

NOVI INFUNDIBULUM NA NEKROPOLI ANTIČKOG JADERA

Na nedavnim zaštitnim arheološkim istraživanjima u Ulici fra Ivana Zadranina u Zadru potvrđena je zona nastavka antičke nekropole. Tom je prigodom ustanovljeno 35 antičkih ukopa. Velika većina otkrivenih grobova su paljevinski grobovi s veoma bogatim nalazima i priložima. Jedan od njih je i incinerirani ukop – grob 34, u kojem je pronađen i stakleni lijevak – *infundibulum*. Na zadarskom području s novim je nalazom lijevka do sada otkriveno čak sedam u cijelosti očuvanih staklenih *infundibula*. Uz dva lijevka bez konteksta nalaza, svi su ostali otkriveni u grobnom kontekstu incineriranih ukopa pri arheološkim istraživanjima antičke nekropole Jadera. Stakleni lijevci posve su specifičan i rijedak oblik slobodno puhanog staklenog posuđa koje služi za pretakanje a ne za pohranu različitih tekućina. Možda su upravo nalazi brojnih staklenih lijevaka na ovom prostoru, a za koje se pretpostavlja da su istočnomediteranske produkcije, rezultat aktivnosti prerade aromatičnog i ljekovitog bilja. Toj pretpostavci ide u prilog i brojnost nalaza ostalih staklenih oblika, ali i postojanje lokalne staklarske radionice (ili više njih). Stoga potreba za staklenim proizvodima općenito, pa tako i za lijevcima, s obzirom da je staklo veoma neutralno na sadržaje koji se u njemu pohranjuju, ima svoje uporište u aktivnostima proizvodnje različitih farmaceutskih pripravaka. Ako je suditi po staklenim lijevcima, takva se aktivnost odvijala u drugoj polovini 1. st. po. Kr.

KLJUČNE RIJEČI: *infundibulum*, *stakleni lijevak*, *antička nekropola*, *Jader*

Na nedavnim zaštitnim arheološkim istraživanjima u Ulici fra Ivana Zadranina u Zadru potvrđena je zona nastavka antičke nekropole.¹ Tom prigodom je ustanovljeno 35 antičkih ukopa. Velika većina otkrivenih grobova su paljevinski ukopi s veoma bogatim nalazima i priložima (Sl. 1). Jedan od takvih je i incinerirani ukop – grob 34, u kojem su posmrtni ostatci spaljenog pokojnika pohranjeni u staklenu urnu, a staklena urna u cilindričnu kamenu urnu (Sl. 2-5). Staklena urna bila je zapunjena spaljenim kostima pokojnika iznad kojih je postavljen toaletni/kozmetički pribor – brončana ušna sonda, željezna

A NEW *INFUNDIBULUM* AT THE CEMETERY OF ANCIENT IADER

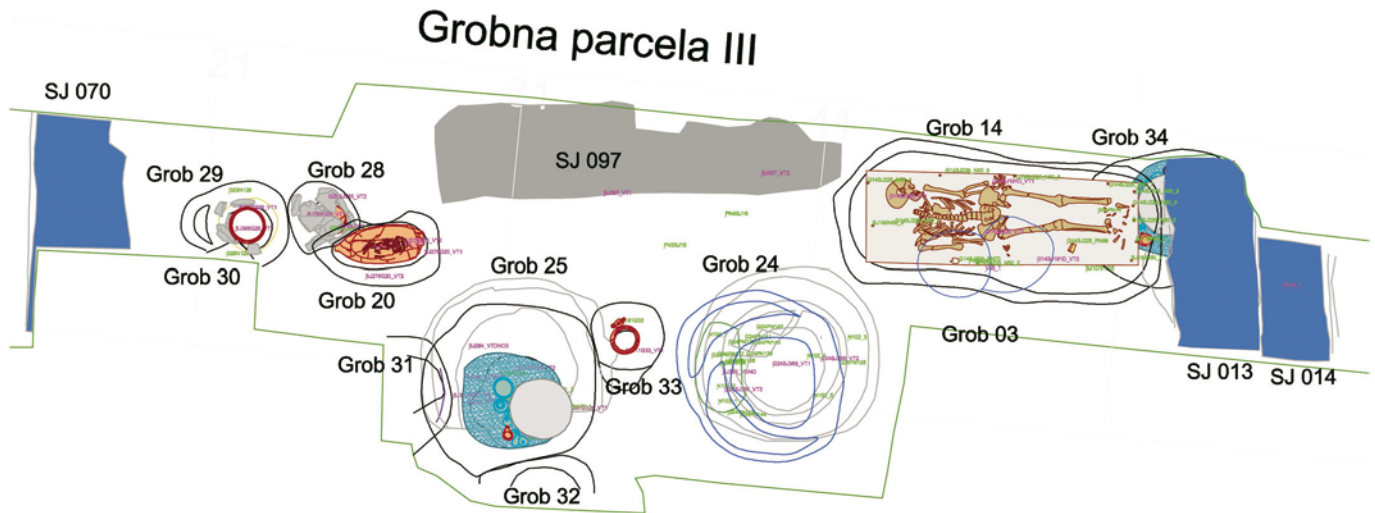
The zone where the Roman cemetery of Iader extended was confirmed in the recent rescue excavations in Ivan Zadranin Street in Zadar. In the excavations 35 Roman burials were discovered. The great majority of the discovered graves consist of cremation graves with extremely rich finds and grave goods. One of them was a cremation grave – grave 34 – containing a glass funnel or *infundibulum*. Including this new find of a funnel, so far 7 completely preserved glass funnels have been discovered in Zadar. Along with two funnels without a specific context for the finds, all of the others were uncovered in a grave context of cremation burials during archaeological excavations at the Roman cemetery of Iader. Glass funnels are a quite specific and rare form of free-blown glass vessels, which serve for transferring but not storing various liquids. Perhaps the finds of numerous glass funnels in this region, which are presumed to be of eastern Mediterranean production, were a result of activities in processing aromatic and medicinal plants. Such a hypothesis would certainly be supported by the numerous finds of other glass forms, but also the existence of one or more local glass workshops. Thus the need for glass products in general, and hence also for funnels, considering that glass is very neutral in terms of the contents stored in it, would be based in activities producing various pharmaceutical preparations. Judging from the glass funnels, such activities took place in the second half of the 1st century AD.

KEY WORDS: *infundibulum*, *glass funnel*, *Roman cemetery*, *Iader*

The recent rescue excavations in Ivan Zadranin Street confirmed the zone over which the Roman cemetery of Zadar extended.¹ In the excavations 35 Roman burials were discovered. The great majority of the discovered graves consist of cremation graves with extremely rich finds and grave goods (Fig. 1). One of them was the cremation burial in grave 34, where the remains of the cremated deceased individual were placed in a glass urn, and the glass urn in a cylindrical stone urn (Fig. 2-5). The glass urn was filled with the burnt bones of the deceased, and above them were placed cosmetic accessories – a

1 Istraživanja su vršena od strane GEOARHEO d.o.o.

1 The excavations were carried out by GEOARHEO d.o.o.



SL. I. / FIG. I.

Grobna parcela III. (Geoarheo d.o.o.)

Grave parcel III. (Geoarheo d.o.o.)

igla(?) s kružnom glavom, kozmetička pločica te stakleni balsamarij i najvjerojatnije rastaljeni željezni prsten (Sl. 6). U zapuni je pronađen i ulomak izgorenog kamenog žetona. Dijelovi toaletne kutijice s pripadajućim priborom pronađeni su u prostoru između kamene i staklene urne (Sl. 7, 8). Od priloga oko kamene urne pronađena su samo dva predmeta od keramike (zdjelica iz kategorije keramike tankih stijenki i uljanica) te zavidan broj staklenih artefakata. Dakle, uz staklenu urnu sa staklenim poklopcem i uz trbušasti balsamarij, od staklenih su priloga izvan kamene urne pronađene dvije zdjelice, plitica, aribalos, dva vrča četverokutnog tijela, cilindrična čaša s horizontalno graviranim linijama, kruškolika boca i lijevak (Sl. 3, 4). Naravno da ovakvo iznimno bogatstvo priloga ne treba čuditi jer su brojni i bogati prilozima veoma čest slučaj s incineriranim ukopima antičke nekropole Zadra.

Otkriće lijevka u grobu br. 34 u Ulici fra Ivana Zadrana (Sl. 9) svakako zaslužuje iznimnu pažnju, posebno s obzirom na činjenicu da takvi nalazi nisu česti u arheološkoj praksi te stoga što staklenim lijevcima u stručnoj arheološkoj literaturi nije dana posebna pozornost.² Osim teksta "Stakleni lijevci s prostora antičkog Jadera" nije mi poznat ni jedan specijalistički rad koji bi se odnosio na tu vrstu instrumenta domestica.³ U tom tekstu obrađeno je pet u cijelosti očuvanih staklenih lijevaka (*infundibu-*

bronze ear probe, iron pin (?) with a circular head, a cosmetic plate, a glass balsamarium, and most probably a melted iron ring (Fig. 6). A fragment of a burnt stone token was found in the fill. Parts of a toiletries casket with associated accessories were found in the space between the stone and glass urns (Fig. 7, 8). The grave goods around the stone urn consisted of only two pottery objects (a small bowl from the category of thin-walled pottery and a clay oil lamp), and a considerable number of glass artifacts. So, along with the glass urn with its glass lid and a globular balsamarium, the glass grave goods beyond the stone urn consisted of two small bowls, a plate, an aryballos, two square-bodied jugs, a cylindrical beaker with horizontal engraved lines, a pear-shaped flask, and a funnel (Fig. 3, 4). Naturally such exceptionally rich grave goods should not be surprising, as numerous and rich grave goods are a very common feature of the cremation burials at the Roman cemetery of Zadar.

The discovery of a funnel in grave 34 in Fr. Ivan Zadrana Street (Fig. 9), certainly deserves exceptional consideration, particularly considering that such finds are not frequent in archaeological practice, and because glass funnels have not been given any special attention in the archaeological literature.² Other than the article "Glass funnels from Roman Iader", I am unacquainted with any specialized text that would refer to this type of *instrumenta domestica*.³ The above article discussed 5 completely preserved glass funnels (*infundibulum*) from the Zadar region

2 Prvi rad u domaćoj literaturi posvećen staklenim lijevcima je I. FADIĆ, 2006.

3 U ovom trenutku nisu mi poznate ni brojnije objave pojedinačnih primjeraka metalnih ili keramičkih lijevaka.

2 The first text in Croatian literature about glass funnels: I. FADIĆ, 2006.

3 At present I also do not know of more numerous publications of individual examples of metal or pottery funnels.



Sl. 2. / FIG. 2.



Sl. 3. / FIG. 3.



Sl. 4. / FIG. 4.



Sl. 5. / FIG. 5.



SL. 6. / FIG. 6.

lum) sa zadarskog područja (Sl. 10). Uz novi lijevak iz groba 34 u Ulici fra Ivana Zadrana, od prijašnjih nalaza u objavi iz 2006. godine pro-makao je još jedan infundibulum iz groba 181 na Trgovačkom centru u Zadru.⁴ Dakle, četiri do sada poznata staklena infundibula potječu upravo iz Zadra, a otkriveni su u arheološkim istraživanjima antičke nekropole Jadera na lokalitetu "T. C. Relja" 2005. godine. Pronađeni su u paljevinskim grobovi-ma br. 35, 125, 171 i 181.⁵ Ostala dva su u vihoru Drugog svjetskog rata, 1944. godine, odnesena iz Zadra u Italiju i danas se čuvaju u Muzeju stakla u Muranu.⁶ Provenijencija im nije posve sigurna pa se kao mjesta nalaza navode Zadar, Nin ili Aserija (Podgrađe kod Benkovca), mada je veoma vjerojatno da su i oni s antičke nekropole Jadera. U svakom slučaju, oni su sa zadarskog područja.

Lijevak – *infundibulum* – spada u utilitarne predmete koji, za razliku od ostalih, služi za pre-takanje tekućine. To je poluloptasti, konični ili bikonični recipijent širokog otvora s dugim cjevas-

(Fig. 10). Along with the new funnel from grave 34 in Fr. Ivan Zadrana Street, another infundibulum from grave 181 at the Relja Shopping Center in Zadar was missing from the 2006 publication.⁴ Hence, four of the currently known glass funnels come from Zadar, and were discovered in the archaeological excavations of the Roman cemetery of Iader at the site of the Relja Shopping Center in 2005. They were found in cremation graves 35, 125, 171, and 181.⁵ The other two were removed in the whirlwinds of the Second World War from Zadar in 1944 and taken to Italy, where they are presently in the Murano Glass Museum.⁶ Their provenience is not entirely certain, so they are listed as "Zadar, Nin, or Asseria (Podgrađe near Benkovac)", although it is extremely likely that they are also from the Roman cemetery of Iader. In any case, they are from the Zadar vicinity.

The funnel – or *infundibulum* – belongs among utilitarian objects that serve to transfer liquids. It has a hemispherical, conical, or biconical body with a wide opening and a long tubular open ending. Ir-

4 S. GLUŠČEVIĆ, 2005, 405, grob 181.

5 S. GLUŠČEVIĆ, 2005; I. FADIĆ, 2006.

6 G. L. RAVAGNAN, 1994, 200-201, kat. 397-398.

4 S. GLUŠČEVIĆ, 2005, 405, grave 181.

5 S. GLUŠČEVIĆ, 2005; I. FADIĆ, 2006.

6 G. L. RAVAGNAN, 1994, 200-201, cat. no. 397-398.

tim otvorenim završetkom. Neovisno o materijalu od kojeg je rađen (keramika, metal, staklo), očito je da se njegov oblik kroz povijesne epohe nije bitnije mijenjao. Stakleni primjerci ovog posve specifičnog i malobrojnog oblika, iako su slobodno puhani, međusobno se neznatno razlikuju.

Zanimljivo je da se novi nalaz lijevka s nekropole antičkog Zadra potpuno uklapa u dosadašnji kontekst nalaza prethodno pronađena četiri lijevka na lokalitetu "T. C. Relja". Naime, svi ovi ukopi s ritusom incineracije sadrže staklenu urnu s poklopcem a od priloga većinu sačinjavaju stakleni predmeti. U **grobu 35** "T. C. Relja" od staklenih su priloga pronađene: dvije plitice, staklena čaša s uleknućima (fragmentarna), riton, lijevak, urna s poklopcem i cjevasti balsamarij. **Grob 171** "T. C. Relja" od stakla sadrži četiri vrča četverokutnog tijela, bocu lop-tastog tijela, zdjelicu, urnu s poklopcem, balsamarij i lijevak. Od staklenih artefakata u **grobu 125** "T. C. Relja" pronađena je urna, tri vrča koničnog tijela, urneta, ulomci plitice od plavog stakla i lijevak. U incineriranom **grobu 181** od staklenih priloga pronađeni su: *olla* s poklopcem, tri kvadratična vrčića, vrčić trbušastog recipijenta, čaša s brušenim rebrima, konična zdjelica, polukružna zdjelica s prstenastom nogom, plitka zdjelica s prstenastom nogom, urneta od plavog stakla, te cijeli niz cjelovitih, deformiranih ili fragmentiranih balsamarija.

U novootkrivenom **grobu 34** u Ulici fra Ivana Zadranina od staklenih su predmeta pronađeni: urna s poklopcem, loptasti balsamarij, dvije zdjelice, plitica, aribalos, dva vrča četverokutnog tijela, cilindrična čaša s horizontalno graviranim linijama, kruškolika boca i lijevak. Brojnost staklenih nalaza u svih pet ukopa možda ukazuje na to da su se pokojnici, neovisno o njihovu spolu, bavili pripremanjem kozmetičkih i medicinskih pripravaka. Tome u prilog idu i nalazi toaletno/kozmetičko/medicinskog pribora poput brončane ušne sonde, željezne igle s kružnom glavom, kozmetičkih pločica, kutijice s toaletnim priborom, brončane pincete, željeznog noža, koštane pločice itd.

Dosadašnja četiri incinerirana groba u kojima su prilozi stakleni lijevci okvirno bi se mogla datirati, s obzirom na ritus i način pokapanja te sveukupne nalaze, u drugu polovinu 1. ili sam početak 2. st. po. Kr. Međutim, precizniju dataciju na kraj 1. st. dosad nam je omogućavao nalaz novca u grobu 171 na kojem je prikaz cara Tita Flavija Domitijana (*Titus Flavius Domitianus*, 81.–96.). S druge strane, u Ulici fra Ivana Zadranina u novootkrivenom grobu 34, koji sadrži lijevak i već spomenute

respective of the material from which it is made (pottery, metal, glass), evidently its form has not changed essentially throughout the historical epochs. The glass examples of this quite specific and scarce form, although free-blown, do not differ greatly from one another.

It is interesting that the new find of a funnel from the cemetery of Roman Zadar fits completely into the context of the finds of the previously discovered four funnels – at the Relja Shopping Center site. All of these burials with a cremation rite contained a glass urn with a lid, and glass objects make up the vast majority of the grave goods. In **grave 35** the glass grave goods consisted of: two plates, a glass beaker with indentations (fragmentary), a rhyton, a funnel, an urn with a lid, and a tubular balsamarium. **Grave 171** contained four square-sided jugs, a globular flask, a small bowl, an urn with a lid, a balsamarium, and a funnel. The glass artifacts in **grave 125** consisted of an urn, three conical jugs, a small urn, fragments of a blue glass plate, and a funnel. Cremation **grave 181** contained the following glass grave goods: an olla with a lid, three small square jugs, a jug with a globular body, a beaker with ground ribs, a small conical bowl, a hemispherical bowl with a ringed foot, a small shallow bowl with a ringed foot, a small blue glass urn, and an entire series of complete, deformed, or fragmentary balsamaria.

In the newly uncovered **grave 34** in Ivan Zadranin Street, the following glass objects were found: an urn with a lid, a globular balsamarium, two small bowls, a plate, an aryallos, two square-bodied jugs, a cylindrical beaker with horizontal engraved lines, a pear-shaped flask, and a funnel. The abundance of glass finds in all five burials could indicate that the deceased individuals, regardless of their sex, were engaged in preparing cosmetic and medicinal products. This would be supported by the finds of toiletries/cosmetic/medicinal equipment, such as bronze ear probes, iron pins with a circular head, cosmetic plates, caskets with cosmetic supplies, bronze tweezers, an iron knife, bone tablets...

The four cremation graves known to the present that contained glass funnels as grave goods, considering the ritual and manner of burial, as well as the total finds, could be approximately dated to the second half of the 1st century or the very beginning of the 2nd century AD. However, a more precise dating to the end of the 1st century has been enabled by the find of a coin in **grave 171** with the image of the emperor Domitian (*Titus Flavius Domitianus*; 81-96 AD). On the other hand, the newly discovered **grave 34** in



Sl. 7. / FIG. 7.



Sl. 8. / FIG. 8.

priloge, ustanovljen je i novac cara Klaudija (*Titus Claudius Caesar Augustus Germanicus*, 41.–54.) koji je kovan 51. godine u Rimu.⁷ Budući da stakleni *infundibulum* nije čest nalaz, a posebno ne u arheološkom kontekstu, novi nalaz lijevka u grobu 34 ima dvojaku vrijednost. Pronađen je u intaktnom grobnom kontekstu i sigurno datiran u drugu polovinu 1. st. po. Kr. Uz to, nalaz obogaćuje naše spoznaje o ovoj specifičnoj vrsti proizvoda staklarske industrije ranog Rimskog Carstva te stvara novu statističku sliku o rasprostranjenosti.

Sa zaštitnim arheološkim istraživanjima u Ulici fra Ivana Zadrana s najnovijim otkrićem lijevka antički Zadar (*Iader*) odnosno zadarsko područje prednjači količinom nalaza ovog iznimnog i rijetkog oblika staklarske produkcije. Ovaj prostor dao je čak sedam cjelovitih lijevaka. Naspram tom broju, do sada je poznato i objavljeno svega desetak staklenih lijevaka iz drugih dijelova Rimskog Carstva. Na području Hrvatske, osim sedam lijevaka sa zadarskog područja, poznat je još samo jedan lijevak iz Iloka, koji je sačuvan u svom gornjem dijelu.⁸ U neposrednoj blizini Iloka, u Srbiji, odnosno u Srijemskoj Mitrovici (*Sirmiumu*)⁹ otkriven je cjeloviti primjerak *infundibula*, a u cijelosti sačuvani lijevak pronađen je i u Sloveniji, i to u Ljubljani (*Emona*).¹⁰

Ostali primjerci sa šireg prostora Carstva dolaze iz Njemačke, odnosno iz Kölna,¹¹ jedan je pronađen u Švicarskoj – lokalitet *Vindonissa*,¹² a po jedan primjerak pronađen je u Avennesu u Belgiji¹³ te u Nimesu i Reimsu u Francuskoj.¹⁴ Nekoliko ulomaka ovog iznimno zanimljivog i raritetnog staklenog oblika dao je i lokalitet *Augusta Rauricorum*.¹⁵ Stakleni *infundibulum* ustanovljen je i na Cipru, a u literaturi se spominju i tri lijevka iz Pompeja.¹⁶ S prostora Apeninskog poluotoka poznata su još dva *infundibula* u Regio Monte. Jedan cjelovito sačuvan potječe iz južne nekropole (grob 14), dok drugom

Ivan Zadrani Street that contained a funnel and the grave goods listed above, also contained a coin of the emperor Claudius (*Titus Claudius Caesar Augustus Germanicus*; 41-54 AD), which was minted in 51 AD in Rome.⁷ Given that glass *infundibula* are not common, particularly not in an archaeological context, the new find of a funnel in grave 34 has a twofold value. It was discovered in an intact grave context and can be dated with certainty to the second half of the 1st century AD. Additionally, the find enriches our knowledge about this specific type of product of the glass industry of the early Roman Empire, and creates a new statistic picture of its distribution.

Following the rescue excavations in Ivan Zadrani Street with the most recent discovery of a funnel, Roman Zadar (*Iader*), or the Zadar region, leads in the quantity of this exceptional and rare form of glass manufacture. This region has produced as many as seven complete funnels. In contrast to this number, to date only around ten glass funnels from other parts of the Roman Empire have been found and published. In Croatia, other than the seven funnels from the Zadar region, only one more funnel is known, from Ilok, preserved only in the upper section.⁸ In the immediate vicinity of Ilok, in Serbia, specifically at Mitrovica (*Sirmium*),⁹ a complete example of an *infundibulum* was discovered, and another completely preserved funnel was discovered in Slovenia in Ljubljana (*Emona*).¹⁰

Other examples from elsewhere in the Empire come from Germany (Köln/Cologne),¹¹ Switzerland – the site of *Vindonissa*,¹² and also one example each from Avennes in Belgium,¹³ and from Nimes and Reims in France.¹⁴ Several fragments of this exceptionally interesting and rare glass form were also found at the site of *Augusta Rauricorum*.¹⁵ A glass *infundibulum* was noted on Cyprus, and three funnels from Pompeii are mentioned in the literature.¹⁶ An-

7 Na ovom se mjestu zahvaljujem kolegi dr. sc. Mati Ilkiću na determinaciji novca.

8 M. DIZDAR, R. ŠOŠTARIĆ, K. JELINČIĆ, 2003, 57-77.

9 V. DAMEVSKI, 1976, 65; V. ŠARANOVIC-SVETEK, 1986, 64; A. M. RUŽIĆ, 1994, tip 9/1, tab. 42,1, kat. 1136, 94; TRANSPARENTNA LJEPOTA, 2013, kat. br. 160, str. 100-101, 103.

10 L. PLESNIČAR-GEC, 1972, tab. 135: 13, 101; I. LAZAR, 2004, kat. 39, 60.

11 O. DOPPELFELD, 1966, 50.

12 L. BERGER, 1960, tab. 22, 102 (225).

13 C. ISINGS, 1957, 92, forma 74; M. VANDERHOEVEN, 1961.

14 MORIN-JEAN, 1922-1923, forma 117, 146-147.

15 B. RÜTTI, 1991, tab. 3, 2015-2017.

16 C. ISINGS, 1957, 92, forma 74; MAGICHE TRANSPARENCE, 1999, kat. 126, str. 136, 195-198, tab. 8-10 i 43, US 101, tab. 26.

7 I would like to thank my colleague, Mato Ilkić PhD for his identifications of the coins.

8 M. DIZDAR, R. ŠOŠTARIĆ, K. JELINČIĆ, 2003, 57-77.

9 V. DAMEVSKI, 1976, 65; V. ŠARANOVIC-SVETEK, 1986, 64; A. M. RUŽIĆ, 1994, type 9/1, Pl. 42,1, cat. 1136, 94; TRANSPARENT BEAUTY, 2013, cat. no. 160, pp. 100-101, 103.

10 Lj. PLESNIČAR-GEC, 1972, Pl. 135: 13, 101; I. LAZAR, 2004, cat. 39, 60.

11 O. DOPPELFELD, 1966, 50.

12 L. BERGER, 1960, Pl. 22, 102 (225).

13 C. ISINGS, 1957, form 74, p. 92; M. VANDERHOEVEN, 1961.

14 MORIN-JEAN, 1923-24, form 117, 146-147.

15 B. RÜTTI, 1991, Pl. 3, 2015-2017.

16 C. ISINGS, 1957, form 74, 92; MAGICHE TRANSPARENCE, 1999, cat. 126, pp. 136, 195-198, Pl. 8-10 and 43, US 101, Pl. 26.



SL. 9. / FIG. 9.

Lijevak pronađen u grobu 34 u Ulici fra Ivana Zadrana u Zadru.

Glass funnel from grave 34 in Fr. Ivan Zadrarin Street in Zadar.

nedostaje donji dio.¹⁷ Za primjerak koji se čuva u muzeju Louvre pretpostavlja se da potječe iz Italije.¹⁸ Iz Francuske dolazi još jedan primjerak lijevka koji je pronađen na nekropoli Ponti à Mariana (Lucciana, Korzika) u grobu 24, a koji je po staklenim nalazima veoma srodan zadarskoj grobnoj cjelini. I ovaj ukop datiran je u sredinu 1. st. po Kr.¹⁹ U Corning muzeju u New Yorku nalazi se još jedan cjeloviti lijevak, ali bez konteksta nalaza.²⁰

Potvrdu o dataciji staklenih lijevaka za zadarske primjerke na sredinu 1. st. po Kr., odnosno u drugu polovinu 1. ili sam početak 2. st. nalazimo na nalazištima u Francuskoj²¹ a takvu dataciju potvrđuje i lijevak iz Sirmiuma²² i tri pompejanska primjerka.²³ No stakleni infundibul iz Emone, koji se gotovo ni po čemu oblikovno ne razlikuje od spomenutih datiranih primjeraka, Plesničar-Gec i Lazar krivo datiraju u 2. do 3. st.²⁴ Datacija je done-sena na temelju grobne cjeline groba 588 kojoj je pripadao i lijevak. Međutim, grobna cjelina ne daje dovoljno elemenata za tako kasnu dataciju.

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Na kraju možemo zaključiti da je upravo u antičkom Jaderu, odnosno na zadarskom području otkriveno sedam cjelovitih staklenih lijevaka, a da su svi ostali dijelovi Carstva dali svega desetak primjeraka. Razloga za ovu brojnost nalaza može biti veoma mnogo. Ako nije posrijedi slaba istraženost ili mali broj objava, količina lijevaka i iznimno velike količine staklene robe pronađene na nekropoli antičkog Zadra prije svega pružaju spoznaje o veoma bogatim trgovačkim kontaktima ovog dijela provincije Dalmacije s ostalim krajevima Rimskoga Carstva. Štoviše, dosadašnjim analizama staklenih proizvoda sa zadarskog prostora potvrđeni su veoma brojni oblici importirani s istočnog Mediterana, a istočnim staklarskim radionicama pri-

other two infundibula are known from Regio Monte in the Apennine Peninsula. One completely preserved funnel came from the southern necropolis (grave 14), while the lower one is missing the lower part.¹⁷ It is presumed that the example in the Louvre Museum in Paris came from Italy.¹⁸ Another example of a funnel comes from France, discovered at the cemetery of Ponti à Mariana (Lucciana, Corsica) in grave 24, which in terms of the glass finds is very similar to the grave unit from Zadar. This burial was also dated to the middle of the 1st century AD.¹⁹ The Corning Museum of Glass in New York also contains another complete funnel, but without provenience.²⁰

A confirmation about the dating of the glass funnels from Zadar to the middle of the 1st century AD, or in the second half of the 1st and very beginning of the 2nd centuries, can be found at sites in France,²¹ and such a dating is also confirmed by the funnel from Sirmium,²² and certainly by the three examples from Pompeii.²³ However, the glass infundibulum from Emona, which is indistinguishable in form from the above dated examples, is incorrectly dated by Plesničar Gec and Lazar to the 2nd and 3rd centuries AD.²⁴ The dating was made based on the contents of grave 588, which included the funnel. The grave assemblage, however, does not offer sufficient elements for so late a date.

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In conclusion, it can be concluded that in Roman Iader (or in the Zadar region), 7 complete glass funnels have been discovered, while only some ten examples are known from the rest of the Empire. There could be many reasons for such an abundance of finds. If this is not a result of a poor state of investigation or a small number of publications, the quantity of funnels and the exceptionally large amount of glass material found at the cemetery of Roman Za-

17 MAGICHE TRANSPARENCE, 1999, kat. 126, str. 136, 195-198, tab. 8-10.

18 V. ARVEILLER-DULONG, M. D. NENNA, 2005, II, 44, tab. 7, kat. 37.

19 D. FOY, M. D. NENNA, 2001, 136-137.

20 D. WHITEHOUSE, 1997, 203, kat. 354.

21 Vidi bilj. 15. i 16; C. ISINGS, 1957, 92, forma 74.

22 V. DAMEVSKI, 1976, 65; V. ŠARANNOVIĆ-SVETEK, 1986, 64, 103; A. M. RUŽIĆ, 1994, tip 9/1, tab. 42,1, kat. 1136, str. 94.

23 C. ISINGS, 1957, forma 74, 92,

24 L. PLESNIČAR-GEC, 1972, tab. 135: 13, str. 101; I. LAZAR, 2004, kat. 39, 60. Uvidom u grobnu cjelinu 588, smatram da ukop nije moguće datirati u 3. st. po Kr. Stoga se i ovaj *infundibulum* s nekropole Emone uklapa u kronološku shemu dosadašnjih nalaza i treba ga datirati u 2. st. po Kr.

17 MAGICHE TRANSPARENCE, 1999, cat. 126, pp. 136, 195-198, Pl. 8-10.

18 V. ARVEILLER-DULONG, M. D. NENNA, 2005, II, 44, Pl. 7, cat. 37.

19 D. FOY, M. D. NENNA, 2001, 136-137.

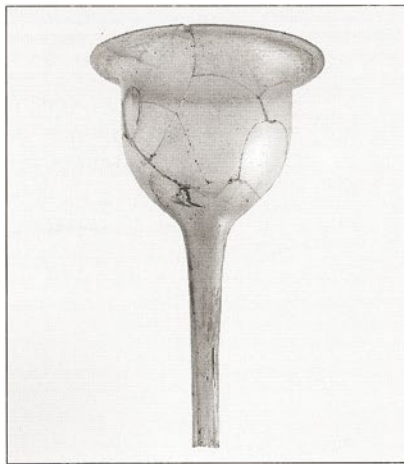
20 D. WHITEHOUSE, 1997, 203, cat. 354.

21 See notes 15 and 16; C. ISINGS, 1957, form 74, 92.

22 V. DAMEVSKI, 1976, 65; V. ŠARANNOVIĆ-SVETEK, 1986, 64, 103; A. M. RUŽIĆ, 1994, type 9/1, Pl. 42,1, cat. 1136, p. 94.

23 C. ISINGS, 1957, form 74, 92.

24 Lj. PLESNIČAR-GEC, 1972, Pl. 135: 13, p. 101; I. LAZAR, 2004, cat. 39, 60. After examining grave assemblage 588, I consider that the burial cannot be dated to the 3rd century AD. Hence this infundibulum from the cemetery of Emona fits into the chronological scheme of the finds to the present, and should be dated to the 2nd century AD.



1



2



3



4



5



6

SL. 10. / FIG. 10.

Dosadašnji nalazi staklenih lijevaka (1-2: Murano – Zadar;
3-6: T. C. Relja gr. 35, 125, 171, 181).

Currently known glass funnels (1-2: Murano – Zadar;
3-6: Relja Shopping Center gr. 35, 125, 171, 181).

pisuje se i proizvodnja staklenih lijevaka. U sagledavanju takva stanja očito je da je antički Jader i širi prostor oko njega (*Asseria*, *Aenona*, *Argyruntum* pa i *Scardona*) pokazatelj posebno senzibiliziranog područja za staklene proizvode. No upravo su možda nalazi brojnih staklenih lijevaka koji služe za pretakanje a ne za pohranu različitih tekućina, kao posve specifičan i rijedak oblik slobodno puhanog staklenog posuđa, na ovom prostoru rezultat aktivnosti prerade aromatičnog i ljekovitog bilja. Takvoj pretpostravci svakako ide u prilog i brojnost nalaza ostalih staklenih oblika, ali i postojanje lokalne staklarske radionice (ili lokalnih radionica). Stoga potreba za staklenim proizvodima općenito, pa tako i za lijevcima, s obzirom da je staklo veoma neutralno na sadržaje koji se u njemu pohranjuju, ima svoje uporište u aktivnostima izrade različitih

dar offer above all an insight into the very extensive trade contacts of this part of the province of Dalmatia with the other regions of the Roman Empire. In terms of this, analyses of the glass products from the Zadar region carried out to the present have confirmed very numerous forms imported from the eastern Mediterranean, and the production of glass funnels has been attributed to the eastern glass workshops. Considering such a situation, it is evident that Roman Iader and the broader region surrounding it (*Asseria*, *Aenona*, *Argyruntum*, and also *Scardona*) exhibited a distinctive sensibility in terms of glass products. But, perhaps the finds of numerous glass funnels that serve for transferring and not storing various liquids, as a quite specific and rare form of free-blown glass vessels, was the result in this region of activities in the processing of aromatic and medicinal herbs. Such a hypothesis would certainly be supported by the abundance of finds of other forms of glass, but also the existence of one or more local glass workshops. Thus the need for glass products in

farmaceutskih pripravaka. Dakle, količina lijevaka i iznimno velike količine staklene robe pronađene na nekropoli antičkog Zadra, ali i njegove okolice, pružaju spoznaje o veoma bogatim trgovačkim kontaktima ovog dijela provincije Dalmacije s ostalim krajevima Rimskoga Carstva te osnažuju dosadašnje tvrdnje o postojanju lokalne staklarske radionice.

Ovaj posve specifičan i rijedak oblik slobodno puhanog staklenog posuđa, koji služi za pretakanje različitih tekućina, na osnovu najnovijih nalaza moguće je datirati u drugu polovinu 1. st. po. Kr.

Fotografije: Ivo Fadić

general, and hence also for funnels, considering that glass is very neutral in terms of the contents stored in it, would be based in activities producing various pharmaceutical preparations. Thus, the quantities of funnels and the exceptionally large amounts of glass material found at the cemetery of ancient Zadar, and also in its vicinity, offer insights into the very extensive trade contacts of this part of the province of Dalmatia with the other regions of the Roman Empire, and reinforce previous claims about the existence of a local glass production center.

This quite specific and rare form of free-blown glass vessels, which serves to transferring various liquids, can be dated on the basis of the most recent finds to the second half of the 1st century or in the 2nd century AD.

Photos: Ivo Fadić

Translation: Barbara Smith-Demo

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