# Ljubljana and Cetina: Pottery Styles of the Third Millennium BC in the Eastern Adriatic

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## *Ljubljana and Cetina: Pottery Styles of the Third Millennium BC in the Eastern Adriatic*

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*Ovaj rad nudi nov sintetički pregled lončarskih stilova trećega tisućljeća prije Krista na prostoru istočnoga Jadrana, temeljen na 146 nalazišta s objavljenom karakterističnom lončarijom. Odmičući se od tradicionalnih koncepata arheoloških kultura i razdoblja, najprije se nastoji jasno definirati ljubljansko-jadranski i cetinski lončarski stil. Potom se kritički preispituje građa koja je dosad bila korištena za datiranje tih stilova: stratigrafski podaci iz višeslojnih nalazišta i asocijacije karakteristične lončarije s metalnim nalazima. Slijedi prvi pokušaj približnoga datiranja spomenutih stilova putem raspoloživih radiokarbonskih datuma. U zaključku rada, ljubljansko-jadranski i cetinski stil smještaju se na temelju svega iznesenog u svoj širi prostorni i vremenski kontekst.*

*Ključne riječi: lončarski stilovi, Jadran, Ljubljana, Cetina, eneolitik, brončano doba, treće tisućljeće prije Krista*

*This contribution provides a new synthetic overview of the eastern Adriatic pottery styles of the third millennium BC, based on 146 sites from which characteristic pottery has been published. Parting with the traditional concepts of archaeological cultures and periods, it first seeks clear definitions of Ljubljana-Adriatic and Cetina pottery styles. It follows with a critical reexamination of the evidence that, up to the present, has been used for the dating of those styles: stratigraphic information from stratified sites and the association of characteristic pottery with objects made of metal. This is followed by a pioneering attempt to date the same styles by using the available radiocarbon dates. In conclusion, Ljubljana-Adriatic and Cetina styles are placed in their wider spatial and temporal context.*

*Key words: pottery styles, Adriatic, Ljubljana, Cetina, Eneolithic, Bronze Age, third millennium BC*

## KULTURE, RAZDOBLJA, STILOVI I STOLJEĆA

Prošla su tri desetljeća otkako je Blagoje Govedarica objavio sintezu pod naslovom *Rano bronzano doba na području istočnog Jadrana* (Govedarica 1989b). U međuvremenu je prikupljen izvjestan broj novih nalaza koji su obogatili korpus arheološke građe, no među njima nema ničega što bi bitno odudaralo od nalaza pozatih već od ranije. Važnije promjene dogodile su se u načinu provođenja arheoloških istraživanja, u tehnikama prikupljanja podataka, analitičkim metodama i teorijskim pristupima. Postupci iskopavanja postali su znatno pažljiviji i precizniji, a dokumentiranje objektivnije i temeljitije pa su podaci prikupljeni u novi-

## CULTURES, PERIODS, STYLES AND CENTURIES

Three decades have elapsed since Blagoje Govedarica published his synthesis titled *Early Bronze Age in the eastern Adriatic region* (Govedarica 1989b). Since then, a number of new finds have expanded the available body of archaeological evidence, but none of them stand out as radically different from the finds that we already knew. Of more importance were changes in archaeological research practice, techniques of data recovery, analytical methods, and theoretical approaches. Excavation procedures have become more careful and sophisticated, while documentation has become more thorough and objective. Compared to the

je vrijeme cjelovitiji, pouzdaniji i uvjerljiviji od podataka iz ranijih iskopavanja. Radiokarbonsko datiranje preraslo je u općeprihvaćen i standardan način određivanja starosti. Dugotrajnu dominaciju kulturno-povijesne paradigme u hrvatskoj prapovijesnoj arheologiji pomalo su načeli drugi teorijski pristupi objašnjenju i tumačenju arheoloških izvora. Zbog svega navedenog, sazrijelo je vrijeme za sintezu koja će se osloniti na suvremenije teorijske temelje i iskoristiti nove i kvalitetnije podatke.

Baveći se građom koja je predmet ovoga rada, većina arheologa govori o ljubljanskoj i cetinskoj kulturi i o razdobljima kasnoga eneolitika i ranoga brončanog doba. Ovi tek prividno jasni pojmovi opterećeni su teškom prtljagom koja se nakupila tijekom njihove dugotrajne i često nekritičke upotrebe te su puni zamki i dvosmislenosti.

Arheološke kulture su prostorno i vremenski ograničene cjeline, definirane na temelju određenih tipova građe koji bi se uvijek trebali pojavljivati zajedno (primjerice, specifičnih vrsta lončarije, alata, ukrasa, načina pokopavanja, oblika kuća). Još uvijek postoji sklonost da se takve cjeline smatra apsolutnim, oštro ograničenim tvorevinama te da ih se više ili manje svjesno poistovjećuje s 'onim što bismo danas zvali narodom' (Kossinna 1911: 3; Childe 1929: V–VI). Umjesto da ostanu praktično i fleksibilno pomagalo pri preliminarnoj organizaciji arheološke građe (Broodbank 2000: 54), arheološke kulture se pretvaraju u aktere na pozornici povijesti. Pri tome se zaboravlja da se zapravo radi o konstruktima koje su stvorili arheolozi u nastojanju da odgovore na posve određena pitanja vezana uz kulturno-povijesnu paradigmu (Trigger 1989: 148–206).

Već odavna znamo da etničke zajednice nisu jasno omeđene, homogene i statičke cjeline (Barth 1969). Kulturni identitet je fluidna kategorija podložna neprekidnoj mijeni, a veze između etniciteta i materijalne kulture složene su i neizravne (Jones 1997). Povrh toga, prostorna i vremenska raznolikost arheološke građe posljedica je mnoštva različitih čimbenika, a ne samo kulturnoga identiteta ljudi koji su tu građu ostavili za sobom (Binford 1965). To su tek neki od razloga zbog kojih je koncept arheološke kulture tijekom posljednjih pola stoljeća doživio brojne žestoke i opravdane kritike (Shennan 1989: 5–17). Bez obzira na to, većina od nas i dalje rutinski opisuje arheološku građu slijedeći kulturno-povijesnu paradigmu, iako je ona donijela arheologiji više štete nego koristi, zamućujući proučavanje društvenih i povijesnih procesa, iskrivljujući sliku prošlosti i skrećući istraživanja na slijepi kolosjek.

Dvostruko starija od koncepta arheološke kulture je podjela prošlosti na arheološka razdoblja (Trigger 1989: 73–79). Thomsenov sustav triju doba i njegova brojna kasnija poboljšanja odigrali su svoju pozitivnu ulogu u vrijeme kada se relativna starost prapovijesnih nalaza mogla odrediti jedino kombiniranjem stratigrafije i tipologije. Taj sustav je još uvijek čvrsto uvriježen u arheološkome žargonu unatoč tome što istoimena razdoblja u različitim regijama nisu uvijek istovremena, dok se prijelasci iz jednoga u drugo doba ponekad ne podudaraju s očitim promjenama u arheološkoj građi (Robb, Farr 2005: 25; Broodbank 2013: 13–14, 203). Zahvaljujući sve većem broju kronometrijskih datuma, da-

information from older excavations, the recently recovered information tends to be more complete, reliable and convincing. Radiocarbon dating has matured to become the standard and universally accepted method of age determination. The persistent domination of the cultural history paradigm in Croatian prehistoric archaeology is beginning to be challenged by other, more current theoretical approaches to the explanation and interpretation of the archaeological record. Due to all of the above, the time is ripe for a synthesis based on contemporary theoretical perspectives that will exploit the new and better information.

When discussing the evidence that represents the subject-matter of this paper, most archaeologists talk about the Ljubljana culture and the Cetina culture, and the Late Copper Age and Early Bronze Age periods. Burdened by the heavy baggage that has accumulated during their long and often uncritical use, these deceptively clear terms are in fact replete with traps and ambiguities.

Archaeological cultures are temporally and spatially demarcated entities, defined by specific types of finds that supposedly always appear together (for example, specific kinds of pottery, tools, decoration, burials, or houses). There is still a tendency for such entities to be regarded as absolute, sharply bounded units that, consciously or unconsciously, are equated with 'what today would be called a people' (Kossina 1911: 3; Childe 1929: V–VI). Instead of remaining a practical and flexible tool for the preliminary classification of evidence (Broodbank 2000: 54), archaeological cultures are converted to agents on the scene of history, while it is forgotten that they are constructs created by archaeologists in their attempt to answer quite specific questions related to the culture history paradigm (Trigger 1989: 148–206).

It has been a while since we realized that ethnic communities are anything but clearly bounded, homogeneous and static units (Barth 1969). Cultural identity is a fluid category susceptible to continuous change, while the relationship between ethnicity and material culture is complex and indirect (Jones 1997). Furthermore, the spatial and temporal variability of archaeological evidence is a consequence of many different factors, and not just of the cultural identity of the people who left that evidence behind (Binford 1965). For these and other reasons, the concept of archaeological culture has been strongly and rightly criticized over the last fifty years (Shennan 1989: 5–17). Regardless of that, most of us still routinely describe archaeological evidence in accordance with the culture history paradigm, despite the fact that it has done more harm than good to archaeology by muddling the study of social and historical processes, distorting the image of the past, and diverting research into blind alleys.

The division of the past into archaeological periods is twice as old as the concept of archaeological culture (Trigger 1989: 73–79). Thomsen's three-age system and its numerous later improvements played out their positive role in times when stratigraphy and typology were the only available means of assessing the relative age of prehistoric finds. That system is still firmly ingrained in the archaeological jargon, despite the fact that the namesake periods are

nas umjesto o arheološkim razdobljima možemo govoriti o vremenu izraženom u kalendarskim godinama, ponekad u tisućljećima i stoljećima, a ponekad čak i u desetljećima.

Eneolitičko razdoblje na istočnome Jadranu opterećeno je svim spomenutim problemima. Izraziti kontinuiteti povezuju rani eneolitik s neolitikom i kasni eneolitik s bronČanim dobom, dok se usred eneolitika događaju ključne promjene materijalne kulture i društvene organizacije. Pri tome se rani eneolitik obično izjednačuje s nakovanskom kulturom, a kasni eneolitik i rano brončano doba s ljubljanskom i cetinskom kulturom.

Ljubljanska i cetinska kultura, kao i njihove različite prostorne i vremenske varijante, definirane su najvećim dijelom na temelju lončarskih stilova (Dimitrijević 1967; 1979a: 317–328; Marović 1976: 67–71; Marović, Čović 1983; Govedarica 1989b). Zahvaljujući tome, raspravu o spomenutim kulturama nije teško preformulirati u raspravu o lončarskim stilovima i njihovoj prostornoj i vremenskoj distribuciji. Napuštanjem koncepata arheoloških razdoblja i kultura približit ćemo se stvarnosti i ujedno izbjeći jalove diskusije radi li se o 'samostalnim i cjelovitim kulturnim grupama' ili ne (Govedarica 1989a: 407; 1989b: 95; Marijanović 1991: 217, 236–238; 1997; 2000: 126) te spadaju li one u kasni eneolitik ili u rano brončano doba (Dimitrijević 1967: 8, 18; 1979a: 317; Batović 1973: 108, 113; Marović 1976: 71; Marović, Čović 1983: 197–198; Govedarica 1989a: 409; 1989b: 11, 13–15; Marijanović 1991: 242; 1997: 1; Forenbaher, Kaiser 1997: 18). Zbog toga se u nastavku ovoga rada posve svjesno i namjerno neće govoriti o kulturama i razdobljima, nego o lončarskim stilovima i vremenu trećega tisućljeća prije Krista. Pri tome će se zbog jednostavnosti pod 'trećim tisućljećem' podrazumijevati razdoblje koje, prema trenutno raspoloživim kronometrijskim datumima, počinje oko 3000. godine i završava oko ili ubrzo nakon godine 2000. pr. Kr.

## UKRAŠENA LONČARIJA TREĆEGA TISUĆLJEĆA PRIJE KRISTA

Zajedničko obilježje ukrašene lončarije trećega tisućljeća prije Krista je geometrijsko ukrašavanje izvedeno kombinacijom urezivanja, utiskivanja i inkrustacije. Ispunjavanjem ureza i sitnih otisaka bijelom pastom postiže se dramatično isticanje motiva na tamnoj pozadini posude. Iako je inkrustacija ispala iz većine ulomaka ili se sačuvala samo u tragovima, dovoljno je česta i široko rasprostranjena da možemo pretpostaviti kako je izvorno bila sveprisutna.

Tako ukrašena lončarija u pravilu čini tek vrlo mali dio ukupnoga skupa nalaza, iako se iz objavljenih izvještaja ponekad može steći suprotan dojam. Ne iznenađuje da na ilustrativnim tablama obično dominiraju atraktivno ukrašeni ulomci, dok se znatno brojnija neukrašena lončarija prikazuje u daleko manjoj mjeri. Za većinu starih iskopavanja nema podataka o tome što je sakupljano a što nije, no velika učestalost ukrašene lončarije u skupovima nalaza poput onoga iz Iga posljedica je selektivnoga prikupljanja građe, a ne odraz stvarnoga stanja na nalazištu (Korošec, Korošec 1969: 12). Niti u novijim radovima obično nema preciznih informacija o omjeru ukrašene i neukrašene lončarije, već se nude samo subjektivne procjene da je ukrašavanje oskudnot always contemporaneous in different regions, while the transitions from one period to the next sometimes do not coincide with evident changes in the archaeological record (Robb, Farr 2005: 25; Broodbank 2013: 13–14, 203). Thanks to the increasing number of chronometric dates, today we can express time by calendar years in millennia, centuries, or sometimes even decades, rather than talk about archaeological periods.

The eastern Adriatic Copper Age (or the Eneolithic) is particularly fraught with all of the aforementioned problems. Evident continuities link the Early Copper Age with the Neolithic, and the Late Copper Age with the Bronze Age, while the crucial transformations of material culture and society take place right in the middle of the Copper Age. Usually, the Early Copper Age is equated with the Nakovana culture, while the Late Copper Age and the Early Bronze Age are equated with the Ljubljana culture and the Cetina culture, respectively.

Definitions of the Ljubljana and Cetina cultures, and their different regional and temporal variants, are based mainly on pottery styles (Dimitrijević 1967; 1979a: 317–328; Marović 1976: 67–71; Marović, Čović 1983; Govedarica 1989b). Therefore it is fairly easy to reformulate the discussion of those cultures into a discussion of pottery styles, including their temporal and spatial distribution. By abandoning the concepts of archaeological periods and cultures we might get a step closer to reality, while avoiding barren discussions, such as whether or not a proposed culture represented 'an independent and complete cultural group' (Govedarica 1989a: 407; 1989b: 95; Marijanović 1991: 217, 236–238; 1997; 2000: 126), or whether it belonged to the Late Copper Age or the Early Bronze Age (Dimitrijević 1967: 8, 18; 1979a: 317; Batović 1973: 108, 113; Marović 1976: 71; Marović, Čović 1983: 197–198; Govedarica 1989a: 409; 1989b: 11, 13–15; Marijanović 1991: 242; 1997: 1; Forenbaher, Kaiser 1997: 18). In this paper, reference to cultures and periods will be avoided quite consciously and intentionally. Instead, I shall be writing about pottery styles and the third millennium BC. For the sake of convenience, 'third millennium' denotes the period that begins around or soon after the year 3000 BC, and ends around or soon after the year 2000 BC.

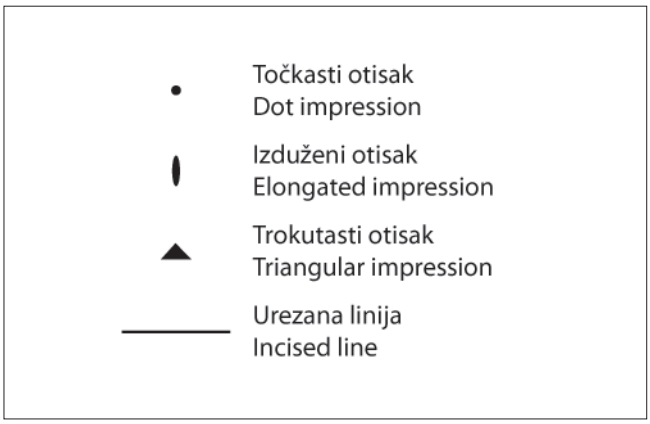
## DECORATED POTTERY OF THE THIRD MILLENNIUM BC

The common trait of the decorated pottery of the third millennium BC is geometric decoration executed by a combination of incision, impression and incrustation. A dramatic enhancement of the motif on the dark vessel surface is accomplished by filling the incisions and the tiny impressions with a white paste. Although the incrustation has disappeared from most of the sherds, or only its traces remain, it is widely distributed, and common enough to presume that originally it was omnipresent.

As a rule, this kind of decorated pottery comprises only a small fraction of the total pottery assemblage, even if the published reports sometimes suggest the opposite. Unsurprisingly, attractively decorated fragments usually dominate the illustrations, while the far more common plain

no (primjerice, Marijanović 2012: 93) ili da je 'relativno velik procenat' lončarije ukrašen (Milošević, Govedarica 1986: 61).

Kvantitativnih podataka je vrlo malo i većinom potječu iz nedavno istraživanih špiljskih nalazišta. Ulomci lončarije ukrašeni karakterističnim urezivanjem i utiskivanjem čine 4,2% skupa nalaza iz faze 4 Grapčeve spilje (Forenbaher, Kaiser 2008: 64),[1] no taj podatak treba prihvatiti s oprezom zboga malog uzorka od ukupno 212 ulomaka. Pouzdaniji su podaci iz faze 3 Pupićine peći, gdje takvi ukrašeni ulomci čine samo 0,4% od ukupno 1566 ulomaka (Hulina et al. 2012: 158).[2] Postoje i podaci o zasad neobjavljenim skupovima nalaza iz još dvaju novijih iskopavanja u špiljama. U Spili kod Nakovane takvi ulomci čine samo 0,4% od ukupno 2296 ulomaka prikupljenih iz faze 5b sektora 3 (Forenbaher, Perhoč 2015: 172), dok u Veloj spili na Korčuli oni čine 1,8% od ukupno 2402 ulomka prikupljena iz konteksta pripisanih trećem tisućljeću prije Krista.[3] Nadalje, od ukupno 638 ulomaka lončarije prikupljenih iz plašta gomile Velike grude, samo ih je devet (1,5%) ukrašeno na način blizak cetinskome stilu (Della Casa 1996: 66, 126, sl. 92: 110–118). S time se može usporediti podatak iz Male glavice, gdje su iz plašta gomile prikupljena 4334 ulomka lončarije među kojima je bilo 218 ukrašenih (Batović, Kukoč 1988). Ako od tog broja oduzmemo 90 ulomaka 'ukrašenih barbotinom', preostaje 128 ulomaka (3%) od kojih je samo dio ukrašen karakterističnim urezivanjem i utiskivanjem. Napokon, Salamandrija na Palagruži s 15,5% karakteristično ukrašenih ulomaka odskače za red veličine od svih ostalih nalazišta za koja imamo kvantitativne podatke, što je jedan od glavnih razloga zbog kojih Salamandriju smatramo nalazištem posebne namjene (Forenbaher 2018).




Sl. 1 Osnovni elementi ukrasa
*Fig. 1 Basic decorative elements*

Ukrasni motivi najčešće su izvedeni kombinacijom urezivanja i utiskivanja, rjeđe samo urezivanjem, a tek vrlo rijetko samo utiskivanjem. Pri tome se koriste četiri osnovna elementa ukrasa: urezane linije, točke, te dugoljasti i trokutasti otisci.

1 Ranije objavljen podatak o 5,2% ukrašene lončarije (Forenbaher, Kaiser 2008: 64) uključuje i nekoliko ulomaka koji ne pripadaju ovoj kategoriji ukrašene lončarije.

2 Ranije objavljen podatak o 2,1% ukrašene lončarije (Hulina et al. 2012: 158) uključuje i veći broj ukrašenih ulomaka koji ne pripadaju ovoj kategoriji ukrašene lončarije.

3 Spomenuta građa iz Vele spile prikupljena je iskopavanjima 2010.–2013.

pottery is much less represented. While for most of the old excavations there is no information about what was or was not kept, the high frequency of decorated pottery in assemblages like the one from Ig reflects a selective recovery of finds, rather than the real situation at the site (Korošec, Korošec 1969: 12). Precise information about the ratio between decorated and plain pottery is rarely provided even in recent publications. Subjective assessments prevail, stating that decoration is scant (*e.g.,* Marijanović 2012: 93), or that a 'relatively large percentage' of pottery is decorated (Milošević, Govedarica 1986: 61).

Quantitative information is scarce, and most of it comes from recently excavated cave sites. Potsherds decorated by characteristic incision and impression constitute 4.2% of the assemblage from Phase 4 of the Grapčeva Cave (Forenbaher, Kaiser 2008: 64),[1] but that figure must be viewed with caution due to the small sample size (212 sherds in total). More reliable data come from Phase 3 of Pupićina Peć, where characteristic decorated sherds constitute only 0.4% of the 1566 potsherds (Hulina et al. 2012: 158).[2] Information is also available on two unpublished pottery assemblages that were recovered from caves in relatively recent excavations. At Spila Nakovana, decorated Ljubljana-Adriatic and/or Cetina sherds constitute only 0.4% of the 2296 potsherds from Phase 5b in Sector 3 (Forenbaher, Perhoč 2015: 172), while at the Vela Cave on the island of Korčula, they constitute 1.8% of the 2402 potsherds from contexts attributed to the third millennium BC.[3] Furthermore, only nine of the 638 sherds (1.5%) that were recovered from the mantle of the Velika Gruda burial mound were decorated in a manner resembling the Cetina style (Della Casa 1996: 66, 126, Fig. 92: 110–118). In comparison, 218 of the 4334 potsherds that were recovered from the mantle of the Mala Glavica burial mound were decorated (Batović, Kukoč 1988), but ninety were 'decorated by *barbotine*' (a coarse slip), while only a fraction of the remaining 128 (3%) were decorated by characteristic incision and impression. Finally, with 15.5% consisting of decorated Ljubljana-Adriatic and/or Cetina style sherds, Salamandrija on Palagruža island surpasses all other sites with quantitative information by an order of magnitude, which is one of the reasons why we consider it a special purpose site (Forenbaher 2018).

Decorative motifs are usually created by combining incision and impression, less commonly by incision only, and very rarely by impression only. Four basic decorative elements are used: incised lines, dots, elongated impressions, and triangular impressions (Fig. 1). Dot impressions may be made simply by driving a blunt end of a small, round-sectioned stick into wet clay at a right angle. Usually, their diameter is less than 2 mm across, only rarely surpassing 3 mm. Elongated impressions were probably made by the blunt end of a flat stick, or by a tool akin to a

1 The previously published frequency of decorated pottery, 5.2% (Forenbaher, Kaiser 2008: 64), includes several decorated sherds that do not belong to this category of decorated pottery.

2 The previously published frequency of decorated pottery, 2.1% (Hulina et al. 2012: 158), includes a considerable number of decorated sherds that do not belong to this category of decorated pottery.

3 The finds in question from the Vela Cave were recovered during the excavation seasons 2010–2013.

tasti otisci (sl. 1). Točkasti otisci mogu se lako napraviti okomitim utiskivanjem zatupljenoga kraja štapića kružnoga presjeka. Promjer im je obično manji od 2 mm, a tek rijetko veći od 3 mm. Dugoljasti otisci vjerojatno su bili izvedeni zatupljenim krajem plosnatoga štapića ili nekim sličnim alatom nalik na odvijač (Dimitrijević 1979a: 322) koji je također okomito utiskivan u meku glinu. Takvi otisci obično su uži od 2 mm, a mogu biti više ili manje izduženi. Najčešće su zaobljenih rubova i eliptičnoga oblika, a tek vrlo rijetko uglati i pravokutnoga oblika. Čini se da su trokutasti otisci također najčešće bili izvedeni zatupljenim krajem plosnatoga štapića ili nekim sličnim alatom koji je u ovom slučaju utiskivan pljoštimice i blago zakošeno u odnosu na površinu posude, ostavljajući otisak oblika trokutića s jednim utisnutim vrhom i dvije jasno definirane stranice. Tek iznimno rijetko čini se kako su takvi otisci bili napravljeni zatupljenim krajem štapića trokutastoga presjeka. Otisnuti trokutići obično su pravokutni i jednakokračni, no oni manje brižljivo izvedeni mogu biti nepravilnoga oblika i zaobljenih obrisa. Njihova najduža stranica obično je kraća od 3 mm, a tek rijetko duža od 5 mm. Urezane linije, izvedene nekim relativno šiljastim alatom, obično su široke oko 1 mm.

Svi otisci unutar pojedinoga motiva u pravilu su jednakoga oblika i veličine, iako se ponekad kombiniraju otisci različitih oblika, ili istoga oblika, ali različitih veličina. Za njihovu izradu vjerojatno se koristilo nekoliko različitih alata, no mnoge složene motive moglo se izvesti samo jednim jednostavnim 'univerzalnim alatom', štapićem s jednim zatupljenim krajem kružnoga presjeka za utiskivanje točaka, te drugim plosnatim krajem za izdužene otiske i trokutiće, dok je bilo koji kraj mogao poslužiti za urezivanje.

Treće tisućljeće prije Krista obilježila su na istočnome Jadranu dva glavna stila lončarije ukrašene na opisani način. Više ili manje slijedeći ustaljenu terminologiju, jedan od njih zvati ću ljubljansko-jadranskim, a drugi cetinskim stilom. Prvi termin je pojednostavljenje prilično nezgrapne formulacije 'jadranski tip ljubljanske kulture' koja ističe Jadran kao glavno područje rasprostranjenosti ovoga lončarskog stila i ujedno poštuje činjenicu da se njegova izvorna definicija uvelike temelji na nalazima s Ljubljanskoga barja. Drugi termin izravno je izveden iz pojma 'cetinska kultura'.

Prije nego što se pozabavimo specifičnostima tih dvaju stilova, valja naglasiti kako je sitne ljubljansko-jadranske ulomke ponekad teško razlikovati od cetinskih. Oblici posuda mogu biti vrlo slični, a tehnike ukrašavanja, osnovni elemenati ukrasa, pa čak i dijelovi motiva mogu biti identični. Zbog toga se za mnoge male ulomke može jedino reći da pripadaju karakterističnoj lončariji trećega tisućljeća prije Krista, iako možda potječu od posuda koje bismo, da su cijele, lako prepoznali kao ljubljansko-jadranske ili cetinske.

## LJUBLJANSKO-JADRANSKI STIL

Definicija ljubljansko-jadranskoga lončarskog stila koja slijedi temelji se na objavljenim nalazima iz 80 nalazišta[4] te se u glavnim crtama podudara s postojećim definicijama lončarije 'ljubljanske kulture', uključujući i njen 'jadranski tip' (Dimitrijević 1967: 10–12; 1979a: 320–322; Govedarica 1989b:

4 Forenbaher 2018 donosi pregled temeljnih podataka i iscrpnu bibliografiju o svim nalazištima s kojih je objavljen barem jedan ulomak lončarije ljubljansko-jadranskoga stila.

screwdriver (Dimitrijević 1979a: 322), that had likewise been driven into wet clay at a right angle. Such impressions are usually less than 2 mm wide, while their length varies. Most often, their curved contours produce an elliptical outline, while exceptionally they may be rectangular. Apparently, most of the triangular impressions were also made by the blunt end of a flat stick or some similar tool, which in this case had been pressed into clay while held almost parallel to the surface of the vessel, leaving a triangular impression with a single impressed tip and two clearly defined sides. It seems that triangular impressions were made only exceptionally by the blunt end of a small, triangular-sectioned stick. The impressions are usually isosceles right triangles, but the less carefully executed ones may be of irregular shape, or have curved contours. Usually, their longest side is shorter than 3 mm, only rarely surpassing 5 mm. Incised lines, created by a relatively sharp tool, are usually about 1 mm wide.

As a rule, all impressions within a decorative motif are of the same size and shape, although impressions of different shapes or sizes may sometimes be combined. While several different tools may have been used for their execution, many complex designs could have been made by just one simple 'universal tool', a round-sectioned stick with one end blunt (for dot impressions), and the other flattened (for elongated impressions and triangles). Either end could have been used for incision.

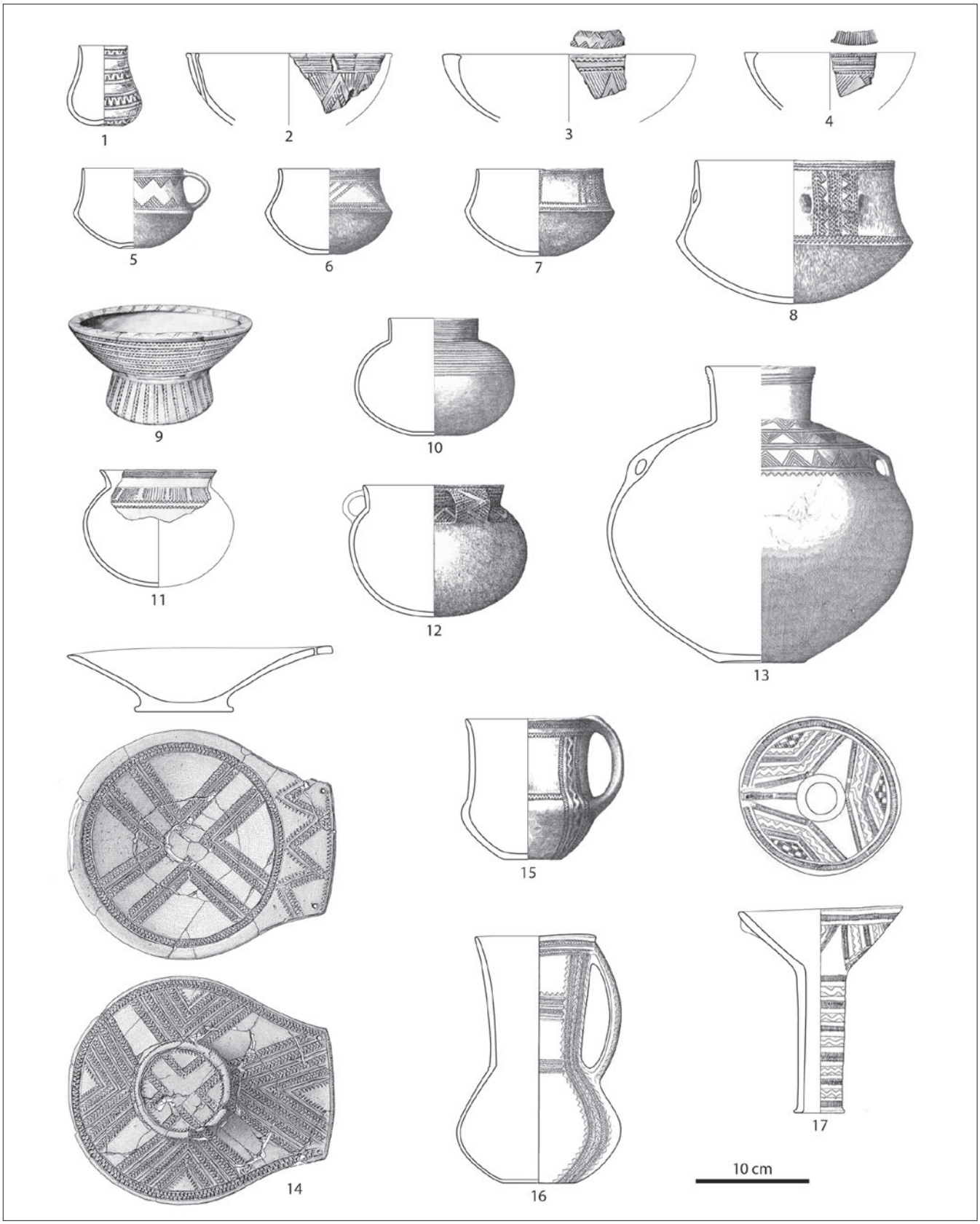
Two major styles of pottery decoration in the manner described above marked the third millennium BC in the eastern Adriatic. More or less following the established terminology, I shall refer to them as Ljubljana-Adriatic and Cetina styles. The first term is a simplification of the rather cumbersome formulation 'the Adriatic type of the Ljubljana culture'; it emphasizes the Adriatic as the main region of the style's distribution, while honoring the fact that its original definition was based primarily on the finds from Ljubljansko Barje. The second term derives directly from the term 'Cetina culture'.

Before turning to specific traits of these styles, one should note that small Ljubljana-Adriatic sherds are sometimes hard to distinguish from Cetina sherds. Vessel shapes may be very similar, while decorative techniques, basic decorative elements, and even parts of motifs may be identical. Because of that, many small fragments can be determined only in general as characteristic third millennium BC pottery, even though they might come from vessels that, if complete, would be easily recognizable as Ljubljana-Adriatic or Cetina.

## LJUBLJANA-ADRIATIC STYLE

The following definition of the Ljubljana-Adriatic style, based on published finds from 80 sites,[4] roughly coincides with the existing definitions of 'Ljubljana culture' pottery, including its 'Adriatic type' (Dimitrijević 1967: 10–12; 1979a: 320–322; Govedarica 1989b: 41–43). These definitions rely heavily on the finds from the lake dwellings at Ig in Ljubljansko Barje, which were recovered in the 1870s by Karel

4 Forenbaher 2018 provides an overview of basic information about all the sites with at least one published Ljubljana-Adriatic potsherd, accompanied by exhaustive bibliography.




Sl. 2 Karakteristična lončarija ljubljansko-jadranskoga stila: 1, 5–8, 10, 12 Ig (prema Korošec, Korošec 1969; Dimitrijević 1979a); 2–4, 9 Otišić (prema Milošević, Govedarica 1986); 11 Vaganačka pećina (prema Forenbaher, Vranjican 1985); 13 Marina (prema Radić Rossi 2011); 14 Velika gruda (prema Primas 1996); 15 Mala gruda (prema Dimitrijević 1979a); 16–17 Boljevića Gruda (prema Guštin, Preložnik 2015)

*Fig. 2 Characteristic Ljubljana-Adriatic style pottery: 1, 5–8, 10, 12 Ig (after Korošec, Korošec 1969; Dimitrijević 1979a); 2–4, 9 Otišić (after Milošević, Govedarica 1986); 11 Vaganačka Pećina (after Forenbaher, Vranjican 1985); 13 Marina (after Radić Rossi 2011); 14 Velika Gruda (after Primas 1996); 15 Mala Gruda (after Dimitrijević 1979a); 16–17 Boljevića Gruda (after Guštin, Preložnik 2015)*

41–43). Te definicije oslanjaju se u velikoj mjeri na građu iz sojeničarskih naselja kod Iga na Ljubljanskome barju koju je sedamdesetih godina 19. stoljeća prikupio Karel Deschmann (Velušček, Čufar 2014), a koju su skoro sto godina kasnije kataloški obradili i objavili Paola i Josip Korošec (Korošec, Korošec 1969). Brojni nalazi s prostora istočnoga Jadrana nadopunili su i proširili taj temelj, no niti jedno od istočnojadranskih nalazišta ne može se količinom karakterističnih nalaza usporediti s Igom. Zbog toga stari Deschmannovi nalazi ostaju nezaobilazni prilikom bilo kakvoga novog pokušaja definiranja ovoga stila, iako se Ljubljansko barje nalazi na periferiji njegovoga geografskog rasprostiranja.

**Oblici i veličine posuda**

Repertoar oblika posuđa ukrašenoga na karakterističan ljubljansko-jadranski način prilično je ograničen. Česti su trbušasti lonci i lončići, zapremine od nekoliko decilitara do nekoliko litara (sl. 2: 10–13). Tijelo im je kuglasto, ponekad blago spljošteno ili s jedva naznačenim bikonitetom pri ramenu. Stegnut vrat obično je nizak, prstenast ili blago ljevkast, a tek rijetko srednje visok i valjkast. Veći lonci mogu imati na ramenu široke, vodoravno probušene supkutane ušice ili kratke uspravne trakaste ručke. Ukras u pravilu obuhvaća vrat i rame te često teče u vodoravnim pojasevima preko ušice ili ručke.

Druga dobro zastupljena skupina posuda su otvorene zdjele i zdjelice (sl. 2: 2–4). Mnoge od njih su razmjerno malih dimenzija, veličine šalice, iako ima i zdjela srednje veličine. Oblik im varira od plitkih do relativno dubokih posuda zaobljenoga tijela koje je uvijek najšire pri obodu. Sam obod često je zadebljan i zaravnjen, a ispod njega može se nalaziti kratka uspravna ili vodoravna trakasta ručka. Na rijetkim primjercima probušene su kroz obod uspravne rupice nalik na supkutane ušice. Otvorene zdjele ponekad stoje na masivnoj križnoj ili zvjezdastoj nozi, na šupljoj valjkastoj ili ljevkastoj nozi (sl. 2: 9), ili na čepastim nožicama. Ukras može prekrivati čitavu vanjsku i unutarnju površinu, uključujući proširenu gornju plohu oboda, ručku i nogu. Po obodu obično teku dvostruki nizovi naizmjeničnih točkastih ili trokutastih otisaka koji omeđuju cik-cak uzorak, ili mali šrafirani trokuti, rombovi i drugi geometrijski likovi izvedeni češljastim utiskivanjem. Ukras vanjske i unutarnje strane posude može biti organiziran u vodoravnim pojasevima, križno ili zvjezdasto.

Duboke bikonične zdjele i zdjelice su vrlo karakteristične, ali su prilično rijetke (sl. 2: 5–8). I one su uglavnom manjih dimenzija, u rasponu od povećih šalica do srednje velikih zdjela. Njihov donji dio je zaobljen, dok se nad bikoničnim ramenom uzdiže povisok, konkavno oblikovan vrat. Takav oblik posude često se naziva 'terinom' (Dimitrijević 1979a: 320). Mogu imati široku, vodoravno probušenu supkutanu ušicu nad ramenom ili uspravnu trakastu ručku koja spaja rame s gornjim dijelom vrata. Vrat može biti ukrašen različitim pojasevima, metopama i rešetkastim kompozicijama. Oblikom im je bliska malena, uska i visoka posudica koja podsjeća na zvonasti pehar (sl. 2: 1).

Još nekoliko osebujnih oblika posuda poznato je samo iz južnoga dijela područja prostiranja ljubljansko-jadranskoDeschman (Velušček, Čufar 2014), and catalogued and published almost a century later by Paola and Josip Korošec (Korošec, Korošec 1969). This body of evidence has been expanded and augmented by numerous finds from the eastern Adriatic, but none of the eastern Adriatic sites can compare with Ig in terms of the sheer abundance of characteristic finds. Deschmann's old finds therefore remain an unavoidable part of any attempt to redefine this style, even though Ljubljansko Barje is located on the geographical periphery of its geographic distribution.

**Vessel shapes and sizes**

The repertoire of the vessel shapes decorated with characteristic Ljubljana-Adriatic designs is rather limited. Round-bellied jars with a volume from a few deciliters to several liters are common (Fig. 2: 10–13). Their body is spheroid, sometimes slightly flattened, or with a barely indicated carinated shoulder. Usually, their constricted neck is low and cylindrical or slightly funnel-shaped, while tall cylindrical necks are much less common. Larger jars may have wide, horizontal, subcutaneously pierced lugs or short vertical strap handles placed at the shoulder. Decoration usually covers the neck and shoulder, and often continues across the lug or handle.

Open bowls of different sizes are another well-represented group (Fig. 2: 2–4). Many of them are fairly small (cup-sized), while other are medium-sized. Their shape varies from shallow to relatively deep vessels with a rounded body that expands towards the rim. The rim itself is often flat and thickened, and a short strap handle may be placed below it vertically or horizontally. Rare examples have their rim pierced by vertical perforations resembling subcutaneous lugs. These bowls are sometimes supported by a massive cruciform or star-shaped pedestal, by a hollow cylindrical or funnel-shaped pedestal (Fig. 2: 9), or by peg-shaped feet. Decoration may cover the entire exterior and interior surface, including the wide top surface of the rim, the handle, and the pedestal. Double series of alternating dots or triangular impressions delimiting a zigzag pattern, or small hatched triangles, lozenges, and other geometric shapes made by comb impression, usually run along the top of the rim. Exterior and interior decoration may be cruciform, star-shaped, or organized in horizontal zones.

Deep carinated bowls are very characteristic, but not very common (Fig. 2: 5–8). Again, most of them are fairly small, ranging in size from a large cup to a medium-sized bowl. Their body consists of the rounded lower part that meets the relatively tall, concave neck at the carinated shoulder. This vessel shape is often referred to as 'terrine' (Dimitrijević 1979a: 320). Sometimes they have a wide, horizontal, subcutaneously pierced lug above the shoulder, or a vertical strap handle connecting the shoulder with the upper part of the neck. The neck may be decorated in horizontal zones, by metopes, or by grid-like designs. A closely related shape is a small, tall and slender vessel resembling a Bell Beaker (Fig. 2: 1).

A few other distinctive vessel shapes are known only from the southern part of the Ljubljana-Adriatic style distribution area, from burial mounds of Velika Gruda, Mala

ga stila, iz grobova u gomilama Velike i Male grude, Grude Boljevića, Rubeža i Mogile na rake (sl. 2: 14–17). Među njima je pet primjeraka obostrano ukrašenih asimertičnih plitica s pločastom drškom,[5] zatim tri pehara obloga trbuha i visokog, blago konkavnog vrata s dugačkom trakastom ručkom koja spaja rame i obod, te visok i obostrano ukrašen lijevak.

Gruda, Gruda Boljevića, Rubež, and Mogila na Rake (Fig. 2: 14–17). Among them are five examples of asymmetric dishes with slab handles,[5] all of them decorated on interior and exterior sides, three round-bellied beakers with a high, slightly concave neck and a long strap handle connecting the shoulder with the rim, and a tall funnel.


Sl. 3 Karakteristični detalji ljubljansko-jadranskoga načina ukrašavanja: 1–2 uske trake ispunjene naizmjeničnim otiscima; 3–5 češljasto utiskivanje; 6–9 prostoručno i češljasto utiskivanje; 10 izrezivanje; 1, 3–5, 8–9 Vela spila; 6 Vaganačka pećina; 10 Sušac

*Fig. 3 Characteristic details of the Ljubljana-Adriatic decorative style: 1–2 narrow bands filled with alternating impressions; 3–5 comb impression; 6–9 free-hand and comb impression; 10 excision; 1, 3–5, 8–9 the Vela Cave on Korčula; 6 Vaganačka Pećina; 10 Sušac*

5 Često objavljivana rekonstrukcija plitice iz Male grude nije pouzdana jer se temelji na samo nekoliko ulomaka. Moguća je i drugačija rekonstrukcija iste posude koja bi tada bila asimetrična i znatno sličnija pliticama iz preostala tri spomenuta crnogorska nalazišta (Primas 1996: 55–56).

5 The frequently published reconstruction of a dish from Mala Gruda is unreliable, since it is based on just a few fragments. A different reconstruction is plausible that would make it asymmetric and much more similar to the dishes from the other three aforementioned Montenegrin sites (Primas 1996: 55–56).

**Ukrašavanje posuđa**

Vrlo karakteristično obilježje ljubljansko-jadranskoga stila su kompozicije sastavljene od uskih traka (obično užih od 5 mm) omeđenih urezivanjem ili češljastim utiskivanjem i ispunjenih naizmjeničnim točkastim, dugoljastim ili trokutastim otiscima koji između sebe stvaraju sićušni cik-cak uzorak (sl. 3: 1–2, 6–9). Takve trake dolaze pojedinačno, u parovima ili po više njih usporedo, a mogu biti razmaknute ili zbijene neposredno jedna do druge. Druga omiljena kompozicija je niz šrafiranih trokuta ili dvostruki niz naizmjenično postavljenih šrafiranih trokuta koji također između sebe omeđuju cik-cak uzorak. Ukras je obično organiziran u vodoravnim pojasevima. Usporedne uske trake izmjenjuju se s nizovima šrafiranih trokuta ili s pojasevima sastavljenim od 'metopa', uspravno šrafiranih pravokutnika omeđenih s obje strane kratkim odsječcima uskih traka (sl. 3: 6). Mogućnosti variranja i kombiniranja ovih standardnih elemenata gotovo su neograničene pa se stječe dojam da je svaka posuda bila osebujno ukrašena.

Osim jednostavnih alata koji ostavljaju pojedinačne točkaste, trokutaste ili dugoljaste otiske, za utiskivanje se koriste posebno pripremljeni instrumenti koji proizvode pravilne nizove gustih, gotovo identičnih i ponekad vrlo sitnih otisaka (sl. 3: 3–5). Eksperimentiranje je pokazalo da se takve ukrase može lako i uvjerljivo replicirati pomoću tankih drvenih ili koštanih letvica gusto omotanih nitima (Leghissa 2015), no nije isključeno da su se upotrebljavali i drugačiji alati poput žičanih zavojnica, češljeva, nazubljenih pločica ili kotačića. Zbog jednostavnosti, na ovom mjestu će se za sve varijante finoga utiskivanja izvedenog posebno pripremljenim instrumentom koristiti zajednički izraz 'češljasto utiskivanje'. Pri tome valja naglasiti da je ljubljansko-jadranski ukras obično pažljivo izveden pa nije uvjek lako ustanoviti radi li se o brižljivom prostoručnom utiskivanju ili o upotrebi nekoga od spomenutih instrumenata. Povrh toga, prostoručno i češljasto utiskivanje često dolaze u kombinaciji (sl. 3: 6–9).

Ukrašavanje se ponekad izvodi izrezivanjem ili duboreznom tehnikom, odnosno uklanjanjem sitnih dijelova prosušene površine stijenke posude pomoću noževa ili dlijeta. Rezultat ponekad može biti vrlo sličan utiskivanju, naročito ako se uzorak ispuni inkrustacijom. Mnoštvo posuđa ukrašenoga izrezivanjem iz sojeničarskih naselja Ljubljanskoga barja (Korošec, Korošec 1969) najčešće se povezuje s vučedolskim lončarskim stilom (Dimitrijević 1979a; Velušček, Čufar 2014). Nasuprot tome, sa širega prostora istočnog Jadrana objavljeno je vrlo malo takvih ulomaka, većinom iz špiljskih konteksta obilježenih ljubljansko-jadranskom lončarijom: desetak iz Gudnje (Marijanović 2005: T. 49; T. 51) te još nekoliko iz Ravlića pećine (Marijanović 1981: T. 36: 6; 2012: T. 68: 5; T. 73: 7) i Vele spile na Korčuli (Čečuk, Radić 2005: T. 87: 1; T. 92: 5). Njima se mogu pridodati jedan ulomak s gradine Renje kod Vrpolja (Korošec 1962: T. 5: 5), tri posude iz Grude Boljevića (Baković, Govedarica 2009: sl. 9–11) i dijelovi plitke zdjele s pločastom drškom iz raskopane gomile u Rubežu kod Nikšića (Benac 1955: T. 1: 6), kao i ulomci omanje zdjele iz nalazišta na otvorenom u uvali Dugoj na otoku Sušcu (sl. 3: 10). Možda ima još takvih ulomaka koji nisu prepoznatljivi na objavljenim ilustracijama, no ni u tom slučaju njihov ukupni broj ne može biti velik.

**Vessel decoration**

A particularly characteristic trait of the Ljubljana-Adriatic style is designs composed of narrow bands (usually, less than 5 millimeters wide) delimited by incision or comb impression and filled with alternating dots, elongated impressions, or triangles defining a tiny zigzag pattern between them (Fig. 3: 1–2, 6–9). These bands may be single, paired, or multiple, either set apart or crowded next to each other. Another popular design is a series of hatched triangles, or a double series of alternating hatched triangles that, like the impressed ones, delimit a zigzag pattern. The design usually runs in horizontal zones. Parallel narrow bands alternate with series of hatched triangles, or bands consisting of 'metopes', vertically hatched rectangles bounded on both sides by short sections of narrow bands (Fig. 3: 6). Endless variations and combinations of these standard elements create the impression that each vessel was decorated in a distinctive way.

Aside from the simple tools that produce isolated dots and triangular or elongated impressions, special instruments are used to create regular series of tightly packed, almost identical, and sometimes very tiny impressions (Fig. 3: 3–5). Experiments have indicated that such decoration can be replicated easily and convincingly by using tools made by wrapping a cord around small, thin laths made of wood or bone (Leghissa 2015). Different tools may have been used as well, such as coiled wire, combs, or denticulate plaques or wheels. For the sake of simplicity, 'comb impression' will be used here as a common term covering all the variants of fine impression made by special instruments. It should be added that, since Ljubljana-Adriatic decoration tends to be carefully made, it is not always easy to establish whether it was made by careful free-hand impression, or by one of those special instruments. Furthermore, free-hand and comb impressions are frequently combined (Fig. 3: 6–9).

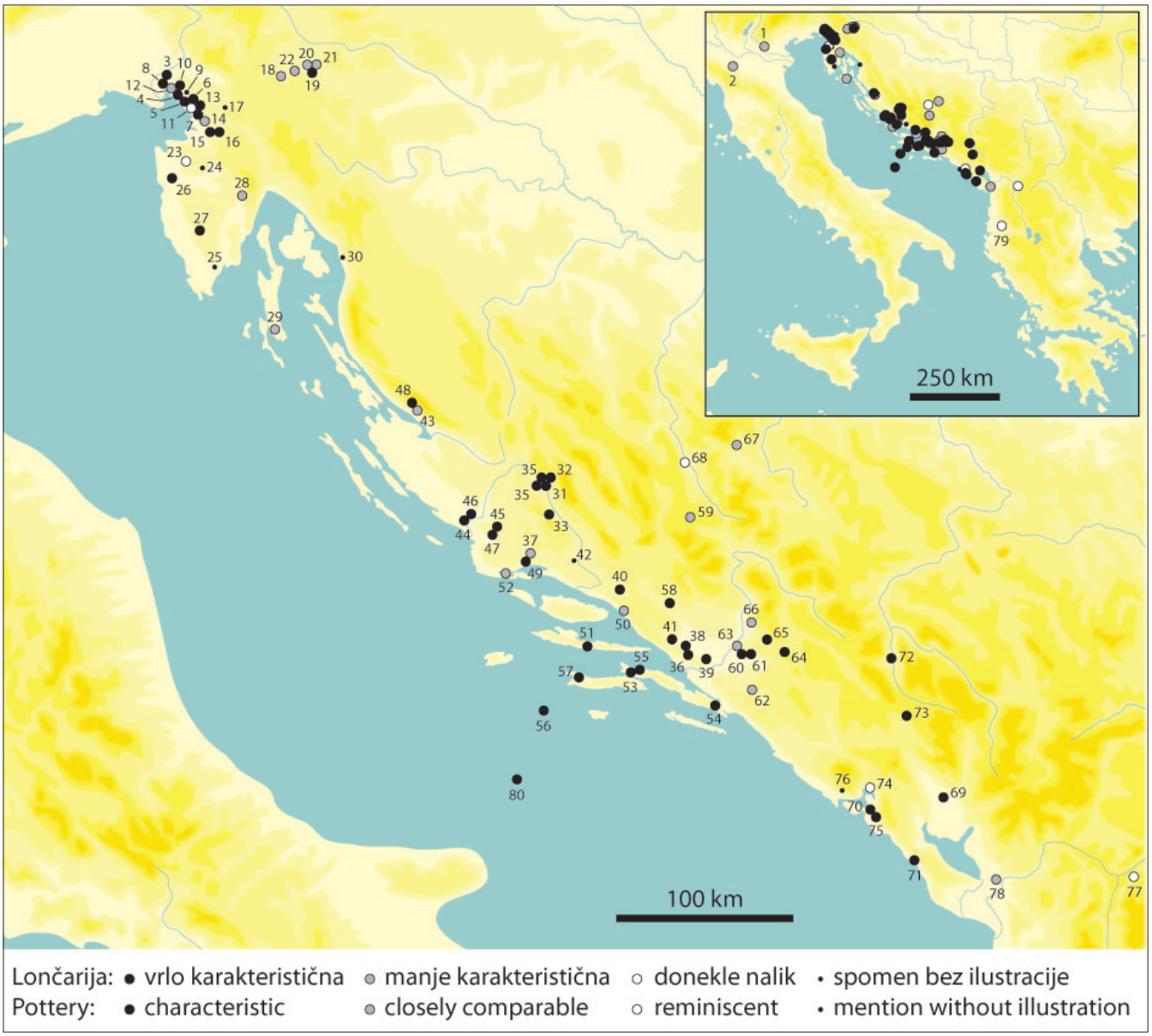
Decoration is sometimes made by excision or carving (*duborez* in Croatian), by removing small parts of the well-dried vessel wall by knives or chisels. Sometimes, the result can closely resemble impressed decoration, especially if the motif is filled with incrustation. Numerous vessels decorated by excision from the lake dwellings of Ljubljansko Barje (Korošec, Korošec 1969) are usually assigned to the Vučedol pottery style (Dimitrijević 1979a; Velušček, Čufar 2014). As opposed to that, only a very few such fragments from the wider eastern Adriatic region have been published, most of them from cave contexts marked by Ljubljana-Adriatic pottery: about a dozen from Gudnja (Marijanović 2005: Pl. 49; Pl. 51), and a few more from the Ravlića Cave (Marijanović 1981: Pl. 36: 6; 2012: Pl. 68: 5; Pl. 73: 7) and the Vela Cave on Korčula (Čečuk, Radić 2005: Pl. 87: 1; Pl. 92: 5). To these one may add a single sherd from the Renje hillfort near Vrpolje (Korošec 1962: Pl. 5: 5), three vessels from Gruda Boljevića (Baković, Govedarica 2009: Figs. 9–11), and fragments of a dish with a slab handle from the ransacked mound at Rubež near Nikšić (Benac 1955: Pl. 1: 6), as well as previously unpublished fragments of a small bowl from the open-air site in the Duga cove (Fig. 3: 10) on the island of Sušac. Other excision-decorated sherds may be unrecognizable in published illustrations, but their total number cannot be great.

**Zemljopisna rasprostranjenost i tipovi nalazišta**

Lončarija ljubljansko-jadranskoga stila rasprostranjena je duž istočne obale Jadrana (sl. 4) od Tršćanskoga Krasa do Skadarskoga jezera, uključujući otoke i pojas zaleđa koji gravitira prema obali te je mjestimice širok pedesetak kilometara. Neujednačena gustoća nalazišta unutar toga prostora u velikoj je mjeri posljedica nejednakoga intenziteta istraživanja (primjerice, mnoštvo nalazišta na Krasu ili mali broj nalazišta u Hrvatskome Primorju i Kvarnerskom zaljevu). Izvan toga prostora, malobrojni više ili manje slični nalazi

**Geographic distribution and site types**

The Ljubljana-Adriatic pottery style is distributed along the eastern Adriatic coast (Fig. 4) from the Trieste Karst to Lake Shkodër, including the islands and a stretch of hinterland up to 50 kilometers wide that gravitates towards the coast. The variable density of sites within this area (*e.g.,* the abundance of sites in the Karst, or the scarcity of sites in Kvarner Bay and the Croatian Littoral) primarily reflects the unequal intensity of research. Beyond that area, a small number of more-or-less similar finds has been published from a few sites in the Po




Sl. 4 Karta rasprostiranja lončarije ljubljansko-jadranskoga stila:
*Fig. 4 Distribution map of the Ljubljana-Adriatic pottery style:*
1 Bernardine di Coriano; 2 Sant'Ilario d'Enza; 3 Castelazzo di Doberdò; 4 Grotta Caterina; 5 Grotta Cotariova; 6 Grotta degli Zingari; 7 Grotta dei Ciclami; 8 Grotta del Mitreo; 9 Grotta del Pettine; 10 Grotta del Pettiroso; 11 Grotta della Tartaruga; 12 Grotta Teresiana; 13 Riparo di Percedol; 14 San Michele; 15 Acijev spodmol; 16 Podmol pri Kastelcu; 17 Tominčeva jama; 18 Črni Graben; 19 Ig; 20 Parte; 21 Parte-Iščica; 22 Založnica; 23 Cingarela; 24 Laganiši; 25 Nezakcij; 26 Pećina kod Srbana; 27 Pećinovac; 28 Pupićina peć; 29 Jami na Sredi; 30 Vlaška peć; 31 Gomile više lada; 32 Lukovača; 33 Otišić; 34 Rudine; 35 Šparevine; 36 Eraci; 37 Kovačina; 38 Kruške; 39 Ograđe; 40 Sridnja gora; 41 Vukosavi; 42 Zemunica; 43 Pazjanice; 44 Šarina draga; 45 Škarin samograd; 46 Tradanj; 47 Ulnovac; 48 Vaganačka pećina; 49 Biranj; 50 Bubnjavača; 51 Grapčeva spilja; 52 Marina; 53 Grad; 54 Gudnja; 55 Spila (Nakovana); 56 Uvala Duga; 57 Vela spila; 58 Ravlića pećina; 59 Varvara; 60 Badanj; 61 Džakulina glavica; 62 Greben pećina; 63 Guvnine; 64 Hateljska pećina; 65 Lazaruša; 66 Zelena Pećina; 67 Alihodže; 68 Pod; 69 Gruda Boljevića; 70 Mala gruda; 71 Mogila na rake; 72 Odmut; 73 Rubež; 74 Spila (Perast); 75 Velika gruda; 76 Vranjaj; 77 Bardhoc; 78 Gajtan; 79 Pazhok; 80 Salamandrija

objavljeni su s nekoliko nalazišta u dolini rijeke Po, u središnjoj Bosni te u sjevernoj i središnjoj Albaniji. Izrazitu iznimku predstavlja Ig na Ljubljanskom barju, nalazište koje je dalo brojne karakteristične nalaze iako je smješteno u slivu rijeke Save i odmaknuto od obale 70 km.

Polovica od ukupno 80 nalazišta koja su dala ljubljansko-jadransku lončariju su špilje. Iz većine od njih prikupljeno je tek nekoliko karakterističnih ulomaka, nerijetko samo po jedan. Brojem takvih nalaza ističu se Grotta dei Ciclami (Gilli, Montagnari Kokelj 1993), Grotta del Mitreo (Montagnari Kokelj, Crismani 1997), Grapčeva spilja (Novak 1955; Korošec, P. 1956; Forenbaher, Kaiser 2008), Vela spila na Korčuli (Čečuk, Radić 2005) i Ravlića pećina (Marijanović 1981; 2012), no niti iz jedne od njih nije objavljeno više od par desetaka ulomaka.

Sljedeća po zastupljenosti su nalazišta naseobinskoga tipa na otvorenome. Deset od njih ukupno dvadeset su gradine, pet su sojeničarska naselja na Ljubljanskome barju, dok o preostalih pet nalazišta ne znamo gotovo ništa. Obilje ljubljansko-jadranske lončarije prikupljeno je jedino iz sojeničarskoga naselja Ig (Korošec, Korošec 1969) te iz nalazišta u vrtači u Otišiću (Milošević, Govedarica 1986). Razmjerno velik broj sličnih, iako ne posve karakterističnih ulomaka prikupljen je s Varvare (Čović 1978) i Poda (Čović 1991b), dvaju gradina smještenih duboko u zaleđu Jadrana. Sa svih ostalih naseobinskih nalazišta potječu tek pojedinačni karakteristični ulomci.

Ljubljansko-jadranska lončarija pronađena je u gomilama na sedamnaest nalazišta. Posude priložene uz zgrčenoga pokojnika u grobni sanduk od kamenih ploča pronađene su samo na tri crnogorska nalazišta, Velikoj grudi (Primas 1996), Maloj grudi (Parović-Pešikan, Trbuhović 1974) i Mogili na rake (Zagarčanin 2016). U svim ostalim slučajevima, ulomci ljubljansko-jadranske lončarije prikupljeni su iz plašta gomile ili iz tla pod gomilom. Ponekad se iz rasporeda ulomaka može naslutiti da je posuđe bilo odlagano u sklopu pogrebnoga rituala, primjerice, u Grudi Boljevića (Baković, Govedarica 2009; Guštin, Preložnik 2015). Drugdje se čini da su ulomci dospjeli u plašt slučajno, zajedno sa zemljom i kamenjem od kojih je gomila bila podignuta. Većinom se radi o tek nekoliko karakterističnih ulomaka, a nešto više ih je objavljeno iz Gomila više lada i Lukovače kod izvora Cetine (Marović 1991), Eraka u zaleđu Ploča (Bilić et al. 2011), Grude Boljevića kod Podgorice (Baković, Govedarica 2009; Guštin, Preložnik 2015) i Bardhoca u Albaniji (Hoti 1982).

Zasebnoj kategoriji pripada Salamandrija, nalazište posebne namjene na Palagruži, odakle je prikupljen veći broj ljubljansko-jadranskih ulomaka (Forenbaher 2018). Jedini podmorski nalaz je trbušasti lonac, slučajno pokupljen s morskoga dna nedaleko Marine kod Trogira (Radić Rossi 2011).

**Prostorna i vremenska raznolikost**

Ljubljansko-jadranski stil očito nije homogen na čitavom svojem području rasprostiranja. Primjerice, otvorene zdjele na masivnoj križnoj ili zvjezdastoj nozi pojavljuju se samo na Krasu i u središnjoj Sloveniji, dok su asimetrične plitice s pločastom drškom i pehari visokoga vrata s dugačkom tra-

River valley, in central Bosnia, and in northern and central Albania. A conspicuous exception is Ig in Ljubljansko Barje, the site that yielded numerous characteristic finds, although it is located within the Sava River drainage area, some 70 kilometers away from the Adriatic coast.

Half of the eighty sites that yielded Ljubljana-Adriatic pottery are caves. Most of them yielded only a few characteristic sherds, or sometimes just a single sherd. A considerable number of Ljubljana-Adriatic sherds were recovered from five caves, Grotta dei Ciclami (Gilli, Montagnari Kokelj 1993), Grotta del Mitreo (Montagnari Kokelj, Crismani 1997), the Grapčeva Cave (Novak 1955; Korošec, P. 1956; Forenbaher, Kaiser 2008), the Vela Cave on the island of Korčula (Čečuk, Radić 2005), and the Ravlića Cave (Marijanović 1981; 2012), but the number of published sherds does not exceed a few dozen for any of those sites.

Open-air settlements are the next best represented site type. Ten out of twenty are hillforts, five are lake dwellings at Ljubljansko Barje, while we know next to nothing about the remaining five. Abundant Ljubljana-Adriatic pottery was recovered only from the lake dwelling at Ig (Korošec, Korošec 1969), and from the site in a small karstic doline at Otišić (Milošević, Govedarica 1986). A fairly large number of similar, though less characteristic sherds was recovered from Varvara (Čović 1978) and Pod (Čović 1991b), two hillforts located deep in the Adriatic hinterland. Only isolated characteristic sherds were recovered from all other settlement sites.

Ljubljana-Adriatic pottery was found in burial mounds at seventeen sites. Vessels deposited in stone cists next to the flexed body of the deceased were found only at the three Montenegrin sites, Velika Gruda (Primas 1996), Mala Gruda (Parović-Pešikan, Trbuhović 1974), and Mogila Na Rake (Zagarčanin 2016). In all other cases, Ljubljana-Adriatic potsherds were recovered from the mantle of the mound, or from the underlying soil. The distribution of the fragments sometimes suggests that the vessels were deposited in the course of the burial ritual, for instance, at Gruda Boljevića (Baković, Govedarica 2009; Guštin, Preložnik 2015). Elsewhere it seems that the fragments ended up in the mantle by accident, together with the soil and rocks used in the mound's construction. While only a few characteristic sherds tend to be present, relatively numerous sherds were published from the burial mounds at Gomile Više Lada and Lukovača near the source of the Cetina River (Marović 1991), Eraci near Ploče (Bilić et al. 2011), Gruda Boljevića near Podgorica (Baković, Govedarica 2009; Guštin, Preložnik 2015), and Bardhoc in Albania (Hoti 1982).

Salamandrija, a special-purpose site on Palagruža that yielded a large number of Ljubljana-Adriatic sherds (Forenbaher 2018), belongs to a separate category. The only submerged find is a round-bellied jar, a chance find from the sea bottom near Marina by Trogir (Radić Rossi 2011).

**Spatial and temporal variability**

Evidently, the Ljubljana-Adriatic style is not homogeneous across its distribution area. For example, open bowls on a massive cruciform or star-shaped foot appear only in the Karst and in central Slovenia, while asymmetric dishes

kastom ručkom ograničeni samo na crnogorska nalazišta. Sustavna analiza vjerojatno bi otkrila i druge, manje očite regionalne razlike, no važno je istaknuti da se temeljni oblici i motivi ukrašavanja mogu naći na čitavome prostoru.

Izvjesna lokalna varijabilnost je očekivana, jer sve što znamo o organizaciji jadranskih društava i njihovoga gospodarstva u trećem tisućljeću prije Krista upućuje na to da izrada lončarije nije bila centralizirana. Lončari iz različitih krajeva istočnojadranskoga prostora dijelili su zajednička shvaćanja o tome kako treba izgledati posuđe, no njihovi proizvodi su se razlikovali u pojedinostima ukrašavanja i oblikovanja. Unutar jadransko-ljubljanskoga stila vjerojatno će se moći razlikovati nekoliko podregionalnih varijanti, no zbog velike fragmentiranosti i razmjerno male ukupne količine građe, takve podregionalne stilove zasad nije moguće jasno definirati, unatoč vrijednim pokušajima (Dimitrijević 1967; Govedarica 1989b). Izrazitu osebujnost i ujednačenost pokazuje posuđe iz crnogorskih nalazišta, no pri tome valja imati na umu da se još uvijek radi o malome broju nalaza prikupljenih isključivo iz grobnih gomila.

Još manje je uvjerljiv pokušaj podjele 'klasičnoga tipa ljubljanske kulture' na dvije vremenske faze (Govedarica 1989b: 39–47). Taj se pokušaj oslanja na nesigurne stratigrafije triju špilja Tršćanskoga Krasa, Grotta del Mitreo (Montagnari Kokelj, Crismani 1997), Grotta degli Zingari (Gilli, Montagnari Kokelj 1996) i Grotta Tartaruga (Canarella, Redivo 1981; Govedarica 1989b), u kojima se pojavljuje skromna količina ljubljansko-jadranske i cetinske (ili cetinskom stilu bliske) lončarije, ponekad obje vrste lončaije zajedno unutar istoga sloja. Preduvjet za pouzdanu vremensku podjelu bio bi dovoljan broj jasno stratificiranih ili čvrsto datiranih karakterističnih nalaza. Takvih nalaza jednostavno nema, pa se ljubljansko-jadranski stil zasad može promatrati samo kao jedinstven vremenski horizont. Izuzetak bi mogli predstavljati jedino već spomenuti nalazi iz crnogorskih gomila uz koje se vezuju najraniji radiokarbonski datumi, o čemu će biti više riječi u nastavku.

## CETINSKI STIL

Definicija cetinskoga lončarskog stila koja slijedi temelji se na objavljenim nalazima iz 103 nalazišta[6] te se uglavnom podudara s postojećim definicijama lončarije 'cetinske kulture', odnosno njezine druge, najprepoznatljivije faze (Marović 1976: 70–71; Marović, Čović 1983: 197–198; Govedarica 1989b: 135–137). Te definicije oslanjaju se u velikoj mjeri na građu iz grobalja pod gomilama oko vrela rijeke Cetine koju je prikupio Ivan Marović u nizu iskopavanja provedenih tijekom treće četvrtine prošloga stoljeća (Marović 1963; 1976; 1991). U međuvremenu su brojni novi nalazi s prostora istočnoga Jadrana nadopunili i proširili taj temelj, no nalazišta uz gornji tok rijeke Cetine svojim brojem i koncentracijom još uvijek dominiraju u ukupnom korpusu građe.

6 Forenbaher 2018 donosi pregled temeljnih podataka i iscrpnu bibliografiju o svim nalazištima s kojih je objavljen barem jedan ulomak lončarije cetinskoga stila.

with a slab handle and tall-necked beakers with a long strap handle are restricted to Montenegrin sites. While a thorough analysis probably would detect other, less obvious regional differences, it is important to note that the basic shapes and decorative motifs can be found throughout the area.

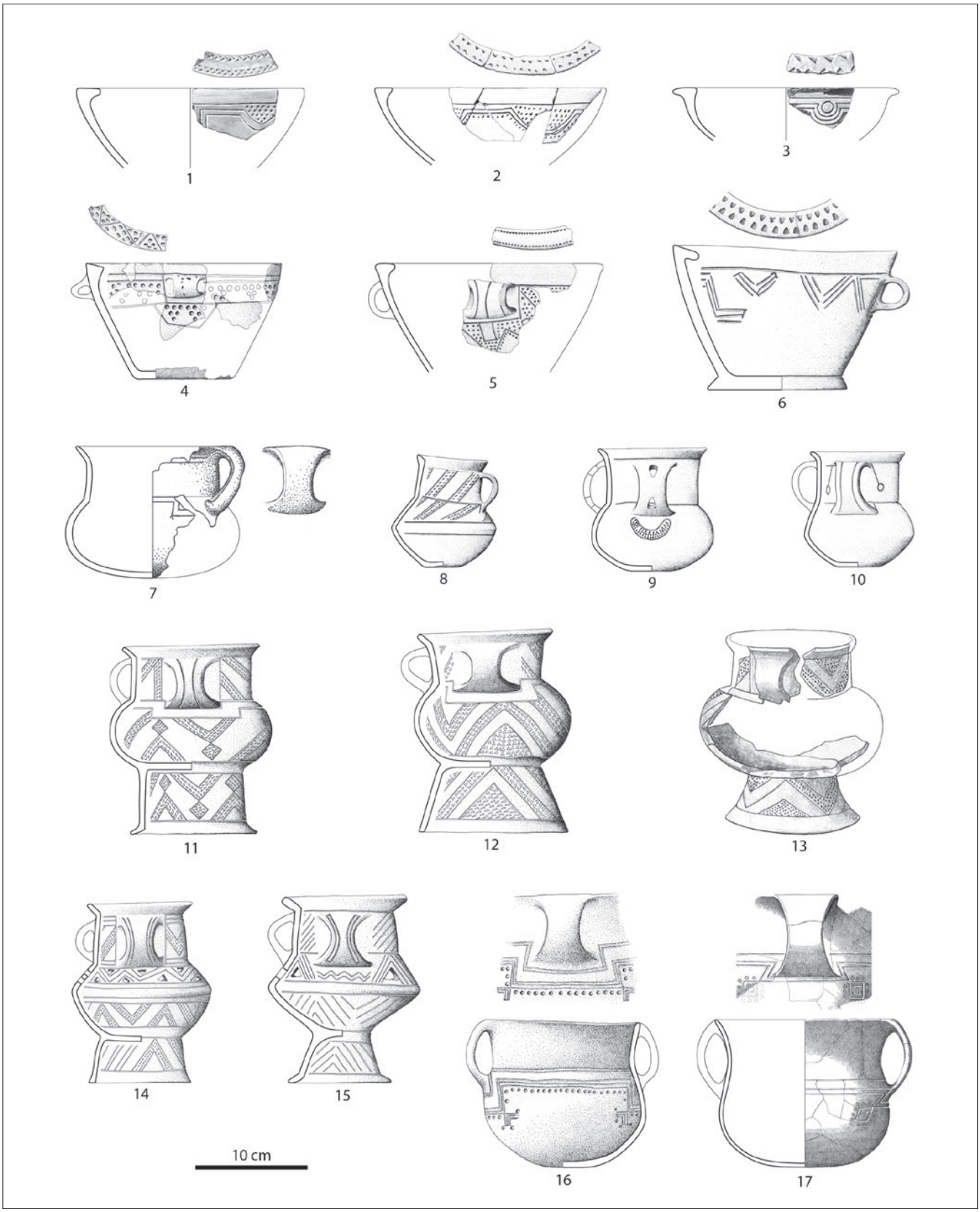
A certain amount of local variability is expected, since everything that we know about the economy and organization of Adriatic societies in the third millennium BC suggests that pottery production was not centralized. Potters from different parts of the eastern Adriatic region would have shared common views about what their vessels should look like, but their products differed in details of shape and decoration. One should be able to distinguish among several subregional variants of the Ljubljana-Adriatic style, but due to the high fragmentation and relatively small total quantity of finds, such subregional styles currently cannot be clearly defined, despite some worthy attempts (Dimitrijević 1967; Govedarica 1989b). The pottery from Montenegrin sites is unusually distinct and uniform, but one should remember that, for the moment, those sites yielded only a small number of finds, all of them from burial mounds.

The attempt to split the 'classical type of the Ljubljana culture' into two chronological phases is even less convincing (Govedarica 1989b: 39–47). That attempt relies on the uncertain stratigraphies of three caves in Trieste Karst, Grotta Del Mitreo (Montagnari Kokelj, Crismani 1997), Grotta Degli Zingari (Gilli, Montagnari Kokelj 1996) and Grotta Tartaruga (Canarella, Redivo 1981; Govedarica 1989b), that yielded modest quantities of Ljubljana-Adriatic and Cetina (or Cetina-like) pottery, sometimes both appearing together within the same layer. A reliable temporal division would require an adequate number of clearly stratified and securely dated characteristic finds. Since such finds simply are not available, the Ljubljana-Adriatic style currently may only be regarded as a single chronological horizon. The only exception may be the aforementioned finds from Montenegrin burial mounds, which are associated with the earliest radiocarbon dates, a topic to be discussed below.

## CETINA STYLE

The following definition of the Cetina style, based on the published finds from 103 sites,[6] roughly coincides with the existing definitions of 'Cetina culture' pottery, or more precisely, with its second and most distinctive phase (Marović 1976: 70–71; Marović, Čović 1983: 197–198; Govedarica 1989b: 135–137). Those definitions rely heavily on the finds from the mound cemeteries around the source of the Cetina River, recovered by Ivan Marović in a series of excavations conducted during the third quarter of the last century (Marović 1963; 1976; 1991). Since then, that body of evidence has been expanded and augmented by numerous new finds from the eastern Adriatic, but the abundance and concentration of sites along the upper course of Cetina River remains dominant.

6 Forenbaher 2018 provides an overview of basic information about all the sites with at least one published Cetina potsherd, accompanied by exhaustive bibliography.




Sl. 5 Karakteristična lončarija cetinskoga stila: 1 Škarin samograd (prema Marović, Čović 1983); 2, 5–6, 8–10, 12 Lukovača (prema Marović 1991); 3 Ljubomir (prema Marović, Čović 1983); 4 Rudine (prema Marović 1991); 7 Pisciulo (prema Cataldo 1996); 11, 15 Gomile više lada (prema Marović 1991); 13 Gradac (prema Govedarica 2006); 14 Zelenovića ogradice (prema Marović 1991); 16 Bajagić (prema Marović 1991); 17 Jukića gomile (prema Olujić 2012)

*Fig. 5 Characteristic Cetina style pottery: 1 Škarin Samograd (after Marović, Čović 1983); 2, 5–6, 8–10, 12 Lukovača (after Marović 1991); 3 Ljubomir (after Marović, Čović 1983); 4 Rudine (after Marović 1991); 7 Pisciulo (after Cataldo 1996); 11, 15 Gomile Više Lada (after Marović 1991); 13 Gradac (after Govedarica 2006); 14 Zelenovića Ogradice (after Marović 1991); 16 Bajagić (after Marović 1991); 17 Jukića Gomile (after Olujić 2012)*

**Oblici i veličine posuda**

Repertoar oblika posuđa ukrašenoga na cetinski način još je uži od ljubljansko-jadranskog. Vrlo su karakteristični pehari i peharići zapremine od nekoliko decilitara do preko jedne litre (sl. 5: 7–10). Tijelo tipičnoga cetinskog pehara obično je kuglasto ili lećasto spljošteno, no može biti i izrazito bikonično. Vrat je slične visine kao i tijelo, poširok i najčešće valjkast, iako može biti i blago stožast ili ljevkast. Završava razgrnutim obodom koji je jasno odvojen od vrata oštrim lomom, no nije naročito širok. Karakteristično oblikovana trakasta ručka povezuje rame s vrhom vrata. Izraz 'stegnuta ručka' bolje opisuje njen oblik od uobičajenoga izraza 'iksoidna ručka' jer se njeni rubovi lučno sužavaju prema sredini. Vrlo rijetko, takve stegnute ručke mogu imati trokutasto perforirane krajeve (primjerice, Marović 1991: sl. 47: 1; Livadie 2010: sl. 15) pa bi za njih izraz 'iksoidna ručka' bio opravdaniji (sl. 6: 8).

Cetinski pehari ponekad imaju visoku valjkastu ili ljevkastu nogu na koju otpada trećina visine posude (sl. 5: 11–15). Takve posude upečatljivoga oblika često se nazivaju 'posudama tipa Kotorac', po nalazu prikupljenome prije stotinjak godina s Gradca u Kotorcu nedaleko Sarajeva (Korošec 1941). Zbog razlomljenosti nalaza ne može se pouzdano procijeniti koliko su takvi pehari na nozi bili česti u odnosu na pehare s jednostavnim ravnim ili zaobljenim dnom. Ulomci visokih nogu razmjerno su uobičajen nalaz, no najčešće se ne može utvrditi radi li se o nozi pehara ili možda zdjele. Nedvojbeni primjerci cetinskih pehara na nozi objavljeni su, osim s Kotorca, još samo s četiri nalazišta, od kojih su tri na izvoru Cetine – Gomile više lada (Marović 1991: sl. 71: 1; 73: 1; 76: 1), Lukovača (Marović 1991: sl. 42: 6; 46: 4) i Zelenovića ogradice (Marović 1991: sl. 64: 1), a jedno, Vlake (Šuta 2013: sl. 10), u zaleđu srednje Dalmacije. Među njima su i dva pehara na nozi s nizom trokutastih perforacija na ramenu (Marović 1991: sl. 73: 1; 64: 1) koji predstavljaju iznimno rijetku varijantu ovoga tipa posude (sl. 5: 14–15). Svi objavljeni pehari na nozi, osim onoga s Gradca u Kotorcu, pronađeni su u gomilama.

Druga dobro zastupljena skupina posuda su otvorene zdjele i zdjelice (sl. 5: 1–6). Mnoge od njih oblikom se ne razlikuju od ljubljansko-jadranskih otvorenih zdjela. Dimenzije im variraju od zdjelica veličine male šalice do zdjela promjera dvadesetak centimetara. Mogu biti plitke ili relativno duboke, blago zaobljenoga ili koničnog tijela koje je uvijek najšire pri obodu. Gornja ploha oboda je zaravnjena i ponekad vrlo široka, vodoravna ili zakošena prema unutra, a ispod oboda može se nalaziti kratka uspravna stegnuta ručka. Cetinske otvorene zdjele također vjerojatno mogu stajati na šupljoj valjkastoj ili ljevkastoj nozi, no nedvojbeni primjerci takvih posuda nisu objavljeni. Od ljubljansko-jadranskih otvorenih zdjela razlikuju se u prvom redu ukrasom. Ukrašena je u pravilu gornja ploha oboda i pojas ispod oboda s vanjske strane posude, dok unutarnja strana nije ukrašena. Nema supkutanih ušica niti zdjela na masivnoj nozi. Ostala izrazito cetinska obilježja su stegnute ručke i istaknuto ravno dno koje je šire od donjega kraja trbuha.

Široki pehari s dvjema nasuprotnim ručkama znatno su

**Vessel shapes and sizes**

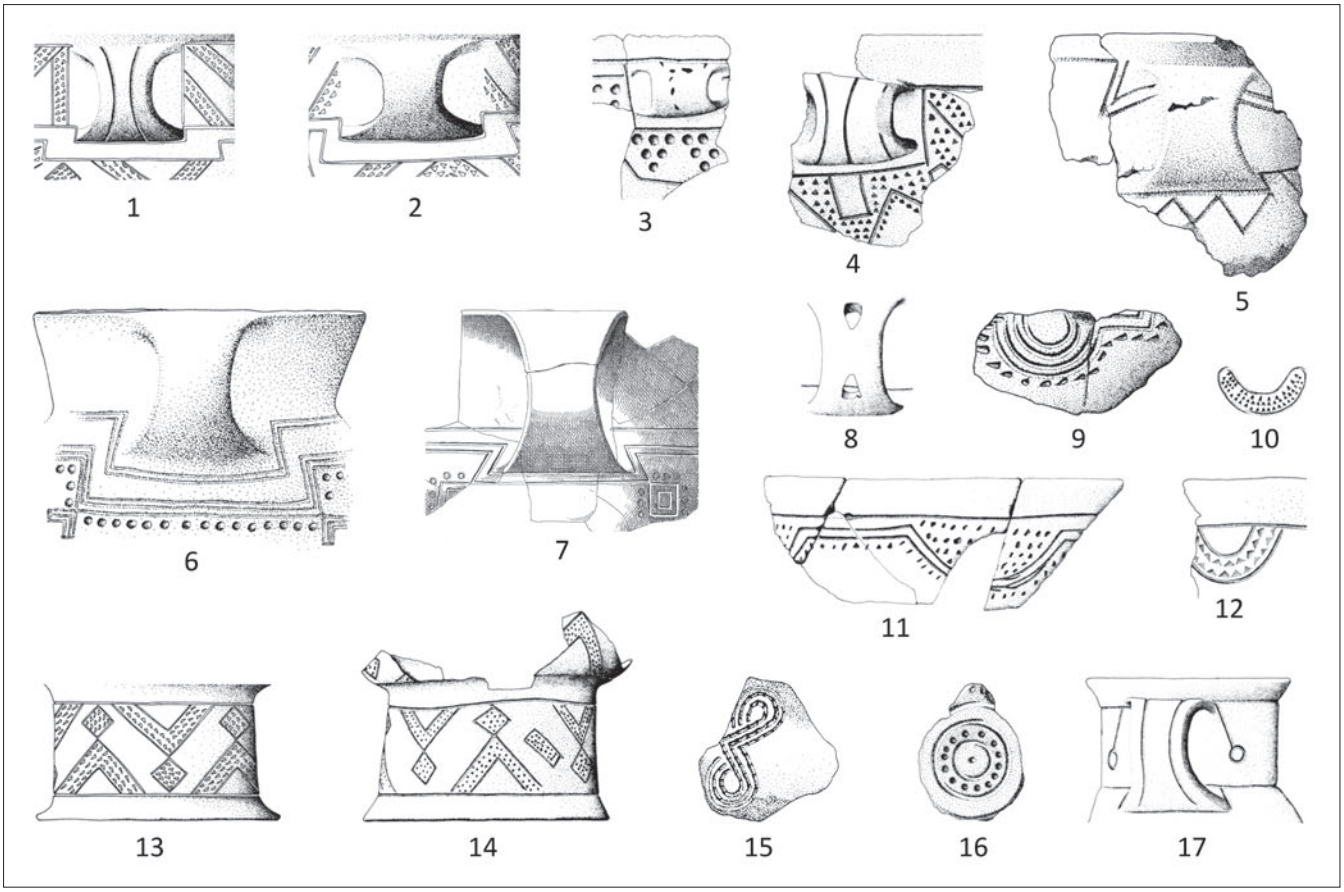
The repertoire of the vessel shapes decorated by characteristic Cetina designs is even more limited than the Ljubljana-Adriatic repertoire. Beakers of various sizes with a volume from a few deciliters to over one liter are very characteristic (Fig. 5: 7–10). The body of a typical Cetina beaker usually is spheroid or lens-shaped, but it may be markedly carinated. The neck is roughly as tall as the body, rather wide and usually cylindrical, although it may be slightly conical or funnel-shaped. It ends in an everted rim that is clearly separated from the neck by a sharp break in profile, but is not particularly wide. A characteristically shaped strap handle connects the shoulder with the top of the neck. Its curved sides gradually converge towards a narrowest point near its middle. The term 'constricted handle' describes its shape better than the customary term 'X-shaped handle' (*iksoidna ručka* in Croatian). Exceptionally, such handles may have triangular perforations near both ends (*e.g.* Marović 1991: Fig. 47: 1; Livadie 2010: Fig. 15); for them, the term 'ex-shaped' seems more justified (Fig. 6: 8).

The Cetina beakers sometimes stand on a cylindrical or funnel-shaped pedestal that makes up a third of the vessel's height (Fig. 5: 11–15). Vessels of this conspicuous shape are often called 'Kotorac type vessels', after a find collected about a century ago from Gradac at Kotorac near Sarajevo (Korošec 1941). Due to the fragmentation of finds, one cannot estimate reliably how common were such pedestalled beakers, compared to the simple beakers with flat or rounded bases. Fragments of pedestals are relatively common, but in most cases it is impossible to decide whether they belonged to a beaker or a bowl. Aside from Kotorac, unquestionable examples of pedestalled Cetina beakers have been published from just four more sites. Three of them – Gomile Više Lada (Marović 1991: Fig. 71: 1; 73: 1; 76: 1), Lukovača (Marović 1991: Fig. 42: 6; 46: 4), and Zelenovića Ogradice (Marović 1991: Fig. 64: 1) – are at the source of the Cetina River, while the fourth – Vlake – is in the hinterland of Middle Dalmatia (Šuta 2013: Fig. 10). Among them are two small pedestalled beakers with a series of triangular perforations at their shoulder (Marović 1991: sl. 73: 1; 64: 1), an exceptionally rare variant of this vessel type (Fig. 5: 14–15). All of the published pedestalled beakers were found in burial mounds, except for the one from Gradac at Kotorac.

Another well-represented group of vessels is open bowls of various sizes (Fig. 5: 1–6). Most of them do not differ in shape from the Ljubljana-Adriatic open bowls. They vary in size from small cups to bowls some 20 centimeters across. They can be shallow or relatively deep, and have a conical or slightly rounded body that expands towards the rim. The top side of the rim is flat and sometimes very wide, horizontal, or inclined towards the middle of the vessel. A short, constricted strap handle may be placed vertically below the rim. The Cetina-style open bowls may probably also stand on hollow cylindrical or funnel-shaped pedestals, although unquestionable examples of such vessels have not been published. They differ from the Ljubljana-Adriatic open bowls primarily by their decoration. As a rule, the top side of the rim and the exterior zone below the rim are decorated, while the interior is left plain. Subcutaneous lugs and massive feet are absent. Other decisively Cetina characteristics are constricted handles and protruding bases that are wider than the bottom part of the vessel.

rjeđi (sl. 5: 16–17). Radi se o nevelikim posudama, zapremine od oko jedne litre. Trbuh im je zaobljen, a neizrazito rame postupno prelazi u širok, blago ljevkast vrat. Dvije nasuprotno postavljene stegnute ručke povezuju rame s obodom. Svi dobro sačuvani primjerci pronađeni su u gomilama, na nalazištima Bajagić (Marović 1991: sl. 88), Jukića gomile (Olujić 2012: sl. 11–13a; T. 8–10) i Shtoj (Koka 1985: T. 1: 1).

Wide beakers with two opposing handles are much less common (Fig. 5: 16–17). These are relatively small vessels with a volume of about one liter. Their belly is rounded, while their inconspicuous shoulder continues into a wide, slightly funnel-shaped neck. The two opposing constricted handles connect the shoulder to the rim. All of the well-preserved examples were recovered from burial mounds, at Bajagić, (Marović 1991: Fig. 88), Jukića Gomile (Olujić 2012: Figs. 11–13a; Pls. 8–10) and Shtoj (Koka 1985: Pl. 1: 1).




Sl. 6 Karakteristični detalji cetinskoga načina ukrašavanja: 1–2, 4, 8, 10–11, 14, 17 Lukovača; 3, 9, 16 Rudine; 5 Zelenovića ogradice; 6 Bajagić; 12 Šparevine; 13, 15 Gomile više lada (sve prema Marović 1991); 7 Jukića gomile (prema Olujić 2012)

*Fig. 6 Characteristic details of the Cetina decorative style: 1–2, 4, 8, 10–11, 14, 17 Lukovača; 3, 9, 16 Rudine; 5 Zelenovića Ogradice; 6 Bajagić; 12 Šparevine; 13, 15 Gomile Više Lada (all after Marović 1991); 7 Jukića Gomile (after Olujić 2012)*

**Ukrašavanje posuđa**

Poput ljubljansko-jadranske, karakteristična cetinska lončarija također je najčešće ukrašena kombinacijom urezivanja i utiskivanja, no pritom se za utiskivanje koriste samo jednostavni alati koji ostavljaju pojedinačne točkaste ili trokutaste otiske. Na posuđu karakterističnoga cetinskog oblika nema češljastog utiskivanja, što znači da se ne koriste posebno pripremljeni instrumenti poput tankih letvica omotanih nitima, češljeva ili zavojnica. Ukrašavanje se izvodi prostoručno i nije tako precizno kao na ljubljansko-jadranskoj lončariji.

Ukras je i ovdje najčešće organiziran u vodoravnim pojasevima, no cetinski pojasevi izgledaju drugačije od ljubljansko-jadranskih. Razgraničuju ih urezane linije koje opasuju posudu ispod oboda, na prijelazu vrata u rame, pri najširem dijelu trbuha te pri vrhu i pri dnu visoke noge, ako

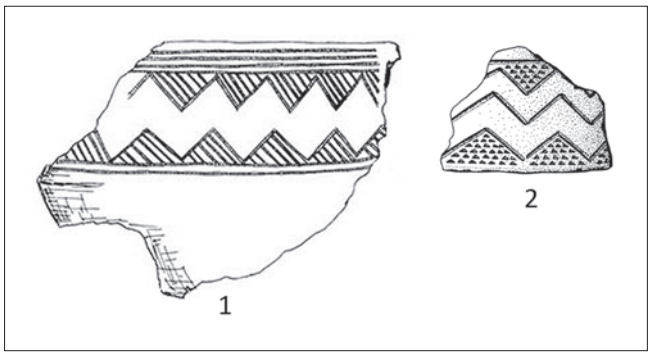
**Vessel decoration**

Like Ljubljana-Adriatic pottery, the characteristic Cetina pottery is usually decorated by a combination of incision and impression, but only simple tools were used to produce impressions of individual dots and triangles. Comb impression does not appear on characteristically shaped Cetina vessels, which means that special tools (such as thin, cord-wrapped laths, combs, or coils) were not employed. Decoration was made by free hand, and was less precisely executed than on Ljubljana-Adriatic pottery.

Most often, the decoration is organized in horizontal zones, but in a manner that differs from Ljubljana-Adriatic zonal decoration. Cetina-style zones are delimited by incised lines that girdle the vessel below the rim, at the transition from neck to shoulder, at the widest point of the belly, and at the top and bottom of the pedestal, if there is one. These

ona postoji. Te granične linije mogu biti jedini ukras, ili se uz njih mogu nizati otisci ili urezani prazni trokuti. Na bogatije ukrašenim posudama, pojasevi sadrže različite geometrijske oblike. Najčešće su to segmenti zakošenih traka ili prelomljene trake u obliku uspravnoga ili obrnutog slova V, trokuti i rombovi, ili kompozicije sastavljene od takvih traka i geometrijskih likova. Plohe omeđene urezivanjem ponekad su šrafirane, no češće su ispunjene točkastim ili trokutastim otiscima, pri čemu trokutići obično teku u pravilnim redovima, dok točke mogu biti razasute bez reda po čitavoj površini geometrijskoga lika. Uobičajene su i trake sastavljene od nekoliko uzdužnih, usporedo urezanih linija uz koje se također ponekad nižu otisci. Cetinske trake su relativno široke u usporedbi s ranije opisanim ljubljansko-jadranskim trakama.

Linije koje razgraničuju ukrasne pojaseve u pravilu obilaze i uokviruju donji kraj ručke, lomeći se pod pravim kutom (sl. 6: 1–7). Takvo uklapanje ručke u ukrasnu kompoziciju specifično je za cetinski stil, kao i urezivanje linija duž oba ruba same ručke (sl. 6: 1, 4, 17). Među lako prepoznatljive i vrlo karakteristične motive spadaju viseći polukrugovi koji prekidaju vodoravno pružanje ukrasa. Mogu se sastojati od zakrivljene trake sastavljene od nekoliko usporedo urezanih linija ili ispunjene otiscima, ili od polukruga omeđenoga urezivanjem i ispunjenoga otiscima (sl. 6: 9–12). Također su karakteristični rombovi i drugi geometrijski likovi 'obješeni' o traku na mjestu gdje se ona lomi pod pravim kutom (sl. 6: 6–7, 13–14) kao i urezani ili utisnuti kružići koji ponekad 'vise' poput trešnje na kraju urezane linije (sl. 6: 16–17). Rijedak, ali lako repoznatljiv motiv kratke prelomljene trake s vitičastim završecima (sl. 6: 15) također se smatra specifično cetinskim (Marović, Čović 1983: 211–212; Govedarica 1989b: 137), iako je samo u jednom slučaju jasno da se nalazio na posudi koja donekle nalikuje cetinskom peharu (Dörpfeld 1935: T. 22: 1; prilog 25a).




Sl. 7 Slične kompozicije izvedene različitim tehnikama ukrašavanja: 1 češljastim utiskivanjem na ljubljansko-jadranskoj bikoničnoj zdjelici iz Iga (prema Korošec, Korošec 1969); 2 urezivanjem i utiskivanjem na nozi cetinske posude iz Zelenovića ogradica (prema Marović 1991)

*Fig. 7 Similar designs executed by different decorative techniques: 1 by comb impression, on a Ljubljana-Adriatic carinated bowl from Ig (after Korošec, Korošec 1969); 2 by incision and impression, on a Cetina pedestalled vessel from Zelenovića Ogradice (after Marović 1991)*

S druge strane, pojedini cetinski motivi ničim se ne razlikuju od onih na ljubljansko-jadranskoj lončariji. To ponaj-

delimiting lines may be the only decoration, or they may be accompanied by a series of impressions or incised triangles. On richly decorated vessels, the zones contain various geometric shapes. Among the most common are segments of slanted bands, angular V-shape or inverted V-shape bands, triangles and lozenges, or designs composed of such bands and shapes. Areas delimited by incision may be hatched, but more often they are filled with impressed dots or triangles, with the latter usually distributed in regular rows, while the former may be scattered irregularly across the entire area of the outlined shape. Also common are bands made of several incised lines oriented lengthwise and sometimes accompanied by a series of impressions. Compared to the Ljubljana-Adriatic bands described above, Cetina-style bands are relatively wide.

As a rule, the lines that delimit decorative zones circumvent the lower end of the handle and frame it within a right-angled motif (Fig. 6: 1–7). This kind of integration of the handle within the decorative design, as well as the lines incised lengthwise along both sides of the handle itself, are specific traits of the Cetina style (Fig. 6: 1, 4, 17). Among easily recognizable and very characteristic motifs are hanging semicircles that interrupt the horizontal flow of decoration. They may consist of a curved band comprised of several parallel incised lines or filled with impressions, or a semicircle outlined by incision and filled with impressions (Fig. 6: 9–12). Also characteristic are lozenges and other geometric shapes that 'hang' from a band at the point where that band zigzags at right angles (Fig. 6: 6–7, 13–14), as well as small incised or impressed circles that sometimes 'hang' like cherries at the end of an incised line (Fig. 6: 16–17). A rare but easily recognized motif, consisting of a short V-shaped segment of an incised band with curled ends (Fig. 6: 15), is also regarded as a specific Cetina trait (Marović, Čović 1983: 211–212; Govedarica 1989b: 137), although there is only one case where it is clear that this motif adorned a vessel somewhat resembling a Cetina beaker (Dörpfeld 1935: Pl. 22: 1; Supplement 25a).

On the other hand, certain Cetina motifs do not differ at all from those on Ljubljana-Adriatic pottery. This is primarily true for the double series of alternating triangular impressions that delimit a zigzag pattern, which are common in both styles. Other decorative designs differ only in the specific technique of their execution. For example, the characteristically shaped Ljubljana-Adriatic vessels are sometimes adorned with wide zigzag bands defined by series of alternating hatched triangles, executed by comb impression (Fig. 7: 1). Almost identical designs can be found on the characteristically shaped Cetina vessels, except that they are outlined by incision and filled with triangular impressions (Fig. 7: 2). Like Ljubljana-Adriatic pottery, Cetina pottery is marked by the great variability of decorative elements and the freedom of their combination, which creates the impression that each vessel is unique despite their general similarity.

**Geographic distribution and site types**

The density of the sites with Cetina style pottery is especially high in a 50-kilometer wide stretch of middle

prije vrijedi za dvostruke nizove naizmjeničnih trokutastih otisaka koji između sebe stvaraju uski cik-cak uzorak, a uobičajeni su za oba stila. Neke druge ukrasne kompozicije razlikuju se jedino specifičnom tehnikom izrade. Primjerice, karakteristično oblikovane ljubljansko-jadranske posude ponekad krase široke cik-cak trake definirane nizovima naizmjeničnih šrafiranih trokuta izvedenih češljastim utiskivanjem (sl. 7: 1). Gotovo identične kompozicije mogu se naći na karakteristično oblikovanim cetinskim posudama, no tada su izvedene urezivanjem i ispunjene trokutastim otiscima (sl. 7: 2). Unutar cetinskoga stila također postoji velika raznolikost i sloboda kombiniranja različitih ukrasnih elemenata, pa se i ovdje stječe dojam da je svaka posuda jedinstvena unatoč njihove općenite međusobne sličnosti.

**Zemljopisna rasprostranjenost i tipovi nalazišta**

Gustoća nalazišta lončarije cetinskog stila naročito je velika u zaleđu srednje Dalmacije, između Krke i Neretve, u pojasu širokom pedesetak kilometara (sl. 8). Ta očita koncentracija tek donekle je posljedica Marovićevih intenzivnih istraživanja gomila uz gornji tok rijeke Cetine, kao i brojnih nedavnih zaštitnih iskopavanja na trasi dalmatinske autoceste. Karakteristični cetinski nalazi pojavljuju se na znatno širem području koje obuhvaća istočnu obalu, otoke i zaleđe Jadrana od Tršćanskoga Krasa do Skadarskoga jezera, zatim istočnu Bosnu i južnu Italiju, a ima ih i na Peloponezu. Neke od praznina u njihovoj distribuciji (primjerice, na prostoru Hrvatskoga Primorja i Kvarnerskoga zaljeva) možda bi se mogle objasniti niskim stupnjem istraženosti, dok su druge vjerojatno odraz stvarnoga stanja, poput skoro 500 km široke praznine koja izolira grupu nalazišta na Peloponezu. Ističe se odsutnost karakterističnih cetinskih nalaza na Ljubljanskome barju koja, s obzirom na opseg i intenzitet provedenih istraživanja, sigurno nije slučajna.

Preko trećine od ukupno 103 nalazišta koja su dala cetinsku lončariju su groblja pod gomilama, pri čemu valja napomenuti da u nekim gomilama nisu pronađeni ostaci pokojnika. Iz većine od njih potječe tek šačica karakterističnih ulomaka ili pojedinačne posude. Znatnija količina nalaza prikupljena je s devet nalazišta, od kojih se osam nalazi uz gornji tok Cetine: Bajagić, Balajića gomila, Gomile više lada, Lukovača, Preočanska kosa, Rudine, Šparevine i Zelenovića ogradice (Marović 1963; 1976; 1991) te jedno, Ervenik (Buttler 1932), uz gornji tok Zrmanje. Obiljem cetinske lončarije naročito se ističu Gomile više lada, Lukovača i Rudine, sva tri smještena nedaleko izvora Cetine.

U velikoj većini slučajeva, ulomci cetinske lončarije razasuti su bez reda kroz čitav plašt gomile. Samo ponekad se naslućuje da su posude bile odlagane u blizini spaljenih ostataka pokojnika, a još rjeđe da su neke od njih možda mogle poslužiti kao urne. Drugdje se čini da su rijetki cetinski ulomci slučajno dospjeli u plašt, a prilično često nalaze se i u tlu pod gomilom. Dokumentirana su samo dva nalaza cetinskih posuda u grobnome sanduku od kamenih ploča. U oba slučaja radi se o karakteristično ukrašenim širokim peharima s dvjema nasuprotnim ručkama. Dvije ili tri takve posude pronađene su u grobu 3 gomile 1 na nalazištu Jukića gomile u Dalmatinskoj Zagori, uz tragove paljevine i

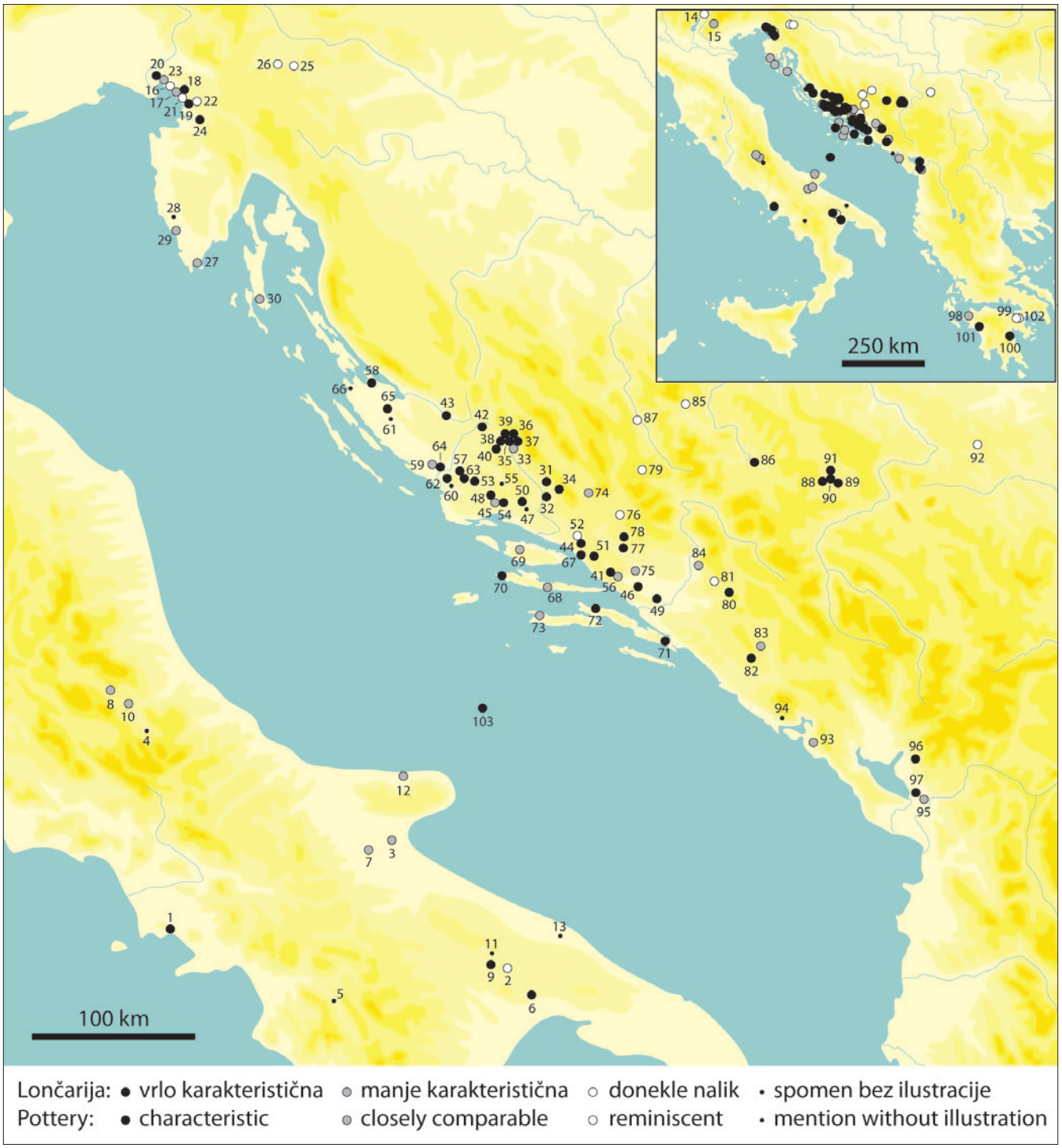
Dalmatia's hinterland between the Krka and Neretva rivers (Fig. 8). In some measure, this conspicuous concentration is a consequence of Marović's intensive exploration of the burial mounds along the upper reaches of the Cetina River, and of many recent rescue excavations along the route of the Dalmatian motorway. The characteristic Cetina finds appear in a much wider area that includes the eastern Adriatic coast, the islands and the hinterland from the Trieste Karst to Shkodër Lake, as well as eastern Bosnia, southern Italy, and the Peloponnese. Some of the lapses in their distribution (*e.g.* in the Croatian Littoral and Kvarner Bay) may be due to the low level of research, while others probably reflect the real situation, like the almost 500-kilometre-wide gap that isolates the group of Peloponnese sites. At Ljubljansko Barje, the conspicuous absence of Cetina finds cannot be accidental, given the extent and intensity of exploration.

More than a third of the 103 sites that have yielded Cetina pottery are mound cemeteries, although one should note that human remains were not found in some of the mounds. Most of them yielded only a handful of characteristic sherds, or an isolated vessel. Substantial amounts of finds were recovered from nine sites, eight of which are located in the upper reaches of the Cetina River: Bajagić, Balajića Gomila, Gomile Više Lada, Lukovača, Preočanska Kosa, Rudine, Šparevine, and Zelenovića Ogradice (Marović 1963; 1976; 1991), while one – Ervenik (Buttler 1932) – is in the upper reaches of the Zrmanja River. Gomile Više Lada, Lukovača, and Rudine, all of them located near the source of the Cetina, yielded particularly abundant Cetina pottery finds.

In most cases, Cetina pottery fragments are scattered haphazardly throughout the mound mantle. Only occasionally it seems that vessels were deposited near the cremated remains of the deceased, while even less often there are hints that a vessel might have served as an urn. Elsewhere it seems that the rare Cetina sherds ended up in the mantle by accident, while quite often such sherds are found in the underlying soil. Only two cases have been documented where Cetina vessels were found within stone burial cists. In both cases, these are characteristically decorated wide beakers with two opposing handles. Two or three such vessels were found in Mound 1, Grave 3, at Jukića Gomile in Dalmatinska Zagora, next to some cremation debris and two inhumations (Olujić 2012: 60, 64, Figs. 11–13; Pls. 8–10). A very similar vessel was found in Mound 6, Grave 14, at Shtoj near Shkodër in Albania, next to a contracted inhumation burial (Oikonomidis et al. 2011: 187, Fig. 1: i).

Caves are the next best represented group, constituting a quarter of all sites. Most of them yielded only a few characteristic sherds, or often just a single sherd. Four of the caves, Grotta Dei Ciclami (Gilli, Montagnari Kokelj 1993), Stubica (Brusić 1973), Škarin Samograd (Brusić 1973; Marović, Čović 1983), and the Ravlića Cave (Marijanović 1981; 2012), yielded relatively numerous Cetina finds, but their number never exceeds a few dozen.

The open-air settlement sites are just as common as the cave sites. Nine out of 25 are hillforts, while we know next to nothing about the rest. The lake dwellings of Ljubljansko Barje are an exception, but they yielded only a few finds




Sl. 8 Karta rasprostiranja lončarije cetinskoga stila:

*Fig. 8 Distribution map of the Cetina pottery style:*

1 nepoznato nalazište (napuljski muzej) / unknown site (Museo di Napoli); 2 Casal Sabini; 3 Coppa Nevigata; 4 Fonti S. Callisto; 5 Fossa Aimone; 6 Laterza; 7 Masseria Fontanarosa; 8 Navelli; 9 Pisciulo; 10 Popoli; 11 Pulo di Altamura; 12 Rodi Garganico; 13 Rutigliano; 14 Monte Mezzana; 15 Montesei di Serso; 16 Grotta Caterina; 17 Grotta Cotariova; 18 Grotta degli Zingari; 19 Grotta dei Ciclami; 20 Grotta del Mitreo; 21 Grotta della Tartaruga; 22 Grotta delle Gallerie; 23 Grotta Teresiana; 24 Acijev spodmol; 25 Ig; 26 Založnica; 27 Marlera; 28 Monkodonja; 29 Uvala Marić; 30 Jami na Sredi; 31 Bajagić; 32 Balajića gomila; 33 Bašćina; 34 Efendići; 35 Gomile više lada; 36 Lukovača; 37 Preočanska kosa; 38 Rudine; 39 Šparevine; 40 Zelenovića ogradice; 41 Begovići; 42 Biskupija; 43 Ervenik; 44 Jukića gomile; 45 Kovačina; 46 Kruške; 47 Mali Mosor; 48 Matijin dolac–gomile; 49 Ograđe; 50 Podi; 51 Samogorska špilja; 52 Sridnja gora; 53 Unešić; 54 Vlake; 55 Vrba; 56 Zagomilje 2; 57 Gaj; 58 Mala glavica; 59 Mrdakovica; 60 Poljakuše; 61 Stanine; 62 Stubica; 63 Škarin samograd; 64 Tradanj; 65 Vreline; 66 Zaton; 67 Bubnjavača; 68 Grapčeva spilja; 69 Kopačina; 70 Markova spilja; 71 Gudnja; 72 Spila (Nakovana); 73 Vela spila; 74 Grabovica; 75 Krstina; 76 Orlov kuk; 77 Ravlića pećina; 78 Trostruka gradina; 79 Varvara; 80 Hateljska pećina; 81 Lazaruša; 82 Ljubomir; 83 Orah; 84 Zelena Pećina; 85 Alihodže; 86 Gradac; 87 Pod; 88 Borci; 89 Ferizovići; 90 Rusanovići; 91 Vrtanjak; 92 Anište; 93 Velika gruda; 94 Vranjaj; 95 Gajtan; 96 Shkrel; 97 Shtoj; 98 Andravida-Lechaina; 99 Korakou; 100 Lerna; 101 Olympia; 102 Zygouries; 103 Salamandrija

ostatke dvaju inhumiranih pokojnika (Olujić 2012: 60, 64, sl. 11–13; T. 8–10). Vrlo slična posuda pronađena je u grobu 14 gomile 6 na nalazištu Shtoj nedaleko Skadra u Albaniji, uz ostatke pokojnika inhumiranog u zgrčenom položaju (Oikonomidis et al. 2011: 187, sl. 1: i).

Sljedeće po zastupljenosti su špilje koje čine četvrtinu od svih nalazišta. Iz većine od njih prikupljeno je tek nekoliko karakterističnih ulomaka, nerijetko samo po jedan. Iz špilja Grotta dei Ciclami (Gilli, Montagnari Kokelj 1993), Stubica (Brusić 1973), Škarin samograd (Brusić 1973; Marović, Čović 1983) i Ravlića pećina (Marijanović 1981; 2012) potječe nešto veći broj cetinskih nalaza, no niti iz jedne od njih nije objavljeno više od par desetaka ulomaka.

Nalazišta naseobinskoga tipa na otvorenom podjednako su brojna kao i špilje. Devet od njih ukupno 25 su gradine, dok o preostalim nalazištima na otvorenom ne znamo gotovo ništa, ako zanemarimo sojeničarska naselja na Ljubljanskom barju, odakle je prikupljeno tek nekoliko nalaza koji podsjećaju na cetinski stil. Općenito govoreći, većina lončarije iz naseobinskih nalazišta može se opisati kao bliska ili donekle nalik cetinskoj, dok su izrazito karakteristični primjerci cetinskoga stila rijetki. Zanimljivo je da je relativno najveća količina takve lončarije (nekoliko cijelih posuda i više desetaka ulomaka među kojima ima i vrlo karakterističnih) prikupljena iz dva nalazišta na Peloponezu, Lerne (Rutter 1982) i Olimpije (Dörpfeld 1935), što je vjerojatno posljedica njihove temeljite istraženosti. Sa svih ostalih naseobinskih nalazišta potječu tek pojedinačni karakteristični ulomci.

Posuđe cetinskoga stila pronađeno je u Apuliji u tri višekratno korištene grobne komore usječene u stijenu. Naročito karakteristični su pehari iz grobnica u Laterzi (Biancofiore 1967; Marović 1975) i Pisciulu (Cataldo 1996), dok iz grobnice Casal Sabini (Cataldo 1996; Maran 2007) potječu nalazi tek donekle nalik cetinskim. Napokon, Salamandrija na Palagruži pripada zasebnoj kategoriji kao nalazište posebne namjene s kojega je prikupljen velik broj ulomaka cetinske lončarije (Forenbaher 2018).

**Prostorna i vremenska raznolikost**

Cetinski lončarski stil prilično je ujednačen na velikom području. Većina karakterističnih nalaza koncentrirana je u srednjoj Dalmaciji, no podjednako karakteristična cetinska lončarija pojavljuje se na nalazištima od Tršćanskoga Krasa do Peloponeza i od Apulije do istočne Bosne. Prostorna raznolikost očituje se ponajviše time što su u perifernim područjima karakteristični cetinski nalazi razmjerno rijetki u odnosu na lončariju koja je bliska cetinskoj, ali nije izrazito karakteristična, ili se odlikuje osebujnim varijantama ukrasa i oblika. Za razliku od 'ljubljanske kulture', za sada nitko nije pokušao regionalno podijeliti 'cetinsku kulturu'. U zaleđu Dalmacije predložena je umjesto toga zasebna 'posuška kultura' čija bi najstarija 'faza Nečajno' bila istovremena s 'cetinskom kulturom' (Čović 1989). Tvrdnja da su te dvije kulture '…ne samo sinhrone, već i koegzistentne… jer se njihova područja rasprostiranja… geografski podudaraju' (Čović 1989: 93) prestaje biti problematičnom ukoliko umjesto o kulturama govorimo o cetinskom i posuškom *stilu*.

reminiscent of the Cetina style. Generally speaking, most of the pottery from the settlements may be described as similar to Cetina style pottery or reminiscent of it, while very characteristic examples of Cetina pottery are rather rare. Interestingly, the relatively greatest quantity of such pottery (several complete vessels and several dozen sherds, including some very characteristic ones) was recovered from two sites on the Peloponnese, Lerna (Rutter 1982) and Olympia (Dörpfeld 1935), which probably reflects their thorough exploration. All other settlement sites yielded only isolated characteristic sherds.

In Apulia, Cetina style pottery was recovered from three repeatedly used rock-cut burial chambers. The beakers from burial contexts in Laterza (Biancofiore 1967; Marović 1975) and Pisciulo (Cataldo 1996) are particularly characteristic, while the finds from the Casal Sabini burial (Cataldo 1996; Maran 2007) are only reminiscent of Cetina. Finally, the special-purpose site at Salamandrija on Palagruža, which yielded a large number of Cetina potsherds, belongs to a category of its own (Forenbaher 2018).

**Spatial and temporal variability**

The Cetina pottery style is fairly uniform across a large area. The majority of characteristic finds is concentrated in middle Dalmatia, but equally characteristic Cetina pottery appears from the Trieste Karst to the Peloponnese, and from Apulia to Bosnia. Spatial variability is manifested primarily by the fact that characteristic Cetina finds are rare in peripheral areas, where most of the Cetina-like finds are not particularly characteristic, or display peculiar variants of decoration and shape. As opposed to the 'Ljubljana culture', nobody has attempted to split the 'Cetina culture' regionally. Instead, a separate 'Posušje culture' was proposed for the Dalmatian hinterland, with an early 'Nečajno phase' that would be contemporaneous to the 'Cetina culture' (Čović 1989). The assertion that those two cultures '…not only are synchronous, but also coexistent… since their distribution areas… coincide geographically' (Čović 1989: 93) ceases to be problematic if one talks about Cetina and Posušje *styles* instead of cultures.

I. Marović and B. Čović proposed a tripartite division of the 'Cetina culture' (Marović, Čović 1983: 196–199). Their first phase is marked by a mixture of Ljubljana-Adriatic and Cetina pottery (most of it modestly decorated and not quite characteristic), the second phase is marked by characteristically decorated and shaped Cetina style pottery, while the third phase is marked by mostly plain pottery of the developed Bronze Age, accompanied by occasional sherds decorated in a Cetina manner. B. Govedarica essentially agreed with that division. His 'Protocetina facies' (Govedarica 1989b: 113–121) corresponds to the first phase of the 'Cetina culture' as defined by Marović and Čović, his 'Cetina culture' in the narrow sense (Govedarica 1989b: 129–138) corresponds to their second phase, while their third phase is perceived by Govedarica at the earliest phase of his 'Dinaric culture' of the developed Bronze Age (Govedarica 1989b: 145–147). Most researchers have accepted one of these divisions (*e.g.,* Marijanović 1991: 240; 1997). In contrast, in my

I. Marović i B. Čović predložili su podjelu 'cetinske kulture' na tri stupnja (Marović, Čović 1983: 196–199). Njihovu prvu fazu obilježava mješavina ljubljansko-jadranske i cetinske lončarije (većinom, skromnije ukrašenih ili ne posve karakterističnih cetinskih nalaza), drugu fazu obilježava karakteristično ukrašeno i oblikovano cetinsko posuđe, dok treću fazu čini pretežno neukrašena lončarija razvijenog brončanog doba uz pokoji ulomak ukrašen na cetinski način. B. Govedarica se u suštini složio s takvom podjelom. Njegov 'protocetinski facijes' (Govedarica 1989b: 113–121) odgovara prvom stupnju 'cetinske kulture' po Mareviću i Čoviću, njegova 'cetinska kultura' u užem smislu (Govedarica 1989b: 129–138) odgovara njihovom drugom stupnju, dok njihov treći stupanj Govedarica vidi kao najraniju fazu 'dinarske kulture' razvijenoga brončanog doba (Govedarica 1989b: 145–147). Jednu ili drugu podjelu prihvatila je većina istraživača (primjerice, Marijanović 1991: 240; 1997). Za razliku od njih, pisac ovih redaka u svojim je dosadašnjim radovima koristio izraze 'prva faza cetinske kulture' (Forenbaher, Kaiser 1997: 18; Kaiser, Forenbaher 1999: 315), 'rana Cetina' (Forenbaher, Kaiser 2008: 62) i 'ranocetinski stil' (Forenbaher 2011: 691) kao sinonime za 'jadranski tip ljubljanske kulture', odnosno ljubljansko-jadransku lončariju.

Nažalost, obje spomenute vremenske podjele 'cetinske kulture' najvećim se dijelom temelje na dvojbenim asocijacijama nalaza iz gomila te nesigurnim i često loše dokumentiranim stratigrafijama špilja, na što se već u više navrata upozoravalo (Della Casa 1995: 570–571; 1996: 128–131; Forenbaher, Kaiser 1997: 18; Velušček 1999: 69). Nedostatak pouzdanih informacija o kontekstu i asocijaciji nadomješten je nezajamčenom pretpostavkom da stil mora 'evoluirati' od skromnijega, jednostavnijeg i manje karakterističnog prema raskošnijem, složenijem i karakterističnom te završiti degeneracijom. Podrobna rasprava tih problema slijedi u nastavku ovog poglavlja, vezano uz datiranje lončarskih stilova.

Na ovom mjestu dovoljno je reći da 'ranocetinski' ili 'protocetinski' lončarski stil, koji bi vremenski stajao između ljubljansko-jadranskog i cetinskog stila te se jasno razlikovao od njih, zasad nije uvjerljivo definiran. Postoje jedino skupovi nalaza u kojima se ljubljansko-jadranska i cetinska lončarija pojavljuju zajedno, no pritom se niti u jednome slučaju ne može sa sigurnošću reći je li to posljedica njihove istovremenosti, poremećenosti konteksta ili neprimjerene tehnike iskopavanja. Možda će se s vremenom pokazati da unutar cetinskoga stila postoje dijakronijske razlike, no zasad nema čvrstih argumenata koji bi poduprli takvu pretpostavku.

## DRUGE VRSTE UKRAŠENE LONČARIJE

Zajedno s lončarijom ljubljansko-jadranskoga ili cetinskog stila ponekad se nalaze ulomci ukrašeni grubim žlijebljenjem, brazdastim urezivanjem te utiskivanjem usukanoga konopčića.

**Grubo žljebljenje**

Zapravo se radi o urezivanju koje se ponekad kombinira s utiskivanjem, no za razliku od ranije opisane tehnike ukrašavanja, izvodi se pomoću nekoga razmjerno tupog i

earlier writings I have used the terms 'first phase of Cetina culture' (Forenbaher, Kaiser 1997: 18; Kaiser, Forenbaher 1999: 315), 'early Cetina' (Forenbaher, Kaiser 2008: 62), and the 'early Cetina style' (Forenbaher 2011: 691) as synonyms for the 'Adriatic type of the Ljubljana culture', that is, for Ljubljana-Adriatic pottery.

Unfortunately, both aforementioned temporal divisions of the 'Cetina culture' rely heavily on dubious associations of finds from burial mounds, and unsound, often badly documented cave stratigraphies, as already noted on several occasions (Della Casa 1995: 570–571; 1996: 128–131; Forenbaher, Kaiser 1997: 18; Velušček 1999: 69). The absence of reliable information about context and association has been substituted with the unwarranted assumption that any style must 'evolve' from a modest, simple and less characteristic form to an opulent, complex and characteristic form, and end in degeneration. A detailed discussion of these problems follows later in this chapter, related to the dating of the pottery styles.

Here, it suffices to say that an 'early Cetina' or 'Protocetina' style that would be clearly distinguishable from Ljubljana-Adriatic and Cetina styles, while fitting chronologically between them, has not yet been defined convincingly. In its stead, there are assemblages containing both Ljubljana-Adriatic and Cetina pottery, but not in a single case can one be certain whether that is a consequence of their contemporaneity, disturbance of deposit, or inappropriate excavation technique. While eventually it might prove possible to discern diachronic variability within the Cetina style, currently there is no hard evidence for it.

## OTHER KINDS OF DECORATED POTTERY

Fragments decorated by coarse incision, *furchenstich* (stab-and-drag style incisions), and cord impression are found occasionally together with Ljubljana-Adriatic or Cetina style pottery.

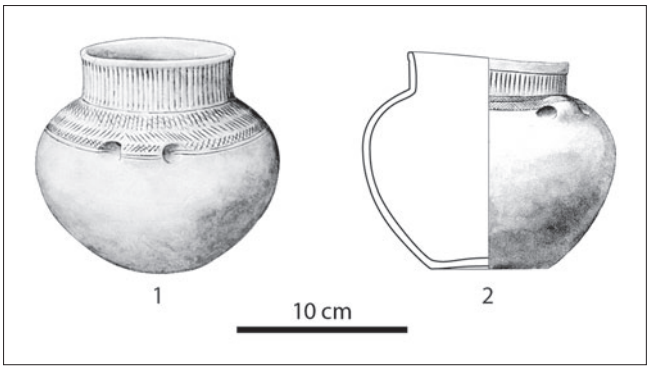
**Coarse incision**

This is a specific kind of incision that is sometimes combined with impression, but in contrast to decorative techniques described above, it is executed by a relatively crude and blunt instrument, such as a wooden stick or lath. Pottery decorated in this manner is usually called *žlijebljena keramika* (Čović 1991a), the Croatian word *žlijeb* meaning gutter or channel.

Coarse incised decoration usually consists of several wide horizontal bands that run around the vessel. Each band may consist of densely packed incised lines oriented lengthwise, crosswise, or at an angle to the band, of diamond lattice incision, alternating hatched triangles, or other geometric shapes (Fig. 9). Series of round, elongated, or triangular impressions sometimes accompany the band, and there are also bands filled by alternating impressions. Combinations of these motifs may constitute complex geometric designs. Incrustation that enhanced the decorative design has been preserved in a few cases. The only ascertained vessel shape is a round-bellied jar with a low neck that is cylindrical or slightly funnel-shaped (Fig. 10). The shoul-

grubog alata poput drvenoga štapića ili letvice. Tako ukrašeno posuđe obično se naziva žljebljenom keramikom (Čović 1991a). U skladu s tim običajem, ovdje će se koristiti izraz 'grubo žljebljenje' kako bi se taj ukras jasno razlikovao od finoga žljebljenja (plitkih i glatkih žljebova izvedenih u prosušenoj glini) koje obilježava neke druge, ranije lončarske stilove.

Grubo žljebljeni ukras obično je sastavljen od nekoliko poširokih vodoravnih traka koje opasuju posudu. Trake se mogu sastojati od uzdužnih linija urezanih gusto jedna do druge, mogu biti ispunjene kosim ili poprečnim urezima, mrežastim šrafiranjem, naizmjence koso šrafiranim trokutima ili drugim geometrijskim likovima (sl. 9). Ponekad ih prate nizovi okruglih, dugoljastih ili trokutastih otisaka, a pojavljuju se i trake ispunjene naizmjeničnim otiscima. Spomenuti motivi mogu se kombinirati u složenije geometrijske kompozicije. U pojedinim slučajevima sačuvala se inkrustacija koja je isticala ukrasni motiv. Jedini sigurno utvrđen oblik posude je trbušasti lončić kuglastoga tijela i niskoga prstenastog ili blago ljevkastoga vrata (sl. 10). Na ramenu može imati široke, vodoravno probušene supkutane ušice ili kratke uspravne trakaste ručke. Ukras u pravilu obuhvaća vrat i rame te često teče preko ušice ili ručke.




Sl. 10 Karakteristična lončarija ukrašena grubim žljebljenjem: 1 Otišić (prema Milošević, Govedarica 1986); 2 Gomile više lada (prema Marović, Čović 1983)

*Fig. 10 Characteristic coarse incised pottery: 1 Otišić (after Milošević, Govedarica 1986); 2 Gomile Više Lada (after Marović, Čović 1983)*

Zemljopisna rasprostranjenost grubo žljebljene lončarije (sl. 11) ograničena je na Dalmaciju i Hercegovinu te uključuje otoke, obalu i širok pojas zaleđa. Izvan toga područja objavljeno je samo nekoliko nalaza iz Crne Gore, iz Odmuta (Marković 1985: T. 27: 2, 5; 28: 4, 6–8; 29: 8) i Spile kod Perasta (Marković 1985: T. 19: 1), te dva ulomka iz Istre, iz Pupićine peći (Hulina et al. 2012: T. 4: 6) i Cingarele (Baćić 1956: T. 6: 3). Polovica od ukupno 33 nalazišta su špilje, no iz većine od njih objavljen je tek poneki ulomak, često samo po jedan. Nešto veća količina nalaza prikupljena je iz četiri špilje od kojih su dvije u južnoj Dalmaciji, Vela spila na Korčuli (Čečuk, Radić 2005: sl. 42; T. 85–86; 91: 1–5, 7; 92: 6; 94: 7, 10, 14) i Gudnja (Marijanović 2005: sl. 23–26; T. 42–47), a dvije u Hercegovini, Ravlića pećina (Marijanović 1981: T. 36: 1, 3; 2012: T. 67: 1–8; 70: 1–2) i Lazaruša (Marijanović 2000: T. 5–6; 7: 1, 3, 5; 8: 6; 2003: T. 24; 25: 1, 3, 5; 26: 6). Grubo žljebljena lončarija pronađena je i u gomilama na deset nalazišta, no radi

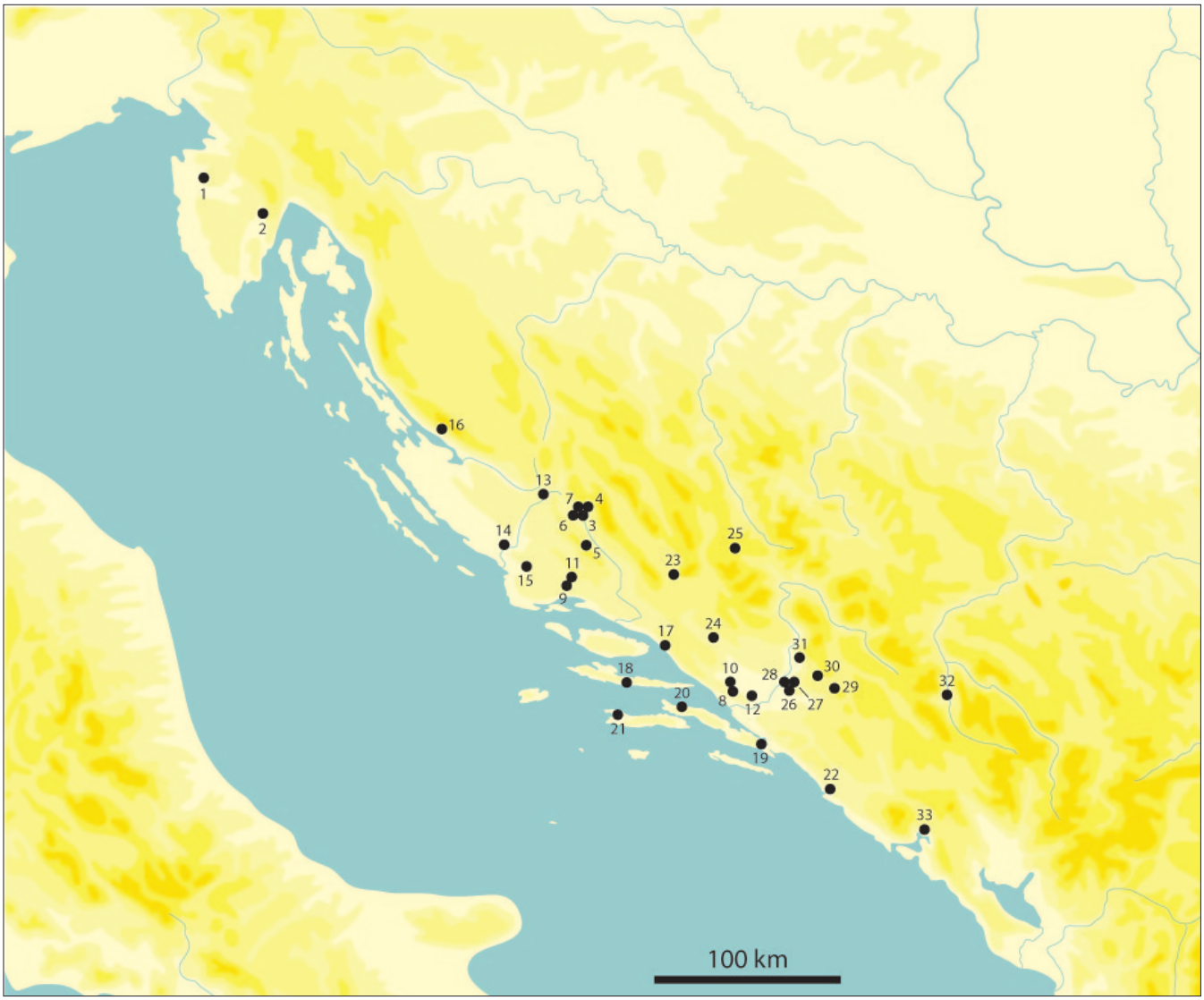

Sl. 9 Ulomci lončarije ukrašeni grubim žljebljenjem iz Vele spile na Korčuli, iz sloja obilježenoga ljubljansko-jadranskom lončarijom

*Fig. 9 Fragments of coarse incised pottery from the Vela Cave on Korčula, from the context marked by Ljubljana-Adriatic pottery*

der sometimes has wide, horizontally pierced lugs, or short vertical strap handles. As a rule, decoration runs around the neck and shoulder, often continuing across lugs or handles.

The geographic distribution of the coarse incised pottery (Fig. 11) is restricted to Dalmatia and Herzegovina, including the islands, the coast, and a wide swath of the hinterland. Beyond that area, only a few finds have been published from Montenegro, from Odmut (Marković 1985: Pl. 27: 2, 5; 28: 4, 6–8; 29: 8) and Spila near Perast (Marković 1985: Pl. 19: 1), and a couple from Istria, from the Pupićina Cave (Hulina et al. 2012: Pl. 4: 6) and Cingarela (Baćić 1956: Pl. 6: 3). Half of the total of 33 sites is caves, but most of them have only a few published sherds, and frequently just a single one. A somewhat larger quantity of finds was recovered from four caves: the Vela Cave on Korčula (Čečuk, Radić 2005: sl. 42; Pl. 85–86; 91: 1–5, 7; 92: 6; 94: 7, 10, 14) and Gudnja (Marijanović 2005: Figs. 23–26, Pls. 42–47) in southern Dalmatia, and the Ravlića Cave (Marijanović 1981: Pl. 36: 1, 3; 2012: Pl. 67: 1–8; 70: 1–2) and Lazaruša (Marijanović 2000: Pl. 5–6; 7: 1, 3, 5; 8: 6; 2003: Pl. 24; 25: 1, 3, 5; 26: 6) in Herzegovina. Coarse incised pottery was also found in burial mounds at ten sites, but these are almost always isolated potsherds that were recovered from the mantle. An exception is a complete little jar from the mantle of Mound 3 at Gomile Više Lada (Marović 1991: Fig. 73: 2). This kind of pottery was also recovered from five open-air settlement sites, including three hillforts and two sites in small karstic dolines. A larger number of finds was recovered only from Vrtača 1 at Otišić (Milošević, Govedarica 1986: Pl. 1: 1, 3; 2: 1–4, 7, 9–10, 13; 3: 1, 7), and from the Sveti Spas hillfort in Knin (Buttler 1933: Pl. 32: 1; Korošec 1962: Pl. 7).

The coarse incised pottery shares many traits with the Ljubljana-Adriatic style. Their jar shapes are almost identical, while the decorative motifs and compositions are similar to the Ljubljana-Adriatic ones, although they consist of larger elements and are more roughly executed. Coarse incised pottery was found together with Ljubljana-Adriatic pottery at the only three stratified cave sites where Ljubljana-Adriatic levels and Cetina levels can be set apart clearly – at Gudnja (Marijanović 2005), the Ravlića Cave (Marijano-




Sl. 11 Karta rasprostiranja grubo žljebljene lončarije:
*Fig. 11 Distribution map of coarse incised pottery:*
1 Cingarela; 2 Pupićina peć; 3 Gomile više lada; 4 Lukovača; 5 Otišić; 6 Rudine; 7 Šparevine; 8 Eraci; 9 Kovačina; 10 Kruške; 11 Matijin dolac–vrtača; 12 Ograđe; 13 Sveti Spas; 14 Tradanj; 15 Ulnovac; 16 Vaganačka pećina; 17 Bubnjavača; 18 Grapčeva spilja; 19 Gudnja; 20 Spila (Nakovana); 21 Vela spila; 22 Vilina pećina; 23 Grabovica; 24 Ravlića pećina; 25 Varvara; 26 Badanj; 27 Gornje Banje; 28 Guvnine; 29 Hateljska pećina; 30 Lazaruša; 31 Zelena Pećina; 32 Odmut; 33 Spila (Perast)

se gotovo uvijek o pojedinačnim ulomcima prikupljenima iz plašta gomile. Iznimka je cijeli lončić iz Gomila više lada, iz plašta gomile 3 (Marović 1991: sl. 73: 2). Takva lončarija također je prikupljena s pet naseobinskih nalazišta na otvorenome, uključujući tri gradine i dva nalazišta u vrtačama. Veći broj nalaza prikupljen je samo iz Vrtače 1 u Otišiću (Milošević, Govedarica 1986: T. 1: 1, 3; 2: 1–4, 7, 9–10, 13; 3: 1, 7) i s gradine Sveti Spas u Kninu (Buttler 1933: T. 32: 1; Korošec 1962: T. 7).

Grubo žljebljena lončarija po mnogočemu je bliska ljubljansko-jadranskome stilu. Oblici lončića gotovo su identični, a motivi i kompozicija nalikuju ljubljansko-jadranskim, iako su sastavljeni od krupnijih elemenata i znatno grublje izvedeni. Takva lončarija pronađena je zajedno s ljubljansko-jadranskom na sva tri višeslojna špiljska nalazišta u kojima se ljubljansko-jadranski nalazi mogu stratigrafski odijeliti od cetinskih, u Gudnji (Marijanović 2005), Ravlić 2012), and the Vela Cave on Korčula (Čečuk, Radić 2005), as well as at the Varvara hillfort at the source of the Rama (Čović 1978: Pl. 5: 4–5). Aside from that, it is present at ten other sites that contained Ljubljana-Adriatic pottery only, the most important of which is Otišić (Milošević, Govedarica 1986). Finally, coarse incised pottery was found in only three burial mounds that contained Cetina pottery only: Mound 3 at Gomile Više Lada and Mound 68 at Lukovača, both at the source of the Cetina River (Marović 1991: Fig. 44: 5; 73: 2) and at Grabovica near Tomislavgrad (Marović 1980: Fig. 6: 1, 6). It is not surprising, therefore, that the coarse incised pottery is sometimes regarded as a constituent part of the 'Adriatic type of Ljubljana culture' (Milošević, Govedarica 1986: 67; Govedarica 1989b: 103–105; for an alternate view, see Marijanović 1991: 224, 235; 2000: 156). If their geographic distributions coincided, one might say that these were the coarse products of the Ljubljana-Adriatic pottery

ća pećini (Marijanović 2012) i Veloj spili na Korčuli (Čečuk, Radić 2005), kao i na gradini Varvari na vrelu Rame (Čović 1978: T. 5: 4–5). Osim toga je prisutna na još deset nalazišta s isključivo ljubljansko-jadranskom lončarijom, od kojih je najvažnije Otišić (Milošević, Govedarica 1986). Napokon, grubo žljebljena lončarija nađena je u samo tri gomile koje su uz nju sadržavale isključivo cetinsku lončariju: u Gomilama više lada (gomila 3) i Lukovači (gomila 68) kod vrela Cetine (Marović 1991: sl. 44: 5; 73: 2) te Grabovici kod Tomislavgrada (Marović 1980: sl. 6: 1, 6). Zbog svega navedenog, nije neobično da se takvo posuđe ponekad smatra sastavnim dijelom 'jadranskoga tipa ljubljanske kulture' (Milošević, Govedarica 1986: 67; Govedarica 1989b: 103–105; za suprotno mišljenje, Marijanović 1991: 224, 235; 2000: 156). Kada bi se njihove zemljopisne distribucije poklapale, rekli bismo da se radi o grubim proizvodima ljubljansko-jadranskoga lončarskog stila. Međutim, na sjevernom Jadranu i u Sloveniji gotovo da i nema grubo žljebljene lončarije. Njena distribucija bolje se poklapa s glavnom koncentracijom nalazišta lončarije cetinskoga stila, što vjerojatno nije slučajno.

**Brazdasto urezivanje**

Linija izvedena brazdastim urezivanjem sastoji se od niza međusobno preklapajućih kratkih ureza, pri čemu je početak i kraj svakoga ureza jasno vidljiv (sl. 12). Napravljena je nekim oštrim instrumentom i u njoj ponekad ima tragova inkrustacije. Posuđe ukrašeno ovom tehnikom razmjerno se često nalazi u špiljama Krasa, a naročito je dobro poznato iz sojeničarskih naselja Ljubljanskoga barja, gdje se obično povezuje s vučedolskim ili vinkovačko-somogyvárskim lončarskim stilovima (Dimitrijević 1967; 1979a; Parzinger 1984; Šavel, Sankovič 2010; Velušček, Čufar 2014). Na tim nalazištima, brazdasto urezivanje može krasiti posude različitih oblika. Među njima su brojne otvorene zdjele širokoga oboda i nekoliko trbušastih lončića koji su svojim oblikom te motivima i kompozicijom ukrasa bliski ljubljansko-jadranskom stilu.


Sl. 12 Ulomak lončarije ukrašen brazdastim urezivanjem iz Vele spile na Korčuli, iz sloja obilježenog ljubljansko-jadranskom lončarijom

*Fig. 12 A fragment of pottery decorated by furchenstich incision from the Vela Cave on Korčula, from a context marked by Ljubljana-Adriatic pottery*

Izuzev na Krasu, brazdasto urezivanje je rijetko na širem prostoru istočnoga Jadrana. Pojedinačni ulomci prikupljeni su iz samo nekoliko raštrkanih špilja i gomila. Skromni po-

style. In northern Adriatic and Slovenia, however, the coarse incised pottery is virtually absent. Its distribution coincides better with the main concentration of the Cetina style finds, which is probably not accidental.

***Furchenstich* incision**

A line produced by *furchenstich* incision (in Croatian, *brazdasto urezivanje*) consists of a series of short overlapping incisions, where the beginning and end of each incision is clearly visible (Fig. 12). It is made by a sharp instrument and sometimes contains traces of incrustation. Pottery decorated in this manner is relatively common in caves of the Karst and is very well known from the lake dwellings of Ljubljansko Barje, where it tends to be assigned to Vučedol or Vinkovci-Somogyvár pottery styles (Dimitrijević 1967; 1979a; Parzinger 1984; Šavel, Sankovič 2010; Velušček, Čufar 2014). At those sites, *furchenstich* incision may adorn vessels of various shapes, including many open bowls with a wide rim and several round-bellied jars whose shapes, decorative motifs and compositions closely resemble the Ljubljana-Adriatic style.

With the exception of the Karst, *furchenstich* incision is rare in the wider eastern Adriatic region. Isolated fragments of this kind were recovered from just a few widely scattered caves and burial mounds. The scarce contextual information suggests that they belong to the third millennium BC, but it does not allow unequivocal association with either Ljubljana-Adriatic or Cetina style pottery. The motif of a V-shaped band with curled ends, executed by *furchenstich* incision, appears on several potsherds from Mound 3 at Gomile Više Lada, and maybe also on those from Škarin Samograd (Marović, Čović 1983: Pl. 29: 6, 10; 31: 11; Govedarica 1989b: Pl. 28: 5; 31: 6).

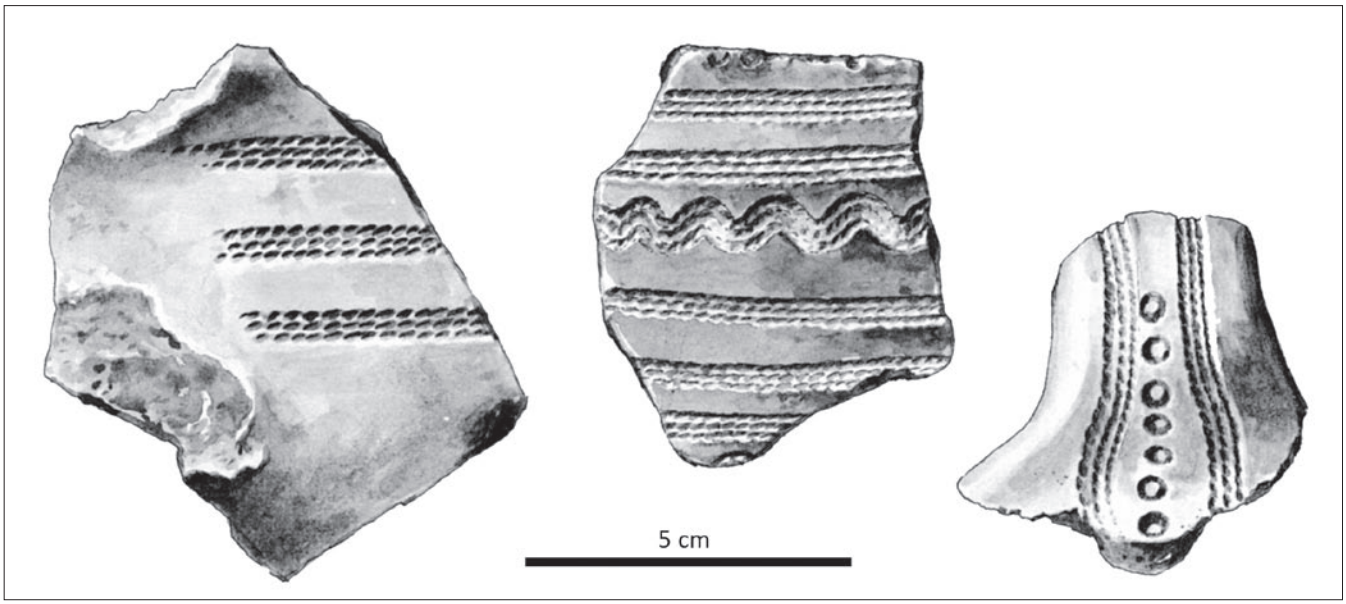
**Cord impression**

This kind of decoration consists of a series of short, slanted and rounded impressions that follow each other at an angle of about 45° in straight or curving lines (Fig. 13). This is often referred to as *Schnurkeramik* or *Litzenkeramik*. According to Čović, the decoration on *Schnurkeramik* (in Croatian, *vrpčasta keramika*) would have been created by cord impression, while the decoration on *Litzenkeramik* would have been produced by pressing a more complex woven or knitted textile against the wet and soft vessel surface (Čović 1980: 35, 41, footnote 1). Experiments have shown, however, that both of these decorations can be produced easily by impressing a twisted double cord (Grömer, Kern 2010; Leghissa 2015: 284–285). In the first case, such a cord is used individually, while in the second case, one or two cords are impressed repeatedly in such a manner that their impressions create a band. The remains of twisted double cords have been recovered from the lake dwellings at Ljubljansko Barje (Leghissa 2015: Fig. 3: 2). Careful examination of impressed band decorations indicated that these could not have been created by woven or knitted textiles, since their radically different structures would be evident in impressions.

Only parts of motifs were preserved in most cases. Straight and wavy bands composed of several parallel cord im-

daci o njihovom kontekstu upućuju na pripadnost trećem tisućljeću prije Krista, no najčešće ne dozvoljavaju nedvojbeno povezivanje s lončarijom ljubljansko-jadranskoga ili cetinskog stila. Motiv prelomljene trake s vitičastim završecima, koji se ponekad smatra specifičnim za cetinski stil, izveden je brazdastim urezivanjem na nekoliko ulomaka iz Gomila više lada (gomila 3), a možda i na onima iz Škarinoga samograda (Marović, Čović 1983: T. 29: 6, 10; 31: 11; Govedarica 1989b: T. 28: 5; 31: 6).

pressions predominate. They usually run horizontally, but sometimes they are vertical, slanted, or extended along a strap handle. Series of hatched triangles and circles placed between the bands are less common. In a few cases, cord impression is combined with small impressed circles, triangles, dots, or ovals. Incrustation filling the motif was preserved in rare examples. Only a few finds hint at the shapes of vessels that were decorated in this manner. Among them are deep bowls with a spheroid, slightly flattened body and




Sl. 13 Ulomci lončarije ukrašeni utiskivanjem uzice iz Trostruke gradine u Sovićima (prema Marović, Čović 1983)
*Fig. 13 Fragments of pottery decorated by cord impression from Trostruka Gradina at Sovići (after Marović, Čović 1983)*

**Utiskivanje uzice**

Radi se o ukrasu sastavljenome od kratkih zakošenih i zaobljenih otisaka koji se nižu jedan do drugoga pod kutom od oko 45°, tvoreći ravne ili zavojite linije (sl. 13). Za tako ukrašenu lončariju često se koriste izrazi 'Schnur-keramika' i 'Litzen-keramika'. Prema Čoviću, ukras na Schnur-keramici (ili vrpčastoj keramici) izvodio bi se utiskivanjem uzice, a na Litzen-keramici utiskivanjem nekoga složenijeg tkanog ili pletenog tekstilnog proizvoda u vlažnu i meku površinu posude (Čović 1980: 35, 41, bilješka 1). Eksperimentiranje je, međutim, pokazalo da se oba spomenuta ukrasa lako mogu izvesti utiskivanjem uzice napravljene uvijanjem dvije predene niti (Grömer, Kern 2010; Leghissa 2015: 284–285). U prvom slučaju se takva uzica utiskuje sama za sebe, a u drugom se jedna ili dvije uzice utiskuju više puta usporedo, tako da njihovi otisci čine traku. Ostaci uzica od dvije niti pronađeni su na sojeničarskim naseljima Ljubljanskoga barja (Leghissa 2015: sl. 3: 2), dok pažljivo ispitivanje trakastih uzoraka ukazuje da se ne može raditi o tkanom ili pletenom tekstilu jer bi njihove bitno drugačije strukture bile prepoznatljive u otiscima.

U većini slučajeva sačuvani su samo dijelovi motiva. Prevladavaju ravne i valovite trake od po nekoliko usporednih otisaka uzice, obično položene vodoravno, a tek ponekad uspravno, koso ili duž trakaste ručke. Rjeđe se pojavljuju nizovi šrafiranih trokuta ili krugovi smješteni u slobodnim pro-

a severely restricted mouth (Čović 1980: Fig. 1: 1–4), deep bowls with a rounded belly, a slightly restricted mouth, and a double vertically pierced lug at the rim (Marijanović 2000: Fig. 8; 2005: Fig. 30), as well as jars with a vaguely marked shoulder and a slightly restricted neck (Korošec, Korošec 1969: Pl. 7: 10; Gilli, Montagnari Kokelj 1993: Fig. 37: 362).

Relatively few cord-impressed fragments have been published from the wider eastern Adriatic region. They were recovered from seventeen sites, most of them in the Dalmatian hinterland (Dalmatinska Zagora and Herzegovina). Five or more fragments have been published only from Trostruka Gradina (Oreč 1978: Pl. 17: 13–14; Čović 1989: Pl. 10: 1–7; 11: 1–8), Pod (Čović 1991b: Pl. 14: 3, 8; 19: 8; 20: 6; 25: 1–4), the Ravlića Cave (Marijanović 2012: Pls. 85–86), and Lazaruša (Marijanović 2000: Figs. 6–8; Pl. 7: 4; Pl. 8: 1, 4). Aside from these, there are a few finds from the lake dwellings at Ljubljansko Barje and a couple of caves in the Karst. With the exception of finds from the Gudnja Cave (Marijanović 2005: Fig. 30), none have been reported so far from the coast and the islands.

Cord-impressed potsherds appear in quite diverse contexts, including those marked by Ljubljana-Adriatic pottery at Gudnja, Phase 5 (Marijanović 2005), Lazaruša, Phase 2 (Marijanović 2000), and Pod, Phase A (Čović 1991b). At Ljubomir, Mound 11, they were recovered from a context that precedes the Cetina contexts (Čović 1980). They were found

storima između traka. U pojedinim slučajevima, utiskivanje uzice kombinira se s malim kružnim, trokutastim, točkastim i ovalnim otiscima. Na malobrojnim primjercima sačuvala se inkrustacija kojom je uzorak bio ispunjen. Nekoliko nalaza daje naslutiti ponešto o oblicima posuda ukrašenih ovom tehnikom. Među njima su zatvorene zdjele blago spljoštenog, kuglastog tijela i izrazito stegnutog oboda (Čović 1980: sl. 1: 1–4), zatim duboke zdjele obloga trbuha i blago stegnutoga oboda s dvostrukom vertikalnom ušicom pri obodu (Marijanović 2000: sl. 8; 2005: sl. 30) te lonci neizrazitog ramena i blago stegnutog vrata (Korošec, Korošec 1969: T. 7: 10; Gilli, Montagnari Kokelj 1993: sl. 37: 362).

Sa širega prostora istočnog Jadrana objavljen je razmjerno mali broj ulomaka ukrašenih utiskivanjem uzice. Prikupljeni su iz sedamnaest nalazišta od kojih je većina u Dalmatinskoj Zagori i Hercegovini. Više od pet ulomaka objavljeno je samo s četiri nalazišta: Trostruke gradine (Oreč 1978: T. 17: 13–14; Čović 1989: T. 10: 1–7; 11: 1–8), Poda (Čović 1991b: T. 14: 3, 8; 19: 8; 20: 6; 25: 1–4), Ravlića pećine (Marijanović 2012: T. 85–86) i Lazaruše (Marijanović 2000: sl. 6–8; T. 7: 4; 8: 1, 4). Uz to, postoji još nekoliko nalaza iz sojeničarskih naselja Ljubljanskoga barja i iz dvije špilje na Krasu. Osim u Gudnji (Marijanović 2005: sl. 30), na obali i otocima zasad nema takvih nalaza.

Ulomci ukrašeni utiskivanjem uzice pojavljuju se u vrlo raznolikim kontekstima. Zajedno s lončarijom ljubljansko-jadranskoga stila dolaze u Gudnji, faza 5 (Marijanović 2005), u Lazaruši, faza 2 (Marijanović 2000) i u Podu, faza A (Čović 1991b). Iz gomile 11 u Ljubomiru prikupljeni su iz konteksta koji prethodi cetinskom kontekstu (Čović 1980). Zajedno s lončarijom cetinskoga stila nađeni su na nalazištu Zagomilje 2 (Mucić, Kovačević Bokarica 2011) i u Rudinama na položaju 'Okruglo' (Marović 1991). U Ravlića pećini prikupljeni su iz konteksta faze 4 koja, uz cetinsku, sadrži i kasniju brončanodobnu lončariju (Marijanović 2012). Na Trostrukoj gradini i Nečajnu potječu iz konteksta koji se smatraju mlađim od cetinskih (Čović 1989). U Grotta dei Ciclami (Gilli, Montagnari Kokelj 1993), Kovačini (Šuta 2013) i Zelenoj pećini (Čović 1980) prikupljeni su iz konteksta u kojima ljubljansko-jadranski i cetinski ulomci dolaze zajedno. Zanimljivo je da se na zdjelama iz Gudnje i Lazaruše utiskivanje uzice kombinira s točkastim i trokutastim otiscima tvoreći trakaste motive koji su vrlo bliski ljubljansko-jadranskome stilu ukrašavanja.

## DATIRANJE LJUBLJANSKO-JADRANSKOGA I CETINSKOG STILA

Za određivanje starosti ljubljansko-jadranskoga i cetinskog stila stoje nam na raspolaganju tri vrste informacija: podaci o stratigrafskim odnosima između konteksta koji su sadržavali karakterističnu lončariju, podaci o vremenski osjetljivim metalnim predmetima[7] pronađenima zajedno s karakterističnom lončarijom te radiokarbonski datumi. Svi dosadašnji pokušaji datiranja spomenutih stilova prilično se olako oslanjaju na često nesigurne podatke o stratigra-

7 U starijim publikacijama, metalni predmeti često se bez podrobnijega obrazloženja spominju kao 'brončani' ili 'bakreni'. Budući da se bez provedene analize sastava ne može sa sigurnošću reći o kojoj se kovini radi, takvi nalazi obuhvaćeni su neutralnim terminom 'metalni predmeti'.

together with Cetina style pottery at Zagomilje 2 (Mucić, Kovačević Bokarica 2011), and on the 'Okruglo' location at Rudine (Marović 1991). At the Ravlića Cave, they were recovered from Phase 4 contexts, which contained both Cetina and later Bronze Age pottery (Marijanović 2012). At Trostruka Gradina and Nečajno, they came from contexts considered to be younger than Cetina (Čović 1989). At Grotta Dei Ciclami (Gilli, Montagnari Kokelj 1993), Kovačina (Šuta 2013), and the Zelena Cave (Čović 1980), they were recovered from contexts where Ljubljana-Adriatic and Cetina potsherds appear together. Motifs on bowls from Gudnja and Lazaruša, created by combining cord-impressed bands with impressed dots and triangles, closely resemble Ljubljana-Adriatic decorative motifs.

## DATING OF LJUBLJANA-ADRIATIC AND CETINA STYLES

There are three different classes of data at our disposal for establishing the age of Ljubljana-Adriatic and Cetina styles: information about stratigraphic relationships between contexts that contained characteristic pottery, information about time-sensitive metal objects[7] that were found in association with characteristic pottery, and radiocarbon dates. All the existing attempts to date these styles rely rather imprudently on unsound information about site stratigraphy and association of finds (Della Casa 1995: 570–571; 1996: 128–131; Forenbaher, Kaiser 1997: 18; Velušček 1999: 69). Since most of the available information comes from old, poorly documented and selectively published excavations, or from informal digs, critical reassessment of their reliability is due. Until now, radiocarbon dates related to Ljubljana-Adriatic and Cetina pottery have not been discussed systematically.

### Stratigraphic relationships

One of the traditional ways of establishing relative age relies on the stratigraphic position of the finds. Both kinds of pottery whose mutual temporal relationship is being considered have been reported from about forty sites. Unfortunately, Ljubljana-Adriatic and Cetina style fragments have usually been found mixed together within the same context, less commonly in different, stratigraphically unrelated contexts, or their context is unknown. Based on the published information, it is only on six sites that one may learn something about the stratigraphic relationship between Ljubljana-Adriatic and Cetina finds, although the situation is not completely clear on any of those sites.

The Škarin Samograd Cave is among the most often cited sites. Both temporal divisions of Cetina culture that are in current use refer to its stratigraphy (Marović, Čović 1983; Govedarica 1989b), despite the fact that Marović's extensive excavations, carried out more than half a century ago, remain unpublished. A small number of characteristic potsherds is scattered across different publications and published wit-

7 In old publications, implements made of metal are routinely reported as 'bronze' or 'copper' finds. Since the composition of metal cannot be ascertained without elemental analysis, I have used a neutral term 'metal objects' for all such finds.

fiji nalazišta i asocijaciji nalaza (Della Casa 1995: 570–571; 1996: 128–131; Forenbaher, Kaiser 1997: 18; Velušček 1999: 69). Većina raspoloživih informacija potječe iz starih, nedovoljno dokumentiranih i selektivno objavljenih istraživanja ili iz nesustavnih iskopavanja, pa stoga valja kritički preispitati njihovu pouzdanost. Radiokarbonski datumi vezani uz ljubljansko-jadransku i cetinsku lončariju zasad nisu bili predmetom sustavnoga razmatranja.

**Stratigrafski odnosi**

Tradicionalni način određivanja relativne starosti oslanja se na stratigrafski položaj nalaza. Postoji četrdesetak nalazišta iz kojih su objavljene obje vrste lončarije čiji nas međusobni vremenski odnos zanima. Nažalost, ulomci posuda ljubljansko-jadranskoga i cetinskog stila najčešće su pronađeni izmješani zajedno unutar istoga konteksta, rjeđe u različitim, stratigrafski nepovezanim kontekstima, ili im je kontekst nepoznat. Samo na šest nalazišta može se, na temelju objavljenih podataka, ponešto zaključiti o međusobnom stratigrafskom odnosu ljubljansko-jadranskih i cetinskih nalaza, iako niti u jednome slučaju situacija nije posve jasna.

Jedno od najčešće spominjanih višeslojnih nalazišta je špilja Škarin samograd. Na njenu stratigrafiju i nalaze pozivaju se obje vremenske podjele cetinske kulture koje su trenutno u upotrebi (Marović, Čović 1983; Govedarica 1989b), iako su Marovićeva opsežna iskopavanja, provedena prije više od pola stoljeća, ostala neobjavljena. Mali broj karakterističnih ulomaka lončarije rasut je po različitim publikacijama i objavljen bez podrobnijih stratigrafskih podataka. Iz postjeće dokumentacije (Marijanović 2005: 26–27) vidljivo je kako se iskopavalo proizvoljnim otkopnim slojevima, ponekad debelim tridesetak centimetara, što je moralo dovesti do miješanja građe iz različitih razdoblja. Osim nekoliko fotografija i skica profila, oskudne terenske bilješke ne sadrže informacije o prirodi slojeva i stratigrafskim odnosima. Iz raspoloživih podataka može se zaključiti kako se lončarija cetinskoga stila pojavljuje kroz sloj debeo preko 1,5 m (od 2,7 do 1,1 m dubine) te da se u donjem dijelu toga sloja (od 2,7 do 2,0 m dubine) uz nju pojavljuju i rijetki ljubljansko-jadranski ulomci (Govedarica 1989b: 113, 130, 132).

Drugo često spominjano nalazište je špilja Gudnja. Kao i u prethodnom primjeru, rezultati opsežnih iskopavanja provedenih prije pola stoljeća nisu objavljeni za života voditeljice istraživanja Spomenke Petrak. I ovdje se kopalo proizvoljnim otkopnim slojevima, ponekad debelim tridesetak centimetara (Marijanović 2005: 11–12). Temeljem uvida u relativno brojne kasnoeneolitičke nalaze, Dimitrijević je, ne upuštajući se u detalje, nagovijestio da se u Gudnji, prema tipološkim obilježjima lončarije, mogu očekivati dva horizonta jadranskoga tipa ljubljanske kulture, no tu svoju tvrdnju nije mogao potkrijepiti stratigrafskim podacima (Dimitrijević 1979a: 322; 1979b: 378). Revizijska iskopavanja provedena prije petnaestak godina imala su za cilj rekonstrukciju stratigrafije nalazišta i uklapanje u nju starih nalaza na temelju skromne i manjkave izvorne dokumentacije (Marijanović 2005: 11). Nažalost, rezultati revizijskih iskopavanja tom prilikom 'nisu posebno prikazani jer su oni

hout detailed stratigraphic information. From the existing documentation (Marijanović 2005: 26–27) one may conclude that the excavation proceeded in arbitrary layers that sometimes were about thirty centimeters thick, which must have led to the mixing of finds from different periods. Aside from a few photographs and sketches of trench profiles, the scanty field notes lack information about the stratigraphic relations and the nature of the sediments. The available information leads to the conclusion that Cetina style pottery appeared through a layer that is more than 1.5 m thick, from the depth of 2.7 to 1.1 m, while the rare Ljubljana-Adriatic potsherds appeared alongside Cetina pottery in the lower part of that layer, from the depth of 2.7 to 2.0 m (Govedarica 1989b: 113, 130, 132).

The Gudnja Cave is another often cited site. Like in the previous case, the results of the extensive excavations that were carried out half a century ago have not been published during the lifetime of its excavator, Spomenka Petrak. Her excavation likewise proceeded in arbitrary layers that sometimes were about thirty centimeters thick (Marijanović 2005: 11–12). Based on his inspection of the fairly numerous Late Copper Age finds, and relying on the typological traits of the pottery, Dimitrijević had predicted (while withholding the details) that Gudnja may be harboring two horizons of the 'Adriatic type of Ljubljana culture', but he could not support his claim with stratigraphic information (Dimitrijević 1979a: 322; 1979b: 378). A limited re-excavation aimed at reconstructing the site's stratigraphy was undertaken fifteen years ago in order to fit the old finds, which were accompanied by scant and deficient original documentation, into an updated stratigraphic sequence (Marijanović 2005: 11). Unfortunately, the results of those excavations were '…not presented separately, since they served only to resolve the problems posed by the already existing body of finds' (Marijanović 2005: 12). According to Marijanović, Ljubljana-Adriatic and coarse incised pottery dominated in Phase 5, while the following phase, Phase 6, contained Bronze Age finds, among which there were several characteristic Cetina style potsherds (Marijanović 2005: 88). Marijanović does not state explicitly, however, whether his phase attributions were based primarily on the available stratigraphic information accompanying the old finds, or whether their typological traits prevailed in most cases (Marijanović 2005: 73–92).

The Ravlića Cave was excavated twice during the last four decades (Marijanović 1981; 2012). Compared to Gudnja and Škarin Samograd, both excavations were much better documented and extensively published. The earlier excavations proceeded in 10–15 cm thick arbitrary levels (Marijanović 1981: 7), while later excavations followed the principles of stratigraphic excavation (Marijanović 2012: 15). Phase 3 was attributed to the developed Copper Age and an early stage of the Early Bronze Age. In earlier excavations, this phase was represented by a layer with a thickness of 1.7 m, while the corresponding layer in later excavations was only about twenty centimeters thick (Marijanović 2012: 20). All the characteristic Ljubljana-Adriatic potsherds, as well as a few fragments with decoration that closely resembles the Cetina style, were attributed to an older Subphase 3a, while

poslužili samo za rješavanje problema koje je predstavljao postojeći fundus građe' (Marijanović 2005: 12). Prema Marijanoviću, u starijoj fazi 5 dominiraju ljubljansko-jadranska i grubo žljebljena lončarija, dok mlađa faza 6 sadrži bronča-nodobne nalaze među kojima ima karakterističnih ulomaka cetinskoga stila (Marijanović 2005: 88). Pritom se eksplicitno ne navodi je li većina nalaza iz starih iskopavanja pripisana nekoj od tih faza na temelju raspoloživih podataka o njihovom stratigrafskom položaju, ili su u većini slučajeva prevagnula tipološka obilježja (Marijanović 2005: 73–92).

Ravlića pećina iskopavana je u dva navrata tijekom posljednja četiri desetljeća (Marijanović 1981; 2012). U usporedbi s Gudnjom i Škarinim samogradom, oba iskopavanja su znatno bolje dokumentirana i opširno objavljena. Ranija iskopavanja provedena su proizvoljnim otkopnim slojevima debljine 10–15 cm (Marijanović 1981: 7), dok su kasnija slijedila načela stratigrafskoga iskopavanja (Marijanović 2012: 15). Faza 3, pripisana razvijenome eneolitiku i starijem stupnju ranoga brončanog doba, zastupljena je u ranijim iskopavanjima slojem debljine oko 1,7 m, dok je u kasnijim iskopavanjima taj sloj bio debeo samo dvadesetak centimetara (Marijanović 2012: 20). Starijoj podfazi 3a pripisani su svi karakteristični ulomci lončarije ljubljansko-jadranskoga stila, ali i poneki ulomak ukrašen na način blizak cetinskome stilu, dok je većina karakteristične cetinske lončarije pripisana mlađoj podfazi 3b (Marijanović 1981: 36–41; 2012: 89–102). Na temelju objavljenih podataka nije posve jasno koliko ta podjela odražava stvarni sadržaj stratigrafskih konteksta, a koliko je posljedica pripisivanja karakterističnih ulomaka određenoj podfazi prema njihovim tipološkim obilježjima. Na ovu drugu mogućnost upozorava činjenica da je nekoliko karakterističnih ulomaka nakovanskih zdjela koji su u starijoj publikaciji bili pripisani fazi 3a (Marijanović 1981: T. 33: 5–12), u novoj publikaciji bez obrazloženja pripisano fazi 2c (Marijanović 2012: T. 54: 1–8).

Jedina špilja na Krasu iz koje možemo ponešto naslutiti o stratigrafskom odnosu između ljubljansko-jadranske i cetinske lončarije je Grotta Caterina. Među nalazima iz sonde AB, jedan ulomak iz sloja 4 i nekoliko ulomaka iz sloja 3 ukrašeni su na karakterističan ljubljansko-jadranski način (Canarella, Pitti 1981: sl. 5: 3–5; 4: 11), dok iz stratigrafski mlađega sloja 2 potječe neukrašena posuda koja oblikom donekle podsjeća na cetinski pehar (Canarella, Pitti 1981: sl. 4: 5).

Jedina gomila s dokumentiranim stratigrafskim slijedom ljubljansko-jadranske i cetinske lončarije je Velika gruda kod Tivta. Grob u sanduku, smješten pri sredini prvobitne gomile, sadržavao je, uz inhumirane ostatke pokojnika, plitku zdjelu karakterističnoga ljubljansko-jadranskog stila (Primas 1996: sl. 5.3). Iz naknadno dodanoga gornjeg dijela plašta gomile, iz sloja C1 u koji su bili ukopani kasnobrončanodobni grobovi, prikupljeno je mnoštvo ulomaka lončarije, uključujući i nekoliko ulomaka bliskih cetinskom stilu (Primas 1996: 67, sl. 5.13B; Della Casa 1996: 66, 126, sl. 92: 110–118). Međusobni stratigrafski odnos između spomenuta dva konteksta je neupitan, no jako usitnjeni i istrošeni ulomci iz sloja C1, nasumce razasuti plaštom gomile, ne mogu poslužiti kao čvrst stratigrafsko-kronološki oslonac. Sudeći po njihovoj tipološkoj heterogenosti, pripadaju različiti the majority of the characteristic Cetina pottery was attributed to a younger Subphase 3b (Marijanović 1981: 36–41; 2012: 89–102). Based on published information, it remains unclear whether this division reflects primarily the actual contents of stratigraphic contexts, or the attribution of characteristic potsherds to subphases according to their typological traits. The latter is suggested by the fact that several characteristic fragments of the Nakovana bowls, attributed to Phase 3a in the older publication (Marijanović 1981: Pl. 33: 5–12), were reattributed in the more recent publication to Phase 2c without any further explanation (Marijanović 2012: Pl. 54: 1–8).

The only cave in the Karst that provides hints about the stratigraphic relationship between Ljubljana-Adriatic and Cetina pottery is Grotta Caterina. Among the finds from Trench AB, a single sherd from Layer 4 and a few sherds from Layer 3 were decorated in a characteristic Ljubljana-Adriatic manner (Canarella, Pitti 1981: Fig. 5: 3–5; 4: 11), while a plain vessel resembling a Cetina beaker was recovered from the overlying Layer 2 (Canarella, Pitti 1981: Fig. 4: 5).

The only burial mound with a documented stratigraphic sequence of Ljubljana-Adriatic and Cetina pottery is Velika Gruda at Tivat. A cist grave, located near the center of the original mound, contained an inhumation, accompanied by a characteristic Ljubljana-Adriatic dish (Primas 1996: Fig. 5.3). A later enlargement of the mound mantle, Layer C1 contained Late Bronze Age burials and yielded many potsherds, including a few that closely resemble Cetina style pottery (Primas 1996: 67, Fig. 5.13B; Della Casa 1996: 66, 126, Fig. 92: 110–118). While the stratigraphic relationship between these two contexts is beyond doubt, the highly fragmented and worn potsherds from Layer C1, scattered haphazardly across the mound, cannot be trusted for chronostratigraphic purposes. Judging by their typological heterogeneity, they belong to diverse periods, and they ended up in the mantle accidentally, so they are considered to be in a secondary context (Della Casa 1995: 567–568).

Finally, at Gajtan, a settlement site near Shkodër, fragments akin to Ljubljana-Adriatic pottery were recovered from the underlying Layer 1 that also contained Neolithic and/or earlier Copper Age pottery, while fragments akin to the Cetina style were recovered from the overlying Layer 2 that also contained Late Bronze Age and Iron Age pottery, according to the scarce published information (Jubani 1972).

Despite uncertainties outlined above, the rather uniform stratigraphies of these six sites suggest that the Ljubljana-Adriatic style precedes the Cetina style. The reverse situation is mentioned only at the Grapčeva Cave, where a layer attributed to Phase 4 yielded a few small decorated potsherds attributable to the third millennium BC. Among them, fragments akin to the Cetina style were recovered from stratigraphically older contexts of Phase 4, while Ljubljana-Adriatic and coarse incised fragments were recovered from stratigraphically younger contexts of the same phase (Kaiser, Forenbaher 1999: 316; Forenbaher, Kaiser 2008: 62–64). This apparent inversion should not be given too much weight, since the total number of characteristic

tim razdoblima te su zajedno sa zemljom slučajno završili u plaštu, gdje se nalaze u sekundarnome kontekstu (Della Casa 1995: 567–568).

Napokon, na naseobinskome nalazištu Gajtan kod Skadra, prema oskudno objavljenim podacima, ulomci bliski ljubljansko-jadranskome stilu potječu iz stratigrafski starijega sloja 1 koji, uz njih, sadrži neolitičku i/ili stariju eneolitičku lončariju, dok ulomci bliski cetinskome stilu potječu iz stratigrafski mlađega sloja 2 koji uz njih sadrži kasnobrončanodobnu i željeznodobnu lončariju (Jubani 1972).

Unatoč opisanim nesigurnostima, prilično ujednačena stratigrafija ovih šest nalazišta ukazuje kako ljubljansko-jadrasnki stil prethodi cetinskome stilu. Obrnuta situacija spominje se jedino u Grapčevoj spilji gdje, iz sloja pripisanoga fazi 4, potječe nekoliko malih ukrašenih ulomaka lončarije koji se mogu pripisati trećem tisućljeću prije Krista. Među njima su ulomci bliski cetinskome stilu prikupljeni iz stratigrafski starijih konteksta faze 4 te ulomci ljubljansko-jadranskoga stila i ulomci ukrašeni grubim žljebljenjem prikupljeni iz stratigrafski mlađih konteksta iste faze (Kaiser, Forenbaher 1999: 316; Forenbaher, Kaiser 2008: 62–64). Ovoj prividnoj inverziji ne treba pridavati naročit značaj jer je ukupni broj karakterističnih ulomaka vrlo malen, a zbog usitnjenosti ih je teško pouzdano stilski odrediti. Uz to, jedan ulomak blizak cetinskome stilu, prikupljen iz najstarijega konteksta faze 5 (koja preslojava fazu 4), upozorava na moguću poremećenost konteksta.

S druge strane, česta pojava nalaza ljubljansko-jadranskih i cetinskih nalaza unutar istoga konteksta sugerira mogućnost vremenskoga preklapanja obaju stilova. Ukoliko postoji, to bi preklapanje neki možda radije zvali 'mlađom fazom klasične ljubljanske kulture' (Govedarica 1989b: 46–47), 'protocetinskim facijesom cetinske kulture' (Govedarica 1989b: 129–144), 'prvim stupnjem cetinske kulture' (Marović, Čović 1983: 196) ili 'ranom fazom cetinske kulture' (Marijanović 1997: 7). Raspoloživi stratigrafski podaci ne dozvoljavaju nam da utvrdimo radi li se o stvarnome sinkronitetu, o miješanju nalaza različite starosti, ili o loše provedenim iskopavanjima.

**Asocijacija s metalnim nalazima**

Drugi tradicionalni način datiranja temelji se na asocijaciji nalaza nepoznate starosti s vremenski osjetljivim metalnim predmetima čija je starost poznata. Nažalost, u vremenu o kojem ovdje govorimo, metalni nalazi nisu niti približno tako precizni i pouzdani vremenski pokazatelji kao što je to slučaj u nekim kasnijim razdobljima. Većinom se radi o neukrašenim predmetima jednostavnih oblika koji nisu naročito vremenski osjetljivi, o temeljnim metalnim tipovima koji su se stoljećima vrlo malo mijenjali. Njihova opća tipološka obilježja dozvoljavaju samo grubo određivanje u neko šire razdoblje. Dodatna nesigurnost proizlazi iz činjenice da se analogije nerijetko pronalaze u udaljenim krajevima Europe ili istočnoga Sredozemlja, pri čemu niti sami analogni nalazi nisu pouzdano datirani. Za ilustraciju je dovoljno spomenuti dva istaknuta primjera: sjekiricu s rubnim pojačanjima nađenu uz 'čovjeka iz leda' na Similaunskom ledenjaku i zlatni bodež iz središnjega groba u Maloj grudi. Prema

sherds is very small, and their reliable stylistic determination is hampered by their small size. Furthermore, a sherd akin to the Cetina style, recovered from the earliest context of Phase 5 (overlying Phase 4), cautions of possible context disturbance.

On the other hand, the frequent appearance of Ljubljana-Adriatic and Cetina finds within the same contexts suggests the possibility that these two styles may overlap in time. Some might prefer to call this stylistic overlap (if indeed it exists) the 'younger phase of the classic Ljubljana culture' (Govedarica 1989b: 46–47), 'the proto-Cetina facies of the Cetina culture' (Govedarica 1989b: 129–144), 'the first stage of the Cetina culture' (Marović, Čović 1983: 196) or 'the early phase of the Cetina culture' (Marijanović 1997: 7). Based on the available stratigraphic information, however, it is impossible to say whether the contexts containing potsherds of both styles reflect their synchronicity, the mixing of finds of different ages, or poorly conducted excavations.

**Association with metal finds**

Another traditional dating method is based on the association between the finds of unknown age and the time-sensitive metal implements of a known age. Unfortunately, in the times under discussion, metal implements as time indicators are not nearly as reliable as in some later prehistoric periods. Most of those objects are plain and simply shaped basic types of metal implements that changed little over the centuries. Their typological characteristics allow only for a rough and rather general age attribution. Additional uncertainty stems from the fact that their analogies, which are often sought in distant parts of Europe or eastern Mediterranean, are themselves unreliably dated. For illustration, one might mention two outstanding examples: the flanged ax that was found with the 'Iceman' on the Similaun Glacier, and the golden dagger from the central burial at Mala Gruda. Following the typological criteria, the hatchet was initially thought to date from around the year 2000 BC (Sjøvold 1992), while the dagger was ascribed to 1900–1800 BC (Parović-Pešikan 1976: 80). Today, both finds are considered to be roughly a thousand years older than those first estimates.

Furthermore, the association between metal objects and Ljubljana-Adriatic or Cetina pottery is often questionable or even nonexistent. Most of the metal finds that were recovered from the upper reaches of the Cetina River, and are considered as key components of the 'Cetina culture' (Marović, Čović 1983; Govedarica 1989b), came from burial mounds that contained neither Cetina nor Ljubljana-Adriatic style pottery, and therefore cannot be used to date either of these two styles. They include the short metal-hilted sword decorated by engraving, the metal-hilted dagger, and the small flat dagger from Živalji (Marović, Čović 1983: Pl. 33: 1, 5; 34: 1), the flat dagger with four rivets and the fragment of a lozenge-section dagger blade from Penića Njivice (Marović, Čović 1983: Pl. 33: 6, 8), the small flat dagger from Veliki Rumin (Marović, Čović 1983: Pl. 33: 4), the elongated lozenge-section dagger decorated by engraving from Župna Kuća in Bajagić (Marović, Čović 1983: Pl. 33: 3),

tipološkim kriterijima, za sjekiricu se najprije mislilo da pripada vremenu oko godine 2000. pr. Kr. (Sjøvold 1992), dok je bodež bio pripisan vremenu oko godine 1900–1800. pr. Kr. (Parović-Pešikan 1976: 80). Danas se oba nalaza smatraju oko tisuću godina starijim od spomenutih prvih procjena.

Povrh toga, asocijacija metalnih predmeta s ljubljansko-jadranskom i cetinskom lončarijom često je upitna ili uopće ne postoji. Većina metalnih nalaza prikupljenih s prostora gornjega toka rijeke Cetine, koji se smatraju ključnim dijelom sadržaja 'cetinske kuluture' (Marović, Čović 1983; Govedarica 1989b), potječe iz gomila u kojima nije zabilježena ni cetinska ni ljubljansko-jadranska lončarija pa ne mogu poslužiti za datiranje niti jednoga od ta dva stila. Među njima su kratki mač s punom kovinskom drškom ukrašen graviranjem, bodež s punom kovinskom drškom i mali plosnati bodež iz Živalja (Marović, Čović 1983: T. 33: 1, 5; 34: 1), plosnati bodež s četiri zakovice i ulomak bodeža rombičnoga presjeka iz Penića njivica (Marović, Čović 1983: T. 33: 6, 8), mali plosnati bodež iz Velikog Rumina (Marović, Čović 1983: T. 33: 4), izduženi bodež rombičnoga presjeka ukrašen graviranjem iz Župne kuće u Bajagiću (Marović, Čović 1983: T. 33: 3), nož iz Kekezove gomile (Marović, Čović 1983: T. 33: 7) te sjekira s rupom za nasad iz Velikih gomila (Marović, Čović 1983: T. 34: 9). Nalazi iz Penića njivica, Župne kuće i Kekezove gomile, kao i bodež s punom kovinskom drškom iz Živalja prikupljeni su slučajno iz raskopanih gomila i o njihovom kontekstu ne zna se gotovo ništa. Nadalje, iz sojeničarskih naselja na Igu potječu brojni metalni nalazi (Korošec, Korošec 1969: T. 105) i obilje lončarije, uključujući i ljubljansko-jadransku, no o njihovom međusobnom odnosu nema nikakvih podataka. Isto vrijedi za metalne nalaze i cetinske posude iz grobnice 3 u Laterzi (Biancofiore 1967). Bakrena sjekira-čekić iz Vele spile na Korčuli (Čečuk, Radić 2005: sl. 38), prikupljena iz sloja obilježenoga ljubljansko-jadranskom i grubo žljebljenom lončarijom, vremenski je neosjetljiv tip predmeta koji može pripadati četvrtome, ali i trećem tisućljeću prije Krista. Svi ti nalazi od slabe su koristi za datiranje ljubljansko-jadranskoga i cetinskog lončarskog stila.

Metalni predmeti i cetinska lončarija pronađeni su zajedno u samo pet gomila, gdje su bili razasuti po plaštu ili su pokupljeni bez stručnoga nadzora. Na Gomilama više lada, iz gomile 3, prikupljena je kratka plosnata oštrica bodeža zaobljene baze s tri zakovice (Marović 1991: sl. 75: 17), a uz lončariju cetinskoga stila bilo je i ulomaka grubo žljebljene lončarije. Iz gomile u Begovićima prikupljena je kratka plosnata oštrica bodeža s dvije zakovice, izobličena korozijom (Beg Jerončić 2011: T. 1: 4). Iz gomile u Malom Mosoru prikupljene su dvije male zlatne aplike ukrašene tiještenim koncentričnim krugovima i savinuta cijevčica od zlatnoga lima (Periša 2006: 368). Na Rudinama, iz raskopane gomile 10A, prikupljeno je šilo kvadratnoga presjeka (Marović 1991: sl. 9: 7). Iz razorene gomile u Ferizovićima prikupljen je lijevani srcoliki privjesak (Govedarica 2006: T. 2: 9). Pod pretpostavkom da su spomenuti mali, jednostavni bodeži dospjeli u gomile istovremeno s ulomcima lončarije, oni bi mogli poslužiti kao grub vremenski pokazatelj prema kojem bi cetinska lončarija iz plašta vjerojatno pripadala trećem tisućljeću prije Krista. Šilo kvadratnoga presjeka još je manje vremenske the knife from Kekezova Gomila (Marović, Čović 1983: Pl. 33: 7), and the shaft-hole ax from Velike Gomile (Marović, Čović 1983: Pl. 34: 9). The objects from Penića Njivice, Župna Kuća, and Kekezova Gomila, as well as the metal-hilted dagger from Živalji, are chance finds from pillaged mounds, and next to nothing is known about their context. Apart from these, the lake settlements of Ljubljansko Barje also yielded numerous metal finds (Korošec, Korošec 1969: Pl. 105) and an abundance of Ljubljana-Adriatic and other pottery, but there is no information about the mutual relationship between these two categories of finds. The same is true of metal finds and Cetina style vessels from the burial chamber 3 at Laterza (Biancofiore 1967). The copper shaft-hole hammer-ax from the Vela Cave on Korčula (Čečuk, Radić 2005: Fig. 38), recovered from a layer marked by Ljubljana-Adriatic and coarse incised pottery, is not time-sensitive; it may belong to the fourth or the third millennium BC. All of these finds are of little use for dating Ljubljana-Adriatic and Cetina pottery styles.

Metal implements and Cetina pottery were found together in only five burial mounds, where they were scattered across the mound mantle, or recovered in a haphazard way. A short and flat dagger blade with a rounded base and three rivets was recovered from Mound 3 at Gomile Više Lada (Marović 1991: Fig. 75: 17); aside from Cetina style pottery, this mound also yielded coarse incised potsherds. A short and flat dagger blade with two rivet holes, disfigured by corrosion, was recovered from a mound at Begovići (Beg Jerončić 2011: Pl. 1: 4). Two small gold ornaments decorated by repoussé concentric circles and a bent tube made of sheet gold were recovered from a mound at Mali Mosor (Periša 2006: 368). A square-sectioned awl bit was recovered from pillaged Mound 10A at Rudine (Marović 1991: Fig. 9: 7). A heart-shaped cast metal pendant was recovered from an obliterated mound at Ferizovići (Govedarica 2006: Pl. 2: 9). Assuming that the small, simple daggers were deposited simultaneously with the potsherds, they might serve as a rough chronological indicator, suggesting that the Cetina pottery from the mound mantle probably belonged to the third millennium BC. The square-sectioned awl bit is less time-sensitive, while the heart-shaped pendant from Ferizovići belongs to the middle of the second millennium BC, according to its typological characteristics (Hänsel 1968: 116–118). One should note that the association between metal finds and Cetina pottery is not completely reliable in any of these cases, since different objects may have ended up in the mantle at different times. Carefully executed and documented recent excavations point in that direction by demonstrating that many burial mounds were used repeatedly, sometimes over long periods of time, or with lapses that lasted several centuries.

Metal objects and Ljubljana-Adriatic pottery were found together in three relatively well preserved and thoroughly documented Montenegrin sites. In each case, clearly associated finds from burial mounds were recovered from safe contexts by controlled excavation. The central burial at Mala Gruda contained five square-sectioned golden hair rings with a mushroom-shaped end, an elongated golden dagger

ski osjetljivo, dok srcoliki lijevani privjesak iz Ferizovića prema svojim tipološkim obilježjima pripada sredini drugoga tisućljeća prije Krista (Hänsel 1968: 116–118). Valja naglasiti da asocijacija metalnih nalaza s cetinskom lončarijom niti u jednom slučaju nije posve pouzdana jer su različiti predmeti mogli dospjeti u plašt u različito vrijeme. Na to navode novija, pažljivo provedena i dokumentirana iskopavanja koja ukazuju da su mnoge gomile bile korištene više puta, ponekad kroz duže vrijeme ili u razmacima od po nekoliko stoljeća.

Metalni predmeti i ljubljansko-jadranska lončarija pronađeni su zajedno u tri relativno dobro sačuvana i temeljito dokumentirana crnogorska nalazišta. U sva tri slučaja radi se o jasno asociranim nalazima iz grobnih gomila, prikupljenim iz sigurnih konteksta sustavnim iskopavanjem. U Maloj grudi, srednišnji grob u sanduku sadržavao je pet zlatnih karičica za kosu kvadratnoga presjeka i pečatasto proširenoga završetka, izduženi zlatni bodež sa središnjim rebrom i jasno izdvojenom uglatom pločicom za pričvršćivanje drška s tri rupe za zakovice, srebrnu bojnu sjekiru s rupom za nasad i kapicom od zlatnoga lima ukrašenom iskucavanjem koja je pokrivala gornji kraj drška te ulomke plitice i pehara karakterističnih ljubljansko-jadranskih obilježja (Parović-Pešikan 1976: T. 3–4). U Velikoj grudi, središnji grob u sanduku sadržavao je osam zlatnih karičica za kosu kvadratnoga presjeka (tri pečatasto proširenoga završetka i pet s preklopljenim krajevima), plosnatu sjekiru od arsenskoga bakra, dva dvorezna noža od kojih je barem jedan izrađen od kositrene bronce te pliticu karakterističnih ljubljansko-jadranskih obilježja (Primas 1996: sl. 5.1–5.4; 6.4–6.5; 7.1; 7.2; 7.5). U Grudi Boljevića, nad središnjim grobom u kojem nije bilo priloga, nađeni su na okupu dvije zlatne karičice za kosu rombičnoga presjeka i pečatasto proširenoga završetka, izdužena oštrica maloga bodeža blago rombičnoga presjeka i zaobljene baze izobličena korozijom, kamena bojna sjekira-čekić s kapicom od zlatnoga lima ukrašenoga iskucavanjem i urezivanjem koja je pokrivala gornji kraj drška te plitica, pehar i lijevak karakterističnih ljubljansko-jadranskih obilježja (Baković 2011: sl. 1–7).

Zlatne karičice za kosu iz crnogorskih grobnih gomila vrlo su slične onima iz groba R15b na nalazištu Steno. Najveći dio nalaza iz toga groblja pod gomilama na otoku Lefkasu u zapadnoj Grčkoj pripisuje se ranoheladskom II razdoblju (Maran 1997: 175; 2007: 9), dok se sam grob R15b ponekad pripisuje ranijem dijelu toga razdoblja (Primas 1996: 85, sl. 6: 13A, 1–3), odnosno možda još ranijem vremenu (Müller Celka 2011). Zlatni bodež iz Male grude uspoređivan je najprije s kretskim bodežima (Parović-Pešikan 1976: 81), zatim s levantskim bodežima (Primas 1996: 89–90) te napokon (i zasad najuvjerljivije) s maloazijskim bodežima koji se pripisuju drugoj fazi ranoga brončanog doba Anatolije, razdoblju koje je približno istovremeno s ranoheladskim II razdobljem (Maran 1997: 175, sl. 5: 2–5; 2007: 9). Za srebrnu bojnu sjekiru iz Male grude postoje brojne analogije s prostora zapadnoga Balkana i srednjega Podunavlja koje se većinom pripisuju vučedolskom horizontu (Durman 1983; Primas 1996: 105–109, 154; Maran 2001: 278). Plosnata bakrena sjekira spada među široko rasprostranjene, jednostavne i oblikom

with a midrib and a well-defined angular plate with three rivet holes for handle attachment, a silver shaft-hole battle ax with a repoussé-decorated gold sheet cap that covered the handle top, as well as fragments of a characteristic Ljubljana-Adriatic dish and a beaker (Parović-Pešikan 1976: Pls. 3–4). The central cist grave at Velika Gruda contained eight square-sectioned golden hair rings (three of them with a mushroom-shaped end, the rest with overlapping terminations), a flat ax made of arsenic copper, two double-edged knives (at least one of them made of tin bronze), and a characteristic Ljubljana-Adriatic dish (Primas 1996: Fig. 5.1–5.4; 6.4–6.5; 7.1; 7.2; 7.5). At Gruda Boljevića, two lozenge-sectioned golden hair rings with a mushroom-shaped end, an elongated blade of a small dagger with a slightly rhombic section and a rounded base disfigured by corrosion, a stone battle ax with a repoussé-and-incision-decorated gold leaf cap that covered the handle top, as well as a dish, a beaker, and a funnel displaying characteristic Ljubljana-Adriatic stylistic traits, were found above the central burial that did not contain any grave goods (Baković 2011: Figs. 1–7).

The golden hair rings from Montenegrin burial mounds are closely similar to those from Burial R15b at Steno. Most of the finds from that mound cemetery on the island of Leukas in western Greece are attributed to the EH II period (Maran 1997: 175; 2007: 9), while Burial R15b itself is sometimes attributed to the early part of that period (Primas 1996: 85, Fig. 6: 13A, 1–3), or maybe an even earlier time (Müller Celka 2011). The golden dagger from Mala Gruda was compared at first to Cretan daggers (Parović-Pešikan 1976: 81), then to Levantine daggers (Primas 1996: 89–90), and finally (and most convincingly) to the Anatolian daggers attributable to the second phase of the Anatolian Early Bronze Age, which is roughly contemporaneous with the EH II period (Maran 1997: 175, Fig. 5: 2–5; 2007: 9). As for the silver battle ax from Mala Gruda, many similar objects were found in the western Balkan Peninsula and the middle Danubian regions, most of them attributed to the Vučedol horizon (Durman 1983; Primas 1996: 105–109, 154; Maran 2001: 278). The flat copper ax belongs to a class of simple, rather diversely shaped and widely distributed objects that are not particularly time-sensitive, but are present during the fourth and third millennia BC (Primas 1996: 94). Only general analogies are proposed for double-edged knives, dated rather loosely to the late fourth or third millennium BC (Primas 1996: 98).

While a general agreement about the absolute dating of the EH II period has not been reached yet, most specialists maintain that this rather long-lasting period covered roughly the second and third quarter of the third millennium BC (Manning 1995; Broodbank 2000; Renfrew et al. 2012). The Vučedol horizon has been dated by radiocarbon and dendrochronology to the first half of the third millennium BC, probably from around 2900 to 2600 BC (Forenbaher 1993: 247; Velušček, Čufar 2014: 42–43). It follows that, based on the association with metal objects; the Ljubljana-Adriatic pottery style at the southeastern end of its geographic distribution should belong to the second quarter of the third millennium BC.

A couple more sites that yielded metal finds and Lju-

neujednačene predmete koji nisu naročito vremenski osjetljivi, a pojavljuju se tijekom četvrtog i trećeg tisućljeća prije Krista (Primas 1996: 94). Za dvorezne noževe s jezičcem navode se samo općenite analogije, datirane prilično labavo u kasno četvrto ili treće tisućljeće prije Krista (Primas 1996: 98).

Iako ne postoji čvrst konsenzus o apsolutnom datiranju ranoheladskoga II razdoblja, većina stručnjaka smatra da se radi o dugotrajnom razdoblju koje otprilike pokriva drugu i treću četvrtinu trećega tisućljeća prije Krista (Manning 1995; Broodbank 2000; Renfrew et al. 2012). Vučedolski horizont datiran je radiokarbonski i dendrokronološki u prvu polovicu trećega tisućljeća prije Krista, vjerojatno od oko godine 2900. do 2600. pr. Kr. (Forenbaher 1993: 247; Velušček, Čufar 2014: 42–43). Iz toga proizlazi da bi, na temelju asocijacije s metalnim predmetima, ljubljansko-jadranski lončarski stil na jugoistočnom kraju svojega rasprostiranja trebao pripadati drugoj četvrtini trećega tisućljeća prije Krista.

Zbog potpunosti valja spomenuti još dva nalazišta koja su dala metalne nalaze i ljubljansko-jadransku lončariju. Dvije gomile na nalazištu Bardhoc u Albaniji sadržavale su mnoštvo grobova iz različitih razdoblja. Među nalazima su plosnate oštrice bodeža, igla s glavicom u obliku raskovanoga tuljca ukrašenog iskucavanjem te ulomci lončarije koja donekle nalikuje ljubljansko-jadranskoj (Hoti 1982), no pobliži podaci o međusobnom odnosu tih nalaza nisu objavljeni. Napokon, u Sridnjoj gori pronađen je u škrapi pri rubu gomile metalni predmet nalik na iglu s malom, zakošenom, diskoidno raskovanom glavicom i nizom laganih kuglastih i prstenastih zadebljanja na vratu, dok je iz plašta i podloge gomile prikupljeno nekoliko karakterističnih ulomaka ljubljansko-jadranske lončarije. Međusobna asocijacija tih predmeta posve je upitna. Na temelju tipoloških obilježja, predmet nalik na iglu bio je pripisan sredini drugoga tisućljeća prije Krista (Milošević 2011: 32, 36, sl. 9–10), no zapravo se radi o ušnoj sondi iz rimskoga vremena (Latinović et al. 2017: 170, sl. 90).

**Radiokarbonski datumi**

Za kronometrijsko datiranje ljubljansko-jadranske i cetinske lončarije stoji nam na raspolaganju samo dvadeset radiokarbonskih datuma iz trinaest nalazišta (tab. 1). Njihova kalibracija provedena je programom OxCal 4.3 (Bronk Ramsey 2009), uz korištenje atmosferske kalibracijske krivulje IntCal13 (Reimer et al. 2013).

**Begovići,** Beta-248564, 3670±40 BP, kalibrirani raspon od 1 SD: 2134–1979 pr. Kr., uzorak ljudskoga zuba iz koncentracije nagorijelih ljudskih kostiju pri sredini grobne gomile. U blizini spomenute koncentracije, ali i drugdje unutar plašta gomile, pronađen je manji broj karakterističnih ulomaka lončarije cetinskoga stila (Beg Jerončić 2011: 98; Jerončić, osobno priopćenje).

**Fossa Aimone,** CIRCE-DSH-123, 3868±75 BP, kalibrirani raspon od 1 SD: 2464–2212 pr. Kr., uzorak drvenoga ugljena iz naseobinskoga konteksta obilježenog lončarijom koja se pripisuje 'cetinskoj kulturi' (Livadie 2010: 163; Passariello et al. 2010: 30). Spomenuti nalazi nisu objavljeni.

bljana-Adriatic pottery may be mentioned for the sake of completeness. Two burial mounds at Bardhoc in Albania contained numerous burials from diverse periods. Among the finds are flat dagger blades, a pin terminating in a repoussé-decorated hammered cone, and potsherds reminiscent of Ljubljana-Adriatic pottery (Hoti 1982), but detailed information about mutual relationship between those finds remains unpublished. Finally, an object resembling a pin with a small and slanted discoid head and a series of slight spherical and ring-shaped bulges along the neck was found in a cleft near the mound edge at Sridnja Gora, while several characteristic fragments of Ljubljana-Adriatic pottery were recovered from the mound mantle and the underlying soil. Mutual association of those finds is extremely questionable. Based on its typological traits, the object resembling a pin was attributed to the mid-second millennium BC (Milošević 2011: 32, 36, Figs. 9–10). It is more likely that this is an ear syringe from the Roman period (Latinović et al. 2017: 170, Fig. 90).

**Radiocarbon dates**

There are only twenty radiocarbon dates from thirteen sites at our disposal for the chronometric dating of Ljubljana-Adriatic and Cetina pottery (Tab. 1). These were calibrated by the OxCal 4.3 calibration program (Bronk Ramsey 2009), using the IntCal 13 atmospheric calibration curve (Reimer et al. 2013).

**Begovići,** Beta-248564, 3670±40 BP, calibrated 1SD range: 2134–1979 BC, a human dental sample taken from a concentration of partially burned human bones that was located near the center of the burial mound. A small number of characteristic Cetina style potsherds was recovered from the mound mantle, some of them from near the concentration of human remains (Beg Jerončić 2011: 98; Jerončić, pers. com.).

**Fossa Aimone,** CIRCE-DSH-123, 3868±75 BP, calibrated 1SD range: 2464–2212 BC, a charcoal sample from a settlement context marked by pottery attributed to the Cetina culture (Livadie 2010: 163; Passariello et al. 2010: 30). The finds remain unpublished.

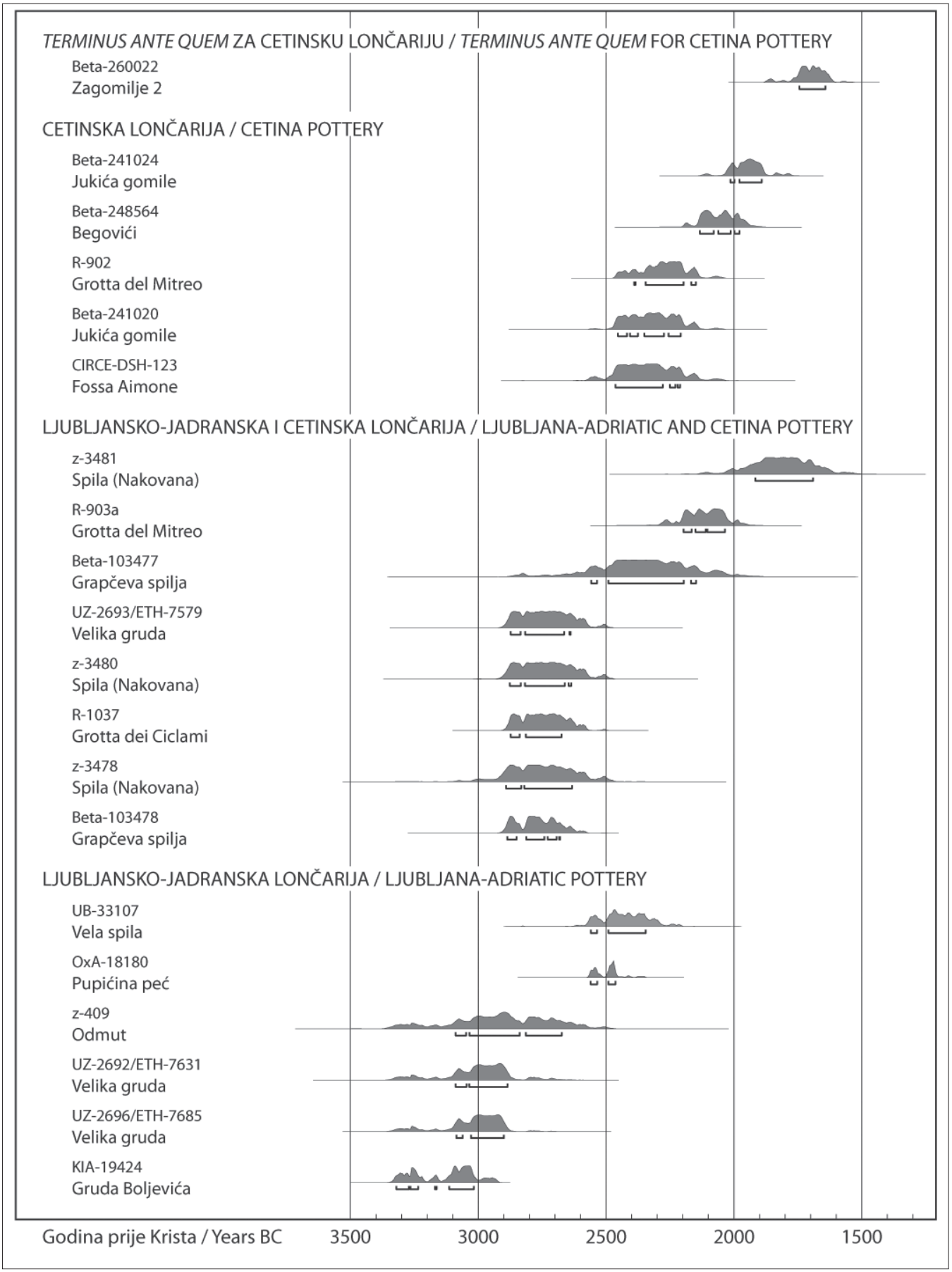
**Grapčeva Cave** yielded two radiocarbon dates: Beta-103478, 4190±50 BP, calibrated 1SD range: 2882–2678 BC, a charcoal sample from Stratigraphic Unit 1220 around the middle of Phase 4, and Beta-103477, 3880±120 BP, calibrated 1SD range: 2551–2144 BC, a charcoal sample from Stratigraphic Unit 1200 near the top of Phase 4. Both contexts (SU 1220 and SU 1200) contained occasional Ljubljana-Adriatic and coarse incised potsherds, while fragments akin to the Cetina style were recovered from the overlying and the underlying contexts (Forenbaher, Kaiser 2008: 62–64, Tab. 1), signaling possible disturbance. Consequently, radiocarbon dates cannot be linked directly to either one of those styles, but may be related to either of them.

**Grotta dei Ciclami,** R-1037, 4160±50 BP, calibrated 1SD range: 2874–2674 BC, a sample from Layer 4, which contained numerous characteristic Ljubljana-Adriatic and Cetina potsherds (Gilli, Montagnari Kokelj 1993: 157).

| Nalazište / Site | Laboratorijski broj / Laboratory number | Uzorak / Sample material | Lončarski stil / Pottery style | Pouzdanost* / Reliability* | Radiokarbonska starost / Radiocarbon age | Kalibrirani 1SD raspon pr. Kr. / Calibrated 1SD interval BC |
|---|---|---|---|---|---|---|
| Begovići | Beta-248564 | ljudski zub / human tooth | cetinski / Cetina | C | 3670±40 | 2134-1979 |
| Fossa Aimone | CIRCE-DSH-123 | drveni ugljen / charcoal | cetinski / Cetina | C | 3868±75 | 2464-2212 |
| Grapčeva spilja | Beta-103478 | drveni ugljen / charcoal | ljubljansko-jadranski ili cetinski / Ljubljana-Adriatic or Cetina | C | 4190±50 | 2887-2681 |
| Grapčeva spilja | Beta-103477 | drveni ugljen / charcoal | ljubljansko-jadranski ili cetinski / Ljubljana-Adriatic or Cetina | C | 3880±120 | 2559-2149 |
| Grotta dei Ciclami | R-1037 | ? | ljubljansko-jadranski ili cetinski / Ljubljana-Adriatic or Cetina | C | 4160±50 | 2874-2675 |
| Grotta del Mitreo | R-903a | drveni ugljen / charcoal | ljubljansko-jadranski ili cetinski / Ljubljana-Adriatic or Cetina | C | 3720±50 | 2198-2036 |
| Grotta del Mitreo | R-902 | drveni ugljen / charcoal | cetinski / Cetina | C | 3820±50 | 2391-2150 |
| Gruda Boljevića | KIA-19424 | ljudska kost / human bone | ljubljansko-jadranski / Ljubljana-Adriatic | C | 4440±35 | 3321-3018 |
| Jukića gomile | Beta-241024 | 'ostaci gara' / 'soot remains' | cetinski / Cetina | C | 3590±40 | 2014-1892 |
| Jukića gomile | Beta-241020 | 'ostaci gara' / 'soot remains' | cetinski / Cetina | C | 3850±60 | 2454-2209 |
| Odmut | z-409 | drveni ugljen / charcoal | ljubljansko-jadranski / Ljubljana-Adriatic | C | 4280±120 | 3089-2674 |
| Pupićina peć | OxA-18180 | drveni ugljen / charcoal (*salix*) | ljubljansko-jadranski / Ljubljana-Adriatic | C | 3963±27 | 2561-2464 |
| Spila (Nakovana) | z-3478 | drveni ugljen / charcoal | ljubljansko-jadranski ili cetinski / Ljubljana-Adriatic or Cetina | C | 4185±95 | 2892-2633 |
| Spila (Nakovana) | z-3480 | drveni ugljen / charcoal | ljubljansko-jadranski ili cetinski / Ljubljana-Adriatic or Cetina | C | 4160±75 | 2877-2647 |
| Spila (Nakovana) | z-3481 | drveni ugljen / charcoal | ljubljansko-jadranski ili cetinski / Ljubljana-Adriatic or Cetina | C | 3485±90 | 1917-1691 |
| Vela spila | UB-33107 | životinjska kost / animal bone | ljubljansko-jadranski / Ljubljana-Adriatic | A | 3940±57 | 2560-2346 |
| Velika gruda | UZ-2696/ETH-7685 | drveni ugljen / charcoal (*leguminosae*) | ljubljansko-jadranski / Ljubljana-Adriatic | A | 4355±65 | 3086-2900 |
| Velika gruda | UZ-2692/ETH-7631 | drveni ugljen / charcoal (*picea*) | ljubljansko-jadranski / Ljubljana-Adriatic | B | 4335±80 | 3090-2886 |
| Velika gruda | UZ-2693/ETH-7579 | drveni ugljen/ charcoal (*acer, pomoidae, leguminosae*) | ljubljansko-jadranski ili cetinski / Ljubljana-Adriatic or Cetina | C | 4155±65 | 2874-2639 |
| Zagomilje 2 | Beta-260022 | ljudska kost / human bone | cetinski / Cetina (*terminus ante quem*) | C | 3400±40 | 1744-1643 |

*A kratkoživući uzorak iz sigurnoga konteksta, B dugoživući uzorak iz sigurnoga konteksta, C uzorak iz nesigurnoga konteksta
**A short-life sample from safe context, B long-life sample from safe context, C sample from uncertain context*

Tab. 1 Radiokarbonski datumi za lončariju ljubljansko-jadranskoga i cetinskog stila
*Tab. 1 Radiocarbon dates for Ljubljana-Adriatic and Cetina style pottery*




Sl. 14 Radiokarbonski datumi za ljubljansko-jadranski i cetinski lončarski stil (distribucije gustoće vjerojatnosti i kalibrirani rasponi od 1 SD)

*Fig. 14 Radiocarbon dates for Ljubljana-Adriatic and Cetina pottery styles (probability density distributions and calibrated 1SD ranges)*

**Grapčeva spilja,** na raspolaganju su dva radiokarbonska datuma: Beta-103478, 4190±50 BP, kalibrirani raspon od 1 SD: 2882–2678 pr. Kr., uzorak drvenoga ugljena iz SJ 1220 pri sredini faze 4 i Beta-103477, 3880±120 BP, kalibrirani raspon od 1 SD: 2551–2144 pr. Kr., uzorak drvenoga ugljena iz SJ 1200 pri vrhu faze 4. Oba konteksta (SJ 1220 i SJ 1200) sadržavala su poneki ljubljansko-jadranski i grubo žljebljeni ulomak, dok su ulomci bliski cetinskome stilu prikupljeni iz stratigrafski mlađih, ali i iz starijih konteksta (Forenbaher, Kaiser 2008: 62–64, Tab. 1). Takva situacija upozorava na moguću poremećenost te se stoga radiokarbonski datumi ne mogu pozdano povezati samo s jednim od spomenutih stilova, već se mogu odnositi na bilo koji od njih.

**Grotta dei Ciclami,** R-1037, 4160±50 BP, kalibrirani raspon od 1 SD: 2874–2674 pr. Kr., uzorak iz sloja 4 koji je sadržavao veći broj karakterističnih ulomaka lončarije ljubljansko-jadranskoga i cetinskog stila (Gilli, Montagnari Kokelj 1993: 157).

**Grotta del Mitreo,** na raspolaganju su dva radiokarbonska datuma: R-903a, 3720±50 BP, kalibrirani raspon od 1 SD: 2198–2036 pr. Kr., uzorak drvenoga ugljena iz stratigrafski starijega sloja 5 koji je sadržavao veći broj ulomaka ljubljansko-jadranske lončarije, dio karakteristično ukrašenoga cetinskog peharića i još nekoliko ulomaka bliskih cetinskom stilu i R-902, 3820±50 BP, kalibrirani raspon od 1 SD: 2391–2150 pr. Kr., uzorak drvenoga ugljena iz stratigrafski mlađega sloja 4 koji je sadržavao ulomke neukrašenoga posuđa oblikom donekle nalik na cetinsku lončariju (Montagnari Kokelj, Crismani 1997: 13). Inverzija datuma u odnosu na stratigrafski slijed upozorava na nesigurnost konteksta.

**Gruda Boljevića,** KIA-19424, 4440±35 BP, kalibrirani raspon od 1 SD: 3321–3018 pr. Kr., uzorak ljudske kosti iz inhumacije u jami pri sredini gomile (Guštin, Preložnik 2015: 31–32). Uz ostatke pokojnika nije bilo grobnih priloga. U plaštu gomile nad središnjim grobom pronađene su tri posude ukrašene na karakterističan ljubljansko-jadranski način. Pozivajući se na neporemećenu stratigrafiju, jedan od voditelja iskopavanja smatra da su te posude bile odložene u sklopu pogrebnoga obreda (Baković, Govedarica 2009: 13, 15). Drugi dovode u pitanje pouzdanost stratigrafije te pripisuju spomenute tri posude hipotetskome sekundarnom grobu, iako priznju da nema traga ostacima drugoga pokojnika (Guštin, Preložnik 2015: 21, 23–25). Radiokarbonski datum smatraju previsokim, navodeći bez podrobnijega obrazloženja efekt rezervoara kao mogući razlog (Guštin, Preložnik 2015: 17).

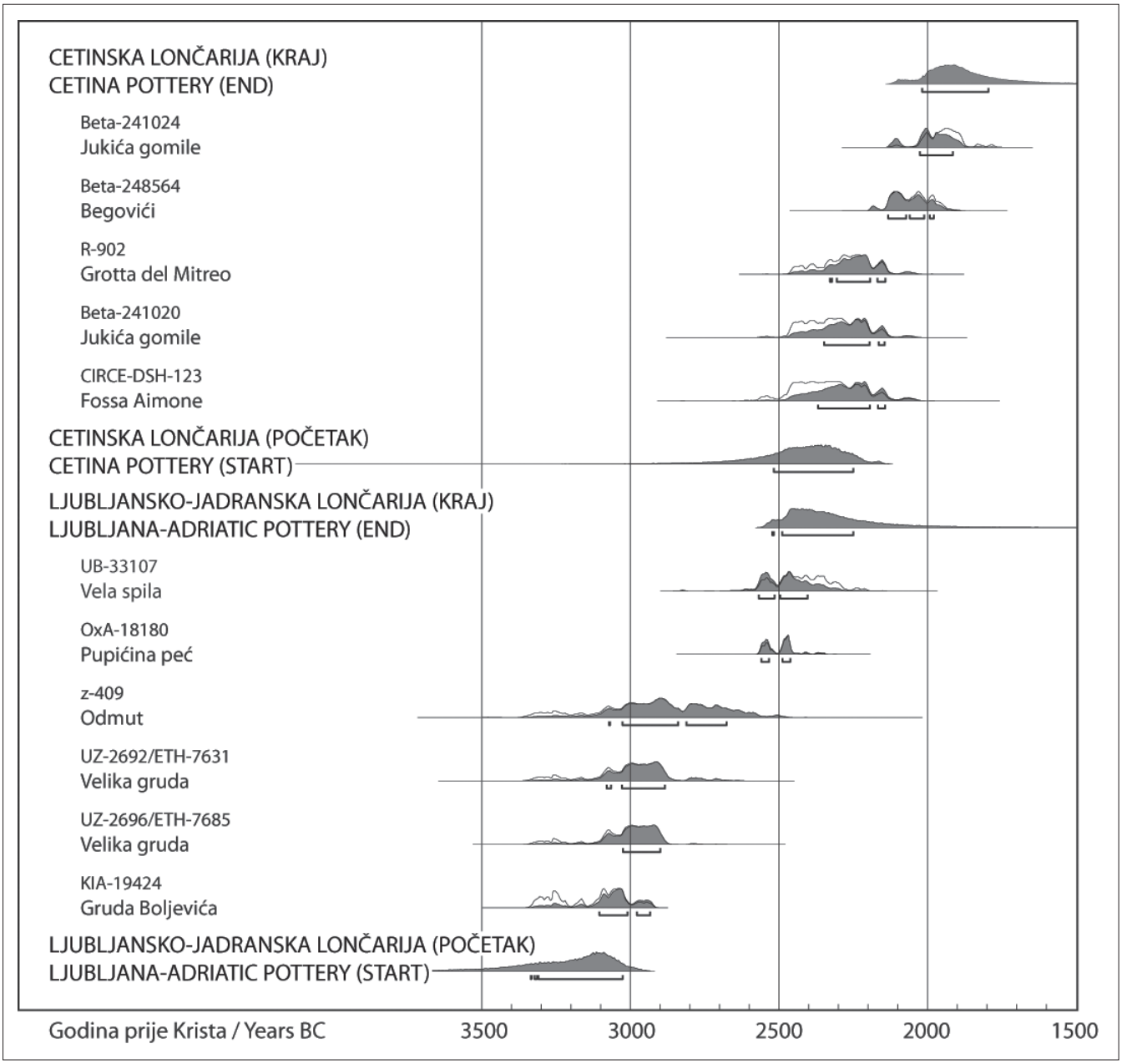
Efekt rezervoara utječe na točnost radiokarbonskih datuma dobivenih datiranjem uzoraka vodenih životinja i biljaka. Prividna starost takvih uzoraka može biti nekoliko stoljeća veća od njihove stvarne starosti (Jull et al. 2013). Kroz prehrambeni lanac, efekt rezervora može se prenijeti i na stanovnike kopna. Ako se prehrana neke ljudske zajednice temelji na morskim ili slatkovodnim izvorima hrane, uzorak ljudske kosti dati će previsok radiokarbonski datum (Philippsen 2013). Zasad, međutim, nema nikakvih naznaka da je iskorištavaje hrane iz mora, jezera ili rijeka u trećem tisućljeću prije Krista igralo važnu ulogu u prehrani stanovnika istočnojadranske regije. Gruda Boljevića udaljena je tride-

**Grotta del Mitreo** yielded two radiocarbon dates: R-903a, 3720±50 BP, calibrated 1SD range: 2198–2036 BC, a charcoal sample from an underlying Layer 5, which contained numerous Ljubljana-Adriatic potsherds, a fragment of a characteristic Cetina beaker, and several other fragments akin to the Cetina style, and R-902, 3820±50 BP, calibrated 1SD range: 2391–2150 BC, a charcoal sample from the overlying Layer 4, which contained fragments of plain vessels whose shapes resemble Cetina pottery (Montagnari Kokelj, Crismani 1997: 13). The inversion of radiocarbon dates relative to the stratigraphic sequence signals uncertain contexts.

**Gruda Boljevića,** KIA-19424, 4440±35 BP, calibrated 1SD range: 3321–3018 BC, a human bone sample from an inhumation burial in a pit located near the center of the mound (Guštin, Preložnik 2015: 31–32). The burial itself did not contain any grave goods. Three vessels were found in the mantle above the central burial, all of them decorated in a characteristic Ljubljana-Adriatic manner. Invoking undisturbed stratigraphy, one of the excavators deems that those vessels were deposited during the funeral (Baković, Govedarica 2009: 13, 15). Others doubt the soundness of stratigraphy and attribute the three vessels to a hypothetical second burial, while noting the absence of a second body (Guštin, Preložnik 2015: 21, 23–25). They regard the radiocarbon date as too early, explaining it away with the reservoir effect without any further discussion (Guštin, Preložnik 2015: 17).

The reservoir effect influences the accuracy of radiocarbon dates when aquatic animals or plants are sampled for dating. The apparent age of such samples may be several centuries too old (Jull et al. 2013). The reservoir effect may be transferred to land dwellers through the food chain. If a community bases its diet on marine or fresh water food resources, a human bone sample will yield an anomalously old date (Philippsen 2013). There are no indications, however, that the exploitation of marine, riverine, or lake resources played a major role in the diet of the eastern Adriatic communities during the third millennium BC. Gruda Boljevića is some thirty kilometers distant from the Adriatic coast, about ten kilometers from Lake Shkodër, and about two kilometers from the Morača River; its location does not suggest a diet based on fish or mollusks. The radiocarbon date from Gruda Boljevića therefore should not be dismissed out of hand, just because it seems to be surprisingly early.

**Jukića Gomile** yielded two radiocarbon dates, both from Mound 1: Beta-241024: 3590±40 BP, calibrated 1SD range: 2014–1892 BC, a sample of 'soot remains' from Burial 3 located near the center of the mound, and Beta-241020, 3850±60 bp, calibrated 1SD range: 2454–2209 BC, a sample of 'soot remains' from the mantle. The central stone cist of Burial 3 contained the remains of at least two inhumations and one cremation, hinting at multiple episodes of use, as well as the fragments of at least three vessels shaped and decorated in a characteristic Cetina manner. It remains unclear which of the burial episodes was dated by radiocarbon, and whether the Cetina pottery belonged to that




Sl. 15 Modelirani datumi za početak i kraj ljubljansko-jadranskoga i cetinskog stila (distribucije gustoće vjerojatnosti i kalibrirani rasponi od 1 SD)

*Fig. 15 Modeled start and end dates for Ljubljana-Adriatic and Cetina styles (probability density distributions and calibrated 1SD ranges)*

setak kilometara od obale Jadrana, desetak kilometara od Skadarskoga jezera i oko dva kilometra od rjeke Morače, pa smještaj nalazišta ne sugerira prehranu temeljenu na ribi ili školjkama. Stoga radiokarbonski datum iz Grude Boljevića ne treba olako odbaciti samo zato jer je iznenađujuće visok.

**Jukića gomile,** na raspolaganju su dva radiokarbonska datuma iz gomile 1: Beta-241024: 3590±40 bp, kalibrirani raspon od 1 SD: 2014–1892 pr. Kr., uzorak 'ostataka gara' iz groba 3 smještenoga pri sredini gomile i Beta-241020, 3850±60 BP, kalibrirani raspon od 1 SD: 2454–2209 pr. Kr., uzorak 'ostataka gara' iz plašta gomile. Središnji grob 3 u sanduku od kamenih ploča sadržavao je ostatke barem dvaju inhumiranih i jednoga spaljenog pokojnika te dijelove najmanje tri posude oblikovane i ukrašene na karakterističan cetinski episode. Likewise, the association of the other radiocarbon-dated sample with Cetina pottery is possible, but by no means certain (Olujić 2011: 661; 2012: 64, 68).

**Odmut,** Z-409, 2330±120 BP, calibrated 1SD range: 3089–2674 BC, a charcoal sample collected near the top of Stratum VI or Layer 3 (Srdoč et al. 1977: 473; Breunig 1987: 104). The same radiocarbon date was reported slightly differently in two other publications, first as z-37, 2335±90 bp (Marković 1977: 11), and then as z-409, 2335±90 bp 'from Stratum IV' [*sic!*] (Marković 1985: 44). Most of the characteristic Ljubljana-Adriatic potsherds were recovered from the upper part of Stratum VI or Layer 3.

**Pupićina Peć,** OxA-18180, 3963±27 BP, calibrated 1SD range: 2561–2464 BC, a charcoal sample of a willow tree re-

način. Budući da je bio više puta korišten, pitanje je na koju se epizodu ukapanja odnosi radiokarbonski datum iz groba i pripada li cetinska lončarija upravo toj epizodi. Povezanost drugoga datiranog uzorka s cetinskom lončarijom također je moguća, no nipošto nije sigurna (Olujić 2011: 661; 2012: 64, 68).

**Odmut,** Z-409, 2330±120 BC, kalibrirani raspon od 1 SD: 3089–2674 pr. Kr., uzorak drvenoga ugljena prikupljen pri vrhu stratuma VI, odnosno sloja 3 (Srdoč et al. 1977: 473; Breunig 1987: 104). Isti taj datum je objavljen donekle različito na još dva mjesta, najprije kao z-37, 2335±90 BC (Marković 1977: 11), a zatim kao z-409, 2335±90 BC 'iz stratuma Odmut IV' [*sic!*] (Marković 1985: 44). Većina karakterističnih ulomaka ljubljansko-jadranskoga stila prikupljena je upravo iz gornjega dijela stratuma VI, odnosno sloja 3.

**Pupićina peć,** OxA-18180, 3963±27 BP, kalibrirani raspon od 1 SD: 2561–2464 pr. Kr., uzorak pougljenjenoga drva vrbe prikupljen iz konteksta 605 faze 3 koji je sadržavao rijetke ljubljansko-jadranske i grubo žljebljene ulomke, ali i tipološki stariju i mlađu lončariju (Hulina *et* al. 2012: 141, 158–164).

**Spila (Nakovana),** na raspolaganju su tri radiokarbonska datuma iz sektora 3: z-3478, 4185±95 BP, kalibrirani raspon od 1 SD: 2892–2633 pr. Kr., uzorak drvenoga ugljena iz najstarijega konteksta faze 5a (SJ 1013), zatim z-3480, 4160±75 bp, kalibrirani raspon od 1 SD: 2877–2647 pr. Kr., uzorak drvenoga ugljena iz najmlađega konteksta faze 5a (SJ 1010)[8] i z-3481, 3485±90 BP, kalibrirani raspon od 1 SD: 1917–1691 pr. Kr., uzorak drvenoga ugljena iz konteksta SJ 1002 stratigrafski mlađe faze 5b. Sektor 3 nalazi se u tijesnom prolazu koji povezuje ulaz s unutrašnjom dvoranom špilje. Prijelaz između stratigrafskih jedinica na tome prostoru je često bio nejasan. U takvim slučajevima iskopavalo se proizvoljnim otkopnim slojevima, što je neizbježno dovelo do miješanja nalaza iz susjednih stratigrafskih konteksta. Kroz čitav sloj pripisan fazi 5 razasuto je desetak karakterističnih ljubljansko-jadranskih i cetinskih ulomaka, kao i pet ulomaka ukrašenih grubim žljebljenjem i utiskivanjem. U donjem dijelu spomenutoga sloja (faza 5a) prevladava neukrašena nakovanska lončarija, dok u njegovome gornjem dijelu (faza 5b) prevladava neukrašena lončarija trećega tisućljeća prije Krista uz koju se pojavljuju i kasniji brončanodobni ulomci (Forenbaher, Perhoč 2015: 42, tab. 2).

**Vela spila (Korčula),** na raspolaganju su dva radiokarbonska datuma iz sonde 1 (istraživanja 2010.–2013.): UB-35652, 4491±50 BP, kalibrirani raspon od 1 SD: 3336–3099 pr. Kr., uzorak kosti domaće životinje iz najmlađega konteksta faze 3 (SJ 7) obilježene ljubljansko-jadranskom lončarijom i UB-33107, 3940±57 BP, kalibrirani raspon od 1 SD: 2560–2346 pr. Kr., uzorak kosti domaće životinje iz stratigrafski starijeg konteksta iste faze (SJ 10). Prvi od ova dva datuma neočekivano je visok: istovremen je s datumima za nakovansku lončariju iz Vele spile i iz nekoliko drugih nalazišta (Forenbaher 2000). Povrh toga, to je jedini u nizu od šest datuma iz sonde 1 koji odskače od stratigrafskoga

8 Kontekst SJ 1010 bio je na temelju preliminarne analize skupa nalaza lončarije pripisan fazi 5b (Forenbaher, Perhoč 2015: tab. 2), no naknadno je na temelju detaljne analize pripisan fazi 5a.

covered from Context 605 of Phase 3, which contained rare Ljubljana-Adriatic and coarse incised fragments, but also some typologically older and younger pottery finds (Hulina et al. 2012: 141, 158–164).

**Spila (Nakovana)** yielded three radiocarbon dates, all from Sector 3: z-3478, 4185±95 BP, calibrated 1SD range: 2892–2633 BC, a charcoal sample from the earliest context (SU 1013) of Phase 5a; z-3480, 4160±75 BP, calibrated 1SD range: 2877–2647 BC, a charcoal sample from the latest context (SU 1010)[8] of Phase 5a; and z-3481, 3485±90 BP, calibrated 1SD range: 1917–1691 BC, a charcoal sample from SU 1002 of the overlying Phase 5b. Sector 3 is located in the narrow passage that connects the cave entrance with the interior of the cave. In that area, the transition between the stratigraphic units was not always clear. In such circumstances, excavation proceeded in arbitrary levels, which inevitably resulted in the mixing of the finds from the neighboring stratigraphic contexts. About a dozen characteristic Ljubljana-Adriatic and Cetina potsherds, as well as five coarse incised sherds, were scattered throughout the layer attributed to Phase 5. Plain Nakovana style pottery dominates in the lower part of that layer (Phase 5a), while its upper part (Phase 5b) is dominated by the plain pottery of the third millennium BC, which is accompanied by occasional later Bronze Age potsherds (Forenbaher, Perhoč 2015: 42, Tab. 2).

**Vela Cave (Korčula)** yielded two radiocarbon dates from Trench 1 (excavation 2010–2013): UB-35652, 4491±50 BP, calibrated 1 SD range: 3336–3099 BC, a domestic animal bone sample from SU 7, the youngest context of Phase 3, marked by Ljubljana-Adriatic pottery; and UB-33107, 3940±57 BP, calibrated 1 SD range: 2560–2346 BC, a domestic animal bone sample from SU 10, an underlying context of the same phase. The first of these two dates is unexpectedly early: it corresponds to the dates for the Nakovana pottery from the Vela Cave and several other sites (Forenbaher 2000). Furthermore, it is the only date in a series of six dates from Trench 1 that is out of stratigraphic sequence.[9] Presumably, a residual animal bone from an earlier context had been selected for radiocarbon dating in this particular case. Therefore, the UB-35652 date will be excluded from further discussion and modeling.

**Velika Gruda** yielded three radiocarbon dates: UZ-2692/ETH-7631, 4335±80 BP, calibrated 1SD range: 3090–2886 BC, a fir wood sample from the central burial; UZ-2696/ETH-7685, 4355±65 bp, calibrated 1SD range: 3086–2900 BC, a charred pulse plant sample from the top part of the primary mound mantle; and UZ-2693/ETH-7579, 4155±65 BP, calibrated 1SD range: 2874–2639 BC, an aggregate charcoal sample (fruit seeds, pulses, maple tree) from two charcoal concentrations found in a pit that was sunk into the mantle of the primary mound above the central burial (Primas 1996: 48–52). The central stone cist contained an inhumation bu-

8 Based on the preliminary analysis of the pottery assemblage, SU 1010 initially was attributed to Phase 5b (Forenbaher, Perhoč 2015: Tab. 2); following the detailed analysis, it was reattributed to Phase 5a.

9 The remaining radiocarbon dates from the most recent excavations of the Vela Cave will be published elsewhere.

slijeda.[9] Pretpostavljamo da je u ovom slučaju za datiranje odabrana životinjska kost koja je zaostala iz nekoga ranijeg konteksta. Zbog toga ćemo datum UB-35652 izostaviti iz daljnjih rasprava i modeliranja.

**Velika gruda,** na raspolaganju su tri radiokarbonska datuma: UZ-2692/ETH-7631, 4335±80 BP, kalibrirani raspon od 1 SD: 3090–2886 pr. Kr., uzorak drva smreke iz središnjega groba, zatim UZ-2696/ETH-7685, 4355±65 BP, kalibrirani raspon od 1 SD: 3086–2900 pr. Kr., uzorak pougljenjene mahunarke iz vršnoga dijela plašta primarne gomile i UZ-2693/ETH-7579, 4155±65 BP, kalibrirani raspon od 1 SD: 2874–2639 pr. Kr., kompozitni uzorak drvenoga ugljena (jezgričavo voće, mahunarke, javor) iz dvije koncentracije ugljena koje su zatečene u jami ukopanoj u plašt primarne gomile nad središnjim grobom (Primas 1996: 48–52). Središnji grob u sanduku od kamenih ploča sadržavao je, uz inhumirane ostatke pokojnika, karakterističnu ljubljansko-jadransku pliticu. Iz gornjega, naknadno dodanoga dijela plašta sekundarne gomile, prikupljeno je mnoštvo sitnih, istrošenih ulomaka lončarije među kojima je i nekoliko ulomaka ukrašenih na način blizak cetinskome stilu.

Voditeljica iskopavanja Margarita Primas smatra prva dva datuma previsokim, prvi možda možda zbog staroga drva, a drugi zbog mogućnosti da je stari ugljen unesen u plašt primarne gomile zajedno sa zemljom. Pouzdaje se u treći datum iz jame iskopane nad grobom, iako dozvoljava mogućnost da je ta jama, ako ne iskopana, onda barem dosegnuta kasnijim remećenjem (Primas 1996: 48–52, 72). Međutim, taj treći datum (UZ-2693/ETH-7579) dvostruko je nepouzdan, kako zbog kompozitnoga sastava uzorka, tako i zbog nesigurnoga konteksta. Budući da nije jasno je li jama iskopana neposredno nakon primarnoga pokopa ili tijekom neke kasnije intervencije, ne znamo treba li taj datum dovesti u vezu s ljubljansko-jadranskom ili možda s cetinskom lončarijom. U usporedbi s tim, konteksti prva dva datuma (UZ-2692/ETH-7631 i UZ-2696/ETH-7685) su čvršći, uzorak iz plašta primarne gomile je kratkoživući, a i sama činjenica da su datumi statistički identični sugerira da se ne radi o slučajnosti, nego o pouzdanom datiraju središnjega groba. Stoga ih ne treba olako odbaciti samo zato jer se čine visokim.

**Zagomilje 2,** Beta-260022, 3400±40 BP, kalibrirani raspon od 1 SD: 1744–1643 pre. Kr., uzorak ljudske kosti iz inhumacije ukopane bez grobnih priloga u naseobinski sloj (Mucić, Kovačević Bokarica 2011: 139). Među lončarijom prikupljenom iz naseobinskoga konteksta ima ulomaka ukrašenih na način blizak cetinskome stilu. Prema tome, radiokarbonski datum iz groba može poslužiti kao *terminus ante quem* za cetinske nalaze iz naselja.

Na temelju izloženoga, uz ljubljansko-jadransku lončariju može se s izvjesnom mjerom opreza vezati šest radiokarbonskih datuma, uz cetinsku pet plus jedan kao *treminus ante quem*, dok se preostalih osam datuma može odnositi na bilo koji od ta dva lončarska stila. Mali ukupni broj datuma, kao i dvojbeni konteksti iz kojih potječe većina uzoraka, sprečavaju precizno datiranje spomenutih

9 Ostali radiokarbonski datumi iz najnovijih istraživnja Vele spile bit će objavljeni na drugome mjestu.

rial, accompanied by a characteristic Ljubljana-Adriatic dish. Among numerous small and weathered potsherds that were recovered from the upper part of the mantle (a secondary enlargement of the primary mound) there are several decorated potsherds akin to the Cetina style.

The excavator Margarita Primas regarded the first two dates as too early, the first one maybe due to the old wood effect, the second one due to the possibility that old charcoal was introduced into the mantle of the primary mound together with the soil. She relied on the third date, the one from the pit above the burial, while admitting that this pit may have been disturbed, if not excavated, at some later point in time (Primas 1996: 48–52, 72). The date in question (UZ-2693/ETH-7579) is doubly unreliable, however, due to its aggregate composition, and its uncertain context. Since it is not clear whether the pit was excavated immediately after the primary burial or during some later intervention, one cannot decide whether the sample dates Ljubljana-Adriatic or Cetina pottery. Compared to this, contexts of the first two radiocarbon dates (UZ-2692/ETH-7631 and UZ-2696/ETH-7685) are sounder, the date from the primary mound mantle comes from a short-life sample, and the very fact that both of them are statistically identical suggests that they are reliable, rather than a product of chance. They should not be easily dismissed just because they seem to be too early.

**Zagomilje 2,** Beta-260022, 3400±40 BP, calibrated 1SD range: 1744–1643 BC, a human bone sample from an inhumation burial without any grave goods, cut into settlement deposits (Mucić, Kovačević Bokarica 2011: 139). Among the pottery fragments that were recovered from the settlement there are decorated potsherds akin to the Cetina style. The radiocarbon date from the burial may serve as a *terminus ante quem* for the pottery finds from the settlement.

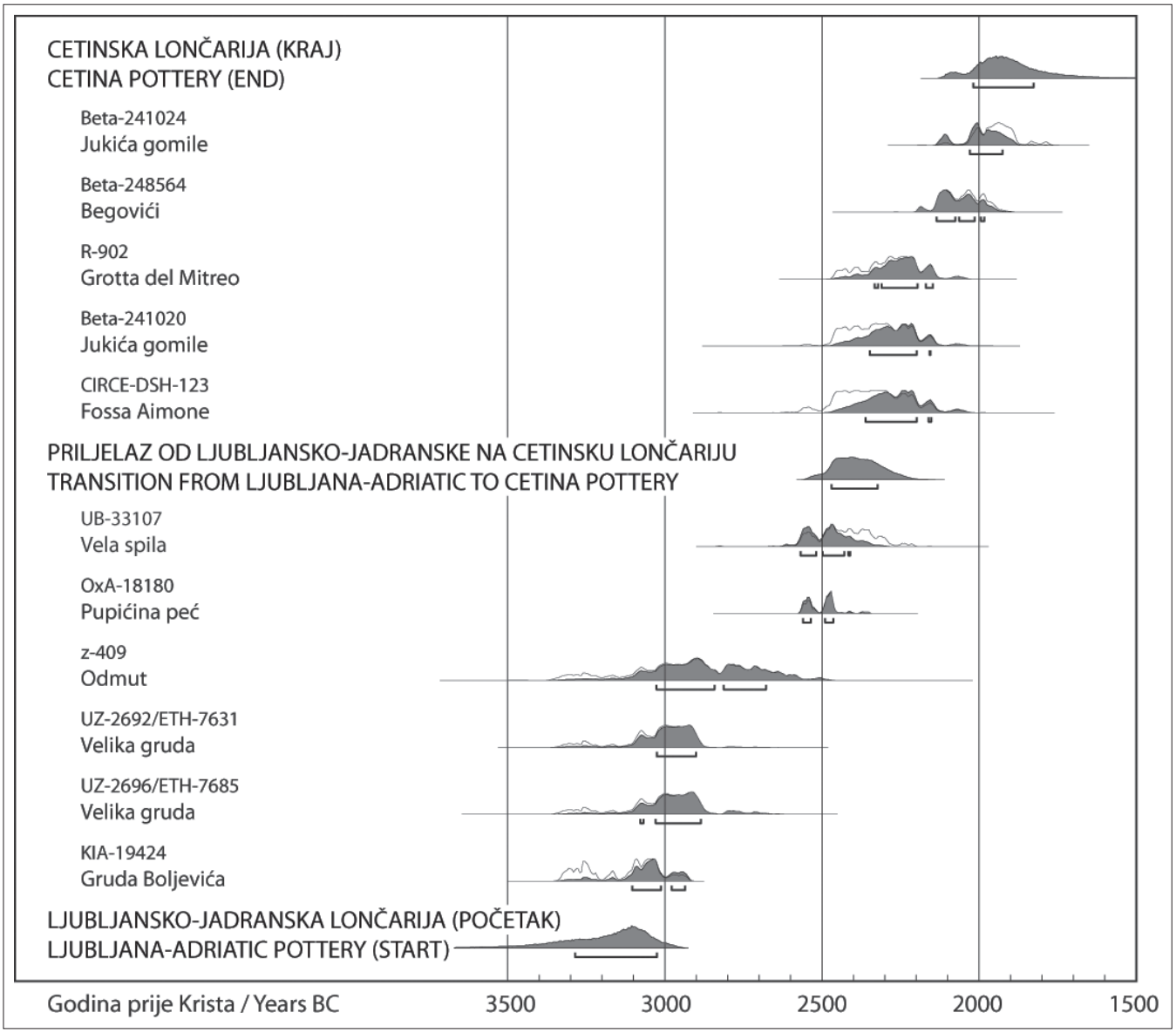
Based on the above, and with appropriate caution, six radiocarbon dates may be associated with Ljubljana-Adriatic pottery, five may be associated with Cetina pottery (plus one as *terminus ante quem*), while the remaining eight dates may be associated with either one of these styles. The small total number of dates and dubious contexts from which most of the samples were recovered prevent the accurate dating of these pottery styles. If one would stick firmly with the stern criteria of 'chronometric hygiene' (Spriggs 1989: 590–605; Taché, Hart 2013: 363–365), one should discard them all. In spite of that, when taken at their face value, these radiocarbon dates provide a rather convincing general chronological outline (Fig. 14). The dates for the Ljubljana-Adriatic style begin just before the year 3000 BC and cover the first half of the third millennium, while the dates for the Cetina style cover the second half of the third millennium and end soon after the year 2000 BC. Accordingly, the dates for the contexts containing a mixture of Ljubljana-Adriatic and Cetina pottery cover almost the entire third millennium BC, and maybe also the first centuries of the second millennium BC if one includes the date from Phase 5b of Spila (Nakovana), which contained some later Bronze Age

lončarskih stilova. Kada bismo se dosljedno držali strogih kriterija 'kronometrijske higijene' (Spriggs 1989: 590–605; Taché, Hart 2013: 363–365), morali bismo ih sve odbaciti. Unatoč tome, radiokarbonski datumi uzeti zdravo za gotovo pružaju prilično uvjerljiv općenit kronološki obris (sl. 14). Datumi za ljubljansko-jadranski stil počinju malo prije godine 3000. pr. Kr. i pokrivaju prvu polovicu trećega tisućljeća, dok datumi za cetinski stil pokrivaju drugu polovicu trećega tisućljeća i završavaju ubrzo nakon godine 2000. pr. Kr. Sukladno tome, datumi za kontekste u kojima se miješaju ljubljansko-jadranska i cetinska lončarija pokrivaju skoro cijelo treće tisućljeće prije Krista, a možda i prva stoljeća drugoga tisućljeća, ako među njih ubrojimo datum iz faze 5b nakovanske Spile koja, uz ljubljansko-jadranske i cetinske ulomke, sadrži i kasniju bronČanodobnu lončariju. Napokon, datum iz groba u Zagomilju koji se na tom nalazištu može uzeti kao *terminus ante quem* za cetinsku lončariju pada oko godine 1700. pr. Kr. i najmlađi je od svih datuma.

pottery in addition to Ljubljana-Adriatic and Cetina sherds. Finally, the date from the Zagomilje burial, which may serve as *terminus ante quem* for the Cetina pottery at that site, falls around the year 1700 BC and is the youngest of all dates.

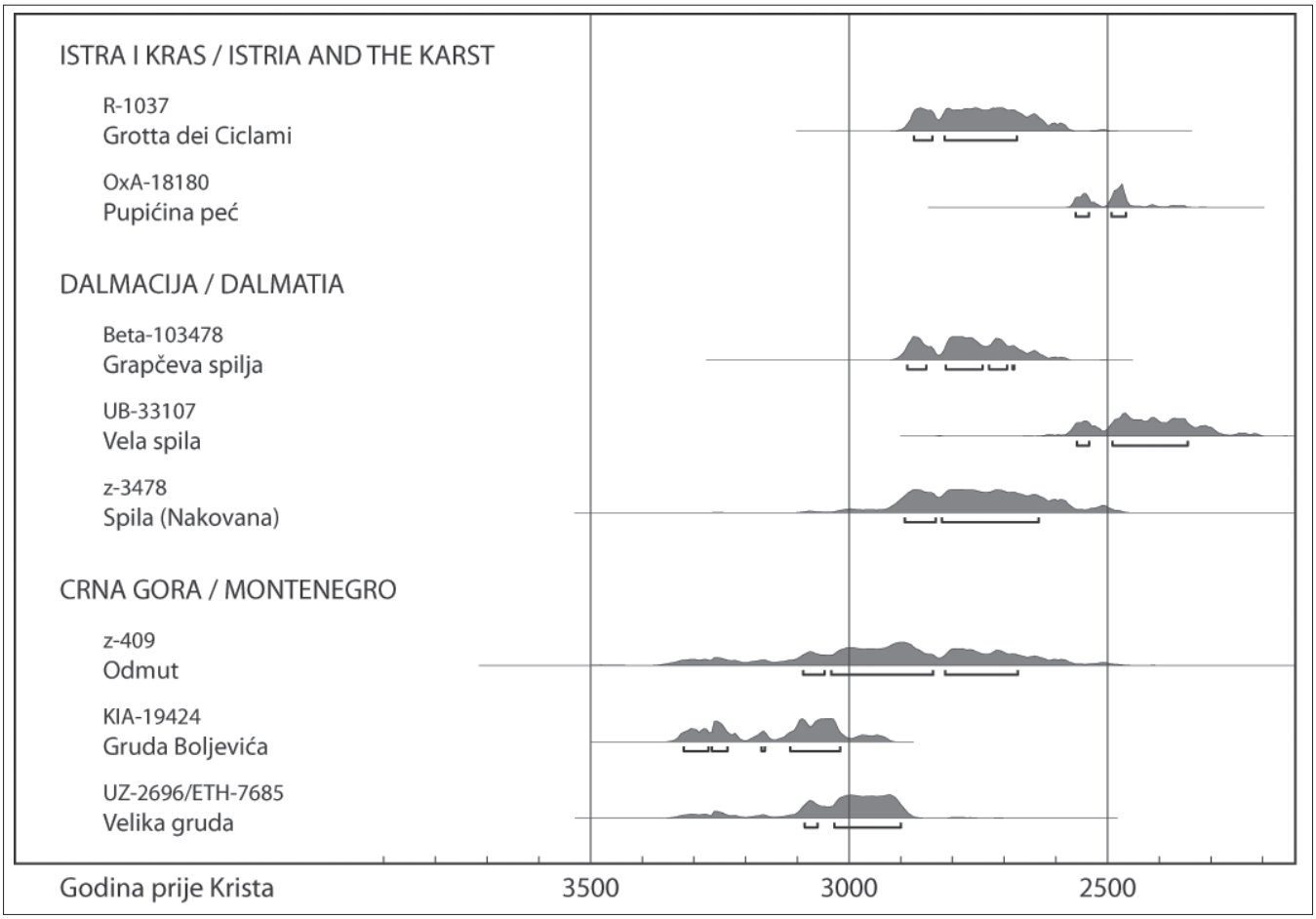
The Bayesian statistical modeling of start and end dates for each style was carried out by the OxCal 4.3 computer program (Bronk Ramsey 2009), first by applying the 'independent phases model'. That model assumes that each group of dates for a specific pottery style is independent, and estimates the start and the end for each style separately (Fig. 15). With a 68% probability, the modeled start of the Ljubljana-Adriatic style would be between the years of 3337 and 3027 BC, while its end would be between the years of 2525 and 2253 BC; the modeled start of the Cetina style would be between 2520 and 2255 BC, and its end between 2021 and 1794 BC.

Since radiocarbon dates do not suggest a major tem-




Sl. 16 Modelirani datumi za prijelaz od ljubljansko-jadranskoga na cetinski stil (distribucije gustoće vjerojatnosti i kalibrirani rasponi od 1 SD)

*Fig. 16 Modeled dates for the transition from the Ljubljana-Adriatic to the Cetina style (probability density distributions and calibrated 1SD ranges)*




Sl. 17 Radiokarbonski datumi za ljubljansko-jadranski stil (distribucije gustoće vjerojatnosti i kalibrirani rasponi od 1 SD) grupirani po regijama. Uključeni su i datumi iz miješanih (ljubljansko-jadranskih i cetinskih) konteksta Grapčeve spilje i nakovanske Spile. Prikazan je samo najraniji datum sa svakoga nalazišta

*Fig. 17 Radiocarbon dates for the Ljubljana-Adriatic style (probability density distributions and calibrated 1SD ranges) grouped by region. Dates from mixed (Ljubljana-Adriatic and Cetina) contexts of the Grapčeva and Nakovana caves have been included. Only the earliest date from each site is shown*

Bayesovsko statističko modeliranje datuma početka i kraja svakog pojedinoga stila provedeno je programom OxCal 4.3 (Bronk Ramsey 2009), najprije koristeći 'model nezavisnih faza'. Taj model pretpostavlja da je svaka od skupina datuma za određeni lončarski stil posve nezavisna te procjenjuje vrijeme početka i kraja za svaki stil zasebno (sl. 15). S vjerojatnošću od 68%, modelirani početak ljubljansko-jadranskoga stila bio bi između godine 3337. i 3027. pr. Kr., a kraj između godine 2525. i 2253. pr. Kr. Modelirani početak cetinskoga stila bio bi između 2520. i 2255. pr. Kr., a kraj između 2021. i 1794. pr. Kr.

Budući da radiokarbonski datumi ne ukazuju na znatnije vremensko preklapanje stilova, Bayesovsko statističko modeliranje je ponovljeno koristeći 'model nastavljajućih faza'. Taj model pretpostavlja da skupina datuma za jedan lončarski stil neposredno prethodi skupini datuma za drugi lončarski stil, redosljedom koji je određen na temelju arheološke građe, te procjenjuje vrijeme prijelaska od jednoga stila na drugi (sl. 16). S vjerojatnošću od 68%, modelirani prijelaz od ljubljansko-jadranskoga na cetinski stil odigrao bi se između godine 2470. i 2324. pr. Kr.

poral overlap between the two styles, Bayesian modeling was repeated by applying the 'sequential phases model'. That model assumes that the group of dates for one pottery style immediately precedes the group of dates for the other pottery style, in a chronological order established by archaeological evidence, and estimates the time of transition from one style to the other (Fig. 16). With a 68% probability, the modeled transition from the Ljubljana-Adriatic style to the Cetina style would have taken place between the years of 2470 and 2324 BC.

The Montenegrin burial mounds yielded the earliest radiocarbon dates for the Ljubljana-Adriatic style. Farther up the Adriatic towards the northwest, the earliest available dates are at least two centuries younger (Fig. 17). If the apparent temporal priority of the southern Adriatic sites gains further support from future radiocarbon dates, this would have major consequences for the interpretation of the origin of the Ljubljana-Adriatic pottery style and other important changes that accompanied its appearance. For now, however, it would be irresponsible to draw far-reaching conclusions based on a few uncertain dates.

Najraniji datumi za ljubljansko-jadranski stil su oni iz crnogorskih grobnih gomila. Dalje uz Jadran prema sjeverozapadu, najraniji raspoloživi datumi su barem dva stoljeća mlađi (sl. 17). Ukoliko bi daljnji radiokarbonski datumi potvrdili vremensku predost južnojadranskih nalazišta, to bi znatno utjecalo na interpretaciju porijekla ne samo ljubljansko-jadranskoga stila, nego i drugih značajnih promjena koje nastupaju usporedo s njegovom pojavom, no zasad bi bilo neodgovorno izvlačiti dalekosežne zaključke na temelju nekoliko nesigurnih datuma.

**Zaključno o datiranju lončarskih stilova**

sva tri načina datiranja ukazuju da ljubljansko-jadranski stil prethodi cetinskom stilu, dok tipološka obilježja asociranih metalnih predmeta i radiokarbonski datumi okvirno smještaju oba stila u 3. tisućljeće prije Krista. Prema unakrsnom datiranju metalnih nalaza, ljubljansko-jadranski stil pripadao bi drugoj četvrtini trećega tisućljeća, dok bi prema radiokarbonskim datumima pokrivao čitavu prvu polovicu trećega tisućljeća prije Krista. Na slično vrijeme ukazuju dendrokronološke analize provedene na Ljubljanskome barju prema kojima se sojeničarsko naselje Parte-Iščica napušta oko godine 2700. pr. Kr. (Velušček, Čufar 2014: tab. 2). S toga nalazišta pripisanog 'vučedolskoj kulturi' prikupljeno je nekoliko ulomaka lončarije bliske ljubljansko-jadranskome stilu (Velušček et al. 2000: T. 3: 11; 6: 3). Nažalost, ljubljansko-jadranski stil na Barju još uvijek nije čvrsto datiran. Čini se da na tom prostoru prethodi vinkovačko-somogyvárskom stilu, no međusobni vremenski odnos tih dvaju stilova zasad je nejasan (Velušček 2014: 640–641).

Ako prihvatimo radiokarbonski datum iz Grude Boljevića, ljubljansko-jadranski stil počinjao bi na južnome Jadranu nešto prije godine 3000. pr. Kr. Kalibrirani raspon od 1 SD za taj datum razvučen je preko cijele posljednje trećine četvrtoga tisućljeća zbog zaravnjenosti kalibracijske krivulje (Reimer et al. 2013), no teško je vjerovati da bi ljubljansko-jadranski stil mogao počinjati znatno prije godine 3000. pr. Kr. jer oko toga vremena padaju najmlađi datumi za nakovansku lončariju (Forenbaher 2000: 380, tab. 2). Trajanje ljubljansko-jadranskoga stila otprilike do godine 2400. pr. Kr. oslanja se na samo dva kasna datuma. Jedan od njih (onaj iz Pupićine peći) datira kontekst koji je, uz ljubljansko-jadranske, sadržavao i mlađe nalaze. Osim toga, s niza nalazišta Ljubljanskoga barja obilježenih lončarijom vinkovačko-somogyvárskoga stila i dendrokronološki datiranih oko sredine trećega tisućljeća prije Krista (Parte, Založnica, Črni graben i Špica), prikupljen je tek poneki rijetki ljubljansko-jadranski nalaz. Zbog toga zasad treba s oprezom prihvatiti mogućnost da ljubljansko-jadranski stil traje nešto duže od pet stoljeća, možda do godine 2400. pr. Kr.

Sredinom trećega tisućljeća prije Krista, ljubljansko-jadransku lončariju smjenjuje cetinski stil. Izvjesno vremensko preklapanje oba stila ne može se na temelju postojećih podataka ni potvrditi ni odbaciti. Vremenski položaj cetinskoga stila unutar trećega tisućljeća prije Krista ne može se pobliže odrediti prema tipologiji asociranih metalnih nalaza, dok se prema radiokarbonskim datumima taj stil

**Concluding Remarks On The Dating Of The Pottery Styles**

All of the discussed dating techniques indicate that the Ljubljana-Adriatic style preceded the Cetina style, while the typological traits of the associated metal implements and the radiocarbon dates place both styles roughly within the third millennium BC. According to the cross-dating of metal implements, the Ljubljana-Adriatic style would belong to the second quarter of the third millennium, while according to the radiocarbon dates it would cover the entire first half of the third millennium BC. The dendrochronological analyses that were carried out at Ljubljansko Barje suggest similar dates, by dating the abandonment of the Parte-Iščica lake dwelling around the transition from the 28th to the 27th century BC (Velušček, Čufar 2014: Tab. 2). From this, the sites of the Vučedol culture, were collected several fragments of pottery of a close Ljubljana-Adriatic style (Velušček et al 2000: Pl. 3: 11; 6: 3). Unfortunately, the Ljubljana-Adriatic style has not been firmly dated yet at Ljubljansko Barje. Apparently, it precedes the Vinkovci-Somogyvár style in that area, but the mutual relationship of those two styles remains unclear (Velušček 2014: 640–641).

If one accepted the radiocarbon date from Gruda Boljevića, the Ljubljana-Adriatic style would have begun in the southern Adriatic shortly before the year 3000 BC. Due to a plateau in the calibration curve (Reimer et al. 2013), the calibrated 1SD range of that date spans the entire last third of the fourth millennium BC, but it seems unlikely that the Ljubljana-Adriatic style could have appeared long before the year 3000 BC, since the earliest dates for Nakovana pottery fall within that range (Forenbaher 2000: 380, Tab. 2). The duration of the Ljubljana-Adriatic style until about the year 2400 BC relies on a couple of late dates. One of them (from the Pupićina Cave) dates a context that contained Ljubljana-Adriatic potsherds, but also later finds. Furthermore, several sites at Ljubljansko Barje that were marked by the Vinkovci-Somogyvár pottery style and dated by dendrochronology around the middle of the third millennium BC (Parte, Založnica, Črni Graben and Špica) yielded very few Ljubljana-Adriatic finds. For the moment, we may cautiously consider the possibility that the Ljubljana-Adriatic style lasted slightly more than five centuries, possibly until the year 2400 BC.

Cetina style pottery replaced Ljubljana-Adriatic style pottery around the middle of the third millennium BC. Based on the existing information, some temporal overlap between the two styles can neither be confirmed nor rejected. The typology of the associated metal finds does not provide grounds for a more precise dating of the Cetina style within the third millennium BC. According to radiocarbon dates, that style appeared around the year 2400 BC and lasted about five centuries, until around the year 1900 BC. The characteristic Cetina finds from Lerna and Olympia provide additional support to this dating. In both cases, they were recovered from contexts attributed to the EH III period (Rutter 1982: 461, 481; Maran 1987: 79; Rambach 2007: 84),

javlja oko godine 2400. pr. Kr. i traje oko pet stoljeća, otprilike do godine 1900. pr. Kr. Dodatnu potporu takvome datiranju pružaju karakteristični cetinski nalazi iz Lerne i Olimpije. U oba slučaja prikupljeni su iz konteksta pripisanih ranoheladskom III razdoblju (Rutter 1982: 461, 481; Maran 1987: 79; Rambach 2007: 84) koje otprilike pokriva posljednju četvrtinu trećega tisućljeća prije Krista (Manning 1995; Broodbank 2000).

Na temelju svega iznesenog može se zaključiti da je ljubljansko-jadranski lončarski stil istovremen s vučedolskim stilom i to ne samo s 'kasnim Vučedolom' nego i s 'klasičnim Vučedolom' (Marijanović 1993: 56; Della Casa 1996: 135, tab. 18; Velušček, Čufar 2003: 132; Maran 2007: 8). Najraniji datumi iz crnogorskih grobnih gomila čak neznatno prethode najranijem datumu s Vučedola (Beta-252282, 4340±40 BP, kalibrirani raspon od 1 SD: 3011–2905 pr. Kr.), dok većina vučedolskih datuma pada oko ili nakon godine 2900. pr. Kr. (Forenbaher 1993: 267, sl. 6; Balen 2010: 111). Nadalje, lončarija ljubljansko-jadranskoga stila pojavljuje se dva do tri stoljeća prije zvonastih pehara te se vremenski preklapa s ranim zvonastim peharima tek u drugoj četvrtini trećega tisućljeća prije Krista (Vander Linden 2006). Cetinski lončarski stil dobrim dijelom je istovremen s kasnim zvonastim peharima i vinkovačko-somogyvárskom lončarijom (Forenbaher 1993: 247–248, sl. 8; Velušček, Čufar 2014: tab. 2).

Ljubljansko-jadranska i cetinska lončarija uklapaju se u paneuropsku umjetničku 'makro-tradiciju' (Robb 2015: 643) lončarije trećega tisućljeća prije Krista ukrašene kombinacijom urezivanja, utiskivanja i inkrustacije. Osim same tehnike ukrašavanja, različite stilove te makro-tradicije povezuju slični temeljni ukrasni motivi i načini njihovoga slaganja u kompozicije, slične vrste i oblici posuda te slična namjena i kontekst odlaganja ukrašenoga posuđa. Unatoč velikim udaljenostima, sličnosti ponekad mogu biti iznenađujuće bliske. Na prostorima zapadnije od Jadrana, od Pirenejskoga poluotoka do srednje Europe i Sicilije, posuđe više ili manje nalik ljubljansko-jadranskome pojavljuje se unutar asemblaža zvonastih pehara (Harrison 1977; Nicolis, Mottes 1998; Nicolis 2001; Vander Linden 2006; Guilaine et al. 2009). U srednjem Podunavlju sličnoga posuđa ima među vučedolskom lončarijom (Schmidt 1945; Dimitrijević 1979a; Durman 1988), dok među vinkovačko-somogyvárskom lončarijom ima posuđa nalik cetinskom (Dimitrijević 1982; Bondár 1995; Velušček, Čufar 2003). Prema istoku i jugu, ljubljansko-jadranska i cetinska lončarija mogu se uspoređivati s jugoistočnoeuropskom 'Schnur-keramikom' (Roman 1992), s cikladskom 'žigosanom i urezanom' lončarijom ranoheladskoga II razdoblja (Broodbank 2000: 202–203), a možda i s pojedinim nalazima s Malte (Maran 1997: 173, 185). Nejasne granice rasprostranjenosti stilova i slični nalazi iz udaljenih krajeva svjedoče o pokretljivosti, povezanosti i zajedničkim ideološkim načelima. Pritom ne treba zaboraviti da se ljubljansko-jadranski i cetinski stil rasprostiru na strateški važnom prostoru između srednje Europe, Balkana te istočnog i zapadnog Sredozemlja.

which covers roughly the last quarter of the third millennium BC (Manning 1995; Broodbank 2000).

It follows from the above that the Ljubljana-Adriatic pottery style is contemporaneous with the Vučedol style – not only with the 'late Vučedol', but also with the 'classic Vučedol' (Marijanović 1993: 56; Della Casa 1996: 135, Tab. 18; Velušček, Čufar 2003: 132; Maran 2007: 8). The earliest dates from the Montenegrin burial mounds are even a bit earlier than the earliest date from Vučedol (Beta-252282, 4340±40 BP, calibrated 1SD range: 3011–2905 BC), while most of the dates for Vučedol fall around or after the year 2900 BC (Forenbaher 1993: 267, Fig. 6; Balen 2010: 111). Ljubljana-Adriatic style pottery appears two or three centuries before the Bell Beakers and overlaps with the early Bell Beakers only during the second quarter of the third millennium BC (Vander Linden 2006). Cetina style -pottery overlaps widely in time with the late Bell Beakers and Vinkovci-Somogyvár pottery (Forenbaher 1993: 247–248, Fig. 8; Velušček, Čufar 2014: Tab. 2).

Ljubljana-Adriatic and Cetina pottery styles belong to a third millennium BC Pan-European artistic 'macro-tradition' (Robb 2015: 643) of pottery decorated by a combination of incision, impression and incrustation. Aside from the decorative technique, different styles of this macro-tradition are linked by similar basic decorative motifs, similar ways in which those motifs are combined into complex designs, similar kinds and shapes of vessels, and similar purpose and depositional contexts of decorated vessels. Despite large distances, those similarities sometimes can be striking. In regions to the west of the Adriatic, from the Iberian Peninsula to Central Europe and Sicily, vessels more or less akin to Ljubljana-Adriatic style pottery appear within Bell Beakers assemblages (Harrison 1977; Nicolis, Mottes 1998; Nicolis 2001; Vander Linden 2006; Guilaine et al. 2009). In the middle Danubian region, similar vessels may be found among Vučedol pottery (Schmidt 1945; Dimitrijević 1979a; Durman 1988), while Vinkovci-Somogyvár assemblages contain vessels akin to Cetina style pottery (Dimitrijević 1982; Bondár 1995; Velušček, Čufar 2003). To the east and south, Ljubljana-Adriatic and Cetina pottery may be compared to the southeast European *Schnurkeramik* (Roman 1992), the Cycladic EH II period 'stamped-and-incised' pottery (Broodbank 2000: 202–203), and maybe even to some of the finds from Malta (Maran 1997: 173, 185). The fuzzy borders of their geographic distribution and similar finds from distant regions testify of mobility, connectedness, and shared ideological tenets. At this point one should remember that Ljubljana-Adriatic and Cetina styles extend across the strategically important region between Central Europe, the Balkan Peninsula, and the eastern and western Mediterranean.

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