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The Cetina phenomenon across the Adriatic during the 2nd half of the 3rd millennium BC: new data and research perspectives

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Introduction

Ivan Marović (1975) was the first to identify Cetina-type pottery in southern Italy, when he recognised two Cetina-type juglets at the Copper Age Laterza cemetery in Apulia, which had been excavated in the 1960s (BIANCOFIORE 1967). Afterwards, further excavations and the reappraisal of previously excavated sites have allowed for the identification in Italy of a number of Cetina-type ceramics from settlements, caves and tombs.

Studies and overviews beginning in the 1980s have shown that the distribution of pottery characterised by Cetina features takes in several Mediterranean regions, from the western Balkans (Adriatic Croatia, Bosnia and Herzegovina, Montenegro and Albania) to the Peloponnese, peninsular Italy, eastern Sicily, Malta and the Aeolian Islands during the second half of the 3rd millennium BC (DELLA CASA 1995; MARAN 1998, 2007; CAZZELLA 1999; KAISER, FORENBHAER 1999; RAMBACH 2004, 2007). It is now widely recognised that the spread of these pottery types across the central Mediterranean is evidence of intertwined interconnections, possibly reflecting the movement of small groups of seafarers.

What is now termed the ‘Cetina phenomenon’ has recently received renewed scholarly attention (e.g. BROODBANK 2013, c. VIII; CAZZELLA, RECCHIA 2015; ARCURI *et alii* 2016; CAZZELLA *et alii* 2016; RECCHIA, CAZZELLA 2017; FORENBAHER 2018), as a result of new discoveries and reappraisals of already known evidence in Croatia, Italy,

Greece and Malta. Yet, many aspects remain to be understood, on both the large-scale and specific regional dimensions. The two integrated international and multi-disciplinary research projects that we are developing are specifically aimed at investigating these topics.

In this paper we will concisely discuss new data from Dalmatia, with particular emphasis on the area between Šibenik and Split, which is the core area of the Cetina culture, and from southern Italy (fig. 1). Finally, we will briefly present our current research projects and the preliminary results these have provided.

The chronology of the Cetina phenomenon and the possibility that different phases of long-distance interconnections can be distinguished are still matters of debate, partly as a result of the scarcity of 14C dates (recently JUNG, WENINGER 2015; FORENBAHER 2018). Some scholars (e.g. MARAN 2007) have proposed that this phenomenon developed in the last centuries of the 3rd millennium BC, mostly corresponding to the Early Helladic III phase in Greece. However, A. Cazzella and one of the authors have pointed out that this phenomenon might have begun earlier and that there could have been two distinct phases of interaction involving the western Balkans, western Greece, southern Italy, Sicily and Malta, one starting in the mid-second millennium BC and one around 2250 BC (RECCHIA, CAZZELLA 2017). Supporting evidence for this hypothesis is provided by phase-sequences recognised in contexts located outside Dalmatia that yield Cetina-type and EHIII-type pottery, such as Olympia (New Museum and Altis; KOUMOUZELIS 1980; RAMBACH 2004) and Malta (Thermi ware and Tarxien Cemetery; CAZZELLA, RECCHIA 2015). Apart from central Dalmatia, the Peloponnese and Ionian Islands might also have played an active role in these long-range interactions, especially as regards maritime contacts with Sicily, Malta, the Aeolian Islands and perhaps central-southern Apulia.

Northern & Central Dalmatia (Croatia & Herzegovina)

In the last decades, our knowledge of the Cetina culture has greatly improved in Dalmatia, thanks to new research and publications. The Cetina culture is mainly known from its burial contexts and funerary practices, which consist of inhumations and/or cremations under stone tumuli, mostly as single burials, although multiple burials do occur. These tumuli are often grouped together to form clusters. The best-known clusters of Cetina tumuli are those located along the upper course of the Cetina River (figs. 2.6-7 and 3.1.3; MAROVIĆ 1991). However, these distinctive funerary structures are scattered throughout Dalmatia, especially along the small valleys that characterise the Dinaric Alps landscape. At present, open-air settlements are virtually unknown; the only traces are a small number of Cetina sherds found at some Middle and Late Bronze Age hillforts. More data come from caves, such as the well-known Škarin Samograd, in the Šibenik area (fig. 3.2). The lack of set-

lements hinders a better understanding of the different economic and social strategies embedded in the Cetina phenomenon.

Recent construction work on the coastal highway necessitated several emergency excavations of Cetina tumuli, which have provided fresh data for the understanding of this cultural aspect. In particular, two tumuli and a carstic sinkhole have been explored at the locality Matijin dolac, Vučevica (ŠUTA 2016, pp. 15–16). A handful of ceramic fragments showing Adriatic-Ljubljana features come from the sinkhole, which was not excavated. The two excavated tumuli are located some 100m from the sinkhole. In tumulus 1 (Gomila 1) neither funerary architecture nor human bones were recovered, but only a few Cetina sherds. In contrast, Tumulus 2 (Gomila 2), located some 100 m to the east of tumulus 1, produced quite a number of Cetina sherds, probably associated with a cremation.

Jukić is a locality in the Zagvozd area, where a dry-stone tumulus yielding Cetina features (Mound 1) was excavated (OLUJIC 2012). Three graves were identified, one dating to the medieval period (grave 2) and two prehistoric (graves 3 and, presumably, 4). Grave 4, located on the southwestern edge of the burial mound, was covered with a huge stone slab, while Grave 3, situated in its central part, had only one of the lateral slabs preserved. In this latter, skeletal remains of two inhumations have been found along with a large number of prehistoric sherds, including two small Cetina jars (fig. 2.8). Furthermore, seven fragments of burnt human bones were found, which do not appear to belong to the aforementioned skeletons. A charcoal sample from Grave 3 gave a date of 3590±40 BP (Beta 241024, 2030-1880 cal. 2σ BC). At the level of Grave 3, in the eastern part of the mound, a decorated fragment of bronze sheet was found. Conversely, in Grave 4, neither artefacts nor human remains were preserved. Underneath Grave 2, in a level corresponding to that of Grave 4, charcoal and bone remains were found that the excavators believe to belong to Grave 4. A sample from the charcoal produced a date of 3830±60 BP (Beta 241020; 2480-2140 cal. 2σ BC).

A further tumulus was excavated at Begovići, near Vrgorac (BEG JERONČIĆ 2011). A cluster of bones and Cetina sherds was recovered close to the tumulus centre (fig. 2.3-5). Noteworthy is the presence of a stone wrist-guard. A human dental sample produced a C14 date of 3670±40 BP (Beta-248564, 2134-1979 cal. 1σ BC).

Finally, a cluster of tumuli was explored at Poljakuše near Danilo (fig. 2.2), during the work on the highway, and is currently being studied by two of the authors (M. GORI, G. RECCHIA) in collaboration with E. Prodrug (City Museum of Šibenik).

The new publication of the Palagruža islet excavations (FORENBAHER 2018) gives us further crucial insights into seaborne connections and the role of seafarers in connecting Dalmatia to Italy. Evidence from Palagruža clearly shows that this small island was occupied during the 3rd millennium BC (fig. 3.4-7), probably as a harbour to facilitate connections between the eastern and the western Adriatic shores. Even though no analyses on pottery have been undertaken, the scarcity of water and particularly of fuel on Palagruža hints at a Dalmatian production the Cetina pot-

tery found on the islet. The relatively abundant lithics found during the excavations are, in contrast, of Apulian origin; 97,5% of the artefacts recovered were made from flint from the Gargano promontory (FORENBAHER, PERHOČ 2017). A few fragments of Cetina pottery have been recovered on the Sušac Island, reinforcing the theory that this maritime corridor was important, with Palagruža serving as a night shelter for seafarers from Dalmatia heading towards the Gargano.

As mentioned above, the chronology of Cetina in Dalmatia certainly remains problematic, because there are no solid stratigraphical sequences from Cetina contexts on which a relative chronology can be based. Forenbaher (2018, pp. 135–141) has attempted a chronological overview of the Adriatic-Ljubljana and Cetina horizons on the basis of the absolute dating available so far. Considered together, these would span the whole of the 3rd millennium BC. Even though the continuity between the Adriatic-Ljubljana and Cetina cultural aspects is undeniable, the temporal relationship between these two, their supposed partial overlap, and the identification of possible sub-phases within each of these periods remain to be clarified.

Southern Adriatic (Montenegro & north Albania) and Central Balkans (Bosnia, south-eastern Albania and Serbia)

Evidence of Cetina contexts and pottery is much rarer in the Southern Adriatic Balkans, but the uneven distribution of Cetina-type finds is likely due to a research bias in the area. Most of the early 3rd millennium BC “princely” tumuli are concentrated in southern Dalmatia, such as Mala Gruda, Velika Gruda (PRIMAS 1996, Della Casa 1996) and Pazhok (BODINAKU 1982). It is worth mentioning that some of these tumuli were used over a long time-span, such as the impressive 6m high Velika Gruda tumulus, which, unlike the central Dalmatian tumuli, is made up of both soil (the primary barrow) and stones, used in succession in the complex sequence of construction phases. Cetina-type fragments occurred as stray finds in the secondary Late Bronze Age mound (fig. 3.8-10; DELLA CASA 1996, fig. 92, pp. 66–67).

A considerable number of finds belonging to the Cetina culture comes from the southern Skadar lake area (northern Albania). Here the cemetery of Shkrel (JUBANI 1995) includes several stone tumuli, ten of which were excavated in the early 1980s. Tumulus II is the richest in Cetina pottery, while tumulus V is outstanding for its size (1.80m x 21.50m) and architecture, which suggests an earlier date. Unfortunately no ceramic finds illuminate its chronology. The tumulus of Shtoj (see GOVEDARICA 2016 for a thorough discussion) is of particular interest, as it shows two superimposed construction phases. In the lower structure a number of violin-shaped idols were found (fig. 4.1), while from the grave in the upper structure comes a Cetina-type vessel (fig. 4.2). Violin-shaped figurines are widespread in the south-western Balkans and in Greece, and according to Govedarica they belong to the same

chronological horizon as the Adriatic-Ljubljana pottery.

Two settlements of the *gradina* type (hillforts), Shkoder and Gajtan (ISLAMI-CEKA 1964, JUBANI 1972), have yielded some Cetina sherds. Like those found at the settlement of Monkodonja in Istria (HELLMUT 2017), these appear to indicate an early use of the site that reflect more like occasional visits to the area than permanent settlement, which only occurred from the Middle Bronze Age onwards. Of particular interest is a sherd from Gajtan (KORKUTI 1985, pl. IV.21), belonging to a thickened-rim bowl, whose impressed decoration (fig. 4.3; JUBANI 1972 p. 424 fig. 8, dh-e) closely recalls the peculiar decoration of some thickened-rim bowls from Castelluccio (eastern Sicily; ORSI 1893, pl.5), that resemble Cetina-type pottery.

New excavations in the caves of Blazi, Nezir and Keputa indicate that the Cetina culture spread in central Albania as well. In fact, several fragments of Cetina vessels come from the upper layers of Blazi (under study by M. Gori, T. Krapf). Finally, a handful of Cetina-type sherds and a juglet from Sovjan (GORI 2015, referred to as a tankard), a site in the Ohrid-Prespa lakes region, are significant pointers to the importance of overland connections in the spread of Cetina features in the south-western Balkans. However, the penetration of Cetina material inland, in Bosnia and Serbia, was already known (GOVEDARICA 2006). One of the most notable examples of Cetina pottery in Bosnia may come from Kotorac, a *gradina* close to Sarajevo. Finally, of great interest is the connection between the tumuli of the Belotić Bela Crkva group and those of the Cetina sphere.

South-Eastern Italy (Apulia)

Despite the increase in the number of finds in the last ten years, evidence of Cetina-type pottery in Italy remains fragmentary. The quantity of sherds remains scanty, but they are spread over a vast area ranging from the Karst in the north-east, to Apulia in the south-east, and Campania in the south-west of the peninsula. Moreover, pottery resembling Cetina types occurs in Calabria, eastern Sicily and the Aeolian Islands. Most of the sherds from peninsular Italy are stray finds, so it remains difficult to assess the nature of the contexts and their chronology.

As is well known, Apulia is one of the Italian regions yielding a considerable quantity of Cetina-type pottery. Finds are chiefly located in the northern part of the region (Gargano promontory and the Tavoliere plain), and in inland areas of the central-southern part of the region (Altamura and Laterza; CATALDO 1996). Rutigliano-Le Rene (RADINA 1989), in central Apulia, stands outside this pattern, as it is located in the coastal plain (10km circa from the coast) and is likely to be a settlement.

Cetina-type sherds from the northern area are almost entirely surface and unstratified finds (e.g. the pottery from Rodi Garganico, NAVA 1985). These chiefly consist of thickened-rim bowls with incised and impressed decorative patterns (fig. 5.1-

3). A. Gravina's recent work (2016) adds new data to the previously known picture (RECCHIA 2002), highlighting the occurrence of this type of pottery along the Fortore valley (Carlantino – loc. Fontana and Chiantinelle-Serracapriola; GRAVINA 2016, fig. 1.20 and 21) and the Candelaro River (Pedegarganica km. 12,200; GRAVINA 2016, fig. 2.15) just to the north and west of the Gargano promontory and the Tavoliere plain. However, apart from the pottery assemblage from Rodi Garganico (GRAVINA 2016, fig. 1.13-16), it is doubtful whether other sherds considered by the author to be related to Cetina types and decorative patterns can be placed in the sphere of Cetina pottery production.

In contrast, at present the entirety of the Cetina-type pottery in the central-southern part of the region consists of small jars and juglets (fig. 5.5), of which the vast majority are decorated with patterns of incised and impressed decoration on the body and incised motifs framing the handles. Apart from the possible sub-coastal settlement of Rutigliano-Le Rene (fig. 5.4), these Cetina-type vessels come from funerary contexts of local tradition (Laterza and Pisciuolo -Altamura) and caves (Pulo di Altamura; CATALDO 1996).

A possible explanation for the marked distinction in distribution between the two areas is that the two groups of finds (the northern and central-southern) actually belong to two chronologically distinct phases of contact with the eastern Adriatic and Ionian area (CAZZELLA 1999; RECCHIA, CAZZELLA 2017). In the first phase small groups from Dalmatia would have reached the Gargano promontory and the Tavoliere, while in the second phase maritime connections may have been established between Dalmatia, and possibly western Greece, and central-southern Apulia. Close similarities between the decorative patterns at Rutigliano-Le Rene and Olympia – Altis (MARAN 1998; RAMBACH 2004), coupled with the occurrence of thickened-rim bowls at Olympia in the preceding New Museum phase, provide supporting evidence for this hypothesis.

In a recent work Arcuri *et alii* (2016, p. 88) have argued that the apparent dichotomy in occurrences between bowls in northern Apulia and jars and juglets in the central-southern part of the region reflects the types of context they come from (settlements in the north, tombs and caves used for symbolic purposes in the central-south) rather than a chronological difference. Yet Rutigliano – Le Rene, which is likely to be a settlement, has yielded Cetina-type sherds belonging to small jars. Moreover, burial tumuli in Dalmatia commonly contain both bowls and jars/tankards (MAROVIĆ 1991), although two of the newly excavated tumuli in the Split area (Begovići, Jukić) seem to contain only jars as grave goods (fig. 2.3-5.8). These vessels show incised and impressed decorative patterns framing the handles, a feature that has been suggested (RECCHIA, CAZZELLA 2017) to characterise the second phase of interaction. Both contexts have provided 14C dates that fall between 2130–1880 BC (2134-1979 BC Begovići, 2030-1880 BC Jukić; see above), thus being consistent with this chronological proposal. Therefore, this may well provide supporting evi-

dence for the hypothesis that Cetina interactions in central southern Apulia occurred only in the second phase of contacts.

South-western Italy (Campania)

Our knowledge about the involvement of southern Italy in the Cetina phenomenon has significantly increased in the last years thanks to new discoveries in Campania.

The occurrence of sherds related to Cetina-type ceramic products in Calabria (MARINO, PACCIARELLI 1996)¹, as well as those from eastern Sicily (such as those from Ognina – BERNABÒ BREA 1976-77, pp. 76-78; CAZZELLA 1999, p. 402, Castelluccio – ORSI 1893, pl. 5)², have already provided some clues about the spread of Cetina-type features in the southernmost part of coastal Tyrrhenian Italy. Yet the finds from Campania clearly illustrate how not only was the Adriatic side of the Italian peninsula possibly reached by small groups of seafarers from the eastern Adriatic and Ionian regions, but that southern Tyrrhenian Italy was also largely drawn into these long-range interactions.

It must be said that the debate about terminology initiated by Arcuri *et alii* (2016, p. 83) is unproductive; the real problem is to define the chronology of these vessels and their meaning in terms of cross-cultural contacts and long-range interactions.

The most interesting sites in Campania that yield Cetina-type pottery are Fosso Aimone (Atena Lucana) and Oliva Torricella, for which 14C dates are available, but unfortunately only preliminary reports have been published. They differ both in their geographical location and absolute dating.

Fosso Aimone is an inland site that has yielded at least one thickened-rim bowl and one jar decorated with simple incised lines (fig. 5.7; TALAMO 2008, pp. 216-217). It provided a 14C date of 3868±75 BP (DSH123, charcoal sample, 2470-2210 cal. 1σ BC; TALAMO *et alii* 2011). Although it cannot be ruled out that this date is affected by an 'old wood' bias, it is highly possible that the penetration of Cetina-type features on the western side of the Apennine already occurred in an early phase of interconnections (see discussion above). What remain to be understood are the lifespan of this site and the character of its pottery assemblage. Aside from the two vessels mentioned above, the other bowl published (ARCURI *et alii* 2016, fig. 6) does not seem a typical thickened-rim bowl (but the image is not very clear) and moreover, it has an 'elbow-shaped' handle (*ansa a gomito*), a very common type of the Early Bronze Age in Italy.

In contrast, Oliva Torricella (ALBORE LIVADIE 2011; ARCURI *et alii* 2016) is a Palma

¹ For a recent discussion of these finds see RECCHIA, CAZZELLA 2017, pp. 98-99.

² For a detailed list of sherds related to Cetina-type style in Sicily see CAZZELLA, RECCHIA 2015, endnote 10.

Campania site (Early Bronze Age), originally located on the coast which appears to have been destroyed by a tsunami. It has yielded a sherd with an incised and impressed decorative pattern (fig.5.6; ARCURI *et alii* 2016, fig. 4.3), closely recalling that of the juglets from Laterza on the one hand, and that of vessels from central Dalmatia (e.g. Rudine t.13, fig. 2.6; MAROVIĆ 1991, fig. 11.1) on the other. At present, this appears to be the only sherd from this site that is clearly a Cetina-type ceramic product, while the other fragments considered by Arcuri *et alii* (2016, fig. 4.1-2.4-5) do not show features and decoration with clear Cetina-type parallels. In particular, the two rims decorated internally with rows of stamped triangles (ARCURI *et alii* 2016, fig 4.1-2) may well belong to the Palma Campania pottery repertoire. Two 14C dates from bone samples are available for this site (ALBORE LIVADIE 2011, p. 123; ARCURI *et alii* 2016, footnote 7): 3727±32 BP (DSH-2964, 2267-2029 cal. 2σ BC) and 3538±103 BP (DSA-155, 2192-1624 cal. 2σ BC; from trench 2), both belonging to the tsunami event, which is thus likely to have occurred between the 22nd and 21st centuries BC. According to the authors of the excavations the Cetina-type sherd would come from the Palma Campania deposit affected by the tsunami event and not from a pre-dating layer. Besides the aspects related to the chronology of the Palma Campania *facies*, which fall outside the focus of this paper, this date is consistent with the chronology of the Cetina phenomenon and particularly with the second phase (*sensu* RECCHIA, CAZZELLA 2017).

A further site yielding a Cetina-type decorated bowl is Gricignano (fig. 5.8; U.S. Navy lotto 1, MARZOCHELLA 1998, fig. 28), a probable sub-coastal settlement located in the Campanian plain just to the north of Naples. No absolute dates are available and the associated pottery assemblage in the local tradition does not include clearly diagnostic sherds and may belong to a very early phase of the Early Bronze Age.

Further finds from Campania regarded as possible Cetina-type pottery (Agerola, Caggiano; ARCURI *et alii* 2016, figs. 3, 7, 8) actually do not show distinctive Cetina features and therefore cannot be counted among this class of products. However, a sherd from the cemetery at Gaudello (Aversa, Campanian plain), still unpublished, is possibly of Cetina type³.

Finally, the vessel of unknown provenance kept at the MANN in Naples (ARCURI *et alii* 2016, fig. 1) is indeed of Cetina type, but may well have arrived in the Museum through (international?) exchange of objects between museums, a common practice in the last two centuries.

³ This sherd was presented by V. G. Mancusi and G. Bonifacio at the Conference: *Facies e culture nell'età del Bronzo italiana*, Rome Belgian Academy, 3-4 December 2015.

Discussion and research perspectives

In the near future, the advancing of archaeological research in the various regions involved in the Cetina phenomenon will certainly increase our knowledge, change the present picture and possibly raise new questions.

At present, however, some general problems that might be addressed on the basis of the already available finds and data appear to be:

1) The lack of a refined chronology, in central Dalmatia as well as in the other regions involved into the Cetina phenomenon, and of good series of 14C dates.

2) The lack of archaeometric analyses on both Cetina ceramic products in Dalmatia and Cetina-type products in the other regions. In all likelihood Cetina-type pottery outside central Dalmatia was locally made, as the analyses carried out at some sites have been indicating. But apart from the question of provenance, archaeometric analyses provide useful evidence on the technological choices, manufacturing traditions and processes behind these productions.

3) The lack of archaeometric analyses on metal artefacts found both at Cetina and Cetina-related sites and in contemporary sites of the regions involved. These might provide significant help in assessing the role of metal exchange in the framework of the Cetina phenomenon.

4) The lack of isotope analyses on human (and animal) bones. These in fact might provide significant data about the movements of individuals across both short and long distances, and on the diet and economic strategies of these communities.

These main goals are currently being pursued, thanks to the collaboration between two multidisciplinary projects: the “*CeVaS – Cetina Valley Survey*” project directed by H. Tomas, and the “*EnAdriS 25-20 BC – Cultural Encounters across the Adriatic and Ionian seas. 2500-2000 BC*” project, coordinated by M. Gori and G. Recchia. These integrated research projects, which benefit from the collaboration between scholars from Croatia, Germany and Italy, seek to go beyond the constraint of present-day borders and different research traditions in approaching this complex and multifaceted phenomenon and its diverse regional and superregional aspects. Our collaboration has developed from a beginning in 2016, in the occasion of the 16th International Aegean Conference ‘*Hesperos. The Aegean Seen from the West*’ held in Ioannina.

One of the main aims of the CeVaS project is the systematic archaeological survey of selected area of the Cetina river valley, which has never been systematically surveyed, over six seasons (2015-2020). The purpose of the surveys is twofold: to reveal the settlement pattern of the Cetina Culture and to examine spatial relationships between different clusters of tumuli and possible settlements. The research is mostly supported by the Croatian Science Foundation under the project number IP 06-2016-1578. It includes the accurate mapping of the already known tumuli and trial excavations of selected Cetina tumuli, caves and sites (TOMAS 2017).

A general goal of the project is to deepen knowledge of the relationship between

Dalmatia and the Peloponnese in the second half of the 3rd millennium BC and to explore the reasons behind these contacts. Since the exchange of metal has been suggested as one of the triggering factors for the spread of Cetina features in western Greece, archaeometrical and typological analyses on metal artefacts from Cetina contexts are included in the project. These are specifically aimed at investigating the provenance of the copper used to produce them and their stylistic and technological affinity with Early Helladic products.

The first seasons of systematic survey have allowed the recognition of significant natural alterations of the landscape in the valley and of the extensive accumulation of sediment, which is likely to hide archaeological traces in the river plain. Stone tumuli on the ridges flanking the valley have been mapped and two have been excavated (Gustav I and II, located near the Gusići village), which have proved to have been probably in use over the Middle Bronze Age.

The 'EnAdrIS 25-20 BC' interdisciplinary project⁴ seeks to explore the relationship between Italy and the Western Balkans in the framework of the spread of the Cetina phenomenon across western Greece and the central Mediterranean. The project's main aim is the understanding of the cultural, social and economic dynamics underlying the Cetina phenomenon.

Specific goals are: 1) to refine the chronology on the basis of 14C dating coupled with the critical revision of the typology of finds; 2) to deepen the knowledge of technological and social aspects related with Cetina and Cetina-type ceramic productions by means of archaeological and archaeometrical analyses (in collaboration with S. Amicone - University of Tübingen); 3) to explore the relationship between the mobility of people, ideas, objects and techniques. In particular, Stable Isotope analyses on human bones and teeth have been applied to the investigation of short-range and long-range mobility of people, and to the study of paleodiet and subsistence patterns (in collaboration with M. Tafuri - 'Sapienza' University of Rome). The first results obtained on bone samples from Brnjica, Jukić,⁵ and the tumuli excavated in the framework of the CeVaS project will be published shortly.

The ongoing study of the finds from Brnjica and Poljakuše (fig. 2.1-2; central Dalmatia; previously unpublished)⁶ and the reappraisal of already known tumuli contexts of the region are providing new insights on the typological and technological dimensions of the Cetina pottery repertoire.

⁴ This project is comprised in a larger one focusing on the 3rd millennium BC in the framework of the ReSoc - Resources in Societies Leibnitz Postgraduate School at the Ruhr-University of Bochum, in collaboration with the Deutsches Bergbau Museum. 14C dating and archaeometric analyses have been partially funded by the Italian MIUR grant 'FFABR'.

⁵ Courtesy of B. Olujić, University of Zagreb.

⁶ The study, carried out in collaboration with E. Prodrug, has been made possible by the synergy with the CeVaS project.

In the framework of both projects a first set of petrographic analyses has been undertaken on ceramic samples from Poljakuše and Vučevica⁷. The preliminary results indicate that these ceramics were locally produced and fired at a low temperature, suggesting that these may have been manufactured specifically for ritual purposes (AMICONE *et alii* 2017).⁸

⁷ Courtesy of I. Šuta, curator of the City Museum of Kaštel.

⁸ We would like to thank Oliver Dickinson for editing this paper and for providing useful comments.

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**Serbia**

- 1 - Bela Crkva
- 2 - Belotić Šumar

Bosnia Herzegovina

- 3 - Kotorac

Croatia

- 4 - Monkodonja
- 5 - Cetina valley
- 6 - Škarin Samograd
- 7 - Brnjica
- 8 - Poljakuše
- 9 - Vučevica
- 10 - Gusići
- 11 - Jukić

Montenegro

- 12 - Begovići
- 13 - Sušac
- 14 - Palagruža
- 15 - Mala Gruda & Velika Gruda

Albania

- 16 - Shkrel
- 17 - Shtoj
- 18 - Gajtan
- 19 - Shkoder
- 20 - Nezir
- 21 - Blazi cave
- 22 - Pazhok
- 23 - Sovjan

Southern Italy

- 24 - Rodi Garganico
- 25 - Pedegarganica km.12
- 26 - Chiantinelle - Serracapriola
- 27 - Carlantino
- 28 - Coppa Nevigata
- 29 - Fontanarosa
- 30 - Gaudello
- 31 - Gricignano
- 32 - Oliva Torricella
- 33 - Atena Lucana
- 34 - Rutigliano
- 55 - Altamura (Pulo, Pisciuolo)
- 36 - Laterza

Fig. 1 – Distribution map of the sites mentioned in the text (Serbia, Bosnia Herzegovina, Croatia, Montenegro, Albania, southern Italy).

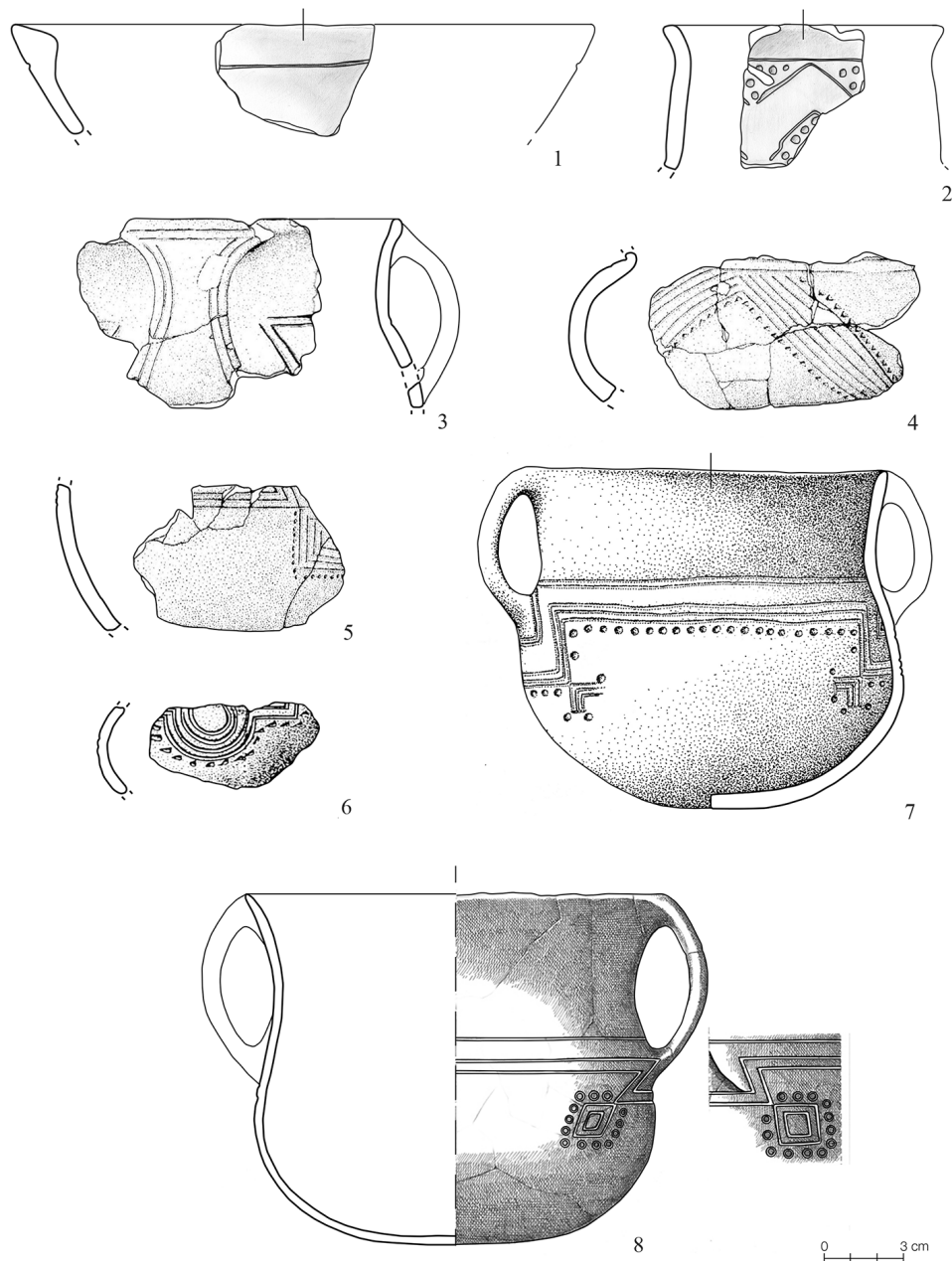


Fig. 2 – Cetina pottery from central Dalmatia. 1: from Brnjica t.1; 2: from Poljakuše t.1; 3-5: from Begovići; 6: from Rudine t.13; 7: from Bajagić t.8; 8: from Jukić t.1 grave 3. (1-2 authors' drawings; 3-5 modified from Beg Jerončić 2011; 6-7 modified from Marović 1991; 8 modified from Olujić 2012).

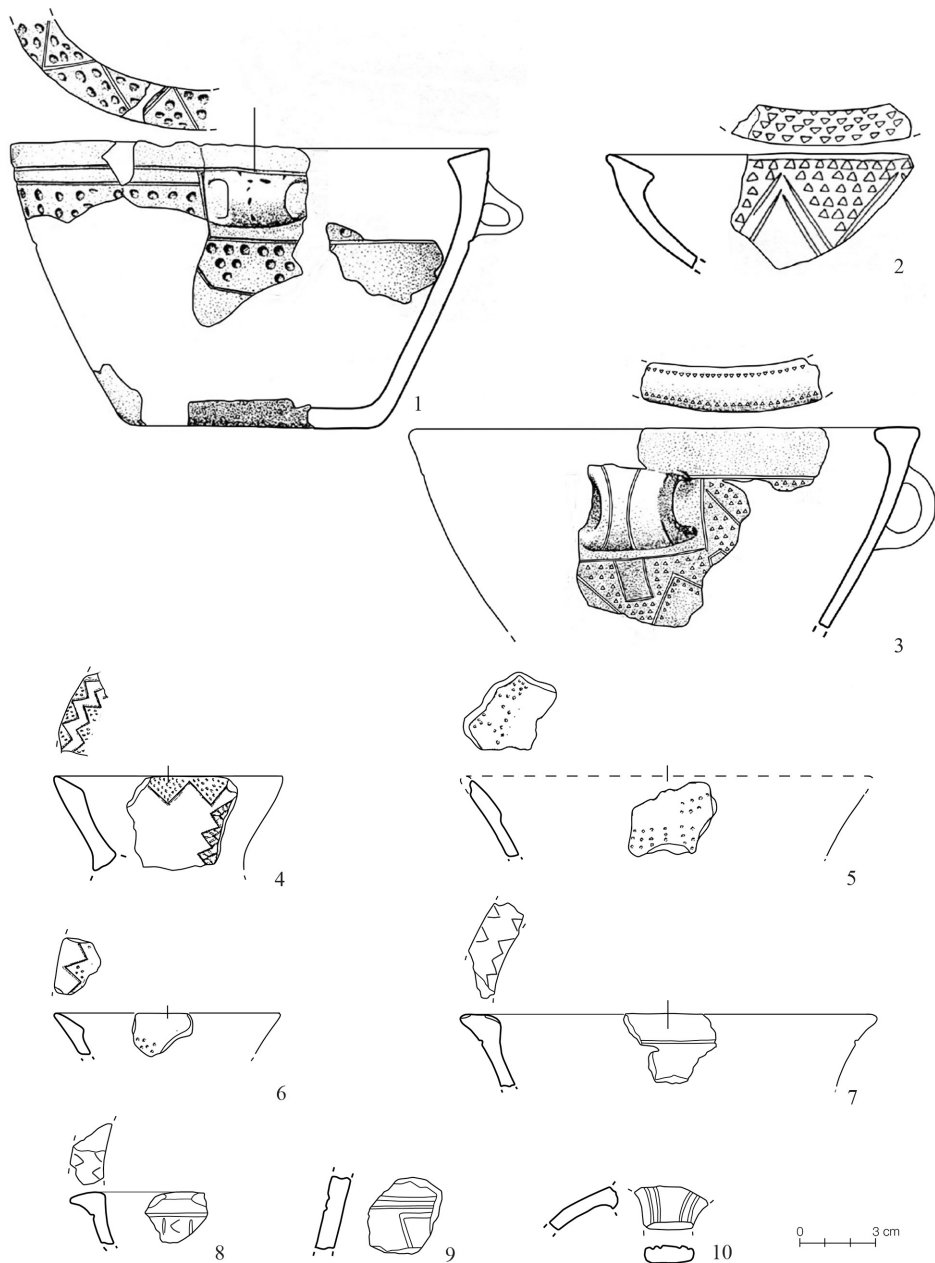


Fig. 3 – Cetina pottery from Dalmatia and south-eastern Adriatic (Croatia and Montenegro). 1: from Rudine t. 52; 2: from Škarin Samograd; 3: from Lukovača t. 68; 4-7: from Palagruža; 8-10: from Velika Gruda (1,3 modified from Marović 1991; 4-7 modified from Forenbaher 2018; 8-10 modified from Della Casa 1996).

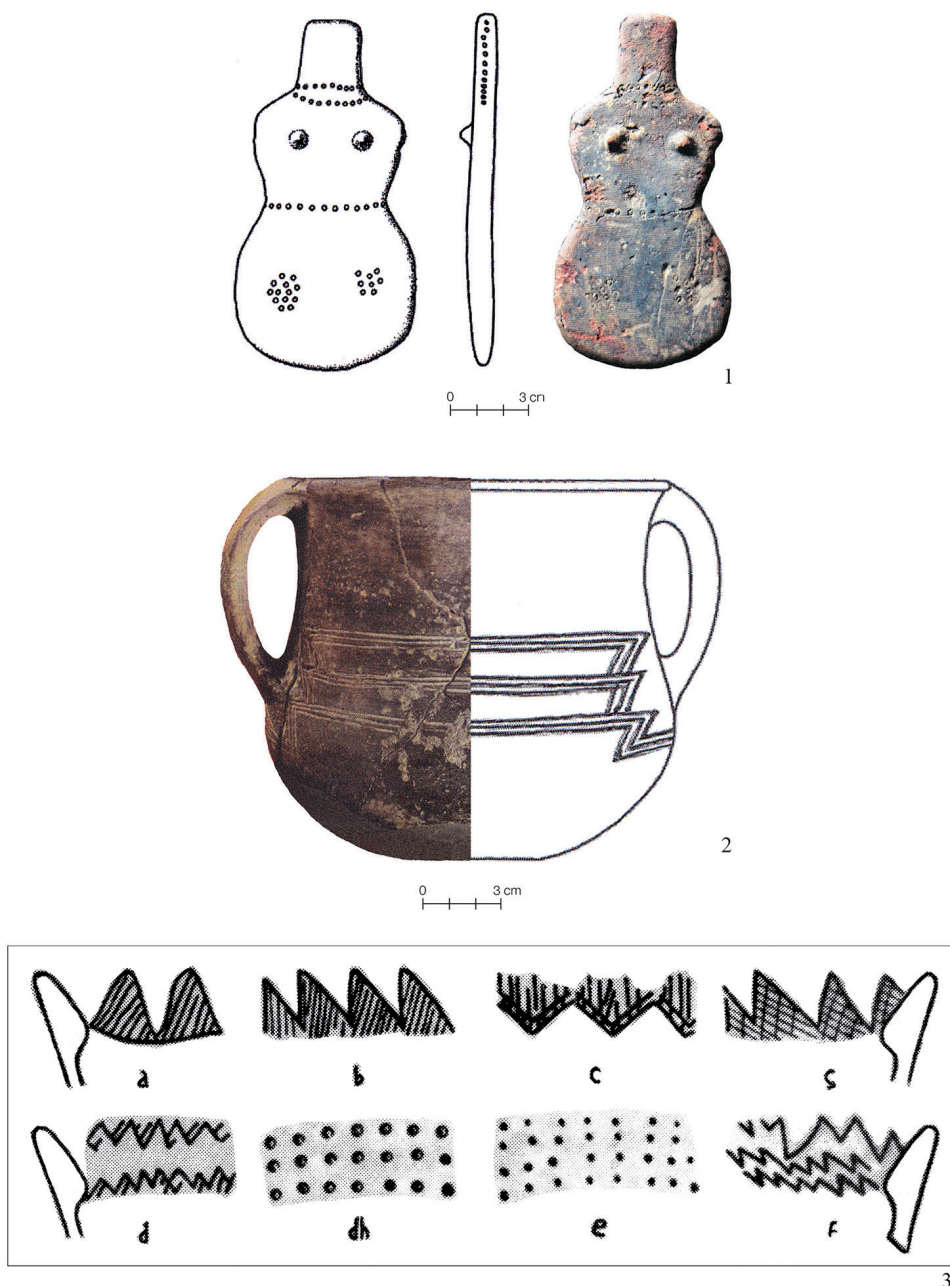


Fig. 4 – Violin-shaped idol and Cetina-type pottery from Albania. 1-2: from Shtoj; 3: decorative pattern on thickened rim bowls from Gajtan. (1-2 after Govedarica 2016; 3 modified from Jubani 1972).



Fig. 5 – Cetina-type pottery from southern Italy (Apulia and Campania). 1: from Rodi Garganico; 2: from Coppa Nevigata; 3: from Fontanarosa; 4: from Rutigliano; 5: from Pisciulo t.2; 6: from Oliva Torricella; 7: from Atena Lucana; 8: from Gricignano – US Navy. (1 modified from Nava 1985; 2-3 after Recchia 2002; 4 modified from Radina 1989; 5 after Cataldo 1996; 6 modified from Arcuri et alii 2016; 7 modified from Talamo 2008; 8 after Marzocchella 1998).

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