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# **Crafting pottery in Bronze Age Europe**

the archaeological background of the CRAFTER project

Zavičajni muzej Paraćin





Република Србија  
Министарство културе  
и информисања



Creative  
Europe

# Crafting pottery in Bronze Age Europe: the archaeological background of the **CRAFTER** project

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# Introduction

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The proceedings before us, comprised of seven papers, are inspired by the subject of the almost completed CRAFTER programme Creative Europe project. The full title of the project is Crafting Europe in the Bronze Age and Today, and in brief, the idea was to draw inspiration from Europe's Bronze Age pottery to help revive modern-day artisanship. The project targets the appreciation of Europe's cultural heritage as a shared resource and the reinforcement of a sense of belonging to a common European space. In particular, it hopes to make cultural heritage a source of inspiration for contemporary creation and innovation and strengthen the interaction between this sector and other cultural and creative sectors. The main framework of the project was the idea that four potters from Spain, Germany, Hungary, and Serbia will draw on their skills to (re)create ceramic vessels representative of some of the most outstanding Bronze Age cultures of Europe: El Argar (south-east Spain), Únětice (Central Europe), Füzesabony (eastern Hungary) and Vatin (Serbia).

The papers published within these proceedings are not strictly related to the project itself, but the problems of Bronze Age pottery in Europe in general. The problems discussed in the presented papers and the inspirations are drawn from the CRAFTER project. The original idea was to delve into the content of the pottery and define its composition and quality. These are, in fact, the elements responsible for the final appearance of the ceramic vessel and its function. Considering that out of four editors, two have presented papers within the proceedings, I have been honored to write this short introduction on their significance and essence.

The thread that connects all of the papers, although their concepts do not seem similar at the first glance, since some of the papers are dwelling on interdisciplinarity while others deal with certain chronological and cultural-historical problems, is that the primary analytical material in all of the papers is Bronze Age pottery, from beyond the Pyrenees, across Central Europe, to the Balkans, which is not unexpected considering that a Serbian institution was credited for publishing. The positive aspect is that the pottery is

discussed in a manner uncommon for archaeology, while on the other hand pottery studies have been more and more neglected in the past few decades, as such subjects are considered as passé in archaeology. The ever-rising number of specializations and specialists have pushed the pottery and potters into an undeserved corner, even though without such a set of analytic work the past can not be completely and adequately perceived.

The pottery is “slow-moving”. It changes, circulates, and exchanges at a slow pace and it enables the perception of the beginning, development, decadence, and the end of a certain society. The pottery has regional character and reflects the primary contacts, esthetics of a community, and the inspiration of the artist. Certainly, this implies to prehistoric pottery and communities which do not function within centralized social systems, such as the Bronze Age beyond Mediterranean Europe, which is indeed in the focus of these proceedings. With the appearance of the potter’s wheel, the production and distribution of pottery merge with industry and economy, and at that moment a puzzle of a small man from the past loses a piece. A piece without which we are unable to perceive small communities through such an important, fruitful, and data-rich object such as pottery and which we often tend to neglect as a discipline. In order to identify the contacts, exchange, and trade or reconstruct the communication routes in past, we often reach to the so-called luxurious artifacts: metals, amber, glass, and artisan objects... Likewise, pottery could narrate a story of one meal, one house, one potter, one village, or one community in the past, which is, like it or not, a fact that will make the interdisciplinary and diverse analyses of prehistoric pottery one of the primary archaeological methods.

Vojislav Filipović  
Institute of Archaeology, Belgrade





*Chalice-shaped vessel from grave 882 of El Argar (Antas, Almería)  
(photo: J. A. Soldevilla, ASOME-UAB)*

# Beakers with trapezoidal mouth as one of the most specific type of Middle Bronze Age vessel in the Central Balkans

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Aleksandar Bulatović

*I dedicate this article to my dear friend and collaborator Jovica Stankovski, a long time archeologist and the director of Kumanovo Museum, North Macedonia, who recently passed away.*

**Abstract:** The paper analyses the distribution, typology, and chronology of beakers with trapezoidal mouth. Besides this characteristic type of vessel that appeared during the Bronze Age in the Central Balkans, vessels of similar stylistic and typological characteristics appear simultaneously, indicating a particular cultural group, which the author of this study has already defined a few years ago as Bubanj-Hum IV - Ljuljaci group. The group was established according to the absolute dates and the distribution of these beakers and other finds. The group existed in the area of Zapadna Morava, Velika Morava and Južna Morava basins, Šumadija and partially Timočka Krajina in the period from the 19/18<sup>th</sup> century BC to the 15/14<sup>th</sup> century BC, when Brnjica and Paraćina groups were formed on its bases in this area.

**Key words:** Beakers with trapezoidal mouth, Central Balkans, 19/18<sup>th</sup>-15/14<sup>th</sup> century BC, Pannonian plain, the Middle Bronze Age, Bubanj-Hum IV – Ljuljaci group.

## Introduction

There were numerous types of vessels made of baked clay that found their specific place in the everyday life of prehistoric populations in the Balkans. Some of them served for drinking, cooking, production of dairy products, as well as storing food or other kitchen or household activities. On the other hand, due to certain characteristics, some of the vessels were not suitable for the aforementioned purposes, and rather represented a part of certain rituals or other unknown activities. The first group of vessels is easily distinguished both by its specific context and other characteristics (shape, temper, size, coating, *etc.*), unlike the second group whose characteristics usually do not fit within the mentioned purposes. Such vessels have usually been defined as “ritual” or “cult” vessels.

The vessels in the focus of this study belong to the second group of pottery, represented by two-handled biconical or globular beakers of different proportions, color, decoration, and other production characteristics. The only common element for those beakers, besides two handles, are two modeled trapezoidal extensions positioned on the opposite sides of the rim, between handles (figs. 2 and 3). Those extensions are mainly shaped as inverted trapezoids with concave lateral sides and their base is connected to the rim. They may vary in size and modulation as well as in angle relative to the neck of the beaker. Also, the contexts in which such beakers are recorded are different, ranging from graves to settlements and waste pits.

Such beakers have been determined as an indicative and distinguishable element of pottery production several decades ago by M. Bogdanović, who defined them as proto-Vatin pottery (Bogdanović 1986), while M. Stojić suggested that such vessels belong to Vatin culture (Stojić 1998).

Recently, Bulatović and Stankovski shared a thesis that such pottery represents one of the most characteristic elements of the Middle Bronze Age in the Central Balkans (Bulatović 2011; Bulatović and Stankovski 2012), which will be further discussed together with other aspects of these beakers. Even though such beakers represent a distinguished type of pottery feature, easily recognizable and suitable for a more detailed study, comprehensive studies on this specific problem are still lacking.

This article will not discuss the purpose of these vessels, but rather their distribution, chronological determination, and possible cultural attribution.

The paper follows the catalogue of all sites where beakers with trapezoidal mouth have been registered, except the site of Pákozdvár.

## Catalogue of sites<sup>1</sup>

### 1. Szoreg, Szeged

A large necropolis was discovered in Szoreg quart of Szeged, Hungary, after which an eponymous group of Perjámos culture was named (Tompa 1934/35, Taf. 28/1, 2; Bona 1975, 94). In the skeletal graves 95, 115, 116, 165, 183 and 215 of the necropolis (Bona 1975, Taf. 112/2, 3, 6, 10-12) a total of six two-handled beakers with trapezoidal mouth were recorded. The beakers from the necropolis are of the globular body and short neck with a distinctly

<sup>1</sup> Numbers of sites in the catalogue correspond to the numbers of sites on the map (fig. 1).

modeled trapezoidal mouth (Fig. 3/b). The handles are concave profiled, the so-called *ansa lunata* type in literature, and the ornaments are mainly comprised of horizontal or vertical incised broad lines, shallowly grooved lines and warty thickening on the belly. In both graves 95 and 215, pairs of pins with a horizontal head made of twisted wire were found besides beakers (Bona 1975, Taf. 126/1, 3). This type of pin is dated to Br A2a phase (Kiss *et al.* 2015) or Br A period according to R. Vasić (2003, Taf. 70). The graves in which these beakers were found belong to the so-called “baroque” phase 4 of the Szöreg group (Perjámos culture), which corresponds to layer XIII in Pecica (Pecica C), phase 4 in Deszk A necropolis or phase B1 of Vatin culture. Pecica C is dated into the period 1750-1600 cal BC (O’Shea *et al.* 2011, Tab. 1), which is the advanced phase of the Middle Bronze Age according to the Serbian chronology.

## 2. Deszk A, Szeged

Necropolis of inhumed deceased is situated in the southeastern periphery of Szeged, east of Szoreg necropolis (Bona 1975, 85-86). Besides many different grave goods, two-handled beakers with trapezoidal opening were recorded in three graves (22, 43 and 71) (Bona 1975, Taf. 90/13, 18, 20). Beakers are very similar to the examples from Szoreg, with oval or globular belly and short neck, with *ansa lunata* handles, and bellies ornamented with incised lines or plastic thickenings (Fig. 3/a). Interestingly, graves with those beakers are situated on the brim of the necropolis (Bona 1975, Plan 19). These graves are dated to the same period as graves at Szoreg.

## 3. Pecica (Pécska), Arad

The famous Bronze Age tell in the lower Mureş region which has been excavated since the early 20<sup>th</sup> century provides the basic chronological frame of the regional Bronze Age. Besides many different types of vessels that were found at this multilayered site, a beaker with trapezoidal mouth was found in layer XIII (Gimbutas 1965, Fig. 120/XIII). Both the shape and handles of the beaker are very similar to the previously mentioned beakers from Szoreg and Deszk A, although this one has more creative ornaments such as circular imprints in combination with zigzag incised lines (Fig. 3/c). This layer is dated by numerous

absolute dates to a period of 1750-1650 cal BC (Bona 1975, 92; O'Shea *et al.* 2011, Tab. 1).

#### 4. Čoka, Senta

A beaker with trapezoidal mouth and two *ansa lunata* handles was found in a waste pit filled with ash at the site of Ciglana na Dašinoj zemlji in Čoka (Girić 1958, 125, sl. 1). It was decorated similarly as other beakers in the Pannonian plain. The beaker was dated to the Early Bronze Age (Bronzano doba Srbije 1972, cat. no. 22).

#### 5. Židovar, Vršac

On the multilayered site of Židovar near Vršac, in the southeastern region of the Pannonian plain, a two-handled beaker was recorded as well (Lazić 1997, sl. 10). The exact context of the find remains unknown. Although found in Pannonian plain, in its southeastern periphery, it distinctly differs from other Pannonian beakers in terms of its shape, handles, and ornaments. It is shorter, biconical and with two handles oval in cross-section. Its mouth is not as intensively modeled in trapezoidal shapes as is the case with other Pannonian beakers, and it has no ornaments, except for the slight thickening on the belly. The beaker was defined as the inventory of the late stage of Vatin culture (Lazić 1997, 26-27).

#### 6. Omoljica, Pančevo

A beaker very similar to the example from Židovar was found at the site of Zlata in Omoljica near Pančevo (Radojčić 2013, cat. no. 9) (Fig. 2/c). Several authors attribute this site as well as the earliest phase of Vatin culture (Pančevo-Omoljica phase) in Br A2-B1 period, which is the end of the Early and the beginning of the Middle Bronze Age (Garašanin 1983, 512; Hansel 1968, 134-135). The site of Zlata was dated by the radiocarbon method in 3530±60 BP (Gogaltan 1999, 224, Pl. 16) that is 1960-1760 cal BC in calibrated values with the probability of 68.2%.

#### 7. Moldova Veche

At the site of Ostrov in Moldova Veche on the southeastern border of Banat, a two-handled beaker with trapezoidal mouth was registered together with vessels characteristic for Vatin culture (Guma 1997, 121-122, Pl. XLVIII/2). It has a biconical shape, stands on a short foot and has two handles with a plastic button-shaped extension on the top

(Fig. 2/f). It is both very rare and the northernmost specimen of this type of beaker with extensions on the top of the handles.

### **8. Požarevac**

A two-handled beaker with trapezoidal mouth originates from the site of Živinarska Farma in Požarevac (Stojić, Jancanović 2008, T. LXXXVI/1, sl. 39), which is very similar to beakers from Židovar and Omoljica, but with slightly concaved top of the handles (the so-called pseudo *ansa lunata*). The beaker is a chance find, with no precise data on the context of origin.

### **9. Ljuljaci, Kragujevac**

Eight two-handled beakers with trapezoidal mouth were found during the excavations at the site of Milića Brdo in Ljuljaci, Central Serbia (Bogdanović 1986, cat.no. 131-138). The beakers were registered in all three cultural layers which are attributed to a period from the end of the Early Bronze Age to the end of the Middle Bronze Age. They are slightly biconical, very similar to each other, with two handles oval in cross-section. Ornaments are represented with thickenings on the belly, and a button-shaped extension is evidenced on top of the handles. One of them is different in many ways. It is slimmer than the others, has a globular body, low foot and handles which highly surpass the rim (Fig. 2/h). The earliest layer in Ljuljaci is dated to  $3480 \pm 100$  BP (Gogaltan 1999, 224, Pl. 16), which is in calibrated values 1940-1680 cal BC, while the second layer is dated to  $3370 \pm 100$  BP, or 1770-1520 in calibrated values (with the probability of 64.6%).

### **10. Svetozarevo (nowadays Jagodina)**

Two-handled beaker with trapezoidal mouth was registered as a chance find from an unknown site in Majur, Svetozarevo (Stojić 1980, cat. no. 39). The beaker is biconical with a higher upper cone and has no ornaments.

### **11. Gornja Gorevnica, Čačak**

At multilayered site of Slatina in Gornja Gorevnica near Čačak, Central Serbia, besides other, the Early/Middle Bronze Age pottery, a two-handled beaker with trapezoidal mouth was recorded (Dmitrović 2009, 7-8, T. 2/1). It has a biconical shape, with handles oval in cross-section and thickening on the belly.

## 12. Ostra, Čačak

Two beakers with trapezoidal mouth were revealed on the hilltop site of Sokolica in Ostra near Čačak (Dmitrović, Ljuština 2007, 11-12, T. III/1, 2). Both are biconical with two handles oval in cross-section and thickenings on their bellies. The other pottery indicates that the site belongs to the end of the Early or the Middle Bronze Age.

## 13. Paraćin

Museum in Paraćin possesses three two-handled beakers with trapezoidal mouth which are thought to originate from the site of Gloždak in Paraćin<sup>2</sup>. Two beakers have globular form and short neck and two handles of oval cross-section (Stojić 1998, 85, Pl. V/2, 6). The third one is sharply biconical, ornamented with two incised horizontal lines on the belly, with two parallel rows of pricked dots in between (Stojić 1998, Pl. V/2, 6) (Fig. 2/b). The site of Gloždak is a necropolis of the Late Bronze Age, so if the beakers originate from that site, they would represent the youngest finds of this type of vessel at all.

## 14. Lešje, Paraćin

A two-handled beaker with trapezoidal mouth originates from the site of Baba in Lešje eastern of Paraćin (Stojić 1998, 85, Pl. V/7). The beaker is globular, with a short neck. It is a chance find with no other information on its context.

## 15. Podgorac, Bor

At the site of Strmljeno in Podgorac near Bor, Eastern Serbia, a biconical two-handled beaker was found as a chance find (Kapurán 2014, 110, T. 15/11). It is decorated with two parallel rows of pricks on its belly.

## 16. Trnjane, Bor

A two-handled beaker with trapezoidal mouth was found in grave 32 during the excavation of the Bronze Age necropolis of cremated deceased in Trnjane near Bor (Jovanović, Janković 1996, Abb. 9a/2). The beaker has a biconical form and two handles of a strip cross-section. Other pottery from the necropolis bears the characteristics of Vatin culture, as well as Paraćin and Brnjica groups of the Late Bronze Age in the Central Balkans (Jovanović, Janković 1996, 196-197). New absolute dates show that the necropolis belongs to the beginning of the Middle Bronze Age (Kapurán *et al. forthcoming*).

<sup>2</sup> The information was obtained from Vesna Vučković, curator of the Hometown museum in Paraćin.

### **17. Kučajna, Bor**

A two-handled biconical beaker with trapezoidal mouth originates from the site of Kučajna in southwestern periphery of Bor (Stojić 1998, Pl. V/11; Kapuran 2014, T. 15/10).

### **18. Orašje, Kruševac**

A two-handled beaker with trapezoidal mouth was found during the plowing in the village of Orašje near Kruševac (Stojić 1998, Pl. V/1; Čađenović 2000, 167, sl. 2/3). The handles are slightly concave in cross-section. Save for the beaker, a large urn, a small cup and a considerable portion of ash were all recorded, but the finder saved only the beaker and the cup.

### **19. Poljna, Kruševac**

In 2000, G. Čađenović published a two-handled slightly biconical beaker with trapezoidal mouth decorated with two rows of pricks filled with white paste on its belly and stated the site of Lazarev Grad in Kruševac as its place of origin (Čađenović 2000, 163-164, sl. 2/2). A few years after, the village of Poljna was named as the original site for the same beaker (Stojić, Čađenović 2006, sl. 54). So it remains unclear where exactly the beaker originates from, but in both cases, it is connected with the area of Kruševac.

### **20. Lazarev grad, Kruševac**

During the rescue excavations of the multilayered site of Lazarev Grad in Kruševac, besides the numerous pottery from the Early/Middle Bronze Age, a two-handled sharply biconical beaker(s) with trapezoidal mouth was recorded (Stojić, Čađenović 2006, sl. 12)<sup>3</sup>. The beaker is decorated with two parallel rows of pricks filled with white paste at the bottom of the upper cone and with four pricks in several spots distributed above the rows.

### **21. Vitkovac, Aleksinac**

From the unknown site in Vitkovac near Aleksinac originates a sharply biconical beaker (cup) with one handle and a single trapezoidal extension on the rim (Praistorijske kulture 1971, cat. no. 225; Stojić, Jocić 2006, T. X/1, sl. 86). The bottom of the upper cone is decorated with groups of two pricked rows framed with two incised parallel lines (Fig. 2/d).

<sup>3</sup> It could be two beakers if one of them does not originate from Poljna.



## 22. Velika Humska Čuka, Niš

During the excavations of the multilayered site of Velika Humska Čuka near Niš, in feature 8/09, a pair of two-handled slightly biconical beakers with trapezoidal mouth were found, together with a flat bronze axe with thickened rims (*Randleistenbeil* type) and other characteristic pottery for the Middle Bronze Age (Bulatović, Milanović 2015, 170-171, T. III/58-60). The handles of one of the beakers possessed button-shaped plastic extensions (Fig. 2/e). According to the type of the axe (Popov Salaš, Tručevac) (Tasić 1984, 68, Abb. 7; Garašanin 1954, 1, T. IV), the feature 8/09 belongs to the Middle Bronze Age.

## 23. Bujanj, Niš

Three biconical two-handled beakers with trapezoidal mouth and a beaker (cup) with one handle and one trapezoidal plastic extension on its rim were found at the site of Bujanj in Niš. The contexts and relative vertical stratigraphy of the finds are uncertain (Garašanin, Đurić 1983, cat. no. 167; Stojić, Jocić 2006, T. LXXIV/190-192). Oršić, Slavetić stated that two of them were found 30 cm beneath the surface (Oršić Slavetić 1940, 11, Abb. 6/2, 4), in a mixed layer together with the Early Copper Age pottery.

## 24. Medijana, Niš

At the site of Motel within the antique site of Medijana in Niš, a fragment of a biconical beaker with trapezoidal mouth was registered together with other pottery typical for the Middle Bronze Age (Jevtić 1975, T. XIV/8). The beaker has a plastic button-shaped extension on the top of the handle and a plastic thickening on its belly.

## 25. Kaštavar, Leskovac

A two-handled sharply biconical beaker with trapezoidal mouth originates from the site of Kaštavar near Leskovac (Stojić 1998, Pl. VI/4). The context of the find is unknown.

## 26. Štulac, Lebane

During the systematic excavations at the site of Svinjarička Čuka in Štulac near Lebane three two-handled sharply biconical beakers with trapezoidal mouth were recorded<sup>4</sup>. The beakers were found next to a disturbed feature 1016 from the Middle/Late Bronze Age (Horejs *et al.* 2019, 164-166), which was dated to 1743-1688 cal BC (68.4% prob-

<sup>4</sup> The excavations, started in 2018, are carried out by the OREA Institute in Vienna and the Institute of Archaeology in Belgrade.

bility), which corresponds to a general dating of such beakers. One of the beakers was completely preserved and the other was fragmented with almost all pieces in place, which could indicate that they originate from feature 1016. In 2019 fragments of similar beakers were found in a huge pit together with pottery from the Middle Bronze Age. Absolute dates from the pit are expected.

## Discussion

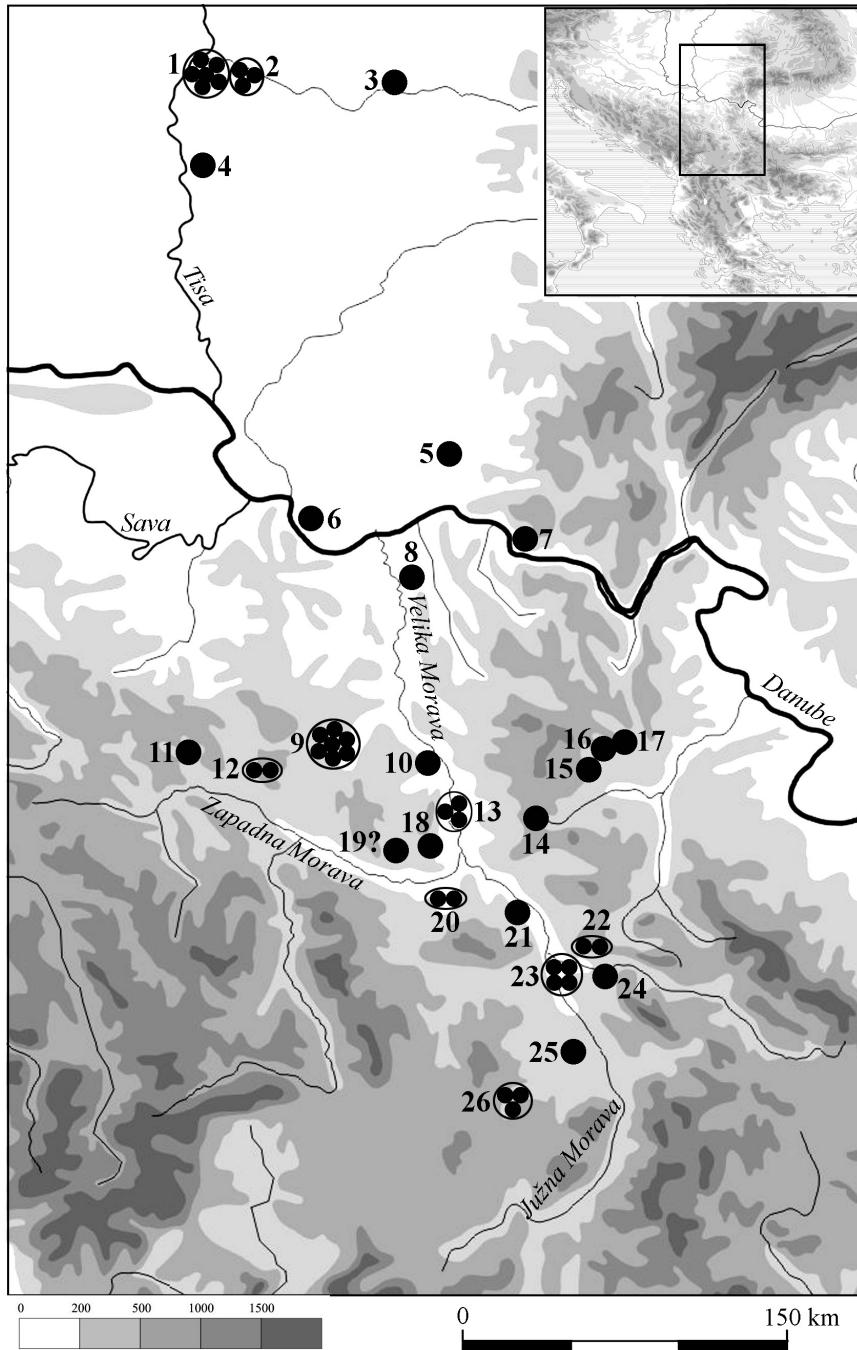
It has been noted that this type of vessel is distributed throughout the vast territory from Pannonian Plain to the mountainous area of the southern part of the Central Balkans, and from the Timok Basin to the Zapadna Morava Basin. This territory measures ca 75000 km<sup>2</sup>, although it does not represent a compact area since an “empty space”, without any finds of these particular vessels, has been registered between the Sava and Danube confluence and Central Panonia (Fig. 1). Interestingly, the northernmost find of such beaker is in Pákozdvár near Balaton Lake in the Pannonian Plain (Tompa 1934/35, Taf. 29/2; Bona 1975, Taf. 131/13), some 150 km far from the area in which these beakers were registered in a considerable number (the Mureş and Tisa confluence) (Fig. 1/1-3). This find is one of a kind in this area and its characteristics differ from all other beakers with trapezoidal mouth. It is sharply biconical with a longer neck and a short foot (Fig. 3). Still, it is ornamented with incised or grooved horizontal and vertical lines and has *ansa lunata* type of handles, similar to the other Pannonian beakers. The beaker is attributed to the Middle Bronze Age, phase Bz 3 (Bona 1975, 115).

Besides the lonely beaker from Pákozdvár and a certain number of such beakers in the area of Mureş and Tisa confluence, this type of vessels are numerous in the Central Balkans, especially in the Južna Morava Basin, the Timok Basin and the area between Zapadna Morava and Velika Morava rivers.

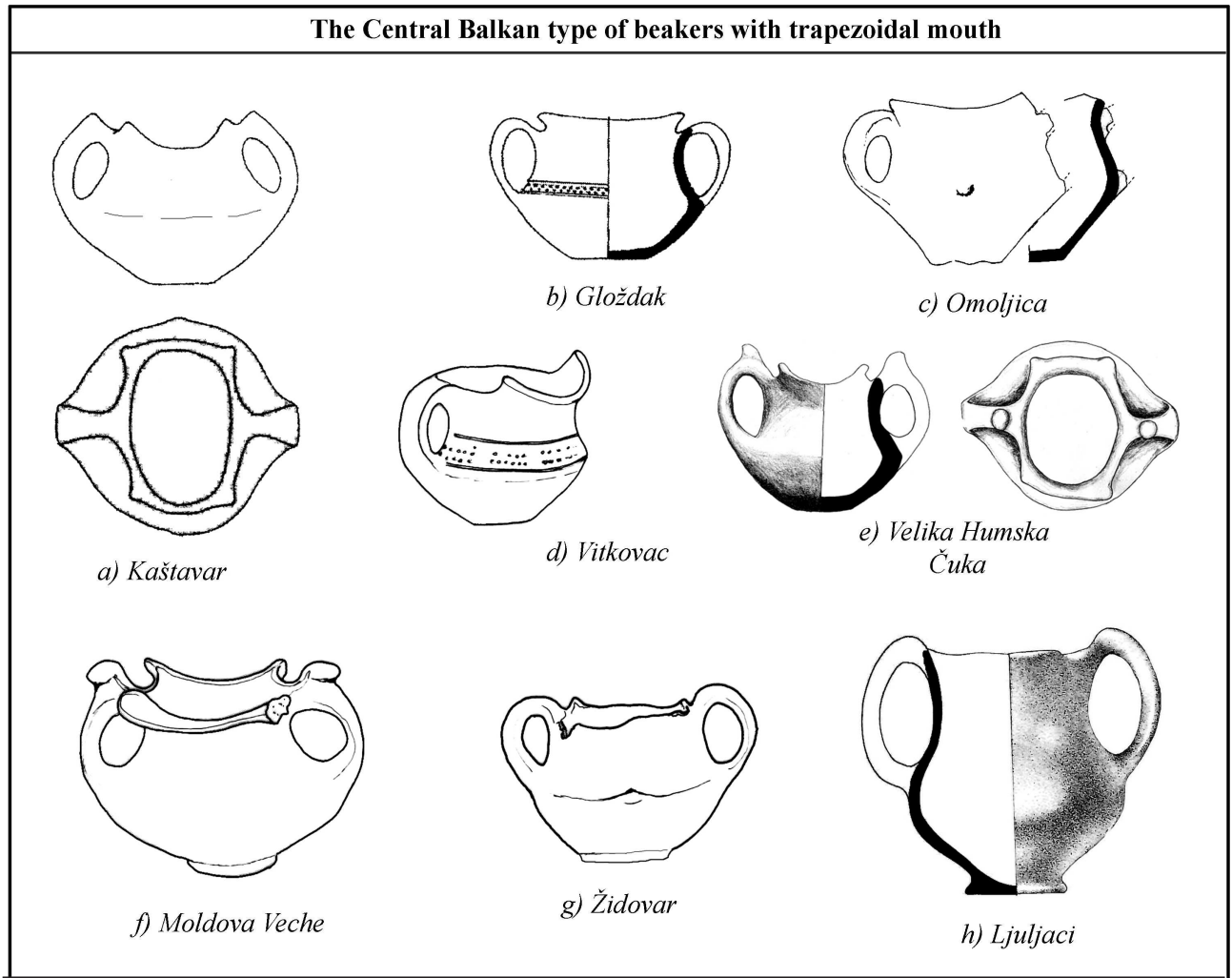
Considering all of the characteristics of such beakers, such as shape, type of handle, modeling of mouth, decoration and other, they can be classified into two basic types – Central Balkan type and Pannonian type, with various subtypes and variants. The first type, marked as Central Balkan, includes beakers from Timok Basin, Zapadna, Južna and Velika Morava basins, as well as beakers from sites in southern Banat (Fig. 1/5-26). This type of beakers

with handles which slightly surpass the rim or stand in line with the rim and mouth discreetly modeled in the shape of two trapezoidal extensions (Fig. 2). The decoration is uncommon for this type and comes down to modeled thickening on the belly (Fig. 2/c), or quite rarely, two horizontal rows of punctuated dotted pricks on the lower portion of the upper cone, which are occasionally filled with white incrustation (Vitkovac, Podgorac, Lazarev Grad) (Fig. 2/b, d). Button-shaped extensions on top of the handles are also quite rare (Velika Humska Čuka, Ljuljaci, Medijana, Moldova Veche) (Fig. 2/e, f). Based on certain characteristics within this type, two subtypes can be distinguished: the so-called southern subtype (identical form, mostly undecorated except for the button-shaped extensions on top of the handles) (Fig. 2/a, e) and the Danube subtype (Moldova Veche) (Fig. 2/f), characterized by elements of both Central Balkan (proportions, form, extensions on handles) and Pannonian type (short foot, emphasized modeling of the mouth). The southern subtype encompasses examples from the sites of Bubanj, Medijana, Velika Humska Čuka, Kaštavar, and Svinjarička Čuka. It should be noted that save for two-handled beakers, a variant with one handle (a cup) and modeled trapezoidal mouth on one side is also recorded (Bubanj and Vitkovac) (Fig. 2/d). Likewise, some of the beakers in the Danube Region (southern Banat) differ from typical Central Balkan type, since those possess a profiled base which resembles a foot and the decoration represented by modeled triangular thickening on the belly (Židovar, Požarevac) (Fig. 2/g), similar to the beakers of Pannonian type. It seems as such differentiation could rather be explained by their younger chronological attribution, rather than distribution, which will be discussed together with absolute dates.

The other type, defined as Pannonian, possesses globular form, short neck and handles with a distinctly conical cross-section (*ansa lunata* type) (Fig. 3). The mouth is modeled in the shape of two distinctly trapezoidal extensions, and the beakers are mostly decorated with shallow vertical and horizontal grooves on the belly, which often form a triangle (Fig. 3/a, c, d). Some of the beakers are decorated with triangular or wart-like modeled thickenings on the belly (Fig. 3/b, d), or rarely with incised zigzag lines and stamps (Pecica) (Fig. 3/c). The example from Pákozdvár could be separated as a subtype due to extremely biconical belly, long neck, and short foot (Fig. 3/d).



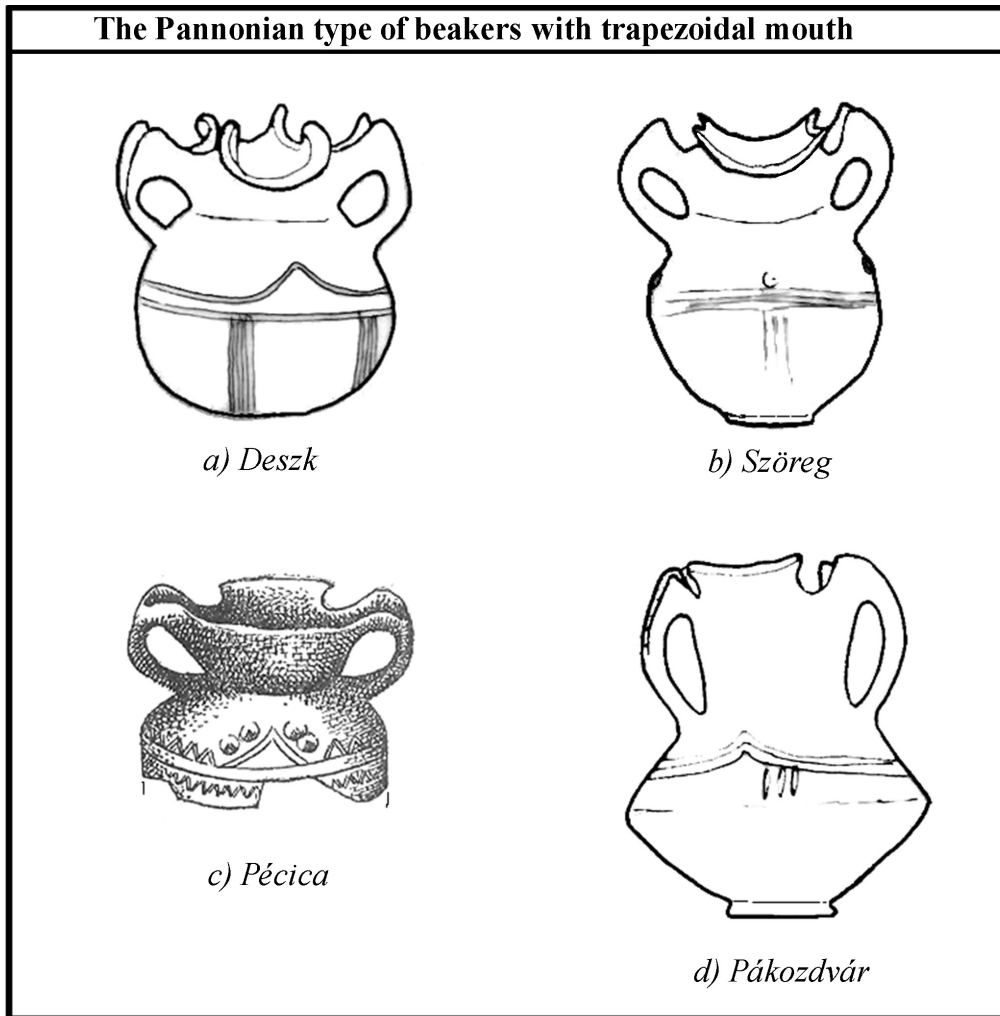
**Fig. 1** Map of distribution of beakers with trapezoidal mouth (the background of the map is provided by the courtesy of Mihailo Milinković) 1. Szoreg, Szeged; 2. Deszk A, Szeged; 3. Pecica, Arad; 4. Čoka, Senta; 5. Židovar, Vršac; 6. Omoljica, Pančevo; 7. Moldova Veche; 8. Požarevac; 9. Ljuljaci, Kragujevac; 10. Svetozarevo; 11. Gornja Gorevnica, Čačak; 12. Ostra, Čačak; 13. Paraćin; 14. Lešje, Paraćin; 15. Podgorac, Bor; 16. Trnjane, Bor; 17. Kučajna, Bor; 18. Orašje, Kruševac; 19. Poljna, Kruševac; 20. Lazarev grad, Kruševac; 21. Vitkovac, Aleksinac; 22. Velika Humska Čuka, Niš; 23. Bujanj, Niš; 24. Medijana, Niš; 25. Kaštavar, Leskovac; 26. Štulac, Lebane.



*Fig. 2 The examples of the Central Balkan type of beakers with trapezoidal mouth*

Although its shape clearly differs from other examples of Pannonian type, its handles, decoration, and mouth are similar to other examples of this type. It is quite interesting that the proposed types of beakers with trapezoidal mouth display a quite homogenous distribution in certain geographic areas, meaning that the Central Balkan type is characteristic solely for the Central Balkans and the Pannonian mostly for the Pannonian Plain and more precisely the confluence area of Tisa and Mureş rivers.

The earliest dates for beakers with trapezoidal mouth originate from the sites of Ljuljaci, Omoljica and Trnjani necropolis. Classical beakers with trapezoidal mouth are distributed in the first and second horizon at the site of Ljuljaci, (Bogdanović 1986, 59-62, cat.no.131-136), while the example with foot and the example with button-shaped extensions on handles is recorded solely in the youngest,



*Fig. 3 The examples of the Pannonian type of beakers with trapezoidal mouth*

third horizon (Bogdanović 1986, 59-62, cat.no. 137, 138). The first horizon is dated to a period 1940-1680 cal BC (with the probability of 68.2%), and the second horizon to a period 1770-1520 cal BC (Gogaltan 1999, 224, Pl. 16) (Fig. 4). Based on the stylistic and typological characteristics of pottery, the last date would rather fit into the third horizon, which is not dated according to the author (Bogdanović 1986, 70).

Grave 32 at Trnjane necropolis, in which a beaker with trapezoidal mouth is recorded, is not dated, but the necropolis itself is dated by samples from two graves to a period 2016-1627 (95.4%), meaning 1947-1664 calBC (68.2%) (Kapurán *et al. forthcoming*, Fig. 9/a, e, f) (Fig. 4). Taking into consideration the lowest date, the beaker certainly originates prior to the 17<sup>th</sup> century BC, most likely from the 19-18<sup>th</sup> century BC.

One of the higher dates that could date the beakers comes from Omoljica (Fig. 4). The date (2040-1690 cal BC, with the probability of 95.4%, meaning 1960-1760 cal BC, with the probability of 68.2%) (Gogaltan 1999, 224, Pl. 16) certainly corresponds to the earlier horizon at the site, or the so-called Pančevo-Omoljica phase of Vatin culture, to which the beaker with trapezoidal mouth belongs as well.

These beakers have been indirectly dated at the site of Svinjarička Čuka near Lebane (Fig. 4). Namely, the beakers (one completely preserved, and one fragmented with all pieces in place) were found immediately next to a disturbed feature, dated to 1756-1643 cal BC (95.4%), meaning 1743-1688 cal BC (68.2%) (Horejs *et al.* 2019), which would correspond to their dating on other sites, especially the younger horizon at the site of Ljuljaci.

According to the available absolute dates, the Pannonian type of beakers with trapezoidal mouth is slightly younger. All of the sites in which these beakers are registered correspond to the Pecica C layer which is dated to 1750-1600 cal BC (O'Shea *et al.* 2011, 69-70, Tab. 1), or more precisely its earlier phase attributed to 1750-1650 cal BC.

According to all of the available absolute dates, this type of vessel appears in the territory of Central Balkans in a period between the end of the 20<sup>th</sup> and the beginning of the 17<sup>th</sup> century BC, and most likely in the 19-18<sup>th</sup> century BC. Regarding chronology, types, and variants of beakers, it has been noted that beakers with button-shaped extensions on handles, as well as slender beakers on a foot from the site of Ljuljaci, could be younger, especially considering that both variants were recorded within the youngest layer at the site of Ljuljaci, which could be dated between the 18<sup>th</sup> and the 16<sup>th</sup> century BC or slightly later. A beaker with button-shaped extensions, almost identical to the example from the site of Ljuljaci, was recorded at the site of Velika Humska Čuka (Fig. 2/e), in an feature together with a *Randleistenbeil* type of axe. The identical type of axe was recorded at the site of Popov Salaš, which is based on it and a bronze winged pin (Tasić 1983, sl. 24), dated to a Br B/C period according to Reinecke chronology (D. Garašanin 1983, 803; Vasić 2003, Taf. 70)<sup>5</sup>, even though the site has previously been attributed to the earlier phase of Vatin culture based on the axe and existing ceramic forms

5 This lower dating is also more consistent with the results of the analyses of chemical composition of metal objects from the site of Popov Salaš, as well as the axe from the site of Velika Humska Čuka. Namely, they were all made of tin bronze, indicating a developed Bronze Age of the Central Balkans (the analyses were conducted within the Jadar project, which is realised by the Brooklyn College, New York and the Institute of Archeology, Belgrade).

(according to M. Garašanin, to Pančevo-Omoljica phase, 1983, 513-514; according to N. Tasić, to an early phase, 1983, 61-62 ).

Therefore, based on absolute dates, it seems as if this type of beaker originated in the area of Central Balkans and most likely in the central part of the Velika Morava Basin or Južna Morava Basin. This area is also indicated by the stylistic and typological elements registered on the pottery of the Bubanj-Hum III cultural group (Garašanin 1983b), that preceded the appearance of beakers with trapezoidal mouth. Save for beakers with two handles in line with the rim, this group is also characterized by variously profiled bowls, often decorated with modeled extensions on the rim, which possess a triangular, horn-like, trapezoidal or other profile. The earliest absolute dates for this group fall into the 25/24<sup>th</sup> century BC, from the site of Velika Humska Čuka (Fig. 4), where a group of pottery from the Early Bronze Age layer in trench 1/15 (6<sup>th</sup>-8<sup>th</sup> technical spits) has been dated. Save for pear-shaped two-handled beaker, the group of pottery contained a bowl with a modeled triangular extension on the rim (Fig. 5/1, 2). A similar combination was recorded some 150 km to the south at the site of Pelince, in a ritual pit B28, in which a similar bowl dated to the 24/23<sup>rd</sup> century BC has been recorded (Bulatović *et al.* 2020) (Fig. 4). A bowl with modeled extension similar to the ones from beakers which are in the focus of this paper has been recorded in a pit next to the previous one (Fig. 5/10). A similar bowl has been recorded in a ritual pit containing Early Bronze Age pottery at the site of Davidovac near Vranje (Bulatović 2014, Pl. II/25-28, Pl. III/29, 30) (Fig. 5/16), as well within a ritual space at the site of Tatićev Kamen near Kumanovo (Bulatović 2014, Pl. III/32). In terms of chronology, the closest finds of similar bowls originate from a shallow pit (feature 1/08) at the site of Bubanj near Niš. This pit, which contained numerous bowls with trapezoidal, horn-like and triangular extensions on the rim (Bulatović, Stankovski 2012, T. IX, X), is dated to the 21/20<sup>th</sup> century BC (Bulatović, Vander Linden 2017) (Fig. 4).

Two dates from two Early Bronze Age pits at the sites of Rit and Nad Klepečkom are quite interesting, especially since the sites are relatively close to the site in Omoljica, where a beaker with trapezoidal mouth has been recorded. The pits are dated to the 21/20<sup>th</sup> century BC, same as the sites of the Bubanj-Hum III group in the southern parts of

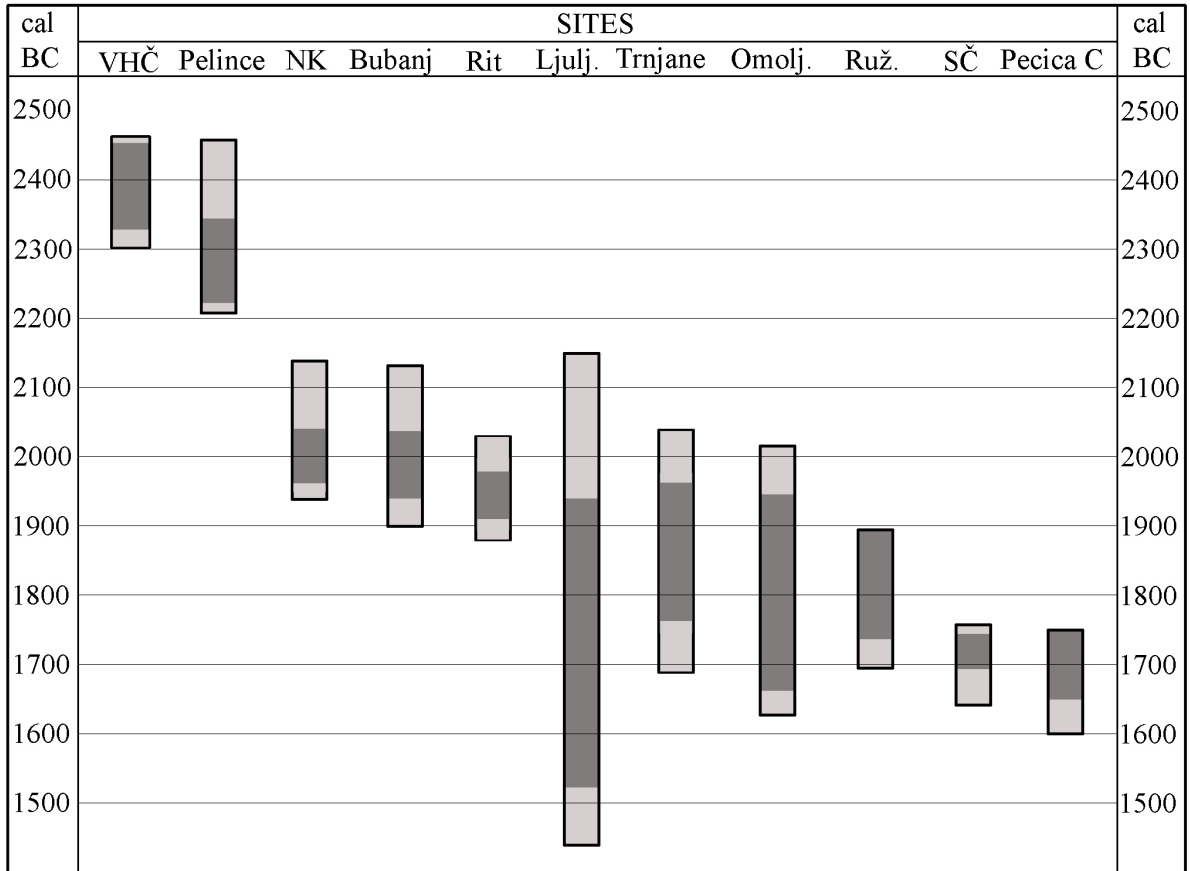


the Central Balkans, yet contained no vessels with modeled extensions (Fig. 4). The fact that besides numerous pottery this pits concurrent with feature 1 at the site of Bubanj did not contain modeled extensions on vessels, indicates that the development of Early Bronze Age in this part of the Danube Region was somewhat different, as there are no stylistic or typological ceramic elements which could evolve into beakers with trapezoidal mouth.

Perhaps the finest example for the evolution of bowls with trapezoidal extensions into beakers with trapezoidal mouth is the example of a bowl from the site of Zvezdan near Zaječar in Eastern Serbia, where one part of the mouth is modeled almost identical as the beakers, and the portion of the rim above the handle is modeled in a manner typical for bowls of Bubanj-Hum III group (Kapuran 2009, T. X/7) (Fig. 5/15). Bowls with trapezoidal extension, similar to bowls from the sites of Davidovac, Pelince or Kokino Selo, were recorded together with it (Kapuran 2009, T. X/9, 10). The site is not dated, and based on the similar pottery at the site of Ružana 1 (Kapuran *et al.* 2016), which is dated to the 19/18<sup>th</sup> century BC (Bulatović *et al. forthcoming*) (Fig. 4), it most likely originates from the end of the Early and the beginning of the Middle Bronze Age. The relatively low date for pottery of similar stylistic and typological characteristics as the pottery registered at the sites of Bubanj, Pelince or Velika Humska Čuka, and which are attributed to Bubanj-Hum III group dated to the 25-20<sup>th</sup> century BC (Fig. 4), could indicate that such forms occur later in Timočka Krajina Region, maybe together with beakers with trapezoidal mouth.

## Concluding remarks

Beakers with trapezoidal mouth have always attracted the attention of archaeologists and were mostly attributed to proto-Vatin or Vatin culture in the literature (Srejšović 1997, 609-610; Bogdanović 1986; Stojić 1998). The first authors who singled out these finds into a unique group Ljuljaci I were N. Tasić and N.N. Tasić (2003, 98). Later, A. Bulatović and J. Stankovski have based on the results of the Early Bronze Age research in Južna Morava Basin defined a new cultural group of that period, Bubanj-Hum IV – Ljuljaci, whose most recognizable element are exactly those beakers, along with other pottery which will be further discussed (Bulatović, Stankovski 2012, 337-347).



*Fig. 4 Chronological table of beakers with trapezoidal mouth and previous cultural group (VHČ – Velika Humska Čuka, one date from a group of Bubanj-Hum III pottery in the Early Bronze Age layer; Pelince – one date from ritual pit B28; NK – Nad Klepečkom, one date from feature 9, trench 77; Bubanj – one date from feature 1/08; Rit – one date from feature 1, trench 18; Ljulj. – Ljuljaci, dates from I and II horizons; Trnjane – two dates, graves 10 and 28; Omolj. – Omoljica, one date for the earlier horizon (Omoljica-Pančevo); Ruž. – Ružana 1; SČ – Svinjarička Čuka – one date from feature 1016; Pecica C – a group of dates from Pecica C layer). Grey zones in images represent the probability of sigma 2 range and darker zones the probability of sigma 1 range.*

Namely, based on the analysis of finds from enclosed objects and available absolute dates, the authors came to a similar conclusion that the ceramic inventory of the Middle Bronze Age in the Morava Region can not be defined within the Vatin culture, as some authors state (Stojić 1998, 81-99), based solely on sporadic finds of Vatin elements and neglecting much more common pottery at the sites, whose stylistic and typological characteristics do not correspond to Vatin culture. Even earlier, D. Garašanin has noted the chronological gap between Early Bronze Age Bubanj-Hum III culture and Late Bronze Age Paraćin group, and proposed a prolonged duration of Bubanj-Hum III group, based on the finds from the site of Ljuljaci and the territory of Kosovo (D. Garašanin 1983, 801), without even mentioning the possibility of marking the Middle Bronze

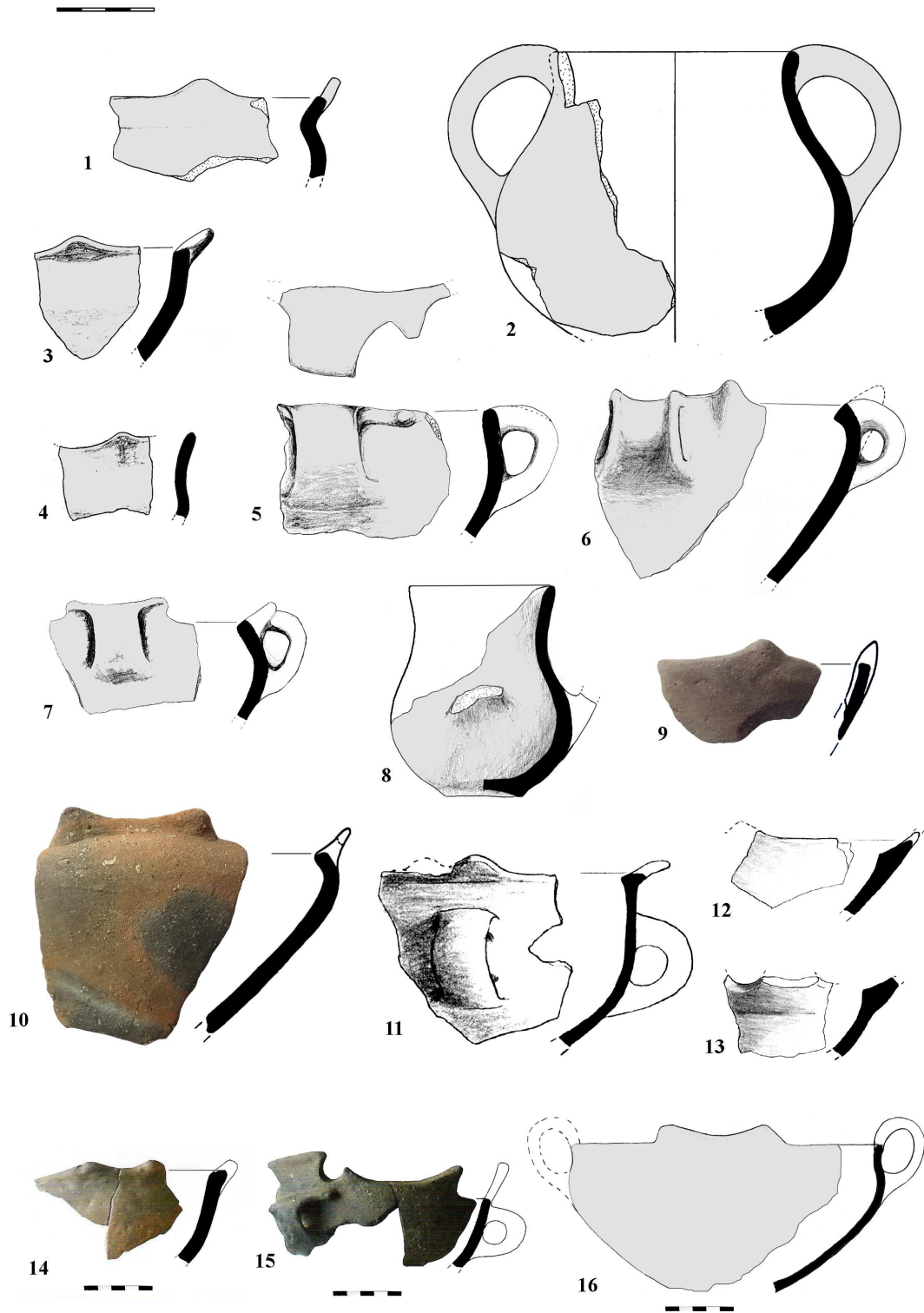
Age material culture in this area as Vatin.

New finds of beakers with trapezoidal mouth, especially the examples from excavations, and the accompanying pottery as well as absolute dates acquired in the last several years, have actualized this subject and confirmed the necessity for the existence of a particular group, recently named as Bubanj-Hum IV-Ljuljaci group.

Therefore, according to the absolute dates, it has been noted that the beakers with trapezoidal mouth have originated from the Central Balkans during the 19–18<sup>th</sup> century BC, before the appearance of “Vatin elements“ in the area. Such beakers are accompanied by pottery with similar stylistic and typological characteristics such as slightly biconical bowls or slightly S profiled bowls with or without ribbon-like handles (Bulatović, Stankovski 2012, T. XXI/1, 2; Bogdanović 1986, cat.no. 44-49; Stojić, Čađenović 2006, T. XLIII/63-66, T. LXXXV/34), semi-globular cups with one handle which surpasses the rim (Bogdanović 1986, cat.no. 31-35), two-handled sharply biconical beakers with handles which slightly surpass the rim, sometimes decorated with horizontal rows of dotted pricks (Bulatović, Stankovski 2012, T. XXII/1-3; Stojić, Čađenović 2006, T. XXII/13, T. XLII/61, 62, T. LXXXI/1, T. LXXXV/29-32; Stojić, Jocić 2006, T. XV/43, T. LXXIV/188-194, T. LXXV/199-205; material from a pit at the site of Svinjarička Čuka<sup>6</sup>), pear-shaped two-handled beakers with handles in line with the rim or slightly surpassing the rim (Bogdanović 1986, cat.no. 27, 29; material from a pit at the site of Svinjarička Čuka; Stojić, Čađenović 2006, T. XXII/13), large pots with wide mouth decorated with modeled bands with notches or finger impressions, or finger impressions distributed in rows on the upper portion of the vessel or the belly (Bulatović, Stankovski 2012, Kapuran *et al.* 2014, T. 3 i 4; Bogdanović 1986, cat.no. 55-66; material from a pit at the site of Svinjarička Čuka).

The stratigraphy at the site of Ljuljaci, in which Vatin pottery occurs in small numbers in horizon II and slightly more in horizon III, indicates that autochthonous forms occur in all of the horizons, while the so-called “Vatin pottery” is sporadic and younger than the beginning of habitation at the site in phase I. A similar situation has been registered in Timočka Krajina Region, where Verbicoara culture elements are mixed with autochthonous elements, which are based on the stylistic and typological charac-

<sup>6</sup> The material from the Middle Bronze Age pit is unpublished.



**Fig. 5** Characteristic pottery of the Bubanj-Hum III group from which beakers with trapezoidal mouth probably evolved (1-2. Velika Humska Čuka, Trench 1/15, group of pottery from the Early Bronze Age layer; 3-8. Bubanj, feature 1/08; 9. Pelince, ritual pit B28; 10. Pelince, ritual pit Γ29; 11-13. Ružana 1; 14-15. Zvezdan; 16. Davidovac)

teristics attributed to Bubanj-Hum IV-Ljuljaci group.

It seems as if certain elements of the Bubanj-Hum IV – Ljuljaci group are younger and not concurrent with the beakers with trapezoidal mouth. Those are handles which imitate the *ansa lunata* type from the north, which occur in the horizon III at the site of Ljuljaci (Bogdanović 1986, cat.no. 39), and the button-shaped extensions on top of the handles, which are also common for the final horizon at the site of Ljuljaci, meaning the final phases of the Middle Bronze Age (Br B according to Reinecke). Such dating would correspond to the chronological attribution of feature 8/09 at the site of Velika Humska Čuka, in which a trapezoidal beaker with button-shaped extensions on handles was recorded. Interestingly, the imitations of *ansa lunata* handle rarely occur far in the south of the Bubanj-Hum IV – Ljuljaci group territory, in southern Morava Region, while the button-shaped extensions on handles are quite common in the south and remain in use even during the Late Bronze Age, in Paraćin and Brnjica cultures. The presence of the so-called *ansa lunata* type of handles in the central Morava Region and Timočka Krajina Region is apparently the result of contacts between bearers of Bubanj-Hum IV-Ljuljaci group from this territory and Vatin group from Pannonia and the Danube Region. The interconnection is less observable in the southern Morava Region, where beakers with slightly concave handles, the imitations of *ansa lunata* type, occur sporadically (Bulatović, Stankovski 2012, T. IV/29, T. XX/1). However, it seems as if the button-shaped extensions on handles are likely the result of interactions between bearers of Bubanj-Hum IV-Ljuljaci group with the bearers of the same group in Timočka Krajina Region, where elements of Verbicioara group are quite common starting from the 19/18<sup>th</sup> century BC (Kapuran 2009; Kapuran *et al.* 2016, T. 2, T. 5/6, 7). Also, the influence of the Verbicioara group is to a lesser or greater degree present in most of the territory attributed to the Bubanj-Hum IV-Ljuljaci group, save for the southwestern periphery (the territory of Kosovo). Therefore, lids and handles with plastic decorations on top, ornamented with transversal notches or zigzag incision in the middle, appear in horizon III at the site of Ljuljaci, which is dated to a period after the 17/16<sup>th</sup> century BC (Bogdanović 1986, cat.no. 183, 206). Those are similar to examples of phase III of Verbicioara culture in Oltenia (Craciunescu 2004, 227, Pl. LII/2, LVII/2, 3),

though Verbicioara elements are common in Timočka Krajina Region even earlier. Numerous stylistic and typological elements of Verbicioara group are present on pottery from the site of Velika Humska Čuka, yet it seems from the end of the Middle and during the Late Bronze Age (Bulatović, Milanović 2015, 170-171, T. IV/61-64, 80-81). The ornament of dotted pricks (Podgorac, Paraćin, Maskare, Marenovo, Globoder, *etc.*) (Fig. 2/b, d; Stojić, Jocić 2006, T. XXII/13, T. LXXXI/1), which are often filled with white incrustation (Lazarev Grad) (Stojić, Jocić 2006, sl. 12, 54) could be considered as chronologically relevant since it most likely originates as a consequence of contacts with populations from the Danube Region, where this represents a common ornament during the developed phase of the Middle Bronze Age (Br B), while such manner of ornamentation is unknown in the Central Balkans since the Late Eneolithic, meaning the Bubanj-Hum II group.

Anyway, it can be assumed that the core of the Bubanj-Hum IV-Ljuljaci group territory encompassed the area of Central Balkans, expanding to the Danube Region, and Timočka Krajina Region. This group originated from the Bubanj-Hum III group, with almost no hiatus in between, which is indicated by dates from the sites of Bubanj and Ljuljaci and the similar stylistic and typological characteristics of pottery registered in both groups. Based on the stratigraphy, especially at the site of Ljuljaci, absolute dates and stylistic and typological characteristics of pottery, it is assumed that the groups lasted between the 19/18<sup>th</sup> century BC and the 15/14<sup>th</sup> century BC, (Bulatović *et al.* 2018).

At the moment, the data on the housing of this group is available based on the excavations at the sites of Ljuljaci (Bogdanović 1986, 15-32) and Trnjani (Jovanović, Jančević 1990, 1). The metal finds from this period in the territory of Bubanj-Hum IV-Ljuljaci group are rare (Garašanin 1983, 799-801), which is interesting, having in mind that traces of copper metallurgy have been registered on several sites in Timočka Krajina Region in past few years (Kapurán *et al.* 2016; Kapurán *et al. forthcoming*). Burial practice is known solely for the Timočka Krajina Region, where the deceased were cremated and buried beneath the circular stone structures (Srejšević, Lazić 1997, 233) in specific urns, with horizontal cup-shaped handles. All of the noted elements characteristic only for this region

indicate the possibility that the group had a specific development in the geographically isolated region of Timočka Krajina (isolated from the Morava Region; orographically opened to Oltenia and Northwestern Bulgaria), which led Srejšović and Lazić to define it as a separate, Gamzi-grad culture (1997, 241). This question thoroughly argued in the literature (Kapuran 2009; Bulatović, Stankovski 2012), requires the full attention of researchers, and surpasses the extension of this paper.

The early Vatin group, the so-called Pančevo-Omoljica phase (a beaker with trapezoidal mouth was recorded at the eponymous site of Omoljica) originated from similar traditions as Bubanj Hum IV-Ljuljaci group, from the Bubanj-Hum III traditions, although under a certain influence of Pannonian Early Bronze Age cultures, especially Mureş group. It is represented in forms of beakers of early Vatin group, which resemble the pottery from the sites of Rit and Nad Klepečkom in Viminacium (21/20<sup>th</sup> century BC) (Bulatović *et al* 2019, 63, T. 1/11, T. 2/12; Kapuran *et al.* 2019, 99, T. 4/14, T. 5/1-4, T. 7/18), where pottery with stylistic and typological characteristics of both Bubanj-Hum III and Mureş groups have been recorded in enclosed features. A form similar to early Vatin beakers, with lowered and etage belly, often with four wart-like thickenings is registered within the Mureş group (Girić 1971, T. XXV/gr. 82, T. LXXXVI/2), which points to the certain cultural basis for the formation of the early Vatin culture, which develops its recognizable character in the later phase, due to contacts with of encrusted pottery cultures, and through keeping the form of beakers from the earlier phase.

Numerous finds of beakers with trapezoidal mouth far to the north, in the territory of Mureş group, are quite interesting, considering that this territory and the Central Balkans are separated by a “gap” represented by lack of finds of such beakers. (Fig. 1). However, in terms of forms and ornaments, such beakers completely correspond to the Mureş group and resemble the ones from the Central Balkans solely in the modeling of mouth, although the ones from the north are of more emphasized modeling. The idea that the origin territory for those beakers is Pannonia was quickly discarded for several reasons, even though a total of eleven beakers have been registered within the relatively small area near Mureş and Tisa (Fig. 1). Firstly, during the preceding period in the territory of the Mureş group (approximately the 21-18<sup>th</sup> century BC, O’Shea

1996, Tab. 3.1), there are no elements that would indicate an evolution towards those beakers, as is the case with the Central Balkans. This primarily refers to the idea of decoration with modeled extensions on the rim, which is completely unknown in the Mureş group, yet one of the most prominent characteristics of Bubanj-Hum III culture in the Central Balkans. Secondly, this type of beakers appears in the Central Balkans in the 19/18<sup>th</sup> century BC (possibly even earlier according to dating spans of Ljuljaci and Omoljica, Fig. 4), while the Pannonian examples are dated to late Mureş group or Pecica C phase, a period between 1750 and 1650/1600 BC, which negates the idea of their origin in Pannonia.

However, it is interesting that during the earlier period, the Early Bronze Age, numerous finds of beakers of Bubanj (Bubanj-Hum III group type) have been registered in the same territories, including the same “gap” in finds between certain regions. (Bulatović, Stankovski 2012, 345 i nap. 516). Such data indicate certain connections, direct or indirect contacts (the process of cultural transmission) of populations that inhabited the Central Balkans and wider zone of Mureş and Tisa confluence during the Early and Middle Bronze Age, and whose intensity and character remain unclear.

## Conclusion

The short analysis of beakers with trapezoid mouth and the accompanying pottery has indicated several important points for the research of the Middle Bronze Age of the Central Balkans. The distribution of such beakers has shown their representation mostly in Morava Region, Šumadija Region, and Timočka Krajina Region, and sporadically in southern Banat. The exceptions are numerous examples registered in the Mureş and Tisa confluence area, which are, as it seems, younger and represent the result of intensive contacts, processes of cultural transmission between the population of the Central Balkans and this part of Pannonia during the Middle Bronze Age. Through the analysis of absolute dates, stylistic and typological characteristics of beakers with trapezoidal mouth and the accompanying pottery, as well as their distribution, it has been concluded that those represent one of the most recognizable form of the material culture of the Middle Bronze Age in the Central Balkans, which is, in the lack



of a more appropriate term, marked as Bubanj-Hum IV – Ljuljaci according to the eponymous sites and the fact that it has evolved from the previous Bubanj-Hum III culture almost without a chronological hiatus. The earliest finds of beakers with trapezoidal mouth are registered in Šumadija, Morava Region and Timočka Krajina Region, and originate from the 19/18<sup>th</sup> century BC, and therefore, it can be assumed with a dose of the reserve, that the group was formed in the area of Šumadija, the upper course of Južna Morava River, central Morava Region, and (possibly) Timočka Krajina Region, and spread far to the Danube Region in the north. The development of the group in bordering regions was somewhat different due to the presence of elements of different cultures from the neighboring regions (Vatin, Verbicioara). It had an independent development from Vatin culture, although certain Vatin and Verbicioara elements formed through contacts of the group with populations in the Danube Region and eastern parts of the Central Balkans are recognized in its central territory during later phases.

Bubanj-Hum IV – Ljuljaci group ceases to exist at the end of the Middle Bronze Age, during the 15/14<sup>th</sup> century BC, when it is replaced by younger cultures that originated from its traditions. Therefore, Paraćin group is formed in the wider area of the central Morava Region, and Brnjica culture in the territory of the Južna Morava Basin: both groups retain numerous stylistic and typological elements of pottery from the previous period and testify a certain cultural continuity in the Central Balkans during the entire Bronze Age.

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