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SADRŽAJ
CONTENTS

(PERI)URBANO VRTLARSTVO U SALONI? O NALAZU *OLLAE PERFORATAE* U SALONITANSKOME *URBS ORIENTALIS* U KONTEKSTU VRTLARSTVA NA ISTOČNOME JADRANU U RIMSKOME RAZDOBLJU

(PERI)URBAN GARDENING IN SALONA? ON THE DISCOVERY OF *OLLAE PERFORATAE* IN SALONITAN *URBS ORIENTALIS* IN THE CONTEXT OF GARDENING ON THE EASTERN ADRIATIC IN THE ROMAN PERIOD

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U radu se raspravlja o šupljim posudama pronađenima tijekom zaštitnih istraživanja na trasi plinovoda u Solinu, a koja je zahvatila istočni dio antičke Salone (*urbs orientalis*). Posude se karakteriziraju tipološki i funkcionalno te se na temelju analogija identificira njihovo korištenje u hortikulturi ili voćarstvu, odnosno interpretira ih se kao *ollae perforatae* funkcionalne u presađivanju i transportu biljaka. Uzimajući u obzir topografiju područja nalaza unutar (pri)gradskoga rastera Salone, na temelju ovih posuda raspravlja se o mogućim asocijacijama pretpostavljenoga hortikulturnoga prostora s ranijim arhitektonskim nalazima. S obzirom na unikatnost takvih posuda u salonitonskome, ali i širem istočnojadranskom keramičkom korpusu, te uzimajući u obzir srodne i pretpostavljene indikatore antičke hortikulture, one se smještaju u širu raspravu o vrtlarstvu u rimskome razdoblje na tomu području te o društvenim praksama i širim implikacijama koje prate uspostavu i korištenje rimskih vrtova te njihovo ideološko i identitetsko značenje kao kulturnih krajolika.

KLJUČNE RIJEČI: istočni Jadran, provincija Dalmacija, Salona, *ollae perforatae*, rimski vrt, vrtlarstvo u antici, kulturni krajolik

The paper discusses several perforated vessels found during rescue excavations on the route of the gas pipeline in Solin, laid within the eastern part of ancient Salona (*urbs orientalis*). The vessels are typologically and functionally characterized and their use in horticulture or pomiculture is identified based on analogies, i.e. they are interpreted as *ollae perforatae* functional in transplanting and transporting plants. Taking into account the topography of the area where they were found within the (sub)urban grid of Salona, the assumed horticultural space as identified on the bases of these vessels is discussed in association with earlier architectural finds. Due to the uniqueness of such vessels in the Salonitan and wider East Adriatic pottery corpus, and considering the related and assumed indicators of ancient horticulture, these objects are placed in a wider discussion on gardening in the Roman period in that area, including the social practices and wider implications that follow the establishment and use of Roman gardens, and their ideological and identity significance as cultural landscapes.

KEY WORDS: Eastern Adriatic, Dalmatia province, Salona, *ollae perforatae*, Roman garden, gardening in antiquity, cultural landscape

Uvod

Od kasno republikanskoga, a posebno Augustova doba u rimskome se svijetu posebna pažnja počinje posvećivati kultiviranim krajolicima (Littlewood 2018: 246; Tally-Schumacher 2022: 164–165), kako u konkretnom smislu uređenja javnih i privatnih (ruralnih i urbanih) vanjskih prostora (npr. Pollard 2009), tako i u djelima antičkih autora (von Stackelberg 2009: 10–16), posebno onih aktivnih u 1. st. po. Kr. te u likovnoj umjetnosti, prvenstveno zidnome slikarstvu (Carroll 2015: 533).

Introduction

From the late Republican, and especially the Augustan era, in the Roman world special attention began to be paid to cultivated landscapes (Littlewood 2018: 246; Tally-Schumacher 2022: 164–165), both in the concrete sense of arranging public and private (rural and urban) outdoor spaces (e.g. Pollard 2009), as well as in the works of ancient authors (von Stackelberg 2009: 10–16), especially those active in the 1st century AD, and in fine arts, primarily wall painting (Carroll 2015: 533). In this context, the works of

U tome kontekstu prednjače dijela Plinija Mlađeg te Statia, koji pružaju uvid u vrtna rješenja aristokratskih ruralnih imanja kroz glorificiranje *otiuma*, opravdanje životnoga stila rimske aristokracije u kojem se isprepleću politička aktivnost i „intelektualni odmor" (Myers 2005: 103–104; 2018: 258; drugi antički autori taj životni stil pak kude, npr. Tally-Schumacher 2022: 168–169). U brojnim književnim dijelima vrtovi, dakako uz same rezidencijalne komplekse, postaju realna i figurativna mjesta kroz koja se komuniciraju društveno-političke i literarne poruke, kao i mjesta isprepletanja prirode i umjetnosti, bilo krajobrazne bilo književne (Myers 2005: 105–106; 2018: 258), dok su im raniji autori isticali proizvodni i aspekt profita (što se očituje i kroz najranije rimske izvore, usp. von Stackelberg 2009: 10–12). Popularnost toga trenda očituje se u njegovu širokom prihvaćanju, odnosno moguće i početnome nastajanju u najužem krugu rimske vlasti i samome carskome miljeu (von Stackelberg 2009: 12; Tally-Schumacher 2022: 164–165, 169), u kojemu se vrtlarstvo i kasnije nastavlja koristiti višeznačno, a egzotični biljni importi poprimaju dodatnu ideološku vrijednost u iskazivanju imperijalne moći (Pollard 2009: 325–326). Uređeni krajolici i vrtovi višeznačni su simboli samodostatnosti, moći i luksuza, umjetnosti i ukroćene divljine (Myers 2018: 259). Vrtovi, za razliku od drugih oblika „kultivirane" prirode, kao omeđene i planirane površine izdvajaju se i odvajaju od okoliša, postajući jedinstveni konceptualni objekti višeslojnoga značenja (von Stackelberg 2009: 12; Austen 2023: 2–3). Upravo dijela antičkih autora pružaju iznimno podrobne opise prvenstveno aristokratskih vrtova i raznolikosti, često egzotičnih, uvezenih, biljnih vrsta (Myers 2005; Pollard 2009: 324–325, 327–328; Macaulay-Lewis 2010; Littlewood 2018; Tally-Schumacher 2022: 168), dok arheološki nalazi, posebno oni iz Pompeja i Herkulana, pružaju uvid u konkretnu organizaciju različitih tipova rasadnika, urbanih vrtova i općenito urbanih zelenih površina (Ciarallo, Mariotti Lippi 1993; Carroll 2015: 533–534 s ranijom literaturom; Van der Veen 2018: 59–60; vidi i literaturu citiranu niže) te, iako tek preliminarno, u ulogu vrtova te pojedinih vrtnih biljnih rješenja u društvenoj samoreprezentaciji (Simelius 2022: 215, 220–221; Tally-Schumacher 2022: 168). Vrtovi su stoga, kao i krajolici općenito, aktivni kreatori identiteta (Austen 2023: 4).

Pliny the Younger and Statius stand out, providing an insight into the garden solutions of aristocratic rural estates through the glorification *of otium*, the justification of the lifestyle of the Roman aristocracy in which political activity and "intellectual rest" are intertwined (Myers 2005: 103–104; 2018: 258; other ancient authors criticized this lifestyle, e.g. Tally-Schumacher 2022: 168–169). In numerous literary works gardens, along with the residential complexes themselves, became real and figurative places through which socio-political and literary messages are communicated, as well as places of interweaving of nature and art, whether landscape or literary (Myers 2005: 105–106; 2018: 258), while earlier authors emphasized their production and profit aspects (which is also evident in the earliest Roman sources, cf. von Stackelberg 2009: 10–12). The popularity of this trend is reflected in its wide acceptance, i.e. possibly its initial emergence in the innermost circle of the Roman government and the imperial milieu itself (von Stackelberg 2009: 12; Tally-Schumacher 2022: 164–165, 169), in which gardening continued to be used ambiguously further on, and exotic plant imports took on an additional ideological value in the expression of imperial power (Pollard 2009: 325–326). Cultivated landscapes and gardens are ambiguous symbols of self-sufficiency, power and luxury, art and tamed wilderness (Myers 2018: 259). Unlike other forms of "cultivated" nature, gardens stand out and are separated from the environment as demarcated and planned areas, becoming unique conceptual objects of multi-layered meaning (von Stackelberg 2009: 12; Austen 2023: 2–3). Some ancient authors provide extremely detailed descriptions of primarily aristocratic gardens and the variety of, often exotic, imported plant species (Myers 2005; Pollard 2009: 324–325, 327–328; Macaulay-Lewis 2010; Littlewood 2018; Tally-Schumacher 2022: 168). Archaeological finds, especially those from Pompeii and Herculaneum, provide insight into the specific organization of different types of nurseries, urban gardens and urban green spaces in general (Ciarallo, Mariotti Lippi 1993; Carroll 2015: 533–534 with earlier literature; Van der Veen 2018: 59–60; see also the literature cited below) and, although only preliminary, into the role of gardens and individual garden planting solutions in social self-representation (Simelius 2022: 215, 220–221; Tally-Schumacher 2022: 168). Gardens are therefore, like landscapes in general, active creators of identity (Austen 2023: 4).

Antički kultivirani krajolici, a posebno vrtovi, na području istočnoga Jadrana, prvenstveno provincije Dalmacije, rijetko su obrađivana tema, uglavnom zbog nedostatka arheoloških izvora koji bi o njima obimnije svjedočili. Ipak, pojedini novi nalazi, interdisciplinarni podaci te pregled ranijih istraživanja mogu pružiti novo, iako za sada još uvijek preliminarno viđenje rimskih vrtova na tomu prostoru. Krećući od triju sigurnih nalaza specifičnih posuda iz Salone,[1] u radu se raspravlja o dosad zabilježenim dokazima o (mogućem) postojanju antičkih vrtova na istočnome Jadranu te ih se konceptualno sagledava kroz društvenu ulogu vrta, vrtlarstva i krajobrazne arhitekture.

Kontekst salonitanskih nalaza

Tijekom zaštitnih istraživanja 2016. i 2017. godine na trasi plinovoda u ulici Stjepana Radića u Solinu (za istraživanja vidi Nađander, Cambi 2017; Jerončić et al. 2018; Jerončić, Markovac 2019), otkrivene su posude s kružnim otvorima na stijenkama i u dnu. Istražni rov u kojem su one pronađene pratio je protezanje ulice Stjepana Radića koja danas prolazi kroz istočni dio salonitanskoga *urbs orientalis* te je tako presjekao različite prostore koji su gradnjom novoga bedema oko 170. godine postali dijelom istočnoga proširenja grada (Jeličić Radonić 2006; 2014: 19–20). Posude su pronađene unutar kvadranta 17 iskopa, u sloju 629 nedaleko ostataka antičke arhitekture, međutim za bolje sagledavanje mjesta nalaza potrebno je promotriti nešto širi prostor (sl. 1).

Arhitekturu u kvadrantu 17 moguće je povezati uz druge nalaze zidova čije protezanje počine 80-ak metara južnije od gradskih vrata – Porta Andetria – te se jednako toliko proteže prema jugozapadu (Jerončić, Nađander 2020: 131). Sam kontekst ovih nalaza smješta se između dvaju antičkih zidova (SJ 593 i 596), ispod jedne od dokumentiranih podnica (SJ 594) te je presječen ukopom za antičku vodovodnu cijev pronađenu *in situ*. Južnije od zida SJ 596, u kvadrantima 18 i 19 utvrđeni su zidovi SJ 599 i 570 koji bi mogli tvoriti, ukoli-

1 U Arheološkom muzeju Split posude su inventirane sa slijedećim inv. br.: AMS 74180, AMS 74265, AMS 74266, dok su u terenskoj dokumentaciji vođene kao PN 851. Uz cjelovitije sačuvane primjerke prisutno je još jedno dno s većim otvorom. Tri su posude preliminarno objavljene u Konestra 2019: 43, kat. br. 34, 34a, 34b.

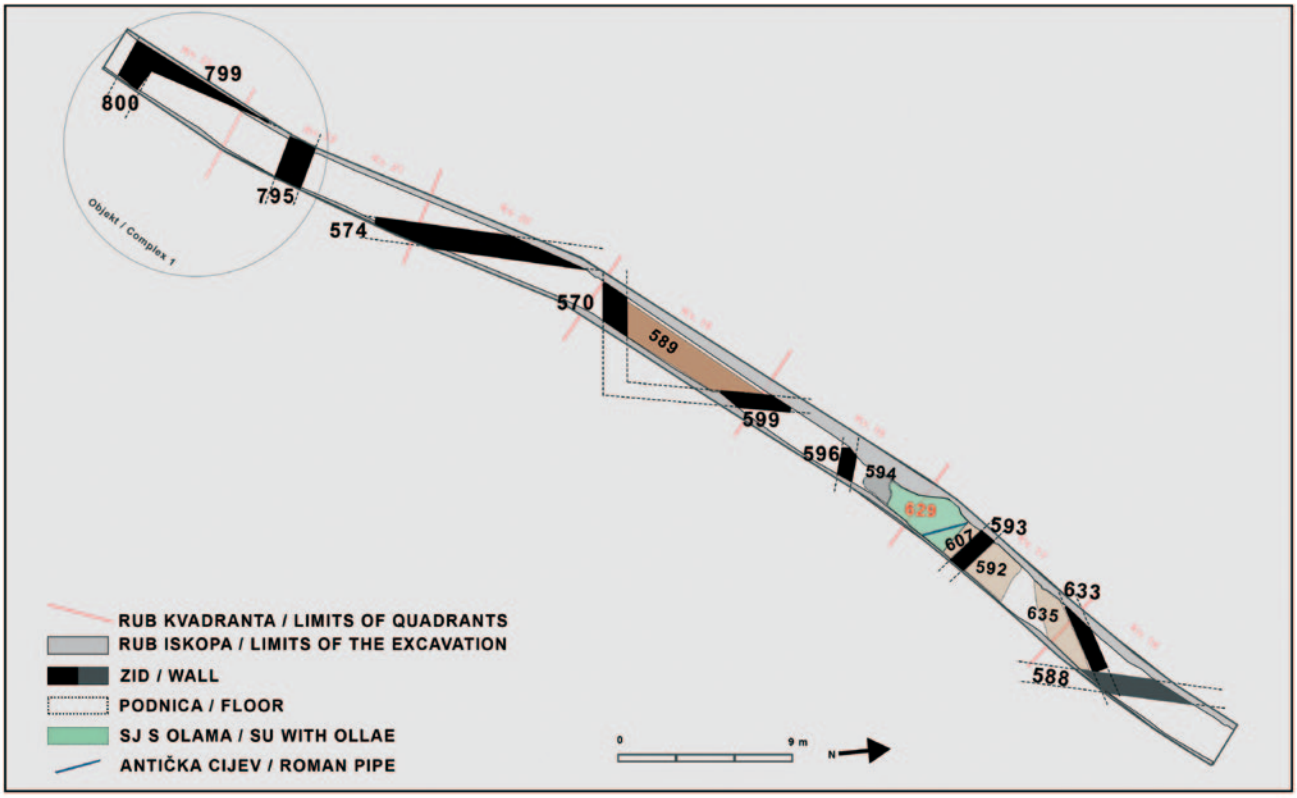
In the area of the eastern Adriatic, primarily in the province of Dalmatia, Roman cultivated landscapes, and especially gardens, are a rarely treated research topic, mainly due to the lack of archaeological sources that would testify about them more extensively. Nevertheless, some new finds, interdisciplinary data and a review of earlier research can provide a new, although for now still preliminary view of the Roman gardens in that area. Starting from three certain finds of specific vessels from Salona,[1] the paper discusses the evidence recorded so far about the (possible) existence of ancient gardens on the eastern Adriatic and conceptually assesses them through the social role of the garden, gardening and landscape architecture.

Salona find-spot context

During rescue excavations conducted in 2016 and 2017 on the gas pipeline route in Stjepana Radića Street in Solin (for research see Nađander, Cambi 2017; Jerončić et al. 2018; Jerončić, Markovac 2019), pottery vessels with circular openings on the walls and bottom were discovered. The trench in which they were found followed the layout of Stjepana Radića Street, which today runs through the eastern part of Salona's *urbs orientalis* and thus cuts through different spaces that became part of the eastern extension of the Roman city with the construction of a new rampart around 170 AD (Jeličić Radonić 2006; 2014: 19–20). The vessels were found within quadrant 17 of the excavation, in layer SU 629 not far from remains of ancient architecture. However, for a better understanding of the location of the finds, it is necessary to observe a slightly wider area (Fig. 1).

It is possible to connect the architecture in quadrant 17 with other finds of walls whose extension begins about 80 meters south of the city gate – Porta Andetria – and extends just as far to the southwest (Jerončić, Nađander 2020: 131). The context of the finds is located between two ancient walls (SU 593 and 596), under one of the documented floors (SU 594) and is intersected by a cut for an ancient water pipe found *in situ*. South of wall SU 596, in quadrants 18 and 19, walls SU 599 and 570 were established which, if

1 In the Archaeological Museum of Split, vessels are inventoried with the following inv. no.: AMS 74180, AMS 74265, AMS 74266, while in the field documentation they are listed as PN 851. In addition to more fully preserved specimens, there is another bottom with a larger opening. Three vessels were preliminarily published in Konestra 2019: 43, cat. no. 34, 34a, 34b.



Sl. 1 – Segment iskopa zaštitnoga istraživanja na trasi plinovoda u Solinu sa širom zonom unutar koje su pronađene *ollae perforatae* (Kv. 17) (Jerončić et al. 2019: prilog 14, uz dozvolu; doradila: A. Konestra)
Fig. 1 – Segment of the protective excavation on the route of the gas pipeline in Solin with a wider zone within which the *ollae perforatae* were found (quadrant 17) (Jerončić et al. 2019: attachment 14, with permission; edited by: A. Konestra)

ko se pretpostavi njihovo spajanje pod pravim kutom istočnije, izvan istraženoga prostora, jedan objekt/prostoriju, posebno s obzirom da se između njih proteže istovjetna podnica (SJ 569) (Jerončić et al. 2019: 26).[2] Odnos sa zidom SJ 596 nedostaje, no zbog smjera protezanja prije bi bio poveziv s opisanim zidovima, nego sa sjevernijim SJ 593. Potonji je eventualno poveziv s ostacima zida SJ 633, posebno ukoliko se podnica SJ 592 u nekome trenutku protezala sve do njega, iako se uz SJ 593 javlja druga, dublje postavljena podnica SJ 635, stoga je kronološka istovjetnost upitna. Ukoliko je tomu tako, onda bi prostor gdje su pronađene posude mogao biti površina između dvaju objekata. Južnije se proteže još jedna struktura položena uzdužno (SJ 574, za koju nije isključena veza sa SJ 570) te južno od nje tri strukture definirane kao Objekt 1

it is assumed that they join at right angle further east outside the investigated area, could form one building/room, especially considering that the same floor (SU 569) stretched between them (Jerončić et al. 2019: 26).[2] The relationship with wall SU 596 is missing, but due to the direction of its extension, it should rather be connected to the described walls, than to the more northerly SU 593. The latter is possibly connected to the remains of wall SU 633, especially if the floor SU 592 at some point extended all the way to it, although next to SU 593, there is another, deeper floor SU 635, therefore their chronological identity is questionable. If this is the case, then the area where the vessels were found could be an area located between two buildings. Further south, there is another structure laid longitudinally (SU 574, for which a connection with SU 570 is not excluded) and to the south of it three structures

2 Za opis situacije korišteni su i prilozi uz stručno izvješće: Jerončić et al. 2019: Prilozi 13–15 te Popis stratigrafskih jedinica, na kojima se temelji dio iznesenih opaski, a koje je ljubazno ustupila tvrtka Kaukal d.o.o.

2 Attachments to the excavation report were also used to describe this situation: see Jerončić et al. 2019: Appendices 13–15 and List of stratigraphic units, on which part of the presented remarks are based, and which were kindly provided by the company Kaukal d.o.o.

(SJ 795, 799, 800). Najsjeverniji zid na ovome području SJ 588 preslojio je SJ 633 te je građen bez veziva, stoga po svoj prilici pripada nekoj kasnijoj fazi.

S obzirom na opseg istražene površine, koja je širinom ograničena na rov za postavljanje plinovoda, vrlo je nezahvalno detaljnije interpretirati sam položaj nalaza, no moguće je da se u jednome vremenskom razdoblju radilo o vanjskome prostoru. Naime, ispod podnice koja je u jednome trenutku preslojila dio ranijih slojeva, mahom su dokumentirani slojevi glinastoga sedimenta s primjesama žbuke i gara (Jerončić et al. 2019: Popis stratigrafskih jedinica), koji ne bi govorili u prilog slojevima nastalima naseobinskim, kućnim aktivnostima.

Samo se područje iskopa smješta stotinjak metara jugozapadno od sklopa gradskih vrata Porta Andetria, odnosno u sam sjeveroistočni kut *urbs orientalis*, nedaleko njegova istočnoga bedema te po svoj prilici tek neznatno južnije od istočne nekropole koja se ovim prostorom protezala u smjeru Porta Andetria (Cambi 1986: 76–86; Miletić 1992; Turković, Maraković 2017: 43–44; vidi i Cambi 1991: 23) te dvadesetak metara od Venerina hrama (Jeličić-Radonić 2011; 2014: 24; Jerončić, Markovac 2019: 15; Jerončić, Nađander 2020: 131). Na tomu širem području, lokalnoga naziva Bilankuša, a posebno istočno od ulice Stjepana Radića, 60-ih su godina 20. stoljeća istraženi ostaci različitih arhitektonskih sklopova, po svoj prilici javne i stambene namjene (Oreb 1969a; 1969b; Piplović 2012 s ranijom literaturom) (sl. 2). Može se stoga pretpostaviti da su istraživanjima za potrebe plinovoda zahvaćeni kako javni tako i privatni sklopovi, a osim toga južnije su istraženi i segmenti ceste, uređene obale Jadra, dio termalnoga kompleksa i niz drugih (sub)urbanih struktura.

Osim ovdje obrađenih posuda, u samome je sloju 629 pronađena nekolicina keramičkih i staklenih nalaza, od kojih je moguće izdvojiti ulomke sive keramike tankih stijenki sjeveroitalskoga porijekla, istočne sigilate B, afričkog kuhinjskog posuđa (kaserola Hayes 23) te disk uljanice tipa *firmalampen*.[3] Svi bi

were defined as Complex 1 (SU 795, 799, 800). The northernmost wall in this area, SU 588 overlaid SU 633 and was built without binder, so it probably belongs to a later phase.

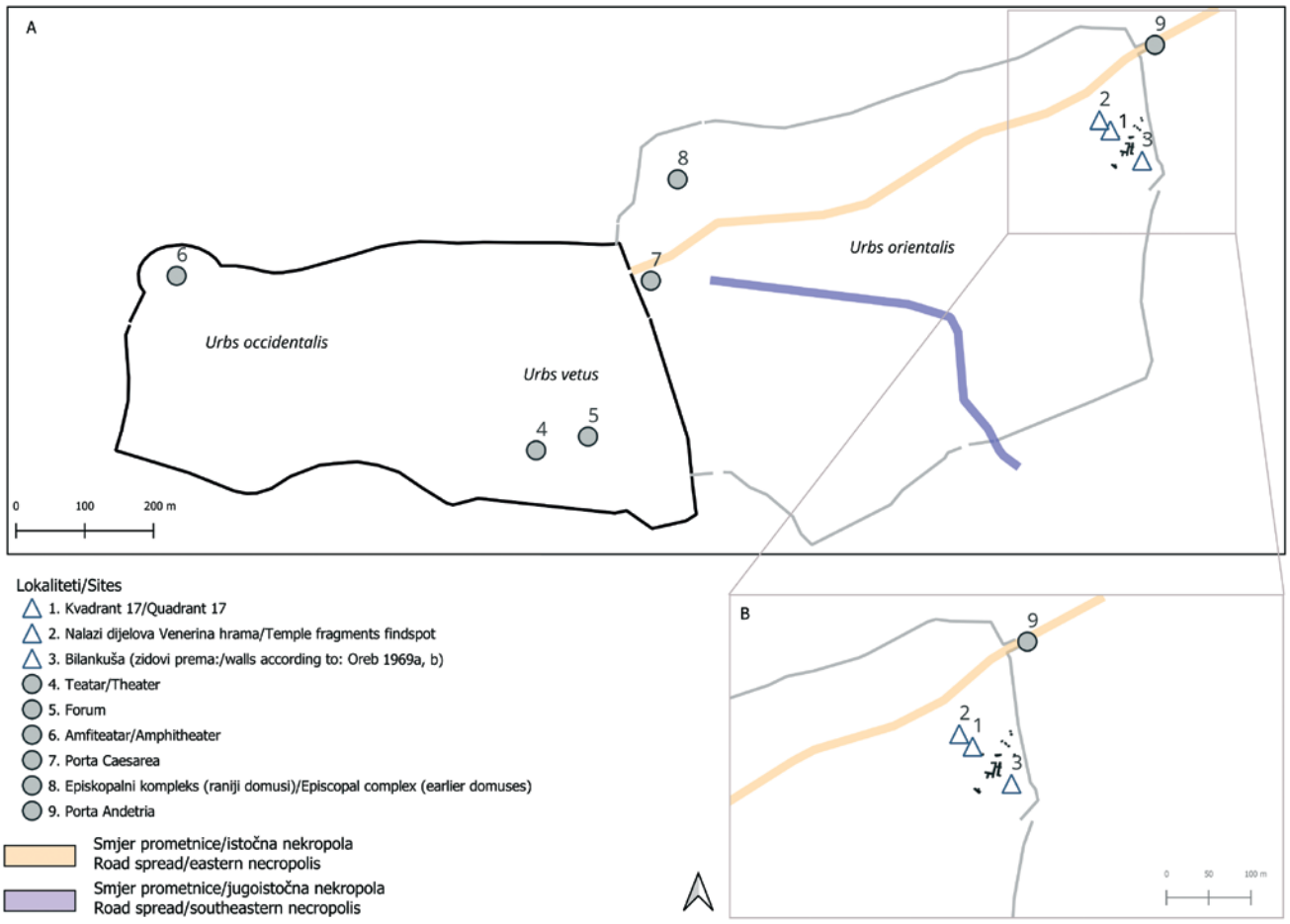
Considering the extension of the investigated area, limited in width to the trench for laying the gas pipeline, it is difficult to interpret the location of the finds in more detail, but it is possible that at a certain point it was an outdoor area. Namely, under the floor, which at one point overlaid part of the earlier layers, layers of clayey sediment with admixtures of plaster and charcoal were mostly documented (Jerončić et al. 2019: List of stratigraphic units), which would not speak in favour of layers created by domestic activities.

The excavation area is located some hundred meters from Porta Andetria city gates, that is, in the very northeast corner of Salona's *urbs orientalis*, not far from its eastern rampart and, in all probability, only slightly south of the eastern necropolis that stretched through this area in the direction of Porta Andetria (Cambi 1986: 76–86; Miletić 1992; Turković, Maraković 2017: 43–44; see also Cambi 1991: 23) and about twenty meters from the temple of Venus (Jeličić-Radonić 2011; 2014: 24; Jerončić, Markovac 2019: 15; Jerončić, Nađander 2020: 131). In that wider area, locally known as Bilankuša, and especially east of Stjepana Radića Street, in the 60s of the 20th century, the remains of various architectural complexes, probably of public and residential use, were explored (Oreb 1969a; 1969b; Piplović 2012 with earlier literature) (Fig. 2). It can therefore be assumed that both public and private structures were affected by the excavations for the gas pipeline, and in addition to that, road segments, landscaped banks of the Jadro river, part of a thermal complex and a number of other (sub)urban structures were also investigated further south.

In addition to the vessels dealt with here, a few pottery and glass finds were found in layer SU 629 as well, from which it is possible to single out fragments of grey thin-walled ware of northern Italian origin, Eastern sigillata B, African cooking ware (Hayes casserole 23) and the disc of a *firmalampen*.[3] All these finds would support the dating of the formation of the layer in the later 2nd

3 Autorica je 2019. godine za potrebe izložbe *Salona iza Porta Andetria. Arheološka istraživanja u ulici Stjepana Radića u Solinu* provela preliminarnu obradu svih nalaza keramičkoga posuđa sa zaštitnih istraživanja trase plinovoda u ulici Stjepana Radića u Solinu (vidi Konestra 2019). Na pozivu i mogućnosti obrade nalaza zahvaljujem Arheološkom muzeju u Splitu (AMS) i mr. sc. Damiru Kliškiću njegovome tadašnjem ravnatelju. AMS-u i muzejskoj savjetnici Emi Višić-Ljubić zahvaljujem na mogućnosti daljnje obrade i objave nalaza.

3 For the purposes of the exhibition *Salona iza Porta Andetria. Arheološka istraživanja u ulici Stjepana Radića u Solinu* the Author has carried out preliminary processing of all pottery finds from the protective research of the gas pipeline route in Stjepana Radića Street in Solin (see Konestra 2019). I thank the Archaeological Museum in Split (AMS) and MA Damir Kliškić, its director at the time, for the invitation and the opportunity to process the finds. I would like to thank the AMS and museum advisor Ema Višić -Ljubić for the possibility of further analyses and publication of the finds.



Sl. 2 – A shematska karta antičke Salone s najznačajnijim urbanim lokalitetima; B položaj kvadranta 17 iskopa zaštitnoga istraživanja na trasi plinovoda i okolni lokaliteti (izradila: A. Konestra; QGIS 3.32.0-Lima)
Fig. 2 – A Schematic map of ancient Salona with the most significant urban localities; B position of quadrant 17 of the excavation on the gas pipeline route and surrounding sites (made by: A. Konestra; QGIS 3.32.0-Lima)

ti nalazi govorili u prilog datacije nastanka sloja u kasnijem razdoblju 2. stoljeća (odnosno nakon defunkcionalizacije navedenih posuda). Dataciju bi mogli potvrditi i, iako loše sačuvani, numizmatički nalazi iz poviših slojeva, a koji zasigurno nisu raniji od (druge polovice?) 2., odnosno 3. stoljeća.[4] Nalazi jedne gotovo cjelovite posude s kružnim otvorima (T. 1: 1), spojivih ulomaka dna i dijela tijela druge (T. 1: 2), nespojivih ulomaka ruba i stijenke te dna treće (sl. 3), te manjeg ulomka dna četvrte (T. 1: 3), mogli bi ukazivati da su predmeti pronađeni u originalnome položaju ili tek neznatno pomaknuti od mjesta gdje su prvotno korišteni.

century AD (that is, after the defunctionalisation of the mentioned vessels). The dating could also be confirmed by, although poorly preserved, numismatic finds from layers located stratigraphically above, which are certainly not earlier than (the second half?) of the 2nd or 3rd century AD.[4] Finds of an almost complete vessel with circular openings (Pl. 1: 1), joining fragments of the bottom and part of the body of a second (Pl. 1: 2), non-joinable fragments of the rim, wall and the bottom of a third (Fig. 3), and a smaller fragment of the bottom of a fourth vessel (Pl. 1: 3), could indicate that they were found in their original position or only slightly moved from the place where they were originally used.

4 Zahvale kustosici A. Marinović (AMS) koje je pružila podatke o numizmatičkim nalazima te ih je vrlo okvirno datirala, a s obzirom na njihovo loše stanje sačuvanosti. Riječ je o PN 838 (SJ 600), PN 845, 846_1, 2 (SJ 622).

4 Thanks to curator A. Marinović (AMS), who provided data on numismatic finds and dated them very tentatively, considering their poor state of preservation. These were inventoried as PN 838 (SU 600), PN 845, 846_1, 2 (SU 622).

Sl. 3 – Posuda 3 sa zaštitnoga istraživanja na trasi plinovoda u Solinu (snimio: V. Vidan, Arheološki muzej u Splitu, uz dozvolu)
Fig. 3 – Vessel 3 from the gas pipeline route research in Solin (photo by: V. Vidan, Archaeological Museum in Split, with permission)

Salonitanske *ollae perforatae* i njihova funkcija

Same pronađene posude vrlo su jednostavno oblikovane. Riječ je o zvonolikim posudama koje oblikom i dimenzijama podsjećaju na zdjelice više nego na lonce (*ollae*). Naime, visina cjelovite posude 1 iznosi približno 9 cm, promjer ruba kod posuda 1 i 2 iznosi 14 cm, dok se promjeri dna smještaju između 5,4 i 7 cm.

Rub posuda tek je neznatno stanjen i lagano izvijen, a na vanjskoj su površini stijenki vidljivi tragovi nastali oblikovanjem na kolu, kao i neznatni i vrlo nepostojani tragovi engoba. Dno je ravno i tek neznatno istaknuto, jedino je u slučaju zasebnoga ulomka dna prisutno razvidnije zadebljanje. Posude su izrađene od žućkasto-ružičaste gline bez vidljivih primjesa (iako tonalitet neznatno varira, izvjesno je da su sve posude proizvod iste radionice) i relativno su ovlaš oblikovane na kolu. Veći su nepravilni kružni otvori uparani u dna posuda (približnoga promjera 4 – 4,6 cm), a četiri nešto manja otvora u donji dio stijenki (promjer iznosi između 2

Salonitan *ollae perforatae* and their function

The vessels discovered in the above-described context are very simply shaped. These are bell-shaped vessels, whose shape and dimensions resemble bowls rather than pots (*ollae*). Namely, the height of the complete vessel 1 is approximately 9 cm, the rim diameter of vessels 1 and 2 is 14 cm, while the bottom diameters are between 5.4 and 7 cm.

The rim of the vessels is only slightly thinned and everted, and on the outer surface of the walls there are visible marks created by shaping on the wheel, as well as faint and vanishing traces of a clay slip. The bottom is flat and only slightly prominent, only in the case of a separate fragment of the bottom is there a more visible thickening. The vessels are made of yellowish-pink clay with no visible admixtures (although the tonality varies slightly, it is certain that all vessels are the product of the same workshop) and are relatively loosely shaped on the wheel. Larger, irregular circular openings were cut in the bottoms of the vessels (approximately 4–4.6

i 3,5 cm). Ostaci presavijene gline s unutarnje strane otvora posude 2 ukazuju na način izrade otvora (T. 1: 2), koji su po svoj prilici načinjeni nakon oblikovanja i početnoga sušenja posuda, odstranjujući manji kružni, nepravilni, dio gline oštrim predmetom te naknadnim poravnavanjem nastaloga reza. Probijanje otvora često bi deformiralo i cijelu stijenku posude, pa je taj dio ponekad izbočen, a ponekad utisnut u odnosu na ostatak posude. Sve to svjedoči da su ove posude izrađene imajući u vidu isključivo njihovu funkcionalnost.

Tako specifično oblikovane posude dosad nisu utvrđene u (objavljenim) korpusima keramičke građe s područja provincije Dalmacije, odnosno njenoga obalnoga dijela, no slično oblikovani predmeti poznati su iz drugih područja Carstva, a posebno su česti nalaz na području uokolo Vezuva gdje se javljaju sa specifičnom tipologijom, kao i na širem području središnje tirenske Italije (D'Amore et al. 1983: 934, Fig. 17; Messineo 1984; Macaulay Lewis 2006: Tab. 1; Parodo 2019: 691 s ranijom literaturom). Prema dosadašnjim istraživanjima takve posude uglavnom datiraju u razdoblje od pol. 1. st. pr. Kr. do polovice 2. stoljeća (Macaulay Lewis 2006: 207). Upravo su istraživanja provedena u središnjoj Italiji definitivno omogućila poistovjećivanje nalaza „šupljih posuda" s *ollae perforatae* (ili *calices perforati* – što bi više odgovaralo salonitanskim predmetima – odnosno *vasa fictilia*, Jashemski 1992: 375) koje se spominju u brojnim antički izvorima u kontekstu hortikulture i voćarstva (Macaulay Lewis 2006: 207; Parodo 2019: 691, n. 11; ali vidi i Burr Thompson 1937: 417–419). Takve posude prvenstveno karakterizira otvor u dnu najčešće izrađen prije pečenja, no nerijetko se javljaju, obično tri, a rjeđe četiri otvora i na donjem dijelu stijenki (Macaulay Lewis 2006: 207). Tipološki, *ollae perforatae* izrazito su regionalno, a ponekad i lokalno specifične i nerijetko su oblici preuzimani iz regionalno proizvođenoga utilitarnog posuđa (Macaulay Lewis 2006: 208 s ranijom literaturom), stoga se najčešće pretpostavlja njihova lokalna proizvodnja (Macaulay-Lewis 2010: 23), koja je na nekim područjima i dokumentirana nalazima iz radioničkih konteksta (npr. Burr Thompson 1937: 471; Messineo 1984: 68, 76; Jashemski 1992: 384–385; Marzano 2022: 170). No, upravo im zbog toga oblici vrlo variraju, često i na razini pojedinoga lokaliteta (Macaulay Lewis 2006: 210; usp. Jashemski 2018: Fig. 16.7A–B).

cm in diameter), and four slightly smaller openings in the lower part of the vessel walls (between 2 and 3.5 cm in diameter). The remains of folded clay on the inside of the opening of vessel 2 indicate the method of piercing of the openings (Pl. 1: 2), which were most likely made after shaping and initial drying of the vessels, by removing a smaller circular, irregular part of the clay with a sharp object and by subsequently smoothing the resulting cut. Piercing the opening would often deform the wall of the vessel, so that a part is sometimes protruding and sometimes depressed in relation to the rest of the vessel. All this proves that these vessels were made with their functionality in mind only.

So far, such specifically shaped vessels have not been identified in (published) corpuses of ceramic material from the area of the province of Dalmatia, i.e. its coastal part, but similarly shaped objects are known from other areas of the Empire, and they are especially common in the Vesuvian area where they appear with a specific typology, as well as in wider central Tyrrhenian Italy (D'Amore et al. 1983: 934, Fig. 17; Messineo 1984; Macaulay Lewis 2006: Tab. 1; Parodo 2019: 691 with earlier literature). According to previous research, such vessels mostly date back to the period between the mid-1st century BC and the middle of the 2nd century AD (Macaulay Lewis 2006: 207). It was the research carried out in central Italy that definitely made it possible to identify the finds of "perforated vessels" with *ollae perforatae* (or *calices perforati* – which would be more suitable for the Salonitan objects – that is, with *vasa fictilia*, Jashemski 1992: 375) which are mentioned in numerous ancient sources in the context of horticulture and pomiculture (Macaulay Lewis 2006: 207; Parodo 2019: 691, n. 11; but see also Burr Thompson 1937: 417–419). Such vessels are primarily characterized by an opening in the bottom, most often made before firing, but often they also bear usually three, and sometimes four openings on the lower part of the vessel walls (Macaulay Lewis 2006: 207). *Ollae perforatae* are typologically extremely regionally, and sometimes locally specific, and often their shapes derive from regionally produced common ware (Macaulay Lewis 2006: 208 with earlier literature), therefore their local production is commonly assumed (Macaulay-Lewis 2010: 23), and in some areas documented by finds from workshop contexts (e.g. Burr Thompson 1937: 471; Messineo 1984: 68, 76; Jashemski 1992: 384–385; Marzano 2022: 170). However, precisely because of this, their shapes vary greatly, often at the level of individual sites (Macaulay Lewis 2006: 210; cf. Jashemski 2018: Fig. 16.7A–B).

Pompejanske su *ollae perforatae* tako vrlo slične malim loncima (Jashemski 1974: Fig. 9; 1979: Fig. 10; Macaulay Lewis 2006), s najvećim promjerom na razini ramena i ponekad visokim rubom (npr. https://brunelleschi.imss.fi.it/giardinoantico/egar.asp?c=24677), dok su recimo primjerci s atenske Agore (Hephasteion) zvonoliki (Burr Thompson 1937: 405–406, Fig. 7–8; Burr Thompson, Griswold 1982: 11, sl. 13), poput primjeraka iz Salone, slično kao i pojedini primjerci iz Galije (Barat 1999: 141–142, Fig. 20), no u oba su komparativna slučaja posude nešto veće od salonitanskih. Pojedini detalji tehničke izvedbe primijećeni kod salonitanskih ola – poput nepravilno oblikovnih otvora ili njihova izbočenost/utisnutost u odnosu na stijenku – vidljivi su i kod nekih od navedenih komparativnih primjera.

S obzirom na specifično oblikovanje te nalaz više istovjetnih, cjeloviti(ji)h posuda u donjim slojevima istraženoga prostora kvadranta 17, salonitanske bismo posude s otvorima interpretirali kao *ollae perforatae* te stoga možemo pretpostaviti kako su i one mogle biti korištene u hortikulturi odnosno voćarstvu. Preciznije, kako saznajemo iz antičkih izvora, takve su se posude koristile za različite aktivnosti vezane uz uzgoj biljaka, odnosno za sjetvu voćki i ukrasnih stabala, vegetativno razmnožavanje biljaka tehnikom margotiranja (vidi npr. Drvodelić 2017) ili uz pomoć reznica te transport biljaka iz rasadnika (Jashemski 1979: 408; Barat 1999: 142; Parodo 2019: 692) ili čak na veće udaljenosti (Jashemski 1992: 375). Potonja je praksa po svoj prilici zabilježena na jednoj olovnoj pločici iz Nauporta koja je pratila pošiljku mladica loze zasađene u urceusima, pa iako nije sigurno radi li se u tome slučaju o prošupljenim olama ili nekom drugom obliku, ipak svjedoči o transportu biljaka u keramičkim posudama na vjerojatno većim udaljenostima (Grassl 2017: 459–464). Iako su *ollae perforatae* pronađene i u vrtovima za koje je pretpostavljena komercijalna namjena (rasadnici), posebno u Pompejima, najčešće se ipak nalaze u sklopu vrtova vila ili kućnim vrtovima (Macaulay Lewis 2006: 211) te mogu pružiti podatke o njihovoj organizaciji i oblikovanju prostora. Osim toga, ovakve su posude zabilježe i u kontekstu carskih ili privatnih urbanih vrtova (npr. u Rimu, Macaulay Lewis 2006: 214; Rea, Saviane 2020; Masi et al. 2024), sakralnih građevina (Burr Thompson 1937) te sepulkralnih parcela (posljednje u Bodel 2018; o hortikulturnom uređenju parcela vi-

Pompeian *ollae perforatae* are thus very similar to small pots (Jashemski 1974: Fig. 9; 1979: Fig. 10; Macaulay Lewis 2006), with the largest diameter at shoulder level and sometimes a high rim (e.g. https://brunelleschi.imss.fi.it/giardinoantico/egar.asp?c=24677), while examples from the Athenian Agora (Hephasteion) are bell-shaped (Burr Thompson 1937: 405–406, Fig. 7–8; Burr Thompson, Griswold 1982: 11, Fig. 13), like the ones from Salona and some examples from Gaul (Barat 1999: 141–142, Fig. 20), but in both comparative cases the vessels are slightly larger than the Salonitan ones. Certain technical details observed on the *ollae* from Salona - such as irregularly shaped openings or their protrusion/depression in relation to the vessel walls - are also visible in some of the mentioned comparative examples.

Considering the specific design and the find of several identical, complete vessels in the lower layers of the investigated area of quadrant 17, we would interpret the Salonitan vessels with openings as *ollae perforatae* and therefore we can assume that they also could have been used in horticulture and pomiculture. More precisely, as we learn from ancient sources, such containers were used for various activities related to growing plants, i.e. for sowing fruit and ornamental trees, vegetative propagation of plants using the margoting technique (see e.g. Drvodelić 2017) or with the help of cuttings, and for transporting plants from nurseries (Jashemski 1979: 408; Barat 1999: 142; Parodo 2019: 692) or even to greater distances (Jashemski 1992: 375). The latter practice was most likely recorded on a lead tablet from Nauportus that accompanied the shipment of vine saplings planted in urcei, so although it is not certain whether in this case these were perforated *ollae* or some other shape, it still testifies to the transport of plants in ceramic vessels on probably longer distances (Grassl 2017: 459–464). Although *ollae perforatae* are also found in gardens for which a commercial purpose was assumed (nurseries), especially in Pompeii, they are most often found within villa or house gardens (Macaulay Lewis 2006: 211) and can provide information about their organization and spatial design. In addition, such vessels have also been recorded in the context of imperial or private urban gardens (e.g. in Rome, Macaulay Lewis 2006: 214; Rea, Saviane 2020; Masi et al. 2024), sacral buildings (Burr Thompson 1937) and sepulchral plots (latest in Bodel 2018; on the horticultural arrangement of plots see also Purcell 1996: 124–125). Since the Greek period,

di i Purcell 1996: 124–125). Ponekad su za iste namjene, još od grčkoga razdoblja, umjesto opisanih posuda korištene reupotrebljene amfore (usp. npr. Macaulay Lewis 2006: 208, 216; Kenawi et al. 2012 i literatura citirana niže; za slikovne prikaze npr. Burr Thompson, Griswold 1982: 35, sl. 50). Analizom mjesta nalaza perforiranih posuda na različitim lokalitetima zabilježene su i njihove različite funkcije, odnosno, pretpostavljeno je njihovo korištenje za sadnju različitih vrsta biljaka odnosno stabala, a koja su ipak najčešće dokumentirana (Jashemski 1992: 382; Macaulay Lewis 2006: 215–216). Na primjer, u Pompejima su ole često pronađene uz zidove, koji su mogli pružiti zaštitu ili podlogu za espalier, posebice jer su ponekad u zidovima pronađeni i za to namijenjeni čavli (Jashemski 1992: 378–379). U tome se slučaju pretpostavlja da su se tako pretežno sadila stabla limuna ili citrona (Jashemski 1992: 382–383). U drugome, jednako čestome slučaju, kada su pronađene neposredno uz portik s kolonadama, *ollae perforatae* mogle su služiti za sadnju biljaka penjačica (Jashemski 1992: 380; Macaulay Lewis 2006: 213; Carroll 2008; usp. i Klynne, Liljenstolpe 2000: 223–225) ili cvjetnica (Messineo 1984: 71). No, osim za dekorativno bilje, kojim su u carsko vrijeme obilovali urbani vrtovi (Purcell 1996), mogle su biti korištene i za propagaciju ekonomski isplativijih kultura, kao što svjedoči nalaz iz Nauporta – dakle, njihov nalaz ne može *a priori* identificirati namjenu vrta unutar kojeg su nađene, već je za to potrebno sagledati i okolni prostor, a posebno arhitekturu (Macaulay Lewis 2006: 213).

Navedene analogije i funkcionalna identifikacija ovdje prikazanih posuda nedvojbeno potvrđuju da se nalazimo pred vrlo skromnim indikatorom antičkoga uzgoja biljaka (moguće stabala) na području antičke Salone. One su mogle poslužiti za presađivanje sadnica dobivenih margotiranjem ili reznicama, kojima bi otvori osiguravali dovoljnu drenažu i provjetrenost korijenja (usp. Jashemski 1979: 408). Prema W. F. Jashemski, pojedine ole iz Kampanije imaju u dnu prilično velike otvore, prevelike za drenažu, stoga je pretpostavila da su se upravo takve posude mogle koristiti za margotiranje (Jashemski 1992: 381–382), a to bi s obzirom na dimenzije otvora, mogao biti slučaj i sa salonitanskim olama. Kako bilo, ove su posude, moguće razbijene, po svoj prilici položene u zemlju zajedno s biljkom koja je u njima rasla, pružajući nam uvid u lokalno preuzimanje hortikulturne

reused amphorae have been sometimes used for the same purpose instead of the described vessels (cf. e.g. Macaulay Lewis 2006: 208, 216; Kenawi et al. 2012 and literature cited below; for pictorial representations see e.g. Burr Thompson, Griswold 1982: 35, Fig. 50). Analysis of the finds of perforated vessels at different sites allowed to identify and propose several different functions of these vessel, i.e., it was assumed that they were used for planting different types of plants or trees, the latter being nevertheless most often documented (Jashemski 1992: 382; Macaulay Lewis 2006: 215–216). For example, in Pompeii, *ollae* were often found next to walls, which could provide protection or support for an espalier, especially as sometimes nails intended for this purpose were also found in the walls (Jashemski 1992: 378–379). In this case, it is assumed that lemon or citron trees were mainly planted (Jashemski 1992: 382–383). In another, equally frequent case, when they were found right next to the colonnades of a portico, *ollae perforatae* could have been used for planting climbing (Jashemski 1992: 380; Macaulay Lewis 2006: 213; Carroll 2008; cf. also Klynne, Liljenstolpe 2000: 223–225) or flowering plants (Messineo 1984: 71). However, apart from decorative plants, which were abundant in urban gardens in imperial times (Purcell 1996), they could have also been used for the propagation of more economically profitable crops, as evidenced by the find from Nauportus – therefore, their find cannot *a priori* identify the purpose of the garden within which they were found, for that it is necessary to look at the surrounding space, especially the present architecture (Macaulay Lewis 2006: 213).

The above-mentioned analogies and the functional identification of the vessels analysed here undoubtedly confirm that we are facing a very modest indicator of ancient cultivation of plants (possibly trees) in the area of Roman Salona. They could have been used for transplanting seedlings obtained by margoting or cuttings, with the openings ensuring sufficient drainage and aeration of the roots (cf. Jashemski 1979: 408). According to W. F. Jashemski, some *ollae* from Campania have rather large openings at the bottom, too large for drainage, so she assumed that precisely such vessels could have been used for margoting (Jashemski 1992: 381–382), and considering the dimensions of the openings, that could also be the case with the *ollae* from Salona. These vessels were, probably broken, most likely placed in the ground together with the plant that grew in them, providing us with an insight into the local

prakse tipične za rimski svijet. Takvu interpretaciju, a kada se usporedi s analogijama, mogla bi potvrditi i stratigrafija. Naime, sloj u kojemu su pronađene ole opisan je kao glinasta zemlja s primjesama ugljena i drobljene žbuke (Jerončić et al. 2019: Popis stratigrafskih jedinica) u kojoj su pronađeni ulomci keramike i stakla (otpad), što je zabilježeno, na primjer, u slučaju atenskoga Hephasteiona (Burr Thompson 1937: Fig. 12) te vrta u vili Richebourg (Yvelines) na sjeveru Galije (Barat 1999: 141). Dodavanje ugljena u vrtnu zemlju posvjedočeno je i antičkim izvorima, dok bi ostale primjese mogle govoriti u prilog miješanja kućnoga otpada s gnojivom (Barat 1999: 141; Poirier 2018: 2–3; Bintliff 2023).

O salonitanskome vrtlarstvu, međutim, nije nam poznato mnogo više (usp. Grgurević 1998: 59; Grgić 2005: 80), kao što ta tema nije dosad sustavnije istraživana niti na širem prostoru antičke Dalmacije, no ono je moralo biti razvijeno posebice u kontekstu bogatijih zdanja, gdje su se vrtovi neraskidivo isprepletali s kompleksnim arhitektonskim rješenjima samih građevina te su stoga bili, poput samih arhitektonski modela, prihvaćeni i u najudaljenijim provincijama (Purcell 1996: 149; Myers 2005). Skromna iznimka jest Dioklecijanova palača, unutar koje se pretpostavljalo postojanje krovnih vrtova i *viridaria*, no ta je pretpostavka na koncu odbačena (Grgurević 1998: 58–59; Grgić 2005: 80), dok je moguće indikativna (ipak samo) anegdota o Dioklecijanovom uzgoju kupusa (usp. Basić 2017: 257, n. 54) odnosno u ponešto drukčijoj interpretaciji o njegovu vrtlarenju u kontekstu umirovljenja u Palači[5] (Maggioni et al. 2017). U kontekstu salonitanskoga vrtlarstva može se spomenuti i nalaz kosira s istih istraživanja u sklopu postavljanja plinovoda kroz Solin, a koji je interpretiran kao alatka za orezivanje stabala odnosno vinograda (Ivčević 2019: 126, kat. br. 5), međutim nije ga stratigrafski moguće povezati s kvadrantom i slojem u kojem su pronađene ole.

Mnogi korpusi *ollae perforatae* potječu iz gradskih središta, posebice ih je mnogo poznato iz pompejanskih urbanih vrtova (Jashemski 1992), ali i šire, te ruralnih i suburbanih vila.

5 Ova se anegdota nalazi kod pseudo-Aureliusa Victora, *Epitome de Caesaribus*, 39.6, djelu koje se tradicionalno smještalo u kraj 4. – početak 5. stoljeća, međutim prema posljednjim analizama po svoj se prilici radi o ranosrednjovjekovnome tekstu (pol. 7. – pol. 8. stoljeća) koji se uvelike temelji na izgubljenome kasnoantičkom izvorniku te u manjoj mjeri na pojedinim drugim izvorima (Stover, Woudhuysen 2023, za dataciju posebno str. 16–18, 37).

adoption of horticultural practices typical of the Roman world. Such an interpretation, and when compared with analogies, could also be confirmed by stratigraphy. Namely, the layer in which the *ollae* were found is described as clay soil with admixtures of charcoal and crushed mortar (Jerončić et al. 2019: List of stratigraphic units) in which fragments of ceramics and glass (waste) were found, which was also recorded, for example, at the Athenian Hephasteion (Burr Thompson 1937: Fig. 12) and the garden of the Richebourg villa (Yvelines) in northern Gaul (Barat 1999: 141). The addition of charcoal to garden soil is attested by ancient sources, while other admixtures could speak in favour of mixing household waste with fertilizer (Barat 1999: 141; Poirier 2018: 2–3; Bintliff 2023).

However, we do not know much more about Salonitan gardening (cf. Grgurević 1998: 59; Grgić 2005: 80), and even in the wider area of ancient Dalmatia this topic has not been systematically researched so far, but this practice had to be developed especially in the context of richer houses, where the gardens were inextricably intertwined with the complex architectural solutions of the buildings themselves and were therefore, like the architectural models, accepted even in the most remote provinces (Purcell 1996: 149; Myers 2005). A modest exception is Diocletian's palace, within which the existence of roof gardens and *viridaria* was assumed, but it was ultimately rejected (Grgurević 1998: 58–59; Grgić 2005: 80). Possibly indicative, though only an anecdote, is the information about Diocletian's cabbage cultivation (cf. Basić 2017: 257, n. 54) that is, in a slightly different interpretation, of his gardening in the context of his retirement in the Palace[5] (Maggioni et al. 2017). In the context of Salonitan horticulture, we can also mention the find of a billhook from the same excavation of the gas pipeline route through Solin, and which was interpreted as a tool for pruning trees or vineyards (Ivčević 2019: 126, cat. no. 5). However, it is not possible to connect it stratigraphically with the quadrant and the layer in which the *ollae* were found.

Many corpora of *ollae perforatae* originate from city centres, especially many of them are known from Pompeian urban gardens (Jashemski 1992),

5 This anecdote is found in the pseudo-Aurelius Victor, *Epitome de Caesaribus* , 39.6, a work that was traditionally dated to the end of the 4th – beginning of the 5th century AD, however according to the latest analyzes it is most likely an early medieval text (mid-7th – mid-8th century AD) which is largely based on a lost late antique original and to a lesser extent on certain other sources (Stover, Woudhuysen 2023, for dating see especially pp. 16–18, 37).

Upravo su potonje s vremenom postale idealna sjela za rimsku aristokraciju te razvoj vrtova ogromnih dimenzija kakvi su poznati u samome Rimu, a krajobrazno uređenje postalo je, posebno od Augustova doba, gotovo umjetnički izričaj – *ars topiaria* (Messineo 1984: 73–74; Tomei 1992: 921–923; Purcell 1996: 128–132; Gleason 2019; Marzano 2022: 24–26). No, takvih građevina za sada u Saloni nema istraženih, kao što je uostalom urbana stambena arhitektura Salone izrazito slabo poznata i uglavnom je istraživana prije uspostave suvremenih arheoloških metodologija. Slična je situacija i u ostalim urbanim središtima rimske Dalmacije, dijelom i zbog njihovoga kontinuiranog trajanja (Suić 2003: 270). Stoga nalaze ovih prošupljenih posuda možemo tek na temelju općih podataka o uzusu njihova korištenja drugdje, pokušati smjestiti u mogući salonitanski, odnosno širi dalmatinski kontekst. Kao što je navedeno, stratigrafija bi mogla upućivati na povezivanje ovih posuda uz raniju fazu korištenja prostora na kojem su pronađene, zasigurno raniju od jedne od podnica, a moguće i dijela ovdje istražene arhitekture (Jerončić et al. 2019: 27 i Prilozi 13–15, Popis stratigrafskih jedinica). Ipak, iako im točan položaj nalaza nije pobliže poznat, značajno je što su pronađe u blizini dvaju zidova. S obzirom na lokaciju nalaza unutar (sub)urbanoga rastera Salone nameće se nekoliko mogućnosti. U sklopu urbane stambene arhitekture različito bilje, grmlje i stabla, ukrasna ili proizvodna (poput voćki), mogli su se nalaziti, poput u Pompeijima, u stražnjem dijelu kuće, u *hortusu* (tzv. kuhinjski vrt, Jashemski 2018: 122–125) ili su u vrt mogli biti pretvoreni manji, neupotrjebljeni prostori okućnice (von Stackelberg 2009: 53). U peristilima su također mogle rasti različite biljne vrste, poput primjera iz Pompeja i Jerihona – Herodova vila, odnosno potonji su mogli biti oblikovani kao *viridaria* (Tomei 1992: 920–921 s ranijom literaturom; Jashemski 1992; Purcell 1996: 141, Fig. 53; Morvillez 2018: 20). Takvi su manji ili veći otvoreni prostori prisutni i u Dalmaciji, na primjer u samoj Saloni, Dokleji, Ninu i Zadru, gdje se uz kuće (domuse?) smještene unutar inzula ponekad prepoznaju peristili ili jednostavnija dvorišta (Sticotti 1913: 74–86; Ilakovac 1962; Wilkes 1976: 375–378; Suić 2003: 272–276; Kolega 2005: 195–196; Jeličić Radonić 2014: 58; Oettel, Živanović 2022: 68–69, Fig. 9), koja, međutim, u pravilu nisu istraživana ispod razine antičke hodne površine. Jedna takva veća stambena jedinica s većim unutarnjim dvorištem istražena je ispod episkopalnoga sklopa u Saloni,

but also more widely, and from rural and suburban villas. It was the latter that over time became the ideal *loci* for the Roman aristocracy and the development of gardens of immense sizes, such as those known in Rome, thus landscaping became, especially from the Augustan era, an almost artistic expression – *ars topiaria* (Messineo 1984: 73–74; Tomei 1992: 921–923; Purcell 1996: 128–132; Gleason 2019; Marzano 2022: 24–26). However, no such buildings have been investigated in Salona for now, as its urban residential architecture is extremely poorly known and was mostly researched before the establishment of modern archaeological methodologies. The situation is similar in other urban centres of Roman Dalmatia, partly due to their habitation continuity (Suić 2003: 270). Therefore, we can only try to place the finds of these perforated vessels in a possible Salonitanian or wider Dalmatian context based on general data on their use elsewhere. As stated, the stratigraphy could point to the connection of these vessels with an earlier phase of use of the area where they were found, certainly earlier than one of the floors, and possibly part of the architecture investigated here (Jerončić et al. 2019: 27 and Appendices 13–15, List of stratigraphic units). However, although the exact location of the finds is not known, it is significant that they were found close to two walls. Considering the location of the finds within the (sub)urban grid of Salona, several possibilities arise. As part of urban residential architecture, various plants, bushes and trees, decorative or productive (such as fruit trees), could be located, as in Pompeii, in the back part of the house, in the *hortus* (so-called kitchen garden, Jashemski 2018: 122–125) or smaller, unused areas of the courtyard could be turned into a garden (von Stackelberg 2009: 53). Various plant species could also grow in the peristyles, as indicated by the examples from Pompeii and Jericho - Herod's villa, i.e. the latter could be shaped like *viridaria* (Tomei 1992: 920–921 with earlier literature; Jashemski 1992; Purcell 1996: 141, Fig. 53; Morvillez 2018: 20). Such smaller or larger open spaces are also present in urban architecture in Dalmatia, for example in Salona itself, Doclea, Nin and Zadar, where peristyles or simpler courtyards can sometimes be recognized next to the houses (domuses?) located within insulae (Sticotti 1913: 74–86; Ilakovac 1962; Wilkes 1976: 375–378; Suić 2003: 272–276; Kolega 2005: 195–196; Jeličić Radonić 2014: 58; Oettel, Živanović 2022: 68–69, Fig. 9). However, these spaces were generally not excavated below the level of the ancient walking surface. One such larger residential unit with a larger inner courtyard

odnosno njegovih crkava, u sjeverozapadnome dijelu kasnijeg *urbs orientalis* (Wilkes 1976: 375; Turković, Maraković 2017: 44–45, Fig. 3: 3), dok se manje unutarnje dvorište javlja i kod ostalih stambenih zgrada koje su identificirane na ovome prostoru, što se najjasnije očituje kod građevine koja je kasnije adaptirana u termalni sklop (Maraković, Turković 2013: 9, bilj. 14; 2014).

Doklejska tzv. „privatna kuća" (Munro et al. 1896: 6–7; Sticotti 1913: 79–84) nedavno je reinterpretirana te je predloženo prvobitno korištenje sklopa kao beneficijarske postaje te naknadno preuređenje u rezidenciju guvernera (Oettel, Živanović 2022). U kontekstu hortikulturnoga uređenja, osim atrija (Munro et al. 1896: 6–7) i peristilnoga dvorišta (2. faza?) s hramom (ili u interpretaciju Munro i suradnika, vrta s *grottom* ili fontanom, Munro et al. 1896: 7), spominje se mogućnost postojanja vrta u zoni protezanja apside (interpretirane kao moguće niše s fontanom) još uvijek neistraženoga prostora s južne strane središnjega dijela građevine, no ostaje otvorena mogućnost interpretacije toga prostora kao dvorane za primanja (Sticotti 1913: 84; Oettel, Živanović 2022: 69). Kako bilo, peristil „privatne kuće" iz Dokleje idealno bi odgovarao kompleksnije uređenim peristilima kakvi su poznati u urbanim središtima diljem rimskoga svijeta (Sfameni et al. 2019: 94), na što posebno ukazuje ondje identificirani mali hram, pa bi se stoga, iako još uvijek nisu ničim naznačena, ondje mogla očekivati i osebujnija hortikulturalna rješenja.

Međutim, mjesto nalaza salonitanskih ola nalazi se i u neposrednoj blizini pretpostavljenoga protezanja istočne salonitanske nekropole, čiji su *horti* također mogli biti krajobrazno oblikovani (usp. Hülsen 1890: 52–55; Messineo 1984: n. 26; Jashemski 1971; Purcell 1996: 124–125; Bodel 2018). Da su i salonitanske nekropole mogle biti kompleksno uređene, svjedoče nalazi grobnih parcela te niz skulpturalnih i drugih dekorativnih kamenih elemenata. Iako se istočna nekropola dijelom nastavila koristiti i nakon gradnje istočnoga bedema u posljednjoj trećini 2. stoljeća, zamah ukapanja u njenome zapadnome dijelu bi ipak trebalo smjestiti nešto ranije, kroz 1. stoljeće (Miletić 1992; Cambi 1986: 76–86; 1991; Cambi, Matijević 2013), što bi moglo odgovarati dataciji ovih nalaza. U tomu je kontekstu posebno zanimljiv nalaz iz Nina, za sada jedini takav na istočnome Jadranu. Ondje je tijekom zaštitnih istraživanja na Ždrijacu 2016. godine istražena veća površina smještena nedaleko područja ranijih nalaza nekropola (od željeznodobnih do srednjovjekovnih),

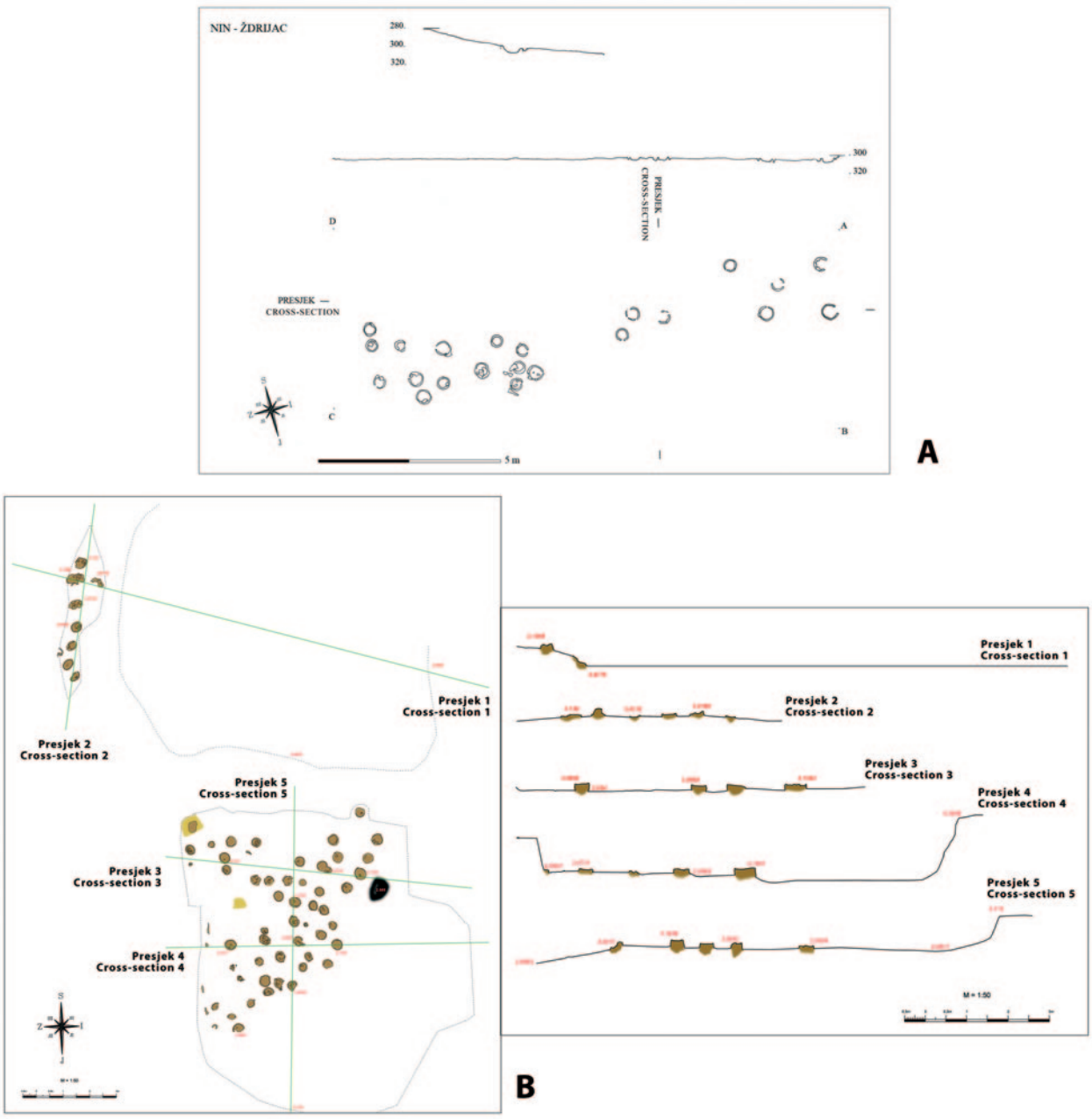
was investigated under the episcopal complex in Salona, i.e. its churches, in the northwestern part of the later *urbs orientalis* (Wilkes 1976: 375; Turković, Maraković 2017: 44–45, Fig. 3: 3), while smaller inner courtyards also occur in other residential buildings that have been identified in this area, which is most clearly evident in the building that was later adapted into a thermal complex (Maraković, Turković 2013: 9, note 14; 2014).

The so-called "private house" in Doclea (Munro et al. 1896: 6–7; Sticotti 1913: 79–84) was recently reinterpreted, and it was proposed that the complex was originally used as a beneficiarii station and subsequently converted into a governor's residence (Oettel, Živanović 2022). In the context of horticultural arrangement, the atrium (Munro et al. 1896: 6–7) and a peristyle courtyard (2nd phase?) with a temple (or in the interpretation of Munro and collaborators, a garden with *a grotto* or fountain, Munro et al. 1896: 7) have been considered, along with the possibility of the existence of a garden in the area of the apse (interpreted as a possible niche with a fountain) of the still unexplored space on the south side of the central part of the building, but the possibility of interpreting that space as a reception hall remains open (Sticotti 1913: 84; Oettel, Živanović 2022: 69). Be that as it may, the peristyle of the "private house" from Doclea would ideally correspond to the more complexly arranged peristyles known in urban centres throughout the Roman world (Sfameni et al. 2019: 94), which is especially indicated by the small temple identified there, and therefore, although they are still not securely indicated, more distinctive horticultural solutions could be expected there.

The findspot of the Salonitan *ollae* is also located in the immediate vicinity of the presumed stretching of the eastern Salonitan necropolis, whose *horti* could also have been landscaped (cf. Hülsen 1890: 52–55; Messineo 1984: n. 26; Jashemski 1971; Purcell 1996: 124–125; Bodel 2018). That the Salonitan necropolises could be complexly decorated is evidenced by the finds of grave plots and a number of sculptural and other decorative stone elements. Although the eastern necropolis partly continued to be used even after the construction of the eastern rampart in the last third of the 2nd century AD, the apex of burials in its western part should still be placed somewhat earlier, wihtin the 1st century AD (Miletić 1992; Cambi 1986: 76–86; 1991; Cambi, Matijević 2013), which could correspond to the dating of these finds. In this context, a find from Nin is particularly interesting, being so far unique in the eastern Adriatic. In 2016, during rescue excavations at the Ždrijac site, a larger area was explored, located not far from the area of earlier

unutar koje su nađene isključivo u tlo nasađene i mahom prepolovljene amfore tipa Lamboglia 2 (Taras 2020: 301–307). Slično postavljene amfore pronađene su i tijekom ranijih istraživanja na prostoru Ždrijaca (Taras 2020: 299–300) (sl. 4). Uglavnom se radi o donjim polovicama amfora (donji dijelovi trbuha i dna) i jednom primjerku gornje polovice (rame, vrat, rub i ručke; drugi primjerak vrata pronađen je unutar tijela druge

necropolis finds (dated from the Iron Age to the Middle Ages). Here, amphorae cut in half and planted in the ground were found, belonging exclusively to the Lamboglia 2 type (Taras 2020: 301–307). Similarly placed amphorae were also found during earlier research in the area of Ždrijac (Taras 2020: 299–300) (Fig. 4). Mostly the lower halves of the amphora (lower parts of the belly and bottom) were identified, with only one specimen of the upper half (shoulder, neck,



Sl. 4 – Tlocrt pronađenih ukopanih amfora na lokalitetu Ždrijac u Ninu: A kampanja 2005. godine; B kampanja 2016. godine (prema: Taras 2020: sl. 2, 9, 11; izradio: R. Maršić, ustupio Arheološki muzej Zadar, uz dozvolu; dorada: A. Konestra)
Fig. 4 – Plan of the buried amphorae found at the Ždrijac site in Nin: A 2005 campaign; B 2016 campaign (according to: Taras 2020: Fig. 2, 9, 11; made by: R. Maršić, provided by the Zadar Archaeological Museum, with permission; edited by: A. Konestra)

amfore), a ukupno je utvrđeno 70 amfora (Taras 2020: 307). S obzirom da raster protezanja amfora, ali i način na koji su položene u tlo, ne bi upućivali na njihovu funkciju u svrhu drenaže, pretpostavljeno je kako bi se moglo raditi o reupotrebi amfora za sadnju biljaka (Taras 2020: 310–315). Iako posve valjana, ova hipoteza je iznesena s rezervom zbog nepravilnoga rasprostiranja amfora i nejednakoga razmaka između njih (Taras 2020: 315–316). Međutim, smatramo da taj detalj ne mora nužno biti sporan niti presudan, naime mogao bi ukazivati na uzastopne sadnje (moguće kronološki udaljene ili ponovljenu sadnju uslijed sušenja pojedine biljke). S obzirom na položaj amfora unutar topografije antičkoga Nina, odnosno Ždrijaca, predloženo je kako bi se moglo raditi o vrtu ili hortikulturnom rješenju povezivom uz pojedine grobne parcele ili pak samu nekropolu (Taras 2020: 313–314), što nalazi analogije na nizu antičkih lokaliteta (Bodel 2018). I sama praksa reupotrebe amfora za sadnju, a koja bi prema nekim autorima osiguravala ograničenje rasta samih biljaka, također nalazi analogije i drugdje (brojni primjeri u Kenawi et al. 2012; vidi i Hidalgo 2011: 171–173; Rizzo 2018: 473–474).

Posljednja je mogućnost ona koja bi prostor nalaza salonitanskih ola sagledavala u sklopu sakralnoga, a zbog blizine hrama Venere (Jerončić et al. 2019: 24, 89). Iako su hortikulturna rješenja prostora uokolo hramova prepoznata na nizu lokaliteta (Burr Thompson 1937, posebno str. 415; Burr Thompson, Griswold 1982: 3, 6; Tomei 1992: 921; Rizzo 2018; Villedieu 2021), u ovome bismo slučaju, ukoliko su naravno posude ispravno datirane, tu mogućnost ipak trebali odbaciti. Iako to ne isključuje da se dio istražene arhitekture može na nekih način povezati s Venerinim hramom, njegova se gradnja smješta u razdoblje vladavine Dioklecijana (Jeličić-Radonić 2011), stoga je znatno kasnija u odnosu na sloj s olama.

I u rimskim izvangradskim vilama (bilo onim rustičnim ili luksuznim rezidencijalnim zdanjima) krajolik je igrao ključnu ulogu u cjelokupnome doživljaju arhitektonskoga sklopa, no ovdje su mogućnosti bile znatno šire te su obuhvaćale kako ukrasne vrtove (obično ograđene prostore), tako i gospodarski, manipulirani odnosno divlji krajolik uokolo samoga zdanja u čijemu su uređenju intervencije mogle biti znatne ili gotovo nepostojeće (Begović, Schrunk 2002: 115, 123; Macaulay-Lewis 2018: 88; vidi i niže). Ipak, s obzirom na ranije nalaze na području Bilankuše (Oreb 1969a; 1969b), čija datacija

rim and handles; the other specimen of the neck was found inside the body of another amphora), for a total of 70 amphorae (Taras 2020: 307). Given the layout of the amphorae, as well as the way they were laid in the ground, their function for the purpose of drainage is improbable, thus the researchers assumed it was a reuse of amphorae for the rear of plants (Taras 2020: 310–315). Although completely valid, this hypothesis was put forward with reservations due to the irregular distribution of the amphorae and the unequal spacing between them (Taras 2020: 315–316). However, this detail is not necessarily controversial or decisive, namely it could indicate successive plantings (possibly chronologically distant or repeated planting due to the drying of an individual plant). Considering the position of the amphora within the topography of ancient Nin, i.e. Ždrijac, it has been proposed that it could be a garden, or a horticultural solution connected to individual burial plots or the necropolis itself (Taras 2020: 313–314), which finds analogies in a series of ancient sites (Bodel 2018). The very practice of reusing amphorae for planting, which according to some authors would ensure the limitation of the growth of the plants, also finds analogies elsewhere (numerous examples cited in Kenawi et al. 2012; see also Hidalgo 2011: 171–173; Rizzo 2018: 473–474).

The last interpretational possibility for the area where the Salonitan *ollae* were found is the one that would consider it as a sacred area, due to the proximity of the Temple of Venus (Jerončić et al. 2019: 24, 89). Although horticultural solutions of the space around temples have been recognized in several localities (Burr Thompson 1937, especially p. 415; Burr Thompson, Griswold 1982: 3, 6; Tomei 1992: 921; Rizzo 2018; Villedieu 2021), in this case, of course if the vessels are correctly dated, we should still reject that possibility. Although this does not rule out that part of the investigated architecture could be connected in some way with the Temple of Venus, its construction is placed in the period of Diocletian's reign (Jeličić-Radonić 2011), therefore it is significantly later than the layer with the *ollae*.

In Roman suburban villas (whether rustic or luxurious residential buildings), the landscape played a key role in the overall experience of the architectural complex as well, but there the possibilities were much wider the within the towns, and included both decorative gardens (usually fenced areas), and economic, manipulated or the wild landscape around the building itself, in the arrangement of which interventions could be substantial or almost non-existent (Begović, Schrunk 2002: 115, 123; Macaulay-Lewis 2017: 88; see also below). Considering earlier

doduše nije posve jasna, no najbliži su mjestu na kojem su pronađene ovdje obrađene posude, salonitanske bismo *ollae perforatae* najizglednije smjestili u kontekst neke sub-urbane (stambene?) građevine, smještene nedaleko jugoistočne nekropole i nešto sjevernije od jednoga rukavca Jadra. U tome se kontekstu vrtni prostor mogao smještati uz samu građevinu, u njezinome stražnjem dijelu ili u peristilu (Morvillez 2018), no o tipologiji i uređenju toga prostora možemo za sada samo nagađati.

Društveni aspekti i antička krajobrazna arhitektura istočnoga Jadrana

Nalaz prošupljenih posuda iz istočnoga dijela salonitanskoga *urbs orientalis*, ili vjerojatnije, s obzirom na moguću dataciju, iz istočnoga suburbanog areala ranocarske Salone, smješteni su u njihov tehnološko-uporabni kontekst te su predmeti interpretirani kao *ollae perforatae* korištene u hortikulturi odnosno voćarstvu. Brojni ranije navedeni primjeri potvrđuju tu pretpostavku i omogućavaju, iako je sam kontekst nalaza izrazito oskudan, njihovo sagledavanje kroz nekoliko aspekata, a posebno onoga stvaranja kultiviranih krajolika i njihova društvenoga značenja.

Predmeti koji su ovdje obrađeni govore u prilogu planske sadnje manjih stabala (voćki) ili ukrasnih grmova, a oba je slučaja moguće povezati kako uz ekonomske aktivnosti tako i uz praksu hortikulturnoga uređena u svrhu prikazivanja (i pokazivanja) statusa i bogatstva (realnoga ili priželjkivanoga) kroz estetski prihvatljivo uređenje vlastitih posjeda. Uzimajući u obzir da su bogatstvo i status rimske elite gotovo uvijek proizlazili iz gospodarske snage obitelji odnosno pojedinca, a potonja često iz poljoprivrednih aktivnosti odnosno iskorištavanja zemljišnih posjeda, obje su prakse ustvari neraskidivo povezane, pa ukrasni vrtovi postaju aluzija na uspješnu poljoprivrednu proizvodnju i moć kontrole nad prirodom (Myers 2005: 105–106; Marzano 2022: 3). Osim toga, (sub) urbani vrtovi, ukrasni ili gospodarski orijentirani, kao mjesta doticanja ruralnoga i urbanoga (von Stackelberg 2009: 50) pružaju uvid u ponešto drukčije poljoprivredne prakse u odnosu na uzgoj monokulturnih usjeva na velikim površinama (poput loze ili masline odnosno žitarica) (Van der Veen 2014: 804–805), posebno

finds in the area of Bilankuša (Oreb 1969a; 1969b), though their dating is not entirely clear, but which are the closest to the findspot of the here dealt with vessels, the Salonitan *ollae perforatae* might most likely be placed in the context of a sub-urban (residential?) complex, located not far from the southeastern necropolis and somewhat north of a branch of the Jadro river. In this context, the garden space could have been located next to the building, in its rear part or in the peristyle (Morvillez 2018), but for now we can only speculate about the typology and arrangement of that space.

Social aspects and ancient landscape architecture of the eastern Adriatic

The discovered perforated vessels from the eastern part of Salona's *urbs orientalis*, or more likely, given their possible dating, from the eastern suburban area of early imperial Salona, were placed in their technological-use context and the objects are interpreted as *ollae perforatae* used in horticulture and pomiculture. Numerous previously mentioned examples confirm this assumption and enable, even though the context of the find is extremely uncertain, to observe them through several aspects, especially the creation of cultivated landscapes and their social meaning.

The objects discussed here are related to the planned planting of smaller trees (fruit trees) or ornamental shrubs, and both cases can be related to economic activities as well as with the practice of horticultural landscaping for the purpose of displaying (and showing off) status and wealth (real or desired) through the aesthetically acceptable organisation of one's properties. Taking into account that the wealth and status of the Roman elite almost always resulted from the economic strength of the individual or the family, and the latter often from agricultural activities or the exploitation of land holdings, both practices are in fact inextricably linked, so decorative gardens become an allusion to successful agricultural production and the power of control over nature (Myers 2005: 105–106; Marzano 2022: 3). In addition, (sub)urban gardens, ornamental or economically oriented, as places where the rural and the urban meet (von Stackelberg 2009: 50) provide an insight into somewhat different agricultural practices compared to the cultivation of monoculture crops on large areas (such as vines, olives or cereals) (Van der Veen 2014: 804–805),

iz perspektive planiranja i potrebnoga vremena do produktivnoga razvoja sadnica, a stoga i do moguće gospodarske eksploatacije usjeva i dinamike njihove komercijalizacije (Marzano 2022: 5–6).

Podaci koji bi govorili o društvenom kontekstu uzgoja vrtova na području rimske provincije Dalmacije, odnosno istočnoga Jadrana, izrazito su oskudni, prvenstveno s obzirom na malobrojnost arheoloških, a posebno arheobotaničkih pokazatelja (Reed 2016). Ipak, pojedini lokaliteti istočne obale Jadrana pružaju uvid u moguće krajobrazne i hortikulturne prakse. Tako je unutar uzorka iz luke rimske vile u uvali Verige na Velikom Brijunu u Istri utvrđeno nekoliko alohtonih vrsta voćaka poput trešnje i breskve, čije je plodove teško prenijeti iz njihovih originalnih staništa, a uvoz te potom uzgoj pretpostavlja se i za kesten te orah (Šoštarić, Küster 2001: 231). Upravo su pojedine voćke, poput trešnje ili višnje i breskve, po svoj prilici proširene carstvom kao egzotične vrste nakon rimskoga osvajanja bliskoistočnih pokrajina (Marzano 2022: 60–64, 67). Osim stabala i druge biljne vrste upućuju na postojanje vrtova povezivih uz veliku rezidenciju u uvali Verige, poput krastavca, mrkve i pojedinih začina (Šoštarić, Küster 2001: 231). Već je A. Gnirs u svojoj interpretaciji velikoga kompleksa u uvali Verige pretpostavio postojanje vrtova, kako u sklopu samih arhitektonskih cjelina, tako i uz njih. Prema tim interpretacijama, veći bi se vrt smještao na terasama istočno od rustičnoga dijela imanja, dok su manji vrtovi pretpostavljeni u sklopu zapadnoga peristila rustične vile i zapadnije od samoga kompleksa (Gnirs 1915: 112, 119–120, Fig. 54 (S)), a vrt se nalazio i uz palestru u zapadnome dijelu imanja (Schrunk, Begović 2000: 263; Bowden 2018: 382). Također, dio termalnoga sklopa (tepidarij) bio je ukrašen freskama s vrtnim prikazom (Gnirs 1915: 138).

Slično, raznovrsni i brojni karpološki nalazi čempresa u uvali Caska na otoku Pagu (Tillier et al. 2016: 391, Fig. 3), povezivi uz veliki rezidencijalno-proizvodni sklop na njezinim obalama, također govore u prilog krajobraznoga uređenja ovoga ranocarskog sklopa, a s obzirom da ta vrsta nije autohtona na istočnome Jadranu (Essert et al. 2016: 968; Tillier et al. 2016: 391). Čempresi su ovdje mogli biti korišteni kao ukrasno drveće u rezidencijalnome kompleksu ili, eventualno, u sklopu nekropole (Tillier et al. 2016: 391; usp. Matterne, Derreumaux 2008: 109; za nekropolu vidi Kurilić, Serventi 2018).

especially from the perspective of planning and the time required for the productive development of seedlings, and therefore also for the possible economic exploitation of crops and the dynamics of their commercialization (Marzano 2022: 5–6).

Data that would speak about the social context of growing gardens in the Roman province of Dalmatia, i.e. the eastern Adriatic, are extremely scarce, primarily due to the small number of archaeological and especially archaeobotanical indicators (Reed 2016). Nevertheless, some sites on the eastern coast of the Adriatic provide insight into possible landscaping and horticultural practices. For example, within the sediments of the harbour of the Roman villa in Verige bay on Veliki Brijun island in Istria, several non-native species of fruit trees such as cherry and peach were found, the fruits of which are difficult to transport from their original habitats, and importation and subsequent cultivation is also assumed for chestnut and walnut (Šoštarić, Küster 2001: 231). Certain fruit trees, such as cherries or sour cherries and peaches, were most likely introduced throughout the empire as exotic species after the Roman conquest of the Middle Eastern provinces (Marzano 2022: 60–64, 67). In addition to trees, other plant species also point to the existence of gardens connected to the large residence in the Verige bay, such as cucumbers, carrots and certain spices (Šoštarić, Küster 2001: 231). In his interpretation of the large complex in the Verige bay, A. Gnirs already assumed the existence of gardens, both within the architectural units themselves, and next to them. According to these interpretations, a larger garden would be located on the terraces to the east of the rustic part of the property, while smaller gardens are assumed within the western peristyle of the rustic villa and further west of the complex itself (Gnirs 1915: 112, 119–120, Fig. 54 (S)), while a garden was also located next to the palaestra in the western part of the estate (Schrunk, Begović 2000: 263; Bowden 2018: 382). Also, part of the thermal complex (*tepidarium*) was decorated with frescoes depicting a garden scene (Gnirs 1915: 138).

Similarly, the diverse and numerous carpological finds of cypress in Caska bay on the island of Pag (Tillier et al. 2016: 391, Fig. 3), connected to the large residential-production complex on its shores, also speak in favour of the landscape design of this early imperial complex, considering that this species is not indigenous to the eastern Adriatic (Essert et al. 2016: 968; Tillier et al. 2016: 391). Here the cypresses could have been used as decorative trees in the residential complex or, possibly, in the necropolis (Tillier et al. 2016:

Osim toga, podaci iz Caske govore u prilog uzgoja voćaka poput trešnje, smokve i oraha unutar vile ili na širem posjedu u njezinoj okolici (Tillier et al. 2016: 389, Fig. 3). Pa iako je o organizaciji arhitektonskoga sklopa rezidencijalne vile za sada jako malo poznato, sama površina na kojoj su utvrđeni arhitektonski ostaci i pojedine njihove značajke, poput terasastoga rješenja i monumentalne obalne „fasade" (Boetto, Radić Rossi 2021: 27), nedvojbeno sugeriraju veličinu, a posredno i njegovu moguću kompleksnost.

Oba spomenuta slučaja posebna su ne samo zato što posjedujemo podrobnije arheobotaničke podatke o njima, već i stoga što su oba bila posjedi rimskih senatorskih obitelji, Brijuni kasnije i samoga cara, a Caska je moguće također u jednome trenutku bila u carskim rukama (Grisonic et al. 2022: 249–251; usp. i Kurilić 2016; Boetto, Radić Rossi 2021). Nadalje, oba primjera ukazuju na spomenute reprezentacijske i krajobrazne aspekte vrtne arhitekture, kao i na cijeli niz simboličnih, društvenih i političkih poruka, posebno uočljivih u literarnim izvorima koji opisuju vrtove rezidencijalnih vila (Myers 2005: 105; von Stackelberg 2009: 10–13). Uz njih bismo, iako u ovome slučaju nedostaju gotovo ikakvi podaci osim tlocrtnih, mogli smjestiti i monumentalno zdanje s eksedrom u uvali Stari Trogir, s obzir da bi samo arhitektonsko rješenje moglo ukazivati i na krajobrazno uređenje toga prostora, kao i visoki društveni položaj pretpostavljenih vlasnika sklopa (Zeman 2014: 10, 16). *Voluptas* i *otium* kao tražene značajke aristokratskoga života svoj su puni zamah doživljavali upravu u brojnim ruralnim vilama, gdje su ne samo arhitekturom, već i krajobraznim uređenjem stvarani preduvjeti za sve one intelektualne i društvene aktivnosti kojima su se isticali njihovim vlasnici te koji su sam rezidencijalni sklop pretvarali u tzv. *locus amoenus* (Myers 2005: 108; McMaster 2014). Uzimajući u obzir i hortikulturni aspekt rimskih vila istočnoga Jadrana dobivamo znatno detaljniju sliku prihvaćanja i takvih društvenih praksi na tomu području.

Salonitanski kontekst nešto je drukčiji, ali ipak poveziv uz snažno prisustvo doseljenoga te vojnoga stanovništva koji je s jedne strane krajobraznu arhitekturu mogao koristiti u vidu samopromocije unutar širega provincijskog društva preuzimajući tipične ranorimske društvene prakse (Myers 2005; Tally-Schumacher

391; cf. Matterne, Derreumaux 2008: 109; for the necropolis, see Kurilić, Serventi 2018). In addition, data from Caska speak in favour of the cultivation of fruit trees such as cherries, figs and walnuts within the villa or on the wider property in its surroundings (Tillier et al. 2016: 389, Fig. 3). Although very little is known about the organization of the architectural complex of the residential villa, the very area where the architectural remains were found and some of their features, such as the terraced design and the monumental coastal "façade" (Boetto, Radić Rossi 2021: 27), undoubtedly speak in favour to its large dimensions, and indirectly to its possible complexity.

Both mentioned cases stand out not only because we have more detailed archaeobotanical data about them, but also because both were properties of Roman senatorial families, Brijuni later belonged to the emperor himself, and Caska may also have been in imperial hands at one point (Grisonic et al. 2022: 249–251; cf. Kurilić 2016; Boetto, Radić Rossi 2021). Furthermore, both examples point to the aforementioned representational and landscape aspects of garden architecture, as well as to a whole series of symbolic, social and political messages, especially noticeable in literary sources describing the gardens of residential villas (Myers 2005: 105; von Stackelberg 2009: 10–13). Alongside them a monumental building with an exedra in the Stari Trogir bay could be placed, although in this case there is almost no information other than the building's ground plan, but its architectural solution alone could be indicative of the landscaping of the area, as well as of the high social rank of its presumed owners (Zeman 2014: 10, 16). *Voluptas* and *otium* as sought-after features of aristocratic life, experienced their full momentum in the numerous rural villas, where not only the architecture, but also the landscaping created prerequisites for all those intellectual and social activities through which their owners stood out and which turned the residential complex into a so-called *locus amoenus* (Myers 2005: 108; McMaster 2014). Thus, taking into account the horticultural aspect of the Roman villas of the eastern Adriatic, we get a much more detailed picture of the acceptance of such social practices in that area as well.

The Salonitan context is somewhat different, but might still be connected to a strong presence of immigrated and military population, which, on the one hand, could use landscape architecture for self-promotion within the wider provincial society by adopting typical early Roman social practices (Myers 2005; Tally-Schumacher 2022:

2022: 164–169), a s druge upustiti se u drukčiji oblik poljoprivredne proizvodnje koji je u gradu poput Salone zasigurno imao nedvojbene komercijalne mogućnosti. Ninski pak nalaz mogao bi ukazivati na prihvaćanje krajobraznih rješenja u sklopu urbanih nekropola i to ne samo kolonijalnih centara poput Salone, već i manjih središta liburnskoga dijela provincije.

Dodatni aspekt kojeg je moguće sagledati s obzirom na ovdje obrađene nalaze onaj je radioničkoga porijekla ola. Naime, kako je ranije naglašeno, posude (ili radije vrtne alatke) ovoga tipa najčešće su proizvod radionica smještenih nedaleko samoga mjesta nalaza te preuzimaju oblike i tehničke odlike lokalne keramičarske proizvodnje (Macaulay Lewis 2006: 208 s ranijom literaturom). Kao i o salonitanskome vrtlarstvu, tako i o keramičarskoj proizvodnji ovoga područja znamo iznimno malo, mahom zbog nedostatka nalaza samih radioničkih struktura, međutim pojedini nalazi omogućavaju pretpostavku da bi se u salonitanskome ageru (ili u nekoj sub-urbanoj radionici) trebala očekivati barem proizvodnja kućanskoga posuđa (usp. Konestra 2019: 43; 2020: 49–50) odnosno građevinske keramike (posljednje u: Konestra et al. 2021: 147, tab. 2, br. 11, 14, 18, 19, 22 s ranijom literaturom).

Zaključak

Više puta naglašene manjkavosti konteksta nalaza salonitanskih *ollae perforatae* ne dozvoljavaju direktnu analizu položaja i precizne funkcije samih predmeta, kao i mjesta nalaza unutar rastera (pri)grada. Ipak, one nedvojbeno ukazuju na postojanje uređenih vrtnih površina odnosno na njihovo korištenje u vidu društveno-simboličke ili ekonomski isplative hortikulture ili voćarstva, uz mogućnost ispreplетanja obaju funkcija. Krajobrazna arhitektura antičkoga svijeta, opjevana u brojnim literarnim izvorima (Myers 2005) te posvjedočena nebrojenim primjerima rimske arhitekture *otia* (bilo arheološkim ili literarnim, usp. Marzano 2007: 72, 87–88, bilj. 18), upravo stoga uglavnom povezivana uz bogate izvangradske rezidencije i suburbani krajolik samoga Rima, ipak je znatno širi fenomen koji uključuje i sasvim jednostavne urbane i proizvodne vrtove kakvima obiluju na primjer Pompeji, a koji su se morali nalaziti i drugdje (Myers 2018: 261). Na istočnome Jadranu za sada su nalazi antičkih vrtova iznimno

164–169), and on the other engage in a different form of agricultural production, which certainly had undoubted commercial possibilities in a town like Salona. The find from Nin, on the other hand, could indicate the acceptance of landscape solutions as part of urban necropolises, not only in colonial centres such as Salona, but also in smaller ones in the Liburnian part of the province.

An additional aspect that can be observed regarding the here analysed objects is that of the workshop origin of the *ollae*. Namely, as it was emphasized earlier, vessels (or rather garden tools) of this type are most often the product of workshops located not far from their findspot and take on the shapes and technical features typical of local pottery production (Macaulay Lewis 2006: 208 with earlier literature). As with Salonitan gardening, we also know very little about pottery production in this area, mainly due to the lack of finds of workshop structures, however, some finds allow us to assume that in the Salonitan ager (or in some sub-urban workshop) we should expect at least the production of common ware (cf. Konestra 2019: 43; 2020: 49–50) or of ceramic building materials (for the latter see: Konestra et al. 2021: 147, Tab. 2, nos. 11, 14, 18, 19, 22 with earlier bibliography).

Conclusion

As emphasized several times, the deficiency of data on the findspot of the *ollae perforatae* from Salona do not allow an in-depth analysis of the position and precise function of these objects, as well as of the location of the findspot within the (sub)urban raster. Nevertheless, they undoubtedly indicate the existence of landscaped garden areas, that is, their use in the form of socially-symbolic or economically profitable horticulture or pomiculture, with the possibility of both functions intertwining. The landscape architecture of the ancient world, sung in numerous literary sources (Myers 2005) and witnessed by countless examples of Roman *otium* architecture (whether archaeological or literary, cf. Marzano 2007: 72, 87–88, note 18), is mainly associated with rich suburban residences and the suburban landscape of Rome itself, but it was in fact a much broader phenomenon that also included simple urban and production gardens which abound for example at Pompeii, but which must have been present elsewhere as well (Myers 2018: 261). On the eastern Adriatic, for now, finds of Roman gardens are extremely rare, i.e. rarely the unearthed remains are interpreted with

rijetki odnosno rijetko su pronađeni ostaci interpretirani imajući u vidu i taj segment, a mahom se vežu uz ruralne rezidencijalne sklopove odnosno sub-urbani kontekst i nekropole. Slaba istraženost urbanih središta, pa tako i njihovih stambenih rješenja i sub-urbanih zona dodatno pridonosi slabome razumijevanju krajobraznih rješenja koja su ipak morala biti implementirana i u te prostore.

Nalaz salonitanskih prošupljenih ola stoga po prvi put s većom sigurnošću ukazuje na preuzimanje tehnoloških, krajobraznih te društvenih praksi uzgoja biljaka na obalnome području provincije Dalmacije, te uz mogući nalaz sepulkralnoga (?) vrta iz Nina pruža posve nove interpretacijske mogućnosti, ujedno pozivajući na dodatnu pažnju pri istraživanju „praznih prostora" unutar antičkih zdanja, ali i gradova, te na povećani angažman interdisciplinarnih metoda i analiza. Osim toga, ovakvi bi, po svoj prilici lokalno proizvedeni keramički predmeti mogli pružiti odlične podatke o značajkama salonitanske, ili šire srednjodalmatinske keramičarske proizvodnje, posebno u usporedbi s drugim pretpostavljenim lokalnim posuđem, što je svakako još jedan mogući smjer daljnjih istraživanja ovih skromnih, no ipak rječitih predmeta.

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that segment in mind, and they are mostly associated with rural residential complexes, i.e. sub-urban contexts and necropolises. The poor research of urban centres, including their housing solutions and sub-urban zones, additionally contributes to the poor understanding of landscape solutions that still had to be implemented in these areas as well.

The discovery of the Salonitan perforated vessels therefore indicates for the first time with greater certainty the adoption of technological, landscape and social practices of plant cultivation in the coastal area of the province of Dalmatia, and together with the possible finding of a sepulchral (?) garden at Nin offers completely new interpretational possibilities, at the same time calling for additional attention when researching "empty spaces" within ancient buildings, but also cities, and for increased involvement of interdisciplinary methods and analyses. Moreover, these probably locally produced objects might provide excellent data on the features of Salonitan or wider central Dalmatian pottery production, especially if compared to other supposed locally produced vessels. The latter is therefore another aspect that might be further explored regarding these very simple yet telling objects.

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ELEKTRONIČKI IZVORI ELECTRONIC RESOURCES

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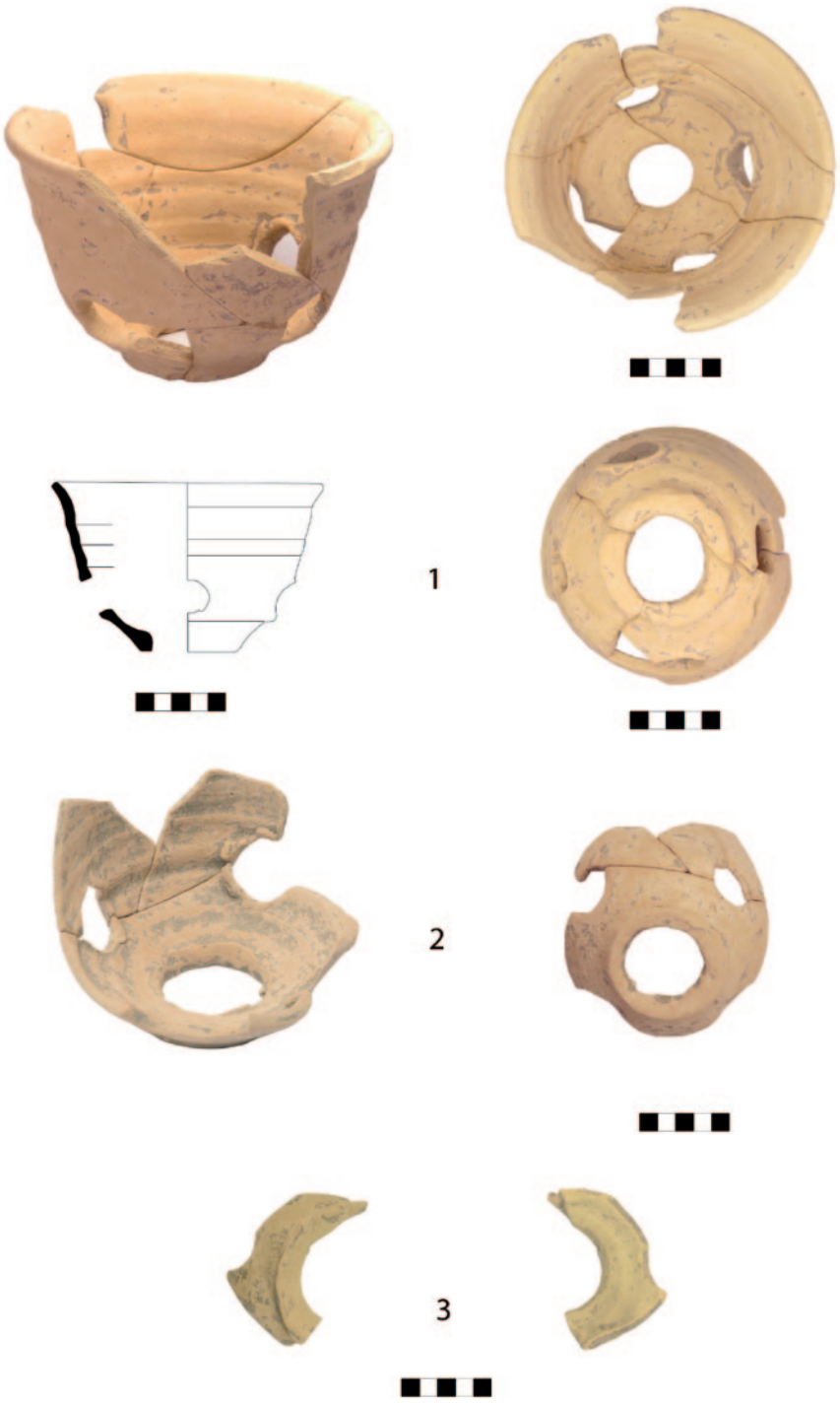
T. 1



T. 1 – *Ollea perforatae* sa zaštitnoga istraživanja na trasi plinovoda u Solinu (slike bez mjerke nisu u mjerilu): 1 Posuda 1 (snimak: Kaukal d.o.o.; crtež: K. Marović, prema Jerončić et al. 2019: T. 8; Kaukal d.o.o., uz dozvolu); 2 Posuda 2 (snimili: V. Vidan i Kaukal d.o.o.; Arheološki muzej u Splitu i Kaukal d.o.o., uz dozvolu); 3 Posuda 4 (snimio: Kaukal d.o.o.; Kaukal d.o.o., uz dozvolu) (izradila i preradila: A. Konestra)

Pl. 1 – *Ollea perforatae* from the excavation on the gas pipeline route in Solin (pictures without scale are not to scale): 1 Vessel 1 (photo by: Kaukal d.o.o.; drawing: K. Marović, according to Jerončić et al. 2019: Pl. 8; Kaukal d.o.o., with permission); 2 Vessel 2 (photo by: V. Vidan and Kaukal d.o.o.; Archaeological Museum in Split and Kaukal d.o.o., with permission); 3 Vessel 4 (photo by: Kaukal d.o.o.; Kaukal d.o.o., with permission) (edited by: A. Konestra)