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KASNOANTIČKI ULOMCI STAKLA S LOKALITETA VIŠNJAN-BRESTIĆ

LATE ROMAN GLASS FRAGMENTS FROM THE VIŠNJAN-BRESTIĆ SITE

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U razdoblju od 25. travnja 2009. do 20. travnja 2010. godine na trasi Istarskog ipsilona Umag - Pula obavljeno je zaštitno arheološko istraživanje na lokalitetu Višnjan-Brestić, gdje je pronađen antičko/kasnoantički objekt gospodarske vile. U ovom će radu biti predstavljen dio kasnoantičkog staklenog materijala, od kojih su najzanimljiviji i najzastupljeniji ulomci čaša korištenih kao recipijenti za piće, moguće i kao svjetiljke, te perlice pronađene kao grobni nalaz.

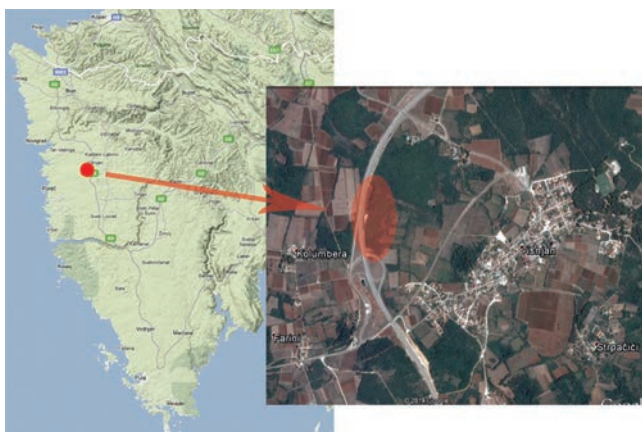
In the period from April 25, 2009, to April 20, 2010, along the route of the Istrian highway between Umag and Pula, a rescue archaeological excavation was carried out at the site of Višnjan-Brestić, where a Roman/Late Roman villa rustica was discovered. In this work we present a part of the Late Roman glass material, most interesting and most numerous among which are fragments of drinking glasses that were used as receptacles for drinks, possibly also as oil lamps, and beads that were unearthed as grave offerings.

KLJUČNE RIJEČI: *Višnjan-Brestić, antičko/kasnoantička gospodarska vila, apsidalni objekt, kasnoantičko staklo, čaše, perlice*

KEY WORDS: *Višnjan-Brestić, Roman/Late Roman villa rustica, apsidal structure, Late Roman glass, drinking glasses, beads*

UVOD

U razdoblju od 25. travnja 2009. do 20. travnja 2010. godine obavljeno je zaštitno arheološko istraživanje u sklopu izgradnje dijela trase Istarskog ipsilona Umag - Pula na uzvisini Brestić pokraj Višnjana.



Sl. 1 Karta Istre s pozicijom lokaliteta Brestić-Višnjan (izradila K. Bartolić Sirotić)

Fig. 1 Map of Istria showing the position of the Brestić-Višnjan site (author: K. Bartolić Sirotić)

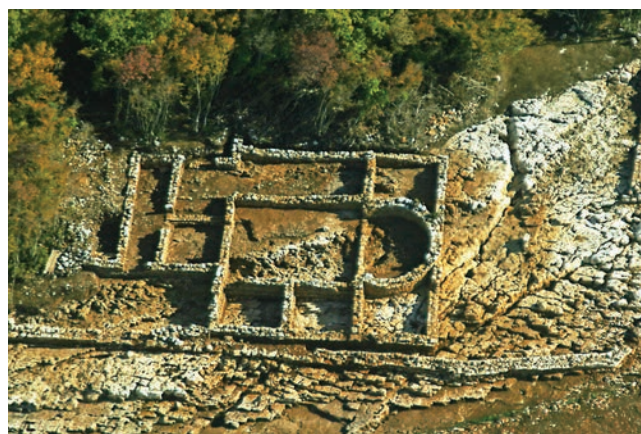
U tom je istraživanju dokumentiran i djelomično konzerviran manji dio kompleksa antičkog i kasnoantičkog objekta koji je pripadao gospodarskoj vili (Zlatunić 2010, 83). Nalazište je podijeljeno u tri sektora (sek I-III), a centralni dio antičko-kasnoantičkog objekta s apsidom (koji je dao i najveći broj arhitektonskih, ali i sitnih arheoloških nalaza) smješten je u sektoru III i zauzimao je kvadrante Ia - XVg na samom vrhu platoa brežuljka Brestić. Površina cjelokupnog otkrivenog objekta je oko 900 m². Istraženi dio kompleksa antičke i kasnoantičke vile obuhvaća više objekata, od kojih središnji dio zauzima apsidalni objekt s bočnim prostorijama (A - M), a preostale istražene prostorije kompleksa vjerojatno pripadaju objektima gospodarske namjene (Zlatunić 2010, 84). Na zidovima apsidalnog objekta nije pronađena hidrožbuka pa se stoga isključuje mogućnost da se radi o termalnom kompleksu (Zlatunić 2010, 85).

Nedaleko od istražene arhitekture, u kvadrantima XVIIc-XVIIId, na rubu veće vrtače pronađen je grob. Grobna arhitektura sastojala se od škriljastog kamenja koje je služilo kao pokrov i zatvaralo istočnu stranu groba, i matične stijene koja je zatvarala zapadnu i južnu stranu te tvorila dno. Slojeve unutar groba sačinjavali su višestruki ukopi triju do četiriju osoba (Zlatunić 2010).

INTRODUCTION

In the period from April 25, 2009, to April 20, 2010, a rescue archaeological excavation was carried out on the hillock of Brestić near Višnjan, along a section of the Istrian highway between Umag and Pula, which was under construction at the time.

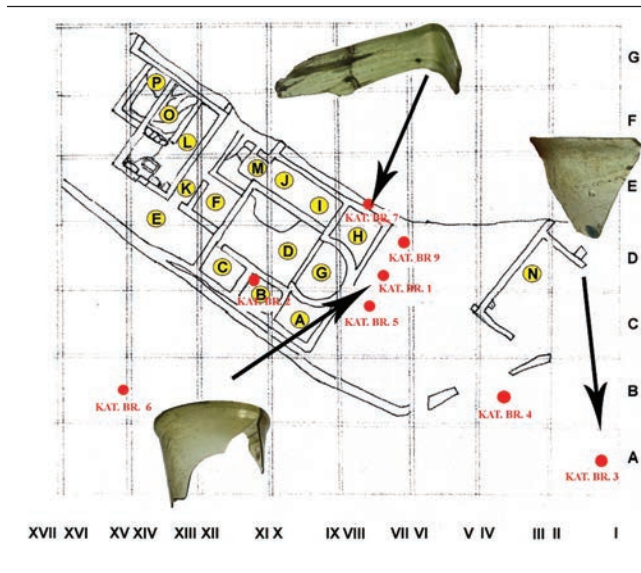
A smaller portion of a complex comprising a Roman and Late Roman structure that belonged to a villa rustica was documented and partially conserved during this excavation (Zlatunić 2010, 83). The site was divided into three sectors (Sector I-III), the central section of a Roman-Late Roman structure with an apse (which yielded the greatest number of architectonic as well as small-sized archaeological finds) was in Sector III, occupying quadrants Ia - XVg, at the very top of a plateau on the hillock of Brestić. The area of the entire structure measures approximately 900 square meters. The explored section of the Roman and Late Roman villa rustica contains several structures, the central section of which is occupied by an apsidal structure with lateral rooms (A - M). The other explored rooms of this complex probably pertain to structures used for agricultural purposes (Zlatunić 2010, 84). There were no traces of hydro-plaster on the walls of the structure, which means that we can exclude the possibility of it being a thermal complex (Zlatunić 2010, 85).



Sl. 2 Aviosnimka antičkog i kasnoantičkog lokaliteta Brestić-Višnjan (Zlatunić 2010, 84)

Fig. 2 An aerial view of the Roman and Late Roman site of Brestić-Višnjan (Zlatunić 2010, 84)

A grave was discovered not far away from the explored architecture, in quadrants XVIIc - XVIIId, which was located on the edge of a larger funnel-shaped hole in the limestone formation. The sepulchral architecture consisted of slab-like stones that served as a lid and closed



Sl. 3 Pozicija kasnoantičkih ulomaka stakla na lokalitetu Višnjan - Brestić (podloga R. Zlatunić, izradila K. Bartolić Sirotić)

Fig. 3 The position of Late Roman glass fragments on the Višnjan-Brestić site (base - R. Zlatunić R, made by K. Bartolić Sirotić)

KASNOANTIČKO STAKLO

Burno razdoblje kasne antike, kondicionirano invazijama barbarskih naroda, utjecalo je na sve segmente života pa tako i na produkciju staklenih predmeta. Kao i u proizvodnji keramike, dolazi do znatnog pada u količini, kvaliteti, oblicima i funkciji staklenog posuđa (Calvi 1968, 169; Henderson 2001, 67; Stern 2001, 132). Tijekom prvog stoljeća staklo se koristi za pohranu tekućina i krute hrane, kao stolno posuđe, za osobne potrebe (kozmetika, parfemi, kupke i medicinski proizvodi), no od IV. stoljeća nadalje rabi se u većini slučajeva kao stolni pribor (Stern 2001, 132; Antonaras 2010, 384-385). Velik broj staklenih ulomaka u ovom periodu odnosi se na čaše (Plesničar-Gec 1974, 49), koje su, osim što su činile dio luksuznog stalnog posuđa, mogle služiti i kao svjetiljke uljanice (Fadić 1992, 63; Lazar 2003, 200). Dokaz tome prvi je našao Harden na temelju pronalaska iz Egipta - na dnu čaše bio je talog čađe i masti (Lazar 2003, 200). Isto potvrđuje i konična čaša s plavim, kapljičastim ukrasom iz Galije, što je jedan od rijetkih nalaza takve uporabe stakla izvan mediteranskog podneblja (Stern 2001, 331). Ovdje prezentirano kasnoantičko staklo prati tendenciju značajki stakla svog vremena - prozirno je, mahom zelenkaste nijanse (koje varira od žučkastozelene preko maslinastozelene do intenzivnije zelene boje), s vidljivim tragovima razvlačenja smjese, nečistoćama i mjehurićima zraka (Calvi 1968, 169; Henderson 2001, 68).

the eastern side of the grave, and bedrock that closed the western and southern sides and also served as a base. The layers within the grave consisted of multiple burials of three to four individuals (Zlatunić 2010).

LATE ROMAN GLASS

The stormy period of late antiquity, which was conditioned by invasions of barbarian peoples, influenced all segments of life, the production of glassware not excluded. As was the case with pottery, we witness a sharp drop in quantity, quality and in the number of forms, at the same time noticing a change in usage (Calvi 1968, 169; Henderson 2001, 67; Stern 2001, 132). During the first century, glassware was used for the storage of liquids and solid foodstuffs, as tableware, and for personal needs (cosmetics, perfumes, baths and medical products); however, from the 4th century onwards it was mostly used as tableware (Stern 2001, 132; Antonaras 2010, 384-385). A large number of glass fragments in this period stem from drinking glasses (Plesničar-Gec 1974, 49) which could have also served as oil lamps, besides being a constituent part of luxurious tableware (Fadić 1992, 63; Lazar 2003, 200). Proof of this was first discovered by Harden, based on a find from Egypt, which contained traces of soot and grease on the bottom of a drinking glass (Lazar 2003, 200). The same is corroborated by a conical glass with a blue, drop-shaped decoration from Gaul, which represents a rare example of such use of glasses outside of the Mediterranean area (Stern, 2001, 331). Late Roman glass, of the kind presented here, follows the tendencies that influenced the production of glassware in that period of time - it is transparent, with a mostly greenish tint (that varies from yellowish green, across olive green, to a more intense green color), with visible traces of distension of the glass mixture, impurities and air bubbles (Calvi 1968, 169; Henderson 2001, 68).

Drinking glasses

On Brestić, out of the ten selected Late Roman glass specimens, five are from drinking glasses. The production start of conical and cylindrical drinking glasses having a flat-cut rim without further treatment, with or without drop-shaped ornamentation, is associated with the Rhineland from as early as the 3rd century. That is also the region where they were present the longest period of time, up to the 6th - 7th century (Goethert-Polaschek 1977, 5-8; von Boeselager 2012, 53-58; Janeš 2009, 230; Hartmann, Grünwald 2010, 15-18; Hartmann, Grünwald 2014, 46-47). Glass was most probably introduced into our region from Aquileia that was the main exporter of

Čaše

Od odabranih 10 primjeraka kasnoantičkog stakla na Brestiću, njih pet su čaše. Početak proizvodnje koničnih, cilindričnih i poluloptastih čaša, ravno odrezanog oboda, bez dodatne obrade, sa ili bez kapljičastog ukrasa nalazimo u Porajnju već u III. st. Tamo se zadržavaju najdulje, do VI. - VII. st. (Goethert-Polaschek 1977, 5-8; von Boeselager 2012, 53-58; Janeš 2009, 230; Hartmann, Grünwald 2010, 15-18; Hartmann, Grünwald 2014, 46-47). Staklo u naše krajeve dopijeva najvjerojatnije iz Aquileje, koja je u tome razdoblju glavna izvoznica staklarskih proizvoda (Plesničar-Gec 1974, 49; Larese 2004, 91). U Aquileji je pronađen velik broj koničnih čaša istovjetnih po formi, materijalu i dimenzijama te se stoga može zaključiti da su produkt lokalnih majstora, koji preuzimaju tehniku i stil porajnskih radionica (Calvi 1968, 169-170).

Osnovne značajke koničnih kasnoantičkih čaša su zadebljan, odrezan i brušen ili naknadno zagrijavan rub na koničnom tijelu te udubljeno ili ravno dno. Stijenke su relativno debele i neukrašene, s mnogo mjehurića zraka i tragovima razvlačenja staklene mase (Fadić 1992, 66; Lazar 2003, 116). Kod ranijih primjeraka koničnih čaša dno je bilo dovoljno široko pa su mogle stajati samostalno, no sada se dna postupno sužavaju pa je čaša nakon ispijanja morala biti okrenuta naopako (Buljević 1994, 258; Lazar 2003, 117) ili su se koristile kao svjetiljke koje imaju suženo dno i otvor većeg promjera (proizvodni centar Sevegliano) (Buora 2004, 11-12, 32-33; Lazar 2003, 197-200).

Kat. br. 1 (sl. 4; T. 1./1) pronađen je u stratigrafskoj jedinici SJ 2 na području južno od apsidalnog objekta uz crni, rahli sloj SJ 58 koji se prostirao uz kanal uklesan u živu stijenu (SJ 57). Radi se o sloju crvenkaste zemlje sa srednje velikim i manjim kamenjem te ulomcima keramike, od grube kuhinjske do stolne, građevinske keramike i amfora datiranih u vrijeme antike i kasne antike (Zlatunić 2010, 86-95). Bio je ondje cijeli spektar sitnih nalaza uobičajenih za područje antičkih gospodarskih vila (Zlatunić 2010, 94-95). Sloj SJ 2 nalazio se ispod humusnog sloja SJ 1 i na većem je dijelu lokaliteta bio iznad matične stijene. Kat. br. 1 sastoji se od tri ulomka stakla, od kojih su dva rub čaše. Rub je odrezan i brušen, nije naknadno toplinski obrađen. Takva se obrada ruba javlja već u I st. kod nekih primjeraka balzamarija, ali je najčešće upotrebljavana u kasnoj antici kod izrade čaša i svjetiljki (Lazar 2003, 18; Mandruzzato, Marcante 2007, 44-45). Boja stakla je žućkastozelena, što odgovara onome proizvedenom u prvim dvjema trećinama V. st. (Milavec 2011,

glassware in this period of time (Plesničar-Gec 1974, 49; Larese 2004, 91). A large number of conical drinking glasses were discovered there, which were identical with respect to form, material and dimensions, and we can, hence, conclude that they were produced by local craftsmen, who were taking over the techniques and designs from workshops in the Rhineland (Calvi 1968, 169-170).

The basic characteristics of conical, Late Roman drinking glasses are a thickened, cut and ground, or subsequently fire-rounded rim on a conical body, and a concave or flat base. The walls are relatively thick and undecorated, with a fairly large amount of air bubbles, and traces of distension of the glass mass (Fadić 1992, 66; Lazar 2003, 116). Earlier specimens of conical drinking glasses featured a base wide enough for them to stand on their own; however, the width of the base gradually narrowed, which means that after the glass was emptied it had to be turned upside down (Buljević 1994, 258; Lazar 2003, 117). They were also used as oil lamps that have a narrowed base and an opening with a rather large diameter (Sevegliano production center) (Buora 2004, 11-12, 32-33; Lazar 2003, 197-200).

Cat. No. 1 (Fig. 4; T. 1/1) was discovered in stratigraphic unit SU 2, in the area to the south of the apsidal structure, alongside the black, loose layer of SU 58, which extended itself along a channel carved out of bedrock (SU 57).

This is a layer of reddish soil containing smaller and mid-sized stones, as well as fragments of pottery that ranged from coarse kitchenware to tableware, construction ceramics, and amphorae dated into the period of antiquity and late antiquity (Zlatunić 2010, 86-95). This represents a whole range of small finds that are common for a region containing Roman villae rusticae (Zlatunić 2010, 94-95). Layer SU 2 was located underneath layer SU 1, a layer containing humus, and it was also found above bedrock on most of the surface occupied by the site. Cat. No. 1 is made up of three fragments made of glass, two of which represent the rim of a drinking glass. The rim was cut flat and ground, without being subsequently fire-rounded. Such a treatment of the rim appeared as early as in the 1st century and can be observed on some specimens representing balsamaria, but it was most often used in the period of late antiquity, especially in relation to drinking glasses and lamps (Lazar 2003, 18; Mandruzzato, Marcante 2007, 44-45). The color of the glass is yellowish green, which corresponds to glass from the first two thirds of the 5th century (Milavec 2011, 97). These were used throughout the 4th and 5th centuries, and besides Aquileia, Sevegliano in the ager of Aquileia

97). Koristilo se kroz IV. i V. st. Jedan od mogućih proizvodnih centara bio je Sevegliano u akvilejskom ageru, u kojem je mogao djelovati putujući zanatlija koji se prilagođavao potražnji ruralne klijentele (Larese 2004, 91; Starac 2010, 114). Ta se pretpostavka temelji na činjenici da je Sevegliano dao iznimno velik broj staklenih predmeta datiranih u vrijeme kasne antike. Najveći broj pripada čašama tipa Isings 106 c (60%) (Buora 2004, 12). Primjerak konične čaše s Brestića nalazimo u različitim analogijama kao što su Morin Jean oblik 104 i 107 (Morin Jean 1922-1923, 139-141), Isings 106 c (Isings 1957, 126-131), Calvi grupa A i B (Calvi 1968, 170-171), Lazar 3. 9. 1. forma koja se pripisuje čašama kao stolnom posuđu i forma 9. 1. 3 koja se pripisuje čašama korištenim u svrhu osvjetljenja (Lazar 2003, 116-118, 197-200) datiranim u kasno IV. odnosno V. st. Neukrašene, jednostavne čaše koničnog oblika i neobrađenog ruba poznate su na teritoriju današnje Istre s lokaliteta Dragonera, gdje su pronađene u slojevima datiranim u V. do VII. st. (Starac 2010, 114), no česte su na istočnoj jadranskoj obali i širem području Dalmacije, i zbog veće količine nalaza mogu se pripisati lokalnim staklarskim radionicama (Fadić 1997, 200; Gluščević 1995, 176-177).

Drugi primjerak predstavlja kat. br. 2 (T. 1./2), pronađen u sloju SJ 2. Sastoji se od jednog ulomka ravno odsječnog, brušenog ruba, izrađenog u tehnici slobodnog puhanja. Staklo ovog primjerka jače je zelene boje, s manje mjehurića zraka. Ulomak pripada tipu poluloptastih čaša, ruba lagano izvijenog, a zatim ponovno okrenutog prema unutra. Stijenke prelaze u lagano uvučeno dno. Poluloptaste čaše variraju visinom pa stoga mogu biti kalotastog oblika ili onog izraženijeg koničnog. Javljaju se na širokom području Carstva sredinom ili krajem III. st., no karakteristične su za IV. st. (Isings 1957, 113; Gluščević 1995, 166; Lazar 2003, 119-121). Prvi primjerci ovoga tipa datiraju u III. st., a pronađeni su na lokalitetu Cologne (Isings 1957, 113-114). Nalazimo ih na području Slovenije (Ljubljana, Martinj hrib, Hruščica) (Lazar 2003, 121), Italije (Sevegliano, Aquileia, Belluno, Feltre itd.) (Buora 2004, 14, 32; Casagrande, Ceselin 2003, 79), Njemačke (Trier, Köln, itd.) (Goethert-Polaschek 1977, 50-59; von Boeselager 2012, 75), Nizozemske (Limburg) (Isings 1971, 71-72, fig. 16). Kao i kod koničnih čaša, jedan od mogućih centara njihove proizvodnje je Sevegliano (Buora 2004, 12), no veliki broj primjeraka pronađenih u Dalmaciji sugerira proizvodnju u centru kao što je Salona ili nekom drugom kasnoantičkom staklarskom centru Dalmacije (Gluščević 1995, 176-177; Fadić 1997, 200).

was also proposed as a manufacturing center, where an itinerant craftsman could have been active, who adapted himself to the needs of the rural clientele (Larese 2004, 91; Starac 2010, 114). Such a presumption is based on the fact that an exceptionally large number of glass objects dated into the period of late antiquity were unearthed at Sevegliano. The largest number of these belongs to drinking glasses of the Isings 106 c type (60%) (Buora 2004, 12). The conical drinking glass specimen from Brestić can be found in different analogies, such as Morin Jean, form 104 and 107 (Morin Jean 1922-1923, 139-141), Isings 106 c (Isings 1957, 126-131), Calvi, group A and B (Calvi 1968, 170-171), Lazar 3. 9. 1., a form ascribed to drinking glasses used as tableware, and form 9. 1. 3, which is ascribed to glasses used as oil lamps (Lazar 2003, 116-118, 197-200), dated into the late 4th or 5th century.

The unadorned, simple conical glasses with an untreated rim are on the territory of present-day Istria also known from Dragonera, where they were discovered in layers dated into the 5th to 7th century (Starac 2010, 114), but on the eastern coast of the Adriatic they are also common in the wider region of Dalmatia, due to the large quantity of finds that can be ascribed to local glassware workshops (Fadić 1997, 200; Gluščević 1995, 176-177).



Sl. 4 Ulomci ruba čaše (fotografirala: K. Bartolić Sirotić)

Fig. 4 Fragments of a drinking glass rim (photographed by K. Bartolić Sirotić)

The second specimen is represented by Cat. No. 2 (T. 1./2), unearthed in layer SU 2. It consists of a single fragment of a rim that has been cut flat, ground, and was made in the free-blown technique. The glass in this case is of a more intensive green color, and has less air bubbles. The fragment belongs to a hemispherical glass type featuring a rim that everts slightly and then turns inward. The walls transition into a slightly retracted base. These glasses vary in height and can hence be either hemispherical in form or else they have a more

Kat. br. 2 može se definirati kao tip Isings 96 a, poluloptasta čaša bez dekoracije, Lazar 3. 10. 1. (Lazar 2003, 119, 121) i von Boeselager oblik 9 a (von Boeselager 2012, 75-78).

Treći primjerak čaše odnosi se na kat. br. 3 (sl. 5; T. 1./3) pronađen u sloju SJ 1/2, a na toj su poziciji humusni sloj SJ 1 i sloj crvene zemlje SJ 2 bili izuzetno tanki. Radi se o rubu čaše, kao i u prva dva primjerka, ravno odsječenog ruba, bez dodatne obrade osim brušenja. Rub je koljenasto izvijen. Primijenjen je ukras tipa "nuppen" (Calvi 1968, 170; Goethart-Polaschek 1977, 5-6, 7; Lazar 2003, 120-121). Čaše s ukrasom tipa "nuppen" većinom imaju poluloptasto tijelo, u rijetkim slučajevima primjenjivo na koničnim čašama (Calvi 1968, 170-171). To potvrđuje i naš primjerak. "Nuppengläser" je tehnika apliciranja vrućih kapi stakla, boje različite od podloge. Kod ranijih primjeraka, koje možemo datirati u sredinu III. st., podloga je bezbojna, no kasnije postaje svjetlozelena, maslinastozelena i smeđezelena (Calvi 1968, 170; Damevski 1974, 66; Fadić 2001, 79; von Boeselager 2012, 82-84). Ponekad su kapljice bile izvedene i zelenim staklom, no modro je značajka porajnskih radionica (Janeš 2009, 230; von Boeselager 2012, 83-84). "Nuppen" ukras doseže vrhunac u kasnoj antici, odnosno na prijelazu III. u IV. st., i karakterističan je za posude za piće (Fadić 2001, 79-80; Antonaras 2010, 384-385). Kapljica je u našem primjerku izvedena na gornjoj polovici tijela, u modroj boji. Sličan primjer pronađen je u Puli, Ribarska koliba (inv.br. A 5574). Radi se o čaši od maslinastozelenog stakla s apliciranim plavim kapljicama u horizontalnom redu, datiranoj u IV. st. (Girardi-Jurkić 1985, 286). Poznat je i primjerak pronađen na lokalitetu Dragonera, datiran u drugu polovicu IV. st. (Starac 2010, 114). Slične primjerke nalazimo i u Sisku (Damevski 1974, 72, 87), Rijeci (Fadić 2001, 408; Janeš 2009, 230), Ptuju (Šubić 1974, 45-46, 54, 61) i Ravnom Brdu (Petru 1974, 17, 31).

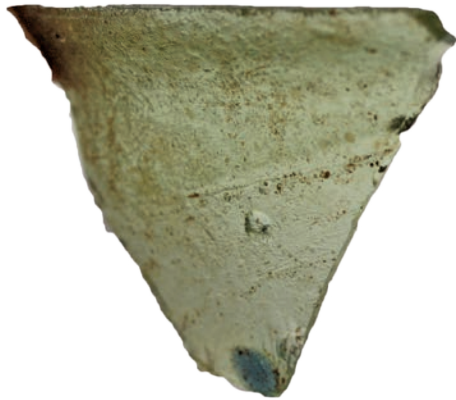
Oblik posude na koju se aplicirao ukras tipa "nuppen" pripada poluloptastim čašama Isings 96 b2 (Isings 1958, 116), Lazar 3. 10. 2 (Lazar 2003, 120-121), Von Boeselager 9c (Von Boeselager 2012, 82-84), Goethert-Polaschek 49c (Goethert-Polaschek 1977, 56-58).

Četvrti ulomak odnosi se na dio čaše s nogom, odnosno čaše-kaleža, kat. br. 4. Sačuvan je mali dio prelaska dna recipijenta čaše u nogu. Ovakvi primjerci imaju recipijent u obliku "tulipana", odnosno V ili U oblika, s blago razvraćenim, zadebljanim rubom. U literaturi se najčešće navodi da su mogli služiti kao uljne svjetiljke odnosno zavjetni lumini, koji su mogli imati ručice na obodu te su se tako vješali (Fadić 1992, 63; I. Fadić,

pronounced conical shape. They appear on a wide territory of the empire in the middle or towards the end of the 3rd century, but they are characteristic for the 4th century (Isings 1957, 113; Gluščević 1995, 166; Lazar 2003, 119-121). The first specimens of this type were dated into the 3rd century and were discovered on the site of Cologne (Isings 1957, 113-114). They were also discovered on the territory of Slovenia (Ljubljana, Martinj hrib, Hruščica) (Lazar 2003, 121), Italy (Sevegliano, Aquileia, Belluno, Feltre, etc.) (Buora 2004, 14, 32; Casagrande, Ceselin 2003, 79), Germany (Trier, Köln, etc.) (Goethert-Polaschek 1977, 50-59; von Boeselager 2012, 75), the Netherlands (Limburg) (Isings 1971, 71-72, Fig. 16). As was the case with conical glasses, one of the centers for their production appears to be Sevegliano (Buora, 2004, 12); however, the large number of them, discovered in Dalmatia, suggests production in a center such as Salona, or in some other Late Roman glassmaking center in Dalmatia (Gluščević 199, 176-177).

Cat. No. 2 can be defined as type Isings 96 a, a hemispherical glass devoid of decoration, Lazar 3. 10. 1. (Lazar 2003, 119, 121), von Boeselager form 9 a (von Boeselager 2012, 75-78).

The third specimen of a drinking glass refers to Cat. No. 3 (Fig. 5; T. 1/3), and it was discovered in layer SU 1/2, on a position where the thickness of the layer of humus SU 1, and the layer of red earth SU2, were extraordinarily thin. As in the first two specimens, the rim of the glass was cut flat, and besides it being ground, no additional treatment was performed. The rim is everted in a knee-shaped manner. This specimen features a decoration of the "Nuppen" type (Calvi 1968, 170; Goethart-Polaschek 1977, 5-6, 7; Lazar 2003, 120-121). Drinking glasses decorated with a "Nuppen" type ornament have for the most part a bell-shaped body, and it was only in rare cases that this ornamentation was applied to conical glasses (Calvi 1968, 170-171). This was also corroborated by our specimen. "Nuppengläser" is an application technique, whereby hot drops of glass are applied, which differ in color from the background. Earlier specimens that can be dated to the middle of the 3rd century feature a colorless background which subsequently becomes light green, olive green and brownish green (Calvi 1968, 170; Damevski 1974, 66; Fadić, 2001, 79; von Boeselager 2012, 82-84). The droplets were also executed with green glass, but blue is a feature of regional workshops (Janeš 2009, 230; von Boeselager 2012, 83-84). The "Nuppen" decoration had its heyday in the period of late antiquity, i.e., in the transition period from the 3rd to the 4th century, and is characteristic for drinking vessels (Fadić



Sl. 5 Ulomak ruba čaše s ukrasom tipa "nuppen" (fotografirala: K. Bartolić Sirotić)

Fig. 5 A rim fragment of a drinking glass decorated with an ornament of the "Nuppen" type (photographed by K. Bartolić Sirotić)

213-215; Buljević 1994, 259). Taj je tip bio rasprostranjen na Istoku i često upotrebljavan u kršćanskom svijetu te prihvaćen na Mediteranu u IV. i V. st., gdje ostaje u upotrebi do VII. st. (Fadić 1992, 66). Jedan od centara proizvodnje čaša na nožici je u Invillinu u Furlaniji, od V. do VII. st. (Starac 2010, 114). U IV. st. su smješteni ulomci čaša na nogama pronađeni na Dragoneri (Starac 2010, 114).

Peti se ulomak odnosi na dno čaše ili zdjelice, kat. br. 5. Dno je zaobljeno i uvučeno. Maslinastozelene je boje, s mjehurićima. Datiran je u drugu polovicu IV. pa do u V. st., zbog boje stakla i uvučenosti dna, karakterističnog za ranije oblike čaša (Buljević 1994, 258; Lazar 2003, 197-198).

Stolno posuđe

Na Brestiću su nađene dvije cjelovite ručke i cjelovito dno posude, a po karakteristikama mogli bismo ih pripisati vrčevima. U većini slučajeva ručke su bile naknadno pričvršćene na posudu tik ispod oboda, na rame. Neke su imale i produžetak u vertikalu, koji je služio kao potpora za palac, u cilju lakšeg rukovanja (Lazar 2003, 21).

U našem prvom slučaju, kat. br. 7 (sl. 6; T. 2./1), imamo ručku trakastog presjeka, od prozirnog stakla maslinastozelene boje. Napravljena je, kao i većina ručki, razvlačenjem užarene staklene mase. Ovaj nam primjerak pokazuje koliko je staklarska industrija u vrijeme kasne antike degradirala, zbog velike količine nečistoća u staklu i mjehurića zraka. Po boji ovu ručku smještamo

2001, 79-80; Antonaras 2010, 384-385). The droplet on our specimen was applied on the upper section of the body, in blue color. A similar example was unearthed at Pula, in Ribarska Koliba (Inv. No. 5574). This was an olive green drinking glass with blue droplets that were applied in a horizontal line, dated into the 4th century (Girardi-Jurkić 1985, 286). We also know of a specimen that was discovered at the Dragonera site, which was dated into the second half of the 4th century (Starac 2010, 114). However, similar specimens were also unearthed at Sisak (Damevski 1974, 72, 87), Ptuj (Šubic 1974, 45-46, 54, 61) and Ravno Brdo (Petru 1974, 17, 31).

The vessel form onto which the Nuppen type ornament was applied belongs to hemispherical drinking glasses of the type Isings 96 b2 (Isings 1958, 116), Lazar 3. 10. 2 (Lazar 2003, 120-121), von Boeselager 9c (von Boeselager 2012, 82-84), Goethert-Polaschek 49c (Goethert-Polaschek 1977, 56-58).

The fourth fragment is part of a stemmed glass, or, a glass-chalice Cat. No. 4. In this specimen, a small section of the transition from the base of the glass container to the stem is preserved. Such specimens have a tulip-shaped container, i.e., either V- or U-shaped, with a slightly everted, thickened rim. Most of the literature dealing with this matter states that they could have been used as oil lamps, or votive oil lamps that may have been equipped with knobs on the rim, thus facilitating hanging (Fadić 1992, 63; I. Fadić, 213-215; Buljević 1994, 259). This type was widespread in the East, and often used in the Christian world. On the Mediterranean it was accepted in the 4th and 5th centuries, where it remained in use up to the 7th century (Fadić 1992, 66). One of the production centers for stemmed glasses was at Invillino in Friuli, from the 5th to the 7th century (Starac 2010, 114). Fragments of stemmed glasses discovered at Dragonera were dated into the period of the 4th century (Starac 2010, 114).

The fifth fragment represents the base of a glass or a small bowl, Cat. No. 5. The base is rounded and retracted. It is olive green in color, and it comes with bubbles. On the basis of glass color, and the inverted quality of the base, which is characteristic of earlier glass forms, it was dated into the second half of the 4th century, up to the 5th century (Buljević 1994, 258; Lazar 2003, 197-198).

Tableware

Two intact handles and a complete base of a vessel were unearthed at Brestić, which on the basis of their characteristics could be ascribed to jugs. In most cases,

u III. do V. st. (Calvi 1968, 169). Takvi su recipijenti bili korišteni u svakodnevnom životu kao dio stolnog posuđa, a zbog svoje praktične forme služili su i za transport različitih tekućina (Fadić 1997, 87).



Sl. 6 Ručka vrča (fotografirala: K. Bartolić Sirotić)
Fig. 6 A handle of a jug (photographed by K. Bartolić Sirotić)

Kat. br. 6 (T. 2./2) sastoji se od ručke i dna. Okolnosti nalaza sugeriraju da se radi o dijelovima iste posude. Ručka je okruglog presjeka, maslinastozelene boje, napravljena razvlačenjem mase. Nedostaje joj dio spoja kod otvora i na ramenu. Ima izduženi, u vertikalu zaobljeni dio kao potporu za palac, zbog lakšeg rukovanja (u obliku slova U). Relativno je krhke strukture. Uz ručku je nađeno i cjelovito dno posude. Konkavno je oblika, maslinastozelene boje, prozirno, napravljeno slobodnim puhanjem. Kvaliteta staklene mase u ovom je slučaju bolja. Staklo je relativno tanko i bez nečistoća, s malo mjehurića zraka. Recipijent i dno bili su okruglog oblika. Konkavna su dna i maslinastozelena boja karakteristični za IV. st. (Lazar 2003, 197–198).

Perlice

Na ovom je lokalitetu pronađeno ukupno 19 perlica, od kojih je njih 18 pripadalo nalazu pokojnika iz jedinog ondje otkrivenog groba (SJ 61).

Perlice iz groba I, kat. br. 8 (sl. 7; T. 3./ 1;) najvjerojatnije su dio ogrlice ili narukvice jedne od individua (ukupno su bila tri do četiri ukopa). Po klasifikaciji M. Guida spadaju u tip br. 20 (Casagrande, Ceselin 2003, 40), odnosno pripadaju tipu XII po Mandruzzato (Mandruzzato 2008, 161). Radi se o 18 poliedarskih perlica od kobaltnoplavog, neprozirnog stakla. Takve su perle teritorijalno i kronološki široko rasprostranjene u različitim varijantama (oblik paralelopipeda, kocke, različitih veličina) (Mandruzzato 2008, 161). Bile su izrazito popularne i izvan granica Carstva. Javljaju se u antičko doba, ali i u vrijeme visokog srednjeg vijeka.

the handles were subsequently attached to the shoulder of the vessel just below the rim. Some of them had a vertical extension that served as a support for the thumb, in order to facilitate handling (Lazar 2003, 21).

In our first case, Cat. No. 7 (Fig. 6; T. 2./1), we have a handle with a strap section, made of olive green transparent glass. As was the case with most handles, it was made by drawing out molten glass. This specimen shows the amount of degradation that the glass industry suffered during the period of late antiquity, because of the large amount of impurities and air bubbles in the glass. On the basis of the olive green color, we dated this handle into the period of the 3rd-5th century (Calvi 1968, 169). Such containers were used in everyday life as tableware, but because of their practical form they were also used for the transportation of various liquids (Fadić 1997, 87).

Cat. No. 6 (T. 2./2) consists of a handle and a base. The circumstances of the discovery suggest that these are parts of the same vessel. The handle is round in section, olive green in color, and made by drawing out molten glass. A section of the joint at the opening and on the shoulder is missing. It is equipped with an elongated, rounded vertical section that serves as a support for the thumb in order to facilitate handling (U-shaped). Its structure is relatively brittle. Besides the handle, a complete base of a vessel was also discovered. It is concave in shape, olive green in color, transparent, made solely by blowing. The quality of the glass mass in this case is better. The glass is relatively thin and devoid of impurities, with only a few bubbles of air. Both the container and the base were circular in form. A concave base and olive green color are characteristic for the 4th century (Lazar 2003, 197–198).

Beads

A total of 19 beads were unearthed at this site, 18 of which were related to the discovery of a deceased individual in the only grave on the entire site (SU 61). The beads from grave I, Cat. No. 8 (Fig. 7; T. 3./1), were most likely part of a necklace or bracelet that belonged to one of the deceased individuals (there was a total of three to four interments). According to the classification of M. Guido, they belong to type no. 20 (Casagrande, Ceselin 2003, 40), or type XII according to Mandruzzato (Mandruzzato 2008, 161). These 18 beads are polyhedral, made of cobalt blue, opaque glass. Such beads were widely spread, both territorially and chronologically, and they come in different variants (in the shape of parallelepipeds and cubes of different sizes) (Mandruzzato 2008, 161). They were extremely popular

Nađene su i među vikinškim materijalom iz IX. do XI. st. (Casagrande, Ceselin 2003, 40). Na našim područjima dokumentirane su na lokalitetu Medulin – Burle, ali i na nalazištima u Dalmaciji, gdje su datirane u III. – IV. st. (Girardi Jurkić, Džin 2003, 70,143). Poznate su na lokalitetima sjeverne Italije: Vidor, Feltre, Montecchio i Aquileia, kao dio ogrlica sastavljenih od različitih tipova perlica ili dijela privjesaka. Datiraju se u IV. st., odnosno u drugu polovicu IV. st., ovisno o kontekstu i ostalim nalazima (Casagrande, Ceselin 2003, 40; Mandruzzato 2008, 156–161).



Sl. 7. Poliedarske perlice (Zlatunić 2010, 106)
Fig. 7 Polyhedral beads (Zlatunić 2010, 106)

U blizini kanala isklesanog u živoj stijeni (SJ 57) nađena je cjevasta perlica PN 98 (T. 3./2; kat. br. 9) tamnoplave boje, od neprozirnog stakla. Ta se perlica, kao i one poliedarske iz groba I, može datirati u III. – IV. st. (Girardi Jurkić, Džin 2003, 142). Po M. Guidu spada u oblik br. 14. I poliedarske perle i bikonična, cjevasta perla izrađene su u tehnici lijevanog stakla, ručno modeliranog (Casagrande, Ceselin 2003, 129–131, 207).

ZAKLJUČAK

Među sitnim nalazima s Brestića, i staklo nam pokazuje kontinuitet ove gospodarske vile od rane antike do u IV. – V. st. Nedostatak nalaza iz kasnijih razdoblja sugerira da život jenjava tijekom velikih previranja u tim turbulentnim vremenima. Kasnoantičko staklo s Brestića možemo uvrstiti u grupu proizvoda koji s područja Aquileje trgovinom dopijevaju u naše krajeve. Njihov stil potvrđuje utjecaj porajnskih radionica i ukus tog vremena na širokom teritoriju Carstva. Broj ulomaka koničnih čaša potvrđuje taj oblik kao dominantan, dok su ostali recipijenti rjeđi. Njihova kvaliteta ponovno dokazuje velike promjene koje se zbivaju u tom vremenu.

even beyond the borders of the empire. Chronologically, they appear during the Roman period, but also in the late medieval period. They were also discovered amongst Viking material from the 9th–11th century (Casagrande, Ceselin 2003, 40). In our region they were documented on the Medulin – Burle site, but also on sites in Dalmatia, and they were dated to the 3rd–4th century (Girardi Jurkić, Džin 2003, 70, 143). They are also known from sites in Northern Italy: Vidor, Feltre, Montecchio, Aquileia, as parts of necklaces consisting of different bead types, or as pendant parts. They are dated into the 4th, or into the second half of the 4th century, depending on context and other finds (Casagrande, Ceselin 2003, 40; Mandruzzato 2008, 156–161).

In the vicinity of the channel that was hewn out of bedrock (SU 57), a tubular bead, SF 98, was unearthed (T. 3./2; Cat. No. 9). It is deep blue in color and made of opaque glass. This bead, as well as those polyhedral ones from grave I, can be dated to the 3rd–4th century (Girardi Jurkić, Džin 2003, 142). According to M. Guido, it belongs to form no. 14. Both the polyhedral beads, and the biconical, tubular one, were made in the cast-glass technique and were hand-modeled (Casagrande, Ceselin 2003, 129–131, 207).

CONCLUSION

Among other small finds from Brestić, glass is indicative for the continuity of this villa rustica, which extends itself from the early period of antiquity, up to the 4th–5th century. A lack of finds from subsequent periods tells us that life was on the decline during the great turmoil of that turbulent period. We can include Late Roman glass from Brestić into a group of products that came to our region from the area of Aquileia, as a result of commercial activities. Their style reflects the influence of workshops from the Rhineland, and the prevalent taste that was widespread on the territory of the empire. The number of fragments of conical glasses confirms that this form was dominant, while other containers were not so common. Their quality is also a renewed sign for the big changes that occurred on the overall scene of that period of time. Likewise, this Late Roman glass is a clear indicator of the social status enjoyed by the residents of Brestić, who used it not only as tableware and oil lamps, but also as jewelry and offerings that were put into graves together with the deceased. The traditions and customs of earlier times, including those of rich grave offerings, were abandoned in the late period of antiquity, and we should therefore emphasize the importance of the beads unearthed in the grave at Brestić, because they

Takoder, kasnoantičko staklo jasni je pokazatelj socijalnog statusa žitelja Brestića. Oni su, osim kao stolno posuđe i kao svjetiljke, staklo koristili i kao nakit te ga prilagali u grobove s pokojnicima. Običaji iz ranijih vremena i bogati prilozi napuštaju se u vrijeme kasne antike pa stoga valja naglasiti važnost perlica pronađenih u grobu na Brestiću. One su bile važan osobni predmet pokojnika; staklo nije bilo lako dostupno širokim masama, što ga je činilo raritetom i distinktivnim obilježjem.

Zaštitnim istraživanjem dijela trase Istarskog ipsilona na lokalitetu Brestić kod Višnjana otkrivena je još jedna gospodarska vila na području Istre i time upotpunjena karta istarskih nalazišta iz vremena antike. Omogućen nam je bolji uvid u svakodnevicu ljudi tog vremena, u njihove običaje, trgovinu. Daljnja bi sustavna istraživanja mogla razotkriti razloge napuštanja vile i zaokružiti priču jedne zajednice.

were part of an important personal item that belonged to the deceased. All of this was probably related to the fact that glass was not readily available to the wide masses, making it a rarity and a distinctive feature. A rescue archaeological excavation along a section of the route of the Istrian highway yielded another villa rustica on the territory of Istria, at the site of Brestić near Višnjana, which further complemented the map showing Roman sites in Istria. This enabled us to get a better insight into the everyday lives of the people in that period of time, shedding some light on their customs and commercial activities. Further systematic explorations could uncover the reasons for abandoning this villa, completing thus the story associated with this particular community.

KATALOG

1. Ulomci oboda i tijela čaše. Konično tijelo. Nedostaje dno. Staklo žućkastozelene boje, prozirno, s mnogo većih i manjih mjehurića. Datacija: IV. st. Tehnika: slobodno puhanje.

v. 4,7 cm, š. 6,9 cm, ø 7,4 cm,

PN 117, sek. III, sonda VII-VIII c/d, SJ 2/58, 06. 10. 2009.



2. Ulomak oboda i tijela čaše. Poluloptasto tijelo. Nedostaje dno i veći dio ruba čaše. Staklo intenzivnije zelene boje, prozirno, s mjehurićima. Datacija: IV. - V. st. Tehnika: slobodno puhanje.

v. 3,4 cm, š. 4,9 cm, ø 8 cm

PN 29, sek. III, sonda XI c/d, SJ 2, 20. 07. 2009.

3. Ulomak oboda i tijela čaše, nedostaje dno. Tijelo zvonolikog oblika.

Staklo maslinastozelene boje, prozirno, s jednom plavičastom, reljefno izraženom kapljicom, tip "Nuppengläser". Datacija: druga polovica IV. st. Tehnika izrade: slobodno puhanje, kapljice nanese na vruć materijal.

v. 3 cm, š. 4,3 cm, ø 10 cm

PN 1, sek. III, sonda Ia, SJ 1/2, 02. 06. 2009.



4. Ulomak kaleža (čaše na nozi). Staklo maslinastozelene boje, prozirno. Datacija: V. - VII. st. Tehnika: slobodno puhanje.

v. 1,1 cm, š. 2,3 cm

PN 40, sek. III, sonda III-IV b, SJ 4a, 27. 07. 2009.

CATALOGUE

1. Fragments of the rim and body of a drinking glass. The body is conical. The base is missing. Yellowish-green glass, transparent, with many larger and smaller air bubbles. Dating: 4th century. Technique: free-blown glass.

Height 4.7 cm, width 6.9 cm, diameter 7.4 cm;

SF 117, Sector III, Probe VII-VIII c/d, SU 2/58, October 6, 2009.

2. A fragment of the rim and body of a drinking glass. Conical body. The base and a larger section of the rim are missing. Intensive green glass color, transparent, with air bubbles. Dating: 4th-5th century. Technique: free-blown glass.

Height 3.4 cm, width 4.9 cm, diameter 8 cm;

SF 29, Sector III, Probe XI c/d, SU 2, July 20, 2009.



3. A fragment of the rim and body of a drinking glass, the base is missing. The body is bell-shaped. Olive green glass, transparent, with a single bluish droplet in relief, "Nuppengläser" type. Dating: second half of the 4th century. Manufacturing technique: free-blown glass, the droplets were applied in a molten state.

Height 3 cm, width 4.3 cm, diameter 10 cm;

SF 1, Sector III, Probe Ia, SU 1/2, June 2, 2009.

4. A fragment of a goblet (stemmed glass). Olive green glass, transparent. Dating: 5th-7th century. Technique: free-blown glass.

Height 1.1 cm, width 2.3 cm;

SF 40, Sector III, Probe III-IV b, SU IVa, July 27, 2009.



5. Dno čaše. Tijelo nedostaje (vjerojatno koničnog oblika). Maslinastozelene boje, prozirno. Datacija: IV. – V. st. Tehnika: slobodno puhanje.

v. 0,7 cm, š. 2,7 cm, ø 3 cm

PN 35, sek. III, sonda VII-VIII c/d, SJ 10, 23. 07. 2009.



5. The base of a drinking glass. The body is missing (probably conical in shape). Olive green glass, transparent. Dating: 4th-5th century. Technique: free-blown glass.

Height 0.7 cm, width 2.7 cm, diameter 3 cm;

SF 35, Sector III, Probe VII-VIII c/d, SU 10, July 23, 2009.

6. The base and handle of a jug. The handle was made by drawing out molten glass. The base and body (that is missing) were made with the free-blown glass technique. Green glass, transparent, with air bubbles. Dating: 4th-5th century.

Handle height 6.9 cm, width 1 cm;

Base height 2.4 cm, 8.7 cm;

SF 78, Sector III, Probe XIV-XV b, SU 59, September 7, 2009.

6. Dno i ručka vrča. Ručka izrađena tehnikom razvlačenja užarene staklene mase. Dno s tijelom (koje nedostaje) izrađeno je tehnikom slobodnog puhanja. Staklo zelene boje, prozirno, s mjehurićima. Datacija: IV. – V. st.

ručka v. 6,9 cm, š. 1 cm

dno v. 2,4 cm, 8,7 cm

PN 78, sek. III, sonda XIV-XV b, SJ 59, 07. 09. 2009.



7. A vessel handle. Technique: drawn out molten glass. Green glass, transparent. Dating: 4th-5th century.

Height 8.6 cm, width 2.7 cm;

SF 54, Sector III, Probe VII-VIII e, SU 2, August 3, 2009.

8. 18 prismatic beads. Cobalt blue glass. Technique: cast, hand-modeled glass. Dating: 3rd-4th century.

Length 1 cm, width 0.7 cm;

SF 47, 74, 51, Sector III, Probe XV c, grave 1, SU 61, August 3, 2009.

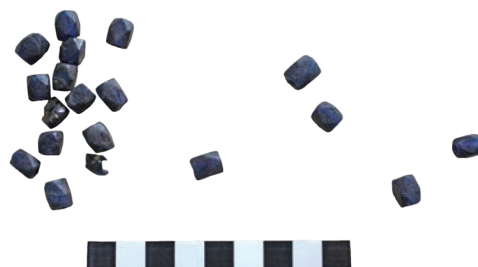
7. Ručka posude. Tehnika: razvlačenje užarene staklene mase. Staklo zelene boje, prozirno. Datacija: IV. – V. st. v. 8,6 cm, š. 2,7 cm

PN 54, sek. III, sonda VII-VIII e, SJ 2, 03. 08. 2009.

8. Osamnaest prizmatičnih perlica. Kobaltnoplavo staklo, neprozirno. Tehnika: lijevano, ručno modelirano staklo. Datacija: III. – IV. st.

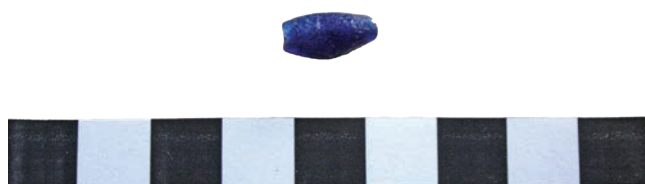
duž. 1 cm, š. 0,7 cm

PN 47, 74, 51, sek. III, sonda XV c, grob 1, SJ 61, 03. 08. 2009.

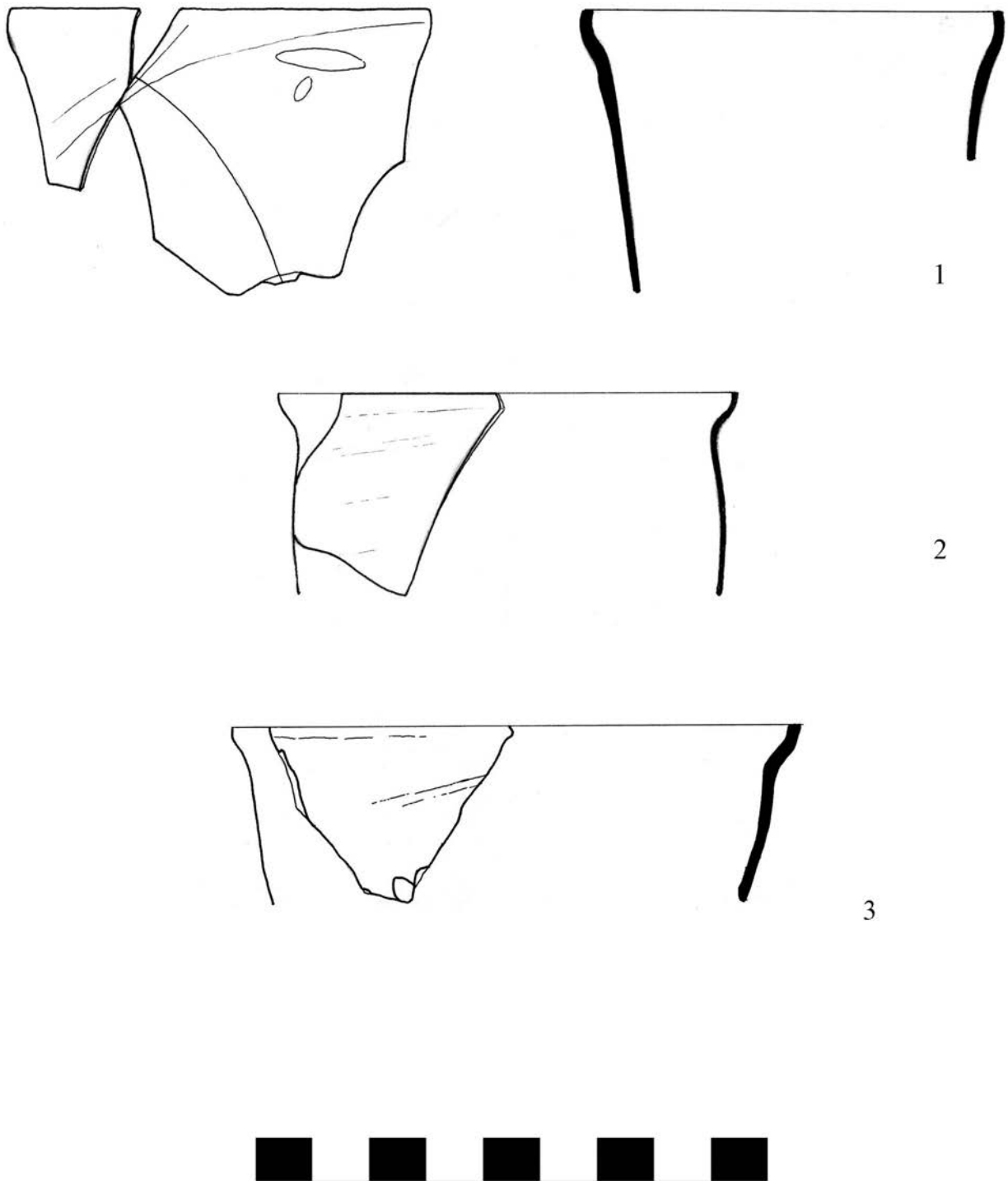


9. Jedna izdužena, kobaltnoplava staklena perla.
Tehnika: lijevano, ručno modelirano staklo. Datacija:
II. - IV. st.
duž. 1,3, š. 0,6 cm
PN 98, sek. III, sonda VI-VII d, SJ 2, 24. 09. 2009.

9. An elongated, cobalt blue glass bead. Technique: cast,
hand-modeled glass. Dating: 2nd-4th century.
Length 1.3 cm, width 0.6 cm;
SF 98, Sector III, Probe VI-VII d, SU 2, September 24,
2009.



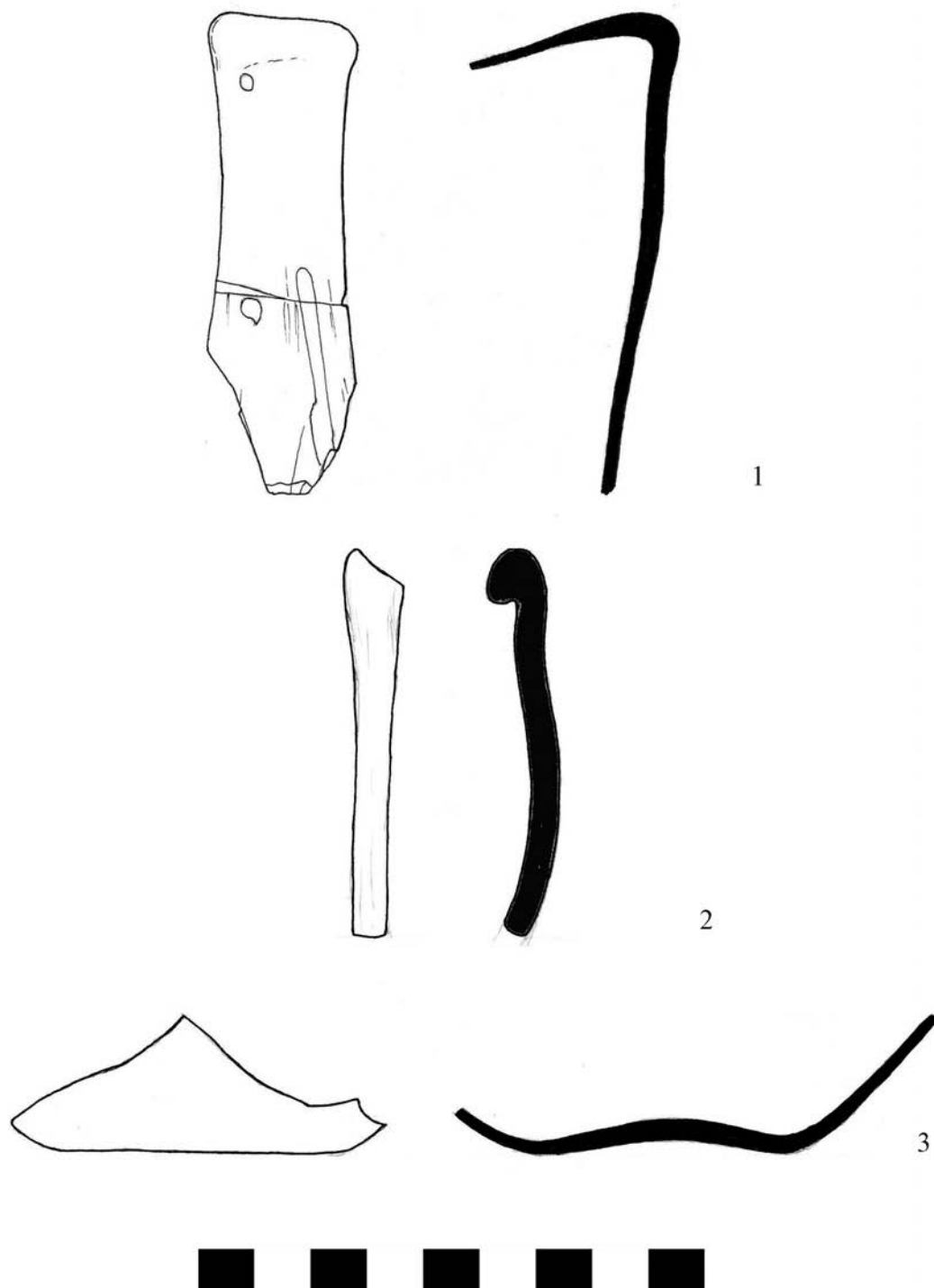
T. 1.



T. 1 Ulomci rubova čaša: 1. konična čaša; 2. poluloptasta čaša; 3. poluloptasta čaša s ukrasom tipa “nuppen” (crteže izradio Zoran Grbin)

T. 1 Rim fragments of drinking glasses: 1. a conical glass; 2. a hemispherical glass; 3. a hemispherical glass with decoration of the “Nuppen” type (drawings by Zoran Grbin)

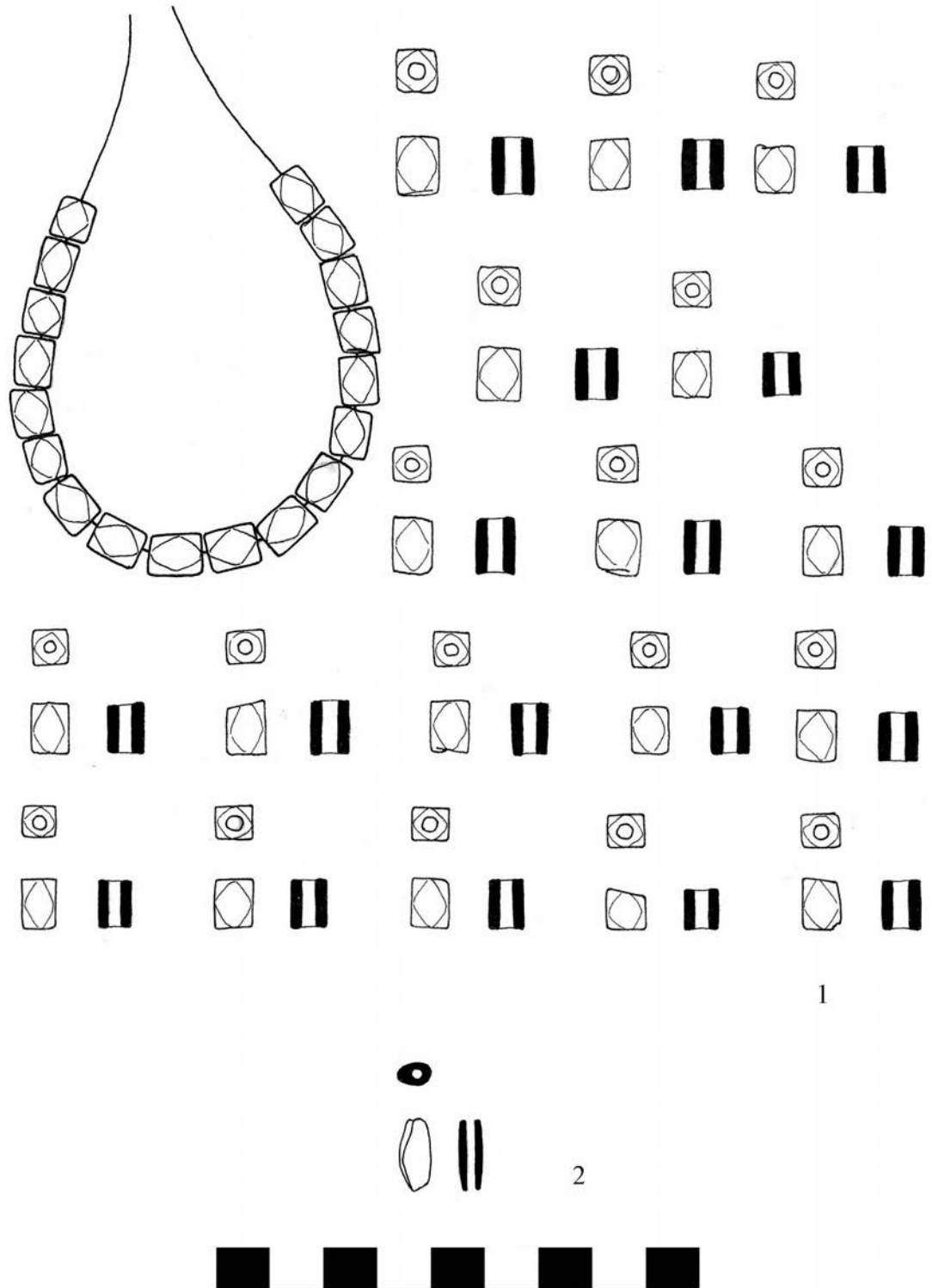
T. 2.



T. 2 Ulomci posuda: 1. ručka vrča; 2. ručka vrča; 3. dno vrča (crteže izradio Zoran Grbin)

T. 2 Vessel fragments: 1. a jug handle; 2. a jug handle; 3. a jug base (drawings by Zoran Grbin)

T. 3.



T. 3 Perlice: 1. poliedarske perlice; 2. cjevasta perlica (crteže izradio Zoran Grbin)
T. 3 Beads: 1. polyhedral beads; 2. a tubular bead (drawings by Zoran Grbin)

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