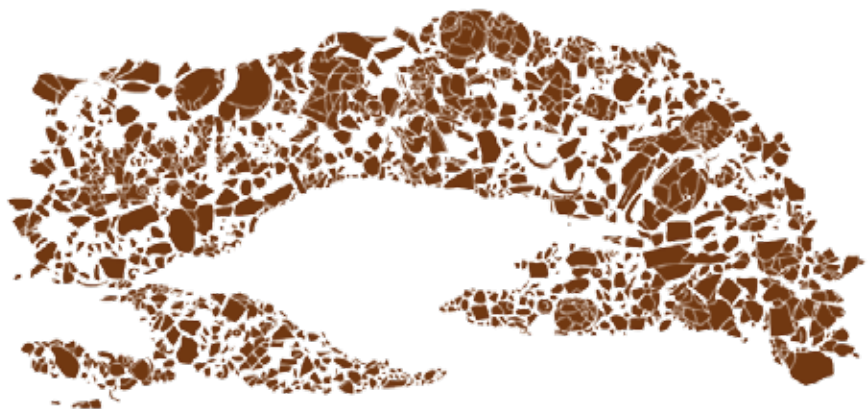


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OKOLICA
KAŠTELANSKOG ZALJEVA U PROŠLOSTI



Izdanja Hrvatskog arheološkog društva

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„Okolica Kaštelanskog zaljeva u prošlosti” naslov je znanstvenog skupa koji je u organizaciji Hrvatskog arheološkog društva i Muzeja grada Kaštela od 2. do 6. listopada 2017. godine održan u Kaštelima.

Tema skupa vezana je uz prostor koji je nastanjen još od paleolitika, a tragovi prošlih vremena svjedoče o kontinuitetu naseljavanja. Okolica Kaštelanskog zaljeva i danas je gusto naseljena, a ostaci prošlosti vidljivi su na svakom koraku. Neka od arheoloških nalazišta ovog prostora poznata su i u širim okvirima te čine nezaobilazan korpus nacionalne kulturne baštine.

Kroz nekoliko sekcija, tematski vezano uz povijesni slijed, održano je ukupno 36 predavanja i predstavljeno 5 postera. Za objavu u *Izdanjima Hrvatskog arheološkog društva* predan je ukupno 21 rad. Organizatori skupa ovim odazivom autora mogu biti zadovoljni, ali je velika šteta što za objavu nije ponuđeno više radova vezanih uz srednjevjekovnu tematiku, kojom ovaj prostor također obiluje.

Osim samih predavanja skup je imao i svoj, tradicionalni, izlet kojim se zaokružio prostor oko Kaštelanskog zaljeva trabakulom „Rižana”, starim 150 godina, a koji je i sam spomenik kulture. Izlet je započeo vožnjom

brodom iz Kaštel Lukšića prema Kaštel Sućurcu, gdje su ravnatelj Muzeja grada Kaštela Ivan Šuta i ravnatelj Arheološkog muzeja u Zagrebu Sanjin Mihelić svečano otvorili izložbu „Tekuća arheološka istraživanja u Hrvatskoj”. Za sudionike skupa bila je to iznimna prilika da se u kratkom roku upoznaju ne samo s arheološkim novostima u okolici Kaštelanskog zaljeva nego i s arheološkim novostima u drugim dijelovima Hrvatske. Izlet brodom nastavljen je u Vranjic, Trogir te Resnik (Sikuli), nakon čega su sudionici skupa autobusom stigli u planinarski dom „Malačka”, gdje je organizirana zajednička večera.

Ovom prilikom htjeli bi se zahvaliti Gradu Kaštela i Turističkoj zajednici grada Kaštela koji su obilato potpomogli kako samu organizaciju skupa tako i objavu 33. broja *Izdanja HAD-a*.

Sa zbornikom radova pod naslovom „Okolica Kaštelanskog zaljeva u prošlosti” zaključujemo istoimeni skup u nadi da će oni pridonijeti nastavku istraživanja ovog prostora i objavljivanja rezultata tih istraživanja.

Ivanka Kamenjarin

Domagoj Tončinić

ALBERTA ARENA, VEDRAN BARBARIĆ, IRENA RADIĆ ROSSI

VRANJIC (GULF OF KAŠTELA)

BETWEEN THE LATE EARLY AND THE MIDDLE BRONZE AGE (19TH–14TH CENTURY BCE)

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Alberta Arena
via dei Giuochi Istmici 28
I –00135 Roma
alberta.arena86@gmail.com

Vedran Barbarić
Faculty of Humanities and Social Sciences
University of Split
Poljička cesta 35
HR –21000 Split
vedbarba@ffst.hr

Irena Radić Rossi
Department of Archaeology
University of Zadar
Obala kralja Petra Krešimira IV., 2
HR –23000 Zadar
irradic@unizd.hr

The article presents a very concise selection of late Early and Middle Bronze Age pottery finds from the rescue excavations that took place at Vranjic (Gulf of Kaštela, Solin) in 2005–2006. The analysis of shapes, handles and decorations reflects the geographical location of the site, positioned at the crossroads of different routes as well as its role as an important hub in the frame of the Western Balkan and Adriatic interaction networks. Investigations at this site also represent an important step in progressing towards an in-depth discovery of the post-Cetina horizon, which has been thus far overshadowed in central Dalmatia.

Keywords: *late Early Bronze Age; Middle Bronze Age; central Dalmatian coast; Adriatic networks; Dinara/Posušje Culture*

Introduction

Rescue excavations at Vranjic (Gulf of Kaštela) brought to light invaluable data for the comprehension of an important missing piece of the central Dalmatian, Adriatic and, on a macro-scale, also Western Balkan and Mediterranean Bronze Age. The systematic study of the finds from the site¹ allows for the reconsideration – under a

more objective light – of the typical features of an area (central Dalmatian coast), which, over the past decades, has very often – and from different points of view – been overshadowed. It also allows for the re-examination of the role this area played in the interaction dynamics with the neighbouring regions.

¹ Pottery finds from Vranjic, datable between the late Early and Recent Bronze Age (Bz A2/A3–D/Ha1), have been analysed in the framework of the doctoral dissertation of Alberta Arena at Sapienza Università di Roma and Freie Universität Berlin (Arena 2018). Results are foreseen to be soon published in a monograph.

From a chronological perspective, more attention has been paid within the research history to earlier or later cultures of the same area, such as the Early Bronze Age I Cetina Culture (ca. 2300–1850 BCE), with its typical burial mounds, bronzes and richly decorated vessels,² or to the Iron Age cultures, with a major part of the overall knowledge relying on comparisons to hillforts and necropoleis in the Northern Dalmatia area, which have been studied in more detail, as well as a few pottery studies.³ The in-between period (about 1850–900 BCE) is still, in a number of ways, an unwritten page in the Bronze Age history of the area.

From a geographical point of view, knowledge of central Dalmatia during this time span has been overshadowed by imposing neighbouring sites, such as the Istrian hillforts to the north,⁴ the Herzegovina and Bosnian hillforts to the east⁵ beyond the border represented by the maritime belt of the Dinaric Alps, and, finally, by the very well-known Proto-Apennine, Apennine and Sub-Apennine Cultures' sites characterising the Italian Peninsula from the late Early to the Recent Bronze Age.⁶

In particular, regarding the main period in question (late Early and Middle Bronze Age), when in the 1980s major cornerstone publications on Balkan prehistory⁷ were published, only a few coastal and island sites were taken into account, as most of them were unpublished or not excavated at all.⁸ Along with this, main pottery studies of the neighbouring Northern Dalmatia coastal area have been chronologically strongly biased towards Late Bronze Age, presenting the area with a seemingly

relative absence of pottery finds related to the period in focus.⁹

This lack of data obviously had an impact on the research history, above all in the principal studies aiming to define the cultures of this corner of the Balkan Peninsula and, for our period of interest, studies aiming at defining the late Early and Middle Bronze Age culture.

Even if it is well known that the Posušje Culture, defined by Čović in 1989,¹⁰ and the Dinara Culture, defined by Govedarica in the same year,¹¹ are in general almost interchangeable concepts, we prefer here to recall and apply Govedarica's definitions because, in his treatise, slightly more attention was paid to the coast (where possible), whereas Čović's approach is more overtly "hinterland-oriented", as is obvious from the choice of the name.

In Govedarica's view, the Dinara Culture characterises the late Early (Bz A2/A3, Dinara 1) and Middle Bronze Age (Bz B and C, Dinara 2) of the whole central Adriatic area: hinterland, coast and islands.¹²

In order to determine internal periodisation and typical features, Govedarica was able to rely on a wide spectrum of data from the hinterland, deriving from excavations and publications at different sites, such as Varvara, Nečajno, Sovići and Gagrice among others, whereas he could only rely upon 7 sites regarding coast and islands, some of them exclusively bearing metal objects (such as Ivankovaća), or only a very small number of finds (such as Bogomolje, Močiljska Pečina, Grapčeva Špilja, Markova Špilja). This means that the definition of the pottery variability of the Dinara Culture was strongly unbalanced, tending towards hinterland characteristics rather than towards coastal and islands ones.

New excavations, find analyses, and publications – some of which still are ongoing and/or in preparation – dem-

² Main references: Marović, Čović 1983; Govedarica 1989, pp. 129–144; Marović 1991.

³ For the synthesis of Iron Age on Eastern Adriatic see: Čović 1987 and Batović 1987; for pottery see: Barbarić 2016.

⁴ From the pioneering works of Carlo Marchesetti between the end of the 19th and the beginning of the 20th century (Marchesetti 1903), Karst and Istrian hillforts have been constantly investigated and published. Summarizing chrono-typological works have also been carried out (Cardarelli 1983). Investigations at Monkodonja, and the full publication of data from the site (Hänsel *et al.* 2015; Hellmuth Kramberger 2017) represents thus far the main reference for the Bronze Age of the Istrian region.

⁵ Čović 1965, 1978, 1989; Oreč 1978.

⁶ Puglisi 1959; Macchiarola 1987; Cocchi Genick 1995; Pacciarelli 2000; Damiani 2010.

⁷ Čović 1983; 1989; Govedarica 1989.

⁸ Arena *et al.* 2020.

⁹ Publication of field survey finds (Batović 1973) and later synthesis of the Late Bronze Age on the eastern Adriatic coast (Batović 1983) is biased towards much later dating of pottery finds due to the chronology of Late Bronze Age and Iron Age Liburnian culture that was proposed by Batović in his works. This fact has produced a "chronological gap" related to Middle Bronze Age in local literature that is about to be mended with recent and ongoing studies by the main author of this paper.

¹⁰ Čović 1989. A concise definition of the Posušje Culture was already published by Čović in ALBIH 1988.

¹¹ Govedarica 1989, pp. 145–172.

¹² Govedarica 1989, pp. 145–172.



Figure 1. Vranjic Peninsula in the Gulf of Kaštela, ortophoto (www.arkod.hr).

onstrate a sort of duality of the Dinara Culture, showing a hinterland version with its own peculiarities and a “maritime” one, deeply intertwined in the Adriatic interaction dynamics.¹³

Even if we are at the very beginning of this reassessment process and even if a considerable amount of work still needs to be done, a few new elements and possible lines of research have already emerged.

Excavation at the site

Archaeological rescue excavations at Vranjic took place in 2005 and 2006¹⁴ and brought to light an almost continuous sequence, spanning from the late Early Bronze Age to Medieval times, according to the typological analyses of the finds¹⁵ and to a sequence of twenty radio-

carbon dates.¹⁶ The most important traces of the Bronze Age period were found in the southwestern part of a present-day waterfront, where the deposit was still *in situ*.

The Bronze Age deposit was subsequently interpreted as traces of a settlement based on the significant quantity of plaster found in all the layers.

The shape of what is now an island artificially linked to mainland was morphologically slightly different in the Bronze Age. The sea level was about three metres lower and, consequently, the exposed surface of the peninsula was larger to the west and to the north, with probably less changes concerning the southwestern and southern side of Vranjic, where the most important Bronze Age deposits were recovered.¹⁷

¹³ Arena *et al.* 2020.

¹⁴ Radić Rossi 2006; 2007; 2008a–b; 2011; Vodička Miholjek 2008; Skelac, Vodička 2009.

¹⁵ It is foreseen a full publication of the finds from the site, comprising all periods.

¹⁶ Radić Rossi 2011, p. 302.

¹⁷ Radić Rossi 2011, pp. 306–307. These preliminary ideas about the conformation of the Peninsula during the Bronze Age, must be enriched by further in-depth analyses, above all taking carefully into consideration erosional processes on the southern side of it.

Analysis of finds

First, it seems important to mention that the finds presented here (Figs. 2–4) represent a small percentage (about 10%) of all Bronze Age assemblages recovered at the site and that we tried to select highly diagnostic specimens, both from a chronological and “cultural” point of view.

Our task here is to clarify some issues regarding the late Early and Middle Bronze Age period, whereas the Late Bronze Age is worthy of further enquiry.¹⁸

Even if – taking into account the difficult context of an underwater rescue excavation – it was to some extent possible to identify and excavate some stratigraphic sequences, it also must be said that a large number of the finds were unearthened without their original contexts.

The chronological assessment of the assemblage presented here can rely upon a network of cross-referencing with more or less well-dated contexts, located in different areas of the Adriatic coast and hinterland (Tab. 1).

Dating through comparison was facilitated by the large number of far-reaching connections that can be established starting from the ceramics recovered at Vranjic. The main contexts that have been used to identify late Early and Middle Bronze Age pots at the site in fact span from Central Bosnia and Herzegovina (Pod A, Varvara A2/A3/B1, Nečajno, Sovići) to Istria (Monkodonja) and Northern Apulia (Grotta Manaccora, Coppa Nevigata and Trinitapoli). Their chronologies are summarised in Tab. 2.¹⁹

Switching from a relative chronology based on comparisons to an absolute chronology is far from being an easy task, above all in an area (Central Dalmatia), for which extensive sequences of radiocarbon dates are not available so far. Regarding the Bronze Age phase of occupation of the Vranjic Peninsula, we can exclusively rely upon three radiocarbon dates (on wood):²⁰

1) IRB Z-3643: 3120 ± 60 BP (1448–1296 cal 1 σ BC, 1505–1226 cal 2σ BC)

2) IRB Z-3686: 3010 ± 50 BP (1377–1132 cal 1 σ BC, 1410–1110 cal 2σ BC)

3) CEDAD LTL1656A: 2925 ± 55 BP (1212–1046 cal 1 σ BC, 1280–941 cal 2 σ BC)

Date 3, obtained at CEDAD, overtly indicates a Late Bronze Age time span, date 2, IRB Z-3686, indicates a late Middle/Late Bronze Age time span, whereas the oldest date 1, IRB Z-3643, clearly indicates a late Middle Bronze Age chronology, namely MBA3 (following the Italian chronology) or Bz C (following the Central European chronology). This oldest date fits perfectly with the foreign models recovered at the site (namely Italian Apennine-like models, see below), clearly datable to the MBA3/Bz C, and with the chronology of some contexts, where pots overtly comparable with those from Vranjic have been recovered (such as Privala B, Varvara B1, Coppa Nevigata group C and H, Trinitapoli – burial phase, see Tabs. 1–2).

But there are other clues indicating an older beginning of the settlement at Vranjic, before MBA3/Bz C. In order to demonstrate the existence of an occupation phase predating MBA3/Bz C, we could use two main arguments. The first is based on the typological comparisons that can be established between Vranjic and other contexts, clearly dated through radiocarbon dating and/or refined typo-chronological studies. The main example is represented by Monkodonja;²¹ the chronology of this renowned site has been determined on the basis of a broad sequence of radiocarbon dates (Monkodonja 1: 1900/1800–1650/1600; Monkodonja 2: 1650/1600–1500/1450), and it has been often emphasised that the occupation of the hillfort abruptly ceases soon after 1500 BCE. Ceramics from Vranjic can be compared to specimens both from the first and from the second phase. Thus, comparisons with Monkodonja, as well as other comparisons that can be established with Italian sites (such as Coppa Nevigata group B and the ritual phases from Trinitapoli and Grotta Manaccora), send us further back in time, at least in MBA1–2/Bz A3–B.

¹⁸ See above note 14.

¹⁹ The chronologies proposed in Tab. 2 are partially based on the cornerstone publication of each site, partially on the chronological revision that has been carried out by Alberta Arena in her doctoral dissertation (Arena 2018).

²⁰ Radić Rossi 2011, p. 302.

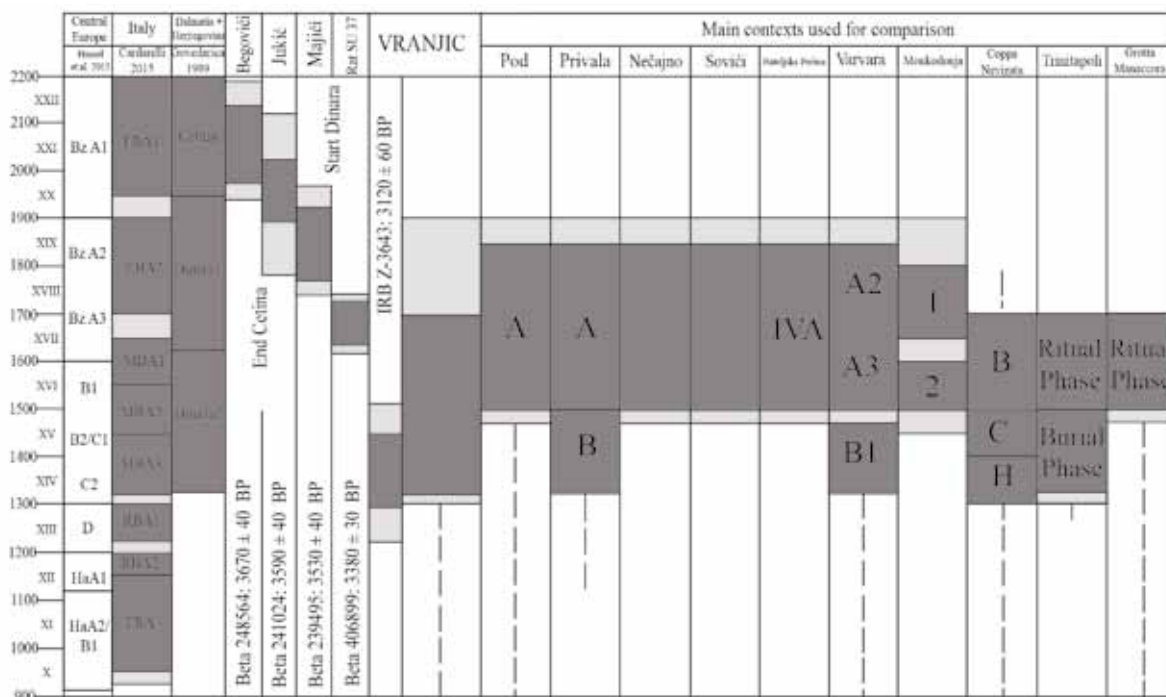
²¹ Hänsel *et al.* 2015; Hellmuth Kramberger 2017.

Fig.	Main comparisons (S=Shape; H=Handle; D=Decoration)	
2.1	S	Škrip (Middle Bronze Age SUs, unpublished); Grotta Manaccora, Area A = "ritual phase" (Tunzi <i>et al.</i> 2018, Fig. 2.4); Torre Mileto (Gravina 1995, Fig. 4.1).
2.2	S	Sovići (Čović 1983, Pl. XVII.9); Monkodonja (Hellmuth Kramberger 2017, Pl. 59.1); Monte Grisa (Moretti 1978, Fig. 4.1).
2.3	S	Majići, mound 1 (Mucić, Kovačević Bokarica 2011, Pl. 5.36).
2.4	S	Pod A (Čović 1991, Pl. 16.3); Prisap (Marjan 1995, Pl. 1.5).
2.5	S	Vilina Pećina (Petrić 1981, Pl. 1.7); Coppa Nevigata, Group H (Cazzella - Moscoloni 1987, Fig. 76.5); Trinitapoli, Ipogeo dei Bronzi, burial phase (Cataldo 1999, Pl. III.815, here Fig. 5.2).
2.6	S	Nečajno (Oreč 1978, Pl. XII.9); Varvara A3 (Čović 1978, Pl. XXXII.1).
2.7	S	Varvara B1 (Čović 1978, Pl. XXXVIII.3); Trinitapoli, Ipogeo dei Bronzi, burial phase (Cataldo 1999, Pl. I.3, here Fig. 5.4).
2.8	S	Varvara, Trench G-z, layers 19 and 17 (late EBA/early MBA(?), Arena - Pravidur, in press, Pls. X.3 and XI.1).
2.9	S	Grotta Manaccora (unpublished); Trinitapoli, Ipogeo dei Bronzi, burial phase (Cataldo 1999, Pl. II.938, here Fig. 5.6).
2.10	S	Gospodska Pećina (Marović 1979, Fig. 6.1); Monkodonja, Sonda IX – Phase 2.5/6 (Hellmuth Kramberger 2017, Pl. 27.7); Grotta Manaccora, excav. Baumgärtel, from AII 49 = "ritual phase" (Recchia 1993, Fig. 10.3).
3.11-14	S	Bogomolje, Glava Malisnova (Marović 1985, Fig. 10); Grapčeva Špilja (Novak 1955, Fig. 17 and Pl. 3); Lastovo, Sozanj (Della Casa <i>et al.</i> 2009, Fig. 19.12); Nečajno (Oreč 1978, Pl. XI.6); Pod A (Čović 1991, Pl. 17.2); Podumci (Marović 1999, Fig. 9); Vranjaj Cave (Pušić 1999, Pl. XV.3); Monkodonja (Hellmuth Kramberger 2017, Pl. 96.10); Grotta Manaccora, Area A = "ritual phase" (Tunzi <i>et al.</i> 2018, Fig. 4.1.9); Trinitapoli, Ipogeo dei Bronzi, burial phase (Cataldo 1999, Pl. VII.1184); Pescina – Le Coste, from the "appenninic pit" (Ialongo 2007, Fig. 102.12).
3.15	S	Močljaska Pećina (Petrić 1981, Pl. I.6); Škrip 1976 (unpublished); Jama, cave (Korošec 1989, Pl. 1.3); Monkodonja, Sonda IX – Phase 1.2/3 (Hellmuth Kramberger 2017, Pl. 13.8); Monkodonja, Sonda IX – Phase 1.3 (Hellmuth Kramberger 2017, Pl. 13.16); Monkodonja, Sonda IX – Phase 1.2/3 (Hellmuth Kramberger 2017, Pl. 27.5); Coppa Nevigata, group C (Cazzella - Moscoloni 1987, Fig. 73.10); Grotta Manaccora, Area A = "ritual phase" (Tunzi <i>et al.</i> 2018, Fig. 4.4-5); Trinitapoli, Ipogeo degli Avori, burial phase (Peroni <i>et al.</i> 2003, Fig. 5, here Fig. 5.8).
3.16-17	S	Coppa Nevigata, group C (Cazzella - Moscoloni 1998, p. 35, Fig. 15); Grotta Manaccora, excav. Baumgärtel, from AII 50a = "ritual phase" (Recchia 1993, Fig. 14.3); Grotta Manaccora, excav. Baumgärtel, from A 4 m = "ritual phase" (Recchia 1993, Fig. 14.4); Grotta Manaccora, Area A = "ritual phase" (Tunzi <i>et al.</i> 2018, Fig. 5.2); Torre Mileto (Gravina 1995, Fig. 4.2); Trinitapoli, Ipogeo dei Bronzi, ritual phase (Tunzi Sisto 1999, p. 191, bottom).
3.18-19	S	Škrip 1974 (unpublished); Varvara A3 (Čović 1978, Pl. XXI.1); Grotta Manaccora, Area A = "ritual phase" (Tunzi <i>et al.</i> 2018, Fig. 4.2); Grotta Manaccora, excav. Baumgärtel, stratum III (Baumgärtel 1953, Fig. 1.8); Trinitapoli, Ipogeo dei Bronzi, burial phase (Cataldo 1999, Pl. VII.464, here Fig. 5.10).
3.20	S	Biconical tankards and pitchers are one of the main features of the Dinara Culture (see Govedarica 1989, pp. 154-162). Such models have also been found in Northern Apulia (at Coppa Nevigata, Grotta Manaccora, Torre Mileto, Trinitapoli). However, it was not possible to find a clear comparison for the specimen recovered at Vranjaj.
4.21	S	Čitluk, Lad, Mound 2 (Marović 1991, Fig. 72.2); Podumci (Marović 1999, Fig. 12a); Varvara, Trench G-i, layer 20 (late EBA/early MBA(?), Arena - Pravidur, Pl. XV.6).
4.22	S	Hateljska Pećina, Phase IVa (Marijanović 2000, Pl. XLII.3); Varvara A3 (Čović 1978, Pl. XXVIII.1).
4.23	H	This type of handle represents one the main features of the Istrian Castellieri Culture. For the distribution of the type see Hellmuth Kramberger 2017, Fig. 216. In Dalmatia, it is attested at Bogomolje, Gomilice (Marović 1985, Fig. 4a, c); Gudnja (Marijanović 2005, Pls. LVIII.3 and LXII.5); Gradina kod Matkovića (Mucić, Kovačević Bokarica 2011, Pl. 1.4); Škrip (Protić 1988, Fig. 8.4). In Northern Apulia it is attested at Coppa Nevigata, group B (Cazzella, Moscoloni 1987, Fig. 71, 14-15); Grotta Manaccora, excav. Baumgärtel, from AI 40 = "ritual phase" (Recchia 1993, Fig. 20.7); Torre Mileto (Gravina 1995, Figs. 3.13 and 8.2). In the Marche region it is attested at Montagnolo (Sabbatini <i>et al.</i> 2009, Fig. 7.5).

Tab. 1-1. Main comparisons between Vranjaj and other sites mostly located in Central Dalmatia, Central Bosnia, Herzegovina, Istria, and Northern Apulia (author Alberta Arena).

Fig.	Main comparisons (S=Shape; H=Handle; D=Decoration)	
4.24-28	D	Incised motifs are one of the main features of the first phase of the Dinara Culture (Govedarica 1989, pp. 154-158). They are attested in different sites, mostly located in the hinterland, beyond the maritime belt of the Dinaric Alps. Such decorations are documented at Dokanova Glavica (Benac 1986); Hateljska Pećina, Phase IVb (Marijanović 2000, Figs. 32-33); Nečajno (Oreč 1978; Čović 1989); Pod A (Čović 1983; 1991); Prisap (Marjan 1995, Pl. 3.5); Privala A (Govedarica 1982); Varvara A2 and A3 (Čović 1978); Vrtača 2 u Kovačevićima (Katavić <i>et al.</i> 2011, Pl. 1.8); Rat (unpublished); Ravlića Pećina (Marijanović 2012, Pls. LXXXVI.4 and LXXXVII.2); Sovići (Čović 1989, Pl. XII.3); Sv. Juraj (Čače 2001, n. 49); Škarin Samograd (Brusić 1972); and possibly at Lastovo, Kaštel (Della Casa <i>et al.</i> 2009, Fig. 11.10-13).
4.29	D	Pod A (Čović 1991, Pl. 19.6); Privala A (Govedarica 1982, Pl. II.1); Varvara, Trench G-i, layer 19A (late EBA/early MBA(?), Arena - Pravidur, in press, Pl. XVI.29).
4.30-31	H	Pierced handles with twisted margins are largely documented in the framework of Appenine Culture, characterizing the Italian Peninsula during Middle Bronze Age 3 (see Cocchi Genick 1995, Figs. 174-181 and Pacciarelli 2000, Fig. 15A.8-9.B.2.C.7).
4.32-33	D	Spiral-shaped motifs are largely documented in the framework of Appenine Culture, characterizing the Italian Peninsula during Middle Bronze Age 3. The decorations recovered at Vranjic may be compared with Motifs 29A, 30 or 34 of the typological classification proposed by Ida Macchiarola (Macchiarola 1987). In Northern Apulia spiral-shaped motifs are attested at Trinitapoli, Ipogeo dei Bronzi, burial phase (Cataldo 1999, p. 243, n. 381) and at Pozzillo (Lo Porto 1997, Figs. 39, 71).
Fig.	Main comparisons (for handles related to the above listed shapes)	
2.2,4 and 3.11,18-19	H	This type of handle represents one of the main features of the Istrian Castellieri Culture. For the distribution of the type see Hellmuth Kramerberger 2017, Fig. 217. In Dalmatia and Herzegovina it is attested at Prisap (Marjan 1995, Pl. 1.4); Privala A (Govedarica 1982, Pl. I.8); Rat (unpublished); Škrip (Protić 1988, Fig. 8.5). In Northern Apulia it is attested at Coppa Nevigata (Belardelli 2004, Pls. L.3, LXII.6, LXIV.20); Grotta Manaccora (unpublished); Santa Maria di Ripalta (unpublished); Torre Mileto (Gravina 1995, Fig. 9.12); Trinitapoli, Ipogeo dei Bronzi, burial phase (Cataldo 1999, Pls. I.882,1658, II.517,524, III.815). In the Marche region it is attested at Massignano (Baldelli <i>et al.</i> 2005, Fig. 5.4).
2.3,7,8,10 and 3.12-14	H	Rounded tongue-shaped terminations represent one of the main features of the Dinara Culture. They are attested in many sites, such as Bogomolje, Glava Malisnova (Marović 1985, Fig. 10); Bribirska Glavica (Korošec, Korošec 1980, Fig. 23); Hateljska Pećina, Phase IVa (Marijanović 2000, Pl. XLIII.4); Jujnovića Špilja (Tomasović 2011, Pl. III.3); Lastovo, Sozanj (Della Casa <i>et al.</i> 2009, Fig. 19.12); Nečajno (Oreč 1978); Pod A (Čović 1983; 1991); Privala A (Govedarica 1982); Rat (Protić 1988); Rudine, mound 39 (Marović 1991, Fig. 25.5); Stubica (Čović 1983); Sv. Juraj (Čače 2001, n.11); Varvara (Čović 1978). In Northern Apulia they are attested at Coppa Nevigata (Belardelli 2004; Cazzella, Moscoloni 1987); Grotta Manaccora (Baumgärtel 1953, Recchia 1993); Trinitapoli, Ipogeo dei Bronzi (Cataldo 1999). In the Marche region they are attested at Forcella di Castel di Lama (Lucentini 2005, Fig. 2.5) and at Massignano (Baldelli <i>et al.</i> 2005, Fig. 5.1).
2.9	H	Škarin Samograd (Marović - Čović 1983, Pl. XXIX.16); Coppa Nevigata, Boschi collection (Belardelli 2004, Pl. LXVII.3); Trinitapoli, Ipogeo dei Bronzi, burial phase (Cataldo 1999, Pl. I.3).
4.22	H	Rectangular tongue-shaped terminations represent one of the main features of the Dinara Culture. They are attested at many sites, such as Hateljska Pećina, Phase IVa (Marijanović 2000, Pl. XLIV.7); Ljubomir (Čović 1983, Pl. XX.4); Nečajno (Čović 1989, Pl. IV.2); Pod A (Čović 1991, Pl. 14.1); Prisap (Marjan 1995, Pl. 2.6); Privala A (Govedarica 1982, Pl. I.7); Privala B (Govedarica 1982, Pl. VI.2); Rat (Protić 1988); Ravlića Pećina (Marijanović 2012, Pl. LXXXIV.1); Sovići (Čović 1989, Pl. IX.8); Stubica (Čović 1983, Pl. XV.6); Sv. Juraj (Čače 2001, n.12,16); Škrip (Protić 1988); Varvara A3 (Čović 1978, Pl. XXXI.5); Veliki Vanik (Mucić, Kovačević Bokarica 2011, Pl. 6.48). In Northern Apulia they are attested at Coppa Nevigata (Belardelli 1995; Cazzella - Moscoloni 1987); Grotta Manaccora (Baumgärtel 1953; Recchia 1993); Torre Mileto (Gravina 1995); Trinitapoli (Cataldo 1999; Peroni <i>et al.</i> 2003). In the Marche region they are attested at Ancarani di Sirolo (Baldelli <i>et al.</i> 2005, Fig.1.6,8); Forcella di Castel di Lama (Lucentini 2005, Fig. 3.3,15); Massignano (Museo Archeologico Ancona).
2.6	H	Nečajno (Čović 1989, Pl. IV.4); Privala A (Govedarica 1982, Pl. I.1); Rat (unpublished); Sovići (Čović 1983, Pl. XIX.3); Grotta Manaccora (unpublished).

Tab. 1-2. Main comparisons between Vranjic and other sites mostly located in Central Dalmatia, Central Bosnia, Herzegovina, Istria, and Northern Apulia (author Alberta Arena).



Tab. 2. Chronology of the main contexts used for comparison (author Alberta Arena).

The second argument that indicates the existence of a MBA1–2/Bz A3–B phase at Vranjic is also proven by the presence of incised decorations at the site (Fig. 4.24–28), since two radiocarbon dates (both obtained from bone samples) associated with such motifs are available from the area under investigation:

– Rat S.U. 37, Beta 406899: 3380 ± 30 BP (1731–1636 cal 1σ BC; 1746–1616 cal 2σ BC);²²

– Majići, mound 1, Beta 239495: 3530 ± 40 BP (1921–1775 cal 1σ BC; 1970–1744 cal 2σ BC).²³

Whereas the radiocarbon date from Rat and the attribution of the decorated finds from the S.U. 37 to the typically Dinara incised motifs can be entirely accepted, this is not the case for the date from Majići, which needs to be prudently taken into account.²⁴

An older beginning (before 1700 BCE) of the settlement cycle at the Vranjic Peninsula is uncertain.

The old chronology characterising, for example, Pod A, Privala A, Nečajno and Sovići is based on the interpolation between the latest radiocarbon dates associated to the Cetina Culture (from Begovići²⁵ and Jukić, mound 1-grave 3²⁶) and the oldest dates associated to the Dinara Culture (such as Majići and possibly also Odmu-level VII²⁷). Even if the beginning of the Dinara cycle during the 19th century BCE is thus probable, this does not prove that such an early start can also be attributed to the Bronze Age occupation of the Vranjic Peninsula.

Analysis of the shapes and decorations of the ceramics recovered at Vranjic datable between the late Early and the Middle Bronze Age, thanks to the above-mentioned

²² The context has been analysed in the doctoral dissertation of Alberta Arena (Arena 2018).

²³ Mucić, Kovačević Bokarica 2011, pp. 154–157.

²⁴ On the one hand, use of the mounds persisted over considerable spans of time, retaining traces of thousands of years; on the other hand, the decorated sherds are only described in the text, neither drawings nor photographs are provided.

²⁵ Beg Jerončić 2011. Beta 248564, on human tooth (3670 ± 40 BP: 2134 – 1979 cal 1σ BC; 2195 – 1939 cal 2σ BC).

²⁶ Olujić 2012, pp. 63–64. Beta 241024, on charcoal (3590 ± 40 BP: 2014 – 1892 cal 1σ BC; 2116 – 1779 cal 2σ BC).

²⁷ Marković 1985, p. 44, Tab. 30; the date BP is published in Della Casa 1996, p. 136 note 176 (SI 2218 – 3660 ± 80 BP: 2187 – 1931 cal 1σ BC; 2286 – 1779 cal 2σ BC). This date must be carefully considered, as it covers a very wide time-span.

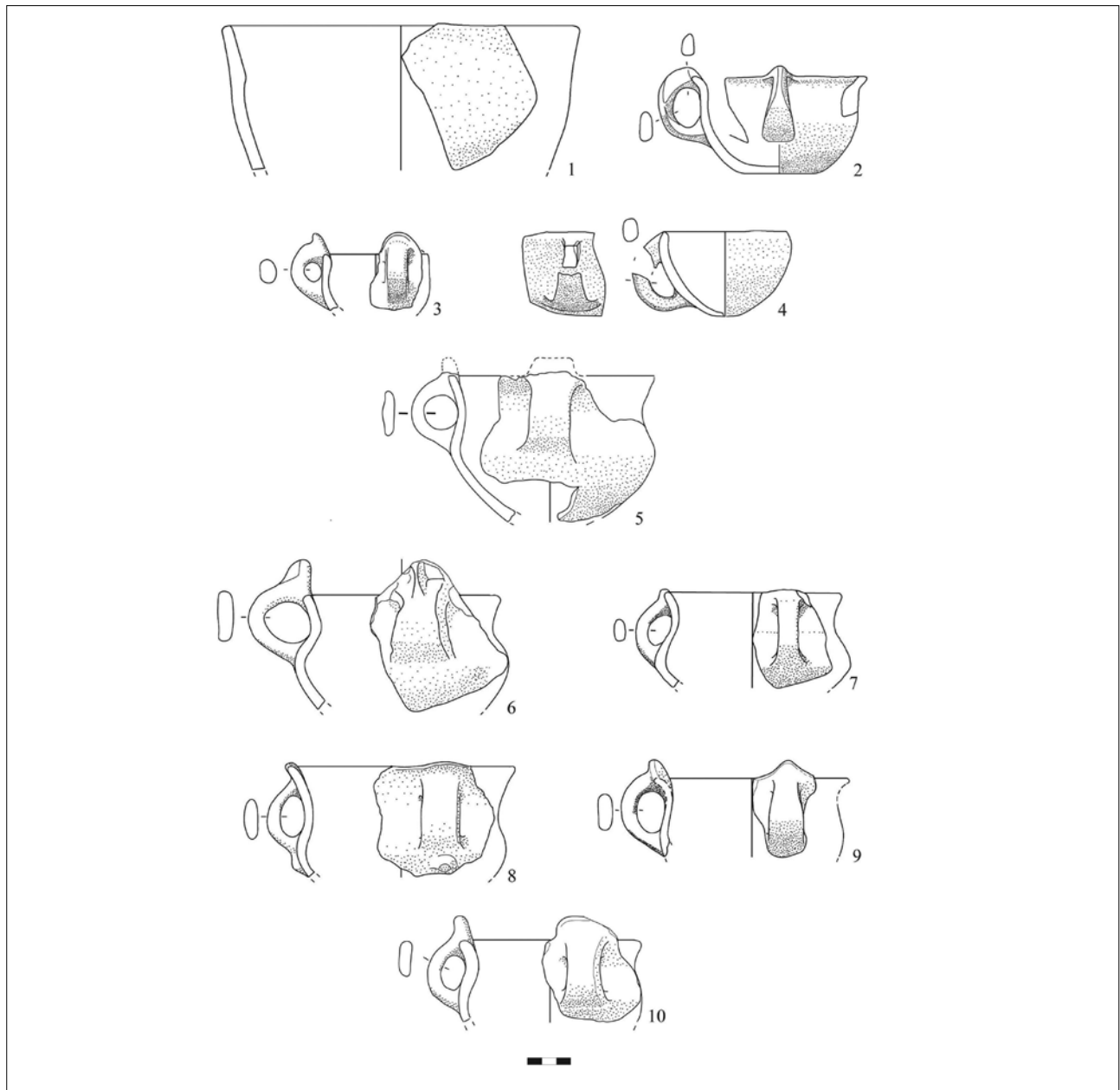


Figure 2. Selected late Early and Middle Bronze Age sherds recovered at Vranjic (author Alberta Arena).

cross-comparisons (Tab. 1) indicates that a good part of it adheres to the typical Dinara Culture models:²⁸ small bowls/dippers with a rounded profile (Fig. 2.4); biconical cups (Fig. 2.5–7) and tankards/pitchers (Fig. 3.20); strap-handles with more or less developed tongue-shaped terminations, which may be rounded (Fig. 2.3,7,8,10 and Fig. 3.12–14), triangular (Fig. 2.9) or

rectangular (Fig. 4.22), or with a central embossed segment (Fig. 2.6); incised decorations (Fig. 4.24–28) and grooves (Fig. 4.29), are also some of the main Dinara (and Posušje) Culture's distinctive features. This is not surprising, due to the geographical proximity of Vranjic to the sites, which had been analysed in the 1980s for the definition of the late Early and Middle Bronze Age Culture of the area.

²⁸ Govedarica 1989, pp. 154–162.

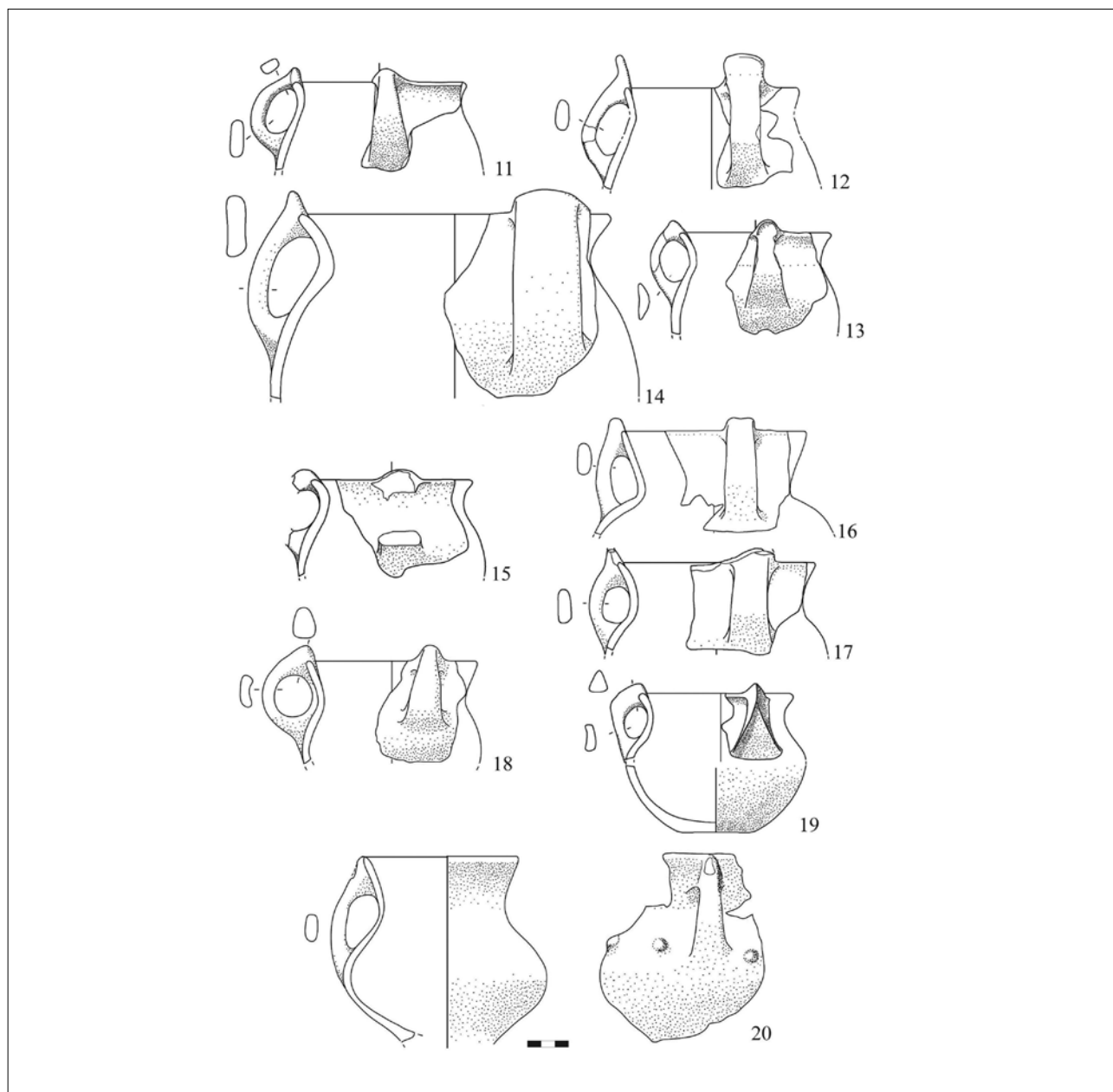


Figure 3. Selected late Early and Middle Bronze Age sherds recovered at Vranjic (author Alberta Arena).

But the pottery assemblages recovered at Vranjic bear some more typological features – rather than exclusively “Dinara-like” markers – which mirror the degree of centrality of the site in the framework of the central and northern Adriatic interaction network.

Some handle types, such as vertical handles with a plate in the upper joint (Fig. 4.23) or those with a triangular

front (Fig. 2.2,4 and Fig. 3.11,18,19), are clearly models belonging to the Istrian *Castellieri* Culture.²⁹

Some other models, such as pierced handles with twisted margins (Fig. 4.30–31) or spiral-shaped excised motifs

²⁹ For an overview on the distribution of typically Istrian models in the Adriatic basin, see Arena *et al.* 2020, Fig. 3.

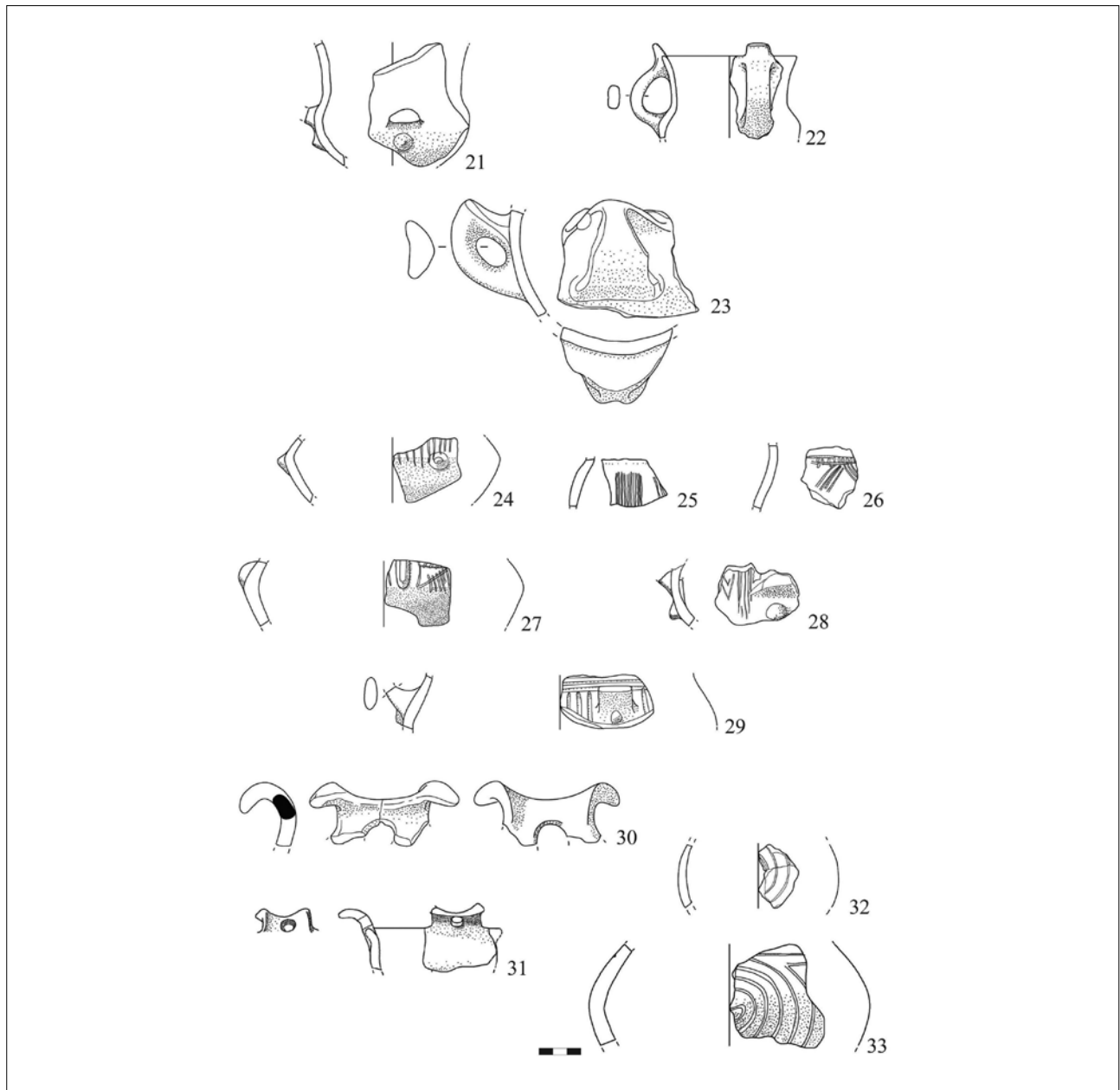


Figure 4. Selected late Early and Middle Bronze Age sherds recovered at Vranjic (author Alberta Arena).

(Fig. 4.32–33), are completely unrelated to the eastern Adriatic pottery variability, being instead typical elements of the Italian so-called Apennine Culture.³⁰

³⁰ Puglisi 1959; Macchiarola 1987. The sherd n. 33 in Fig. 4, was formerly attributed to the Neolithic Danilo Culture (Radić Rossi 2011, p. 303). Even if this interpretation is reasonable from a mere typological point of view, it does not consider the Bronze Age chronology of

the site, where no other Neolithic sherds have been recovered. For this reason, a comparison with Apennine-like Middle Bronze Age 3 Italian models seem more plausible. Archaeometric (petrographic, mineralogical, chemical) analyses on Italian-like models recovered at Vranjic have been carried out at the University of Bari – Dipartimento di Scienze della Terra (Dr. Giacomo Eramo) in the framework of a wider research on imports vs. local production in the context of trans-Adriatic contacts (Arena 2018). The publication of the above-mentioned archaeometric results is in preparation. For an overview of all Italian-like models recovered in central Dalmatia see Arena *et al.* 2020, Fig. 2.

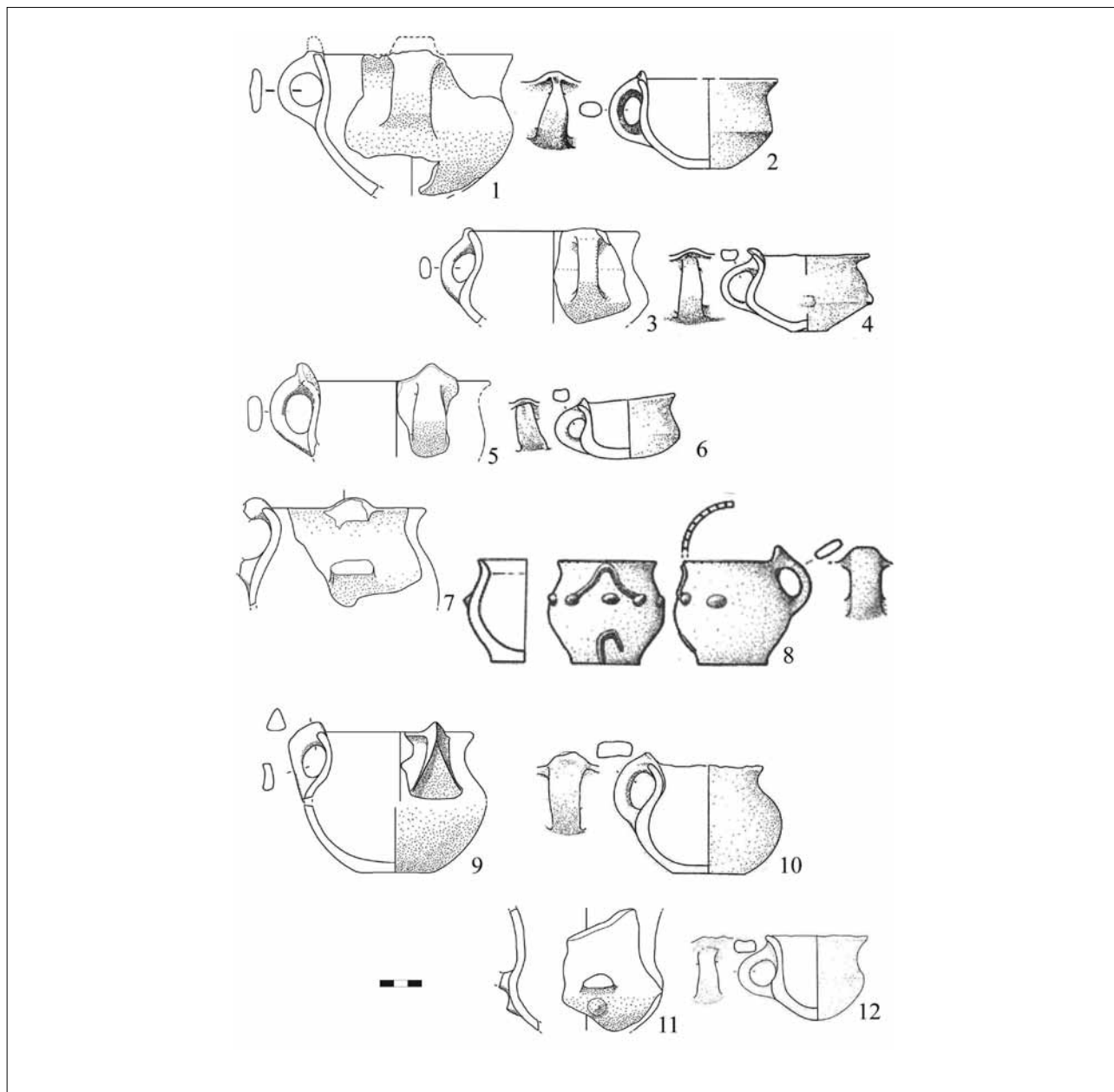


Figure 5. Comparisons between sherds from Vranjic (Central Dalmatia) and miniaturized versions from Trinitapoli (Northern Apulia). Vranjic: 1, 3, 5, 7, 9, 11; Trinitapoli: 2, 4, 6, 8, 10, 12 (after Cataldo 1999 and Peroni *et al.* 2003).

Ovoid (Fig. 3.11–15) or globular (Fig. 3.16–19) tankards and pitchers are more easily comparable to specimens recovered in Northern Apulia, rather than to pots from the Bosnian or Herzegovina hinterland.

Moreover, the similarity between some pots from Vranjic and some pots from Trinitapoli in Northern Apulia³¹ serves as the iconic representation of the intensity of trans-Adriatic contacts in this period (Fig. 5).³²

³¹ Arena *et al.* 2020.

³² Arena *et al.* 2018, with former references.

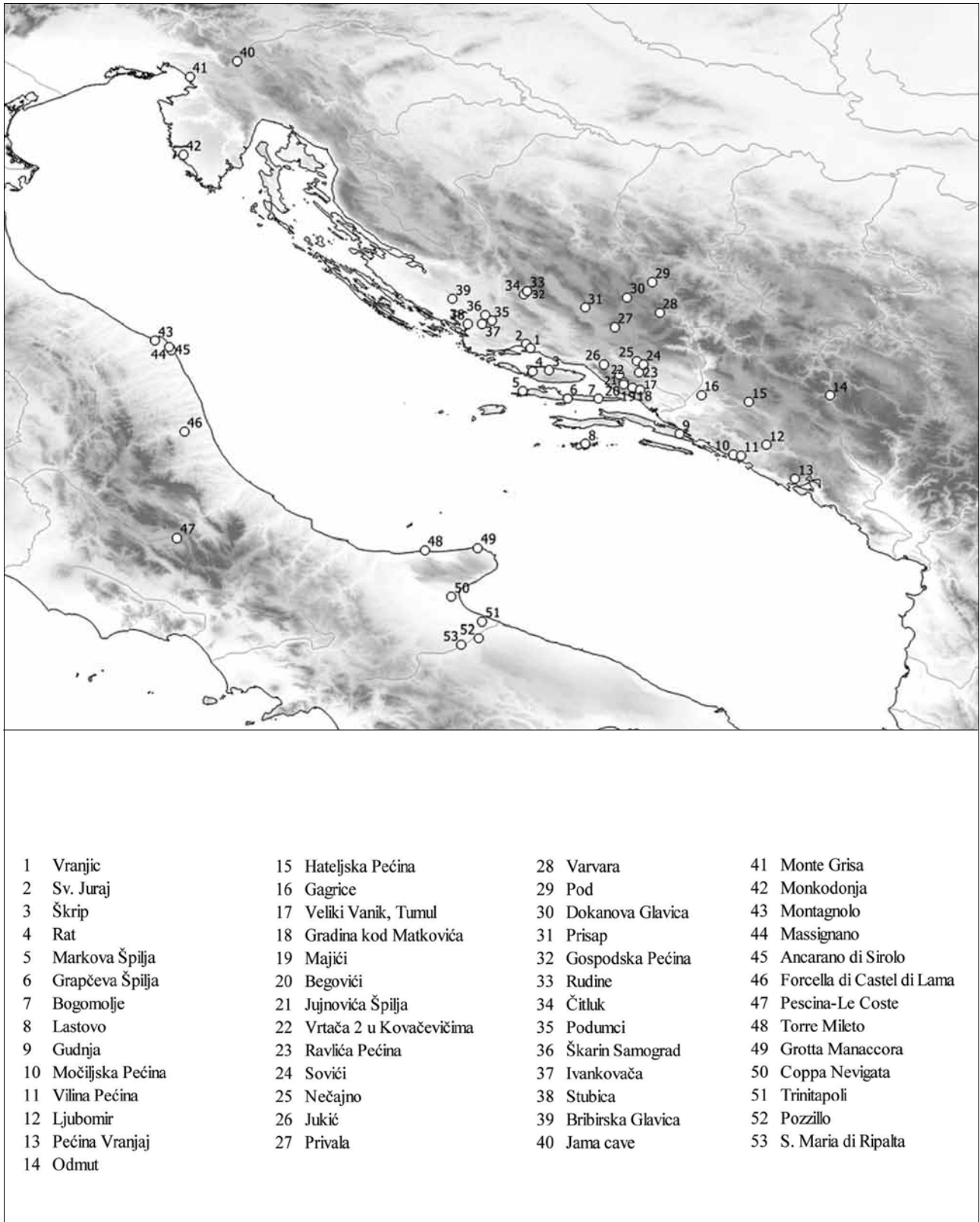


Figure 6. Location of the sites cited in the text (author Alberta Arena).

Conclusions

Regarding the Bronze Age phase analysed here, some elements can be highlighted:

A) The presence at the site of clearly Istrian models (such as vertical handles with plate in the upper joint and vertical handles with a triangular front).

B) The presence of clearly Appennine-like models, such as spiral-shaped excised decorations and pierced handles with twisted margins.

C) The quantity and quality of comparisons that – starting from Vranjic – can be established with the Istrian Castellieri Culture to the north and with Northern Apulia to the west (mainly concerning ovoid and globular tankards/pitchers).

This makes clear something that was hitherto only supposed; namely, that the peculiarity of coastal, as opposed to hinterland sites located beyond the maritime belt of the Dinaric Alps, lies in their entanglement with the other Adriatic districts: Istria to the north and northern Apulia to the west.

Something else here is additionally worth underlining; the fact that it is probable that Vranjic was more than a “normal” coastal site.

Its geographical location makes it an ideal place for connections as well as serving as a crossroads of different routes alongside and across the Adriatic Sea (through the Trogir channel to the north and through the passage between Cape Marjan and the Čiovo Island towards the central Dalmatian Islands³³ and further on, towards northern Apulia). Vranjic is also very well connected with inland sites, as the nearby Klis mountain pass links coast and hinterland and represents the most favourable doorway across the maritime belt of the Dinaric Alps, a barrier, which is – in most of other places of the Dalmatian coast – almost insurmountable.

³³ Kirigin 2012.

Acknowledgments

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Radiocarbon dates have been calibrated using IntCal13 atmospheric curve (Reimer *et al.* 2013).

ALBERTA ARENA,
VEDRAN BARBARIĆ. IRENA RADIĆ ROSSI
VRANJIC (KAŠTELANSKI ZALJEV) U KASNOJ
FAZI RANOG I SREDNJEM BRONČANOM
DOBU (19.-14. STOLJEĆA PR. KR.)

(Sažetak)

Zaštitno arheološko istraživanje u Vranjicu provedeno 2005. i 2006. godine pokazalo je postojanje stratigrafskog slijeda s kontinuiranim slijedom od kasnije faze ranog brončanog doba do srednjovjekovnog razdoblja, potvrđene tipološkom analizom nalaza i serijom od dvadeset C14 datuma.

Nalazi unutar brončanodobnog dijela stratigrafskog slijeda (pronađen *in situ* na jugozapadnom dijelu današnje obale) su, s obzirom na značajnu količinu kućnog lijepa u svim slojevima, interpretirani kao ostaci naselja.

Nalazi koji su ovdje objavljeni predstavljaju tek udio (otprilike 10%) svih nalaza lončarije. Odabrani su nalazi s dijagnostičkim potencijalom kako bi se razjasnile neke dvojbe vezane uz rano i srednjebrončanodobno razdoblje, dok pitanja vezana uz kasno brončano doba ostaju otvorena.

Kako je većina nalaza pronađena izvan izvornog konteksta, kronološki pristup predstavljenom skupu nalaza počiva na mreži tipoloških usporedbi s primjerima iz bolje ili lošije datiranih arheoloških konteksta s jadranske obale i zaleđa.

Zahvaljujući usporedbama s lokalitetima poput, primjerice, Monkodonje i Rata, predlažemo početak naselja u Vranjicu u vrijeme oko 1700 godina pr. Kr.

Analiza oblika i dekoracija lončarije pronađene u Vranjicu i datirane između kasnije faze ranog brončanog doba i srednjeg brončanog doba, zahvaljujući spomenutoj mreži tipoloških usporedbi (Tab. 1), pokazuje karakteristike tipične za Dinarску kulturu.

Ipak, centralni smještaj ovog lokaliteta unutar mreže jadranskih kontakata je jasno prikazan zastupljenošću oblicima lončarije u Vranjicu koja pripada drugim tipološkim tradicijama.

Neki tipovi ručki, poput trakastih ručki s horizontalnom pločicom na gornjem spoju (Fig. 4.23) ili onih s trokutastom formom tijela ručke (Fig. 2.2,4 and Fig. 3.11,18,19), bez sumnje pripadaju modelima iz istarske kulture kašteljera. Neki drugi oblici, poput perforiranih ručki s izvrnutim rubovima (Fig. 4.30–31) ili spiralno-izdubljenih motiva (Fig. 4.32–33) pokazuju potpunu nepovezanost s istočnojadranskim tipovima lončarije te su vezani uz tzv. apeninsku kulturu zapadne jadranske obale.

Povrh navedenog, sličnost nekih posuda iz Vranjica i drugih s lokaliteta Trinitapoli u sjevernoj Apuliji predstavlja plastičnu ilustraciju intenziteta prekojadranskih kontakata u ovom razdoblju. (Fig. 5).

Analiza formi, ručki i dekoracija odražava geografski smještaj lokaliteta, smještenog na križanju više komunikacijskih ruta, te ukazuje na njegovu ulogu važnog čvorišta unutar zapadnobalkanskih i jadranskih komunikacijskih mreža. Istraživanja na ovom lokalitetu također predstavljaju važan korak prema sveobuhvatnom pristupu post-Cetina horizontu srednje Dalmacije, koji je do sada bio zapostavljen.

Prijevod na hrvatski jezik: autori

ABBREVIATION

Godišnjak ANU BiH, CBI

Godišnjak Akademije nauka i umjetnosti Bosne i Hercegovine, Centra za balkanološka ispitivanja, Sarajevo

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