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## PRELIMINARY CONSIDERATIONS ON THE ROMAN POTTERY FROM A RESCUE ARCHAEOLOGICAL EXCAVATION AT NOVIODUNUM

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**Abstract:** *The pottery analyzed in this paper was excavated during a survey verifying the archaeological potential of the area situated 500 metres SW of the Roman city of Noviodunum, where a 6,000 sqm major construction project will be erected (the Romanian Border Police Headquarters). For this reason, the archaeological team decided to first dig a 30 × 2 m trench N-S orientated. 0.30-0.50 m deep painted plaster, Roman and Early medieval pottery shards, glass, Roman mortar, building materials and a W-E oriented inhumation grave were found. The pottery was discovered in a waste pit 3 × 2 m at the top (-0.55 m), narrowing gradually up to -1.70 m deep. In the same context, some earthen lamps and moulds, which will be published separately, were also found.*

**Rezumat:** *Ceramica care face obiectul acestui articol a fost descoperită ca urmare a unui sondaj de evaluare de teren pentru verificarea potențialului arheologic a unei zone aflate la aproximativ 500 m S-V de ruinele cetății Noviodunum, teren pe care ar urma să fie realizată o investiție (sediul Poliției de Frontieră – Isaccea) pe cca. 6000 mp. În acest scop a fost practică o secțiune de 30 × 2 m orientată N – S. La adâncimea de 0,30-0,50 m au fost identificate fragmente de tencuială pictată, fragmente ceramice aparținând epocilor romane și medievale, fragmente de sticlă, mortar, materiale de construcție, un mormânt de înmormântare fără inventar, orientat E-V, etc. Ceramica publicată aici a fost descoperită într-o groapă menajeră cu dimensiunile de 3 × 2 m în partea superioară, la - 0,55 m sub nivelul actual de călcare, care se îngustează în trepte până la - 1,70 m. Menționăm că în același context arheologic au mai fost descoperite opaițe și tipare de opaițe care vor face obiectul unui studiu separat.*

**Key words:** *Noviodunum Isaccea, pottery, typology, Early Roman period, Getae, archaeological excavation.*

**Cuvinte cheie:** *Noviodunum Isaccea, ceramică, tipologie, perioadă romană timpurie, getic, arheologie, cercetări arheologice.*

Being one of the most important strategic points of the Roman rule at the northern border of *Moesia*, Noviodunum is known as the headquarters of *Classis Flavia Moesica*<sup>1</sup> (Pl. I/1-2). The archaeological excavation and accidental finds revealed the

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<sup>1</sup> Suceveanu, Barnea 1991, 67; ISM V, 281, 283; DID 2, 61; Barnea 1977, 121.

Roman and Late Roman fortifications of *Noviodunum*, the Early<sup>2</sup> and Late<sup>3</sup> Roman necropolis as well as many other objectives<sup>4</sup>.



Pl. I.

The position of *Noviodunum* in the economy of the 2<sup>nd</sup>-3<sup>rd</sup> century AD is in many ways an extension of the position already established in the 1<sup>st</sup> century AD, when Rome's expansion reached the borders of *Ripa Thraciae* during the confusing times of weak Odrise domination in the area.<sup>5</sup> The Western connection in the area of the Danube remained strong during the first two centuries AD, as proven by the significant amounts of imported pottery products from Italy and other western provinces, as a result of the military effort to secure the *limes*.<sup>6</sup>

Even though there is no major study on the Roman pottery of *Noviodunum*, useful deposits have been published especially with thin-walled pottery,

<sup>2</sup> On the subject of Early Roman cemetery and roads, Bujor, Simion, 1961, Simion 1977, Simion 1984, Simion 2007.

<sup>3</sup> Stănică, Radu, Dinu 2010, on the 4<sup>th</sup>-5<sup>th</sup> century AD necropolis near *Noviodunum*.

<sup>4</sup> Topoleanu 1984; Barnea 1977, 104 (Roman baths).

<sup>5</sup> DID II, 46-63; Baumann 2008a, 191 on the hypothesis of a Roman garrison stationed at *Noviodunum* before 12 or 15 AD.

<sup>6</sup> Baumann 2008b, on *terra sigillata* imports coming from the Roman West, the North-Pontic area and South-Moesian region.

systematically excavated in previous years<sup>7</sup> from the tumular cemetery, as well as other studies concerning more or less the Early Roman pottery.<sup>8</sup>

The assumption – more than once formulated<sup>9</sup> – that Noviodunum was an important centre for pottery and building materials production<sup>10</sup> now may be accepted as a certainty, especially given the finds of kilns for ceramic vessels and construction materials. Few supports or amphora-stands (some of them discarded because of manufacturing flaws) or lamp moulds are listed in the catalogue – a sign that the kilns area is not far.

The poor state of preservation of the shards does not always allow certain identifications. Except for the non Roman shards and the few Late Roman specimens, the pottery material resulted from the excavation can be accommodated within the limit of the first three centuries AD. There is a degree of uncertainty here, due to the small number of imports that can be dated more accurately, but they suggest the same date.

Although it is more limited in number, the non Roman material in the area may be contemporary with the earliest Roman material, by typology. In the absence of other evidence for dating, such as buildings or kilns, certainly situated nearby, the pit fill and the scattered fragments of pottery found there thus suggest that the area was inhabited in the first centuries AD.

An important part of the excavated material appears to be earlier than the 3<sup>rd</sup> century AD, but the smaller amount of fineware found here can only lead to preliminary interpretations. Joining fragments are very scarce and it was impossible to find a single complete vessel. It is therefore possible that the lower part of the pit fill is a gradual accumulation rather than a single dump, but the records are not sufficient to establish this with certainty, therefore we have preferred to treat the fill as a single entity. The pottery fragments from the upper fill of the pit and in the entire area are mixed, and some of these pieces are clearly made later than the others. Therefore we did not catalogue them separately, because of their rarity, representing an insignificant percentage of the entire lot. In fact it would be strange *not to find* late Roman pottery, considering the position of the nearby Roman and late Roman fortification.

Although pottery appeared in average quantities, the stratigraphic contexts in which it was found often did not provide precise chronological information, so that individual types are dated here mainly by comparison with examples from other sites. The nature of the context of each published item is noted in the catalogue. The ceramic

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<sup>7</sup> Baumann 2010 (i.e. fine, *barbotine*, roughcasting and glazed pottery).

<sup>8</sup> Simion 1977; Simion 1984; Simion 2007; Topoleanu 1984; Baumann 2009; Baumann 2010.

<sup>9</sup> Topoleanu 1984, 187; Baumann 2009, 273.

<sup>10</sup> Baumann 2009, 199, pl. 10.

material published in this paper is arranged typologically, but the non Roman pottery and special shapes are presented separately.

The first remark concerning the found Roman pottery is the diversity of shapes and fabrics. Regarding the kitchenware category, it is difficult to determine clearly which vessel was locally produced and which was imported, given that the common shapes were in use in the first three centuries AD. For that reason, we consider that a general discussion about the precise provenance of the pottery can be held after the completion of the archaeological excavation, when a substantial lot will have been subject to the archaeological analysis. For the time being, we will briefly mention the main functional categories listed in the catalogue.

The majority of the **amphorae** certainly have Pontic origins, but in some cases the origins are questionable. Considering the poor state of preservation (disparate fragments), we preferred to mention even some unlikely analogies from other parts of the Empire.

### **Kitchenware**

As far as the cooking pots are concerned, in some cases (i.e. no. 15) the cultural attribution is questionable, and the lasting circulation of some shapes is problematic for dating, but, except for some fragments, the analogies suggest 2<sup>nd</sup>-3<sup>rd</sup> century AD circulation. Few examples can be dated to the Late Roman period, being discovered mostly in the upper fill of the pit. Fortunately, in most cases we have found analogies in Moesia and Dacia provinces, but some similarities with western provinces (mostly analogies from Italy and Spain) prove that this functional category circulated the same as the fineware. Nevertheless we have no reason to believe that the majority of the pots were not locally produced, (west Pontic) especially as the classic oriental shapes are missing. The main features of the cooking pots are the reddish coarse fabrics (resulted from oxidized firing) with limestone and silver mica in composition and the traces of secondary burning on the exterior. Some pieces have a groove on the upper inside rim to fit a lid, but this is not a general characteristic of the entire assemblage.

Pans (sometime wrongly identified in the bibliography as bowls or plates - depending on the found analogies) are divided in different types and variants, and were certainly used for cooking, mostly because of the coarse fabric and obvious secondary burning traces on the outside.<sup>11</sup> The pan types and variants don't reflect in our paper a proper typology, as the main purpose of this paper is rather to exemplify different types and variants found together.

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<sup>11</sup> For further details, see the discussion below in the catalogue.

### Tableware

The bowl category includes the only example (no. 37) of a probably 2<sup>nd</sup> century import or imitation of Dragendorff 37 shape, while no. 33 is questionable, as the colour and characteristics of the coarse reduced fired fabric suggest classification in the cookware category.

### Drink ware

Pitchers, jugs and mugs are almost equally represented in the general picture of archaeological finds, fitting the general shapes from the early Roman times.

Interesting points concerning **storage vessels** are brought by three fragments of a (probably) *pithos* decorated with multiple waves and horizontal lines. The vessels placed in the *miscellaneous* section are fragments of *turibula* or vessels missing elements of identification. The amphora-stand finds enrich the specific literature on this subject and answer some legitimate questions concerning the rarity of these instruments in Moesia.<sup>12</sup>

The **pre-Roman** pottery excavated at Noviodunum finds its analogies in already published materials from the area;<sup>13</sup> before the Romans' arrival, Noviodunum was an important centre of transit on the Danube in which Histria had long showed interest.<sup>14</sup>

The settlement<sup>15</sup> was inhabited by the Getae population<sup>16</sup> and it was apparently situated in the eastern side of modern Isaccea, not randomly close to the last crossing point over the Danube before the Delta – another fortified settlement, Aliobrix was on the other side of the Danube – as proven by the archaeological discoveries of local Getae and Hellenistic pottery.<sup>17</sup>

Though the three hand-made fragments of pottery presented in the catalogue (no. 60-62) cannot be clearly assigned to the Sarmatian culture, the low quality of the fabric, the uncontrolled firing technique and the coarse processing are arguments<sup>18</sup> for

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<sup>12</sup> Baumann 1995, 429; Luezas Pascual 1991, 82.

<sup>13</sup> Radu, Stănică 2011, presenting Carpic ceramic fragments; Baumann 2009, pl. XIII (Getic pottery from 1<sup>st</sup>-2<sup>nd</sup> century AD.).

<sup>14</sup> Baumann 2008a, 190 for the amphora handle stamped with the name of the producer Theognetos and inscription ΙΕΤΡΙΗ (2<sup>nd</sup>-1<sup>st</sup> c. AD) discovered at Noviodunum.

<sup>15</sup> For the acceptance of the Noviodunum Celtic toponym see Baumann 2008, 189-190, also Suceveanu, Barnea 1991, 48.

<sup>16</sup> Suceveanu, Barnea 1991, 48.

<sup>17</sup> Irimia 2007, 158.

<sup>18</sup> Bărcă 2006, 67.

identifying the existence of this cultural group at Noviodunum.<sup>19</sup> The pottery fragments do not allow firm identifications, due to the small number of fragments found not only at Noviodunum, but also in the overall Sarmatian pottery discovered in Moesia. Nevertheless, the Sarmatians are mentioned in the area in the first century AD<sup>20</sup> during the military expedition of Roman governor Tiberius Plautius Silvanus Aelianus to the North of the Danube.<sup>21</sup> The case of Sarmatian archaeological finds was also discussed by other specialists,<sup>22</sup> but we retain the assumption that after the initial attacks the Roxolan Sarmatians from the North of the Danube were under Roman military control in the first three centuries AD.<sup>23</sup>

However some of the hand-made and wheel-made vessels are encountered in Sântana de Mureș-Cerneahov culture, too, where a Sarmatian influence is also present.<sup>24</sup>

### Catalogue

#### Amphorae

1. Bottom fragment of an amphora, 2011, S 1, C 2-3, h – 0.30-0.60 m, preserved height – 7 cm, semi-fine light brick fabric with small lithic particles and silver mica, beige slip, Munsell<sup>25</sup> 10 YR 6/8 brownish yellow. References: Rădulescu 1976, 102, pl. 1/2-2a (Pontic amphora, 1<sup>st</sup>-2<sup>nd</sup> c. AD); Ramón Torres 2006, fig. 10/1, fig. 11/1-4;
2. Rim fragment of amphora, 2011, S 1, C 2, h – 0.30-0.60 m, preserved height – 5 cm, rim diameter – 8 cm, coarse brick fabric with sand, iron oxide and limestone particles, slip of the same colour, Munsell 7.5YR 6/8 reddish yellow. References: Zeest 1960, 117, pl. XXXVI/type 89 k (2<sup>nd</sup>-3<sup>rd</sup> c. AD) or Zeest type 73, pl. XXX/73 (2<sup>nd</sup>-3<sup>rd</sup> c. AD); Bogdan-Cătănciu, Barnea 1979, 181, fig. 144/3.3 N II (2<sup>nd</sup> century AD);
3. Rim and handle fragments of an amphora, 2011, S1, C2, h- 0.20-0.30 m, preserved height 17 cm, rim diameter 9,7 cm, dark brick colour fabric with fine sand and iron oxide particles, white slip on the outside, Munsell 2.5Y 7/6 yellow. References:

<sup>19</sup> Thanks to dr. Valeriu Sârbu for the initial cultural identification of the pottery fragments as Sarmatian.

<sup>20</sup> Ovidius *Trist.* III, 10, 51-66; Tacitus, *Hist.* I, 79.

<sup>21</sup> Vulpe, Barnea 1968, DID II, 56-58 on the newcomers, including Roxolan Sarmatians.

<sup>22</sup> Bichir 1972, 169; Bârcă, Simonenko 2009.

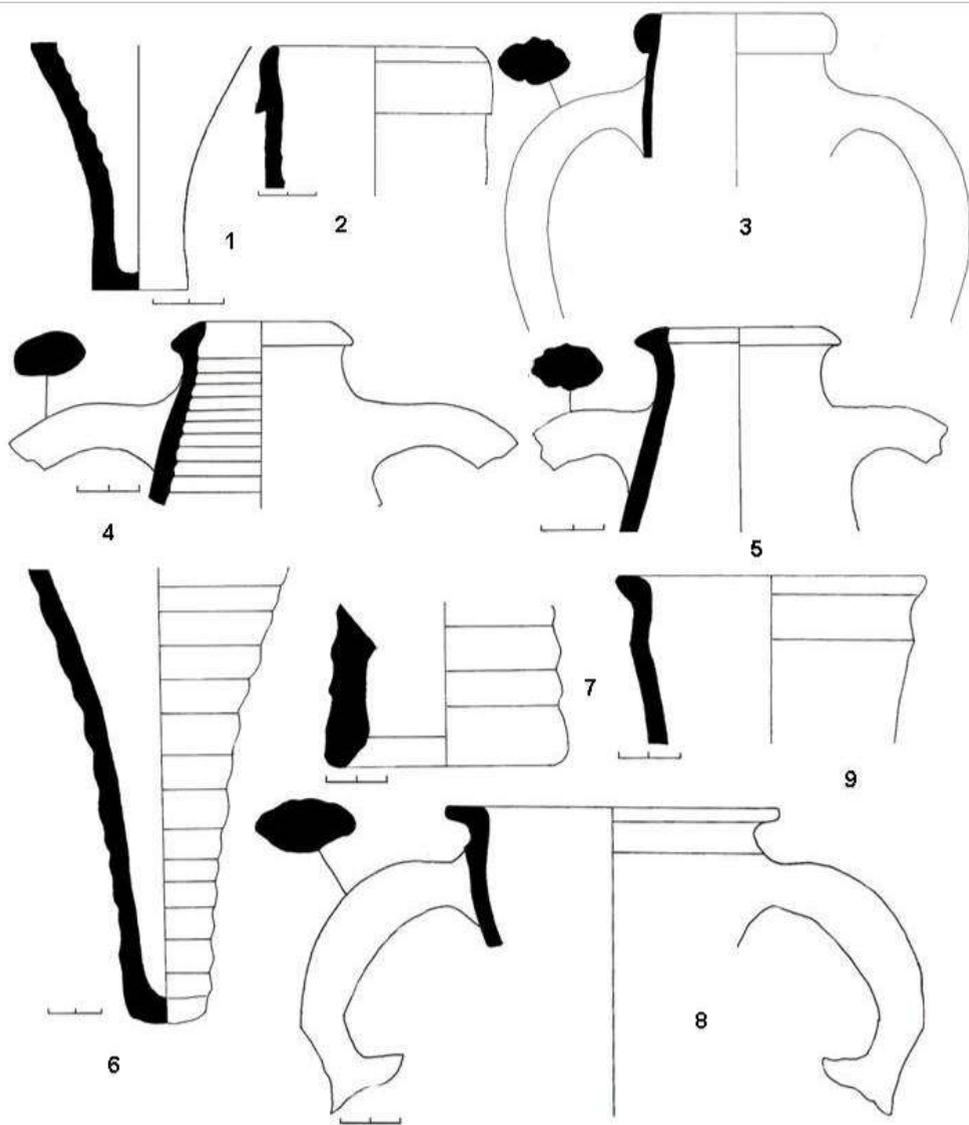
<sup>23</sup> Oța 2007, 51.

<sup>24</sup> Körösfői 2009, 145-160. A similar combination of Roman shards, *pithoi* decorated with waves and hand-made pottery was found in early (3<sup>rd</sup> century) Sântana de Mureș-Cerneahov culture; Bichir 1971, 135-145; Bichir 1972, 137-176.

<sup>25</sup> Munsell Soil Colour Charts 1994, Revised Edition.

Zeest 1960, type 72, Pl. XXX/72 (2<sup>nd</sup>-3<sup>rd</sup> c. AD); Paraschiv 2006, 17, Pl. 1/1, Pontic amphorae type I (1<sup>st</sup>-2<sup>nd</sup> c. AD);

4. Fragmentary rim of amphora, 2011, S 2, h=0.20-0.30 cm, preserved height 6 cm, rim diameter 6 cm, coarse reddish fabric with limestone and black particles, slip of the same colour, Munsell 2.5Y 7/4 pale yellow. References: Zeest 1960, 117-118, Pl. XXXVII/type 92 (2<sup>nd</sup>-3<sup>rd</sup> c. A.D.); Bogdan-Cătănciu, Barnea 1979, 181, fig. 144/3.6 N II (2<sup>nd</sup> c. AD); Dyczek 2001, 221, type 29, Fig. 142b; Paraschiv 2006, p. 19, Pontic amphorae type 3, pl. 2/13 and 3/18;
5. Fragmentary rim of amphora, 2011, S1, G1, preserved height 6.5 cm, rim diameter 6.3 cm, semi-fine reddish fabric with limestone particles and silver mica, oval shape handles decorated with grooves, slip of the same colour, Munsell 10 YR 7/6 yellow. References: Zeest 1960, 117-118, Pl. XXXVII/type 92 (2<sup>nd</sup>-3<sup>rd</sup> c. AD); Bogdan-Cătănciu, Barnea 1979, 181, fig. 144/3.6 N II (2<sup>nd</sup> c. AD); Dyczek 2001, 221, type 29, Fig. 142b; Paraschiv 2006, 19, Pontic amphorae type 3, pl. 2/13 and 3/18;
6. Fragmentary amphora bottom, 2011, S 2, h = 0.20-0.30 cm, preserved height – 17.5 cm, maximum preserved diameter – 10 cm, multiples grooves on the outside, pyriform-shaped, coarse reddish fabric with iron oxide and limestone particles, slip of the same colour, Munsell 2.5YR 6/8 light red. References: Rădulescu 1976, 102, pl. 1/2-2a (Pontic amphora, 1<sup>st</sup>-2<sup>nd</sup> c. AD); Ramon Tórrres 2006, fig. 10/1, fig. 11/1-4 (amphorae PE 25 and PE 26. 1<sup>st</sup> c. AD);
7. Amphora base, possibly type Kapitän II, 2011, S1, G1, preserved height – 5.5 cm, base diameter – 8 cm, coarse reddish fabric, silver mica, limestone and iron oxide particles in composition, slip of the same colour, Munsell 10R 5/8 red. References: Bogdan-Cătănciu, Barnea 1979, fig. 142/3.4 NI; Dyczek 2001, 137-144, type 18, fig. 70 (2<sup>nd</sup>-5<sup>th</sup> c. AD); Paraschiv 2006, pl. 21/34-35; Negru, Bădescu, Avram 2003, fig. 2/20-32;
8. Amphora rim and handle, 2011, S1, G1, preserved height – 10 cm, rim diameter – 11 cm, reddish semi-fine fabric with rare iron oxide particles, white-yellow slip on the exterior, Munsell 7.5YR 8/6 reddish yellow (fabric). References: Opaít, Paraschiv 2012, p. 118, fig. 13/a (Peacock and Williams Class 50 early subtype); Garcia Noguera, Pocina Lopez, Remola Vallverdu 1997, 190, fig. 5/6 (2<sup>nd</sup> c. AD)
9. Fragmentary rim of amphora, 2011, S1, G1, preserved height – 5.5 cm, rim diameter – 10 cm, reddish semi-fine fabric with fine black and white particles, yellow slip on the inside and outside, Munsell fabric 7.5YR 8/6 reddish yellow and Munsell angoba 5Y 8/8 yellow. References: Bogdan-Cătănciu, Barnea 1979, 181, fig. 146/4.3 (NII – 1<sup>st</sup>-2<sup>nd</sup> c. AD); Acconci, Gabrieli 1994, 446, fig. 29/3;

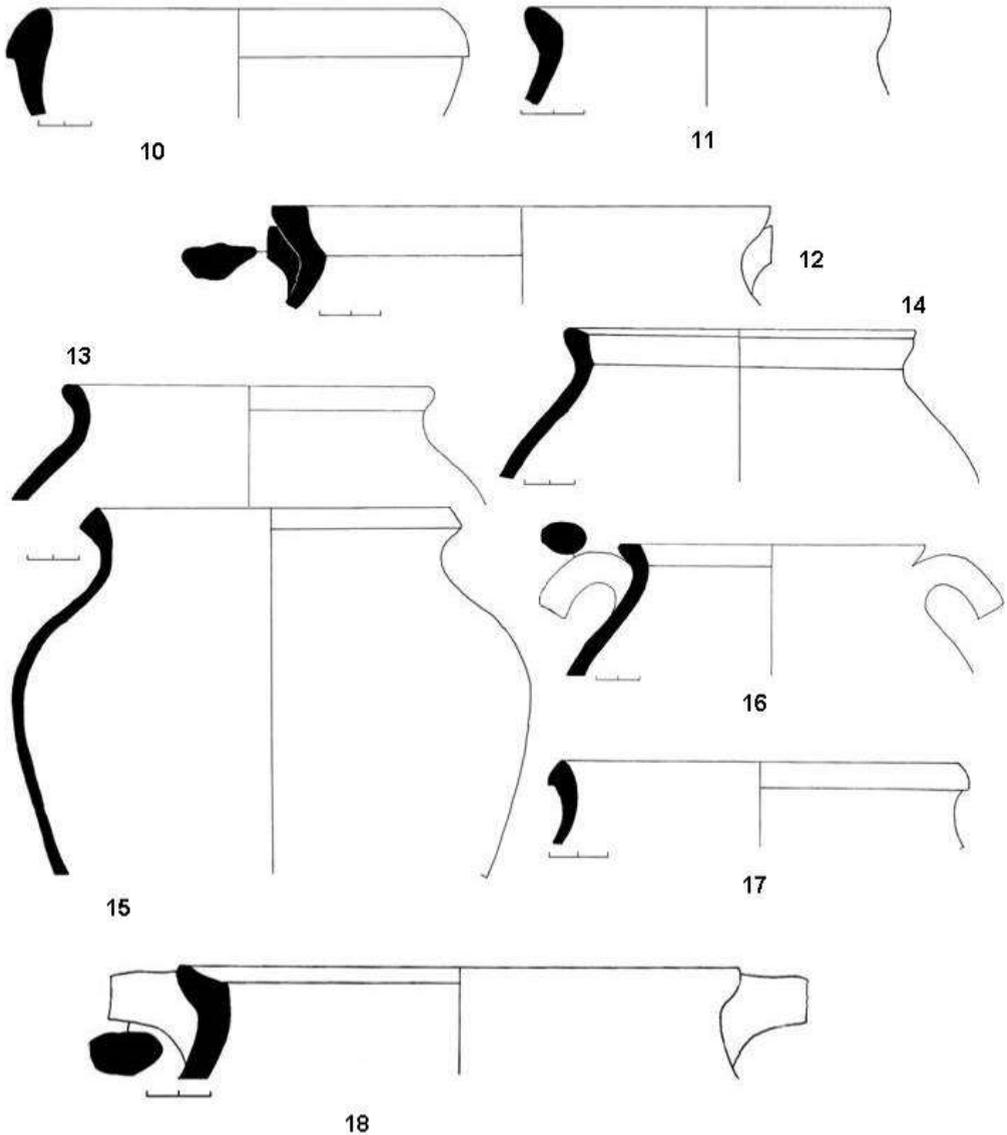


Pl. II.

10. Rim fragment of an amphora, 2011, S1, C2, h – 0.20-0.30 m, preserved height 4 cm, rim diameter 17 cm, semi-fine beige fabric with small limestone particles, slip of the same colour, Munsell 5Y 8/6 yellow. References: Zeest 1960, 168, pl. XXXII/76b; Băjenaru, Dobrinescu 2008, 191-192, pl. 4/9 (2<sup>nd</sup>-3<sup>rd</sup> century AD.)

**Pots**

11. Rim fragment of a pot, 2011, S 1, C 2-3, h – 0.30-0.60 m, preserved height 3 cm, rim diameter 12 cm, coarse brick colour fabric with limestone, iron oxide, sand particles and silver mica, secondarily burned on the outside, Munsell 5YR 6/8 reddish yellow. References: Suceveanu 2000, 122-123, pl. 54, type XXXVIII/3, 6 (2<sup>nd</sup>-4<sup>th</sup> century A.D.) and 117, pl. 51, type XXXVI/12 (3<sup>rd</sup> c. AD); Brukner 1981, T. 112/38; Bonnet *et alii* 2012, 391, fig. 43/1 (first half of 3<sup>rd</sup> c. AD);
12. Rim fragment from a pot, 2011, S 1, C 2, h – 0.30-0.60 m, preserved height 3 cm, rim diameter 16 cm, coarse reddish fabric with lithic particles in composition, the core is gray, porous, slip of the same colour, Munsell 2.5Y 7/4 pale yellow. References: Suceveanu 2000, 119, pots type XXXVII, pl. 52/3-4 (2<sup>nd</sup>-3<sup>rd</sup> c. AD) and 129, pots type XL, pl. 60/5 (2<sup>nd</sup>-3<sup>rd</sup> century A.D.); the shape of the rim is also common for the late period: Baumann 1995, 402, pl. I/5 (4<sup>th</sup> c. AD); Bogdan-Cătănicu, Barnea 1979, fig. 172/5.2 (NVIB – 6<sup>th</sup> c. AD);
13. Rim fragment of a pot, 2011, S 1, C 2, h – 0.30-0.60 m, preserved height – 5 cm, rim diameter 15 cm, coarse gray fabric with sand, small rocks and limestone inclusions, the core is dark brown colour, severely burned on the outside, Munsell 10 YR 2/2 very dark brown. References: Bogdan-Cătănicu, Barnea 1979, 184 fig. 152/5.1 NIII; Kenrick 2013, 21, pl. 10/165 (Buff 1: orange-buff clay, paler on outside surface); Serrano Ramos 1989, 126, fig. II/2; Bonnet *et alii* 2012, 381, fig. 30/10 (first half of 3<sup>rd</sup> c. AD); Gallimore 2011, 303, fig. 5.25/330 (context of first half of third century);
14. Rim fragment of a pot, 2011, S2, h – 0.10-0.20 m/0.30-0.60 m preserved height – 6 cm, rim diameter 14 cm, coarse dark brick colour fabric with limestone particles, secondarily burned on the outside and inside, gray slip, the fabric is Munsell 2.5Y 7/4 pale yellow, and the slip is Munsell 2.5Y 2.5/1 black. References: Bogdan-Cătănicu, Barnea 1979, 188 fig. 162/5.7 NV (5<sup>th</sup>-6<sup>th</sup> c. AD); Bonnet *et alii* 2012, 411, fig. 79/8 (first half of 5<sup>th</sup> c. AD);
15. Rim and median part of a pot, 2011, S1, C2, h – 0.20-0.30 m, preserved height – 14.5 cm, rim diameter – 15 cm, dark gray colour coarse fabric with lithic inclusions, secondarily burned, Munsell 5Y 2.5/1 black. References: Baumann 1995, pl. LIII/2 (Getic pot, 1<sup>st</sup>-3<sup>rd</sup> c. AD), pl. LXIII/1 (Roman provincial pot); Bogdan-Cătănicu, Barnea 1979, fig. 149/1.2 NIII (2<sup>nd</sup>-3<sup>rd</sup> c. AD);

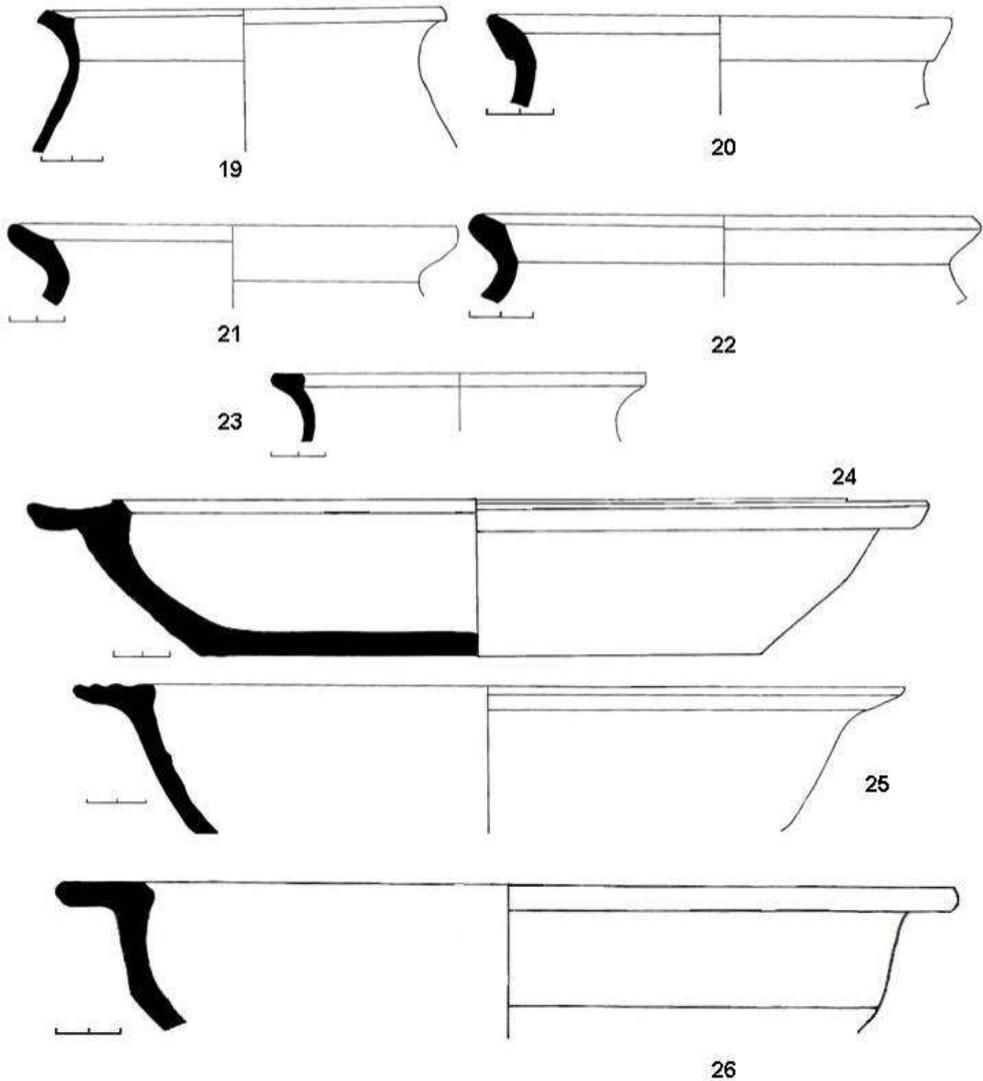


Pl. III.

16. Fragmentary pot, 2011, S 2, h – 0.20-0.30 cm, preserved height – 6 cm, rim diameter – 14 cm, coarse reddish fabric with limestone and small rocks, slip of the same colour, secondarily burned on the outside and inside, Munsell 2.5Y 7/4 pale yellow.

- References: Suceveanu 2000, 129-130, pots type XL, pl. 60/5 (2<sup>nd</sup>-3<sup>rd</sup> century AD); Bondoc, Gudea 2009, 165, pl. XXXIX/176-177 (first half of 3<sup>rd</sup> century AD);
17. Rim fragment of a jar, 2011, S 2, h – 0.20-0.30 cm, preserved height – 2.7 cm, rim diameter – 14 cm, coarse beige fabric with silver mica and limestone particles, secondarily burned on the outside and inside, slip of the same colour, Munsell 7.5YR 6/8 reddish yellow. References: Popilian, Bondoc 2014, fig. 8/11, fig. 13/5; Bondoc, Gudea 2009, p. 164, pl. XXXVII/166 (2<sup>nd</sup> c. AD); Olcese 2003, 79-80, pl. VII/7 (pots type 2, an early variant in Rome area dated to 4<sup>th</sup> -3<sup>rd</sup> c. BC – 2<sup>nd</sup>-1<sup>st</sup> c. BC); Haas, Attema, Tol 2012, 249, pl. XVI/6; Johnson 2008, 19, no. 53 (early Roman dating, perhaps to the 1<sup>st</sup> to 2<sup>nd</sup> c. AD); Brukner 1981, T. 123/143;
  18. Pot rim, 2011, S 2, h – 0.20-0.30 cm, preserved height – 3.5 cm, rim diameter – 17 cm, coarse reddish fabric with iron oxide, limestone fragments and small black particles of stone, slip of the same colour, secondarily burned on the inside, Munsell 10 R 5/8 red. References: Kenrick 2013, 43, pl. 21/372; Bogdan-Cătănciu, Barnea 1979, 188, fig. 162/5.4 (NV - possibly 5<sup>th</sup> c. AD); Suceveanu 1982, 102, pl. 7/29 (*Thermes II Phase I B* – 2<sup>nd</sup> c. AD);
  19. Pot rim, 2011, S1, G1, preserved height – 4.5 cm, rim diameter – 13 cm, reddish semi-fine fabric with limestone and silver mica, self slip, secondarily burned on the inside and outside, Munsell 2.5 YR 6/8 light red. References: Opaïț 1991, pl. 28/171 type VIII B1; Topoleanu 2000, 108, pl. XXVIII/243 (West-Pontic pots type II – a popular shape in the area during 2<sup>nd</sup>-7<sup>th</sup> c. AD); Bogdan-Cătănciu, Barnea 1979, 190, fig. 168/5.4-5.5 (NVIA – 6<sup>th</sup> c. AD);
  20. Pot rim fragment, 2011, S1, G1, preserved height – 3 cm, rim diameter – 14 cm, coarse reddish fabric with limestone, sand and other black particles, red slip on the outside, secondarily burned on the outside, Munsell 7.5YR 7/8 reddish yellow. References: Bogdan-Cătănciu, Barnea 1979, 184, fig. 152/5.3 (NIII – 2<sup>nd</sup>-3<sup>rd</sup> c. AD); Hudson 2010, 4, fig. 11/N7-1-238 (second half of the 2<sup>nd</sup> c. AD); Klenina 2004, 112, fig. 26/239 (pots type 1);
  21. Pot rim fragment, 2011, S1, G1, preserved height – 3 cm, rim diameter – 16 cm, coarse reddish fabric with limestone fragments, silver mica and fine sand, slip of the same colour, secondarily burned on the outside, Munsell 7.5 YR 6/8 reddish yellow. References: Bondoc, Gudea 2009, 169, pl. XLIV/203-204 (2<sup>nd</sup>-3<sup>rd</sup> c. AD); Brukner 1981, T. 124/158; Tamba 2008, 309, OL7 – Fig. VI/6.5;
  22. Pot rim fragment, 2011, S1, G1, preserved height 2.5 cm, rim diameter 16 cm, coarse reddish fabric with fine sand, silver mica and limestone particles, slip of the same colour, Munsell 10 YR 7/6 yellow. References: Bondoc, Gudea 2009, 169, pl. XLIV/203-204 (2<sup>nd</sup>-3<sup>rd</sup> c. AD) and 166, pl. XLI/184; Brukner 1981, T. 124/158; Tamba 2008, 309, OL7 – Fig. VI/6.5;

23. Pot/bowl/casserole rim fragment, 2011, S1, G1, preserved height – 2.5 cm, rim diameter – 14 cm, semi fine red fabric with rare limestone micro particles and silver mica, secondarily burned on the inside and outside, Munsell 7.5 YR 6/8 reddish yellow. References: Bondoc, Gudea 2009, 169, pl. XLIV/202 (first half of 3<sup>rd</sup> c. AD); Suceveanu 2000, 120, pl. 52/3 (pots type XXXVII, 2<sup>nd</sup> – 3<sup>rd</sup> century A.D.); Tamba 2008, 219, LM1S, Fig. VI/4.13 and 283, LM3, Fig. VI/5.23;



Pl. IV.

## Pans

Although in terms of functionality those vessels belong to the same category, we decided not to divide them into types, considering only the shape of the shards: some types have concave interior, while for others the interior is straight or slightly oblique. These vessels are divided in the specific literature into a variable number of functional categories, including plates, bowls, cups and casseroles/frying pans, depending on the authors. The vessels have some common distinctive features: 1) the coarse fabric is the main reason for the classification under kitchenware; 2) the traces of secondary burning on the outside, present on the majority of the shards prove that these vessels were in contact with fire, being used for cooking; 3) the only specimen for which a complete profile was established has flat base. Although these characteristics are not necessarily decisive for classifying the shards under *vasa coquinatoria* category, we believe that it's very likely that these vessels were used mainly for cooking rather than for eating.

The size of the vessels varies, but other features must be considered, too: no. 24 is somehow more often encountered, no. 25, 27, 33 and 35 are decorated with 1-3 grooves around the outer edge of upper surface of the rim, even if there are distinctive variants, and no. 26 and 28 are slightly concave. No. 24 is a flanged vessel with internal lip. The rim is flat and flared and the interior of the vessel is concave.

24. Pan rim fragment, 2011, pit, h – 2 m, height – 5.5 cm, rim diameter – 32 cm, coarse red fabric with limestone, iron oxide and silver mica in composition, secondarily burned on the outside, Munsell 2.5Y 7/8 yellow. References: Johnson 2008, 123, no. 370-372 (Cooking Pans with Wide Rim); Robinson 1959, 90, pl. 70/M65 (plate, diameter – 20,3 cm, first half of the 2<sup>nd</sup> c. AD); Suceveanu 1982, 101, pl. 5/38 (first c. AD); Suceveanu 2000, 46-49, pl. 14/10 (bowl type XII, 2<sup>nd</sup>-3<sup>rd</sup> c. AD) and 95-96, pl. 38/1-5 (*plateau*, type XXVIII, 2<sup>nd</sup>-3<sup>rd</sup> c. AD); Klenina 2006, fig. 9/11 (2<sup>nd</sup>-3<sup>rd</sup> c. AD); Istenič, Schneider 2000, fig. 5/3 (Aegean type, from the shipwreck of Nerezine, 1<sup>st</sup>-3<sup>rd</sup> c. AD); Topoleanu 2000, 119, pl. XXXV/303 (west Pontic provincial pan);

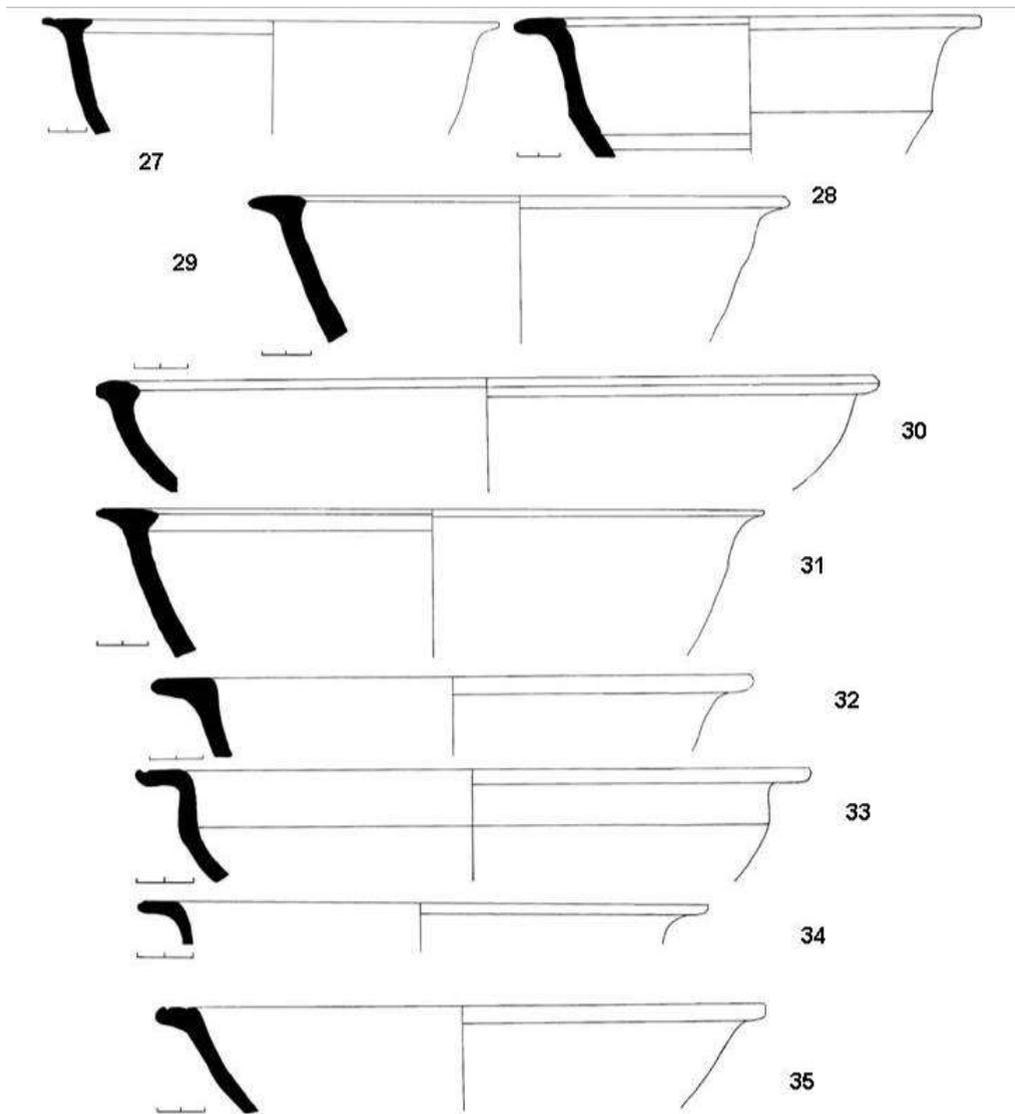
### *Other pan types and variants*

References: Johnson 2008, 122, no. 368 (cooking pan with wide rim, diameter – 26 cm); Topoleanu 2000, 119, pl. XXXVI/304-305 (west Pontic pans); Bogdan-Cătănicu, Barnea 1979, 183, fig. 151/2.19 and 2.21 (NIII – 3<sup>rd</sup> c. AD); Mușețeanu 2003, 105, pl. 38/61 and pl. 39/62 (2<sup>nd</sup>-3<sup>rd</sup> c. AD); Webster 1976, 31-32, fig. 8/45-50 (bowls 2<sup>nd</sup>-3<sup>rd</sup> c. AD.); Opaiț 1991, pl. 35/25658;

In the case of no. 32-35, the rim is flat, the interior of the vessel has a straight or inclined shape.

References: Baumann 1995, pl. LXI/4, 6 (Telita–Amza, 2<sup>nd</sup>-4<sup>th</sup> c. AD); Tamba 2008, LM1S – Fig. VI.4.14; Sultov 1985, 84, dishes type 1a, pl. XLII/2 – variant; Warner Slane 1994, 129, Fig. 2/6 (plate AfRS Hayes form 58); Bondoc, Gudea 2009, 174, pl. LII/242 (pot, rim diameter – 20,5 cm, first half of 3<sup>rd</sup> c. AD) and 192, pl. LXXVIII/385 (plate, rim diameter – 24,7 cm, middle of 3<sup>rd</sup> c. AD); Luezas Pascual 1991, *lebrillos*, 77-78, pl. XII/33-34 (1<sup>st</sup> c. AD); Mușețeanu 2003, 105, pl. 39/63 (2<sup>nd</sup>-3<sup>rd</sup> c. AD);

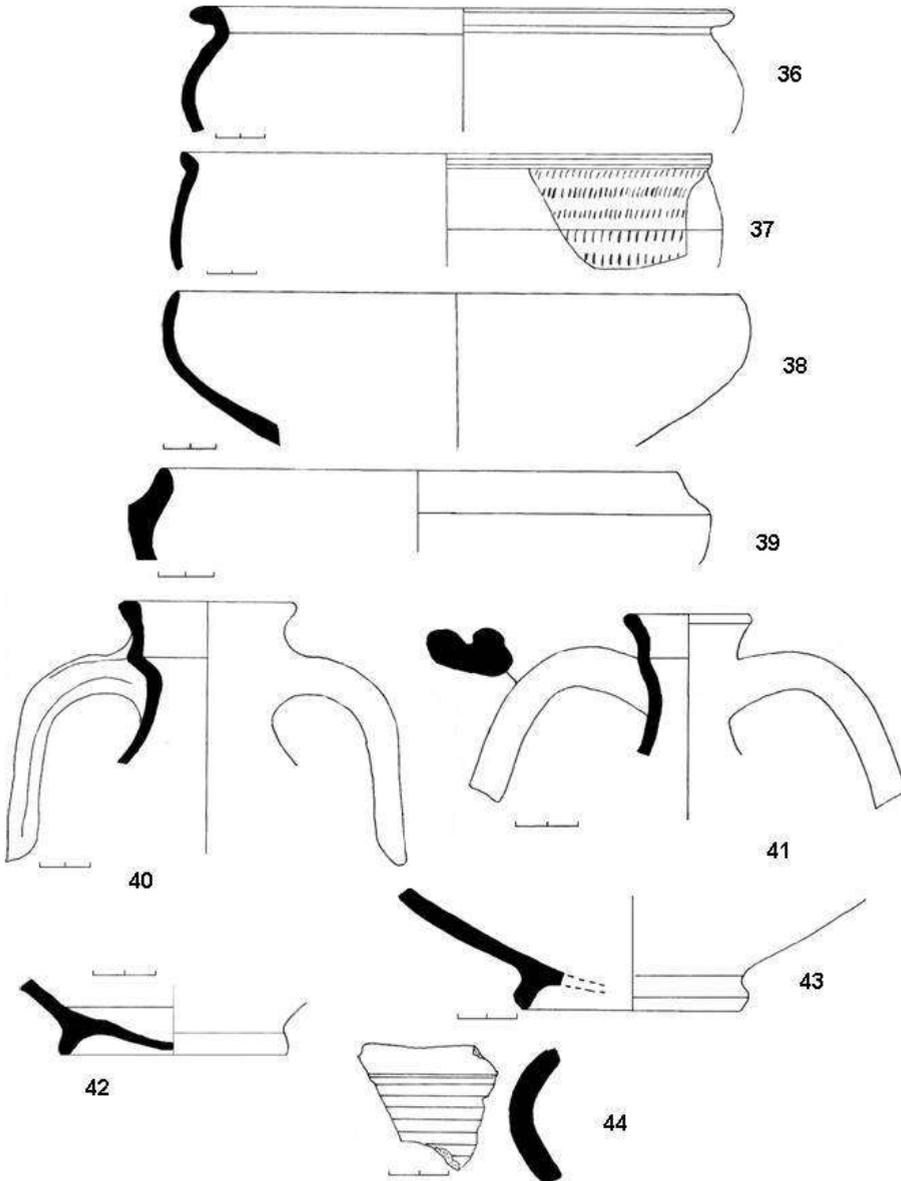
25. Rim fragment from a deep bowl or pan, 2011, S 1, C 2, h – 0.30-0.60 m, preserved height 5 cm, rim diameter 28 cm, very pale pink /whitish colour, coarse fabric with sand, limestone and red particles, secondarily burned on the outside, slip of the same colour, Munsell 5Y 8/3 pale yellow;
26. Rim fragment of a deep bowl or pan, 2011, S 1, C 2, h – 0.30-0.60 m, preserved height – 5 cm, rim diameter – 28 cm, coarse dark gray fabric with silver mica and other black inclusions, secondarily burned on the outside, Munsell 5YR 2.5/1 black;
27. Fragmentary pan, 2011, S 2, h – 0.20-0.30 cm, preserved height 6 cm, rim diameter 24 cm, coarse reddish fabric with limestone and silver mica, slip of the same colour, porous, secondarily burned on the outside, Munsell 10R 4/8 red;
28. Rim and median part of a pan, 2011, S1, G1, preserved height – 6.5 cm, rim diameter – 22 cm, coarse reddish fabric with sand, limestone particles, iron oxide and other black particles, slip of the same colour, secondarily burned on the outside, Munsell 5YR 6/8 reddish yellow;
29. Fragmentary pan, 2011, S1, G1, preserved height 6 cm, rim diameter 22 cm, coarse red fabric with fine sand, no slip, secondarily burned on the outside, Munsell 10R 3/6 dark red;
30. Fragmentary pan, 2011, S1, G1, preserved height – 4.3 cm, rim diameter – 30 cm, coarse red fabric with fine sand, no slip, secondarily burned on the outside, Munsell 10R 3/6 dark red;
31. Fragmentary pan rim, 2011, S1, G1, preserved height – 6 cm, rim diameter – 27 cm, coarse red fabric with fine sand, limestone and small stones, porous, secondarily burned on the outside, Munsell 2.5R 6/8 light red;
32. Rim fragment of a deep bowl/plate, 2011, S 1, C 2, h – 0.30-0.60 m, preserved height – 3 cm, rim diameter – 23 cm, coarse brick colour fabric with iron oxide and limestone particles, slip of the same colour, secondarily burned on the outside, Munsell 5YR 6/8 reddish yellow;



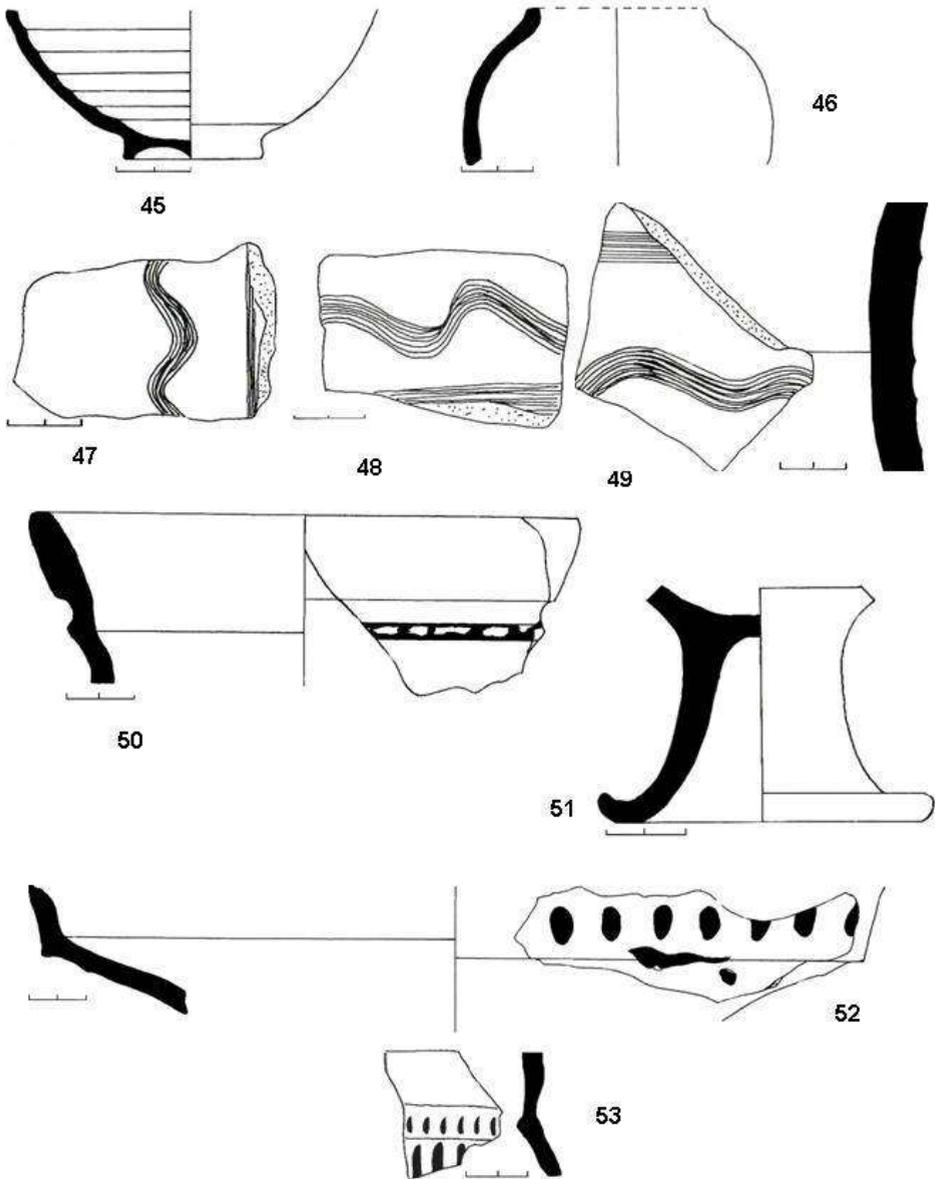
Pl. V

- 33. Rim and median part of a pan, 2011, S 2, h – 0.20-0.30 cm, preserved height 4 cm, rim diameter – 24 cm, coarse reddish fabric with small stones and limestone particles, slip of the same colour, Munsell 10R 4/6 red;
- 34. Rim fragment, 2011, S1, G1, preserved height – 2.7 cm, rim diameter – 20 cm, semi-fine beige fabric with fine sand, red particles and limestone, slip of the same colour, secondarily burned on the inside and outside, Munsell 2.5Y 7/4 pale yellow;

35. Rim and median part of a pan, 2011, S1, G1, preserved height – 4.5 cm, rim diameter – 26 cm, coarse reddish fabric with sand, silver mica, limestone, iron oxide and other white and black particles, slip of the same colour, Munsell 5YR 6/8 reddish yellow;



Pl. VI.



Pl. VII.

### Bowls

36. Rim fragment of a casserole/bowl, 2011, S1, C2, h – 0.20-0.30 m, preserved height – 5 cm, rim diameter – 22 cm, coarse gray colour fabric with sand and stone particles in composition, beige slip, secondarily burned on the outside and inside, Munsell 2.5Y 7/2 light gray. References: Suceveanu 2000, 3 analogies (variants) concerning the shape: 43-46, pl. 13/6 (bowl diameter 34 cm, type XI, 2<sup>nd</sup> c. AD), 90, pl. 35/1 (*coupe* diameter 20 cm, type XXV, 2<sup>nd</sup>-3<sup>rd</sup> c. AD) and 134-136, pl. 63/11 (pot type XLI, diameter 22 cm, 1<sup>st</sup>-4<sup>th</sup> century AD.); Tamba 2008, 219, LM1S – Fig. VI.4.13 and 283, LM3 – Fig. VI.5.23;
37. Rim fragment of a bowl, 2011, S 1, C 1, h – 0.10-0.20 m, preserved height – 4.5 cm, rim diameter – 21 cm, fine reddish fabric with small particles of limestone and sliver mica, red-brown slip on the inside and outside, decorated with parallel registers with wheel, Munsell 2.5YR 3/6 dark red. References: Opait 1980, p. 357 no. 59, pl. XIII/2 (first half of the 2<sup>nd</sup> c. AD); Suceveanu 1982, 102, pl. 6/7 (*Thermes II, Phase I B* – 2<sup>nd</sup> c. AD); Suceveanu 2000, 36, pl. 10/8, bowls type VIII (2<sup>nd</sup> c. AD); Brukner 1981, T. 56/31-35, T. 73/50 (2<sup>nd</sup> c. AD); Klenina 2006, fig. 39/295;
38. Rim fragment of a bowl, 2011, S1, G1, preserved height – 5.8 cm, rim diameter – 21 cm, maximum diameter – 22 cm, light reddish brown fine fabric with silver mica and rare limestone particles, reddish slip on the insight, Munsell 10R 7/8 yellow (slip outside), Munsell 7.5YR 7/8 reddish yellow (slip inside). References: Suceveanu 2000, 18-27, pl. 3-5/ (1<sup>st</sup>-3<sup>rd</sup> c. AD); Hayes 1972, Çandarlı form 4, 321-322, fig. 64 (3<sup>rd</sup> c. AD);
39. Rim fragment of a bowl or plate, 2011, S 1, C1, h – 0.35, preserved height – 3 cm, rim diameter – 18 cm, semi-fine brick colour fabric with small limestone inclusions, porous, light beige slip, Munsell 2.5Y 6/6 olive yellow. References: Suceveanu 1982, 97, pl. 3/1 phase I B-C (*coupe*, 2<sup>nd</sup>-3<sup>rd</sup> c. AD); Suceveanu 2000, 72, pl. 26/12 variant (*coupe* type XVIII – 1<sup>st</sup>-2<sup>nd</sup> c. AD); Bondoc, Gudea 2009, 187, pl. LXXI/348 (2<sup>nd</sup>-3<sup>rd</sup> c. AD); Quercia, Johnston, Bevan, Conolly, Tsaravopoulos 2011, 37, no. 89 (bowl or funnel 3<sup>rd</sup> to 5<sup>th</sup>-6<sup>th</sup> c. A.D.); Abadie – Reynal, Sodini 1992, 47, fig. 20, CC 125 and 127 (6<sup>th</sup> c. AD); Robinson 1959, pl. 70/L59 (variant – stamped plate, early 5<sup>th</sup> c. AD); Klenina 2004, 108-109, pl. 13/133 (plate type 3, 2<sup>nd</sup>-3<sup>rd</sup> c. AD, manufactured in western and northern Black Sea coastal regions, Lower Moesia and Trace, based on Minor Asia patterns);

### Pitchers and jugs

40. Rim and handle fragment of a pitcher, 2011, S 1, C 2, h – 0.30-0.60 m, preserved height – 10 cm, rim diameter – 7 cm, semi fine brick colour fabric with lithic and

limestone fragments, porous, traces of red slip on the rim and handle, Munsell 10YR 8/8 yellow. References: Suceveanu 2000, 157, pl. 75, type XLIX/2 (3<sup>rd</sup>-4<sup>th</sup> c. AD); Bogdan-Cătănicu, Barnea 1979, 181, fig. 146, 148/4.3, NII, (pitcher – 7 cm rim diameter), (2<sup>nd</sup> c. AD); Hayes 2009, 26, pl. 10/128a (amphora); Bonnet *et alii* 2012, 400, fig. 63/3 (pitcher 4<sup>th</sup> c. AD); Johnson 2008, 170, no. 476-477 (Benghazi LRA 9 - 5<sup>th</sup> c. AD); Croitoru 2011, fig. 86/2229;

41. Rim and handle fragments of a pitcher, 2011, S 2, h – 0.10-0.20 m/0.30-0.60 m preserved height – 6 cm, rim diameter – 4 cm, semi-fine reddish fabric with limestone fragments, dark beige slip on the outside, Munsell 2.5Y 7/6 yellow and Munsell 5YR 3/4 dark reddish brown slip. References: Suceveanu 2000, 157, pl. 75, type XLIX/2 (3<sup>rd</sup>-4<sup>th</sup> c. AD);
42. Bottom fragment of a pitcher or jug, 2011, S 1, C1, h – 0.35 m, preserved height – 2 cm, bottom diameter – 7 cm, fine brick colour fabric with silver mica, traces of red slip on the outside, Munsell 10YR 7/6 yellow;
43. Bottom fragment of a pitcher or jug, 2011, S 1, C 1, h – 0.10-0.20 m, preserved height – 4 cm, bottom diameter – 8 cm, semi-fine brick colour fabric with white micro particles and silver mica sparkles, slip of the same colour, Munsell 2.5Y 7/8 yellow;
44. Fragmentary rim of a trilobite jug, 2011, S1, G1, preserved height – 4.3 cm, coarse gray fabric with small stones in composition, slip of the same colour, Munsell 1 for Glay 5/1 greenish gray. References: Croitoru 2011, fig. 30/3289;

### Mugs/cups

References: Mușețeanu, Elefterescu 2004, 101-102, pl. VI/1 (2<sup>nd</sup>-3<sup>rd</sup> c. AD); Popilian 1976, (mugs type 1) 104, pl. LII /567 (2<sup>nd</sup>-3<sup>rd</sup> c. AD); Suceveanu 2000, (type XXXII) 105, Pl. 43/37 (2<sup>nd</sup>-3<sup>rd</sup> c. AD); Rădulescu 1975, 336-338, pl. II-V (2<sup>nd</sup>-3<sup>rd</sup> c. AD); Johnson 2008, 105, no. 320-321 (1<sup>st</sup>-3<sup>rd</sup> c. AD); Bucovală, Pașca 1992, 268, pl. 8 (2<sup>nd</sup>-3<sup>rd</sup> c. AD);

45. Fragmentary base of a small mug, 2011, S 1, C 2, h – 0.30-0.60 m, preserved height – 4 cm, base diameter – 3.8 cm, fine brick colour fabric with rare limestone particles and silver mica, slip of the same colour, grooves on the inside, ring base foot, Munsell 7.5YR 7/8 reddish yellow;
46. Fragmentary median part of a mug, 2011, *passim*, preserved height – 4.5 cm, maximum diameter – 9 cm, semi-fine reddish fabric with silver mica, red slip on the outside and interior of the neck, secondarily burned on the outside, Munsell 10R 5/8 red;

### Pithoi

References: Brukner 1981, T. 127-128/1-3, 8-9 (1<sup>st</sup>-3<sup>rd</sup> c. AD); Vulpe 1953, 291, fig. 80/2 (3<sup>rd</sup> c. AD):

47. Fragment of median part, 2011, S 1, C 1, h – 0.10-0.20 m, semi-fine brown fabric with small white particles, beige slip, decorated with fine waves and parallel grooves, Munsell 5YR 5/8 yellowish red;
48. Fragment of median part, 2011, S 1, C 2, h – 0.30-0.60 m, semi-fine brown fabric with small white particles, beige slip, decorated with fine waves and parallel grooves, Munsell 5YR 5/8 yellowish red. Fragment from the same jar as the previous;
49. Fragment of median part, 2011, survey 2, h – 0.20-0.30 cm, preserved height – 8 cm, approximated diameter – 12 cm, decorated with small horizontal and waves grooves on the outside, semi-fine brown fabric with small white particles, beige slip (the fabric is the same as for the previous two fragments) Munsell 5YR 5/8 yellowish red;

### Miscellaneous

50. Rim fragment of unknown vessel, 2011, S 1, C 2, h – 0.30-0.60 m, preserved height – 5 cm, rim diameter – 16 cm, semi-fine light beige fabric with rare limestone and silver mica particles, secondarily burned on the inside and outside, slip of the same colour, decorated on the outside with the cog wheel, Munsell 10YR 6/8 brownish yellow. References: Kenrick 2013, 23, pl. 11/182 (pot stand or wide-mouthed jar with frilled “Hellenistic” rim?); also some distant similarities with an amphora shape, but no analogies concerning the cog wheel decorations: Serrano Ramos 1989, (amphora Dressel 7-11), 133, fig. VI/17 (1<sup>st</sup> c. BC-1<sup>st</sup> c. AD); Acconci, Gabrielli 1994, amphora Dressel 7-11, 439, fig 24/4 (US 13); Garcia Vargas 2010, 62, fig. 2.2.7/14 (first c. BC); other analogies with Getic pottery, evidently without cog wheel decoration: Ioniță 1982, fig. 12/1-3, fig. 14/2 (Geto-Dacian); Ioniță, Ursachi 1988, fig. 48/37, fig. 64/1 (Dacian funerary urn type 2a). It is very possible that no analogies found here are relevant enough;
51. Fragmentary vessel base, 2011, S 2, h – 0.20-0.30 cm, preserved height – 5.7 cm, base diameter – 8 cm, semi-fine fabric with limestone and silver mica, the core is reddish and the surface is beige, the core is Munsell 5YR 5/8 yellowish red and the surface Munsell 5Y 5/3 olive. References: Bogdan-Cătănciu, Barnea 1979, 179, fig. 141/1.1 - 1.2, N1 (Getic culture, 1<sup>st</sup> c. BC – 1<sup>st</sup> c. AD); Hayes 2009, 18, fig. 6/87 (Roman incense burner); Venault, Labaune, Symonds 2011, pl. 5/10-11, 14, pl. 6/17 and 19 (Augustus-Tiberius);

52. Median part of possible *turibulum*, 2011, S 2, h – 0.20-0.30 cm, preserved height – 5 cm, approximated diameter – 30 cm, semi-fine fabric with limestone, iron oxide and silver mica particles, reddish-brown colour, Munsell 5YR 6/8 reddish yellow; References: Man 2011, pl. CXI/4; Bondoc, Gudea 2009, 184, pl. LXVI/321 (2<sup>nd</sup> c. AD); Alicu, Cociș, Ilieș, Soroceanu 1994, 129, pl. 70/977 (2<sup>nd</sup> c. AD);
53. Fragment of a possible *turibulum*, 2011, S 2, h – 0.20-0.30 cm, preserved height – 4 cm, fine brown – beige fabric, decorated with alveoli, Munsell 5YR 6/8 reddish yellow. References: Man 2011, pl. CXI/4; Bondoc, Gudea 2009, 184, pl. LXVI/321 (2<sup>nd</sup> c. AD); Alicu, Cociș, Ilieș, Soroceanu 1994, 129, pl. 70/977 (2<sup>nd</sup> c. AD);
54. Rim fragment of a vessel, 2011, S 2, h – 0.20-0.30 cm, preserved height – 8.5 cm, rim diameter – 18 cm, coarse reddish brown fabric with limestone, iron oxide and silver mica, porous, slip of the same colour, secondarily burned on the outside, Munsell 5YR 5/8 yellowish red. References: Popilian, Bondoc 2014, p. 145, type 4, fig. 58/10 (2<sup>nd</sup>-3<sup>rd</sup> jar used as funerary urn). The shape of the rim and the upper part of the body are vaguely resembling Getae jar/urn: Vulpe 1959, 375, fig. 244-245 (Getae culture, 3<sup>rd</sup>-4<sup>th</sup> c. AD); Trohani 2006, 58, pl. 155/188 (Getae culture, 2<sup>nd</sup>-1<sup>st</sup> c. BC); Popilian 2012, 55, M 66, pl. XI/1 (Getae - Dacian funerary urn, 2<sup>nd</sup>-3<sup>rd</sup> c. AD); Negru 2000, 94, pl. 100/1 variant, (provision jar, 2<sup>nd</sup>-4<sup>th</sup> AD); Crișan 1969, 189, fig. 102 (Roman vessel from Pannonia), pl. XCVII/1, pl. XCVIII/4, pl. C/1; Ioniță, Ursachi 1988, fig. 46/58 (Dacian vessel);

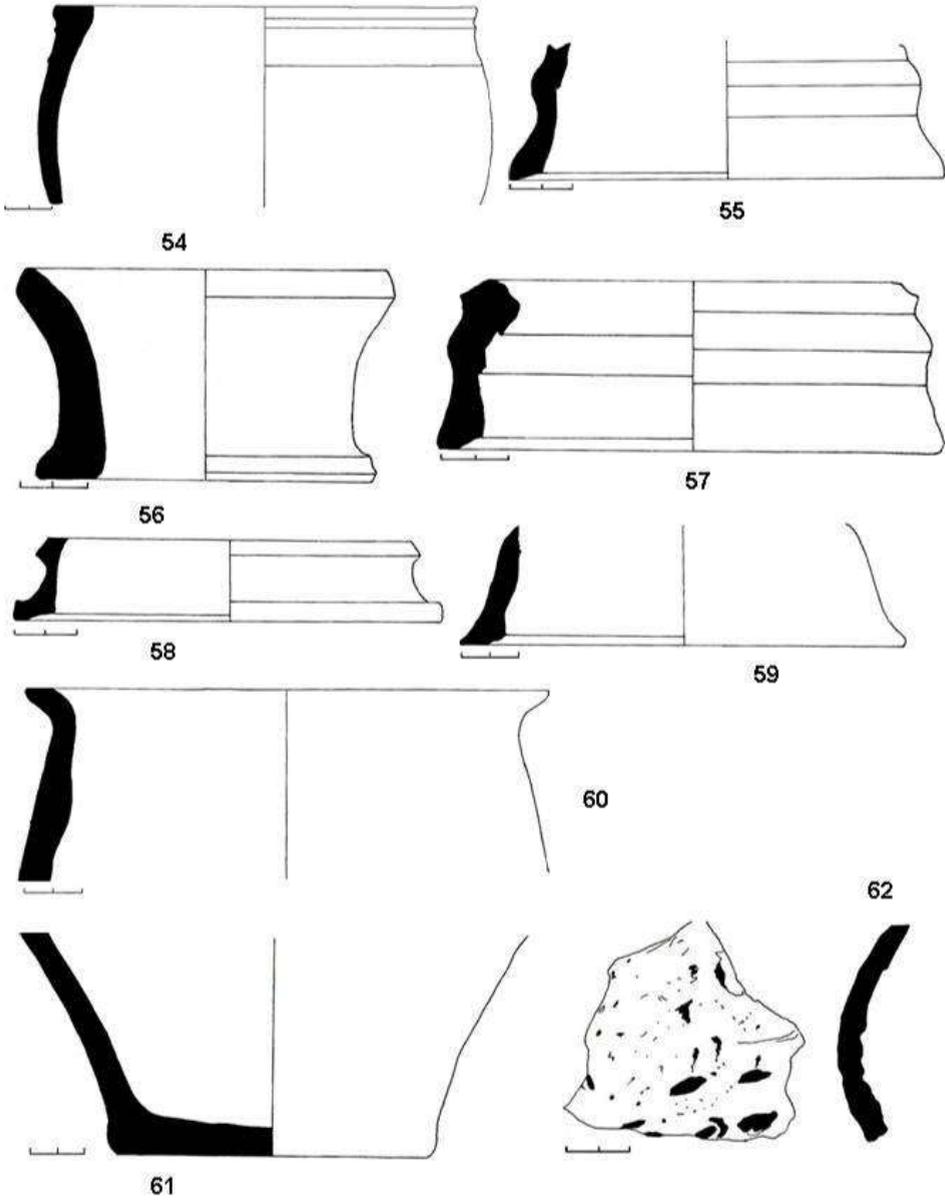
### Supports / amphora-stands

These instruments were used to stack the pieces in the oven and, maybe, in the factory to dry them.

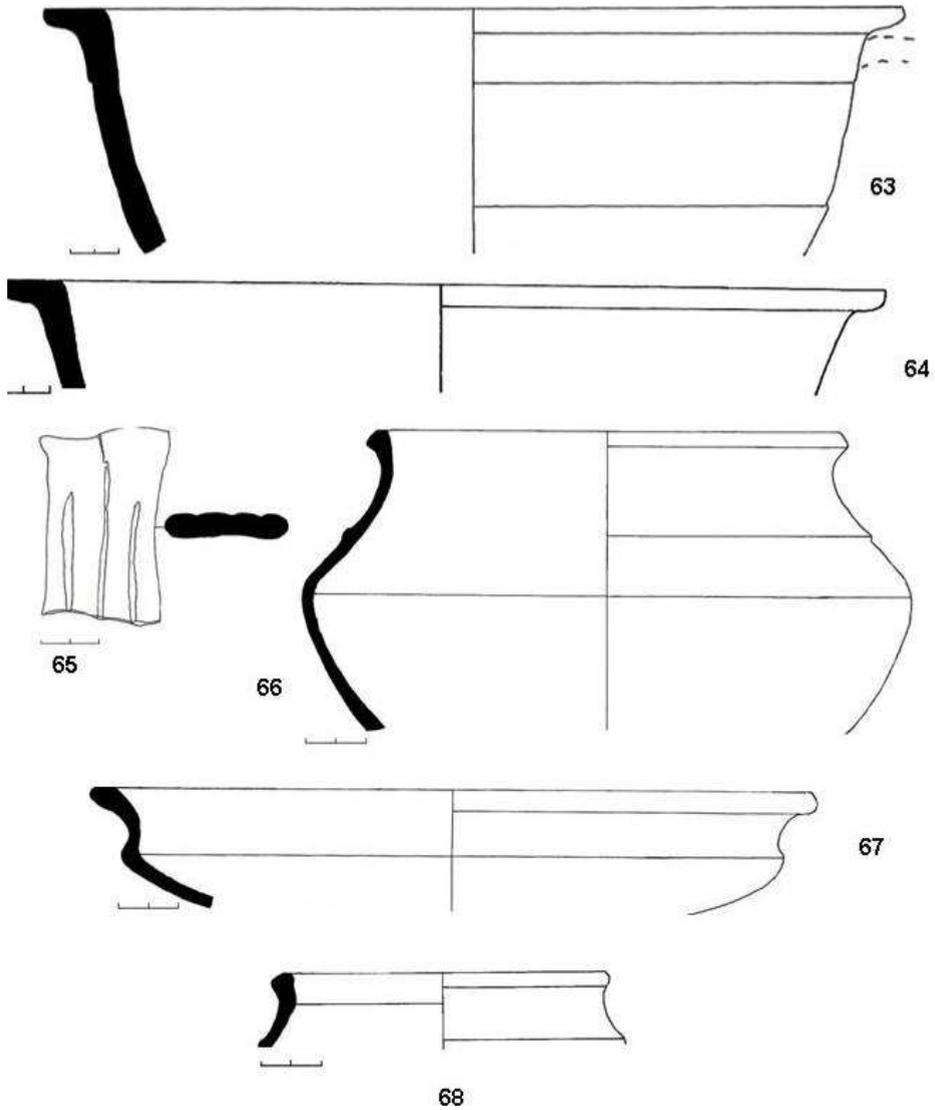
References: Baumann 1997, 51-52, pl. XIV/1-5 (4<sup>th</sup> c. AD); Baumann 1995, pl. LII/6-7, pl. XII/1-5; Opaït, Tsaravopoulos 2011, fig. 7; Luezas Pascual 1991, 82, pl. XVI/50-54, (first c. AD); Luezas Pascual, Valero 1993, 77-78, pl. 4/8-11; Kenrick 2013, (pot-stand) 42, pl. 20/355 ("Middle Imperial"), 33, pl. 16/280-281 ("Hellenistic"); Gallimore 2011, 364, fig. 5.42/513 (amphora stand - context of first half of third century);

55. Fragmentary support for vessel, scrap, 2011, S 2, h – 0.20-0.30 cm, preserved height – 4.5 cm, base diameter – 14 cm, semi-fine reddish fabric with silver mica and limestone, self slip, Munsell 2.5Y 7/8 yellow;
56. Fragmentary support for vessel, 2011, S1, G1, height – 6.3 cm, upper part diameter – 11 cm, base diameter – 10 cm, coarse yellow fabric with small limestone particles and silver mica, the core is beige, Munsell 10YR 7/8 yellow;
57. Fragmentary support for vessel, 2011, S1, G1, height – 5 cm, upper part diameter – 13 cm, base diameter – 14,7 cm, semi-fine reddish fabric with rare limestone

particles and silver mica, red slip on the outside, the core is olive gray, Munsell 2.5Y 7/8 yellow;



Pl. VIII.



Pl. IX.

58. Fragmentary support for vessel, 2011, S1, G1, height – 2.7 cm, upper part diameter – 12 cm, base diameter – 14 cm, semi-fine light red fabric with limestone inclusions and silver mica, red slip on the outside, Munsell 2.5Y 7/8 yellow;

59. Fragmentary base of support, 2011, S1, G1, preserved height – 4.3 cm, semi-fine yellow fabric with silver mica and rare limestone traces, yellow slip on the outside, the core is gray, Munsell 10YR 7/8 yellow.

### Non Roman pottery

#### Hand-made vessels

References: Bârcă 2006, fig. 38/3, fig. 147/2, fig. 152/5; Bichir 1972, pl. V/5, pl. VI/19, pl. XVI/9; Oța, Sârbu 2009, fig. 16/11, 14, fig. 18/12, fig. 20/3, fig. 28/2, 11;

60. Fragmentary rim, 2011, S 1, C 1, h – 0.10-0.20 m, preserved height 6 cm, rim diameter 18 cm, hand-made, coarse light beige fabric with stones fragments, secondarily burned on the outside, Munsell 10 YR 5/6 yellowish brown;
61. Fragmentary bottom, 2011, S 2, h – 0.20-0.30 cm, preserved height – 8.2 cm, base diameter – 12 cm, hand-made, poor quality gray fabric with small stone fragments, fragile, no slip, the base is flat of irregular shape, secondarily burned on the outside, Munsell 1 for glay 2.5/1 greenish black;
62. Fragmentary median part, hand-made, 2011, S1, G1, preserved height – 7 cm, coarse gray fabric with small stones and possibly vegetal materials in composition, no slip, the jar is not homogenously fired but partially reduced and partially oxidative, fingerprints on the inside, the core is dark gray and surface is partially gray and yellow, Munsell (the core) 7.5 YR 2.5/1 black and Munsell (on the outside) 10YR 7/6 yellow;

#### Wheel-made vessels

63. Fragmentary jar, 2011, S1, G1, preserved height – 10 cm, rim diameter – 35 cm, fine gray fabric with silver mica, polished on the outside, Munsell 1 for Gley 5/ gray. References: Sîrbu, Arsenescu 2006, fig. 11/9; Sîrbu, Luca, Roman, Purece, Diaconescu 2006, fig. 7/11-12 (2<sup>nd</sup>-3<sup>rd</sup> c. AD); Crișan 1969, 180, fig. 96/12;
64. Fragment of large tray, 2011, S 2, h – 0.20-0.30 cm, preserved height – 4 cm, rim diameter – 33 cm, semi-fine light gray fabric with small silver mica sparkles and limestone particles, polished on the inside and outside, slip of the same colour, Munsell 5Y 4/2 olive gray. References: Sîrbu, Arsenescu 2006, fig. 11/9; Sîrbu, Luca, Roman, Purece, Diaconescu 2006, fig. 7/11-12 (2<sup>nd</sup>-3<sup>rd</sup> c. AD);
65. Fragmentary handle (possibly joining with nr. 63), 2011, S1, G1, preserved length – 6.5 cm, thickness – 1 cm, fine gray fabric with silver mica, polished on the outside, decorated with 3 grooves, Munsell 1 for Gley 5/ gray
66. Rim and median part of a deep bowl (?) 2011, S1, C2, h – 0.20-0.30 m, preserved height – 10 cm, rim diameter – 16 cm, fine light gray fabric with small limestone

- particles, polished on the outside, Munsell 5Y 5/1 gray. References: Sîrbu, Arsenescu 2006, fig. 12/4;
67. Rim fragment of a deep bowl, 2011, S 1, C3, h – 0.50 – 0.80 m, preserved height – 4 cm, rim diameter – 24 cm, fine gray fabric with rare limestone particles, porous, polished on the outside, Munsell 5Y 3/2 dark olive gray. References: Moscalu 1983, 121-122, bowls type 16 a/b, (4<sup>th</sup> c. BC) pl. LXX/8-9; Baumann 2003, 196/no. 64 (plate 2<sup>nd</sup>-3<sup>rd</sup> c. A.D.); Georgieva, Bačvarov 1994, pl. VIII/6-8 (4<sup>th</sup> c. AD); Negru 2000, pl. 107/3 (3<sup>rd</sup> c. AD); Sîrbu, Arsenescu 2006, fig. 10/7; Crișan 1969, pl. XXXIV/5, 10; Baumann 2009, pl. I/10 (1<sup>st</sup> c. AD);
68. Rim fragment, 2011, S1, G1, preserved height – 2.5 cm, rim diameter – 11 cm, semi fine light gray fabric with limestone particles, gray slip on the outside and inside, polished on the outside, Munsell (slip) 1 for Glay 3/2 dark greyish green.

### **Conclusions**

The main characteristic of the assemblage presented above is the great diversity of fabrics and shapes. Though only a small part of the main Roman shapes was discovered, considering the limited area of archaeological research, we hope that other types of functional pottery will be found during future excavations.

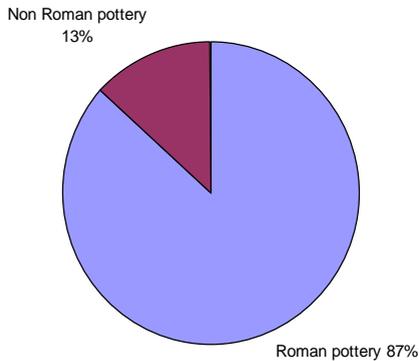
The ratio between the Roman and non Roman pottery may bring forth an interesting comparison with the pottery from Dacia province in the period of the foundation and afterwards. It is worth mentioning that from a comparative stand, the percentage of non Roman pottery found at Noviodunum (13%) is similar to the non Roman pottery found in Napoca, where the pottery manufactured in “La Tène tradition” accounts for 13% of the total. The traditional non Roman pottery disappeared from Napoca after only three generations<sup>26</sup>.

However, it would be correct to assume that some of the general Romanisation processes may be found in Moesia province, too, despite the differences generated by the particularities of each Roman province. If – and we emphasize that – the Roman and non Roman shards are even closely contemporary, not brought together by subsequent intervention, it will be important to mention that this situation responds to an economic necessity rather than integrating the natives in the new Roman province, not only because people did not live in a world divided into the categories “native” and “Roman”, but because categories of social identity, such as gender, age or religion would almost certainly have been more relevant to most people on a daily basis<sup>27</sup>.

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<sup>26</sup> Rusu-Bolindeț 2007, 463-464.

<sup>27</sup> Greene 2005, 37.

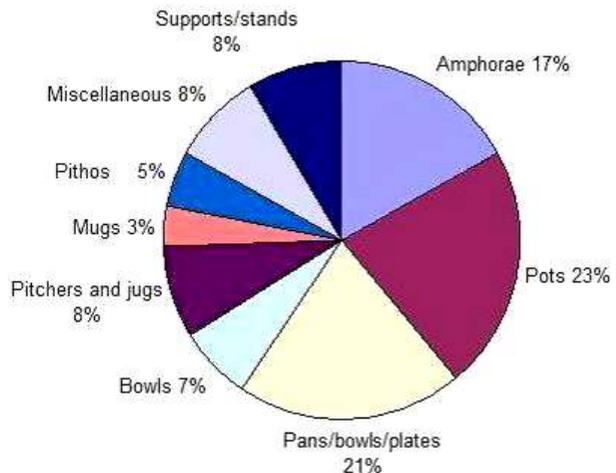


Graphic 1. Distribution percentage of Roman and non Roman pottery.

the 2<sup>nd</sup> century AD., when the process of Romanisation is about to complete,<sup>31</sup> and Noviodunum is preparing to upgrade to the status of *municipium*, the hierarchy of its social structures<sup>32</sup> having already been established.

Our purpose is to recover and assess more information in the future with the help of the new methods of archaeological analyses, reflecting on the nature and purpose<sup>28</sup> of *opus operatum* of the socially conditioned *habitus* of the potter.<sup>29</sup> Regarding the theoretical considerations of the approach, the diversity of the ethnic and social structures and their representation at Noviodunum<sup>30</sup> are dialectically related to the productive activity and the impact on the Roman society.

According to the archaeological discoveries from the tumular necropolis, the native Getae presence is limited to the first half of



Graphic 2. Percentage distribution of the Roman pottery in the main categories.

<sup>28</sup> Greene 2005, 36.

<sup>29</sup> Roth, 2003, 35-45.

<sup>30</sup> Baumann 2008, 193. There are 24 anthroponomical epigraphic attested at Noviodunum in the 2<sup>nd</sup> c. AD, from which 11 are Greek-Oriental, and other are veterans of the *classis* or former military personnel.

<sup>31</sup> Baumann 2008, 195 concerning the thesis of 2<sup>nd</sup> c. AD Romanisation of Noviodunum inhabitants.

<sup>32</sup> Barnea 1991, 81-84 about a *questor* of the *municipium Noviodunum* (2<sup>nd</sup>-3<sup>rd</sup> century AD).

At this point we are just at beginning the elaboration of a contextual theory about the specific aspects of Noviodunum pottery. Further steps are deemed necessary, given the economic, politic and social conditions of the Rome expansion at the Danube frontier, when the increasing amount of Roman ceramic products proves once more that the causes are rather to be found in the growing Roman (and probably cheaper) industrial production than in the inhabitants' level of Romanization. Thus, the spread of Roman pottery and the emerging conservative forces of part of the population should also be approached from theoretical perspective, providing insights into a range of social and ideological issues, such as the natives' acceptance of and resistance against the incorporation in the Roman social, political, and economic systems.<sup>33</sup>

### References

- Abadie-Reynal, C., Sodini, J. P. 1992, *La ceramique paleochretienne de Thasos (Alik, Delkos, fouilles anciennes)*, Etudes Thasiennes 13, Athenes.
- Acconci, A., Gabrieli, G. 1994, *Scavo del cortile Bajali a Madaba*, 405-420.
- Alicu, D., Cociș, S., Ilieș, C., Soroceanu, A. 1994, *Small finds from Ulpia Traiana Sarmizegetusa*, Cluj-Napoca.
- Băjenaru, C., Dobrinescu, C. 2008, *Săpături de salvare în necropola romană a Tomisului, Pontica 41*, 189-208.
- Barnea, I. 1977, *Noi descoperiri la Noviodunum*, Peuce 6, 103-121.
- Barnea, A. 1991, *Municipium Noviodunum*, Peuce 10, 81-84.
- Baumann V. H. 1995, *Asezari rurale antice in zona Gurilor Dunarii: contributi arheologice la cunoasterea habitatului rural (sec. I-IV p.Chr.)*, Tulcea.
- Baumann V. H. 1997, *La céramique utilitaire du IV-e siècle fabriquée par l'officina romana de Valea Morilor*, in *Etudes sur la ceramique romaine et daco-romaine de la Dacie et de la Moesie Inferieure*, BHAUT 1, Timișoara, 31-53.
- Baumann V. H. 2003, *Noi săpături de salvare în așezarea rurală antică de la Telita-Amza, jud. Tulcea*, Peuce, S.N. 1, 155-232.
- Baumann V.H. 2008a, *Despre începuturile vieții romane la Noviodunum*, Peuce, S.N.6, 189-206.
- Baumann V. H. 2008b, *Ceramica terra sigillata de la Noviodunum*, Peuce, S.N. VI, 207-250.
- Baumann V. H. 2009, *Producerea ceramicii locale la gurile Dunării în sec. I-IV p. Chr.*, Peuce, S.N. 7, 193-216.
- Baumann V. H. 2010, *Introducere în studiul ceramicii fine de la Noviodunum*, Peuce, S.N. 8, 109-146.

<sup>33</sup> Peňa 2007, 1-2.

- Bârcă, V. 2006, *Istorie și civilizație. Sarmații în spațiul est-carpatic (sec. I a. Chr.-sec. II p. Chr.)*, Cluj-Napoca.
- Bârcă, V., Simonenko, A. 2009, *Călăreții stepelor: sarmații în spațiul nord-pontic*, Cluj-Napoca.
- Bichir, G. 1971, *Sarmații și pătrunderea lor la Dunărea de Jos*, Peuce 2, 135-145.
- Bichir, G. 1972, *Sarmații la Dunărea de jos în lumina ultimelor cercetări*, Pontica 5, 137-176.
- Bogdan-Cătănicu, I., Barnea, A. 1979, *Ceramica și descoperirile mărunte, în Barnea, I.* (coord.), *Tropaeum Traiani, I, Cetatea*, București.
- Bondoc, D., Gudea, N. 2009, *Castrul roman de la Răcari: încercare de monografie*, Cluj-Napoca.
- Bonnet, C., Gilles, A., Batigne Vallet, C., Maza, G., Réthoré, P., Silvino T. 2012, *L'alimentation en céramique de Valentia (Valence, Drôme) et ses campagnes de la fin du IIe s. au Ve s. apr. J.-C.*, *Revue Archéologique de Narbonnaise* 45, 361-434.
- Brukner, O. 1981, *Rimska keramika u Jugoslovenskom delu Provincije Donje Panonije*, *Disertationes et monographiae* 24, Beograd.
- Bucovală, M., Pașca, C. 1992, *Cercetări în necropola romană de vest a Tomisului (1992)*, *Pontica* 25, 241-272.
- Bujor, E., Simion, G. 1961, *Săpăturile de salvare din cimitirul roman de la Isaccea*, *Materiale* 7, 392-397.
- Crișan, I.H. 1969, *Ceramica daco-getică*, București.
- Croitoru, C. 2011, *Roman discoveries in the East Carpathian Barbaricum (1<sup>st</sup> century BC–5<sup>th</sup> century AD)*, Brăila.
- Dyczek, P. 2001, *Roman Amphorae of the 1<sup>st</sup>-3<sup>rd</sup> centuries AD found on the Lower Danube. Typology*, *Archaeologia* Warsaw 54.
- Dragendorff, H. 1895, *Terra Sigillata. Ein Beitrag zur Geschichte der griechischen und römischen Keramik*, Bonn.
- Gallimore, S. C. 2011, *An island economy: Ierapetra and Crete in the Roman Empire*, A dissertation submitted to the Faculty of the Graduate School of the University at Buffalo, State University of New York, UMI Number: 3460751.
- Garcia Vargas, E. 2010, *Formal Romanization and the Atlantic projection of amphorae from the Guadalquivir valley*, *BAR IS* 2162, 55-65.
- Garcia Noguera, M., Pocina Lopez, C. A., Remola Vallverdu, J. A. 1997, *Un context ceràmic d'inicis del segle II d.C. a Tàrraco (Hispania Tarraconensis)*, *Pyrenae* 28, 179-209
- Georgieva, R., Bačvarov, I. 1994, *Trakijski nekropol pri selo Professor Iširkovo, Silistrensko*, Silistra.

- Greene, K. 2005, *Roman Pottery: Models, Proxies and Economic Interpretation*, JRA 18, 34-56.
- Hayes, J. W. 2009, *Castelporziano. Excavations at the Imperial Vicus 1985-7 and 1996-8. Trenches S and SA: pottery finds and lamps, Castelporziano IV*, 1-35.
- Haas, T. de, Attema, P., Tol, G., 2012, *Polygonal masonry platform sites in the Lepine mountains (Pontine region, Lazio, Italy)*, *Palaeohistoria* 53-54, 195-282.
- Hudson N. 2010, *Ceramics report, Tell Timai 2010*, 1-19 (excavation report).
- Ioniță, I. 1982, *Din istoria și civilizația dacilor liberi (Dacii din spațiul est carpatic în secolele II-IV e.n.)*, Iași.
- Ioniță, I., Ursachi, V. 1988, *Văleni. O mare necropolă a dacilor liberi*, Iași.
- Irimia, M. 2007, *Considerații privind așezările getice din Dobrogea și problema existenței unor emporia în zona Dunării inferioare, Pontica* 40, 137-225.
- Istenič, J., Schneider, G. 2000, *Aegean cooking ware in the Eastern Adriatic*, RCRFActa 36, 341-348.
- Johnson, B. L. 2008, *Ashkelon 2: Imported Pottery of the Roman and Late Roman Periods*, Winona Lake, Indiana.
- Kenrick, Ph. M. 2013, *Pottery Other Than Transport Amphorae*, Aylward, W. (ed.), *Excavations at Zeugma*, Los Altos, California, 1-81.
- Klenina, E. 2004, *Ceramic vessels from the 2<sup>nd</sup>-3<sup>rd</sup> centuries in the villa rustica "Bliznetsy" (the chora of Tauric Chersonesos)*, Poznan.
- Klenina, E. 2006, *Ceramic tableware and kitchenware of the 3<sup>rd</sup>-6<sup>th</sup> century from Novae (Northern Bulgaria)*, Poznan-Sevastopol.
- Körösfi, Z. 2009, *Un complex al culturii Sântana de Mureș-Cerneahov în curtea cetății din Târgu Mureș*, *Marisia* 29, 145-160.
- Lockyear, K., Sly, T., Popescu, A. (with contributions from Mihaela Ciușescu, Clive Orton, Jane Sidell and Robin Symonds) 2005-2006, *The Noviodunum Archaeological Project 2001-2004: results and conclusions from the pilot seasons*, Peuce, S.N. 3-4, 121-158.
- Luezas Pascual, R. A. 1991, *La cerámica común romana del alfar de "La Maja" (Calahorra, La Rioja): Campañas 1987-1988*, *Berceo* 121, 61-102.
- Luezas Pascual, R. A., Valero, S. A. 1993, *Nuevos datos sobre un posible alfar de cerámica romana en Varea (Logroño, La Rioja)*, *Berceo* 124, 73-88.
- Man, N. 2011, *Așezarea romană de la Cristești, Cluj-Napoca*.
- Moscalu, E. 1983, *Ceramica traco-getică*, București.
- Mușețeanu, C. 2003, *Ateliere ceramice romane de la Durostorum*, București.
- Mușețeanu, C., Elefterescu, D. 2004, *Contribuții privind ceramica romană de la Durostorum (IV)*, Peuce, S.N. 2, 95-142.
- Negru, M. 2000, *Militari-Câmpul Boja. Un sit arheologic pe teritoriul Bucureștilor*, București.

- Negru, M., Bădescu, A., Avram, R. 2003, *Kapitän II amphorae in Roman Dacia*, RCRF Acta 38, 209-215.
- Noguera Guillén, J. 1999, *Estudi diacrònic de la Cubeta de Mora (Ribera d'Ebre, Tarragona) des d'època tardorepublicana a l'antiguitat tardana*, Quaderns de prehistòria i arqueologia de Castelló 20, 267-286.
- Olcese, G. 2003, *Ceramiche comuni a Roma e in area romana. Produzione, circolazione e tecnologia (tarda età repubblicana–prima età imperiale)*, Documenti di Archeologia 28, Mantova.
- Oaiț, A. 1980, *Considerații preliminare asupra ceramicii romane timpurii de la Troesmis*, Peuce 8, 328-366.
- Opaiț, A. 1991, *Ceramica din așezarea și cetatea de la Independența (Murighiol), secolele V î.e.n.-VII e.n.*, Peuce 10, 133-182.
- Opaiț, A., Tsaravopoulos A. 2011, *Amphorae of Dressel 24 similis type in the Central Aegean area (Chios – Erythrai – Kyme)*, The Annual of the British School at Athens 106, 1, 275-323.
- Opaiț, A., Paraschiv D. 2012, *Rare amphora finds in the city and territory of (L)Ibida 1<sup>st</sup>-6<sup>th</sup> Centuries AD*, RCRF Acta 42.
- Orton, C., Tyers, P., Vince, A. 1993, *Pottery in archaeology*, Cambridge University Press.
- Oța, L. 2007, *Sarmații din Muntenia și imperiul Roman*, Analele Banatului, S.N. 15, 51-55.
- Oța, L., Sîrbu, V. 2009, *Sarmații din județul Brăila*, Brăila.
- Paraschiv, D. 2006, *Amfore romane și romano-bizantine în zona Dunării de Jos (sec. I-VII p.Chr.)*, Iași.
- Peña, T. 2007, *Roman pottery in the archaeological record*, Cambridge University Press, New York.
- Poblome, J., Bes, P. B., De Cupere, L. V., Romanus, K., Vionis, A., Waelkens, M. 2010, *Sic transit gloria mundi. Does it really? Wasting seventh century AD Sagalassos (SW Turkey)*, în Menchelli, S., Santoro, S., Pasquinucci, M., Guiducci, G. (eds.), LRCW 3. *Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: archaeology and archaeometry. Comparison between western and eastern Mediterranean*, Third International Conference on Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean. Parma-Pisa, 26-30 March 2008, BAR IS 2185, 791-801.
- Popilian, G. 1976, *Ceramica romană din Oltenia*, Craiova.
- Popilian, G. 2012 *Necropola daco-romană de la Dioști (Județul Dolj)*, Craiova.
- Popilian, Bondoc 2014 *Așezările daco-romane de la Locusteni*, Craiova

- Quercia, A., Johnston, A., Bevan, A., Conolly, J. and Tsaravopoulos, A. 2011, *Roman pottery from an intensive survey of Antikythera, Greece*, Annual of the BSA 106, 47-98.
- Radu, L., Stănică A. 2011, *O descoperire carpică la Noviodunum*, Pontica 44, 259-267.
- Ramón Torres, J. 2006, *Les Àmfores Altimperials d'Ebusus*, in Lopez Mullor, A., Aquilue, X. (coords.), *La producció i el comerç de les àmfores de la Província Hispania Tarraconensis: homenatge a Ricard Pascual i Guasch*. Monografies MAC-Barcelona, 8, 241-270.
- Rădulescu, A. 1975, *Contribuții la cunoașterea ceramicii romane de uz comun, din Dobrogea*, Pontica 8, 331-360.
- Rădulescu, A. 1976, *Amfore romane și romano-bizantine din Scythia Minor*, Pontica 9, 99-114.
- Robinson, H. S. 1959, *Pottery of the Roman Period: Chronology, The Athenian Agora*, American School of Classical Studies, Princeton, New Jersey, V.
- Roth, R. E. 2003, *Towards a ceramic approach to social identity in the Roman world: some theoretical considerations*. Romanisation? Digressus Supplement I, 2003, 35-45.
- Rusu-Bolindeț, V. 2007, *Ceramica romană de la Napoca. Contribuții la studiul ceramicii din Dacia romană*, Cluj-Napoca.
- Serrano Ramos, E. 1989, *Notas sobre la cerámica común del teatro romano de Málaga*, Baética: Estudios de arte, geografía e historia 12, 123-142.
- Schindler-Kaudelka, E. 2010, *Magdalensberg. Ceramica e contesti di epoca augustea*, V. Revilla, M. Roca (Hrsg.), *Contextos ceràmics i cultura material d'època augustal a l'occident romà. Actes de la reunió celebrada a la Universitat de Barcelona els dies 15 i 16 d'abril de 2007*, Barcelona, 462-488
- Sciallano, M., Sibella, P. 1991, *Amphores. Comment les identifier?*, Aix-en-Provence.
- Simion, G. 1977, *Descoperiri noi pe teritoriul Noviodunensis*, Peuce 6, 123-148.
- Simion, G. 1984, *Descoperiri noi în necropola de la Noviodunum*, Peuce 9, 75-96, 481-502.
- Simion, G. 2007, *Noi descoperiri în necropola tumulară romană de la Isaccea (Noviodunum) jud. Tulcea*, Pontica 40, 307-338.
- Sîrbu, V., Arsenescu, M. 2006, *Dacian settlements and necropolises in southwestern Romania (2<sup>nd</sup> c. BC-1<sup>st</sup> c. AD)*, Acta Terrae Septemcastrensis 5, 1, 164-187.
- Sîrbu, V., Luca, S. A., Roman, C., Purece, S., Diaconescu, D. 2006, *Dacian settlement and children necropolis of Hunedoara. Un unique discovery in the Dacian world. Archaeological approach*, Acta Terrae Septemcastrensis 5, 1, 188-208.
- Stănică, A., Radu, L., Dinu, N. 2010, *Cercetările arheologice de la Isaccea–Noviodunum, punctul Cariera de Lut. Campaniile 2002, 2004 și 2005*, Peuce 8, 203-222.
- Suceveanu, A., Barnea, A. 1991, *La Dobroudja Romaine*, București.
- Suceveanu, A. 1982, *Histria VI. Les thermes romains*, Bucarest.

- Suceveanu, A. 2000, *Histria X. La céramique romaine des I<sup>er</sup>-III<sup>e</sup> siècles ap. J.C.*, București.
- Sultov, B. 1985, *Ceramic production on the territory of Nicopolis ad Istrum (2<sup>nd</sup>-4<sup>th</sup> century)*, Sofia.
- Tamba, D.G. 2008, *Porolissum. Așezarea civilă (vicus militaris) a castrului mare*, Cluj-Napoca.
- Topoleanu, F. 1984, *Noi descoperiri arheologice la Isaccea (I)*, *Peuce* 9, 187-205, 585-596.
- Topoleanu, F., 2000, *Ceramica romană și romano-bizantină de la Halmyris (sec. I-VII d. Ch.)*, Tulcea.
- Trohani, G. 2006, *Locuirea getică din partea de nord a Popinei Bordușani, comuna Bordușani, județul Ialomița*, II, Târgoviște.
- Venault, S., Labaune, Y., Symonds, R. avec la collaboration de Humbert, L. 2011, *Un nouveau témoignage d'occupation précoce à Augustodunum. L'enclos funéraire augusto-tibérien de la nécropole de Pont-l'Évêque à Autun (Saône-et-Loire)*, Reddé, M. et al. (dir.), *Aspects de la Romanisation dans l'Est de la Gaule. Glux-en-Glenne: Bibracte*, Bibracte 21, 767-780.
- Vulpe, R. 1953, *Săpăturile dela Poieniști din 1949*, *Materiale arheologice privind istoria veche a RPR*, I, 213-506.
- Vulpe, R., Barnea, I. 1968, *Din istoria Dobrogei*, II, București.
- Warner Slane, K. 1994, *Tetrarchic recovery in Corinth: Pottery, Lamps and Other Finds from the Peribolos of Apollo*, *Hesperia* 63, 127-168.
- Webster, P. V. 1976, *Severn Valley Ware: a preliminary study*, *Bristol and Gloucestershire Archaeological Society Transactions* 1976, 18-46.
- Zeest, I. B. 1960, *Keramicheskaia tara Bospora*, *MIA* 83.

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