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Ožanić Roguljić, Ivana; Raičković Savić, Angelina

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***SUB TESTU*: PREPARATION OF ROMAN FOOD UNDER A CLAY DOME¹**

Ivana Ožanić Roguljić
Institute for Archaeology
Ljudevita Gaja 32 Street
HR – 10000 Zagreb
iozanic@iarh.hr

Angelina Raičković Savić
Archaeological Institute, Belgrade
Knez Mihailova 35/4
RS – 11000 Beograd
araickovic@yahoo.com

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Pregledni članak / Review

Among the multitude of ceramic fragments, there occasionally appear handles of unusual shapes, or the remains of large dome-shaped lids. Such vessels were used for food preparation in kitchens with open hearths. Ever since prehistory, they have represented a kitchen appliance in daily use to the present day, and they appear in Roman kitchens as well. Various sources refer

to this method of food preparation as sub testu. These vessels' segments have also been archaeologically confirmed on Roman sites in Pannonia Inferior and Moesia Superior. There is a type of dish called patina in Roman cuisine, similar to modern-day soufflé, which was presumably prepared on plates with a flat bottom and curved, convex, or concave walls.

Key words:

Roman ceramic, Roman food, sub testu, sač, peka, patina, plates, Vinkovci, Atovac, Viminacium

Introduction

There are dozens of different terms² for a dome-shaped lid used for food preparation on an open hearth.³ The origins of such lids date back to prehistory: that is, the Bronze Age – the earliest period in which they have been documented so far.⁴ It is maintained that the practice of covering food with a lid during cooking originated from an even older culinary practice of covering meat or fish with a thin layer of clay. The prehistoric dome-shaped lid developed into two basic shapes. The first one resembles the shape of a bowl and has two handles, while the other one is closer to the forms still in use today: a hemisphere with one handle at the top. It was used in both the Roman and Medieval periods, while, with the arrival of the Turks, a metal – *i.e.* iron – lid (*peka* or *sač*)

comes into use.⁵ Until a century ago, it was extensively used in the area from Prekmurje to southwest Hungary, in Baranja, the entirety of Bosnia, on the Adriatic coast and throughout Serbia. Potters in the Adriatic and Dinaric areas manually spun *čripnja* / *peka* on the potter's wheel, while *poljuka*, from Slavonia, was made in a cast mould. In the continental regions, these vessels are typically used for baking bread and meat dishes. In the coastal regions, fish and seafood (octopus etc.) are added to the repertoire. The extensive use of this type of vessel ceases with the disappearance of the open hearth.⁶ Nowadays, it is used mainly in the traditional cuisine of Dalmatia, Bosnia and Herzegovina, Montenegro and South Serbia.⁷

1 The article results from the project *Life on the Roman road: communications, trade and identities on Roman roads in Croatia from 1st – 8th CE*, supported by the Croatian Science Foundation (UIP-05-2017-9768).

2 *Peka, pekva, sač, sače, crepnja, cripnja, cigla, krijepnja, crepulja, črešnja, čripnja, lopiž, pokljuka, vršnik or sansija.*

3 Ivanišević 2015, 87.

4 Vinski Gasparini 1954, 119–122; Gavazzi 1978, 122; Stipčević 1991, 62; Mihovilić 2013, 312; Karavanić *et al.* 2015, 121–122.

5 Čimin 2017, 280–284.

6 Gavazzi 1978, 122.

7 Barišić 2010, 188–201.

Historical sources

The traditional methods of baking bread and other kinds of food applied even today were most likely used during the Roman period, too. Until the 70s of the 2nd century BC, bakers and bakeries did not exist;⁸ instead, people produced the required amounts of bread within their own homes. This was predominantly a women's task, so the production of these vessels is attributed to them. Cato documents data about baking loaves of bread *sub testu* and preparation of desserts under a lid. According to these data, bread was baked under a lid,⁹ while *savillum* was baked in an oiled and covered bowl.¹⁰ Columella gives a description of the way the lid – *sač* – can be used for faster fruit drying and baking unleavened bread.¹¹ In Petronius' *Satyricon*, too, there is a description of a feast at which meat was served on a decorated plate covered by the lid under which it was baked.¹² Pliny the Elder, in the section of his *Natural History* devoted to Roman bread and bakers, notes that there existed a wide repertoire of types of bread named after the dish they were intended to be eaten with (bread for oysters), by the taste (cake bread), or by the manner of baking (bread from the oven, pan bread).¹³ There is another source which contains the descriptions of various types of Roman bread and the manner of their preparation. In his *Etymologiae*, Isidore explains the procedure of putting the lid over unleavened bread or a pancake, covering it with live coals and baking the dish that way.¹⁴

Archaeological confirmation

Numerous specimens of lids have been found on Roman sites throughout Italy (*testa dei clibani*), dated to the period from the late Republic to late Antiquity. Dome-shaped lids, dated mostly to the period of Republican Rome and further on, until the end of the 1st century, represent frequent finds in central Italy.¹⁵ The practice of *sub testu* baking continued until late Antiquity.¹⁶ In the same time frame, lids were found in Slovenia.¹⁷



FIGURE 1. The handle of a peka, Vinkovci.

On the site of Vinkovci-Šokadija¹⁸ a handle from a *peka* was discovered, placed aside on the recipient (Pl. 2: 1; Fig. 1). It was made of grey clay with a small number of inclusions and dated to the 1st century. A similar handle and a fragment of the recipient were found on the site of Kuzmin (Bregovi-Atovac) in Srijem during research on a settlement dated to the 1st century BC.¹⁹

Many hearths belonging to individual households have been discovered in Viminacium, but most of them are severely damaged. A multitude of ceramic vessel finds discovered not only in the crafts centre, but also at other locations, enables us to confirm the thesis that unleavened bread prepared under the *peka* was a staple in the diet of Viminacium's population. Broad, deep lids with knob-shaped handles (Pl. 2: 2; Fig. 3) have been discovered; certain authors identify them as baking lids – *sač*;²⁰ but, since there are no traces of burning on these objects, we have to remain reserved when it comes to the confirmation of this thesis.

Similarly, lids with thickened edges that could have served to hold the live coals during baking have been found, mostly with no traces of burning. They might have been used simply to keep the dish warm after baking, not placed on the hearth directly

8 Plin. Nat. 18. 107.

9 "Bread recipe: wash your hands and the bowl meticulously. Pour the flour into the bowl, gradually adding water, and knead vigorously. When the dough is well-kneaded, take it out and bake under earthenware lid." (Cato Agr. 74. 84, translated from the Latin by I. Ožanić Roguljić).

10 "Savillum was made this way: half a pound of flour, two and a half pounds of cheese are to be mixed as when preparing libum; a pound of honey and an egg. Season the clay bowl with oil. When you have kneaded the mixture well, put it in the bowl and cover it with a lid. Make sure it is well baked in the middle, which is the highest. When baked, take it out of the bowl, sprinkle with poppy seeds, leave under the bowl for a while, then take out." (Cato Agr. 84, translation by I. Ožanić Roguljić).

11 Col. 12. 3.

12 Petr. 35.

13 Plin. Nat. 18. 27. 105.

14 Isid. Orig. 20. 2. 15.

15 Cipriano, Fabrizio 1996, 192.

16 Cubberley *et al.* 1988, 210; Dalby 2003, 101; Paulas 2016, 580–581.

17 Istenič 1999, 145; Giesler, Mackensen 1981, 108–120.

18 Ožanić Roguljić 2016, Pl. 55: 10.

19 Brukner 1995, 95, Pl. VII: 64.

20 Vida 2011, 721.



FIGURE 2. A specimen of a large Pompeiian plate, Viminacium.

during the baking process. Naturally, we should bear in mind the kind of thermal shock these lids endured and the fact that they could not remain unimpaired for a long time. In all likelihood, after a certain period of usage, they cracked or broke due to the sudden temperature changes, and had to be discarded.

Forms of shallow plates with flat bottoms were discovered in the rubbish pits near the kilns in Viminacium; these vessels could have served as the recipients of the *sač*, over which a deep lid was placed, or were used for the preparation of *patina*. They were made of medium-refined or sand clay and found in the entire colour palette resulting from the firing. Some of these specimens measure up to 60 cm in diameter, and they are 6 to 10 cm deep (Fig. 2). The absence of lids to match these vessels represents an obstacle in their interpretation. Lids of these dimensions simply do not appear among the finds.

Function and usage

Dishes (primarily meat, fish and bread) were baked on a plate. The food was covered with a *sač* (a dome-shaped lid), which in turn was covered with live coals held in place by fluted rims. The best embers were obtained by burning firewood of high calorific value: e.g. beech or hornbeam, which retain the optimal temperature necessary for baking under the lid for a long time. The fire was commonly kindled on a large, flat disc – the firebed. The firebed would be heated for up to an hour and a half before the dome was put onto it. Baking could begin once enough embers were produced. The lower part of the *sač* (a large round vessel), which goes directly onto the embers, was seasoned with a small quantity of oil or lard, and then meat was placed on it, in one or several large pieces. The food was then covered with the up-

per part of the *sač* (the lid). The dome-shaped lid had a modelled edge – plastic horizontal and curved flutings which hold the embers. The open flame should not be allowed on the lid – only slow burning embers or ashes – since, in that case, the meat would burn on the outside and remain uncooked in the middle, or the ceramic vessel could crack due to the high temperature. Bread could be baked without the lower part of the vessel, on the heated baking stone directly. Bay, cabbage or fig leaves were commonly placed under the bread dough; however, this was not a rule.²¹ T. Vida has given an exceptionally detailed description of these dome lids' shapes for food preparation on an open hearth in the Roman period and the Middle Ages; he determined their typology and produced their distribution map relying on the results of the research obtained so far.²²

Vessels for baking under a lid

In the traditional preparation of *sač*, as well as in Cato's writings (*savillum*), there is a vessel or bowl in which food is prepared under a lid. It is open to question what such vessel looked like in the Roman period. There is no evidence of a vessel which could be connected with the finds of *sač*. Possibly, a large lid – *peka* – was used only for baking bread, while dishes such as *savillum* required another combination of plate and lid. Vessels with a flat bottom and curving walls of the recipient, either convex or concave, are connected with baking bread and a few other dish types. They are covered with a red slip both on the inside and on the outside; this coating is actually another layer of clay applied onto the modelled and dried vessel, and the red colour results from the presence of air in the kiln. If they do exist, the lids of such vessels are commonly slightly raised. Such a set of vessels often has traces of burning on the outer areas; their names vary among the various written sources, while the form itself originates from the Pompeiian plates.²³ They belong to the most common type of vessels discovered on the majority of Pannonian and Moesian sites from the 1st century to the 4th, and the sites where they do not appear are rare. The dimensions of these plates range from 10 to 60 cm in diameter, and they are 5 to 12 cm deep.²⁴ A special type of dish was named after these simple plates (*patina*) that could be covered by lids, which could have been used for baking bread. This dish is called *patina*, and an entire chapter of Apicius is devoted to it.²⁵ *Patina* can be prepared by combining various ingredients: chopped meat, fish, entrails, fruit and vegetables. Eggs are present as an ingredient in the majority of these recipes, and it could be either a sweet or a savoury dish, very much like soufflé. *Patina* can be baked in a beehive oven or on an open hearth. If baked in the beehive oven, it is not necessary to cover it with a lid, since enough heat is generated and the ingredients are easily cooked through. Such preparation proce-

21 Ožanić 2004, 29, 32; Vojnović-Traživuk 2009, 104.

22 Vida 2011.

23 Olcese 2003, 126, Pl. XV: 1–4.

24 Brukner 1981, 85–86; Nikolić-Đorđević 2000, 112; Raičković 2007, 23; Ožanić Roguljić 2016, 49–51.

25 Apicius, 4. 2. 128–143.



FIGURE 3. Deep lids, Viminacium.

ture is followed in modern ovens, too, and was also confirmed in the replica of a beehive oven in Andautonia Archaeological Park in 2004. The Apicius cookbook describes the way *patina* is prepared: embers are placed around the dish itself and atop the lid.²⁶ This method of cooking is similar to the preparation of dishes under the *sač* and suitable for application on an open hearth. The lids that complement this type of plate have a ring-shaped or curved rim which could hold the embers in place.²⁷ The statistical predominance of the plates on the vast majority of sites shows that they were multi-functional and practical, so they could be used both for serving food and for its consumption. It seldom happens that the ancient sources and ethnology describe a certain procedure in almost identical ways.²⁸ The procedure of using the ceramic *peka*, or a vessel for baking on an open hearth, has remained the same from prehistory until today.

According to the data deduced from the archaeological context, it is observed that the remains of dome-shaped lids have been found in Roman urban areas (*Cibalae*, *Viminacium*) and rural ones (*Atovac*). A form of *peka* with two handles has been documented in Pannonia Inferior, and if we interpret the large lids from Viminacium as lids for *sač*, then they represent another

type of large, deep lid with wide knob-shaped handle. In all likelihood, they are far more numerous than the limited scope of this paper could demonstrate. The ceramic baking lids were affordable and easily manufactured, but they were frequently cracked due to their extensive use. The small size of their fragments, and possibly their secondary use, could be the reason they are so rarely identified during the analyses of pottery ware. Since no vessels which could be connected with *peka* have been discovered so far, there is a high probability that they were used for baking bread, or perhaps other kinds of dishes made of compact dough and baked on a baking stone, which could have been covered with bay or other kinds of leaves. The bread and desserts which had to be prepared in a dish seasoned with oil were most likely baked in the plates with convex or concave walls, after which another type of dish (*patina*) was named. Such plates usually had lids, and in various forms they appear on the majority of Roman sites from the 1st century to the 4th. Like the *peka* (Fig. 4), they were covered with embers, too. The method of baking under a lid, i.e. *sub testu*, was a common way of preparing food on an open hearth in the Roman period,²⁹ so this paper focuses specifically on the presence of such method in the areas of *Pannonia Inferior* and *Moesia Superior*.

26 Apicius, 4. 2. 33; Plesničar-Gec, Kuhar 1996; Grainger 2006, 77.

27 Grainger 2006, 77.

28 Dalby 2003, 101.

29 Olcese 2003, 13, 24–26, Pl. XVII–XVIII.



FIGURE 4. A reconstruction of a peka, island of Iž (The Ethnographic Museum, Zagreb).

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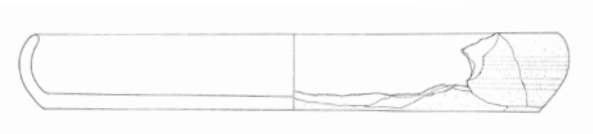





SHAPE	DATATION	FINDING PLACE
 <p data-bbox="165 363 209 389">Pl 1</p>	2 nd – 3 rd century	Museum Varteks Šokadija Komercijalna banka
 <p data-bbox="165 661 209 687">Pl 1</p>	2 nd – 3 rd century	Museum Varteks Komercijalna banka
 <p data-bbox="165 959 209 985">Pl 3</p>	2 nd – 3 rd century	Museum Varteks Komercijalna banka
 <p data-bbox="165 1257 209 1283">Pl 4</p>	2 nd – 3 rd century	Varteks Šokadija
 <p data-bbox="165 1555 209 1581">Pl 5</p>	2 nd – 3 rd century	Museum Šokadija Komercijalna banka
 <p data-bbox="165 1853 209 1879">Pl 6</p>	4 th century	Museum

PLATE 1. The most frequent shapes of plates with a flat bottom, Vinkovci (Ožanić Roguljić 2016, 50).

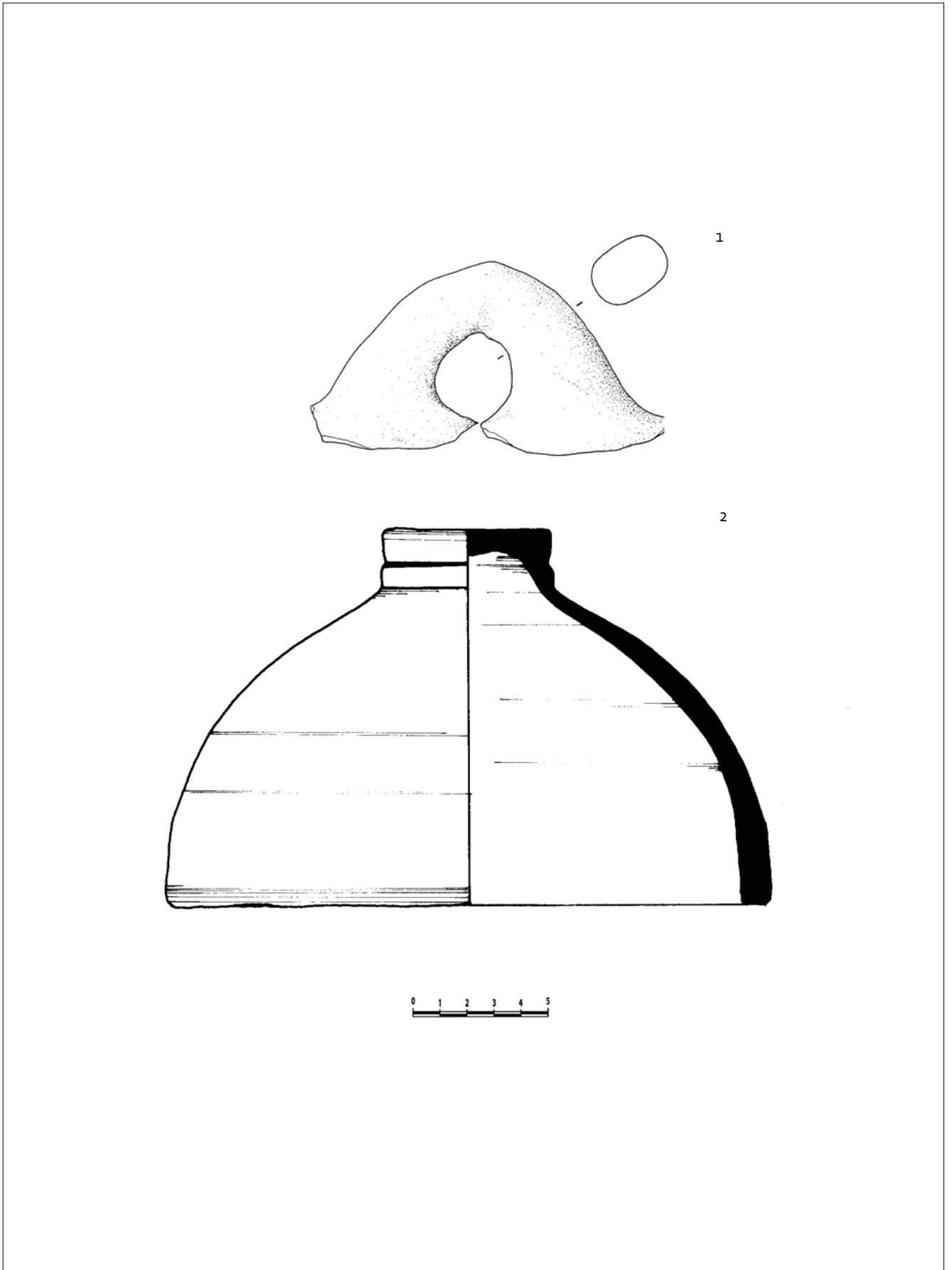


PLATE 2. 1. The handle of a peka, Vinkovci; 2. Bell-shaped lid (peka), Viminacium.