE-BLOWN GLASS

Ribbed bowls with marvered threads (Zarte Rippen-schalen) are the product of Western glass workshops (No. 1), and in Dalmatia were imported from Northern Italy, most likely from Aquileia. They appeared already in the Augustan or the Late-Augustan Age, were most numerous in the age of Tiberius and Claudius, and disappeared shortly thereafter. In the Archeological Museum in Split there is only one such bowl from Gardun preserved.

We associate the fragments of colored glass from Tilverium with picked up decorations patches (No. 2) with northern Italian glass, mainly jugs and bottles, less often bowls or jars. Such decorated vessels were most popular in the middle of the 1st century AD.

Tubular unguentaria (No. 3) are widespread in the Roman world. Unguentaria from Tilverium are western, Italic products, if they were not produced in some local Dalmatian workshop, perhaps from a workshop in Salona.

Beakers with applied oval decorations from colorless glass (No. 4) were imported to Gardun probably in the second half of the 1st and beginning of the 2nd century AD, when they were most common, or possibly from the middle of the 1st till the first half of the 3rd century AD when they were being produced in northern Italy.

A fragment of a bowl with convex sides (No. 5) possibly belongs to a bowl type that is associated with ceramics, terra sigillata form Dragendorff 35. The time period when this type was most prevalent is between 70 and 120/130 AD. Such bowls are very widespread in western parts of the Empire, especially in Northern Italy.

They have been found in the eastern Mediterranean as well, where they may have even been produced.

A fragment of a beaker with faceted decorations (No. 6) belongs to the category of luxurious goods of eastern Mediterranean origin, which, due to market demands and judging from their widespread usage in the western provinces, may have also been produced in the west in the late 1st or early 2nd century AD.

A fragment of beaker with picked up decorations (No. 7) belongs to the type of beakers, bottles, cups or bowls, that were produced in Western workshops (in the regions of Gaul and along the Rhine), as well as in the East (in Syria and Egypt) throughout the 2nd and 3rd centuries AD - however, later dating is also possible, from the 4th or 5th centuries AD.

Bowls or cups with a tubular rib under a rounded rim (No. 8) were manufactured in Italy, namely in the western provinces of the Roman Empire, in the second half of 1st to the 3rd century AD.

Because of the level of fragmentation, we cannot determine with certainty the typology of the fragment of vessels with horizontal linear-cuts, so we mainly date them from the 1st to 4th centuries AD, noting that such forms of decorated glass were also produced later. Some of the examples may belong to the Hofheim cups, which mostly date from the Tiberius-Claudius age, and were popular in the Flavian age (No.9).

Semicircular and/or conical bowls and/or cups with constricted knocked off rim (No. 10) belong to the mostly western Late Antique type of dishes, although there is some thought that it could be of a local Dalmatian (Salona) workshop type. Due to the level of fragmentation we cannot be sure of the date, but there are elements that indicate the possibility of earlier dating of the Gardun fragments.

Some of the fragments of cups or bowls with rounded rims (No. 11) perhaps were parts of lamps with three handles for hanging (monocandila), conical recipients (they were put into metal frames for more than one cone), funnel shaped lamps or cups on legs, which could serve as votive lumina. Cups with rounded edges were the most widespread cup type in Rome in the 1st half of the 5th century AD. Cups-lamps belong to long existing types; some were in use till the end of the 8th century and later. Some of the fragments may be parts of earlier or ordinary cups or bowls.

A fragment with tubular rims bent outwards (No. 12) is possibly part of a bowl-lamp with three handles as were used from the 4th to the 8th century and later, as the color of the glass also points to a Late Antique date.

Stemmed goblets (No. 13), chalices or votive lumina, were common inventory in early Christian buildings, especially in the Mediterranean where they were used from the 4th to the 8th century. This type draws its origin from the east and is rare in the west.

Conical cups with convex pushed-in open base-rings (No. 14) can be dated to the early Christian age, however due to its level of fragmentation we must be cautious and leave the possibility open for earlier dating.

A fragment of a cup with blobbed decoration (Nuppen-glas), given the slope of its edges, is ascribed to the type of hemispherical cup with blobs, which would be variously grouped (No. 15). This type is document-



Fig. 3. Mold-blown Glass.

ed in the East and in the West of the Empire from the second half of the 3rd century to the first half of the 5th century AD, and is best represented in the 4th century AD.

A fragment of colorless glass with applied threads of black glass (No. 16) can be dated from the 14th - 15th century AD.

MOLD-BLOWN GLASS

Among glassware blown into a mold, most notable are the findings of probably two, perhaps three, Ennion cups in Gardun, of about ten found in all of Dalmatia. Dalmatian cups belong to those few that were found outside of the north Italian region. Other than in Tilurium (Gardun), fragments of cups that were made and signed by Ennon and Aristreas in the second quarter of the 1st century AD were also found in Narona (Vid near Metkovic), and in Burnum (Ivoševci near Kistanje).

The cup fragment 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 Aristreas the Cypriot, Ennion's adherent, a master of fine tableware. (No. 1). However, the preserved part of the inscription refers to another master, mainly Ennion. The last "N" in the first line is, in fact, the last "N" is his name, and the last "I" in the second line is the last "I" in ΕΠΙΟΙΕΙ. "ENNIQN ΕΠΙΟΙΕΙ", or "Enion made me", attests the inscription on the cup. We are most probably dealing with a cup with two handles of the Harden A2iv type. Analogous to this cup from Gardun are the Enion cups in Turin and Newark. Also found in Gardun were fragments of probably another Ennion cup, made of transparent dark-blue glass, Harden type A2iv. 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 Bra, Turin and Newark. Insofar as this is not an Ennion cup, that Gardun cup, may be attributed to a Northern Italian workshop which imitated the master's style. There is another fragment from Gardun (No. 3), but it is too small to allow for its attribution to some narrower grouping among Ennion's cups with one or two handles (Harden A1 and A2).

A fragment with knot-shaped knobs (No. 4) probably belonged to a truncated conical beaker, which were one of the most common types of vessels blown into a mold in the second half of the 1st century AD. In fact, there are not many examples of such decorated bottles, jugs and horns. Such cups are relatively numerous in the military localities of Vindonissa, Vitudurum and in Augst (Switzerland), as well as in Nijmegen (The Netherlands). Fragments from military camps along the Rhine, Bonn and Asciburg (Germany) are well known. From the numerous typological analogies, we separate

the fragment from the military localities in Nijmegen, and the cups from Zaton, Asseria, Zadar and Novi Banovci, whose adornments are analogous to the adornments of the fragment from Gardun. Generally, the adornment imitates the look of Hercules' lumpy club.

A cylindrical box (pyxis) from Gardun (No. 5) is identical to the one from Augusteum in Narona, and is probably a product of northern Italian workshops from the 1st century AD.

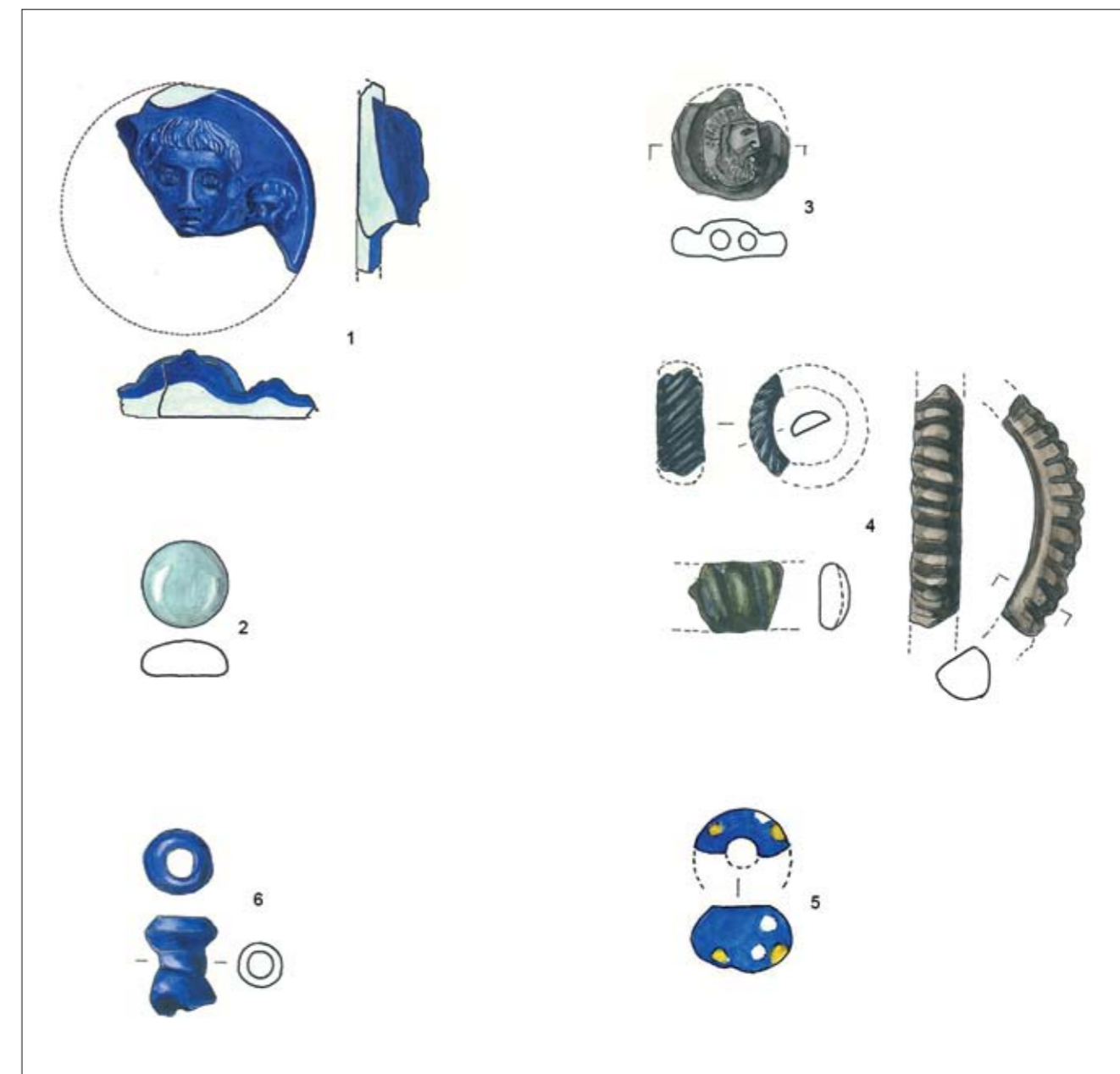


Fig. 4. Miscelanea.

A finely ribbed hemispherical bowl with pronounced shoulder (No. 6) is a western product from the second quarter of the 1st - beginning of the 2nd century AD.

A small number of fragments of square bottles with short necks are preserved; everted, bent and flattened rim, with one handle, in the shape of Isings 50 (No. 7). The square bottles or jugs primarily date from the period that lasted from the middle of the 1st to the 4th century AD, while it should be noted that the bottles from Magdalensberg are the earliest, and that they were common place from the last quarter of the 1st century to the 2nd century AD.

Gardun also yielded several fragments of cups with horizontal ribs (No. 8) that are possibly blown into a mold. Since these fragments are of colorless glass, we do not date them prior to the second half of the 1st century AD, or more precisely, not till the age of Flavius when colorless glass came into fashion. It is possible that we are dealing with a Syrian product.

Taking into account the adornments on a fragment of a bulbous bottle with lozenges in a shallow relief (No. 9), it is ascribed to a Syrian-Palestinian bulbous bottle from the 3rd/beginning of the 4th century AD. Such an adornment appears mostly on eastern Mediterranean vessels from the 1st - 7th century AD.

A fragment of a grape bunch-shaped bottle (No. 10) belongs to a type that is a variant without handles and was produced in the east of the Roman Empire in the second half of the 2nd century AD. This is a rare find in Dalmatia; it is related to the Osor examples.

MISCELANEA

A fragment of a phalera from Gardun (No. 1) is part of a circular medallion, a military medal, depicting the Emperor Tiberius and his son Drusus the Younger. This phalera was possibly awarded to soldiers for their service in the wars with Germania from the 14th to the 16th years AD.

Pebbles (*latrunculi*, *calculi*) were made of various materials, as well as from glass (No. 2) - most likely formed in a mold and used for social games, as a game piece on game board games (*tabulae lusoriae*).

A bead with an image of the Emperor from the severan period originates from Gardun from the first half of the 3rd century AD, which is, along with the famous beads from Salona, the third such example from Dalmatia; similar beads or pendants from eastern, Syrian or Egyptian origin are present in the entire Mediterranean region.

A fragment of a ring, as well as fragment of a bracelet, with ribbed decoration (No. 4) are part of fashion expressions of the 3rd/4th century AD.

For the Late Antique period, beads with picked up decoration (No. 5) were characteristic, as were multiple beads in the shape of a spool (No. 6). Other Tiliarian beads were earlier, although mostly long lasting forms.

BIBLIOGRAPHY

- BULJEVIĆ 2003: Z. Buljević, *Stakleni inventar/Glasinventar*. In: M. Sanader, *TILURIUM I, Istraživanja - Forschungen 1997.- 2001.*, Zagreb, 2003, 271-356.
- BULJEVIĆ 2004: Z. Buljević, *The Glass*. In: E. Marin, *The Rise and Fall of an Imperial Shrine. Roman Sculpture from the Augusteum at Narona, Split, 2004*, 186-209.
- BULJEVIĆ 2005: Z. Buljević, *Tragovi staklara u rimskoj provinciji Dalmaciji, Vjesnik za arheologiju i povijest dalmatinsku 98, Split, 2005*, 93-106.
- FADIĆ 1997: I. Fadić, *Il vetro, trasparenze imperiali. Vetri romani dalla Croazia, Milano, 1997*, 73-238.