

ACTA TERRAE SEPTEMCASTRENSIS

XI, 2012

**“LUCIAN BLAGA” UNIVERSITY OF SIBIU
FACULTY OF HISTORY AND PATRIMONY
INSTITUTE FOR THE STUDY AND VALORIFICATION OF THE
TRANSYLVANIAN PATRIMONY IN EUROPEAN CONTEXT**

ACTA TERRAE

SEPTEMCASTRENSIS

XI

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Sibiu, 2012

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DATA CONCERNING C₁₆₄ FEATURE FROM TURDAȘ-LUNCĂ
(HUNEDOARA COUNTY)

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Abstract: *The present study shows the results obtained after analysing the pottery belonging to feature C₁₆₄ from Turdaș-Luncă (Hunedoara County, Romania). The analysis consisted in two approaches: a typological one, codified descriptions of vessel's shape and ornaments and the fabrication method. The results were also compared to similar data for Starčevo-Criș pottery from Miercurea Sibiului-Petriș (Sibiu County, Romania) and Iosaș-Anele (Arad County, Romania).*

Keywords: *pottery, Starčevo-Criș culture, early Neolithic, Turdaș site, Romania.*

Rezumat: *Lucrarea de față prezintă rezultatele analizei materialului ceramic aparținând complexului C164 de la Turdaș-Luncă (județul Hunedoara). Analiza ceramicii arheologice a presupus două tipuri de abordări: analiza tipologică, care se referă la descrierea formei vasului și a ornamentelor și analiza metodelor de fabricație. Rezultatele obținute au fost comparate cu date obținute în urma unor analize de același tip aplicate materialului ceramic Starčevo-Criș de la Miercurea Sibiului-Petriș (județul Sibiu) și Iosaș-Anele (județul Arad).*

Cuvinte cheie: *ceramică, cultura Starčevo-Criș, neolitic timpuriu, așezarea Turdaș, România.*

1. General data

The Neolithic settlement from Turdaș is well known since the 19th century (Luca 2001 with the bibliography). In the archeological repertory dedicated to Starčevo-Criș culture from Transylvania Nicolae Vlassa (Vlassa 1966, 16) pointed

out the existence of some idols and pottery fragments published by Zsófia von Torma as belonging to Starčevo-Criș culture. On the other hand, Gheorghe Lazarovici didn't mention this point in his studies (Lazarovici 1984) and into the archeological repertory belonging to Hunedoara County the coordinator of the volume expressed his doubts in what concerns the existence of a Starčevo-Criș site here (Luca 2008, 170-171).

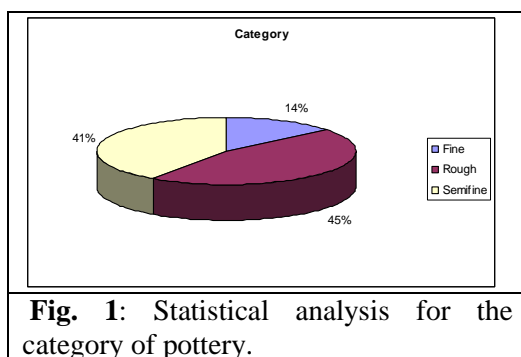
The preventive archeological research from Turdaș-*Luncă* was made in accordance with the construction of the highway between Deva and Orăștie. From the chronological point of view the following archeological cultures were discovered: Starčevo-Criș culture, Turdaș culture, Petrești culture, Coțofeni culture, Dacian period, Roman period and Middle Age period (Luca *et al.* 2012, 293).

C₁₆₄ feature, from A sector of this archaeological site presents itself as an deepened (0.20-0.30 m) ovoid shaped construction having a floor made of stones and it belongs to Starčevo-Criș culture. It is possible that in the north-western side of this feature to have been existed a fire place. The feature's dimensions are 2.60 x 1.80 meters. The whole structure was delineated at 1.2 meters above the actual ground. During the excavations there have been recovered some construction elements made of clay and having ancient imprints, river stones, fragments from a hearth, quartzite, obsidian, ochre and mill fragments. The feature was excavated by Marius Ciută.

The pottery from this complex was analysed from the typological, technological and mathematical-statistic point of view. There was also made some comparative analysis with other discoveries belonging to the same culture. The pottery from this assemblage included 404 fragments.

2. Technological aspects of the pottery

In what concerns category most of the fragments belong to rough category - 45%, followed by semifine category - 41% and only 14% belong to fine pottery.



Total number of fragments	Fine	Rough	Semifine
404	57	183	164

Under the aspect of exterior colour of pottery more than a half, more precisely 56%, is light brown (code H), followed by brown (code U) 20%. Less representative are: brown with burning spots (code Q) - 6%, dark brown (code E) - 5%, orange

(cod D) – 4%, brown-reddish (code V) – 3% and 1% brick-coloured (cod B), greyish-black (code G), red (code K) and brown as the coffee (code O1).

In what concerns the inner colour of the shards, most of them is represented by light brown (code H), but this time only by 35%. As in the case of the exterior colour the interior one it is also dominated by the light ones: 17% is represented by brown (cod U), 14% dark brown (cod E) and 6% brown with brown with burning spots (code Q). Less representative are: greyish-black (code G) with 5%, grey (cod F) with 4%, yellowish (cod C) – 3%, orange (cod D) – 2 %, brown as the coffee (code O1) – 1%, brick-coloured (cod B) – 1%, brown-reddish (code V) – 1%.

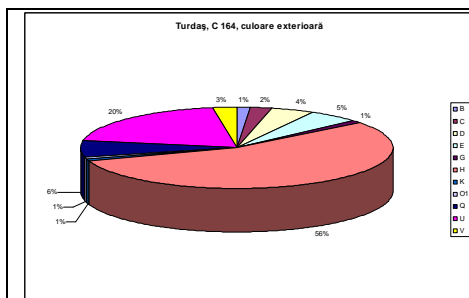


Fig. 2: Statistical analysis concerning exterior colour of pottery.

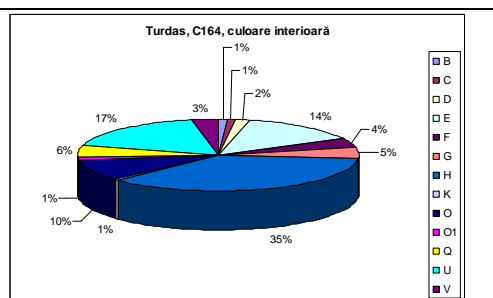


Fig. 3: Statistical analysis concerning interior colour of pottery.

The analysis of the temper used for making the pottery indicates specific elements for Starčevo-Criș culture. The great majority (77%) is represented by chaff and sand. Sand and chaff covers 12% of the whole material, chaff, sand and gravel 6% and 2% potsherds and chaff, silt and chaff and 1% large grain sand.

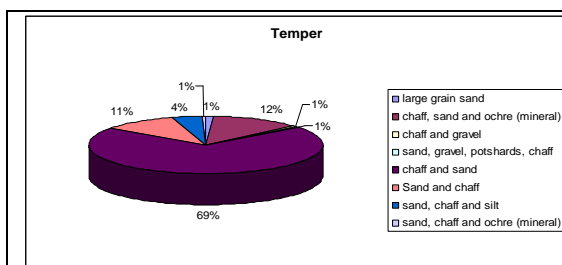


Fig. 4: Statistical analysis for temper.

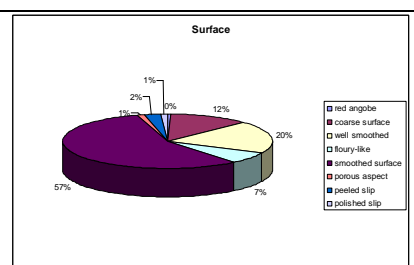


Fig. 5: Statistical analysis concerning surface treatment.

The analysis of the temper used for making the pottery indicates specific elements for Starčevo-Criș culture. The great majority (69%) is represented by chaff and sand. Sand and chaff covers 11% of the whole material and chaff, sand and ochre (mineral) 12%. 4% is represented by sand, chaff and slit and 1% by: sand, chaff and ochre (mineral); large grain sand; chaff and gravel; sand, gravel, potshards and chaff.

More than a half of the fragments studied present a smoothed surface (57%) while 20% it is well smoothed and 12% has a coarse surface. 7% feels floury-like, this characteristic being related to the silt used as a temper in some cases. 2% of the pottery has peeled slip, 1% has a porous aspect as a result of a secondary burning, while 1% has polished slip. There were also two fragments with red angobe but because it was a very small quantity the informatic programme used for creating the graphics eliminated automatically this situation and indicated 0% for this category.

The last aspect to be analysed in what concerned the technology of production was burning. 42% of the fragments were oxidating well burned and 21% oxidating slight burned. The dominant of oxidating burned pottery confirms once again a specific feature for Early Neolithic ceramics. This observation should also be connected with the colour of pottery, light colours being characteristic for this type of burning. 20% was slight burned and 14% well burned.

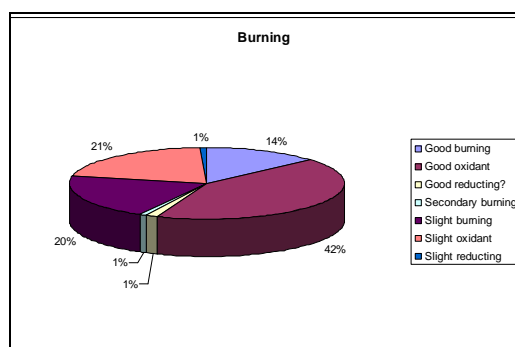


Fig. 6: Statistical analysis concerning the burning of pottery.

3. Typology and ornamentation

Most of the rim, base and handle shapes that were studied could be integrated in the catalogue for Starčevo-Criș pottery elaborated by Gheorghe Lazarovici and Zoia Maxim (Kalmar-Maxim 1999, 30-61) but there are also shapes that could be found into another catalogue (Tudorie 2011).

Y type	1 of fragments
A	4
B	3
D	5
G	1
G1	1
H	4
H4	2
I	1
J	6
J2	3
P	2

Base type	Number of fragments
B1	1
B2	1
H2	1
H4	1
I1	1
L	1
P	1
R	1
T	1
X1	1

In analyzing the types of rimes identified stood out the predominance of globular forms, some of them in closed position, like H4, but also straight – G, H, I or overturned as J, J2, G1. From feature C₁₆₄ there have been also collected ceramic fragments belonging to pots with an opened form, such as those of type A or D.

Regarding the types of bases they show the same characteristics as mentioned for the types of rimes.

Because the pottery discovered in this feature is quite fragmentary there couldn't be identified whole vessels.

The register of ornaments from this feature is not a very wide one, including: applications (code A), impressions made with an object (code A3), alveolar ornaments (code W), including alveolar ornaments on the rim, pseudo-barbotine (code B for ornamentation technique and code IA for the type of ornament) and alveolar applications (code A;W). In what concerns the last ornament mentioned quite particular are three fragments having an alveolar application forming a flower-shape motif (Pl. III, 6-8).

4. Comparative analysis

The seriated study on the types of ornaments for the pottery belonging to feature C₁₆₄ indicates a certain correlation with some features from Miercurea Sibiului-Petriș – G₂₆, B₁₉, B₁₇, G₃₅, G₅₈ și B₉ (Luca *et al.* 2004; but also with the pottery from Iosaș-Anele, because of the presence of pseudo-barbotine. Similar elements with the vessels from Iosaș-Anele are also the alveolar “belts” as is the case of MI type of ornament.

Types of ornaments	Turdaș C ₁₆₄	Miercurea Sibiului G ₂₆	Miercurea Sibiului B ₁₉	Miercurea Sibiului B ₁₇	Miercurea Sibiului G ₃₅	Miercurea Sibiului G ₅₈	Iosaș-Anele	Miercurea Sibiului B ₉
B;IA	3	5	1	12	4	34	1	11
W;C3	1	1				4		
A3;TG	1							
A;W;	2							
A;W;AB	1							
A;W;AT	2							
A;W;MC	1							
W;AF	1							
W;B	1							
A;MI	1					1	1	

5. Conclusions

From the chronological point of view this feature belongs to IC phase (Lazarovici system) and presents analogies with materials from Miercurea Sibiului-*Petriș* (Luca *et al.* 2011, 108), *Șeușa-La cărarea morii* (Luca *et al.* 2011, 122), *Ocna Sibiului-Triguri*, first cultural horizon (Luca *et al.* 2011, 111).

REFERENCES

Kalmar-Maxim 1999	Zoia Kalmar Maxim, <i>Neo-eneoliticul din Transilvania, date arheologice și matematico-statistice</i> , (1999) Cluj-Napoca.
Luca 2001	Sabin Adrian Luca, Așezări neolitice pe valea Mureșului (II). Noi cercetări arheologice de la Turdaș-Luncă. I. Campaniile anilor 1992-1995, Alba Iulia (2001).
Luca 2008	Sabin Adrian Luca (coord.), <i>Repertoriul arheologic al județului Hunedoara</i> . In <i>Bibliotheca Brukenthal</i> , XXVI, 2008.
Luca et al. 2004	Sabin Adrian Luca, Adrian Georgescu, Dragoș Diaconescu, Cosmin Suciu, <i>Șantierul arheologic Miercurea Sibiului-Petriș, campania anului 2003</i> . In <i>Cronica Cercetărilor Arheologice</i> , (2004), http://www.cimec.ro/Arheologie/cronicaCA2004/cd/index.htm .
Luca et al. 2005	Sabin Adrian Luca, Cosmin Suciu, Adrian Georgescu, Dragoș Diaconescu, <i>Șantierul arheologic Miercurea Sibiului-Petriș, campania anului 2004</i> . In <i>Cronica Cercetărilor Arheologice</i> , 2005, http://cimec.ro/Arheologie/cronicaCA2005/cd/index.htm .
Luca et al. 2006	Sabin Adrian Luca, Dragoș Diaconescu, Adrian Georgescu, Cosmin Suciu, <i>Cercetările arheologice de la Miercurea Sibiului-Petriș (jud. Sibiu). Campaniile anilor 1997-2005</i> , în <i>Brukenthal Acta Musei</i> , I.1 (2006), p. 9-20.
Luca et al. 2006 ^o	Sabin Adrian Luca, Paolo Biagi, Michaela Spataro, Dragoș Diaconescu, Adrian Georgescu, Cosmin Suciu, Georgeta el Susi, Corneliu Beldiman, <i>Șantierul arheologic Miercurea Sibiului-Petriș, campania anului 2005</i> . In <i>Cronica Cercetărilor Arheologice</i> , 2006, http://www.cimec.ro/arheologie/cronicaCA2006/cd/index.htm .
Luca et al. 2007	Sabin Adrian Luca, Dragoș Diaconescu, Adrian Georgescu, Cosmin Suciu, <i>Archaeological researches at Miercurea Sibiului-Petriș (Sibiu County, Romania) the campaigns from 1997 to 2005</i> . In <i>Acta Terrae Septemcastrensis</i> , VI (2007), p. 7-24.
Luca et al. 2007 ^o	Sabin Adrian Luca, Corneliu Beldiman, Paolo Biagi, Beatrice Ciută, Marius Mihai Ciută, Dragoș Diaconescu, Adrian Georgescu, Georgeta el Susi, Michaela Spataro, Cosmin Suciu, <i>Șantierul arheologic Miercurea Sibiului-Petriș, campania anului 2005</i> , în <i>Cronica Cercetărilor Arheologice</i> (2007), http://www.cimec.ro/arheologie/cronicaca2007/cd/index.htm .
Luca et al. 2008	Sabin Adrian Luca, Dragoș Diaconescu, Cosmin I. Suciu, <i>Cercetările arheologice de la Miercurea Sibiului – Petriș (județul Sibiu, România). Nivelul Starčevo-Criș în campaniile de cercetare din anii 1997-2005</i> . In <i>Brukenthal Acta Musei</i> , III.1 (2008), p. 7-46.
Luca et al. 2008a	Sabin Adrian Luca, Corneliu Beldiman, Paolo Biagi, Beatrice Ciută, Marius Mihai Ciută, Dragoș Diaconescu, Adrian Georgescu, Georgeta el Susi, Michaela Spataro, Cosmin Suciu, <i>Șantierul</i>

	arheologic Miercurea Sibiului-Petriș, campania anului 2007. In <i>Cronica Cercetărilor Arheologice</i> (2008), http://www.cimec.ro/Arheologie/cronicaCA2008/cd/index.htm
Luca et al. 2008b	Sabin Adrian Luca, Dragoș Diaconescu, Cosmin Suciu, <i>Archaeological Research in Miercurea Sibiului-Petriș (Sibiu County, Rumania): the Starčevo-Criș level during 1997-2005 (a preliminary report)</i> . In <i>Documenta Praehistorica</i> , XXXV (2008), p. 325-341.
Luca et al. 2009	Sabin Adrian Luca, Dragoș Diaconescu, Georgeta El Susi, Florian Dumitrescu-Chioar, <i>Feature G₂₆/2005 from Miercurea Sibiului-Petriș and new questions about the life beyond some objects of an Early Neolithic community</i> . In <i>Acta Terrae Septembastrensis</i> , VIII (2009), p. 17-34.
Luca et al. 2009°	Sabin Adrian Luca, Corneliu Beldiman, Beatrice Ciută, Marius Mihai Ciută, Dragoș Diaconescu, Adrian Georgescu, Gheorghe Natea, Florina Maria Nițu, Anamaria Șeulean, Florian Dumitrescu, Cosmin Suciu, Georgeta el Susi, Sorin Tincu, <i>Șantierul arheologic Miercurea Sibiului-Petriș, campania anului 2008</i> . In <i>Cronica Cercetărilor Arheologice</i> (2009), p. 147.
Luca et al. 2010	Sabin Adrian Luca, Corneliu Beldiman, Beatrice Ciută, Dragoș Diaconescu, Adrian Georgescu, Gheorghe Natea, Florina Maria Nițu, Anamaria Șeulean, Florian Dumitrescu, Aurelian Rusu, Cosmin Suciu, Georgeta el Susi, Sorin Tincu, <i>Șantierul arheologic Miercurea Sibiului-Petriș, campania anului 2009</i> . In <i>Cronica Cercetărilor Arheologice</i> (2010), p. 124.
Luca et al. 2011°	Sabin Adrian Luca, Cosmin Ioan Suciu, Florian Dumitrescu-Chioar, <i>Catalogue of the Early Neolithic (Starčevo-Criș Culture) settlements in Western Part of Romania – Transylvania, Banat, Crișana, Maramureș, Oltenia and Western Muntenia, în Neolithisation of the Carpathian Basin: Northernmost Distribution of the Starčevo/Körös culture</i> . In <i>The First Neolithic Sites in Central/South-East European Transect</i> , (vol. II), <i>Early Neolithic (Starčevo-Criș) Sites on the Territory of Romania</i> , BAR 2188 (2011), p. 79-132.
Luca et al. 2011°	Sabin Adrian Luca, Corneliu Beldiman, Dragoș Diaconescu, Florian Dumitrescu-Chioar, Gheorghe Natea, Florina Maria Nițu, Anamaria Tudorie, Georgeta El Susi, Aurelian Rusu, Cosmin Suciu, <i>Miercurea Sibiului, județul Sibiu, punct Petriș</i> . In <i>Cronica Cercetărilor Arheologice</i> (2011), p. 87.
Luca et al. 2012	Sabin Adrina Luca, Florian Dumitrescu-Chioar, Gheorghe Vasile Natea, Florina Maria Nițu, Maria-Raluca Teodorescu, Vasile Palaghie, Anamaria Tudorie, Corneliu Beldiman, Mihai Cristian Căstăian, Victor Cristian Sava, Cosmin Ioan Suciu, Sorin Tincu, <i>Șantierul arheologic Turdaș-Luncă, campania anului 2011</i> . In <i>Cronica Cercetărilor Arheologice din România, București</i> , (2012) p.

	292-293.
Tudorie 2011	Anamaria Tudorie, <i>Typologic Catalogues and Dictionaries for Starčevo-Criș Pottery</i> . In <i>Acta Terrae Septemcastrensis</i> , X (2011), p. 7-16.

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Photo 2: Turdaș-*Luncă*, C164 feature.

Photo 3: Turdaș-*Luncă*, C164 feature.

Photo 4: Turdaș-*Luncă*, C164 feature.

Plan 1: Turdaș-*Luncă*. Horizontal plan of C164 feature.

Map 1: Variant of sidestepping Deva–Orăștie. Turdaș-*Luncă* archaeological site (km 11+12+450-060). Plan of employment zone 1: 50,000.

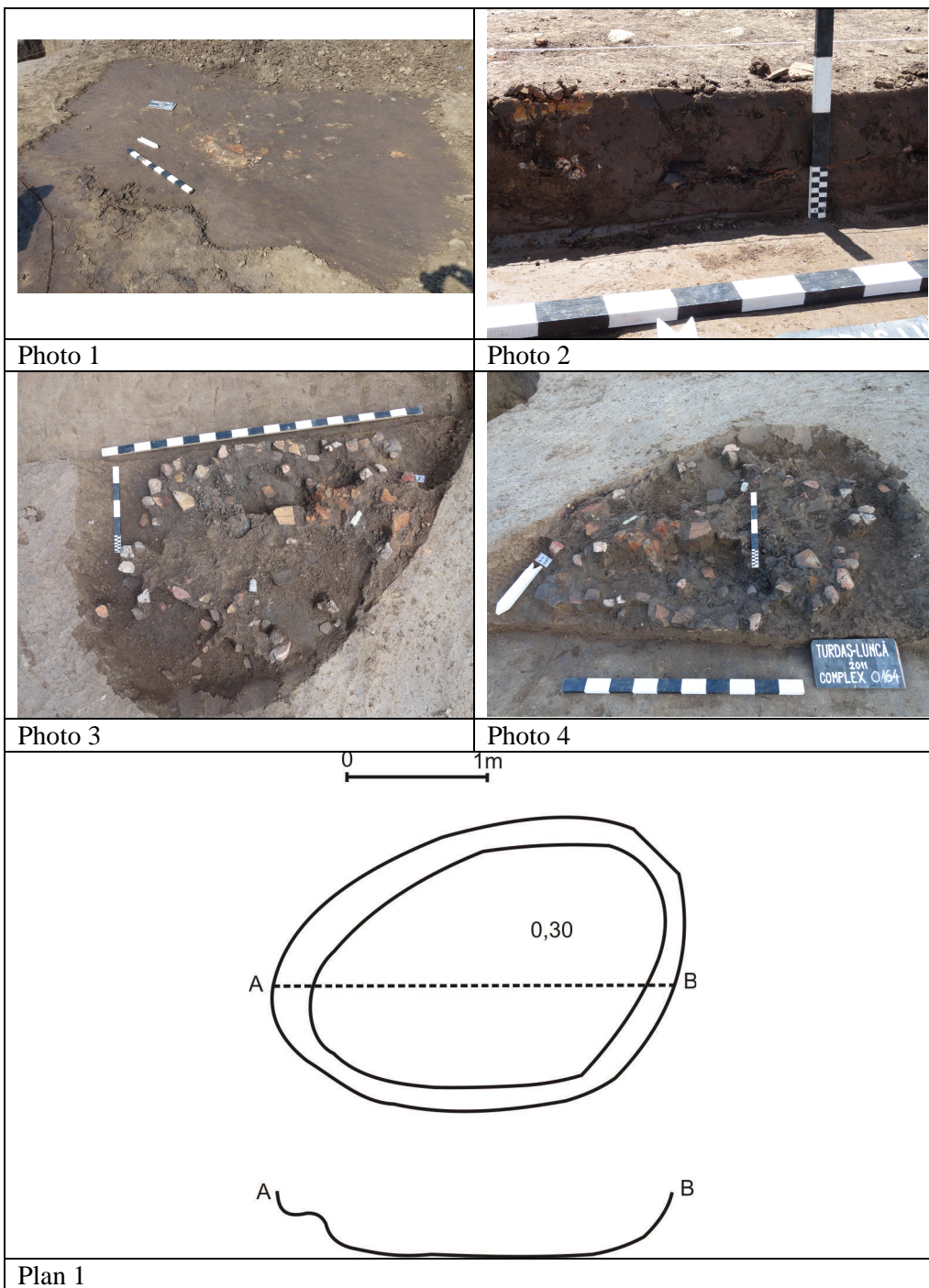
Map 2: Plan of situation 1: 5,000 (a) with the position of the site is on ortofotoplan and the location of C164 (b.) – plan of detail 1: 500.

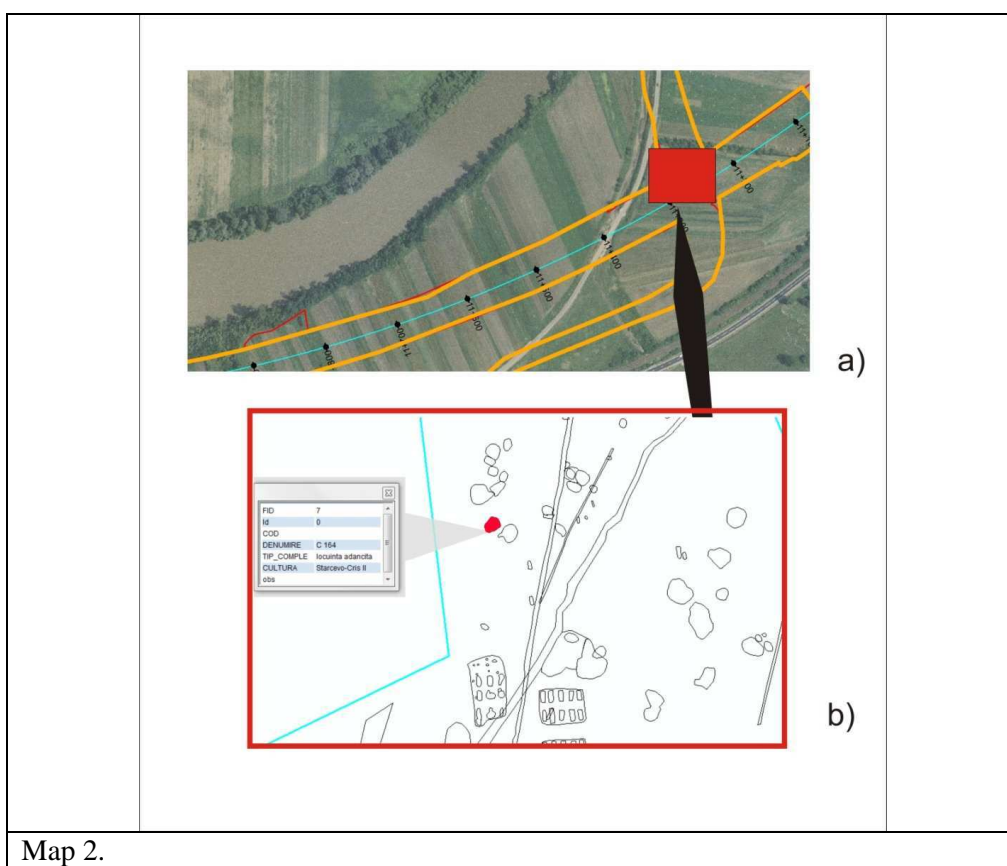
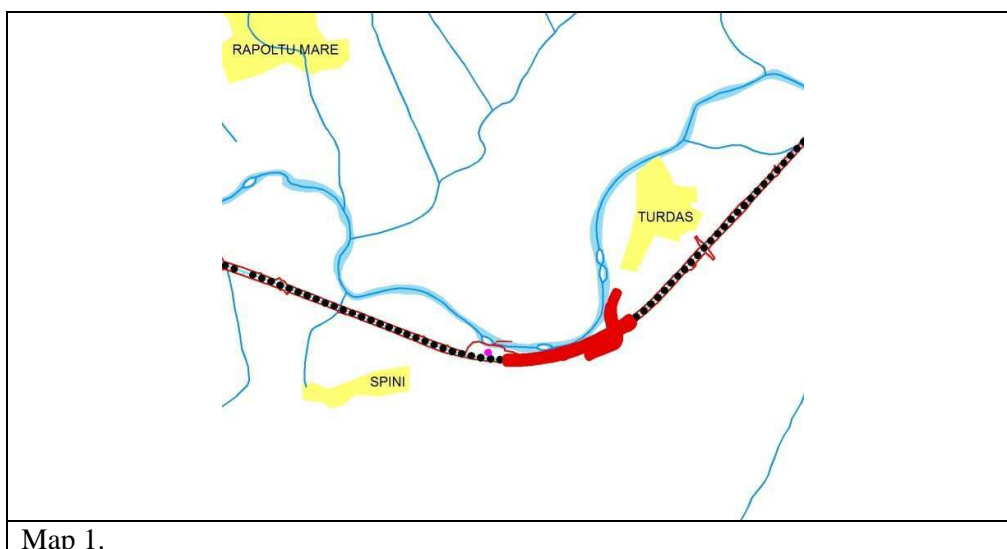
Plate I: Turdaș-*Luncă*. Sherds from C164 feature.

Plate II: Turdaș-*Luncă*. Sherds from C164 feature.

Plate III: Turdaș-*Luncă*. Sherds from C164 feature.

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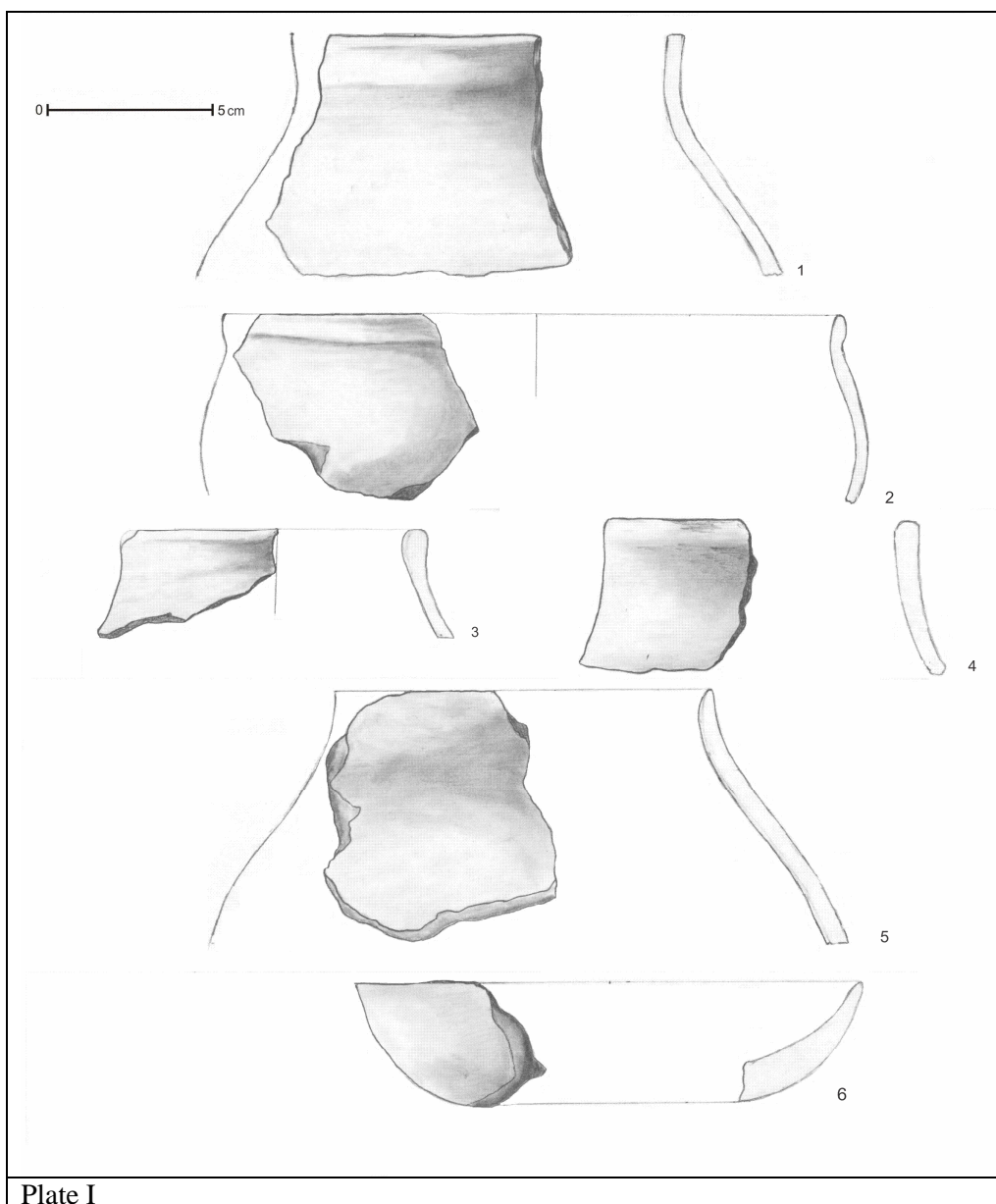


Plate I

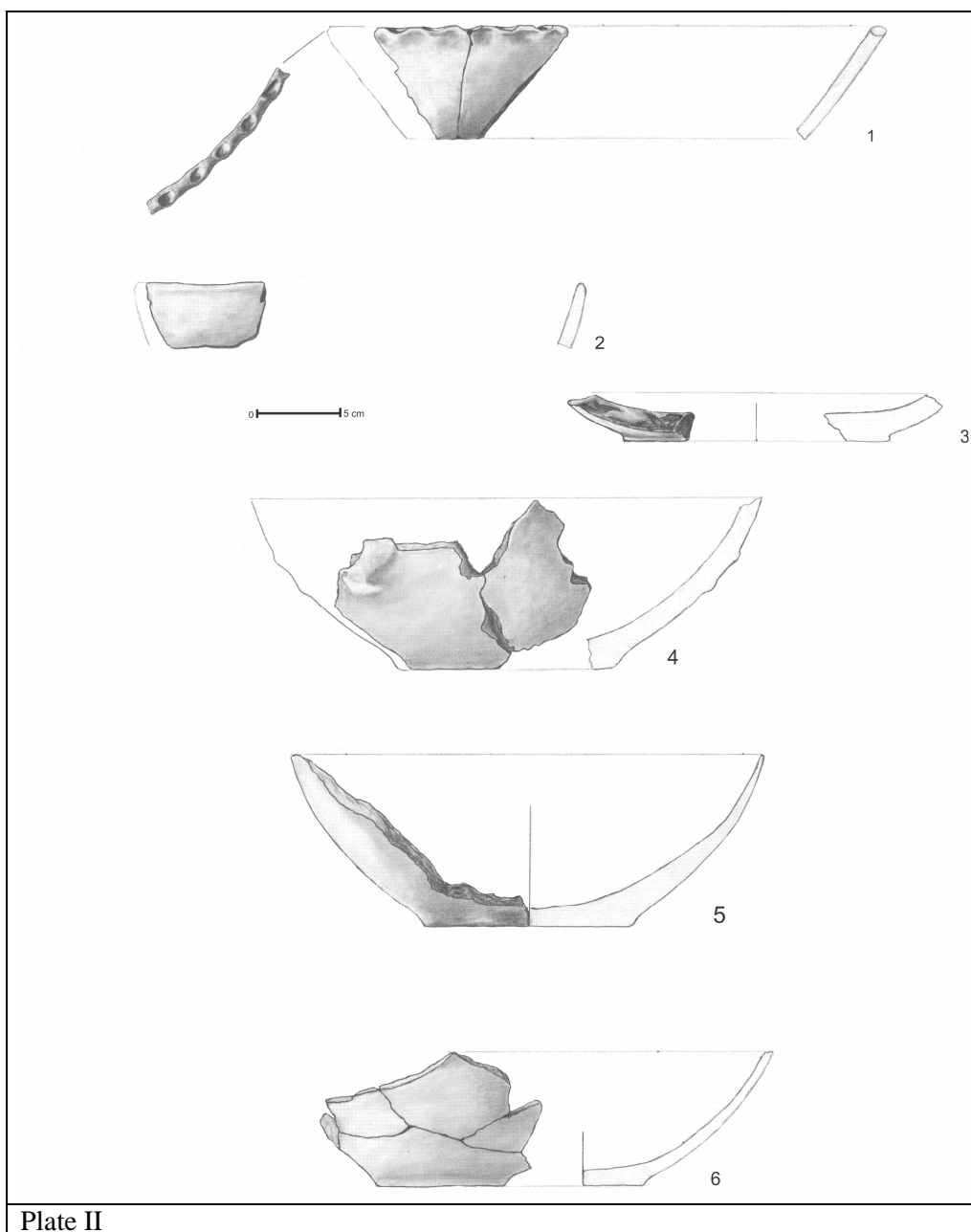
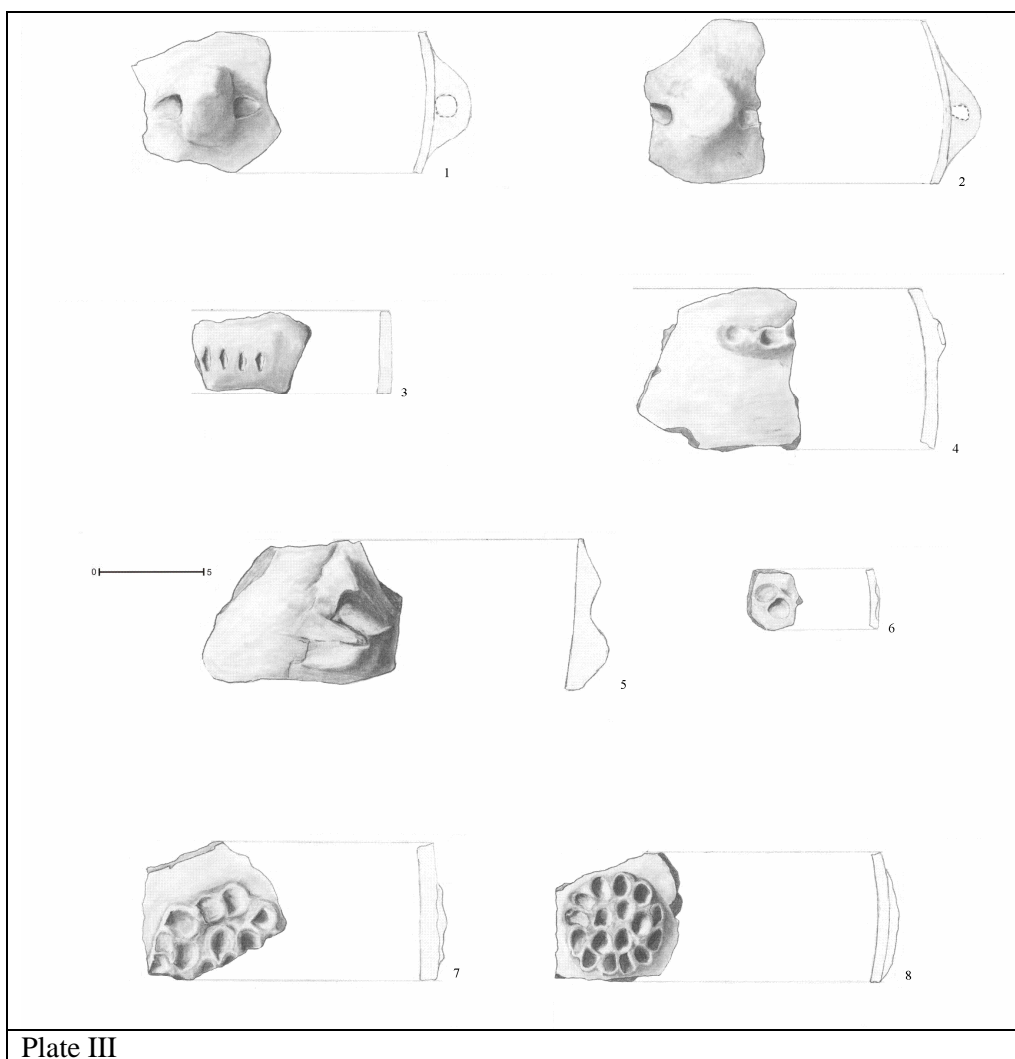


Plate II



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ANOTHER EARLY NEOLITHIC SITE DISCOVERED IN ALBA COUNTY.
THE STARČEVO-CRIȘ SETTLEMENT FROM SĂLIȘTEA
(CIOARA, ROMANIA)

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Abstract: *The present study shows the results obtained after analyzing the Early Neolithic pottery discovered at Săliștea/Cioara (Alba County). The study consisted in two approaches: a typological one, codified descriptions of vessel's shape and ornaments and the fabrication method. The results were also compared to similar data for Starčevo-Criș pottery from: Miercurea Sibiului-Petriș (Sibiu County), Cerișor-Peștera Cauce (Hunedoara County), Iosaș-Anele (Arad County), Șeușa-La cărarea morii (Alba County), Turdaș-Luncă (Hunedoara County), Cristian I (Sibiu County) – unpublished research.*

Keywords: *pottery, Starčevo-Criș culture, early Neolithic, Cioara (Romania).*

Rezumat: *Lucrarea de față prezintă rezultatele analizei materialului ceramic neolitic timpuriu de la Săliștea/Cioara (județul Alba). Analiza ceramicii arheologice a presupus două tipuri de abordări: analiza tipologică, care se referă la descrierea formei vasului și a ornamentelor și analiza metodelor de fabricație. Rezultatele obținute au fost comparate cu date obținute în urma unor analize de același tip aplicate materialului ceramic de la Miercurea Sibiului-Petriș (jud. Sibiu), Cerișor-Peștera Cauce (jud. Hunedoara), Iosaș-Anele (jud. Arad), Șeușa-La cărarea morii (jud. Alba), Turdaș-Luncă (jud. Hunedoara), Cristian I (jud. Sibiu) – cercetări inedite.*

Cuvinte cheie: *ceramică, cultura Starčevo-Criș, neolitic timpuriu, Cioara (Romania).*

1. General Data

The village of Cioara (Alba County) ceased to bear this name since 1965, when it was called Săliștea, a name that is quite common in our country. This is the main reason we have decided to use in this paper the old name. The residence is Săliștea, having in its composition the following villages: Tărtăria, Săliștea-Deal and Mărgineni.

On the territory of Săliște village, on Drejman Street no. 431, the residence of the mayor, Mr. Emil Aurel Stănilă, on the occasion of a cellar practiced in the hillside, Early Neolithic pottery was discovered. The study of this pottery gave us the opportunity of writing the following article.

In the territory mentioned above it is well known the archeological site from Tărtăria-Gura Luncii, where Starčevo-Criș artifacts were also discovered (Vlassa 1966, 16; Lazarovici 1984, 97-98). The Starčevo-Criș discoveries were not mentioned in the *Archeological Repertory of Alba County*, neither at Tărtăria voice (185-186) nor at Săliște (163-166). All this aspects indicates the fact that this settlement it is an unknown one.

The observations made by us indicates the fact that the hill was highly eroded, placing amounts of erosion material (stone, sand) over the site, the amount accumulated being of 3-4 meters. It is almost certain that the Starčevo-Criș settlement was placed under a rock, and the dwelling discovered incidentally was deserted and remained *in situ*. The pottery discovered is the best argument for this. It was displayed around a fireplace, kept in a bad condition and poorly burned.

The whole lot of 119 ceramic fragments benefited of statistical analysis. It should be noted that inside this lot it was discovered a large vessel, consisting of 63 fragments, restored in the restoration Laboratory of Brukenthal National Museum in Sibiu, but also a miniatural one.

2. Working method

Ceramic analysis assumed for us two types of approaches: typological analysis, which refers to the description of the shape of the vase and ornaments and analyze of manufacturing methods. The ceramic material was described from the macroscopic point of view, settling the following coordinates: category pottery, indoor and outdoor, color blending, smoothing, burning and then was carried out a morphological classification of ceramic snippet.

Due to lack of space, especially in the case of the comparative tables seriated analyzed, we use the following abbreviations: Miercurea Sibiului-*Petriș* – only the name of the feature, Șeușa-La *cărarea morii* – the name of the archeological feature - L1, Cerișor-*Cauce Cave* –S1, Iosaș-*Anele* – IS, Turdaș-*Luncă* – TRD, Cioara-*CIO*, Cristian I (unpublished) – L1 (complexes form First terrace) - CL1, Cristian, L2 - CL2, Cristian, L3 (ritual deposition area on Terrace 2) – CL3.

3. Technological aspects

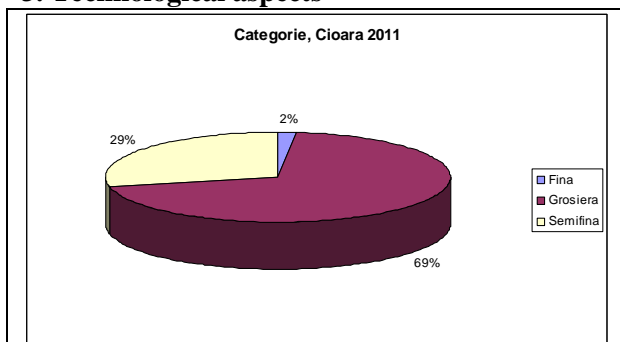


Fig. 1: Statistical analysis for the category of pottery.

Total number of fragments	Fine	Rough	Semifine
119	2	83	34

Category analysis indicated that ceramic pottery from Cioara is in proportion of 69% rough and 29% semifine. Only two percent is represented by fine ceramics.

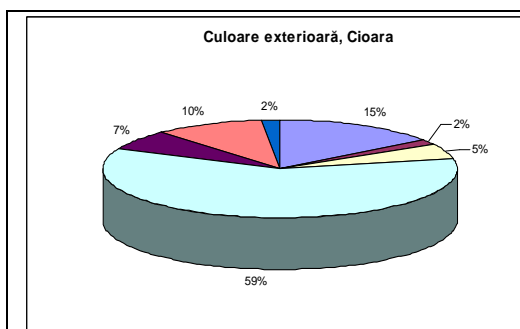


Fig. 2: Statistical analysis concerning exterior colour of pottery.

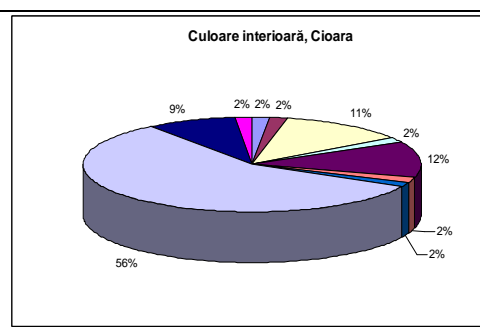
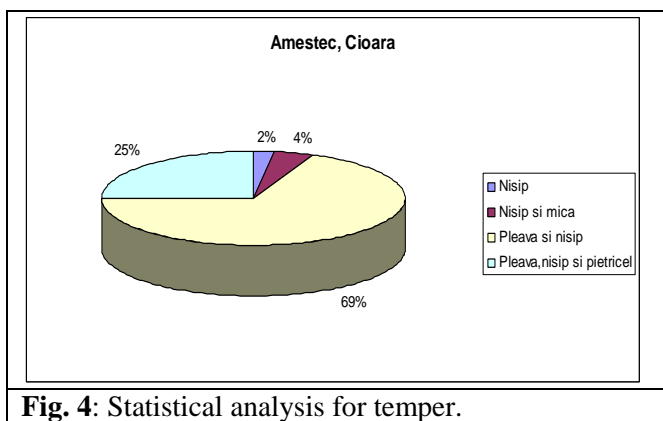


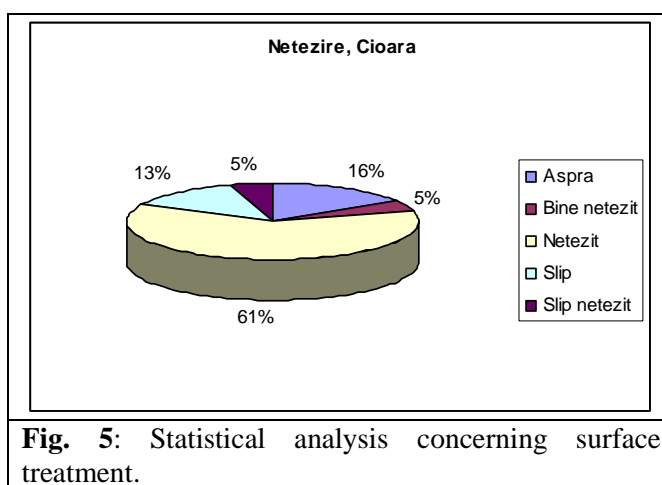
Fig. 3: Statistical analysis concerning interior colour of pottery.

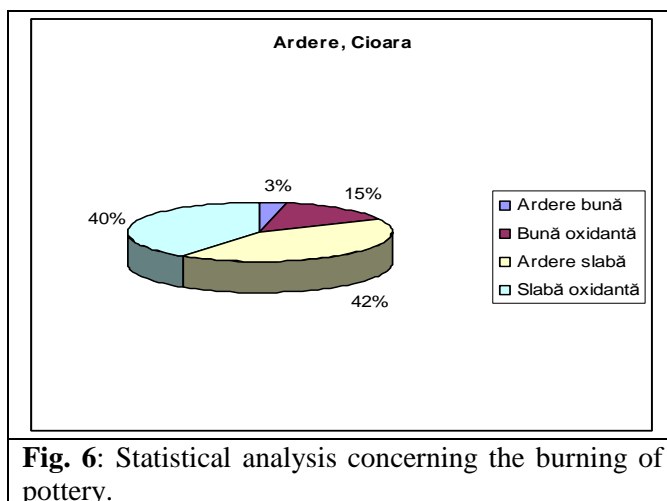
In terms of the color of the ceramic material, as it can be seen watching the two charts above, the most, both on the exterior and interior, is represented by light brown (code H). Analyzing the outside side of the pot, 15% is brick-coloured (code B), 10% brown (code U), 7% brown with burning spots (Q), 5% dark brown (code E) and two percent orange (code D) and reddish brown (code V). In what concerns the interior color, 12% is dark brown (code E), 11% brick-coloured (code B), 9% Brown (U), and two percent reddish brown (code V), black (code A), black with brown spots (cod UA), orange (code D), gray (code F), black-gray (code G).



The analysis of the temper used for making this pottery indicates a majority percentage of 69% for chaff and sand, a specific aspect for Starčevo-Criș. A quarter of the ceramics degreaser is chaff, sand and pebbles. The difference of percentage is represented by sand (2%) and sand mica (4%).

Pottery from Cioara has a smoothed surface for 61%, 16% coarse surface, 13% has slip, 5% smoothed slip and 5% is well smoothed.





Most of the ceramic material was burned slight – 42%, and 40% oxidating slight. Pottery well burned represent only 18%, of which 15% was burned oxidating well.

4. Typology and ornamentation

Under the aspect of shapes typologies but also ornamentation, in the case of this ceramic lot, because of the small number of fragments, the register of shapes for rimes, bases and ornaments it is a restricted one.

In what concerns the shape of pots, in the case of the large vessel (Photo 1) it could be integrated in the catalogue elaborated by Zoia Maxim (MAXIM 1999), under the code **EA**, while the miniatural one (Photo 2), which was reconstructed from 5 fragments, was identified with the code **JB**.

There were five rim typologies identified: **D, I, P, Y** (MAXIM 1999) and **H6** (TUDORIE 2011, Fig. 1), and for bases only four types: **I1, H3, J3, X1** (TUDORIE 2011, Fig. 3).

Regarding the ornaments, we have identified five techniques used on pottery of this complex: plastic application (code A), impressions with fingernail (code A2), plastic applications and impressions with fingertip (code AA1), pinches (code H) and alveolar ornaments (code W). Of all those listed above, only for the two categories have been set also the type of ornament: impressions with fingertip (cod AA1), type **MB** (TUDORIE 2011, p. 12) and alveolar ornaments on the rim, type **C3** (TUDORIE 2011, 13).

5. Comparative analysis

5.1. Type of rimes

As we have mentioned above, this Starčevo-Criș feature from Cioara was the provider of only five types of rimes, types that were also identified in several features from Miercurea Sibiului-*Petriș*: B₁₀, B₁₇, B₂₀, B₂₁, B₉, G₂₆, G₂₈, G₃₅ și G₅₈, but also in Cristian I (unpublished): L1, L2, L3, Iosaș-*Anele* (only the type I) Cerișor-*Peștera Cauce* (type Y, being a very frequent one as I can be easily noticed

by observing Fig. nr. 7; in case of L1 feature from Cristian I there have been identified 86 fragments) and Turdaş-*Luncă* (unpublished).

	B 1 0	B 17	B 19	B 2 0	B 21	B9	CIO	CL1	CL 2	CL 3	G 26	G 28	G 35	G 58	IS	S1	TR D
D	1	6	10	3	1	6	1	61	1	7	4			1			6
H 6							1	6		1				2			
I	3	3	3			2	1				1	1	4	1	2		1
P		1	7		2	2	1	28		14	2			1			3
Y	1 1	1 0	6	6	3	6	1	86	2	15	4	1	3	2		6	1

Fig. 7. Seriated table for the types of rimes.

5.2. Types of bases

The four types of bases belonging to Starčevo-Criş materials from Cioara present correspondences with two features at Miercurea Sibiului-*Petriş*: B₁₉ and G₅₈, with materials from Iosaş-*Anele* but also from Turdaş-*Luncă* (unpublished). All four types of bases have been also discovered at Cristian I, but this fact needs to be linked to the large number of ceramic fragments analyzed in the case of this site, 19.144 fragments.

	B19	CIO	CL1	CL2	CL3	G58	IS	TRD
H3		1	37	1	5		1	
I1	1	1	1			3	2	1
J3		1	7		1	1	1	
X1		1	12	1	1	1		1

Fig. 8. Seriated table for the types of bases.

5.3. Ornaments

Plastic applications (code A) is a type of ornament quite frequently met on Starčevo-Criş pottery and plastic applications showing fingertip alveolation on their surface (code AA1, type MC) is represented on ceramic materials from Miercurea Sibiului-*Petriş*: B₁₇ and B₂₀ features and among those from Cristian I (unpublished): L1 and L2.

The ornamentation of rims is usually represented by the alveolar ornaments - type C3, also identified and Cristian I (unpublished), in all three analyzed features, at Miercurea Sibiului: G₂₆ and G₅₈, but also at Turdaş-*Luncă* (unpublished).

	B 17	B 19	B 20	B 21	B 9	CIO	CL 1	CL 2	CL 3	G 26	G 28	G 35	G 58	IS	L1	S1	TRD
A;	12	2	2		2	2	220	6	112	6	4	1	7	5	1	1	

A2;						1	6		1								
AA1; MB	3		1			1	5	1									
H;				1		1	46		40								
W; C3						1	80	1	31	1			4				1

Fig. 9. Seriated tabel for ornamentation.

6. Conclusions

From the chronological point of view this feature belongs to IC phase (Lazarovici system) and presents analogies with materials from Miercurea Sibiului-*Petriș* (Luca *et al.* 2011, 108), *Șeușa-La cărarea morii* (Luca *et al.* 2011, 122), *Ocna Sibiului-Triguri*, first cultural horizon (Luca *et al.* 2011, 111).

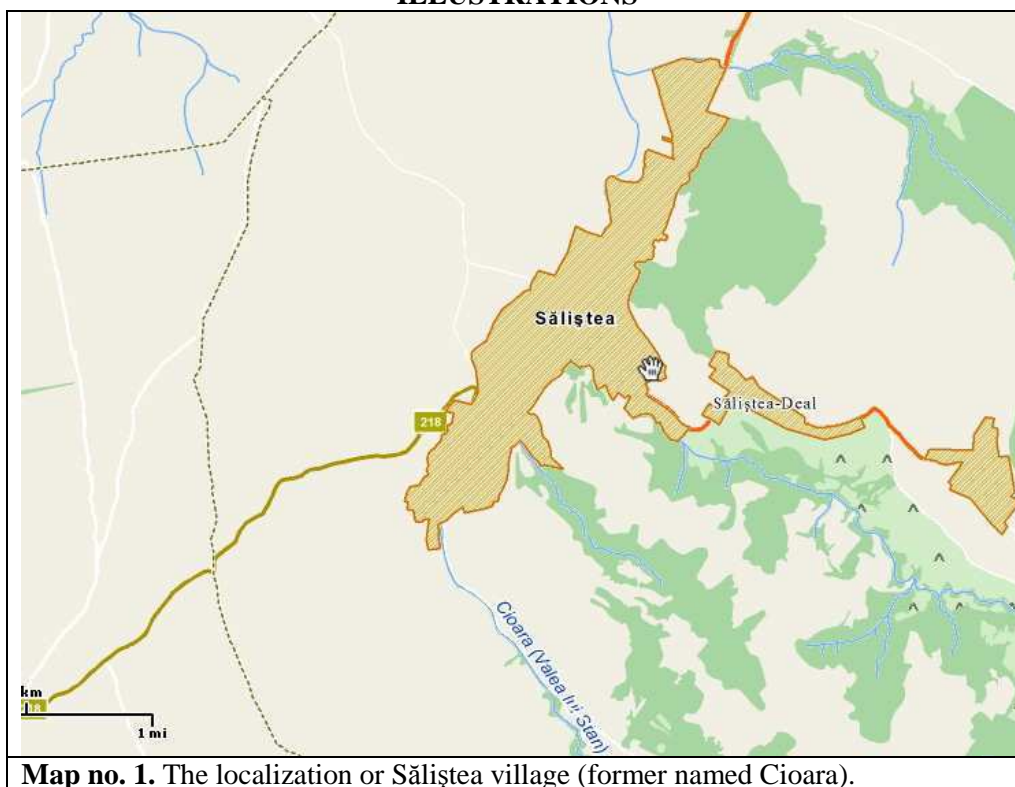
REFERENCES

CIUTĂ	1998	Marius Mihai Ciută, <i>O locuință de suprafață aparținând neoliticului timpuriu descoperită la Șeușa-La cărarea morii</i> . In <i>Apulum</i> , 35 (1998), p. 1-15.
CIUTĂ	2000	Marius Mihai Ciută, <i>Contribuții la cunoașterea celui mai vechi orizont al neoliticului timpuriu din România: Cultura Precriș. Descoperirile arheologice de la Șeușa-La cărarea morii</i> . In <i>Apulum</i> , 37, 1 (2000), p. 51-81.
CIUTĂ	2005	Marius Mihai Ciută, <i>Începuturile neoliticului timpuriu în spațiul intracarpatic transilvănean</i> , Alba Iulia (2005).
CIUTĂ	2009	Marius Mihai Ciută, <i>Cercetări arheologice de la Șeușa-La cărarea morii, I. Locuirile preistorice</i> . In <i>BB</i> , XLIII (2009).
DIACONESCU et alii	2009	Dragoș Diaconescu, Sabin Adrian Luca, Georgeta El Susi, Florian Dumitrescu-Chioar, <i>Groapa G₂₆/2005 de la Miercurea Sibiului-Petriș și noi întrebări privind viața de dincolo de obiecte a unei comunități neolitice timpurii</i> . In <i>BruckAM</i> , IV.1 (2010), p. 7-10.
LAZAROVICI-MAXIM	1995	Gheorghe Lazarovici, Zoia Maxim, <i>Gura Baciului. Monografie arheologică</i> , Cluj Napoca (1995).
LUCA	2004	Sabin Adrian Luca, <i>O statueta zoomorfă stilizată descoperită în stațiunea de la Miercurea Sibiului-Petriș (jud. Sibiu, România) și câteva opinii despre începutul neoliticului timpuriu din Transilvania</i> . In <i>Istros</i> , XI (2004) (extract).
LUCA	2006 b	Sabin Adrian Luca, <i>Aspects of the Neolithic and Eneolithic Periods în Transylvania (II)</i> . In <i>Homage to Milutin Garašanin</i> , Belgrad (2006), p. 341-366.
LUCA	2008	Sabin Adrian Luca (coord.), <i>Repertoriul arheologic al județului Hunedoara</i> , în <i>BB</i> , XXVI (2008).
LUCA-BARBU	1992 - 1994	Sabin Adrian Luca, A. Barbu, <i>Așezarea neolitică de la Iosaș-Anele (jud. Arad)</i> . In <i>Sargetia</i> , XXV (1992-1994), p. 13-23.
LUCA-SUCIU	2004	Sabin Adrian Luca, Cosmin Suci, <i>Despre</i>

		începutul neoliticului timpuriu din Transilvania. In <i>SUC.SH</i> , I (2004), p. 9-24.
LUCA-SUCIU	2005	Sabin Adrian Luca, Cosmin Suciu, <i>The Beginning of Early Neolithic in Transylvania</i> . In <i>Scripta Praehistorica</i> , Iași (2005), p. 139-156.
LUCA-SUCIU	2007	Sabin Adrian Luca, Cosmin Suciu, <i>Migration and Local Evolution in the Early Neolithic of Transylvania, the Typological-Stylistic Analysis and the Radiocarbon Data</i> . In <i>A short walk though the Balkans: the first farmers of the Carpathian basin and adjacent regions</i> , Trieste (2007), p. 77-88.
LUCA-SUCIU	2008	Sabin Adrian Luca, Cosmin Suciu, <i>Migration and Local Evolution in the Early Neolithic of Transylvania, the Typological-Stylistic Analysis and the Radiocarbon Data</i> . In <i>ActaTS</i> , VII (2008), p. 39-56.
LUCA et alii	2003	Sabin Adrian Luca, Karl Zeno Pinter, Adrian Georgescu, <i>Repertoriul arheologic al județului Sibiu</i> . In <i>BS</i> , III, Sibiu (2003).
LUCA et alii	2004	Sabin Adrian Luca, Cristian Roman, Dragoș Diaconescu, <i>Cercetări arheologice în peștera Cauce (I) (Village of Cerișor, Lesle Parish, Hunedoara Country)</i> , Sibiu, (2004).
LUCA et alii	2006	Sabin Adrian Luca, Dragoș Diaconescu, Adrian Georgescu, Cosmin Suciu, <i>Cercetările arheologice de la Miercurea Sibiului-Petriș (jud. Sibiu). Campaniile anilor 1997-2005</i> . In <i>BruckAM</i> , I.1 (2006), p. 9-20.
LUCA et alii	2007	Sabin Adrian Luca, Dragoș Diaconescu, Adrian Georgescu, Cosmin Suciu, <i>Archaeological researches at Miercurea Sibiului-Petriș (Sibiu County, Romania) the campaigns from 1997 to 2005</i> . In <i>ActaTS</i> , VI (2007), p. 7-24.
LUCA et alii	2008	Sabin Adrian Luca, Dragoș Diaconescu, Cosmin I. Suciu, <i>Cercetările arheologice de la Miercurea Sibiului – Petriș (județul Sibiu, România). Nivelul Starčevo-Criș în campaniile de cercetare din anii 1997-2005</i> . In <i>BruckAM</i> , III.1 (2008), p. 7-46.
LUCA et alii	2008 b	Sabin Adrian Luca, Dragoș Diaconescu, Cosmin Suciu, <i>Archaeological Research in Miercurea Sibiului-Petriș (Sibiu County, Rumania): the</i>

		<i>Starčevo-Criș level during 1997-2005 (a preliminary report)</i> . In <i>DP</i> , XXXV (2008), p. 325-341.
LUCA <i>et alii</i>	2009	Sabin Adrian Luca, Dragoș Diaconescu, Georgeta El Susi, Florian Dumitrescu-Chioar, <i>Feature G₂₆/2005 from Miercurea Sibiului-Petriș and new questions about the life beyond some objects of an Early Neolithic community</i> . In <i>ActaTS</i> , VIII (2009), p. 17-34.
LUCA <i>et al.</i>	2011	Sabin Adrian Luca, Cosmin Ioan Suciu, Florian Dumitrescu-Chioar, <i>Catalogue of the Early Neolithic (Starčevo-Criș Culture) settlements in Western Part of Romania – Transylvania, Banat, Crișana, Maramureș, Oltenia and Western Muntenia, în Neolithisation of the Carpathian Basin: Northernmost Distribution of the Starčevo/Körös culture</i> . In <i>The First Neolithic Sites in Central/South-East European Transect, (vol. II), Early Neolithic (Starčevo-Criș) Sites on the Territory of Romania</i> , BAR 2188 (2011), p. 79-132.
LUCA <i>et alii</i>	2012	Sabin Adrina Luca, Florian Dumitrescu-Chioar, Gheorghe Vasile Natea, Florina Maria Nițu, Maria-Raluca Teodorescu, Vasile Palaghie, Anamaria Tudorie, Corneliu Beldiman, Mihai Cristian Căstăian, Victor Cristian Sava, Cosmin Ioan Suciu, Sorin Tincu, <i>Șantierul arheologic Turdaș-Luncă, campania anului 2011</i> . In <i>CCA</i> , București (2012), p. 292-293.
LUCA <i>et alii</i>	2012 a	Sabin Adrian Luca, Adrian Georgescu, Claudiu-Iuliu Munteanu, Anca Nițoi, Anamaria Tudorie, Cosmin Ioan Suciu, Florentina Martiș, <i>Șantierul arheologic Cristian I, campania anului 2011</i> . In <i>CCA</i> , București (2012), p. 284-285.
MAXIM	1999	Zoia Kalmar Maxim, <i>Neo-eneoliticul din Transilvania, date arheologice și matematico-statistice</i> , Cluj-Napoca (1999).
MOGA-CIUGUDEAN	1995	Vasile Moga, Horia Ciugudean, <i>Repertoriul arheologic al județului Alba, în BMA</i> , II, Alba Iulia (1995).
TUDORIE	2011	Anamaria Tudorie, <i>Typologic Catalogues and Dictionaries for Starčevo-Criș Pottery</i> . In <i>ActaTS</i> , X (2011), p. 7-16.

ILLUSTRATIONS



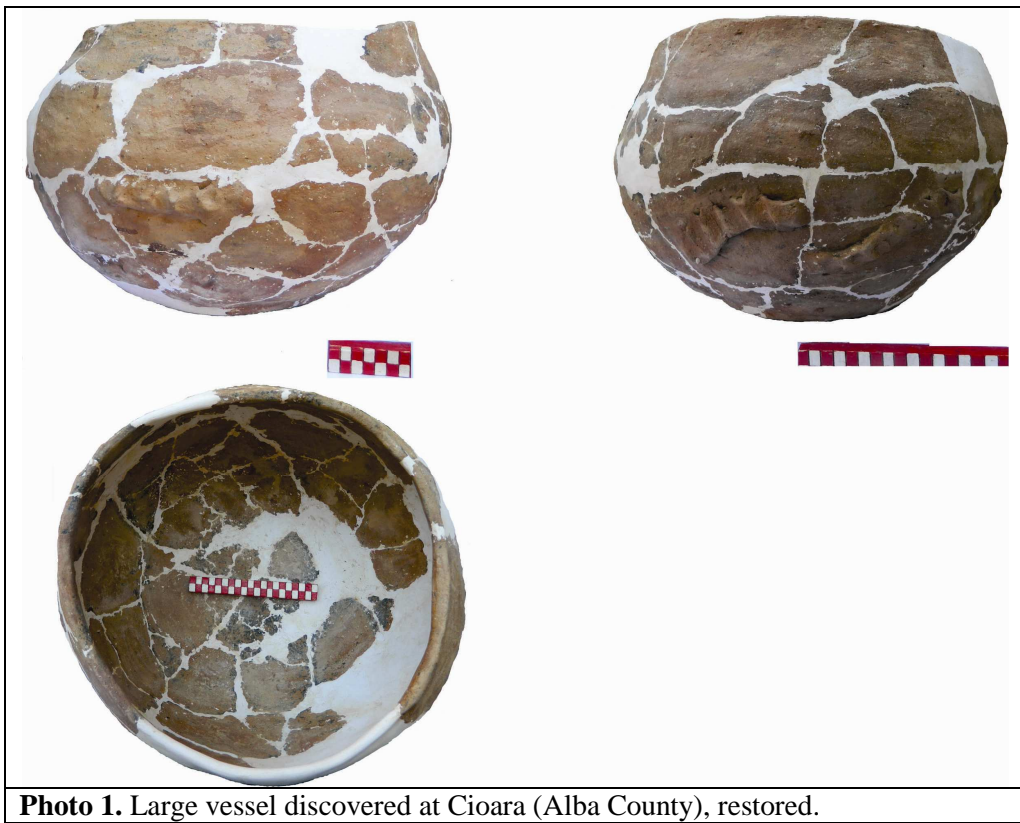


Photo 1. Large vessel discovered at Cioara (Alba County), restored.



Photo 2. Miniatural pot discovered at Cioara (Alba County), restored.

ACTA TERRAE SEPTEMCASTRENSIS

XI, 2012

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FACULTY OF HISTORY AND PATRIMONY
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TRANSYLVANIAN PATRIMONY IN EUROPEAN CONTEXT**

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Keywords: *Miercurea Sibiului (Sibiu County, Romania), Vinča A₃-B₁, level IIb, animal remains, kill-off patterns.*

Abstract: *This article deals with the analysis of 1,174 bones collected from the IIb level equivalent to Vinča A₃-B₁. According statistics cattle dominate by 59.19% followed by ovicaprids with 14.57% and pig with 9.98%. Dog has a little contribution, about 0.56%. Overall, domestic taxa account for 84.3%. Of the 15.7% provided by hunting, red deer gives 8.3%, 3% aurochs, roe deer 2.24% and 1.79% boar. Occasionally, hare and some carnivores as badger, lynx were caught. Their share is placed under 1%. In general, cattle metric evaluations fall within the range size (Fig. 6) of Vinča A-B settlements or their contemporaries. Heights of 122.4 cm and 124.2 cm were found in case of domestic taxon. The two values obviously do not cover dimensional scale of height at the withers, may also exist larger dimensions. A goat withers height of 57.32 mm was estimated, representing a very low value for the time. A value of 53.1 cm was found in sheep, this one is part of the lower range of variation, the species reached at the time. In the suids, pig measurements clearly distinguish from those of wild boar; the few data from pigs belonging to small gracile specimens. For example, one metacarpal IV of GL 65 cm gave withers height of 65.5 cm.*

So far there have been determined and sent for printing two faunal samples from Level I, referring to Starčevo-Criș Culture and Level IIa, referring to Vinča A₂₋₃ phase, which corresponds to IIa level in the site. This article will be presenting the analysis of fauna from the IIb level equivalent to Vinča A₃-B₁ to ensure continuity of site investigation, in terms of paleoeconomy (Luca, Diaconescu, Suciu 2008, 7). The 1,174 bones were collected during 2000-2008 campaigns, they originate only in mammals. In addition to the 892 bones with definite assignment to five domestic and seven wild taxa, 282 fragments were partially determined. 45 ribs may belong to cattle or red deer, 79 are waste from small-sized mammals and 158 bones are from large-sized species, bovines, red deer (Table 1). The bones are quite well preserved, without signs of burning or cutting. Four ends of bones show signs of gnawing, mostly in sub-adults. As is common for Neolithic sites (Dimitrijević 2006, p. 245) there are few complete bones, no complete skeletons, few bones

attributable to the same skeleton. We note a single case of articulated bones. It is a metacarpal articulated with carpals, all of them from B. 22. About 30% of bones were collected from four houses and an oven closed to one of them, but most come from the culture layer.

1. Distribution of bones inside complex

A₃-B₁ stage is evidenced between 6350 and 6200 BP, the surface dwelling levels from Miercurea Sibiului-*Petriș* (level IIb), belong to the end of this stage (Suciu 2009, 306). Dwelling – L₃ was partially recovered in S. I (Suciu 2009, 123), it provided three bones of cattle and two of red deer. Dwelling/platform – L₁₁ located in S. II was fully excavated, it is a large complex, and therefore 271 bones were harvested. Cattle prevail by nearly 60%, followed by pig with 17.4% and red deer with 10%. Other species recorded less than 5% (Fig. 1). Distribution of cattle bones (Fig. 2) shows a slightly higher density of elements from distal part of the legs, namely phalanges, metapodials, lower teeth as well. Perhaps the large parts of the skeleton would

Table 1 – Distribution of bones in level IIb at Miercurea Sibiului.

Complex	L 3	L. 11	L.13-14	B. 22	Oven 3	Layer	NISP	%	MNI	%
Bos taurus	3	12 9	33	77	2	284	528	59.1 9	25	29.41
Ovis/Capra		13	4	34	4	75	130	14.5 7	17	20
Sus s. domesticus		38	2	7	2	40	89	9.98	13	15.29
Canis familiaris				2	1	2	5	0.56	3	3.53
Domestic taxa	3	18 0	39	12 0	9	401	752	84.3	58	68.23
Cervus elaphus	2	24	5	6	1	36	74	8.3	11	12.94
Bos primigenius		6	1	3		17	27	3.03	5	5.88
Capreolus c.		7		1	2	10	20	2.24	4	4.71
Sus s. ferrus		4	1	2		9	16	1.79	4	4.71
Lynx lynx		1					1	0.11	1	1.17
Meles meles		1					1	0.11	1	1.17
Lepus sp.						1	1	0.11	1	1.17
Wild taxa	2	43	7	12	3	73	140	15.7	27	31.76
Identified	5	22 3	46	13 2	12	474	892	100	85	100
Big-sized frgm.		35	12	30		81	158			
Small-sized frgm.				40		39	79			
Ribs Bos/Cervus		13				32	45			
TOTAL	5	27 1	58	20 2	12	626	1,174			

have been thrown into garbage pits or elsewhere, after cleaning complex, reaching the deposit only smaller items. 129 bones are from at least seven cattle, aged five-six months (one), three-four years (two) and over four years (four individuals). Thirty-eight pig bones, mostly derived from skull and proximal parts of the forelimb (Fig. 3), from at least six animals, aged five-seven months (two individuals), 12-14 months (one), two-three years (two), mature and advanced (one). Thirteen remainders originate from a goat and a ram, three years old (distal radius, with sutures visible). With twenty-four bones meaning 10.76% red deer prevails in the wild mammals. Remnants of the head are better represented, the sample originating in one subadult and two adults. Seven roe deer bones from one adult and one juvenile and six aurochs bones from at least two adult individuals were also collected. Four bones belong to an adult boar. An ulna comes from lynx, and a fragment from the hip badger. Platform including L₁₃ and L₁₄, provided several bones, the sixth part of the structure being investigated S. II (Suciu 2009, 130). Of fifty-eight animal bones spread between the platform stones, about 58% (thirty-three fragments) derived from cattle. We note again a majority share of teeth, phalanges, metatarsal bones meaning

Table 2 – Cattle bones distribution in level IIb.

Bone	L3	L11	L13	B22	Oven 3	Layer	Total	%NISP
Skull		7		8		11	26	4.92
Maxilla+teeth		6	3	2		12	23	4.36
Mandibula+teeth	1	9	6	10		35	61	11.55
Scapula		7	2	1		10	20	3.79
Humerus		8		3		26	37	7.01
Radius	1	8	2	4		11	26	4.92
Ulna	0	0	0			3	3	0.57
Metacarpus		8	1	7		20	36	6.82
Ossa metacarpi		4		1		6	11	2.08
Pelvis		6	3	4		8	21	3.98
Sacrum						1	1	0.19
Femur	1	6		3	1	7	18	3.41
Tibia		5	2	2		14	23	4.36
Patela				1		1	2	0.38
Astragalus		3	1	2		10	16	3.03
Calcaneus		4	2			6	12	2.27
Centroquartal			1			4	5	0.95
Metatarsus		13	1	5		22	41	7.77
Metapodials		9		4		9	22	4.17
Phalanges		14	8	4		34	60	11.35

Ribs		5		11	1	15	32	6.06
Vertebra		7	1	5		19	32	6.06
Total	3	129	33	77	2	284	528	100

smaller items “scattered” among the other remnants of the stone platform (Fig. 2). At least four animals of 16-18 months, two-three years, and three-four years old and above have provided the sample. Four bones come from a goat in three-four years, and two from a sub-adult pig. Seven remainders of red deer, one from wild boar and one from aurochs completes the sample from that location. Dwelling – B₂₂ appears as an oval pit with almost vertical walls. Pillar circular pits were found on the side of this complex, indicating a relatively light covering structure. By researching this complex was found an installation of fire appliances – oven C₃ closed to that house (Luca et al 2007). Of sixty-one collected bones, thirty-six remains are also from cattle, among them vvertebrae, metapodials and skull elements prevailing. Bones originate in a juvenile and three adults. One of them is a male, with a height of 126.8 cm, another is a female with height of 124.2 cm. Eight bones come from a ewe with a waist of 53.1 cm and a ram. A horn core belongs to the second individual (sizing in Annex). From a pig, aged over one year, come a proximal radius, a scapula and a rib. A broken bone in the frontal region of a dog completes domestic species group. A horn core and a distal metacarpus with Bd/ Dd - 69.5/43.4 mm were collected from the bottom of pit house. They originate maybe in an aurochs female. Twelve bones from at least seven taxa collected from the oven no 3. A snout portion of a dog was also found. Hypothetically, the rest of the frontal skull dog, found in B₂₂ could come from the same individual who provided the mandible in the oven 3. If we consider the layer distribution of bones, 37% is the share of the distal limb elements, parts no food value, about 18% those of the skull and 30% of the fleshy part of the limbs. Perhaps these items will have been spread by movements in the level (Fig. 3).

2. Kill-off patterns

In terms of cattle management the data are as follows. According to fusing bones we find that, the survival rate is 75% up to one year, then decreased to 66% at two years and, around three-four years is placed at 62.5%. Statistics suggest a major share of bones from animals that have reached the adult stage and few young and sub-adults. Data on the teeth confirm the above results. Specifically the survival rate is 92% up to six months, then it is reduced to 88% at one year, it is 76% at two years and reaches 52% up to three-years (Fig. 4). According to dentition were assessed twenty-five individuals, of which 12% is recorded up to a year, just within one-two years, 36% up two-four years and 40% above. Animals in the latter category were mostly exploited at an advanced stage; there are even specimens with teeth very eroded. Thus on the one

Table 3 – Cattle age estimation according dentition.

Context	Element	L/R	Pd4/P4	M1	M2	M3	Age (months)
MANDIBULA/MWS							
L3/	M3	l				H	36+
Layer	M3	l				E	36+
Layer	M3	l				½	24-30
Layer	M3	l				L	36+
Layer	M3	l				L	36+
Layer	M3	l				K	36+
Layer	M3	r				C	24-36
Layer	M3	r				K	36+
Layer	M3	r				E	36+
L11/	M3	r				K	36+
L11/	M3	r				J	36+
L11/	M3	r				F	36+
L13/	M3	r				L	36+
Layer	M3	r				E	24-30
Layer	Mandibula	l			c	V	18-24
L11/	Mandibula	l	/c	J	g	F	36+
L11/	Mandibula	r		½			5-6
B22/	Mandibula	r		A			5-6
B22/	Mandibula	r			b	C	18-24
Layer	Mandibula	r	l/		a		18-24
B22/	Mandibula	r		H	j	K	36+
B22/	Mandibula	r		H	k	K	36+
MAXILLA							
Layer	M2	l				very worn	mature
L11/	M2	l				very worn	senile
Layer	M2	r			erupted	in crypt	18-22
L13/	M2	r			just erupted		16-18
B22/	M3	l				Erupting	24-26
L11/	M3	l				C3 not worn	30-32
L11/	M3	l				Erupting	24-30
Layer	M3	l				C3 not worn	30-32
Layer	M3	l				Erupting	28-30
Layer	M3	l				Erupting	28-30
L11/	M3	r				Erupting	24-30
Layer	M3	r				Erupting	26-28
Layer	M3	r				very worn	senile

Layer	Maxilla	1				very worn	senile
Layer	Maxilla	1		erupting			5-7

hand cattle were mainly used for meat specimens aged 2-4 years and less calves. Dairy products and labour were specially targeted. In the goats, there are bones of two individuals slaughtered between 2-3 and 4-6 years. Nine individuals are sheep. On dentition was found that of seventeen individuals 20.17% is culled up to six months and 15.13% between six months and one year. For

Table 4 – Sheep/goat age estimation according dentition.

Context	Element	L/R	Pd4/P4	M1	M2	M3	Age	Payne MWS
B22/ sheep	M2	R			½		6-12 m	C
L11/sheep	M3	L				U	22-24 m	D
Layer/sheep	M3	L				B	22-24 m	D
Layer/sheep	M3	L				E	22-24 m	D
B22/sheep	Mandibula	L				½	22-24 m	D
B22/sheep	Mandibula	L				U	6-12 m	C
Layer/goat	Mandibula	L		g	e	D	24-36 m	E
Layer/sheep	Mandibula	L	/h	k	g	H	5-6 years	G
Layer/sheep	Mandibula	L		g	d	B	22-24 m	D
Layer/sheep	Mandibula	L				A	2-6 months	B
B22/goat	Mandibula	R			h	G	4-6 y	G
B22/sheep	Mandibula	R				E	22-24 m	D
B22/sheep	Mandibula	R	a/				0-2 m	A
Layer/sheep	Mandibula	R		l	h	G	4-6 y	G
Layer/sheep	Mandibula	R		j	g	F	4-6 y	G
Layer/sheep	Mandibula	R	U/				1 m	A
Layer/sheep	Mandibula	R				½	22-24 m	D
Layer/sheep	Mandibula	R				B	2-6 m	B
Layer/sheep	Mandibula	R				½	6-12 m	C
B22/	Mandibula	D		m	k	J	6-8 y	H

stage one-two years, killings are focused on the time span 22-24 months (29.41%). Few slaughters evidenced between two-four years, amounting to 6%. 23.53% is recorded between four-six years and 6% between six-eight years (Fig. 5). On a part exploitation focused on young and sub-adults meat obtaining, meaning about 65% of individuals. On the other hand, about one third of specimens were exploited for many years, primarily dairy and breeding flock. The slaughtering season was established in case of eleven animals. According them, most of killings were starting from late fall, continuing during winter and early spring. In the warm

season few exemplars were culled. It can therefore speak about a permanent dwelling, in winter as well, as in case of B₂₂. On the other hand, intensive exploitation in winter may suggest insufficient feeding reserves. The absence of slaughtering in the summer might suggest some movement of the flock, so a kind of transhumance. Or simply the preservation of the lambs, for breeding flock. Regarding the pig exploitation, the large number of jaws has led to appreciation of thirteen individuals. According to age classes, 15.38% is cut to six months, and only 7.7% to one year. Maximum cut off recorded between one-two years, about 54%, then the percentage decreasing to 23%. There is only one individual with much eroded dentition, probably a breeding animal. Regarding red deer, there is prevalence of adult and matures – 60%, compared to 40% share of immature exemplars. If aurochs of five individuals, one is sub-adult, one is between three-four years and the rest beyond this limit. We note in case of roe deer two adult and two sub-adults. As for wild boar, there is an immature specimen and three reaching that stage. So the prevalence of adults is noted for the game.

3. Metric evaluation

Related to cattle cephalic skeleton, it is worth mentioning a female horn-core oval-shaped and GD/ SD/ base circumference of 55.1/ 46.6/ 158.2 mm. Another piece of base has a diameter of almost 80 mm. The core is damaged and it comes from a domestic bull. Appreciation is supported by the fact that, in the same complex – B₂₂ and at the same depth a metacarpus with GL – 200.3 mm, providing a 124.2 cm waist was found. In Fig. 9 is well-observed the association between bones. Another piece with large diameter/ low of 88/ 71.5 mm (Fig. 11) may suggest a wild female. Outer curvature length is about 408 mm. The piece is slightly arched in front, twisted inward and upward, with deep grooves. A portion of the intercornual ridge is also preserved. It has an ascendant way and then flattened. It has common characters to “primigenius” type. So far, based on data from Vinča A-B sites in Banat/Transylvania (Fig. 6) were outlined limits of cattle horn-cores variation: according them, the large diameter and the small diameter range between 48-80 mm/ 35-65 mm. Those of aurochs are clearly separated from cattle according dimensions. Dentition of cattle is massive, predominantly higher values. Specifically the length of the M3, show a variation of 34 to 40.7 mm, averaging 39 mm in the level IIb at Miercurea Sibiului. In general, data from Transylvanian site fall within the range size (Fig. 6) of Vinča A-B settlements or their contemporaries (see Parța-tell I – levels 7 a-c). Dwelling – L₁₁ provided a metacarpus with GL – 203, with an estimated height of 122.4 cm (Matolcsi). The shaft index is 15.02, suggesting a female specimen. Another metacarpus with lg. 200.3 mm, giving a height of 124.2 cm came from hut 22. The shaft index of 18.17 mentions a domestic bull. From previous examples, it appears that sexual dimorphism is expressed in terms of low waist, manifesting differences especially on bone width. The two values obviously do not cover dimensional scale of height at the withers, may also exist larger dimensions. Specify that a value of 116.9 cm was estimated on level IIa

at Miercurea Sibiului. Values between 122.8 and 129.2, average 126.07 cm representing males were found in Gornea (El Susi 1996, 111). Several complete metapodii from cattle were identified at Parța – level 7 a-c corresponding to Vinča A (Lazarovici, Lazarovici 2006, 212 and Fig. IIIb.4b). Values of 123.2 cm for females, 127-128 cm for males and 133.8¹ for geldings were estimated (El Susi 1995, 28). If the 6a level corresponding to the phase Vinča A₃-B₁ Vinča (Lazarovici, Lazarovici 2006, 212) there are no data on the height at withers of cattle. Bone width measurements show also large sized cattle with more than 1.20 m height at the withers. Exemplify by metacarpal and talus scatter diagrams in Fig. 7. Such exemplars are common in the area of Vinča settlements (Orton 2008, 136-140).

A robust horn from buck, slightly arched, flat-convex, with very sharp leading edge and rounded the poster comes from the cultural layer. It belongs to “aegagrus” type according its morphology. GD/SD is 68.7/44.5 mm, 195 mm preserved from its original length (Fig. 12). A goat metacarpus of B₂₂ with GL 99.7 mm allowed estimation of the withers height of 57.32 mm, a very low value for the time. In 7 b-c levels at Parța, we have also low values as 55.4 cm, 56.6 cm and 58 cm (El Susi 1995, 32). In contrast, an increased waist of 71.3 cm was found in Gornea (El Susi 1996, 295). Regarding the morphology of ram horns, there are two incomplete pieces, of small-sized, with sharp nuchal and frontal edges, rounded the third; two flat sides, convex the third. Diagram of GD versus SD suggests, on the one hand, a diversified morphology of male horns, and a wide variation, on the other. For example, a specimen with diameters of 52/22 is strongly flattened, triangular shape is weakly perceptible. One female horn-type goat appears on the diagram in Fig. 8; it is 26/22 mm in diameters and originates from Tărtăria-Vinča sample (Bindea 2008, 410). Dimensions fall within the medium range size variation. A single massive horn large (diameters of 69.5/ 50 mm) derived from the sanctuary from Parța (Bolomey 1988, 214). Although derived from a later level at the site, I gave it as an example to give an upper limit of sheep variation in Neolithic of the Banat and Transylvania. In the females, we identified a piece of acorn front, with only two knobs instead of horns at Miercurea Sibiului. Based on a metacarpus, with GL 108.6 mm from B. 22 was estimated a value of 53.1 cm (Fig. 10). So there were sheep, even shorter than goats. Value of 53.1 cm is part of the lower range of variation, the species reached at the time. For instance a value of 51.66 cm was estimated in the IIa level from Miercurea Sibiului, a variation from 56.6 – 63.9 cm in Gornea, and 55.4 – 58 cm in Parța. Overall, the goats are more robust than sheep, but belong to the same lower value segment. In the suids, pig measurements clearly distinguish from those of wild boar; the few data from pigs belonging to small gracile specimens. For example, one metacarpal IV of GL 65 cm gave withers height of 65.5cm. It is a low value, such values of 68-76, average 65.2

¹ A lower value is listed in this article, which appeared as a result of the coefficient 5.47 and not 5.72, cf Udrescu et al, 1999.

were estimated in Gornea (El Susi 1996, 125), 76.5 cm in Liubcova, 57-75 cm, an average of 68 22 cm in Parța. A dog mandible harvested from B 22 has a teeth row length of 67.3 mm. The Dahr length of 151.2 suggests a medium-sized individual. In this case M1 is 22 mm and P1 and P2 are straddled. Another M1 lower jaw is 19.5 mm. A fragment of mandible with lg. P1-P4 34.4 mm was gathered from the oven no. 3. There are no bones to calculate the height, but based on dentition it is assumed small to medium size animals. About eating dog cannot say anything, indeed the jaw remains are broken but not evidenced of its consumption. Red deer and roe deer material offered little metric data; they fit into the range of variation of species in time. On a talus from boar was considered a waist size of 98.96 cm. Measurements of aurochs belong to the field of female variation, if referring to some existing data (Kysely 2008, 20).

4. Percentage ratios

A look at the frequency of species exploited in the settlement emphasizes the major participation of cattle, in delivering the major part of the necessary meat and by-products. As fragments they reach 59.19% (Fig. 9), followed by ovicaprids with 14.57% and pig with 9.98%. Dog has a little contribution, about 0.56%. Overall, domestic taxa account for 84.3%. Of the 15.7% provided by hunting, red deer gives 8.3%, 3% aurochs, roe deer 2.24% and 1.79% boar. Occasionally, hare and some carnivores as badger, lynx were caught. Their share is placed under 1%. The presence of lynx, a taxon adapted to wooded areas stresses the broad distribution of the species in prehistoric times, also in the massive forest at altitudes of 300-500 m, where the site is located. Currently it is rarely met in the high hills; its area of distribution is limited to the south-west of the county, in the mountains Cindrel (Posea et al 1982, 696-697). So the hunt, on the one hand is focused on meat supplying, on the other hand the production of leather, fur and raw materials for manufacturing. Analysis of horn and bone tools (Beldiman, Sztancs 2007; Suciu 2009, 218-220) showed the existence of a wide variety of tools and bone and horn obtained from wild species. Grouping wild taxa depending on their biotope requirements, is found that species adapted to a slightly more wooded environment represent about 10% (red deer, boar, lynx), compared to only 5%, the share of those who prefer an open area (roe deer, aurochs, hare). Taking into account the percentages of MNI there are some differences from the first method of assessment (NISP). The differences are the logical consequence of the weight of different anatomical elements. It seems that in our case, the cattle are disadvantaged compared to small species, sheep, goats, pigs, the latter have more scrap jaws, especially in complex. Specifically, cattle are only 30% ovicaprids being placed at only 10% percent difference and 15% pig. So pigs and small ruminants win in frequency by estimating the MNI. Red deer has more, about 13% and the boar, nearly 6%. Overall game is to 32%. For comparison with other faunal assemblages we do prefer the method of NISP. In our case, the data from level II b did not differ significantly from those of the previous level (II a). We note only a 3% increase in

cattle and a declining of sheep/ goat with the same value. Pigs also increased by 4%. Therefore, it strengthens the economy based

Table 5 – Species frequencies in Vinča A-B settlements.

Site	MS-IIa	MS-IIb	Tărtăria	Parța-tell 1	Liubcova
Culture	<i>Vinča A2-3</i>	<i>Vinča A3-B1</i>	<i>Vinča B</i>	<i>Banat Culture</i>	<i>Vinča A-B</i>
<i>Bos taurus</i>	56.14	59.19	76.42	29.74	34.16
<i>Ovis/Capra</i>	17.82	14.57	6.42	6.89	11.55
<i>Sus s. domesticus</i>	5.71	9.98	5.71	8.69	6.01
<i>Canis familiaris</i>	0.5	0.56	1.42	0.28	1.24
<i>Cervus elaphus</i>	13.11	8.3	5	33.44	24.43
<i>Bos primigenius</i>	1.85	3.03	1.42	1.48	2.67
<i>Capreolus c.</i>	3.02	2.24	2.85	5.18	2.96
<i>Sus s. ferrus</i>	1.51	1.79		14.06	13.55
Other sp.	0.34	0.33	0.76	0.24	9.35
Wild taxa	19.83	15.7	10.03	54.4	47.04
Domestic taxa	80.17	84.3	89.97	45.6	52.96
Total sample	749	1,174	148	2,162	1,048

on cattle exploitation. Compared to the early Neolithic, sheep and goat rate loss, while pig increases. In terms of hunting, is captured about the same taxa, otherwise common wildlife, red deer, roe deer, wild boar, aurochs and hare. Hunting rate is five percent lower in IIb to IIa, as a consequence of the increasing share of domestic segment. The only sample, dated on this time span in south-western Transylvania comes from Turdaș – Vinča B level (?) (Bindea 2008, 68-69). Unfortunately the 148 bones offer little information, however it is worth noted, the largest share of cattle, of 76.42%, the pig and ovicaprids having only 5-6%. Comparisons with data supplied by samples from Parța-tell 1 /7b-c levels (Plain Banat) do not show similarities, maybe the rate of cattle, which does not pass 30%. Ovicaprids and pigs do not reach more than 7-9%. In contrast, red deer hunting reaches about 33%; by and large the game exceeds the rate of domestic mammals, being 54%. It is an economic model that does not “fit” with what we have in the settlements in south-eastern Transylvania. It is something else. Perhaps, the level Vinča A-B from Liubcova-Ornița seems to be closer to what we have at Miercurea Sibiului, resulted in the prevalence of bovines, not exceeding 35%. Small ruminants are about 1.5% and pig is unimportant (although living conditions in the Danube valley facilitated an easy management of it). Red deer is prevalent by 24% and generally hunt targeting a diverse fauna, 47%.

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Fig. 12 – He-goat horn core.

Bibliography

- Beldiman, Sztancs 2007** Beldiman C., Sztancs D. M., Industria preistorică a materiilor dure animale In: Luca S. A., Beldiman C., Biagi P., Ciută B., Ciută M., Diaconescu D., Georgescu A., Spataro M., Miercurea Sibiului - Petriș. Campania 2006 In: *Cronica Cercetărilor Arheologice, campania 2006*, www.cimec.ro/Arheologie/cronicaCA2007/cd/index.htm
- Bindea 2008** Bindea D., *Arheozoologia Transilvaniei în pre-și protoistorie*, Editura Teognost, Cluj-Napoca, 2008, 463 p.
- Bolomey 1988** Bolomey Al., Preliminarii despre resturile de animale din stațiunea neo-eneolitică de la Parța In: *SCIIVA*, T. 39, 3, 1988, 207-221
- Dimitrijević** Dimitrijević V., Vertebrate fauna of Vinča-Belo Brdo (excavation campaigns 1998-2003) In: *Starinar*, LVI, 2006, p. 245-270
- El Susi 1995** El Susi G., Economia animalieră a comunităților neo-eneolitice de la Parța, jud. Timiș, 1995 In: *Banatica*, 13/1, p. 23-51
- El Susi 1996** El Susi G., *Vânători, pescari și crescători de animale în Banatul mileniilor VI î. Chr. I d. Chr. Studii arheozoologice, Bibliotheca Historica et Arheologica*, T 3, Timișoara, Editura Mirton, 440 p.
- Kyselý 2008** Kyselý R., Aurochs and potential crossbreeding with

- domestic cattle in Central Europe in the Eneolithic period. A metric analysis of bones from the archaeological site of Kutna Hora-Denemark (Czech Republic) In: *Anthropozoologica* 43 (2), p. 7-37
- Lazarovici, Lazarovici 2006** Lazarovici Magda Cornelia, Lazarovici Gheorghe, Arhitectura neoliticului și epocii cuprului în România, I, *Bibliotheca Archaeologica Moldaviae*, IV, Iași, arheologie.ulbsibiu.ro
- Luca et al 2007** Luca S. A., Beldiman C., Biagi P., Ciută B., Ciută M., Diaconescu D., Georgescu A., Spataro M., Miercurea Sibiului - Petriș. Campania 2006 In: *Cronica Cercetărilor Arheologice, campania 2006*, www.cimec.ro/Arheologie/cronicaCA2007/cd/index.htm
- Luca, Diaconescu, Suciu 2008,** Luca S. A., Diaconescu D., Suciu C., Cercetările arheologice de la Miercurea Sibiului-Petriș (jud. Sibiu, România). Nivelul Starčevo-Criș în campaniile de cercetare din anii 1997-2005 (raport preliminar) In: *Brukenthal. Acta Musei*, III. 1, 2008, p. 7-46
- Orton 2008** Orton D. C., Beyond Hunting and Herding: Humans, animals, and the political economy of the Vinča period In: Thesis Ph D, Faculty of Archaeology and Anthropology, University of Cambridge, cambridge.academia.edu
- Posea et al 1982** Pose Gr.. *Enciclopedia geografică a României*, Edit. Științifică și Enciclopedică, București, 1982
- Suciu 2009** C. I. Suciu, *Cultura Vinča în Transilvania*, *Bibliotheca Brukenthal*, XLIV, Editura Altip, Alba Iulia, 2009, www.brukenthalmuseum.ro/publicatii

Measurements

Horn

cores

Context	Taxon	GL	Gd	Sd	Circonf.
Layer	Cattle		55. 1	46.6	158.2
B. 22	Cattle		79. 8		
B. 22	Aurochs	408	88	71.5	255
Layer	Goat	195	68. 7	44.5	174
B. 22	Sheep		46. 9	34.6	
L. 11	Sheep		48. 5	31	

Mandibula

Maxilla

Context	Taxon	P2-M3	M1 - M3	LM3/M1	Context	Taxon	M1-M3	LM3
L. 13	Cattle			34	L. 11	Cattle		29.5
L. 11	Cattle			37.5	Layer	Cattle		30.2
L. 11	Cattle			38.5	Layer	Cattle		33.2
Layer	Cattle			39.3	Layer	Cattle		31
L. 11	Cattle			39.5	L. 11	Sheep		17
Layer	Cattle			40.1	Layer	Pig		24.5
Layer	Cattle			40.1				
Layer	Cattle		90. 5	40.1				
B. 22	Cattle			40.3	Atlas			
B. 22	Cattle			40.7	Context	Taxon	GL	BFcr
Layer	Aurochs			42	B. 22	Cattle		79
B. 22	Dog	67.3	34. 6	21.8	Layer	Cattle		78.2
Layer	Dog		46. 7	19.5				
Layer	Sheep	67.2		23.3	Axis			
Layer	Sheep			23.3				

Layer	Sheep			22.8	Context	Taxon	BFcr	
Layer	Ovicaprid	46.5		21.4		L. 11	Cattle	88
L. 11	Roe deer	42.5		17		Layer	Sheep	27
Scapula					Calcaneus			
Context	Taxon	SLC	GLP	LG	Context	Taxon	GL	GB
L. 11	Cattle	59.5			Layer	Cattle	137.2	46.5
L. 11	Cattle		67.5		Layer	Cattle	139.8	48.6
L. 11	Cattle	55	70	52	L. 11	Cattle	157.5	60.5
L. 11	Cattle	52.5			Layer	Sheep	66.1	21.8
L. 11	Cattle	50.5			Layer	Sheep	67.3	18.9
L. 11	Cattle		72.5	59.5	Layer	Red deer	129.5	
Layer	Cattle		75.5	64.5				
B. 22	Sheep	21.6	35.2	27.8				
Layer	Sheep	21.2	32.6	24.9				
B. 22	Pig	21						
L. 11	Pig	21.5						
L. 14	Boar	26.5			Centroquartal			
Layer	Red deer	34			Context	Taxon	GL	
L. 11	Red deer	43	66	54	L. 14	Cattle	66	
Humerus						Pelvis		
Context	Taxon	BT	Bd	Dd		Context	Taxon	LA
Layer	Cattle	73.1	81.7	78		Layer	Cattle	56.2
B. 22	Cattle	73.2	77.1			B. 22	Cattle	61.8
L. 11	Cattle	74.5	81.	82		Layer	Cattle	64.3

Layer	Cattle	74.7	5 80				Layer	e Bos	77
L. 11	Goat	30.5	31	28			B. 22	Bos	79.8
Layer	Pig			36.2			L. 11	Pig	28
			34.						
Layer	Pig	27.8	4	36.6			L. 11	Pig	29.1
			38.						
L. 11	Pig	28.5	5	35			Layer	Pig	31
L. 11	Pig	32							
B. 22	Boar			54.4					
L. 11	Boar	38	49	48					
	Red		56.						
L. 11	deer		4	58.5					
	Roe								
Layer	deer		29						
Radius									
			BF						
Context	Taxon	P	Bp	Dp	Bd		Dd		
Layer	Cattle	71.3	75	38.5					
			87.						
B. 22	Cattle	79.3	7						
L. 11	Cattle	79.5							
Layer	Cattle	83		45					
B. 22	Cattle	84.2		46.7					
B. 22	Cattle			37					
B. 22	Cattle			39.8					
L3	Cattle			47					
Layer	Cattle			47.3					
Layer	Cattle			49.8					
Layer	Cattle			52					
	Auroch								
Layer	s			57.9					
L. 14	Goat				28.5		16.5		
			29.						
Layer	Sheep	25.8	1	14.1					
			30.						
Layer	Sheep	28.8	3	15.3					
B. 22	Sheep				25		16.6		
L. 11	Sheep				25.5				
Layer	Goat				26.7		12.9		
	Red		56.						
Oven 3	deer	54.6	5	28.5					

Layer	Roe deer	28	16.3				
Metacarpus							
Context	Taxon	GL	Bp	Dp	Sd	Bd	Dd
L. 11	Cattle		57.5	33.5			
L. 11	Cattle	203	58.5	35	30.5	61.5	34
L. 11	Cattle		58.5	35			
Layer	Cattle		59	41			
L. 14	Cattle		60.5	36			
B. 22	Cattle	200.3	64.2	39	36.4	65.1	34.7
Layer	Cattle		65.7	37.5			
B. 22	Cattle		66.6	37.3			
Layer	Cattle		69.8				
B. 22	Cattle						33.1
B. 22	Cattle					53.3	30.8
L. 11	Cattle			34.5			
Layer	Cattle			34.1			
Layer	Cattle						38
L. 11	Aurochs		69.5	44			
L. 11	Aurochs		72	48			
Layer	Aurochs		76.2	46.3			
B. 22	Aurochs					69.5	43.5
L. 11	Aurochs						43.5
L. 11	Aurochs						42
Layer	Goat	99.7	23.9	17.1	15.6	25.7	15.2
B. 22	Sheep	108.	19.	14.2	12.1	22.2	13.6

		6 Mc 4- 65	8					
L. 11	Pig							
Metatarsus								
Context	Taxon	Bp	Dp	Bd	Dd			
B. 22/	Cattle		31. 5 46.					
Layer	Cattle	44,8	7 46.					
Layer	Cattle	46,4	6 44.					
Layer	Cattle	48,8	9 49.					
L. 11	Cattle	49	5 49.					
Layer	Cattle	51,6	7					
L. 11	Cattle	54,5	55 59.					
Layer	Cattle	55,2	9					
Layer	Cattle			53.7	31			
L. 11	Cattle			53	30.5			
Layer	Cattle			63,1	36.5			
L. 11	Cattle			63	35.5			
Layer	Cattle			69,3	38.8			
Layer	Cattle			69,4	33.8			
Tibia				Talus				
Context	Taxon	Bd	Dd	Context	Taxon	GLI	GLm	Bd
Layer	Cattle	63.5	2 44.	B. 22	Cattle	66.7	62.4	45
Layer	Cattle	63	6 44.	L. 11	Cattle	68	64	44.5
L. 11	Cattle	65	47 47.	Layer	Cattle	69.3	62	43.7
Layer	Cattle	65	6 49.	Layer	Cattle	69.5	62.3	43.6
Layer	Cattle	68.2	1	L. 11	Cattle	70.5	64.5	41
L. 11	Cattle	71	54	Layer	Cattle	71	64	

L. 14	Auroch s	75.5	56. 5	B. 22	Cattle	71.2	63.9	45.1
Layer	Auroch s	74.5	55. 4	L. 11	Cattle	71.5	66	46.5
Layer	Pig	28.7	25. 3	Layer	Cattle	72.1	66.5	48.3
Layer	Roe deer	22.4	16. 9	Layer	Cattle	72.5	65	45.5
				Layer	Cattle	72.7	67.2	
				Layer	Cattle	75.3	68.8	44.3
				Layer	Aurochs	77.8		48.8
				Layer	Aurochs			51.8
				Layer	Boar	54	47	31.2
				L. 14	Red deer	62	61	38.5
				Layer	Red deer	63.2	60.4	37.7

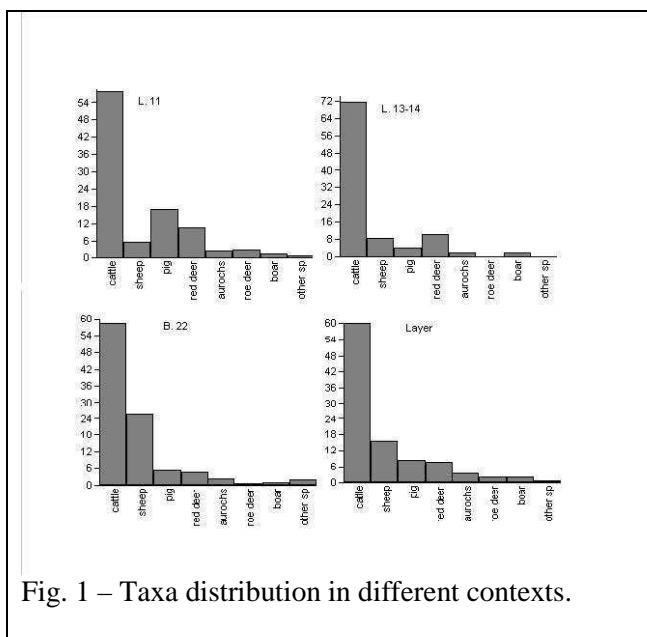


Fig. 1 – Taxa distribution in different contexts.

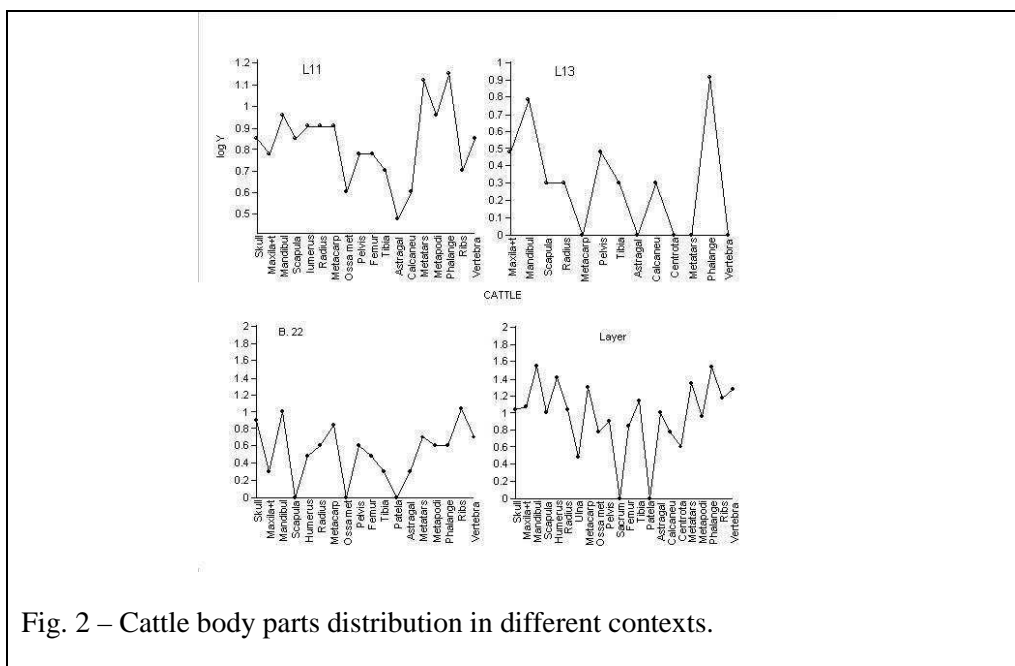


Fig. 2 – Cattle body parts distribution in different contexts.

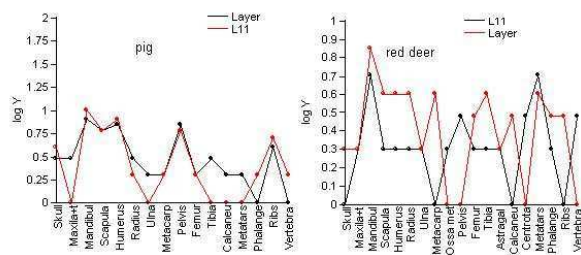


Fig. 3 – Pig, sheep/ goat body parts distribution in different contexts.

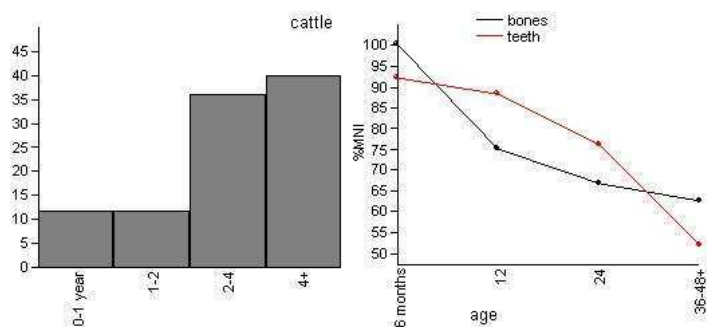


Fig. 4 – Cattle age estimations.

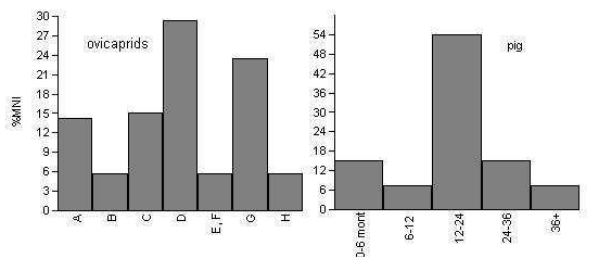


Fig. 5 – Pig, sheep / goat age estimations.

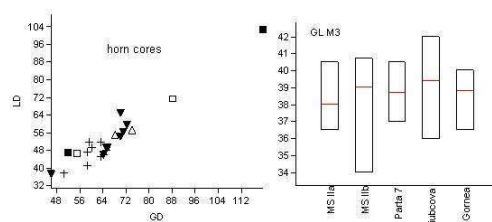


Fig. 6 – Scatter diagram of cattle horn cores (▼-Gornea-Căunița; + - Liubcova-Ornița; Δ- Parța; ■ – MS-IIa level; □- MS-IIb level) and M3 averages in Vinca A-B sites.

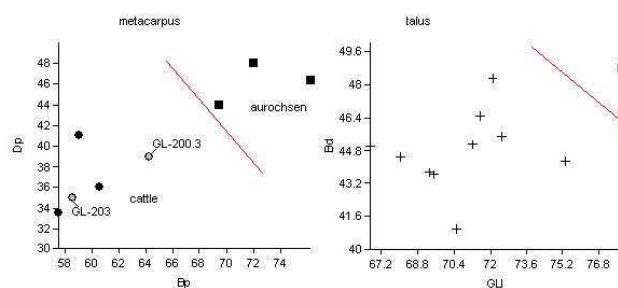


Fig. 7 – Scatter diagram of cattle metacarpus and talus.

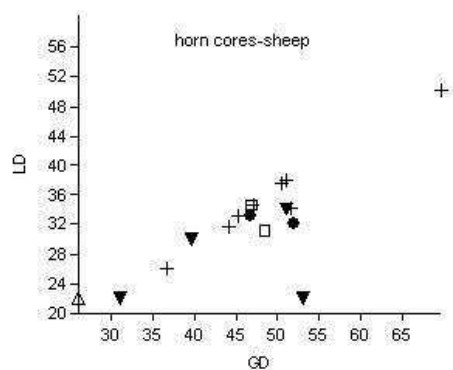


Fig. 8 – Scatter diagram of horn core sheep: □- MS-IIa level; ▼- Gornea-Căunița;

● - Liubcova-Ornița; + - Parța; Δ- Tărtăria.



Fig. 9 – Articulated cattle bones in B₂₂.



Fig. 10 – Bones from cattle (broadened Ph.1) and sheep/goat metapodii.



Fig. 11 –Wild cattle horn core.

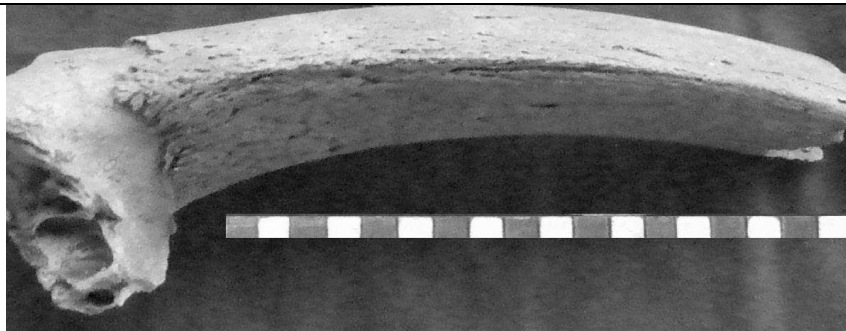


Fig. 12 – He-goat horn core.

TURDAȘ CULTURE POTTERY FROM TURDAȘ-LUNCĂ SITE. TYPOLOGICAL AND MORPHOLOGICAL ANALYSIS. A CASE-STUDY

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Abstract: *The research carried out on archaeological site Turdaș-Luncă (Hunedoara County) during highway construction Deva –Orăștie a considerable amount of ceramic material. This study presents an analysis of pottery from three complexes belonging to Turdaș culture from the above mentioned site, a total of 16,741 sherds. In our analysis we used the software package ZEUS. We have presented data obtained compared with existing data for the site from Miercurea Sibiului-Petriș (Sibiu County), belonging to Vinča and Lumea Nouă cultures (approximately 12,000 sherds). The results show, in terms of technology, Turdaș culture fits in Neolithic patterns developed in Transylvania and the morphologically analysis highlights commonalities and especially different elements between Vinča and Turdaș cultures.*

Keywords: *Neolithic, Turdaș culture, Vinča culture, pottery, technological and morphological analysis*

Rezumat: *Cercetările arheologice de salvare desfășurate în situl de la Turdaș-Luncă (jud. Hunedoara) cu prilejul construirii autostrăzii Deva –Orăștie au scos la iveală o cantitate considerabilă de material ceramic. Studiul de față prezintă analiza ceramicii din trei complexe aparținând culturii Turdaș din situl mai sus menționat, cu un total de 16.741 de fragmente. În analiza noastră am utilizat pachetul de programe ZEUS. Datele obținute le-am prezentat în comparație cu datele existente pentru situl de la Miercurea Sibiului-Petriș (jud. Sibiu), complexe aparținând culturilor Vinča și Lumea Nouă (însușind aproximativ 12.000 de fragmente ceramice). Rezultatele obținute arată, din punct de vedere tehnologic, încadrarea culturii Turdaș în tiparele neoliticului târziu transilvănean iar din punct de vedere morfologic evidențiază punctele comune și mai ales cele diferite între culturile Vinča și Turdaș.*

Cuvinte cheie: *neolitic, cultura Turdaș, cultura Vinča, ceramică, analize tehnologice și morfologice*

Introductory note and work method

During 2011 archaeological research was carried out on Turdaș-Luncă site (Hunedoara county), caused by highway Deva-Orăștie construction (Luca *et al.*

2012). The large amount of pottery identified here is now at the Brukenthal National Museum, for technological and morphological analysis carried out by this author. As it can be assumed, this work is and will be for a while, in progress.

The pottery was registered in Access database and processed with the software package ZEUS (Lazarovici 1998; Lazarovici, Micle 2001). This work system, implemented by Professor George Lazarovici was completed during the analyses of Turdaş pottery (NIȚU 2012, 228-283) and especially on the occasion of processing Vinča pottery from Miercurea Sibiului-*Petriș* (NIȚU 2008; NIȚU 2012, 132-227; SUCIU 2009), shown here for comparison.

Technological analysis was done using dictionaries on each criterion and typological analysis was based on catalogs of Vinča culture pottery, supplemented by new Turdaş types encountered.

The three complexes in this study, belonging to Turdaş culture, have a total of 16,741 sherds. Vinča and Lumea Nouă complexes (complexes G41 and G44) from Miercurea Sibiului-*Petriș* presented here for comparison totals approximately 12,000 sherds.

In the analysis presented below we removed percentage below 1% from all the graphics to avoid excessive and unnecessary load.

Description of complexes

Complex C023

The pit was burned, the traces of fire are identified on other contemporary pits which means an event destroyed the complexes in area A. Above C023 was identified C014, a ditch, which involves building fortress system after the violent fire that burned down C023.

Same stratigraphic sequence is seen with pit C013 which is cut by ditch C010. All these complexes contemporary with C023 are rich in vessels as a consequence of a rapid abandonment, due to fire.

Filling of pit C023 is pigmented with charcoal and adobe. Pit depth is 2.2 m, has a length of 7.1 m and a width of 4.45 m.

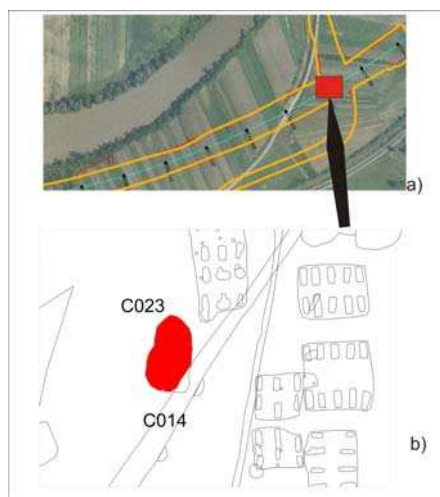


Figure 1. Site plan 1:5000 (a) positioning of the site's area and location on the orthophotomap of C023 complex (b) - detailed plan 1:500

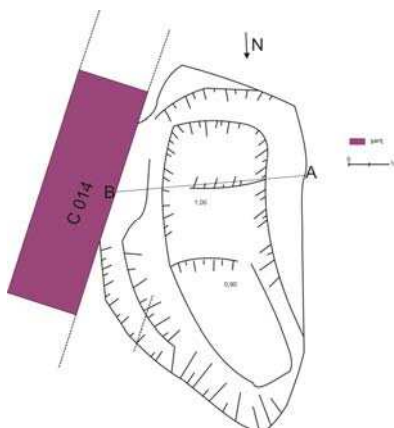


Figure 2. C023 Plan of the complex

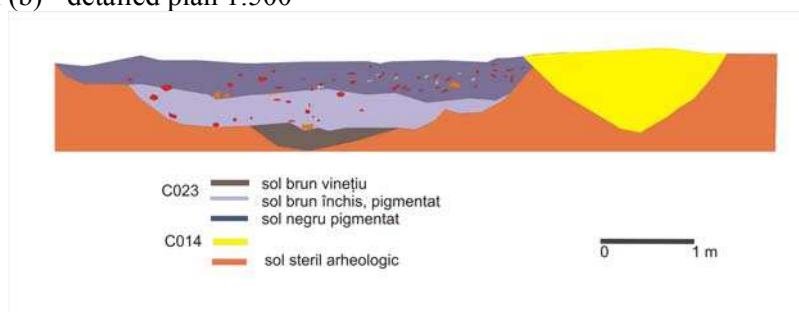


Figure 3. Complex C023 - Profile

Complex C382

The pit was identified after plotting a control section and appear as a large cluster of pottery and bones. Depth is relatively small (1.60 m) and the filling has a loamy apert, black-gray with adobe, charcoal and gravel pigment at the bottom. In the south-west pit complex is cut by C1819. Also in the southern part was identified a circular pit of small dimensions, probably a pit pole.

Complex shape is rectangular with rounded corners. It was identified here zoomorphic plastic, clay weights, flint and an ax raw. The complex has a length of 8.96 m and a width of 5 m.

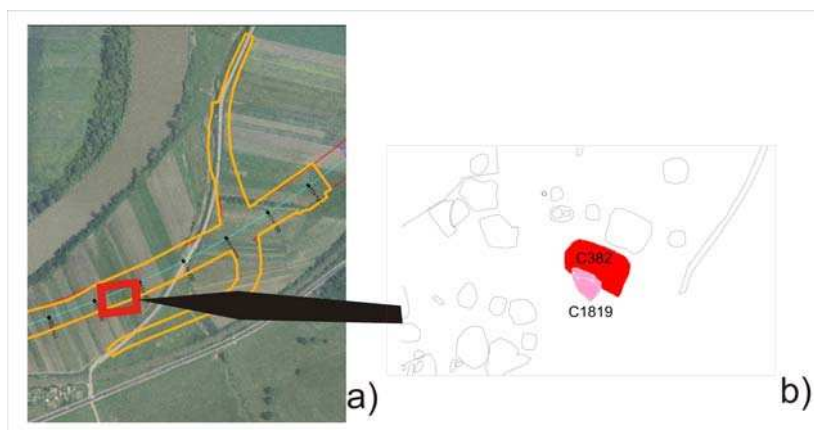


Figure 4. Orthophotomap Turdaș-Luncă (a) Position of the complex C382 - site plan (b - scale 1:300).



Photo 1. Complex C382

Complex C405

The pit is an ovoid structure consisting of a pit dwelling (C405), a circular oven (C1221) and an access pit to the oven (C405A). Pit dwelling has a depth of 2.25 m and a diameter of 4.9 m and is slightly sunken in the south-west. The total length of the structure is 6.8 m. There were observed several pits pole supporting the roof. On the bottom of the pit could be observed very strong burning traces and charred beams and massive adobe elements with traces of beams and poles were identified. Ceramics recovered in a large quantity belongs to Turdaș culture. Lithic inventory is rich with many blades of flint, polished axes and fragments of grinders. The access pit to the oven is 2.3 m long and 1.7 m wide and 0.6 m deeper than the pit dwelling. The oven, dug in the wall, has a diameter of 0.8 m.

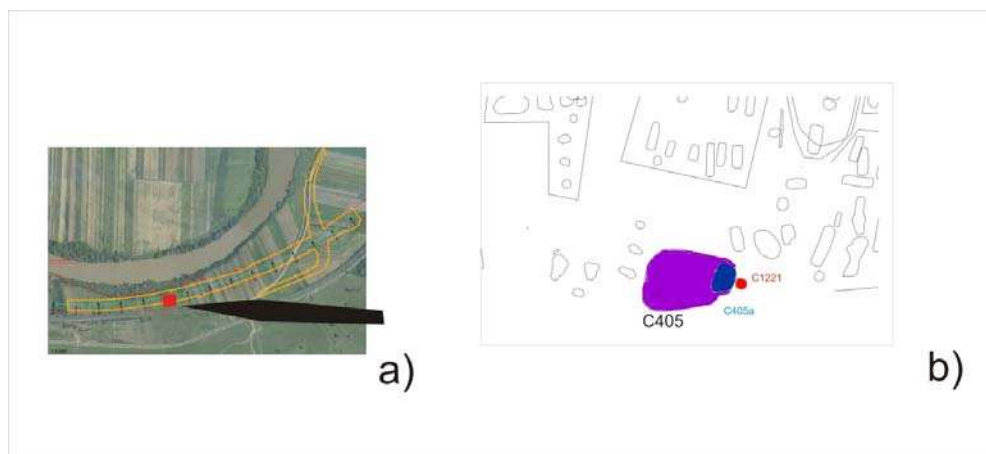


Figure 5. Orthophotomap Turdaș-Luncă (a) position of the complex C405 (B6), the access pit C405a and oven C1221-site plan (scale 1:200 b)

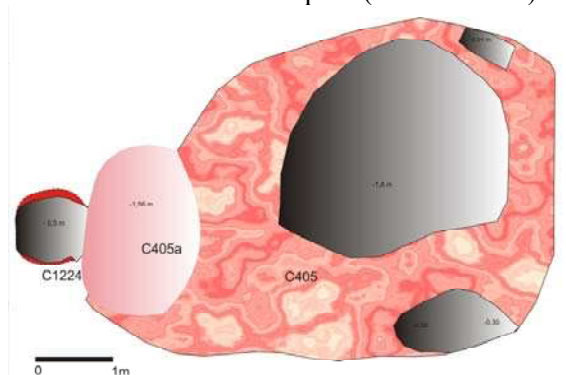


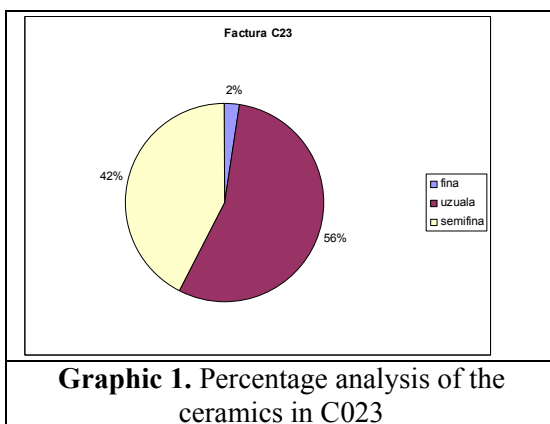
Figure 6. Complex C405 - Plan

Description of ceramic material-morphological aspects

Complex C023

Were identified and analyzed 3487 pottery sherds. From **Fig. 1** it can be seen very small percentage held by fine ceramic (only 2%) compared to the other two categories of ceramic, coarse and semifine. Predominant colors are brown (29%), light brown (19%), tile-coloured (16%) and dark brown (10%).

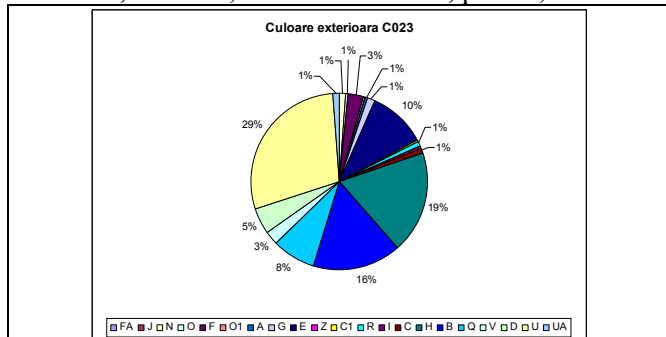
Temper was used as a fairly large share large grain sand and pebbles (P6-20%) followed by sand and pebbles (19%), sand (11%) and



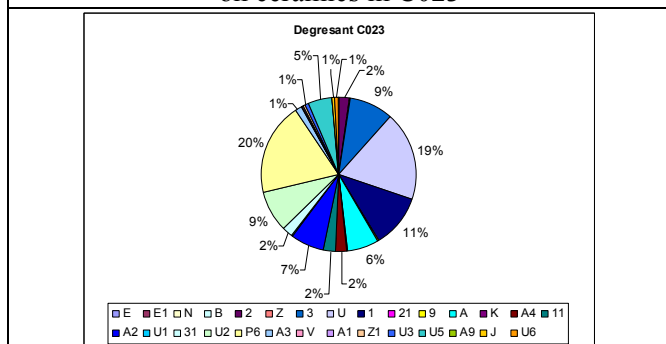
Graphic 1. Percentage analysis of the ceramics in C023

sand, pebbles and ocher (9%).

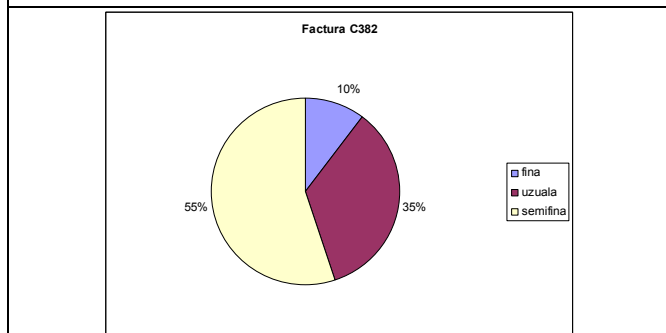
Firing analysis and surface treatment are shown in **Tab. 2** and **Tab. 3** in the form of analyses containing Vinča and Lumea Nouă informations from Miercurea Sibiului-Petriș investigated during 2003-2010 (Luca *et al.*, 2004, no. 124; Luca *et al.* 2005, No. 151; Luca *et al.* 2006a, p 9-21; Luca *et al.* 2006b,



Graphic 2. Percentage analysis of the exterior colour on ceramics in C023



Graphic 3. Percentage analysis of temper in C023



Graphic 4. Percentage analysis of the ceramics in C382

no. 117; Luca *et al.* 2007, 233-236; Luca *et al.* 2008, 199-200; Luca *et al.* 2009, 147-149; Luca *et al.* 2010, 124-126; Luca *et al.* 2011, 87-89). It is necessary to specify here that from excavations carried out in 2010 we included in our analysis only complex G73, the rest of ceramic material derived from this campaign is still being processed at the National Museum Brukenthal.

Tab. 2 shows that pottery is generally well fired, mostly oxidant. This is justified by the circumstances in which this structure has ended life, by fire.

Vessels' surface (**Tab. 3**) is mostly coarse, followed by smoothed surface, mealy (9% ceramic paste contains silt, in various combinations) and treated with smoothed slip. The remaining techniques were identified on less than 100 sherds each, amount less relevant compared to the total number of fragments in the complex.

Complex C382

Were identified and analyzed to date 4243 ceramic fragments. The data we present here are incomplete because there still is a considerable amount of ceramics from C382 to be processed.

The large amount of semifine pottery can be observed (55%), followed by the coarse (35%) and fine pottery (10%). Although still in small quantities, percentage of fine pottery however increases compared with C023.

Colours we meet now are brown, present in many cases (29%) followed by light brown (24%) and tile-coloured (16%). In smaller quantities were identified dark brown, brown with flecks, reddish brown and orange.

Temper used to produce pottery is sand in most cases (29%), followed by sand and pebbles (20%) and then sand (13%) and large grain sand and pebbles (11%). It is to be noted the presence of fine sand as temper in 6% of cases. Most of the pottery is well fired, in light colours.

Pottery surface is in a fairly large proportion smoothed, followed by coarse pottery. At a distance from them is a series of other treatment techniques. We refer here to the pottery well smoothed, the ones with polished or smoothed slip and to those with chalky appearance.

Complex C405

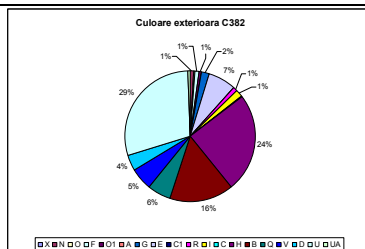
There were identified and analysed 9011 pottery sherds. From this amount semifine pottery detain the biggest value (64%). If for other two complexes situation was to some extent balanced between the two ceramic types- coarse and semifine, now coarse pottery significantly decreases to only 29%. Fine pottery appears in 7% of cases.

In terms of exterior color of ceramics prevail brown (27%), followed by light brown (19%) and tile-coloured (16%). Also it is to be noted here brown with flecks (9%), black-gray and dark brown (each with 6%).

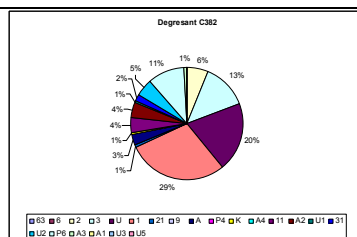
Was used as temper sand (25%), sand and pebbles (20%), large grain sand and pebbles (13%), large grain sand (8%), fine sand and silt (8%), sand and silt (7%) and fine sand (5%). Other types of temper are present as a percentage of under 5%.

Approximately two thirds of the group analyzed is fired in light colours, the rest being divided mostly into ceramic fragments with good firing and good reductant firing. Low-fired sherds are little represented.

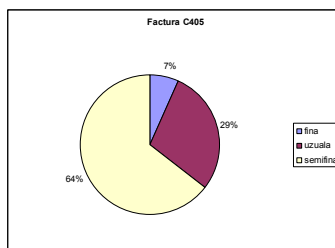
Pottery with coarse and smooth exterior are almost equally represented quantitatively. In addition to these two categories occupy an important place mealy pottery, followed by the well smoothed ones. Other surface treatment techniques are present on less than 100 pieces each and we consider them irrelevant in relation to the 9011 recorded fragments of this complex.



Graphic 5. Percentage analysis of the exterior colour on ceramics in C382



Graphic 6. Percentage analysis of temper in C382

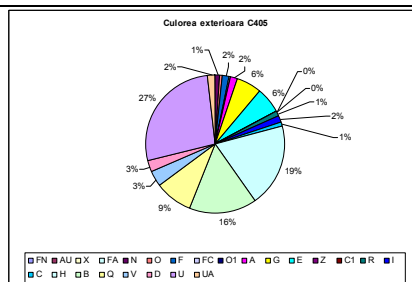


Graphic 7. Percentage analysis of the ceramics in C405

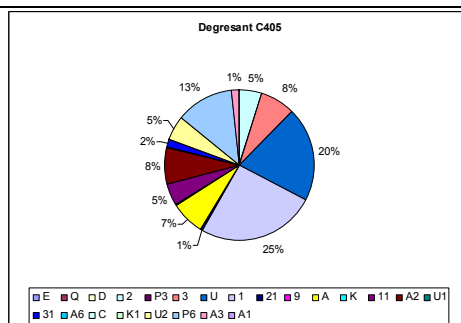
Analysis of the aspects of pottery production technology does not provide relevant data. From first glance we understand that this three complexes belonging to Turdaş culture stand at the edge of the tables because of the large number of fragments compared with the number recorded in Vinča from Miercurea Sibiului-Petriş.

A second observation we make about predominant features on each criterion. Thus, for categories burning and surface treatment, even for color category, in both cases - Turdaş and Vinča complexes, generally we have balanced percentage representation relative to the total number of fragments analyzed per complex.

The only exceptions are black and shades of grey which are rarely found in Turdaş complexes. Analyse of degreaser used in ceramic paste is the only one that gives us two clusters, with clear boundaries. This happens because improving methods of recording data in 2007-2008. Introduction of new codes to describe in more detail degreaser combinations (codes generally consist of letter + number) and when this happens can clearly be read in **Tab. 4**.



Graphic 8. Percentage analysis of the exterior colour on ceramics in C405



Graphic 9. Percentage analysis of temper in C405

Exterior	B8	B15	B22	B18	L14	G73	B4b	L11	B7	G41	G80	G44	B12	B5	B2	L13	G57	G42	L3	G55	G7	C405	C023	C382
N			1																					
U																								
F			1							1		1										1		
N			7							2														
A						1																		
K																								
A		2	3	7				1	2	1			4									1		
U								0																
L		7	2	6	1			3	4				1	2		2			2					
P					3			4					0											
S								1																
M				2	2			1					3			2								
								3																

K				1			2			1			1								
X				1			1			4			1			1			1		
F	3			1			1			1			1			2			3		
A				5			4			8			2						4		
W				1			4			7			1			3			3		
J	1			2			1			2			1			3			1		
N	8			2			7			2			1			8			3		
	7			9			6			7			8			5			0		
O	8			8			2			3			8			5			4		
F	7			2			1			8			3			1			3		
	8			0			7			9			0			5			1		
	4									4						4			1		
F	6									1			9			5			1		
C				1			9			4			8			4			1		
O				1			9			4			8			4			1		
I	1			7						4			4			3			1		
A	1			4			3			2			2			3			6		
				0			7			0			1			1			1		
G	3			2			9			5			4			9			2		
	2			8			4			4			0			1			2		
										5			6			7			8		
E	3			4			4			6			2			8			3		
	8			3			3			7			3			8			6		
Z										1									1		
C										4			3			1			1		
I				7			1			1			2			3			2		
R				7			4			3			2			6			3		
I	1			7			1			1			4			1			5		
				3			0			4			9			8			1		
C				3			1			1			2			3			6		
H	4			2			7			3			6			9			3		
	1			7			6			6			9			5			2		
B	3			1			3			3			6			7			2		
	3			8			6			5			0			4			8		
Q	2			1			4			2			3			7			8		
	8			5			9			5			6			1			4		
V	1			7			1			7			1			3			4		
				2			3			4			8			2			7		
D	1			1			1			6			2			7			9		

U	2	2	7	6	3	3	1	3	1	1	1	1	1	2	3	5	4	2	3	1	2	1	1
	0	1	8	6	6	0	5	1	1	8	8	3	4		6	5		9	1	4	0	2	
							3		7			9							5	3	0	3	
U		2	1				2	1			1	6			9				3	1	4	2	
A																			1	4	0	0	
																				8			

Table 1. Analysis of exterior colour - comparative analysis between Vinča culture and Turdaş culture.

Fi ri ng / C o m p l.	G42	B22	B2	G41	G44	B4b	B8	G80	B5	B18	B15	B7	L11	L3	B12	L14	G7	G73	L13	G57	G55	C405	C023	C382
6	4	1 4 9	4	1 5 4	3 6	5	2	1 1	1 2	4 2	2 1	5	1 7 6	4 6	8 0	5	1		1 8	4 2	7 0	3 2	1 6	5
5	8	2 3 0	5	3 3 2	5 7	9 5	1 3	1 2 9	9 5	9 2	5 8	3 4	5 0 1	2 6	1 0 8	6 0	3	2 4 5	5 1	1 0 2	1 3 8	9 2	1 5 0	6 4
8		4	1	1		4	1	3	3	6	3		2 1		1 1	5			3			2 0	6	3
7		3						1		1	1		6		5			1	1		5	1 5		
2		1 0		9	7	3		8	4 0	1 0	2 5	3 8	6 2 3	2	1 8 9	1 2 1		8	7 5	4 5	6 1	4 5	7 6	1 5
1		3	7	5	3 6	3 6	6	7 5	5 1	8 9	2 4	1 3	1 2 3 3	6	2 1 0	2 2 8	1	2 3 7	1 5 8	3 8	1 0 5	1 6 4 1	3 5 8 5	6 3 5
4		1 1 7		1 2 3	3 4	1 1	3	2 4	2 3	6 1	3 1	3 7	2 1 8	6 2	1 4 5	2 3	2	6	4 0	7 8	5 3	1 8 1 3	7 6 5	7 2 2
3	2	1 2 8	4	1 7 3	3 0	3 1	5	4 8	4 7	9 5	5 2	2 9	5 3 7	4 1	1 5 3	6 3	2	1 8 9	8 9	1 2 7	2 5 0	4 0 5 5	2 1 6 4	

Table 2. Analysis of firing - comparative analysis between Vinča culture and Turdaş culture.

Surfac e treatm ent/ Compl ex	G73	B8	B4b	G41	B22	G80	G42	B2	G44	G57	G55	B5	B18	B15	B12	B7	L13	L11	L14	L3	C382	C023	C405
1	2	1	5	1	1	7	3	4	2	7	1	3	3	1	4	1	1	3		2	1	9	2
	2	0	8	9	4	4			8	8	2	7	2	1	1	5					6		7
	8			3	1						4												
A					4					1			1		5	1		1					

5	1							1							2	1							
B	5 2	1	7	5 7	5 4	2		1 7	5	7	9	5 8	2 6	5 2	3	1	1 3		1 5	5 5	7 6		
I	5 0	3	1 8	1 0 8	8 5	2 1	2	2	1 5	4 4	7 4	3 0	5 2	1 8	1 0 3	1 3	6 5	5 3 0	6 2	8	1 2 6	9 2 7	
9	2																						
D	2	3							2	2	1	4	3 8	1 5	4 7	1	1	2 7	2	2 3		1 4	
8	1		4	1	2	1	1		2										2		1	1 3	
4												1	4	4	5	4			2				3
2	1							1							1	3	4			1		2	
6	1 7 6	5	4 3	2 7 4	2 1 5	8 5	5	8	6 2	1 5	1 9	1 1 7	2 0 2	1 0 3	4 4 2	7 6	2 6	1 8 5	3 4 9	1 0 0	1 4 1	1 7 7	
3	1 6 0	9	3 9	1 5 3	1 2 7	1 1 0	4	5	3 9	1 2 6	2 4 5	5 5	9 8	3 1	1 8 8	4 5	9 0	8 2 1	9 2 0	7 0	1 8 7	1 4 6 8	
F	1							1							1	2	6 1						
C	3							2	6							4	7	1 7			1	1 8 9	6 2 1
7												1	7			1 1			1 1				9 1
K	2																						
E	1 6	1	1 1	5	8	3	2		2	3 1	1 8	9			1		1		3 1 3	5 8 2	1 4 9		
F?	2																					1	
Tabel 3. Analysis of surface treatment - comparative analysis between Vinča culture and Turdaş culture.																							

Table 3. Analysis of surface treatment - comparative analysis between Vinča culture and Turdaş culture.

Temper/ Surface	G42	G41	B7	B22	G44	B18	B12	L3	L13	L11	B15	L14	B5	G80	B2	G73	B8	B4b	G55	G57	C382	C405	C023
4	1																						
P	2																						
5		1																					
Y	4	1	1	5	1														8	1			
		3	2	5	1																		
		5																					
R	1	7	4	1															2	1			
4	9																						

63	2	1	1	4		7													1
	7	1	9																
X		1				1	1												
P		1																1	
5																			
I	1	1				1		1	3									1	
B				1															
4																			
7						1													
W	2	1	3	4	7	7	1	1	2	3	7	3	1	1			2	2	
		0	6	3		7	3	6	6	0		7	6	3			8	0	
		0						2		2									
U							1												
6	3	7	1	4	9	6	9	1	6	3	2	3	6				1	1	1
		5	6	9		4	7	9	0	1	3	2					2	1	
										8									
R	1			1			3		3	3									
				4						3									
M							4		1	2	1								
G							1			2									
F							1			4									
B						2	2	1		1	1						1		
1																			
T						1	4		2	9							1		
H										2									
O										2									
E	1	4		7	1	3	2	2	1	1	2	3		1		2	5	5	4
							3			7									2
R				1													1		
2																			
Q	1																		1
R			2					1									3		
1																			
D	2	1			1	3			7		5					1			4
B			1	1						1		1				2	3		
2																			
E	1															1			1
1																			
N						1			2										1
B									1	2			1						1
2		1	1	1	3	6	7	1	4	4	4	4	6	7	4	2	1	6	1
		4	0	3	2	5	6	4	9	1	6	5	0	8		7	0	2	4
		3		3						5						2		4	6
A																	1		
5																			
C																	1		
1																			
Z					2	2													3
P								1									1		1
3																			
R																	1	1	
3																			
Y																	1	2	

1																										
3	1	4	1	7	3	4	9	1	8	5	3	1	3	3	2	3	4	2	8	4	5	6	3			
		9	9	1	1	5	2	4	0	8	8	4	3	2		4		3	4	0	5	7	2			
										8		9									1	8	3			
U	1	1	3	1	3	1	2	6	1	9	6	1	8	7	8	1	7	3	1	1	8	1	6			
		2	8	4	8	0	7	9	2	9	5	2	0	7		3		6	6	4	5	8	4			
		1		8		2	5		8	5		9			9			4	4	4	2	8				
1	2	9	1	8	2	1	1	2	6	4	3	9	4	8	4	1	5	3	9	5	1	2	3			
		9	0	3	5	2	7	9	8	9	0	0	0	0		3		0	5	5	2	8				
						7	4			9					8					2	7	3				
																				9	1					
21	1										4				3		1		3	1	3	5	6			
															0				1	1	1	9				
9	1																						1	3	3	
A	6		2	1	7	7		4	1	1	1	2	4	2	6	2	5	2			1	6	2			
				2				4	1	1	7							4			2	5	2			
									7													4	7	3		
P																					3					
4																										
K	1		3				1	1												2	2	1				
																					2	2	3			
A	2							4				1	1		3		1	1	4			7				
4												1				0		3			8					
11	4												1		2		1	1	7	9	8					
													7				1		9	7	8					
A	8		2	2	3				1				7	1		2	1	1	6	1	6	2				
2									6						1		6	3	8	8	4					
U																					1		1	2	1	
1																							3		6	1
31													1	1	4		1		4	3	8	1	7			
																			8	4	9	3				
A																					2					
6																										
K																					1					
1																										
U	1				2										2	1		2		9	2	4	2			
2															0				5		7	5	9			
P	1														1		6		3	4	1	6				
6															4		2		8	4	1	8				
																			6	4	1					
																			6	9						
A																			1	1	1	3	1	4		
3																							4	3	5	
V	1										1											1				
																								3		
A																			1		2		3	8		
1																										
Z																			1				8			
1																			1							
U																			1				1			3
3																							6			
U																							2			1

5	7
	2
A	2
9	
J	1
	9
U	2
6	5

Tabel 4. Analysis of temper - comparative analysis between Vinča culture and Turdaş culture.

Rim type/ complex	L14	L13	L11	B12	B18	B15	L3	B5	C382	B22	C023	G73	C405	B4b	G57	G41	G80	G55	G44	B7	B8
15 B		2	4																		
12 G	1		7																		
14 D			1																		
21			1																		
9E			1																		
9D			3																		
12 F	1	3	1										1								
3B			0																		
			9		2	1															
12 D	8	3	4	5	1					1	1		1			1					
6F			8																		
			3	2																	
12 A	3		1	2		1								1							
1P			3																		
			1	1																	
3A			1	1																	
11 D	5	3	3	4	1					4	1				1						
			9																		
1H	1		6							1											
5D	3		1	5	3		1	1		1											
			0																		
16 B				1																	
10 F	1	9	6	3	9	6	3	2		3	3	1	4	3				1			
	0		8	5																	
6A				1	1																
12 E	1	6	3	3	1				2	1	3		6			1					
	4		4																		
4L	3	3	2	1	7	2					1	2	1			1		1			
			1	5																	
6C					4																
6D					1																

8M	2	2	6							1	2								
4K			9	5	9	4		2		1	1								
17	2	2	7	2		1				1	1	2							
B																			
16			7	1						3									
A																			
14	2	1	7	6	5	1	1		1	2	1	5	1		3	1		1	
B	1	0	6						2		5		2						
14			1	1	1	1					1								
C																			
10			2		4			3											
B																			
12			6	2	1	2									1	3			
C																			
9F			2	2	2	2			1							2			
17		1	1	1									1			1			
C																			
15			2										1						
A																			
8F	2		1	3	1	2		1	3		6	1	1						
			8										0						
8L	1		2	1	5	2	1	3	8	1	7	3	1	1		3			
			7	2									1						
2A			3		1			1		1			1			1			
17		2	2	4	1			2		9			1		2		1		
A			0										1						
8D			6	1				1	1		2	1			1	1		1	
11	1	2	2	1	8	4	2	3	4	5	1	8	1	1		3		2	1
B			0	4							3		8						
8N			4						1		3		2						
1G	1		2							2		2	2						
5B				8	2	2	1		2	1	8		8	1					
1J			1		1			1		1			1			1	1		
1L			1	2									3					3	
9A			2		1					1	2		1		1	3		1	
8A			6	1				1	6	2	2	1	1	2		3		1	
													6						
14			5	6	2		1	2	6	5	7	3	1	1	6	6	2	2	1
A													6						
4J							1			1			1						
8E						2	1				1	2	2			1			
4D			3	1	3			5	1	3	5	3	5		2	4	1	4	3
																			4
BD										1		1							
5A			4	2				1	5	2	1	1	2	1		6	1		1
											3		9						
8C						1		1	3		5		3	1		5			
4B											3	2				1			
4P																			
CA																			
FA																			
HD																			

KA	1													
GA	1						1							
10 D	2	1				5		2	1	3				
EC	5				9	1		1						
1M	1		1	2	1	1				1	1			
DB	1			3	5									
12 B	1			1	2		1							
8K	2				2									
AE	3			5	1									
DA	2			3	9									
10 C	1	1	5	3	2	5	1	2	4	8	1	3	1	
EB					4	6								
					7	1								
5C					0									
	3				4	6	1	1		1				
BC	1			4	1									
					2									
17 D					5	1								
					0									
11 A	2	2	1		1	6	1	3	2	7	2	8	1	1
					0	2								
10 E					1	1	1							
EA	1			5	1									
					9									
11 E	4		5	3	1	2	3							
					6									
1E	1													
6J	1													
6K	1													
BB	1				6									
4E	2	2		1	1	1	4				2	2		
4C	1		3	7	8	3	1	2	4	8	1	4	2	
					9									
10 A	1		2	4	4	3	8	2	5	3	1	3	1	
8U	2													
AB	1													
AD	4													
BA	2													
E1	1													
GC	1													
GD	1													
GE	1													
8B	1				1		2							
8G	2				1		1		1					

1C	1					3			1			1
4A	6		2	9	8	1	4	1		6	2	3
9B				1	4	3				1	2	
4F	1	1			4	1	6	1	1	6	1	1
5E					1	1					1	
10				1	5	2		4		1	1	
G												
11	1			2	2	2					3	
F												
10					1	3	1					
H												
11	1	3		3	5	1	4		9	4	1	
C												
2B	2				1	2	1		2	2		
9C	1			1		1	3		1			
13	1							1				
B												
4G	1							1	1	1		
1D	2							2		1	1	
4H	2							2		1	1	
13								2				
C												
4M								1				
13					1		1		1			
D												
4N				1	1					3		
2C						1		1		1		1
1S					1		1		3			
1R					1						1	1
13								1		1		1
E												
13								1				
H												
1A								1		1		
13										1		
F												
16										1		
C												
6H										1		
GB										1		

Tabel 5. Analysis of rim types - comparative analysis between Vinča culture and Turdaş culture.

Tabel 5. Analysis of rim types - comparative analysis between Vinča culture and Turdaş culture.

Base type/ Complex	B18	L13	G57	L11	B7	B12	B15	L3	G41	G55	L14	B5	B22	G44	G73	B4b	G80	B8	C382	C405	C023
-----------------------	-----	-----	-----	-----	----	-----	-----	----	-----	-----	-----	----	-----	-----	-----	-----	-----	----	------	------	------

4F	2																																											
4G	1																																											
4D	3													2		1																												
J2	2							2												1																								
H4					1							1																																
H2	1							1												1																								
4B						1																																						
6B						1																																						
J1	1							7		1												3																						
4A											1																																	
7A											1																																	
H1						2		2							1																													
A8	2		1					1		1		2		1		1		6		1		4		2		4					1													
3H						1													2																									
G1	1						2		3							1		1		2		1		1		1			2															
3D									1												2																							
G3	1					2		3		4								2							1		1					1												
GA											1																																	
E4											1																																	
6A											1													1																				
G4	3							8		4							1		1							1		1		2		1												
G2											1			1							2							1		1														
C5	9		2		1		3		1		1		3		2		2		4		9		3		5		1		3		4		1		1		4							
E3						1		2								1		1		2							3		1		1		1		1									
A2	6		2		2		4		1		1		4					5		1		5		3		7		1		1					3		1		8					
5J											1																																	
A1						8		2								1		1			4					1		2					6											
A4	4		3		5		3		1		1		2		8					1		9		4			5		1		4		5		2		1		2		3		4	
A5						1		2								2		3		4							2		4		2		5		2					2		3		
C1											3								1		4		3							1		1		4										
A7	1		2								1		1		3		2							3		2		7			1		1		2		5							
C2						1		1							1												1		1		1													
C6																			2							4		1					2											
C3	5		3		3		3		4		1			5							2		7		5		1		1		4		2					1		3		9		
E5						1													1						1					1														
F7						3													1													1		2										
C4											2													1			1					2												
5B																			1		1												1											
E1											2													3		1		1					4											

H3				1		1												1	1		
F3	1			1		2	2	2	3	1	5	3			1	1	2	1	7	2	8
				8																2	
A3	1	4	1	6	2	2	4	2	8	6	1	5	8	2	4	4	2	2	1	1	5
	0			9		5					8							2	3	3	7
																			9		
A6			3						1	6		5	3		1	3	3	1	5	3	5
															0					4	
F1	2			4		4	3					1	3						1	4	6
																			0	1	
F5									1			1	2			1			1	5	5
F2				1		4			5	5	6	1	1	2	2		2		7	9	2
				1															7	4	
F4	1		2	1				1	3			2	4	3	2	1			5	4	1
																				3	5
F6					2							1	1						2	4	7
E2			1										1	1		1				2	4
																				4	
EJ																					
																			1	3	
5A																				3	
5E																				1	
AA																				1	
BB																				1	
EI																				3	
GF																				1	
ED																				1	1
																				0	
AD																			3	2	2
Ei																			2		1
EA																				1	3
																				0	
EG																			3	6	4
AE																			3	2	1
																				5	1
EE																			2	1	6
																				1	
AB																			3	2	1
																				7	4
EC																			2	9	1
																					0
EF																				3	3
EB																				5	9
FA																					1
FB																					1
FC																					1
FD																					1
Tabel 6. Analysis of base types - comparative analysis between Vinča culture and Turdaş culture.																					

Tabel 6. Analysis of base types - comparative analysis between Vinča culture and Turdaş culture.

Decorative techniques / Complex	B5	B18	G73	B15	B8	B2	G57	B22	B7	G41	L3	G80	B12	G44	L11	G55	L14	B4b	L13	C405	C023	C382
A2	2									1												
WD				1																		
O							1															
K	1	1	2	1	1	1	1	2	1	1	4	9	1		4	1	3	7	1	1		
	2	4	8	1				2	5	7			0		2	3						
A1	3	9	6					2	6	1	3	1			9	2	1	2		1		
													0									
T		1	1					1		4			1	1	1	1		1				
B		1						4	1	1			6		1							
M										2			1	1								
J	1	1	3					6		4			5	1	2		2					
															2							
C															1							
A															4	1						
W		3		3		1	3	4	2	2	1	2	8	3	4	1	5	2	2	3	4	1
															8	3						
G	2	2	3					2		8	1	1	6	1	2	1	3	2	4	7	1	1
															3							
F			1	1				2		2			2	1	3		1		1	1	1	1
0	5	1	7	4	1	1	5	9	3	2	3	3	1	1	1	1	1	1	7	5	4	
		1								1			1		0	1	5			2		
															4							
P				1									3		1						1	
A3	2		6					2	1			4		2		1		1		9	2	
I								1					2		1							1
Y													1		5				1	2	2	
D			1	1			3	8		5	1	1	6		1	4	2	4	1	8	1	6
															2					0	5	
1																				4		
Q															1	1				1	7	
Q?																				1	3	3
D1																						1

Table 7. Analysis of decorative techniques - comparative analysis between Vinča culture and Turdaş culture.

Types of ornaments / Complex	L13	L14	B5	B18	B15	C382	B12	B4b	L11	G80	B8	L3	G44	B22	G41	G73	B7	G55	G57	C023	C405
H4		1																			
B5			1																		
G13			1																		

M3	1											
F5	1											
P34	1											
A7	1		1									
P39	1											
A2	2		1		3		1					
P29	1								1			
P36	1										1	
B6					1							
C8					1							
G8					2							
M9					1							
P37					1							
P38					1							
C1	1						1		2			
P4	5		2						1		2	
E4					1		1		1			
G11	1						1		5			
D9					2		3					
G3					1		1					
P16							5					
A6							1					
C10							1					
C22							1					
C27							1					
D4							1					
D8							1					
G6							1					
L1							1					
P61							2					
P62							1					
P64							2					
P65							4					
P66							4					
P67							3					
P68							1					
P69							2					
P10	4		3						6		1	
G2	1						1		1		2	
P1	1		1		1		2		1		1	
F4	1		1		3		5		2		3	
B1	2						2		1		1	

[illegible]

P3					3	1			
A3	1	2	2	2	2	4	2	2	2
A4					1	1	1		
A14					1	2			
P47	1					1	1		
A18					1	3			
P44					1	1	2		
A9					1				
F17					2				
P27	1					1			
P7	1				2	1			
F13					1				
K2					1				
E6					2		1		
L4					1				
P15					1				
P18					2				
P6					1				
M4	1				1	2	7	2	1
F3	1				2	2	1	1	1
E1	1	5					3		
H2	2				1	1			
M7					1	2			
C7					1	1			2
AM					1				
AN					1				
CG					1				
Ci					2				
P54					1				
PN					1				
AB					2				1
CK					1				1
AG					1				2
AH					1				2
AE					1				
AL					1				
CB					1				
CF					1				
CJ					1				
CL					1				
CM					2				
CN					1				

CQ	1
CR	1
CS	2
CT	1
CU	1
CV	1
CW	1
CX	1
CY	1
DC	1
E5	1
GB	1
P24	1
PF	1
PG	1
PR	1
PS	1
Tabel 8. Analysis of ornaments - comparative analysis between Vinča culture and Turdaş culture.	

Typological analysis

As already mentioned, as a starting point in our analysis we used Vinča culture typological catalogs (codes are a combination of letters with numbers or numbers with letters) to which were added new types, Turdaş types, during our analysis. These latter codes are in the form of combinations of letters.

Comparative analysis of rim types (**Tab. 5**) is the only one that gives us the opportunity to see the three Turdaş complexes in the middle of the table and not on the edge of it, as in all other cases. We must not forget that the C382 complex analysis, the one that connects these three complexes with Vinča ones from the middle of the table is still in progress. Until this process completes we can not draw firm and final conclusions and this situation could change at any time.

Analysis of the bases (**Tab. 6**) takes them out at the edge of table. These three are linked together mainly by types of series F and type AB and AE (bottom types with different degrees of bending outwards) and type EC, EE and EG (circular bases).

Tab. 7 includes an analyse of techniques of ornamentation. Strongest link between complexes is given by techniques with codes W, G, 0 and D, respectively alveolar ornaments, stitches, incision and stitches with incision. By analyzing the types of ornaments (**Tab. 8**) note that only one type of ornament was found in complex C382. Of course, this is due to the current state of processing ceramic material from this complex. The other two complexes, located on the edge of the table, confirms ornamentation techniques in **Tab. 7** and indicate presence of ornaments on bases (code consisting of letter A combined with other letters).

Although our study is based on a very small number of Turdaş complexes (only three) the amount of ceramic material analyzed (nearly 17,000 sherds) we believe that entitles us to some preliminary conclusions, not surprising though. Turdaş ceramic production technology compared to the Vinča leads to pots in bright colors, reddish, finished with less care. Vessel surface treatment techniques are generally limited to smoothing, many pottery shards remain harsh and surface treatment technologies of Vinča culture seems to be forgotten (we refer here to burnished pottery or burnished slip). From a typological point of view **Tab. 5, 6 and 8** clearly shows the common elements of the two cultures and especially the elements that differentiate them.

In conclusion we would like to draw attention to the fact that from the total amount of ceramic fragments came from the site at Turdaş-*Luncă*, campaign 2011, have been analyzed so far about 27,000 sherds, a fraction of the total ceramic material stored for processing at the Brukenthal National Museum and we consider all the data presented here rather preliminary, pending further qualitative and quantitative analysis for the entire site.

BIBLIOGRAPHY

LAZAROVICI 1998	Lazarovici Gheorghe, <i>Metode și tehnici moderne de cercetare în arheologie</i> , Cluj-Napoca (1998).
LAZAROVICI, MICLE 2001	Lazarovici Gheorghe, Micle Dorel, <i>Introducere în arheologia informatizată</i> , Timișoara (2001).
LUCA <i>et al.</i> 2004	Luca Sabin Adrian, Georgescu Adrian, Diaconescu Dragoș, Suci Cosmin, <i>Miercurea Sibiului-Petriș</i> . În <i>CCA. Campania 2003</i> , nr. 124. http://www.cimec.ro/Arheologie/cronicaCA2004/cd/index.htm
LUCA <i>et al.</i> 2005	Luca Sabin Adrian, Suci Cosmin, Georgescu Adrian, Diaconescu Dragoș, <i>Miercurea Sibiului-Petriș</i> . În <i>CCA. Campania 2004</i> , nr. 151. http://www.cimec.ro/Arheologie/cronicaCA2005/cd/index.htm
LUCA <i>et al.</i> 2006a	Luca Sabin Adrian, Diaconescu Dragoș, Georgescu Adrian, Suci Cosmin, <i>Cercetările arheologice de la Miercurea Sibiului-Petriș (jud. Sibiu). Campaniile anilor 1997-2005</i> . În <i>Brukenthal AM</i> 1.1, (2006), p. 9-21.
LUCA <i>et al.</i> 2006b	Luca Sabin Adrian, Biagi Paolo, Spataro Micaela, Diaconescu Dragoș, Georgescu Adrian, Suci Cosmin, El Susi Georgeta, Beldiman Corneliu, <i>Miercurea Sibiului-Petriș</i> . În <i>CCA. Campania 2005</i> , nr. 117. http://www.cimec.ro/Arheologie/arheologie-cercetari.htm
LUCA <i>et al.</i> 2007	Luca Sabin Adrian, Beldiman Corneliu, Biagi Paolo, Ciută Beatrice, Ciută Marius, Diaconescu Dragoș, Georgescu Adrian, Spataro Micaela, Suci Cosmin, <i>Miercurea Sibiului-Petriș</i> . În <i>CCA. Campania 2006</i> (2007), p. 233-236.
LUCA <i>et al.</i> 2008	Luca Sabin Adrian, Beldiman Corneliu, Biagi Paolo, Ciută Beatrice, Ciută Marius, Diaconescu Dragoș, Georgescu Adrian, El Susi Georgeta, Spataro Micaela, Suci Cosmin, <i>Miercurea Sibiului-Petriș</i> . În <i>CCA. Campania 2007</i> (2008), p. 199-200.
LUCA <i>et al.</i> 2009	Luca Sabin Adrian, Beldiman C.- Ciută B.-Ciută M.- Diaconescu D.-Georgescu A.- Natea Gh.- Nițu F.- Șeulean A.- Dumitrescu F.- Suci C.- El Susi G.- Tincu S., <i>Miercurea Sibiului-Petriș</i> . În <i>CCA. Campania 2008</i> (2009), p. 147-149.
LUCA <i>et al.</i> 2010	Luca Sabin Adrian, Beldiman Corneliu, Ciută Beatrice, Diaconescu Ddragoș, Georgescu Adrian, Teodorescu Raluca, Natea Gheorghe, Nițu Florina, Șeulean Anamaria, Dumitrescu Florian, Rusu Aurelian, Suci Cosmin, El Susi Georgeta, Tincu Sorin, <i>Miercurea Sibiului-Petriș</i> . În <i>CCA. Campania 2009</i> (2010), p. 124-126.
LUCA <i>et al.</i>	Luca Sabin Adrian, Corneliu Beldiman, Dragoș Diaconescu,

2011	Florian Dumitrescu, Gheorghe Natea, Florina Nițu, Anamaria Tudorie, Georgeta El Susi, Aurelian Rusu, Cosmin Suciu, <i>Miercurea Sibiului, jud. Sibiu. Punct Petriș. În CCA. Campania 2010</i> (2011), p. 87-89.
Luca <i>et al.</i> 2012	Sabin Adrian Luca, Florian Dumitrescu, Gheorghe Natea, Florina Maria Nițu, Raluca Teodorescu, Vasile Palaghie, Anamaria Șeulean, Corneliu Beldiman, Mihai Castaian, Victor Sava, Cosmin Suciu, Sorin Tincu – “Turdaș – Luncă”. În <i>Cronica Cercetărilor Arheologice din România. Campania din anul 2011</i> , p. 292-293 , București, 2012.
NIȚU 2008	Florina Nițu, <i>Cataloage tipologice privind cultura Vinča, faza timpurie. În Corviniana XII</i> (2008), p. 29-54.
NIȚU 2012	Florina Nițu, <i>Aspecte tehnogice privind ceramica culturii Vinča din Transilvania</i> , Sibiu (2012). Teză de doctorat- manuscris.
SUCIU 2009	Cosmin Suciu, <i>Cultura Vinča în Transilvania. În BB XLIV</i> , Sibiu (2009).

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FACULTY OF HISTORY AND PATRIMONY
INSTITUTE FOR THE STUDY AND VALORIFICATION OF THE
TRANSYLVANIAN PATRIMONY IN EUROPEAN CONTEXT**

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Sibiu, 2012

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**ANIMAL REMAINS FROM THE LEVELS
II/ III (LUMEA NOUĂ) AND III (PETREȘTI)
FROM MIERCUREA SIBIULUI-PETRIȘ (SIBIU COUNTY)**

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Keywords: *Lumea Nouă, Petrești Culture, Miercurea Sibiului, faunal remains, age profiles.*

Rezumat. Resturile de faună atribuite nivelului II/III (Lumea Nouă), au fost colectate din complexele G. 41 (138 oase) și G. 44 (42 oase). În primul complex, predomină ovicaprinele cu 38,71%, fiind urmate de vită cu 37,96%, porc cu 14,52%. Speciile sălbatice însumează doar 90,32% (pe resturi), cerbul este notat cu 4,03%, urmat de căprior cu 3,22%. Bourul, mistrețul și iepurele au câte un rest (0,81%). Ca număr minim de indivizi, se modifică un pic situația, ponderea speciilor sălbatice este de cam 30%, cerbul și căpriorul au câte 8,33%, celelalte cam 4%. Dintre mamifere domestice, ovicaprinele prevalează cu 29,17%, vita și porcul având cam 20,83% fiecare. Ceea ce credem că merită subliniat este un fragment dintr-un corn de bour, plasat pe fundul complexului. **Complexul G. 44** a furnizat 34 resturi animaliere dintre care, 23 fragmente (67,63%) provin de la vită, 7 de la ovicaprine (20,59%) și două de la porc (5,88%). Un rest de iepure și unul de la un căprior completează eșantionul speciilor vânat. Precizăm că pe fundul complexului s-a găsit un craniu de vită (fig. 8), așezat pe fața dorsală, cu cea ventrală în sus. Potrivit datelor metrice ar fi vorba de un craniu de mascul domestic. **Nivelul III**, atribuit culturii Petrești a furnizat 298 resturi menajere, colectate din trei locuințe (L1-3). conform frecvențelor pe resturi și indivizi putem creiona unele trăsături ale economiei animaliere a comunității petreștene. În primul rând taxonii identificați nu epuizează lista resurselor animale utilizate în consum. De pildă, nu există resturi de moluște, pești, păsări, ce făceau obiectul unor activități sezoniere de consum. Ele sunt identificate în celelalte nivele (mai bogate în oase), deci aceste resurse se găseau în mediul înconjurător al sitului. Se practica în schimb vânătoarea sistematică a cervidelor, bourului și mistrețului. Cota acesteia este de 21% pe resturi și 34,6% pe indivizi. Dacă facem raportul între grupa mamiferelor ce reclamau un biotop ceva mai deschis, uscat, adică bour, căprior și grupa mamiferelor tipice unei zone mai împădurite (cerb) constatăm o ușoară predominanță a primei grupe. Adică bourul+căpriorul însumează 9,6% față de 8,8% (cerb). Ca număr de indivizi diferențele sunt substanțiale, prima grupă reprezintă cam 21% față de numai 7,7% cerb. Acest decalaj ar putea sugera niște alterări de peisaj, defrișări marcate, chiar o retragere a cerbului mai spre

altitudine; menționăm că lipsa unor frontale cu coarne (resturi de craniu există în material) ar sugera vânărea sa, cu predilecție în sezonul cald, poate în cursul unor incursiuni vânătoarești. O privire de ansamblu asupra vârstei animalelor vâdate indică o situație neobișnuită: la cerb 75% din animalele prinse sunt tinere și subadulte și doar un sfert adulte. Un procent de 40% se înregistrează și la căprior, în schimb, la bour doar 16.7% sunt animale tinere. Avem de-a face cu procente mari de animale imature corporal vâdate, ceea ce implică o vânăre intensă, fără nici o grijă pentru conservarea genofondului cinegetic, probabil nevoi alimentare vor fi determinat acest comportament. Componenta domestică include gospodărirea bovinelor, cu o pondere de 55,94% pe resturi (NISP) și 32,69% pe număr minim indivizi (MNI). Procentajul mult mai mic ca MNI se datorează în primul rând slabei reprezentării a dentiției, estimările vârstelor de sacrificare și, implicit a MNI făcându-se pe sutura oaselor lungi. Se pare că ambientul favoriza creșterea lor, la fel ca și în nivelurile anterioare.

The article puts forward faunal related-data from levels II/ III (Lumea Nouă group) and III (Petrești culture) at Miercurea Sibiului-Petriș. I think it is necessary to publish them, despite their insufficiency, at least to enrich the database for both cultures, and to ensure a continuity in the presentation of faunal information about the site. The samples refer to 180 remains from Lumea Nouă context and 298 fragments from petrești Level, their presentation should provide a bit of information about economic practices, livestock and hunting in these times.

Level II/ III (Lumea Nouă Group)

"Materials Vinča B1, with elements of Lumea Nouă Group, painted pottery (parallel/ after Vinča B1, certainly before the Vinča C) were found" in 2007's campaign (Suciu 2009, p. 88). The two pits belonging, G. 41 and G. 44 are particularly important because "a preliminary analysis of ceramics from these structures and the discovery of a broken vessel with paint typical of Lumea Nouă Group in G. 44 demonstrate the existence of another stratigraphical unit in the site. It was noted as level II/ III, also containing deepened housing" (Luca et alii 2008). **G. 41** provided 138 waste from four domestic and five wild taxa (Table 1). Statistics display the prevalence of small ruminants by 38.71%, followed by cattle with 37.96% and pig with 14.52%. Wild mammals make only 90.32% (as fragments) among them red deer with 4.03% and roe deer with 3.22%. Aurochs, wild boar and hare have a fragment every one (0.81%). As a minimum number of individuals, statistics little change. The share of the game is about 30%, among them the red deer and roe deer total 8.33% each one, and 4% the aurochs, hare and wild boar. In the domestic segment, sheep/goat prevails by 29.17%, cattle and pig by 20.83% each other. What is worth noting is a horn from bull, settled on the bottom of the complex (Fig. 7).

Table 1. Distribution of bones in pits (level II/III).

Pits	G. 41				G. 44			
Taxa	NI SP	%	M NI	%	NISP	%	MNI	%
Bos taurus	46	37.9 6	5	20.8 3	23	67.65	3	33.33
Ovis/Capra	48	38.7 1	7	29.1 7	7	20.59	3	33.33
Sus s. domesticus	18	14.5 2	5	20.8 3	2	5.88	1	11.11
Domestic taxa	112	90.3 2	17	70.8 3	32	94.12	7	77.77
Cervus elaphus	5	4.03	2	8.33				
Bos primigenius	1	0.81	1	4.17				
Capreolus c.	4	3.22	2	8.33	1	2.94	1	11.11
Lepus sp.	1	0.81	1	4.17	1	2.94	1	11.11
Sus s. ferrus	1	0.81	1	4.17				
Wild taxa	12	9.68	7	29.1 7	2	5.88	2	22.22
Identified	124	100	24		34	100	9	100
Unidentified	14				7			
Aves					1			
TOTAL	138				42			

The piece was not removed even from the base, measuring 335 mm along the great curvature. Completely it should not exceeded 345-350 mm judging by degree of bending. The diameter of the base, on the preserved part is 96 mm. Small diameter could be around 70(72) mm. Unfortunately the piece is damaged without being able to measure the circumference. According to the data, the horn core originates in a mature female, the rough walls, with deep grooves confirming the assessment to the stage. Three splinters from small-sized animals and five from large ones were also collected on the bottom of the pit: an axis of immature sheep, a rib and proximal radius from pig. It is impossible to relate them to the deposit of the horn (if it's a deposit, the more the piece is fragmentary). The remaining bones recovered from the pit filler is distributed to at least 24 individuals from nine taxa; the distribution by skeletal parts (Table 2, Fig. 1) did not reveal anatomical connections, any particular sequence of deposition, but rather a heterogeneous and discontinuous distribution of the elements. It seems that it is rather a waste pit, at least in its late stages of filling. Of 124 identifiable bones about one third is derived from fleshy parts of the body, about 27% are ribs + vertebrae, about 20% remnants of skull +

teeth and 20% from distal parts of limbs (metapodii, phalanges). The number of presumed specimens is quite large, about 24, forasmuch the bones were collected from various depths. Specifically the 46 cattle bones come from at least five individuals: two animals under 24 months (one

Table 2. Distribution of skeletal elements in G₄₁.

	Cattle	Ovic.	Pig	Red deer	Roedeer	Aurochs	Hare	Boar	Total
Skull+horn cores	1	5	1			1			8
Maxilla+teeth	2		1	1					4
Mandibula+teeth	2	8	3						13
Scapula	3	3			1				7
Humerus	4	1	1						6
Radius	2	2	2		1		1		8
Ulna	2	2	1					1	6
Metacarpus	1	2		1					4
Ossa metacarpii	1								1
Pelvis			1						1
Femur	3	2	1						6
Tibia	3	2	1						6
Astragalus	1								1
Calcaneus	3	1							4
Metatarsus	3	6		1	1				11
Metapodials	2								2
Phalanges	2								2
Ribs	8	10	6	2	1				27
Vertebra	3	4							7
Total	46	48	18	5	4	1	1	1	124

in 12-15 months), one 2-3 years old and two over 2-3 years. Ovicaprids provided 48 waste from seven animals of which three up to one year (less than one month,

2-3 months, 6-8 months), an individual of 18-24 months, another of 20-26 months, one of 5-6 years and the last in 4-5 years. At least five pigs were presumed, an animal killed at 4-6 months, another between 14-16 months, one in 12 months, a male over 30 months and another one over 12 months. Red deer bones originate from one subadult (12-18 months) and an adult. Roe deer remains come from a specimen killed in 13-15 months and another over 15-16 months. One specimen of aurochs, hare and wild boar complete the list of wild taxa. **G. 44** provided 34 waste of which 23 fragments (67.63%) come from cattle, 7 from ovicaprids (20.59%) and 2 from pig (5.88%). Two bones from and roe deer complete the list. It should be noted a cattle skull (Fig. 8) found on the bottom of the complex, ventral side up. The partial skull includes the frontal bone with attached cores, nasal parts and a half of right maxilla (the

Table 3. Distribution of skeletal elements in G₄₄.

	Cattle	Ovic.	Pig	Roe deer	Hare	Total
Skull+horn cores	2		1			3
Mandibula+teeth	1	2				3
Scapula	1					1
Humerus	2	1				3
Radius	2					2
Ulna	1					1
Metacarpus		1		1		2
Ossa metacarpii	1					1
Pelvis	1					1
Femur	2					2
Tibia	2					2
Astragalus	1	1				2
Metatarsus		1				1
Metapodials	2	1			1	4
Phalanges	3					3
Ribs	1		1			2
Vertebra	1					1
Total	23	7	2	1	1	34

premolar region). The preserved maxillary fragment fell over the skull. The skull lacks left maxilla, the nasal part and lower face. Do not rule out the possibility that it have been removed during the initial preparation of the cranium. The ends of the horn cores didn't preserve. It seems the ventral part of the specimen has been cropped at the boundary between neurocranium and viscerocranium. P4 just erupted, the animal being 3.5-4 years old. The length on outer curvature is 195 mm, on the whole it would not exceed 235 mm. Base diameters/circumference are 65.5/48.1/ 191 mm. The shape index is 73.43 suggesting an elliptical cross section. Intercornual ridge is concave, the horn cores go sideways, slightly arched. Interfrontal suture is open, maximum frontal breadth (at orbits) is 210 mm, the least frontal breadth - 175 mm, the breadth between base of cores - 130 mm. The skull appears narrow and long. Grooving is little developed because that individual was killed a little over 3.5 years. We know that in three years they are missing, being well developed in animals over 7-8 years (Sykes, Symmons 2007, p. 519). According to metric evaluations the skull originates from domestic male. A distal femur from an animal slaughtered shortly after 3.5 (distal suture visible) (Udrescu, Bejenaru, Hriscu 1999, tab. 5.7) was taken from the same depth with the skull. Might be the same specimen with the skull. Other bones within pit were gathered from different depths. They belong to tree cattle: one specimen slaughtered in 15-18 months (not fused proximal phalanx II), another one around 3.5-4 years and an elderly ($M_3 - j$ cf. MWS according Grant 1982). The seven bones of ovicaprids (20.59%) allocate to a specimen 10 months old, another one 24-30 months (sheep) and a goat that exceed one year. A fragment of skull and a rib come from a pig. Two metapodial splinters from roe deer and hare complete the sample from the pit. Distribution of bone according to anatomical criteria (Table 3, Fig. 2) shows mainly elements from distal parts of limbs (metapodii, phalanges) and the skull+ jaws (fewer). Practically all body regions are present, however the elements are disparate and distributed at random, therefore is talking about a garbage pit. Based on distribution of bones in pits it cannot define clear traits of animal breeding, because of partial contradictory data. For example, ovicaprids dominate, followed by cattle and pigs in the first complex; the order is changed in the second: cattle, ovicaprids and pig. So interspecific reports are not clearly defined. That is important is the presence of cattle skull in G. 44, suggesting a ritual action. One might clarify some issues when the archaeologists publish the archaeological contexts. Possible we've got to do with a deposition context in the first pit as well.

Level III includes findings assigned to Petrești Culture- phase AB (Luca et alii 2006, p. 15), in terms of architecture it is represented by dwellings with clay platform. Platforms have been partly preserved because agricultural work and the relatively small depth at which to store them. The 298 mammal bones were collected from three dwellings (structures) noted by S.1, 2, 3. Structure no. 1, identified in the surface S. I/2001-2002 provided 51 bone fragments of mammals of which 35 are determined to taxon. 18 of them come from three individuals, one killed in 12-18 months, another at 2-2.5 years and the third at 7-9 years. The five

pork splinters have their origin in a subadult animal. Hunted species are represented by 5 red deer bones (an immature individual), 4 bones from aurochs (two adults, one subadult), 2 bones from wild boar (possibly adult) and a bone from an adult roe deer. Structure no. 2, with a floor of 4.30 x 2 m was identified in the SE corner of S. III/2005-2006. Destruction of the median part of this complex was due to compaction ends of the floor, over two deepened complex located underneath which produced fracture midpoint of the structure, the top of this fracture was subsequently affected by modern agricultural work (Luca et alii 2008). From this context we determined 118 bones, of which more than half (67 fragments) come from eight cattle slaughtered at 6-8 months, 18-24 months, 2.5 to 3 years, 3-4 years (two), 4-5 years and above this limit (two mature). The 17 bones from small ruminants come from three animals slaughtered between 1-2 years (12-14 months, 21-23 months), one of 2-2.5 years and one over four years. Four pig bones come from an animal slaughtered under 12 months and another above this limit. A humerus with inflammation probably caused by knock when lived originates in a dog. 17 pieces belong to wild species, six of which come from a sub-adult and mature aurochs. The five red deer remains come from an animal 18-24 months old and another of 2-3 years. Boar is noted by four remains from a female reaching the adult stage. Two bones of an adult roe deer were determined. Structure 3 was better preserved than the first two and it was investigated during campaign 2006. According archaeological data, the platform was built on a massive wooden structure with split beams top of them was pasted a thick clay, over 0.10 m. Unfortunately, the platform was disturbed by some improvement of the La Tène epoch as well. This complex has provided 129 faunal remains, of which about half belong to cattle. The 61 remains derived from animals slaughtered under 12-15 months, 12-18 months, 2-4 years (two), and over 4-5 years (two). Pig totals 17 remains and small ruminants only 15 bones. Pig remains are distributed to a suckling pig and three specimens over 12 months (one is about 3 years). The 15 bones are assigned to four specimens of ovicaprids slaughtered under a year, at 5-6 months (one), between 21-24 months (two) and between 2-3 years (one). There are bones from at least one she-goat and two sheep. A fragmented ulna was assigned to dog. Of the 26 bones of wild animals, half come from two red deer hunted in 2-2.5 years. The seven remains of roe deer illustrate unequal all body regions. It should be noted a front with attached antlers, belonging to a male hunted to 12-15 months, probably captured in April-June. Another one exceeded two years. Five bones from aurochs suggest a mature animal. A wild boar calcaneus may come from an exemplar three years older. 37 unidentified bones derived from listed taxa. According to statistics (Table 4, Fig. 4) one

Table 4. Distribution of remains in dwellings.

Dwelling	L1	L2	L3	Total	%	MNI	%
Bos taurus	18	67	61	146	55.94	17	32.69

Ovis/Capra		17	15	32	12.26	8	15.38
Sus s. domesticus	5	4	17	26	9.96	7	13.46
Canis familiaris		1	1	2	0.77	2	3.85
Domestic taxa	23	89	94	206	78.93	34	65.38
Cervus elaphus	5	5	13	23	8.81	4	7.69
Bos primigenius	4	6	5	15	5.75	6	11.54
Capreolus c.	1	2	7	10	3.83	5	9.61
Sus s. ferrus	2	4	1	7	2.68	3	5.77
Wild taxa	12	17	26	55	21.07	18	34.61
Identified	35	106	120	261	100	52	100
Unidentified	16	12	9	37			
TOTAL	51	118	129	298			

might suggests some data on animal exploitation in the community Petrești from Miercurea Sibiului-Petriș. First of all, the presumed species taxa do not exhaust the list of animals used in consumption and other purposes. For instance remains of molluscs, fish, birds, which were the subject of seasonal consumption activities, have not been identified. They were barely found in earlier levels (richest as number of bones), accordingly those resources there were in the site surroundings. It will be practiced consistent deer, wild boar and auroch hunting instead. Share game is 21% as waste and 34.6% as individuals. Relationship between the mammalian group with requirements for an opened-dry habitat (roe deer, aurochs) and those of woodland (red deer) suggests a slight predominance of first group. The grouping of aurochs and roe deer makes 9.6% versus 8.8%- red deer. In terms of numbers of individuals, the differences are substantial, the first group represents about 21% compared to only 7.7%- red deer. This difference might suggest some alterations in the landscape, marked deforestation, even a withdrawal of red deer to higher altitudes. To note the lack of red deer antlers on pedicle (although there are skull remains in sample), suggesting its hunting, mainly in summer, perhaps in the course of some forays. A glimpse on age profiles (Fig. 6) stresses a particular situation: if red deer 75% of the specimens are young and and only one quarter sub-adult. About 40% is the quota of sub-adults in case of roe deer and only 16.7% in aurochs. We therefore deal with large percentages of immature animals, which involves hunting without any concern for wildlife conservation, probably food needs determined this behavior.

Domestic segment is mainly focused on cattle management, reaching 55.94% as NISP (fragments) and 32.69% as MNI (specimens). It seems their exploitation should have been facilitated by environmental conditions, little changed versus earlier periods, given that many cattle are slaughtered for meat. For example in settlements Vinča A2-3, A3, B1, their percentage is around 59% of the waste. (El Susi 2011, p. 24). The small taxa (sheep, goats and pigs) reach low

percentages. For example, small ruminants are quoted by 12.26% as NISP and 15.38% as MNI, and pigs by 9.9% -13.4%. Age profile of cattle shows a rate of 17.65% up to one year, few culling between 1-2 years (about 11%), and a rate of 35.3% between 2-4 years and as much over four years (Fig. 5). Overall, the share of juveniles and sub-adults is 64.7% pointing the prevalent use of beef as main protein source. There are many slaughterings between 2-4 years (especially males) and few of calves. It seems this "strategy" linked to good environmental conditions favored an increased percent of species. Since we refer to cattle bones from only three complex one cannot generalize. Labor and dairy products it will be also exploited, as suggested by advanced mature specimens. For sheep and goats it should be noted fewer animals up to one year (11%), a maximum between 1-2 years, almost 56%, 22% between 2-4 years and 11% over the limit. Accordingly, the small ruminants were slaughtered in large numbers as sub-adults (for mutton), less importance was given for dairying. The same majority of immature specimens is characteristic in pig culling, 85.7% were killed below two years. Under biometric report, not much to say. Unfortunately no complete bones, so there are several considerations on the waist of animals in the habitation. As for cattle, the bone width measurements suggest robust individuals yet, it seems that there weren't produced significant changes of conformation, compared to previous epochs (El Susi 2011, p. 30-31). Most data derived from males, some of them are closed to the lower limit of aurochs: for example, a proximal radius with BFP/ Dp of 83/ 45 mm, or a distal metacarpus with Bd/ Dd of 69.4/ 33.5 mm and a lower M3 with GL of 39.3 mm, etc.. We wonder whether lest some pieces assigned to aurochs (a tibia with Bd/ Dd of 74.5/ 55.4 mm and a talus with 51.8 mm /BD) could come from a domestic bull. The two fragmentary horns belong to a female and a male as with metric data. Lot of ovicaprids does not provide sufficient information for biometric characterization, noting only that there is a goat's horn type "aegagrus" (sword form). Although Petrești sample is small, I thought it was appropriate to publish it, in the absence of adequate data base on animal exploitation in settlements of this culture. About size and body conformation of mammals exploited by Petrești communities in Transylvania there a few bit of information. For example in Zau de Câmpie and Tărtăria (Bindea 2008, 70-74), quite contemporary robust and enough high cattle were reported. The sample from Zau de Câmpie provided some height at the withers: 120.9 cm for females and 129-137 cm for males (Bindea 2008, 137). Unfortunately, metric data are insufficient in case of sheep/ goat and pig.

Table 5. Distribution of taxa in Petrești sites from Transylvania and Banat.

NISP	Miercu rea S.	Moșna	Cheile Turzii	Zau de Câmpie	Tărtăria	Parța-II
Cattle	55.94	25	49.7	84.83	63.94	59.95
sheep/goat	12.26	25	18.23	6.47	9.52	6.18

Pig	9.96	27.8	16.47	4.35	8.84	6.45
Dog	0.77	1.4	0.29	0	0	0.52
Game	21.07	20.8	15.31	4.35	17.69	26.9
MNI						
Cattle	32.69	21.7	30.55	57.35	30.43	41.67
sheep/g oat	15.38	26.1	16.66	11.76	17.39	10.42
Pig	13.46	21.7	13.88	11.76	17.39	14.58
Dog	3.85	4.3	2.77	0	0	2.08
Game	34.61	26.2	36.14	19.12	34.78	31.25

Except the site of Parța, placed in the Banat Plain, all other are located in central and southeastern Transylvania, either inside the cave (Cheile Turzii) or on the terraces of rivers, at an average altitude of about 300-600m. Apart from sample from Zau de Câmpie, containing 1277 bones, the others ones do not exceed this value. By and large, as a direct consequence of small samples, significant fluctuations occur from case to case, each lot providing dissimilar percentages of taxa. So from this point of view, there may be no correlation between sites. Faunal spectra from Miercurea Sibiului and Tărtăria would show some common trends, resulting in high rate of cattle (56% and 64%) and fewer small ruminants (12% in Miercurea Sibiului and 9.5% in Tărtăria), pig accounting for only 8-9% (Tab. 5, Fig. 6). A similar percentage of cattle, about 50% and a significant rate of ovicaprids and pig, 18% and 16% referred to Cheile Turzii sample. Mosna makes special note by the same percentage for cattle, sheep/ goats, 25%, and some more pig, 27.8%. The largest quota of bovines has been found in Zau de Câmpie 85%, associated with few domestic swine and small ruminants, 6.5% and 4.3%. Although lot of Parța contains about 60% cattle bones, pig and small ruminants remains outweighs not about 6%. In the game, share varies between 15-26%, except Zau de Câmpie with only 4.3%. It is clear that hunting was constantly practiced by Petrești communities, besides cattle breeding (in almost all settlements their remains exceeding 50%), the small-sized species (sheep, goats, pigs) registering variable rates from case to case.

Bibliography

Bindea 2008	D. Bindea, <i>Arheozoologia Transilvaniei în pre-și protoistorie</i> , Editura Teognost, Cluj-Napoca (2008), 463 p
El Susi 2010	G. El Susi, Unpublished data about the menagement of mammals in the settlement of Petrești culture from Moșna (Sibiu district), <i>Acta Terrae Septemcastrensis</i> , IX, 2010, p. 151-172
El Susi 2011	G. El Susi, Analysis of faunal remains from sublevel IIa (Vinča A2-3) at Miercurea Sibiului-Petriș (Sibiu County), <i>Acta Terrae Septemcastrensis</i> , 10, 2011, p. 17-47
Grant 1982	A. Grant, The use of tooth wears as a guide to the age of domestic ungulates. In Wilson, B., Grigson, C. and Payne, S. (eds.), <i>Ageing and sexing animal bones from archaeological sites</i> , <i>British Archaeological Reports, British Series</i> 109, Oxford (1982), 91-108.
Luca et alii 2006	S. A. Luca, D. Diaconescu, A. Georgescu, C. Suciu, Cercetările arheologice de la Miercurea Sibiului – Petris (jud. Sibiu), Campaniile anilor 1997-2005, <i>Brukenthal. Acta Musei</i> , I/1, p. 9-21
Luca et alii 2007	S. A. Luca, C. Beldiman, P. Biagi, B. Ciută, M. Ciută, D. Diaconescu, A. Georgescu, M. Spataro, C. Suciu, Șantierul arheologic Miercurea Sibiului, punct : Petriș, <i>Cronica Cercetărilor Arheologice</i> , campania 2006, http://www.cimec.ro
Luca et alii 2008	S. A. Luca, C. Beldiman, P. Biagi, B. Ciută, M. Ciută, D. Diaconescu, A. Georgescu, G. El Susi, M. Spataro, C. Suciu, Șantierul arheologic Miercurea Sibiului, punct : Petriș, <i>Cronica Cercetărilor Arheologice</i> , campania 2007, http://www.cimec.ro
Sykes, Symmons 2007	S. Sykes, R. Symmons, Sexing Cattle Horn-cores: Problems and Progress, <i>International Journal of Osteoarchaeology</i> , 17, 2007, p. 514–523, Wiley InterScience, (www.interscience.wiley.com)
Suciu 2009	C. I. Suciu, <i>Cultura Vinča în Transilvania</i> , <i>Bibliotheca Brukenthal</i> , XLIV, Editura Altip, Alba Iulia, 2009
Udrescu. Bejenaru, Hrișcu 1999	M. St. Udrescu, L. Bejenaru, C. Hrișcu, <i>Introducere în arheozoologie</i> , Edit. Corson, Iași, (1999), 184 p.

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- Fig. 7 – Taxa distribution in Petrești sites (as NISP).
- Fig. 8 – Horn core from aurochs in G₄₁.
- Fig. 9 – Horn core from cattle in G₄₄.

**Measurements
Horn cores**

Con text	Taxon	Gd	Sd	Circ onf.
L3/	Cattle	67	60	
L2/	Cattle	53	45.8	
Gr. 41/	Aurochs	96	(71 (34.	
Gr. 41/	Sheep	47	6	
Gr. 41/	Goat	29.8	23.3	83.5
Gr. 44/	Cattle	65.5	48.1	191

Atlas /Cont ext	Taxon	BFcr
L3/	Roe deer	cran-44.3

Axis Conte xt	Taxon	BFcr
Gr. 41/	Sheep	40.7

Mandibula

Con text	Taxon	P2-M3	M1-M3	LM3
L2/	Cattle			39.3
L2/	Sheep	66.5	45.9	21.7
L3/	Ovicaprid			21.2
L3/	Ovicaprid			19.8
L3/	Pig			34.4
L1/	Aurochs		93	42
Gr. 41/	Sheep	67.2	46.7	23.3
Gr. 41/	Sheep		46.7	23.4
Gr. 44/	Cattle			40.7

Pelvis Conte xt	Taxon	LA
L2/	Cattle	56.2
L2/	Cattle	64.3
L2/	Pig	36.8
L3/	Pig	26.8
G. 41/	Pig	29.1

Scap ula

Con text	Taxon	SL C	GL P	LG
Gr. 41/	Cattle	46.1	67.6	56.1
Gr. 41/	Goat	20		
Gr. 41/	Goat	22.1	32.7	26

Tibia Conte xt	Taxon	Bd	Dd
L3/	Cattle	65	47.6
L3/	Ovicaprid	22.5	19.1
L3/	Pig	28.7	25.3
L2/	Aurochs	74.5	55.4
L3/	Roe deer	25.8	20
Gr. 41/	Cattle	63.5	44.2

Humerus

Con text	Taxon	BT	Bd	Dd
----------	-------	----	----	----

Metacarpus

Conte xt	Taxon	Bp	Dp
----------	-------	----	----

L2/	Cattle	82.5			L2/	Cattle	65.7	37.5
L2/	Boar	45.6	54.7	50	L2/	Cattle		34.1
L3/	Roe deer	29.5			L1/	Aurochs	72	48
Gr. 41/	Sheep		25.6	27.5	L1/	Aurochs	69.5	44
Gr. 41/	Cattle	74.7	80		L1/	Aurochs?		42
Gr. 41/	Cattle		79	83.1	L3/	Red deer	49.3	
					L2/	Red deer	42.8	30.2

Radius

Con text	Taxo n	BF P	Dp	Bd	D d
L2/	Cattle	83	45		
L2/	Aurochs		58		
L2/	Wild boar			44.5	32.8
Gr. 44/	Cattle		39.8		
Gr. 41/	Pig	31	20.7		
Gr. 41/	Roe deer			28	16.3

Metatarsus

Con text	Taxo n	Bp	Dp	Bd	D d
L2/	Cattle	46.4	46.6		
L2/	Cattle	53.7			
L2/	Cattle	47.5	49		
L1/	Cattle	49	49.5		
L2/	Cattle	51.6	49.7		
L3/	Cattle	58.6			
L3/	Cattle				31.30
L1/	Cattle			53	.536
L2/	Cattle			63.1	.533
L3/	Cattle			65	.537
Gr. 41/	Cattle				.6
Gr. 41/	Goat	24.5	17		
Gr. 41/	Goat				14.8
Gr.	Sheep			23	14

Calcaneus

Context	Taxon	GL
L1/	Cattle	157.5
L2/	Cattle	139.8
Gr. 41/	Cattle	132.7
Gr. 41/	Cattle	139.4
Gr. 41/	Goat	69.5

PHI

Context/Taxon	GL	Bp
L2/cattle	67.2	36
L2/aurochs	74.5	43

Talus

Context	GLI	GL m
L3/cattle	72.7	67.2
L2/aurochs		
L2/red deer	63.2	60.4
G. 41/cattle	72	68.3
G. 44/cattle	70.2	64.6
G. 44/ovic	30.6	29.5

L1, 2, 3 – G. 41, 44 – Lumea

41/

.1

Petrești
structures

Nouă pits

Gr.

44/ Sheep 19.1 19.1

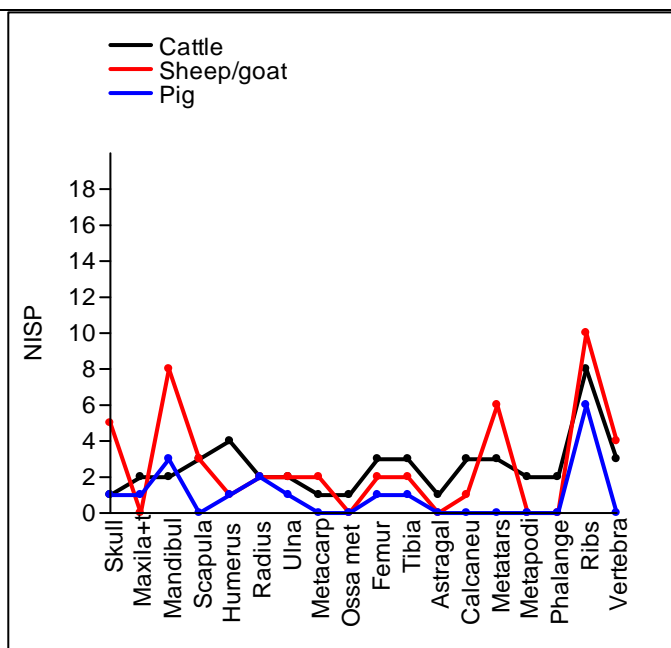


Fig. 1.

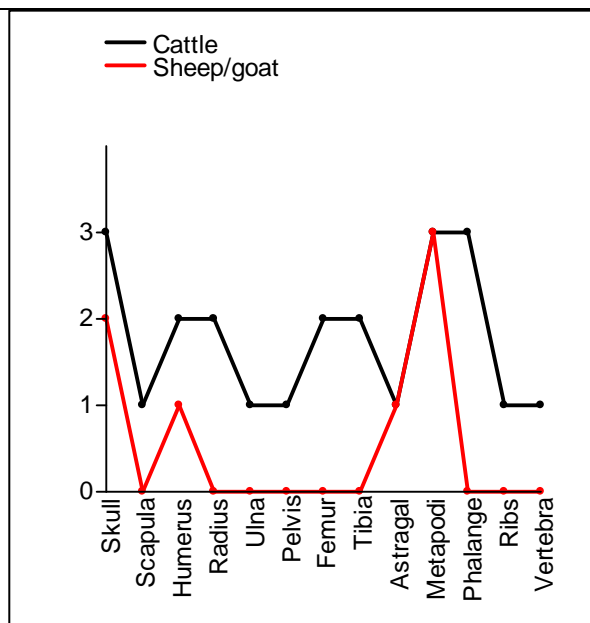


Fig. 2.

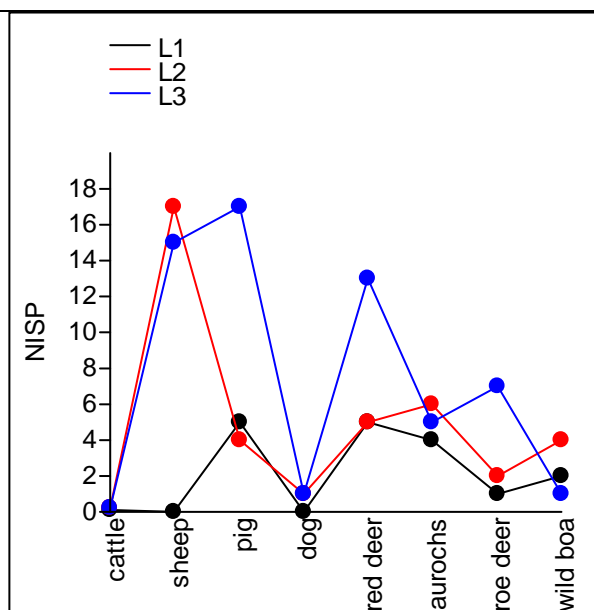


Fig. 3.

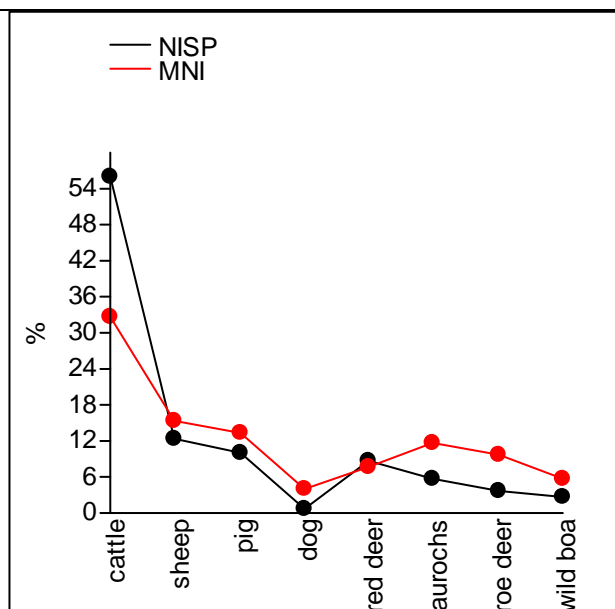


Fig. 4.

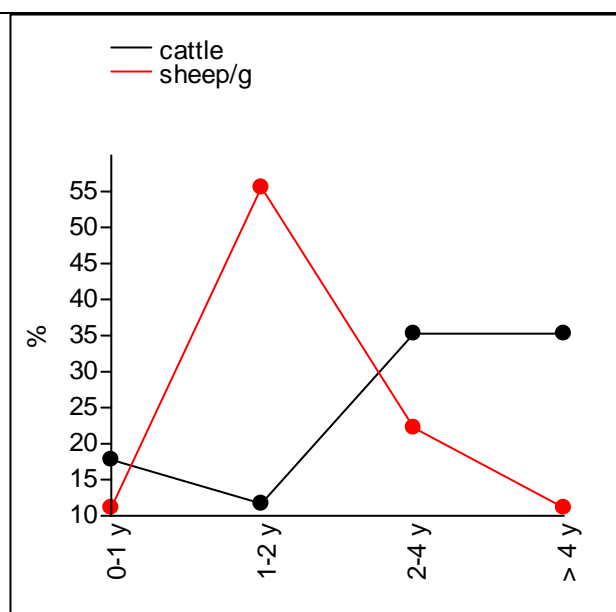


Fig. 5.

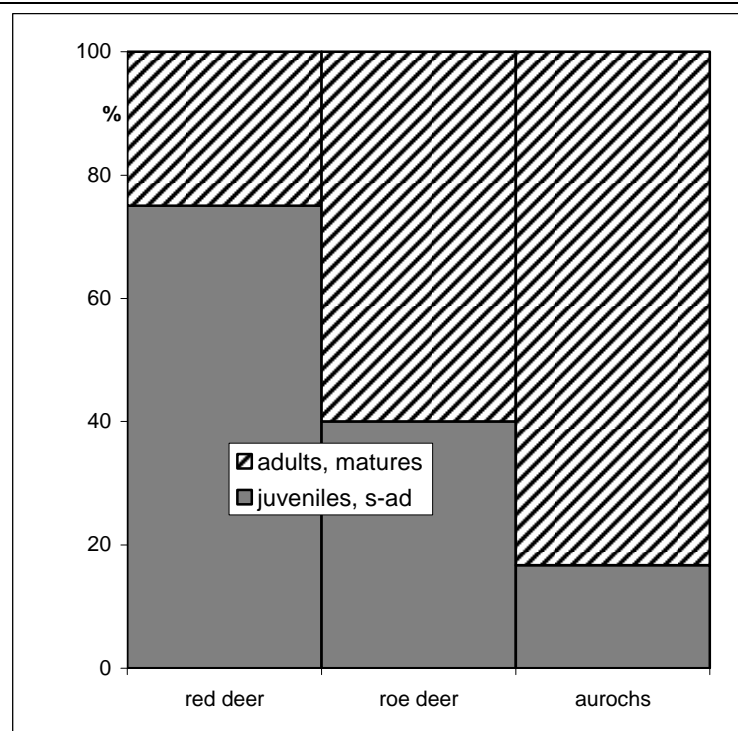


Fig. 6.

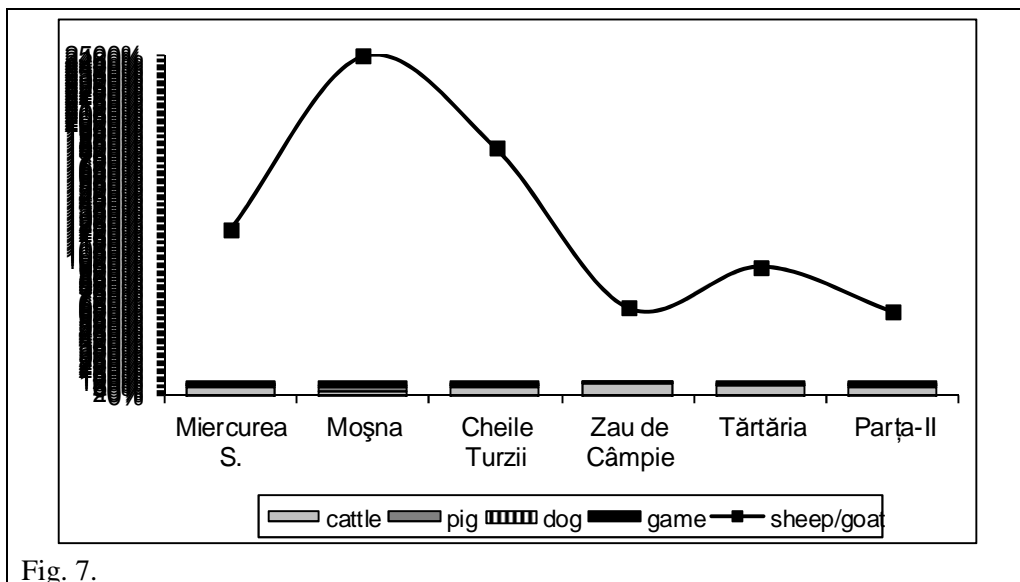


Fig. 7.



Fig. 8.



Fig. 9.

ACTA TERRAE SEPTEMCASTRENSIS

XI, 2012

**“LUCIAN BLAGA” UNIVERSITY OF SIBIU
FACULTY OF HISTORY AND PATRIMONY
INSTITUTE FOR THE STUDY AND VALORIFICATION OF THE
TRANSYLVANIAN PATRIMONY IN EUROPEAN CONTEXT**

ACTA TERRAE

SEPTEMCASTRENSIS

XI

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Sibiu, 2012

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**THE ARCHAEOLOGICAL COMPLEXES FROM TURDAȘ-LUNCĂ
(HUNEDOARA COUNTY) BELONGING TO COȚOFENI CULTURE,
DISCOVERED DURING THE RESCUE EXCAVATION IN 2011**

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Abstract: *The study presents the results of the statistical analysis of two of the archaeological complexes belonging to Coțofeni culture (C130 and C143) that were discovered in the archaeological site from Turdaș-Luncă, during the rescue excavations from 2011.*

Keywords: *Coțofeni culture, Turdaș-Luncă, rescue excavation, statistical analysis.*

Rezumat: *Studiul prezintă rezultatele analizelor statistice asupra a două complexe arheologice aparținând culturii Coțofeni, descoperite pe situl arheologic de la Turdaș-Luncă, în cursul campaniei de săpătură din anul 2011.*

Cuvinte cheie: *cultura Coțofeni, Turdaș-Luncă, cercetări preventive, analiza statistică.*

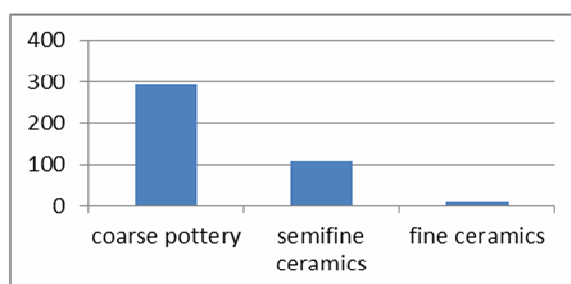
History of research

Since the 19th century, the archaeological site from Turdaș-Luncă was considered the pearl of Transylvanian archaeological remains. The first investigations in this site were made quite early, since 1875 by the first female archaeologist, Zsófia von Torma, and the first information relating to the excavations of Zsófia von Torma appeared in the press in Transylvania and Budapest from 1875-1876 (Luca 2001). In the literature, articles concerning this archaeological site are published by Gábor Téglás, Carl Goos and Zsófia von Torma – an article devoted to Neolithic settlements in Hunedoara County. In 1910, under the leadership of Márton Roska, a new research is taking place at Turdaș-Luncă and it is reflected by the appearance of a monograph of the collection (Roska 1941). In the 30's of last century, excavations were made by Vladimir Dumitrescu in cooperation with Octavian Floca (Luca 2001) and in the 60's by Iuliu Paul (Luca 2001). In 1982 there is signalled a surface research by Florin Drașovean and Tiberius Mariș and in 1986 John Nandris, Gheorghe Lazarovici and Zoe Kalmar investigated the collapsed bank of Mureș River. Since 1992, every year until 1997, systematic excavations are undertaken by Sabin Adrian Luca, concluded with the publication of the monograph of the site in 2001 (Luca 2001). The latest rescue excavations in the site from Turdaș-Luncă are those made in 2011, with the occasion of the construction of Sibiu-Orăștie motorway.

On this occasion, were discovered some archaeological complexes belonging to Coțofeni culture, two of which are the subject of this article, complexes C130 and C143. These archaeological complexes do not contain a large number of ceramic fragments, but allow us to draw interesting conclusions regarding the ceramic of Coțofeni culture in this region of Transylvania.

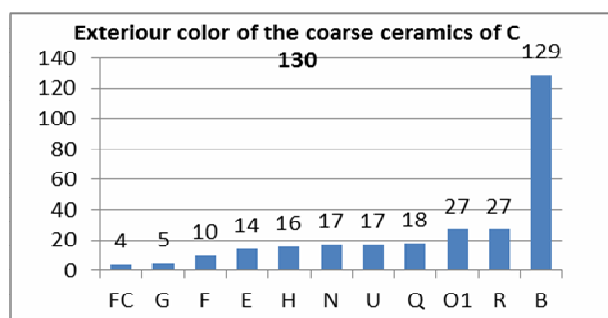
I. C 130 – 411 ceramic fragments

Complex C130 it is composed of two pits, both of a relatively circular shape, each with a length of 6.68m and a width of 2.75m (photo 1). Coțofeni ceramic materials appear at the bottom of the complex, in the brown soil, poorly pigmented (fig. 2, photo 2). The upper part is represented by a black-grey coat with ceramic pigment. The statistical analysis reveal that the complex contains predominantly coarse pottery (71%), followed by semi-fine ceramics (26%) and fine ceramics (3%). It is a situation that it is not surprising, that fit the Coțofeni ceramics in the general percentages in Romania. Analyzing each type of ceramics separately, were obtained some interesting results which will be presented below.

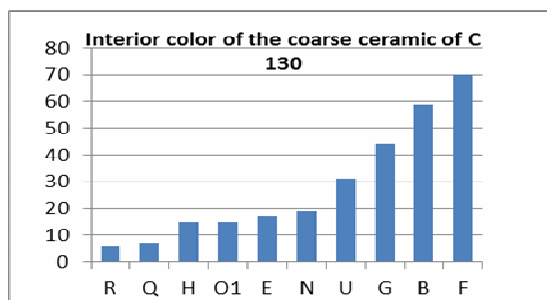


a. Coarse ceramics – 293 fragments

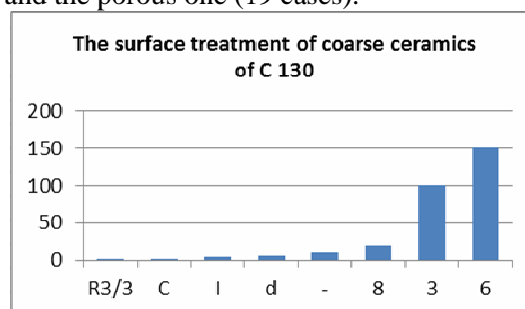
The exterior colour of the coarse ceramic of complex 130 is brick colour predominantly, allowed by the one of brick colour with flaps and coffee colour in equal proportions.



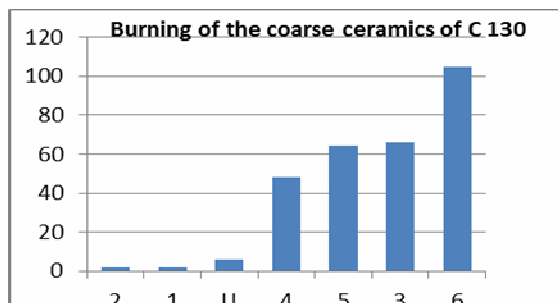
The interior colour of the coarse ceramics is more balanced, by comparison with exterior one. Most ceramic fragments are of grey, brick and dark grey colour.



The coarse ceramics is in big proportions rough (151 cases), followed by the smoothed (100 cases) and the porous one (19 cases).

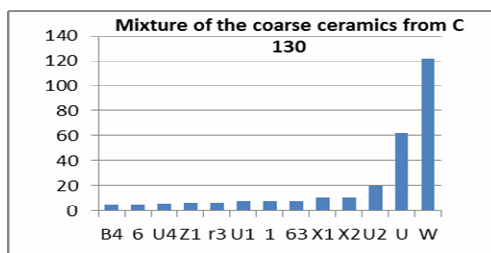


In which concerns the burning of the ceramics of C 130, most of the coarse ceramic fragments are poorly burned, both reductive (105 cases) and oxidant (48 cases), by comparison with the ones that are well burned that are oxidant (66 cases) and reductive (64 cases).



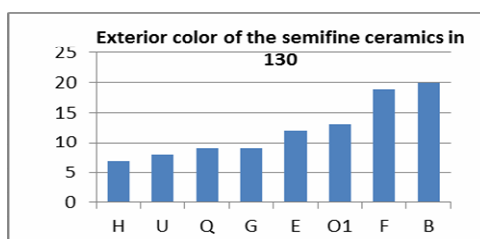
Concerning the mixture of the coarse ceramics, what gives its defining note is the presence of small stones in various percentages. Most representative are the

fragments that contain sand and small stones (22%), sand, small stones and shards (43%) and sand, small stones and ochre (7%).

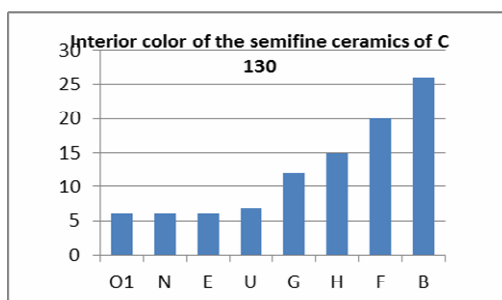


b. Semifine ceramics – 108 fragments

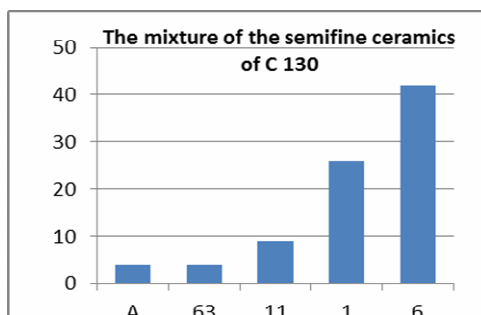
The semifine ceramics of C130 contain frequently fragments of brick colour to the exterior (21% of the cases), followed by grey (20%) and coffee colour (14%), but must be noticed that by comparison with the coarse ceramics, the percentages are more balanced.



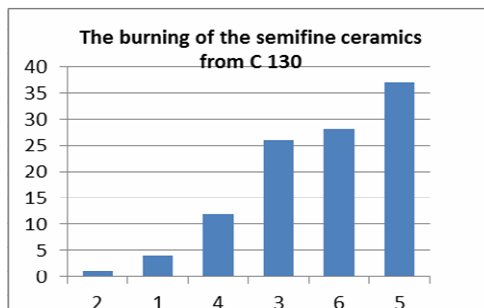
The interior colour of the semi-fine ceramics is brick colour (26 of the cases), grey (20 cases), dark brown (15 cases).



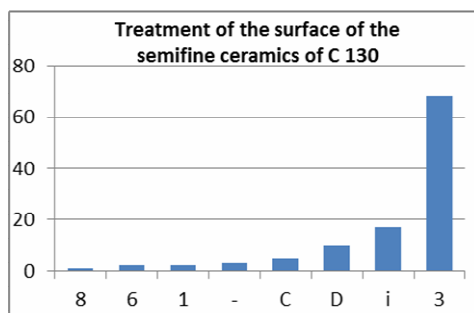
The mixture of the semi-fine ceramic is characterized by the lack of small stones. Most of the ceramic fragments are composed of sand and shards (49%), sand (31%) and sand and ochre (10%).



In which concerns the burning, the semifine ceramics are burnt in a reductive manner, either good (34% of cases), or poorly burnt (26% of cases).

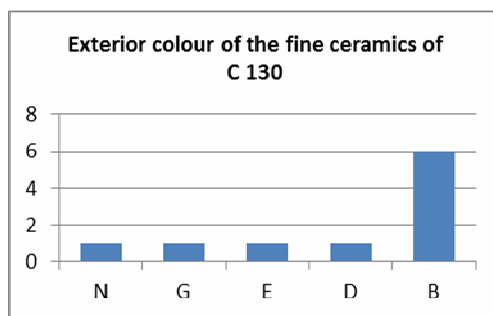


One of the differences between the coarse and the semi-fine ceramics is localized at the level of the treatment of the surface of the vessel, so that, in 63% of cases the ceramics are smoothed, in 16% of the cases in very well smoothed, followed by the ones with partially preserved or smoothed slip only in 2% of the cases the ceramic is rough.

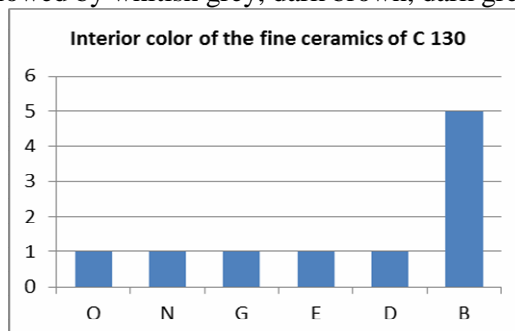


c. Fine ceramics – 10 ceramic fragments

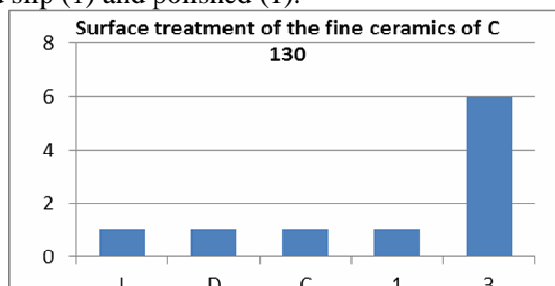
In the case of the fine ceramics, we must mention that there is a predominance of the brick coloured ceramic (6), followed by the whitish-grey (1), dark brown (1), dark grey (1), orange (1).



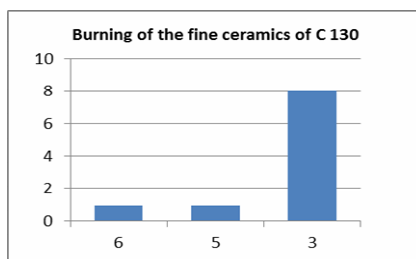
In the case of the interior colour, most of the ceramic fragments are brick coloured (5 cases), followed by whitish grey, dark brown, dark grey and orange.



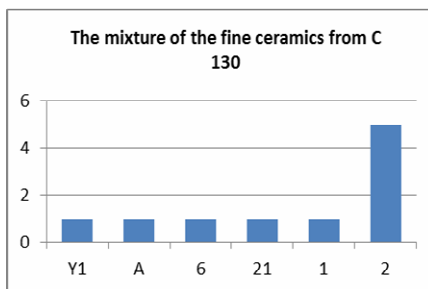
Fine ceramics is in big proportion smoothed (6 cases), well smoothed (1 case), with smoothed slip (1) and polished (1).



Referring to the burning, it is good oxidant (8 fragments) or reductive (1 fragment), and only in one case poorly reductive.



The mixture of the fine ceramics is in great percentage composed of fine sand (5 cases), followed by sand (1 case), fine sand and ochre (1 case), sand and shards (1 case), sand and mud (1 case), fine sand, mud and shards (1 case).

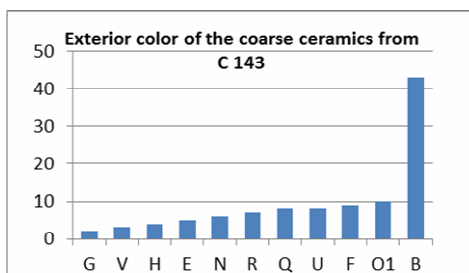


II. C 143 – 145 ceramic fragments

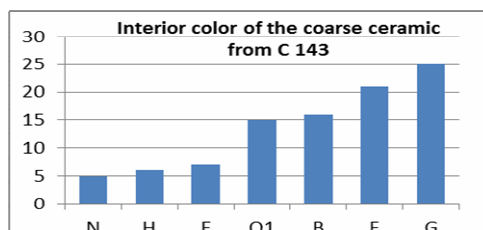
C 143 is a circular pit with access steps (fig. 3), possibly a dwelling. The filling of the pit is dark brown (photo 3-4). On the bottom of the complex, the sterile is of black colour.

a. Coarse ceramics – 112 ceramic fragments

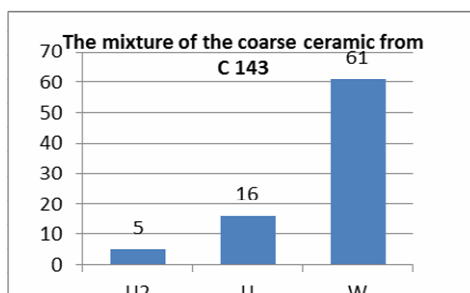
The coarse ceramic from C 143 is of brick colour (43 cases), followed by coffee colour (10 cases), grey (9 cases), brown (8 cases) and brown with flaps (8 cases).



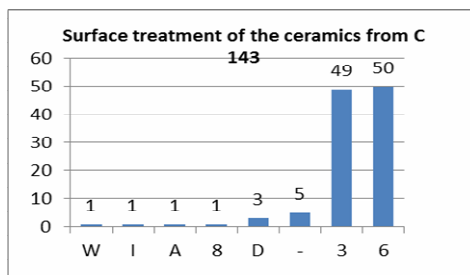
The interior colour is in most of the cases dark-grey (25 of cases), grey (21 of cases), brick colour (16 of cases) followed by coffee colour (15 of cases).



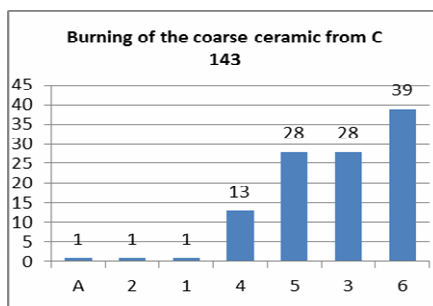
Regarding the mixture, the coarse ceramic of C 143 contains sand, small stones and shards (61 fragments), followed by sand and small stones (16 fragments) and sand, small stones and ochre (5 shards).



Regarding the treatment of the surface of the vessels, the coarse ceramic is either rough (50 of cases) and smoothed (49 of cases).

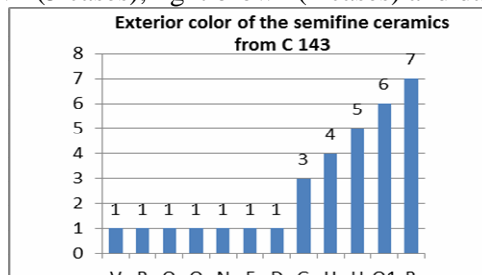


The burning is in most cases reductive (good in 28 of cases and poor in 39 of cases). The oxidant burning is good in 28 cases and poor in 13 cases.

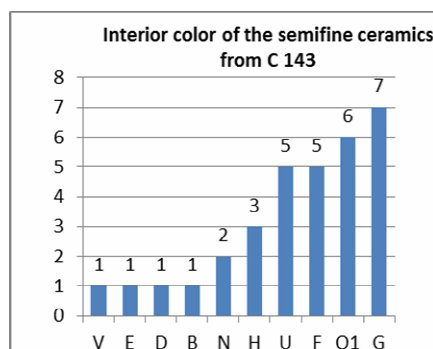


b. Semi-fine ceramics

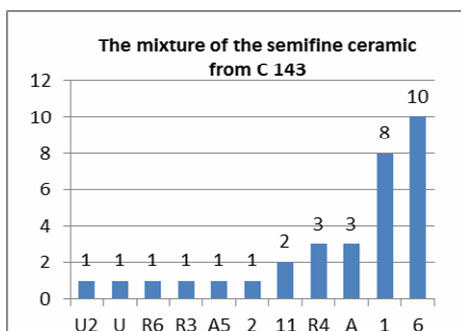
The semifine ceramics is of brick colour (7 cases) or coffee colour (6 of cases), followed by brown (5 cases), light brown (4 cases) and dark grey (3 cases).



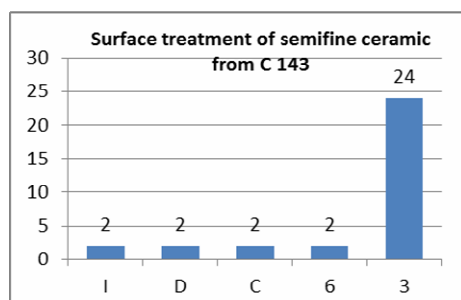
The interior colour is of dark-grey colour (7 cases) or grey colour (5 cases), coffee colour (6 cases) and brown (5 cases).



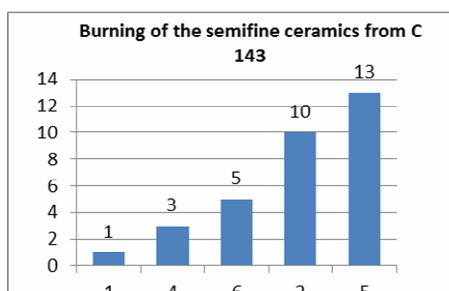
The mixture is lacking small stones, so it is composed of sand and shards (10 cases), sand (8 cases), sand and mud (3 cases), sand, mud and shards (3 cases).



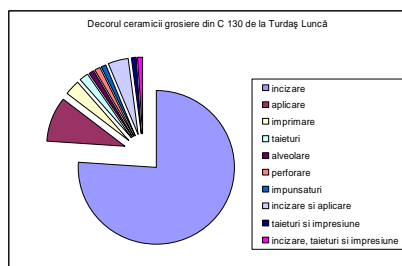
Concerning the surface treatment, the ceramic fragments from C 143 is in most cases smoothed (24 out of the 32 of cases).



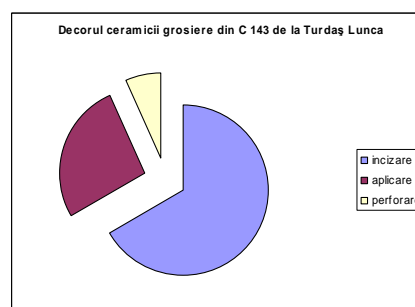
As normal, the burning is good in 23 of the situations, either reductive (13 cases) or oxidant (10 cases). In 8 cases the burning is poor oxidant (3 cases) or reductive (5 cases).



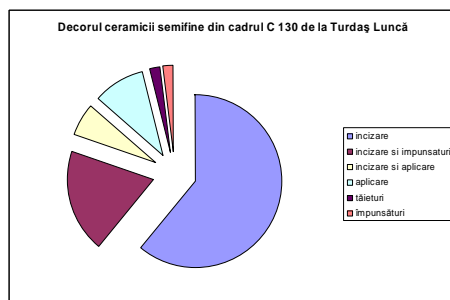
Fine ceramics is represented in the case of C143 by one fragment, unlike the complex described above, which determines us not to use the same manner of presentation used above. It is one small fragment of whitish-grey colour (interior and exterior), with fine sand and mud in composition, of good reductive burning and partially preserved slip.



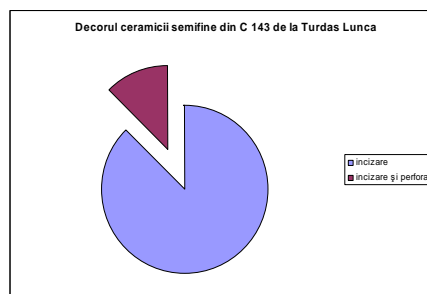
Ornaments of the coarse ceramics of C130.



Ornaments of the coarse ceramics of C143.



Ornaments of the semi-fine ceramics of C130.



Ornaments of the semi-fine ceramics of C143.

Conclusions

The ceramics of the two archaeological complexes analyzed above is predominantly coarse, followed by semifine and fine categories.

The forms include vessels of small, medium and big sizes. The fragmentary condition of the ceramic material cannot permit the reconstruction, but in a limited percentage, of the types of vessels: vessels of globular shape and pots with funnel mouth of medium and big sizes, cups and mugs of small sizes. The ornaments are predominantly incised, most frequently being represented by narrow incised stripes, oblique hatched and especially angular, associated sometimes with plastic applications of *lentils*. There were not identified ceramic fragments decorated with alveolar belt nor in the technique of successive stitches. Also, it is to be mentioned that in the case of C143, unlike C130, there were used fewer decorative techniques, in both cases - semifine and coarse ceramics, as seen in the graphics presented above.

Based on the ornaments of the ceramic, the complexes C 130 and C 143 from Turdaș-Lunca have analogies both in sites belonging to phase I of Coțofeni culture (Nandru-Peștera Curată – Roman 1976, pl. 68/18, Herculane-Peștera Hoșilor – Roman 1976, pl. 75-77, Petrești-Malul Râului – Ciugudean 2000, pl. 28/7) but also in the sites belonging to the second phase of Coțofeni culture (Cicău-Săliște –

Ciugudean 2000, pl. 49/6-7, Unirea-Dealul cămării – Ciugudean 2000, pl. 50/1-2, 5, pl. 53, Sântimbru – Ciugudean 2000, pl. 54/2, 55/6, Aiud-Cetățuie – Ciugudean 2000, pl. 56/4-5, Limba-În Coastă – Ciugudean 2000, pl. 62/2).

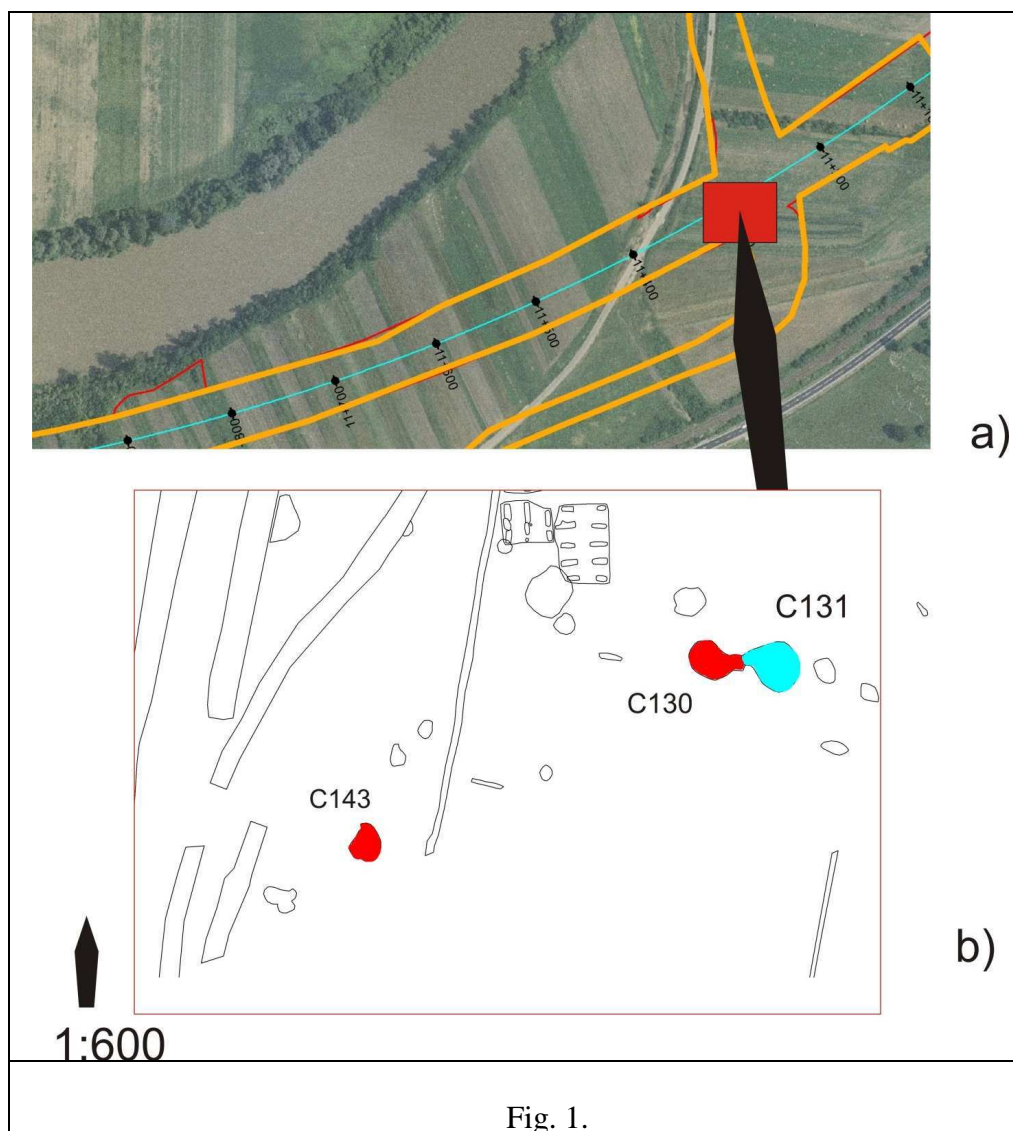
Given the analogies of the ceramics, both complexes belong to the beginning of the second phase of Coțofeni culture. In terms of absolute chronology, the complexes are framed in the period of 3.300-3.000 B.C.

REFERENCES

Ciugudean 2000	Ciugudean Horia, <i>Eneoliticul final din Transilvania și Banat. Cultura Coțofeni</i> , Timișoara, 2000.
Luca 2001	Luca Sabin Adrian, <i>Așezările neolitice pe Valea Mureșului (II). Noi cercetări la Turdaș Luncă I. Campaniile anilor 1992-1995</i> , în seria Bibliotheca Apulensis, ed. Economică, 2001.
Roman 1976	Roman Petre, <i>Cultura Coțofeni</i> , București, 1976

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Photo 2	Profile of C130 during cross-section
Photo 3	Complex C143 when it was outlined
Photo 4	Complex C143



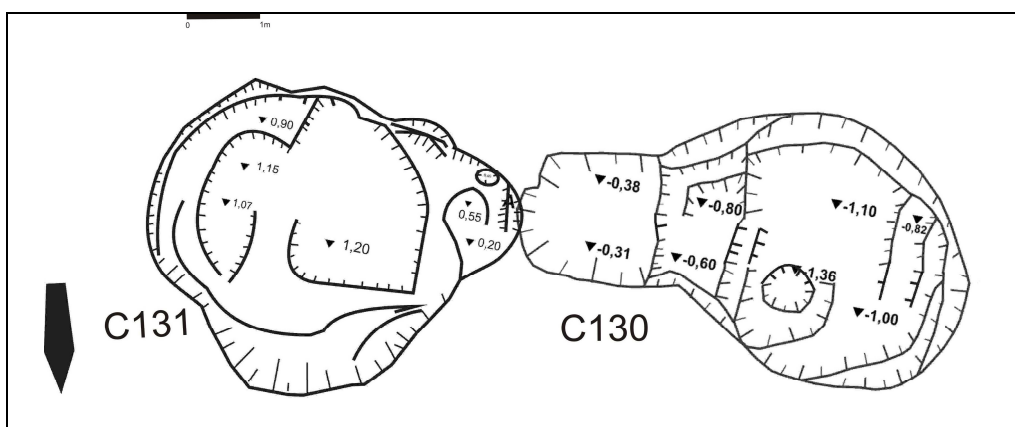


Fig. 2

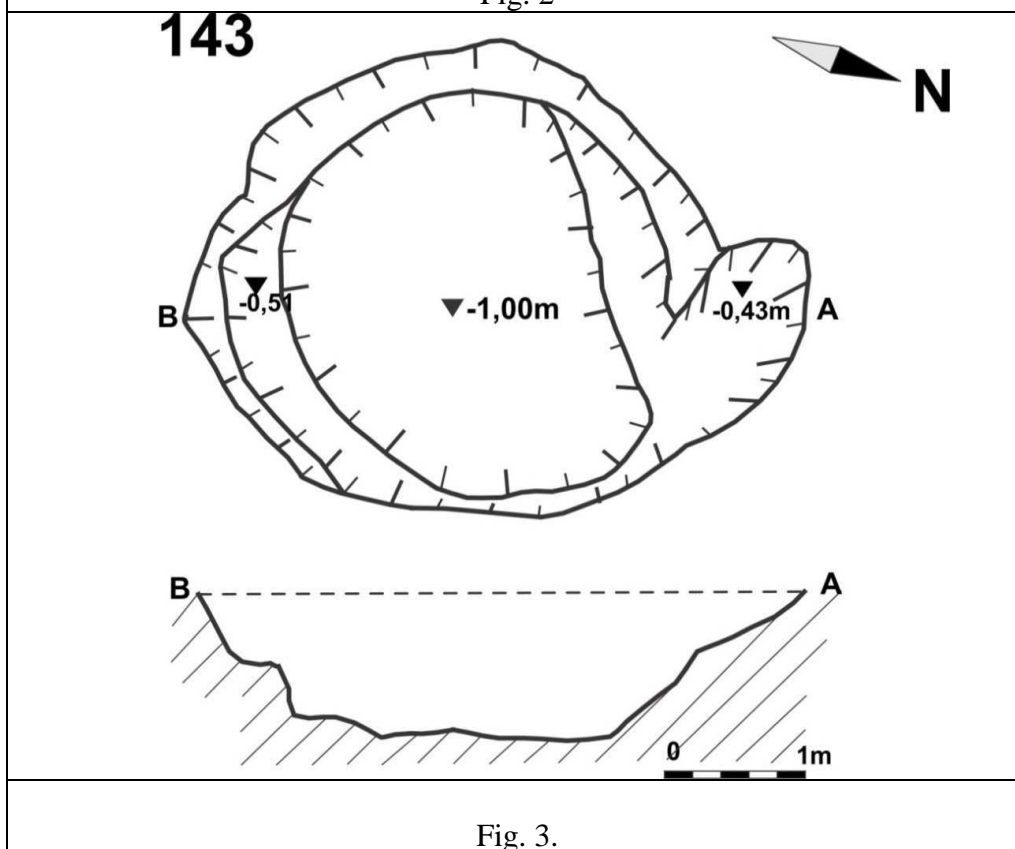


Fig. 3.



Photo 1



Photo 2



Photo 3



Photo 4

ACTA TERRAE SEPTEMCASTRENSIS

XI, 2012

**“LUCIAN BLAGA” UNIVERSITY OF SIBIU
FACULTY OF HISTORY AND PATRIMONY
INSTITUTE FOR THE STUDY AND VALORIFICATION OF THE
TRANSYLVANIAN PATRIMONY IN EUROPEAN CONTEXT**

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XI

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BRONZE AGE SHELL BEADS DISCOVERED IN HUNEDOARA COUNTY, ROMANIA

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Key words: *adornment, Cauce Cave, Dentalium shell, Hunedoara County, tubular beads, Romania, Wietenberg culture.*

Abstract: *Wietenberg Dentalium shell beads discovered at Cerișor-Cave No. 1, Hunedoara County, Romania. The Prehistoric site from Cerișor village, “The Cave No. 1”, Hunedoara County, was systematically researched from archaeological point of view in 2000 by a group of specialists led by Professor Sabin Adrian Luca and the archaeologists Cristian Roman and Dragoș Diaconescu. The Prehistoric stratigraphy presents layers dated from the Neolithic (Turdaș culture), the Eneolithic (Coțofeni culture), and the Bronze Age (Wietenberg culture, IInd-IIIrd phases). From the IIIrd level two entire tubular beads made of fossil Dentalium shells have been recovered, most probably collected from a fossil deposit located in the present territory of the city of Hunedoara (Buituri deposit). According to the Beldiman 2007 typology, the type of beads is III C1. They are very well preserved and allow the observation of morphological details, manufacture and use traces. The aim of the study is to examine all the indices regarding the manufacturing chain. The only traces which could be observed are the fracture and the cutting of the ends of the shell. The traces of this operation are clearly observable on the proximal and distal parts of the piece CRM/III 1. The use-wear and the analogies with similar artefacts discovered in funerary contexts, allow us to state the functional role of this type of artefacts. It seems that they were used like beads hung on a string or elements of a necklace (more often) in combination with other types of beads (clay, stone, teeth, bone, copper etc). Other discoveries of this type in all Central Europe and Balkan Area sustain our hypothesis.*

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*In memory of Marinaș Băicoană,
ex-president of “Proteus” Speleological Club, Hunedoara City*

The caves from Cauce, Lelese village, Hunedoara County are placed in the Eastern part of the Poiana Ruscă Mountains. There is The Cerișor-Lelese Field which evolved between Runcu and Sohodol Valley. In the last years, some of the known caves from this area have been systematically researched from a speleological and archaeological point of view, Cauce Cave and the Great Cave offering the most important results².

The Great Cave or The Cave No. 1 is placed at 650 m North-East of Cauce village, on the Roman Hill, on the superior side of the right slope of Runcu Valley. The cave is developed in dolomitic limestones which are specific for the geological structure of the area. The cave has two entrances and a length of 125 meters. The portal of the cave has an opening of 6.2/2.3 meters and allows the access in a large hall having the dimensions of 20/5/6 meters³.

The cave is known due to the efforts of the members of “Proteus” Speleological Club from Hunedoara (ex-president Marinaș Băicoană) which discovered and mapped it in 1977. In 1979 the cave was excavated by Tiberiu Mariș, but the results of the research were not published and the materials were lost. In 1999, The Corvins' Castle Museum from Hunedoara, “Lucian Blaga” University Sibiu and the “Proteus” Speleological Club from Hunedoara organised a National Training of Speleological Archaeology when an excavation for general information was made at the cave entrance. The systematic diggings led by Professor Sabin Adrian Luca and the archaeologists Cristian Roman and Dragoș Diaconescu were made in 1999 and 2000. On this occasion two sections were dug: one at the entrance no. 2 and one in the Great Hall. The latter revealed the stratigraphy (corresponding to Prehistory)⁴:

- *Ist level* belongs to the Starčevo-Criș culture (Ind phase);
- *IInd level* has a thickness of 2-10 cm and contains archaeological materials belonging to Turdaș (later phase – contemporary with the IInd level from Turdaș-“Luncă”);
- *IIIrd level* belongs to the Coțofeni culture (II-III phases);
- *IV level* belongs to the Wietenberg culture (late IInd phase – beginning of the IIIrd phase).

Objectives. Methodological aspects. The use of *Dentalium* shells as adornments

Our study is integrated in the recent, systematic approach of valorisation of skeletal material artefacts discovered in Romania. In this context, the publication of

² Luca *et alii* 2004; Beldiman *et alii* 2004; Beldiman 2004d; Beldiman, Sztancs 2004; Beldiman, Sztancs 2005; Luca *et alii* 2005.

³ Sztancs, Beldiman 2004, 97.

⁴ Luca *et alii* 2004.

the pieces has a special place. The aim of the study is to offer an example of an exhaustive presentation of two adornments made up of local fossil gastropods shells belonging to the *Dentalium* species.

The approach offers the opportunity to review the earliest Romanian attestation of *Dentalium* beads. These were hung in complex adornments (necklace made of beads) or as simple pendants hung on a textile or leather wire⁵.

The methodology used in the study is based on the one established in *Fiches typologiques de l'industrie osseuse préhistorique. Cahier IV: Objets de parure*, 1991, elaborated under the coordination of PhD Henriette Camps-Fabrer⁶. In its content there are some useful instruments used for analysing the shells such as: the general pattern of adornment (0)⁷ and the fiche for processed shells (2.1. and 2.2.)⁸. Yvette Taborin's book regarding the using of shells as adornments in the Paleolithic is an important contribution for the patterns used for analysing the adornments made of shells⁹.

The shells of gastropods (snails) were used as adornments from the beginning of the Upper Paleolithic (Aurignacian culture) and then in all the prehistoric ages. They have marine origin and they are both fossils pertaining to the Tertiary age (gathered from fossil areas) and to the Pleistocene species (gathered from the seashore).

The terrestrial species of gastropods or the ones that live in the rivers were used as raw material for adornments only in exceptional situations. This fact is due to their specific fragility. The species with thick shells having small and medium dimensions were more extensively used. For this reason, we may distinguish three groups of shells: round (for example, *Littorina*); long (*Turritella*, for example) or shells with the body slightly curved (*Dentalium*, for example)¹⁰.

From a typological or functional point of view, the artefacts made of *Dentalium* fossil shells are considered to be tubular beads and represent the base for shell adornments in the Mesolithic, the Neolithic, the Eneolithic and the Bronze Age in Europe¹¹.

In Romania, the Prehistoric adornments of this type coming from the archaeological cultural layers are rare. In this context, these beads are more important for the Romanian archaeology.

This species presents more advantages, for that reason Prehistoric people preferred to use them. These are: the large quantities of fossil deposits, the relatively simple way of gathering the shells and the anatomic morphology which made them ideal for this type of usage. The technical interventions for obtaining a bead are

⁵ Beldiman 2004c; Sztancs, Beldiman 2004, 97.

⁶ Barge-Mahieu, Bellier, Camps-Fabrer *et alii* 1991; Beldiman 2003.

⁷ Barge-Mahieu, Taborin 1991.

⁸ Taborin 1991; Barge-Mahieu 1991.

⁹ Taborin 1993.

¹⁰ Taborin 1991, 3; Moreno Nuño, Zapata 1995, 190.

¹¹ Taborin 1991, 2; Barge-Mahieu 1991, 1-2.

quite simple. The variable-length segmentation could have been done using the transversal cutting or fracture. The simple opening of the cavity edges using the fracture of the distal extremity represents another technique of obtaining *Dentalium* shell beads.

***Dentalium* beads from Cerișor-Cave No. 1**

The two *Dentalium* beads were discovered in the surface no. 1, excavated in 2000, in an isolated area belonging to the Wietenberg culture. They were mentioned in the excavation report published in 2000 and in the monograph related to the above mentioned archaeological site¹². In the former paper, the authors also mention the discovery of a small bead having the general shape of a “star” which was initially published as a bone bead; the piece was recovered from the interior of a *Dentalium* shell¹³. Its examination with optical instruments revealed the fact that the raw material used was clay¹⁴. This has four elongations which are placed in a cross and it has a central perforation. The dimensions are: maximum diameter – 7 mm; thickness – 5 mm; the diameter of perforation – 2.5 mm (fig. 3). The above mentioned situation offers a clue of how the necklace was manufactured by the combination of different types of beads (various raw materials, types or dimensions). It is not clear if the ceramic bead was preserved inside of the shell bead because both pieces were hung on a string at the same time or perhaps, the former one got there by intended placement, without the obligatory presence of the string (for hanging). The solution to this problem does not change the conclusion regarding the combination of different elements made of various raw materials that were hung on a string forming a necklace. *Dentalium* beads are this type of elements.

Morphology

The adopted conventions for these artefacts are related to the identification of the proximal part/extremity (EP-PP) as the one with a larger diameter and of the distal part/extremity (ED-PD) as the one with a smaller diameter. For the middle part is used abbreviation PM.

According to the Beldiman 2007 typology, the pieces belong to the type *III CI*¹⁵.

The artefact **CRM/III 1** (fig. 1) is entirely preserved and has a very good conservation status. It has the anatomic general shape slightly curved and its surfaces' profile is blunted discontinuously, especially at PP. The contour of the EP is strongly accentuated. This fact is due to the transversal cutting and to the usage which determined the intense bluntness and the rounded edges. Also, on two areas,

¹² Roman *et alii* 2000, 14-15; Luca *et alii* 2005.

¹³ Roman *et alii* 2000, 15, 33, pl. IV/9.

¹⁴ Sztancs, Beldiman 2004, 97.

¹⁵ Beldiman 2007, 135.

we observed detachments of 5/2 mm which occurred after the shell was fractured. ED is slightly oblique and on an area of circumference, it presents a dent of 2 mm depth and 3 mm length; it has rounded edges and it is intensely blunted. At the dent's base, a part of the cutting groove is slightly oblique on the long axis of the piece.

The artefact **CRM/III 2** (fig. 2) is preserved entirely and has a very good conservation status. The parameters of the artefact are relatively similar to the ones of the piece CRM/III 1. The general shape is anatomical, slightly curved and the surfaces' profile is discontinuously blunted (especially at PP). The proximal extremity has a slightly winding shape, almost regular, being slightly oblique on the long axis of the piece. The shape of this part resulted from the transversal cutting and came as a result of the utilisation which determined its intense bluntness and the rounded edges. There are no detachments due to the fracture. The distal extremity is slightly oblique and does not preserve traces of cutting. The edges are uniform, but they are intensely blunted.

Morphometry

The dimensions of the artefacts are in millimetres. We may observe that they are quite the same and the standard length of the pieces is about 55 mm.

Artefact	Total length	Diameter of EP	Diameter of PM	Diameter of EP	Thickness of EP	Thickness of ED
CRM/II I 1	56	9	7.5	5	1.2	1
CRM/II I 2	53	9	7.5	5	1.2	1

Technical study

In the case of the *Dentalium* tubular beads the débitage stage is absent. The shells were only shaped.

It is possible that the raw material comes from the fossil deposit that exists in the neighbourhood: the place named Buituri (in past time, a village) near to Hunedoara City. There, in a place called "John's Well" *Dentalium* shells were identified¹⁶. Among the economical reasons, the exploitations of the fossil deposit from the Eastern part of the Poiana Ruscă Mountains may be related to the regular presence of the communities in that area (probably in warm seasons).

Shaping/Façonnage

¹⁶ Luca *et alii* 1998; Băicoană 1999; Sztancs, Beldiman 2004, 100.

The transversal cutting of the extremities using a lithic or a metallic blade and fracture represent the main technological procedures of façonnage. The specific traces are preserved on the edges of the CRM/III 1 artefact. In this way, at the proximal extremity there are two detachments of 2-5 mm which probably resulted during the direct percussion procedure (fig. 1/5-6). The slightly oblique cutting using a metal blade determined the appearance of a groove (4 mm long and 0.8 mm depth) at the distal extremity (ED). The groove has a “V” profile and was blunted because of the usage (fig. 1/3-4).

Wear traces. Remarks regarding the function

The beads' free hanging on a wire (leather or string) produced the intense bluntness of the extremities edges. This fact faded the cutting traces and determined the strong polish of the edges (fig. 1/5-6; 2/5-6). Also, the bluntness of the anatomic surface is the result of the rubbing on the textile or on the leather clothes.

We may conclude that the tubular *Dentalium* shell beads were necklace elements and in combination with other necklace elements were axially hung on a string. The discovery of the clay bead in the shape of a star from the inside of one of the shell beads is a proof in this case. In this kind of adornments other types of adornments might have been included (animal teeth, lithic or clay pieces – beads).

The *Dentalium* beads could have been lost in the cave or could have been abandoned with a ritual purpose. The second hypothesis is frequent in Prehistory and it is documented by a large number of valuable artefacts which were discovered unbroken in *abries* sites or in archaeological sites placed in karstic areas from Romania¹⁷.

At Cauce Cave, in grave no. 1 (M 1/1998) another two *Dentalium* beads belonging to Wietenberg culture were discovered¹⁸. The wear traces and the analogies coming from funerary contexts confirm the idea of using these beads hung on a string as a necklace.

Analogies. The using of *Dentalium* beads as adornments

The dating of the artefacts discovered at Cave No. 1 from Cauce was done according to ceramics analysis. According to this, the *Dentalium* beads belong to the late IInd phase – beginning of the IIIrd phase of the Wietenberg culture¹⁹.

In Romania, the gastropods' shell adornments (perforated *Helix* shells) were discovered in 1925-1926 at Ripiceni-Stânca by Nicolae N. Moroşan. The beads were found in the Vth archaeological level which, from a cultural point of view, belonged to the gravettian culture. Unfortunately, the data regarding this discovery

¹⁷ Beldiman, Sztancs 2004; Sztancs, Beldiman 2004; Nicolăescu-Plopşor *et alii* 1957.

¹⁸ Luca *et alii* 2004, pl. VI/1-2; Sztancs, Beldiman 2004; Luca *et alii* 2005, 42; Beldiman, Sztancs 2005, pl. XXXVI/CRC VII 5-6.

¹⁹ Roman *et alii* 2000, 9-10, 14; Beldiman, Sztancs 2005, 180.

is uncertain because the use of this type of shell is unusual in the Upper Paleolithic²⁰.

Recently (2003), in the gravettian site of Piatra Neamț-Poiana Cireșului, in the first archaeological level, four *Congeria* fossil bivalve shells without technical traces were discovered. Probably, these were gathered from a fossil deposit (Upper Miocene or Lower Pliocene) located in the area and brought into the site. The archaeologist who discovered the shells believed that this fact is due to the symbolical analogy with vulva morphology²¹.

In the case of the Epipaleolithic period (tardigravettian culture, the Mediterranean aspect) the archaeological literature mentions more discoveries of fossil shells; the oldest ones belong to the *Dentalium* species. At Băile Herculane-Peștera Hoților, IIIrd level, Alexandru V. Grossu identified in the malacological assemblages, the next species: *Lithoglyphus naticoides*, *Cepaea vindobonensis*, *Helix pomatia* și *Cerithium* sp. He did not mention any technological traces of any of those shells, but the foreign characteristic of these make us to believe that they were gathered with the purpose of being used as raw materials for adornments²².

Some gastropods shells discovered in the Ist level of the Drobeta-Turnu Severin-Schela Cladovei are also mentioned, but the authors of the research do not detail the subject²³.

At Dubova-Cuina Turcului, from the first levels (Ist – IInd) one of the most important assemblage of Epipaleolithic gastropod and lamellibranchiate shell adornments were discovered. Six species of local fossil and subfossil were attested. In the first level two *Dentalium* shells were mentioned (one of them broken and one entire). From the second level, a *Dentalium* shell and 52 perforated shells were mentioned, all belonging to following species: *Theodoxus transversalis*; *Theodoxus danubialis*; *Lithoglyphus naticoides* (the most); *Nassa (Cyclope) neritea*; *Zebrina detrita*²⁴.

In another site, Dubova-Peștera Climente II a broken *Dentalium* shell from the Epipaleolithic level was found²⁵.

During the archaeological research of Ostrovul Banului, in the epigravettian level, a broken *Dentalium* shell and 20 shells were found, belonging to the local species, *Theodoxus danubialis* fașconated using splitting²⁶.

In '70 Eugen Comșa summed up the data regarding the Neolithic and Eneolithic *Dentalium* discoveries from the settlements and necropolises from Andolina, Ceamurlia de Jos, Cernica, Glina, Vădastra and Vărăști²⁷.

²⁰ Moroșan 1938; Beldiman 2004b, with literature.

²¹ Cărciumaru, Mărgărit *et alii* 2003; Beldiman 2004b, with literature.

²² Mogoșanu, 1971; Beldiman 2004b, with literature.

²³ Boroneanț, 1980; Beldiman 2004b, with literature.

²⁴ Grossu 1970; Păunescu, 1978; Beldiman 2004b, with literature.

²⁵ Boroneanț 1970; Beldiman 2004b, with literature.

²⁶ Boroneanț 1979; Beldiman 2004b, with literature.

²⁷ Comșa 1973.

For the Bronze Age, respectively the Wietenberg culture, there is a very well documented article written in 1984 by Tiberiu Jurcsák in which the author refers to the discoveries from the well-known settlement from Derșida (Jurcsák 1984). In this article, the author mentions the existence of more than 200 *Dentalium* shells from which 86 are preserved in the Museum of Oradea²⁸. There are more analogies that should be mentioned for this type of artefacts: Piatra Craivii, Sântimbru, Țelna²⁹.

For the Poiana Ruscă Mountains we have the data regarding the fossil deposit from Buituri that was mentioned in the XIXth century in literature as an important paleontological site³⁰. The situation is similar with the one from Dreșida where there is also a fossil deposit where from the shells might have been gathered.

Recently, the discoveries from Cauce Cave attested the using of *Dentalium* shells in the Wietenberg culture. The two *Dentalium* shell beads found in the grave no. 1/1998 are similar from a morphological and a typological point of view. Additionally, these were discovered in anatomical connexion, respectively in the neck area. This fact suggests the idea of using the beads as elements in a necklace³¹.

In Europe there are a lot of discoveries where beads made of *Dentalium* in combination with other types of shell beads or teeth were used as necklaces. The analogies presented are especially morphological. We mention selectively some of these discoveries coming from the archaeological sites from Western Europe: the South of France (The Pirinei Mountains area or the Mediterranean shore)³² or Spain³³.

In South-East European areas, there are a lot of discoveries of this type of shells. We mention only few of them: Cave Bacho-Kiro from Bulgaria³⁴, Vinča-Belo Brdo³⁵, Durankulak³⁶ or Varna³⁷.

For the Neolithic of Hungary, the *Dentalium* beads were found in a hoard (which was dated from Lengyel culture). The hoard was found in 1896, on the southern region of Felsőörs. It contained adornments made of 280 mollusks some red stone pearls which were deposited in a clay pot. The malacological investigation revealed the presence of *Scaphopials*, more precisely, the species *Dentalium badense* Partsch, 1856. The authors mention Várpalota (30 kilometers

²⁸ Jurcsák 1984, 111; fig. 1-4.

²⁹ Andrișoiu 1992, 46, 208, pl. 40/12-13; Rîșcuța 1995.

³⁰ Luca *et alii* 1998; Băicoană 1999; Roman 2008, 22.

³¹ Roman *et alii* 2000, 14-15; Luca *et alii* 2004, 48-49, 237, pl. VI/1-2; Sztancs, Beldiman 2004, 102; Luca *et alii* 2005, 180; Roman 2008, 122.

³² Taborin 1991, 7-11.

³³ Baldeon 1985, 163; Álvarez Fernández 2006, 253; Jover Maestre, Luján Navas 2010, 110; Luján Navas, Jover Maestre 2008.

³⁴ Kozłowski 1991, 33-43; Zilhão 2008, 55.

³⁵ Dimitrijević 2010.

³⁶ Todorova 2002.

³⁷ Chapman 2011.

from the place of discovery) as the source of collecting mollusks which were gathered in the hoard³⁸.

In an analysis regarding the Neolithic graves of the Southern Transdanubian region reveals the fact that the fossil *Dentalium* shells were used for adornments. The proportion presented by the author of study is proportion of 14.75%³⁹.

At the Baden cemetery from Budakalász, most of the beads are made of *Dentalium* shells (662 – 19.22%). The author of the archaeomalacological research presents the main fossil deposits from area and underlines the fact that the beads were made of local shells⁴⁰. Also, there is described an important procedure regarding the combination between the *Dentalium* beads and copper⁴¹. The discoveries from Budakalász are very important because they testify the way in which the raw materials were used for adornments. The necklaces were made by combining the shell beads with the ones made of copper, limestone, clay or teeth⁴². The study is very important because it presents also the fossil deposits used for obtaining these raw materials.

The using of *Dentalium* shells in Early Bronze Age is attested by the discoveries of this type of beads in the necropolis from Hernádkak from Hungary. These are mentioned in the grave no. 54, the grave no. 78 and in the grave no. 129⁴³.

The using of *Dentalium* shells in the Middle Bronze Age is also attested by discoveries from Central European area. In this context, we should mention the important contribution of István Bóna, *Die Mittlere Bronzezeit Ungarns und ihre Südöstlichen Beziehungen* where a lot of *Dentalium* shell adornments are presented. We mention the grave no. 64 from⁴⁴ and the grave no. 11 from Gáta⁴⁵. These are only two discoveries from the ones that are presented in the monograph⁴⁶.

For the Gáta-Wieselburg culture, Middle Bronze Age, we have a very recent publication related to the adornments made of fossil *Dentalium* shells discovered in the graves⁴⁷. The authors mention the using of the beads in necklaces with bronze spirals. The sites quoted are *Hegyesalom*, grave no. 5 where were discovered 3 row necklaces made from 10 bronze spirals and 6 *Dentalium* shells⁴⁸ and grave no. 21 where from comes a row necklace made from bronze spirals and *Dentalium*

³⁸ Regenye *et alii* 2009, 421 sqq.

³⁹ Sümegi 2009b, 340, table 4.

⁴⁰ Sümegi 2009a, 426; Sümegi 2009b, 338.

⁴¹ Sümegi 2009a, 428, pl. 7-8.

⁴² Siklosi 2004, 22.

⁴³ The grave no. 54 – Schalk 1992, 338, fig. 13/11; 26/4; the grave no. 78 – Schalk 1992, 140; fig. 16/7; the grave no. 129 – Schalk 1992, 365; fig. 25/7; 32/4-8.

⁴⁴ Bóna 1975, fig. 119/15.

⁴⁵ Bóna 1975, fig. 277/11.

⁴⁶ Bóna 1975.

⁴⁷ Nagy, Figler 2009.

⁴⁸ Nagy, Figler 2009, fig. 1 and 2.

shells; *Szeleste* where in an isolated grave were discovered 5 *Dentalium* shell beads around the skull⁴⁹.

These are only a small part of analogies mentioned in the literature. We have also this type of discoveries dated from Bronze Age in actual territory of Austria, Germany (Deutschkreutz, Jois, Gattendorf)⁵⁰ or southern part of Europe – Greece⁵¹.

All these discoveries, most of them from the graves, sustain the hypothesis formulated at the beginning of the study that these fossil shells were used as adornments.

Conclusions

The discovery of the two tubular *Dentalium* beads allowed us to analyse in detail the relevant clues regarding the manufacturing chain of this type of artefacts and the way in which they were used.

The shaping of the beads was made using the transversal cutting and fracture on both extremities. The intense bluntness and polish of extremities' edges and of the objects' surfaces suggest a relative long period of using by free axial hanging on a string, probably in a necklace (with other perforated elements, other types of beads made of clay, lithic materials or skeletal materials).

Also, the present approach gave us the opportunity of review the using of *Dentalium* shells as adornments in Romania. Here we mention the Epipaleolithic discoveries from Iron Gates area (the Ist and the IInd archaeological levels from Dubova-Cuina Turcului; the first archaeological level from Dubova-Peștera Climente II; the first archaeological level from Ostrovul Banului. Also we quoted some of analogies from international literature. This is due to the fact that the fossil deposits were intensely used for obtaining raw materials for adornments.

Concluding, we may assert that this article contributes at the repertoire of shell adornments (with a special view in the Bronze Age) in our area where there are important economical resources and fossil deposits which were known and systematically used since Prehistory.

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⁴⁹ Nagy, Figler 2009, 261; fig. 7/7.

⁵⁰ Nagy, Figler 2009, 257.

⁵¹ McDonald, Wilkie 1992.

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Literature

- Álvarez Fernández 2006
 Álvarez Fernández, Esteban, *Los objetos de adorno-colgantes del Paleolítico Superior y del Mesolítico en la Cornisa Cantábrica y en el Valle del Ebro: una visión europea*, Salamanca.
- Andrițoiu 1992
 Andrițoiu, Ioan, *Civilizația tracilor din sud-vestul Transilvaniei în epoca bronzului*, Institutul Român de Tracologie, Bibliotheca Thracologica II, București.
- Angelescu et alii 2004
 Angelescu, Mircea-Victor; Oberländer-Târnoaveanu, Irina; Vasilescu, Florela (coord.), *Cronica cercetărilor arheologice din România. Campania 2003. A XXXVIII-a Sesiune națională de rapoarte arheologice, Cluj-Napoca, 26-29 mai 2004*, CIMEC, București.
- Baicoană 1999
 Baicoană, Marinaș, *Moluște descoperite în urma săpăturilor arheologice în Peștera de la Cauce*, Speomond, 4, 28-29.
- Baldeon 1985
 Baldeon, Amelia, *Estudio de las industrias lítica y ósea de Erralla*, in Munibe, 37, 123-185.
- Barge-Mahieu 1991
 Barge-Mahieu, Hélène, *Fiche coquillages néolithiques*, in Barge-Mahieu, Bellier, Camps-Fabrer et alii 1991, 17 p.
- Barge-Mahieu, Bellier, Camps-Fabrer et alii 1991
 Barge-Mahieu, Hélène; Bellier Claire; Camps-Fabrer, Henriette et alii, *Fiches typologiques de l'industrie osseuse préhistorique. Cahier IV: Objets de parure*, UISPP, Commission de nomenclature sur l'industrie de l'os préhistorique, Publications de l'Université de Provence, Aix-en-Provence.
- Barge-Mahieu, Taborin 1991
 Barge-Mahieu, Hélène; Taborin, Yvette, *Fiche générale des objets de parure (0)*, in Barge-Mahieu, Bellier, Camps-Fabrer et alii 1991, 19 p.
- Beldiman 1999
 Beldiman, Corneliu, *Industria materiilor dure animale în paleoliticul superior, epipaleolitic și neoliticul timpuriu pe teritoriul României*, teză de doctorat sub conducerea dr. S. Marinescu-Bîlcu, Institutul de Arheologie «Vasile Pârvan» al Academiei Române, București.
- Beldiman 2003
 Beldiman, Corneliu, *Recenzie la Fiches typologiques de l'industrie osseuse préhistorique. Cahiers I-X*, RevBist, 17, 372-386.
- Beldiman 2004a
 Beldiman, Corneliu, *Parures paléolithiques et épipaléolithiques de Roumanie (25 000-10 000 BP): typologie et technologie*, in V. Dujardin, éd., *Table Ronde sur le Paléolithique supérieur onsum. Industrie osseuse et parures du Solutréen au Magdalénien en Europe*, Angoulême (Charente, France), 28-30 mars 2003, Mémoires de la SPF, Paris.
- Beldiman
 Beldiman, Corneliu, *Art mobilier au Paléolithique supérieur en*

- 2004b Roumanie, in M. Otte, éd., La Spiritualité.Colloque. Service de Préhistoire de l'Université de Liège, UISPP, 8ème Commission: Paléolithique supérieur, 10-12 décembre 2003, ERAUL, Liège.
- Beldiman 2004c Beldiman, Corneliu, *La parure au Paléolithique supérieur et à l'Épipaléolithique en Roumanie: le coquillage* (manuscript).
- Beldiman 2004d Beldiman Corneliu, *Descrierea materialului arheologic*, in Luca, Roman, Diaconescu 2004, 75-79.
- Beldiman 2004e Beldiman Corneliu, *Parures préhistoriques de Roumanie: dents percées paléolithiques et épipaléolithiques (25 000-10 000 BP)*, MemAntiq, 23, 69-102.
- Beldiman 2007 Beldiman, Corneliu, *Industria materiilor dure animale în preistoria României. Resurse naturale, comunități umane și tehnologie din paleoliticul superior până în neoliticul timpuriu*, Asociația Română de Arheologie, Studii de Preistorie – Supplementum 2, București.
- Beldiman et alii 2004 Beldiman, Corneliu; Luca, Sabin Adrian; Roman, Cristian C.; Diaconescu, Dragoș, *Cerișor, com. Lelese, jud. Hunedoara. Industria materiilor dure animale*, in Angelescu et alii 2004, 85-94, 469-475.
- Beldiman, Sztancs 2004 Beldiman, Corneliu; Sztancs, Diana-Maria, *Industria materiilor dure animale în cadrul culturii Starčevo-Criș din sud-vestul Transilvaniei: o lingură-spatulă descoperită în Peștera Cauce, sat Cerișor, com. Lelese, jud. Hunedoara*, Corviniana, 8, 27-56.
- Beldiman, Sztancs 2005 Beldiman, Corneliu; Sztancs, Diana-Maria, *Industria preistorică a materiilor dure animale din Peștera Cauce*, in Luca et alii 2005.
- Blischke 2002 Blischke, Jobst, *Gräberfelder als Spiegel der historischer Entwicklung während der mittleren Bronzezeit im mittleren Donaugebiet*, Berlin.
- Bóna 1975 Bóna, István, *Die Mittlere Bronzezeit Ungarns und ihre Südöstlichen Beziehungen*, Budapest.
- Bondár, Raczky 2009 Bondár, Mária, Raczky, Pál (ed.), *The Copper Age cemetery of Budakalász*, Budapest.
- Boroneanț 1970 Boroneanț, Vasile, *La période épipaléolithique sur la rive roumaine des Portes de Fer du Danube*, Prähistorische Zeitschrift, 45, 1, 1-25.
- Boroneanț 1979 Boroneanț, Vasile, *Descoperiri arheologice în unele peșteri din Defileul Dunării*, in T. Orghidan, Șt. Negrea (ed.), Speologia, Academia Română, Grupul de cercetări complexe Porțile de Fier, Seria monografică, București, 140-185.
- Boroneanț 1980 Boroneanț, Vasile, *Probleme ale culturii Schela Cladovei-Lepenski Vir în lumina noilor cercetări*, Drobeta, 4, 27-42.
- Cârciumaru, Cârciumaru Marin; Mărgărit Monica et alii, *Les découvertes d'art*

- Mărgărit et alii 2003 *paléolithique de la vallée de Bistrița dans le contexte de l'art mobilier paléolithique de Roumanie. Annales de l'Université «Valahia» de Târgoviste, Séction d'Archéologie et d'Histoire, 4-5, 16-27.*
- Chapman 2011 Chapman, John, *Spondylus, Dentalium*, in *Studia Praehistorica, Treasures of the Varna Chalcolithic Necropolis*, <http://www.jrank.org/history/pages/6598/Varna.html>. (accessed at 2nd of April 2011, 19.40)
- Comșa 1973 Comșa, Eugen, *Parures néolithiques en coquillage marins découvertes en territoire roumain*, Dacia, NS, 17, 61-76.
- Dimitrijević 2010 Dimitrijević, Vesna *Dentalium beads and Neogene fossil sites exploitation at the Late Neolithic / Eneolithic site Vinča – Belo Brdo*, in *BoneCommons*, http://www.alexandriaarchive.org/bonecommons/exhibits/show/ica2010paris/session3_4/item/1100 (accessed March 31, 2011).
- Grossu 1970 Grossu, Alexandru V., *Unele observații asupra gasteropodelor descoperite în straturile romanello-aziliene de la Cuina Turcului*, SCIVA, 21, 1, 45.
- Ilon 2009 Ilon, Gábor (editor), *ΜΩΜΟΣ VI. Őskoros kutatók VI. Összejövetelének konferenciakötete. Nyersanyagok és kereskedelem Kőszeg, 2009. Március 19 – 21*, Szombathely.
- Jover Maestre, Luján Navas 2010 Jover Maestre, Francisco Javier, Alicia, Luján Navas, *El consume de conchas marinas durante la Edad del Bronce en la fachada mediterránea de la Península Ibérica*, in *Complutum*, 2010, Vol. 21 (1), 101-122.
- Jurcsák 1984 Jurcsák, Tiberiu, *Obiecte de podoabă de origine sudică în așezarea de epoca bronzului de la Derșida (jud. Sălaj)*, ActaMP, 8, 111-119.
- Kozłowski 1991 Kozłowski Janusz K., *L'art de la Préhistoire en Europe orientale*, Paris.
- Luca et alii 2004 Luca, Sabin Adrian; Roman, Cristian C.; Diaconescu, Dragoș, *Cercetări arheologice în Peștera Cauce (I) (sat Cerișor, com. Lelese, jud. Hunedoara)*. Cu contribuții de Eugen Orlandea, Cosmin Suciu și Corneliu Beldiman, Universitatea «Lucian Blaga» Sibiu, Institutul pentru Cercetarea și Valorificarea Patrimoniului Cultural Transilvănean în Context European, Bibliotheca Septemcastrensis IV, Sibiu.
- Luca et alii 2005 Luca, Sabin Adrian; Roman, Cristian C.; Diaconescu, Dragoș; Ciugudean, Horia Ion; El Susi, Georgeta; Beldiman, Corneliu, *Cercetări arheologice în Peștera Cauce (II) (sat Cerișor, com. Lelese, jud. Hunedoara)*, Universitatea «Lucian Blaga» Sibiu, Institutul pentru Cercetarea și Valorificarea Patrimoniului Cultural Transilvănean în Context European, Bibliotheca

- Septemcastrensis V, Sibiu.
- Luca *et alii* 1998 Luca, Sabin Adrian; Sonoc, Alexandru; Roman, Cristian C.; Cerișer, Nicolae, *Cercetări cu privire la preistoria zonei Hunedoara*, Corviniana, 4, 23-61.
- Luján Navas, Jover Maestre 2008 Luján Navas, Alicia, Jover Maestre, Francisco Javier, *El aprovechamiento de recursos malacológicos marinos durante la Edad del Bronce en el levante de la Península Ibérica*, in Archivo de Prehistoria Levantina, Vol. XXVII, 81-114.
- McDonald, Wilkie 1992 McDonald William, Wilkie Nancy, *Excavations at Nichoria in Southwest Greece. Volume II. The Bronze Age Occupations*, Minnesota.
- Mogoșanu 1971 Mogoșanu, Florea, *Rezultatele ultimelor săpături arheologice privind paleoliticul din Peștera Hoților de la Băile Herculane*, SCIVA, 22, 1, 3-14.
- Moreno Nuño, Zapata 1995 Moreno Nuño, Ruth, Zapata, Lydia, *Malacofauna del depósito sepulcral de Pico Ramos, Muskiz, Biskaia*, in Munibe, 47, 187-197.
- Moroșan 1938 Moroșan, Nicolae N., *La station paléolithique de grotte de Stânca Ripiceni*, Dacia, 5-6, 1935-1936 (1938), 1-21.
- Nagy, Figler 2009 Nagy, Marcella, Figler, András, *Dentálumékszerek a Gáta-Wieselburg kultúra temetkezéseiben* in Ilon 2009, 255-266.
- Nicolăescu-Plopșor *et alii* 1957 Nicolăescu-Plopșor, Constantin S. *et alii*, *Șantierul arheologic Ohaba-Ponor (reg. Hunedoara, r. Hațeg)*, Materiale, 3, 41-49.
- Păunescu 1978 Păunescu, Alexandru, *Epipaleoliticul de la Cuina Turcului-Dubova*, Tibiscus, 5, 11-56.
- Regenye *et alii* 2009 Regenye, Judit, Biró, Katalin, Fűköh, Levente, *Egy neolitikus kincslelet töredékei* in Ilon 2009, 421-426.
- Rișcuța 1995 Rișcuța N., *Obiecte din os și corn în cultura Wietenberg*, in BCȘS, 1, 53-60.
- Roman 2008 Roman, Cristian C., *Habitatul uman în peșterile din sud-vestul Transilvaniei*, Sibiu.
- Roman *et alii* 2000 Roman, Cristian C.; Diaconescu, Dragoș; Luca, Sabin Adrian, *Săpături arheologice în Peștera nr. 1 (Peștera Mare) de la Cerișor (com. Lelese, jud. Hunedoara)*, Corviniana, 6, 7-59.
- Schalk 1992 Schalk, Emily, *Das Gräberfeld von Hernádkak. Studien zum beginn der Frühbronzezeit in nordöstlichen Karpatenbecken*, Berlin.
- Siklosi 2004 Siklosi, Zsuzsanna, *Prestige goods in the Neolithic of the Carpathian Basin. Material manifestations of social differentiation*, in Acta Archaeologica Academiae Scientiarum Hung. 55, 1-62.
- Sümegei 2009a Sümegei, Pál, *The archaeozoological of the beads and molluscs*

- from the Late Copper Age Baden cemetery at Budakalász, in Bondár, Raczky 2009, 409-436.
- Sümegei 2009b Sümegei Pál, *Őskori kultúrák ékszereinek elemzése – lokális és távolsági anyagok a csiga és kagylóékszerek között* in Ilon 2009, 335-346.
- Sztancs, Beldiman 2004 Sztancs, Diana-Maria, Beldiman, Corneliu, *Piese de podoabă din materii dure animale descoperite în Peștera Mare, sat Cerișor, com. Lelese, jud. Hunedoara*, Corviniana, 8, 97-109.
- Taborin 1991 Taborin, Yvette, *Fiche coquillages façonnés*, in Barge-Mahieu, Bellier, Camps-Fabrer et alii 1991, 6 p.
- Taborin 1993 Taborin Yvette, *La parure en coquillage au Paléolithique*, XXIX^e Supplément à Gallia-Préhistoire, Paris.
- Terzea, Beldiman 2003 Terzea, Elena; Beldiman, Corneliu, *Peștera nr. 1 din Dâmbul Colibii: date paleontologice și arheologice*, RevBist, 17, 33-43.
- Todorova 2002 Todorova, Henrieta, *Durankulak. Die Prähistorischen Gräberfelder*, Sofia.
- Zilhão 2008 Zilhão, João, *Modernos y Neandertales en la transición del Paleolítico medio al superior en Europa*, Espacio, Tiempo y Forma. Serie I, Nueva época. Prehistoria y Arqueología, t. 1, 2008, 47-58.

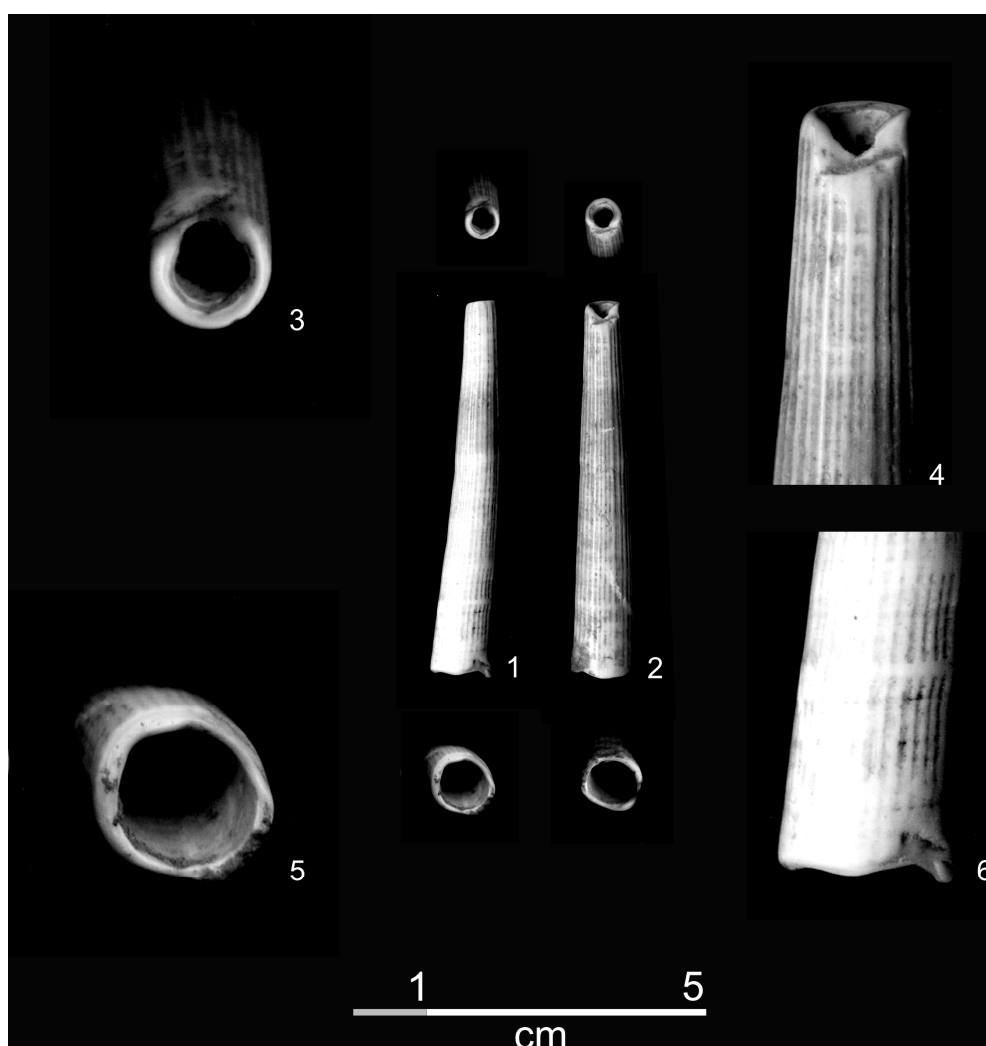


Fig. 1 CRM/III 1: 1 – 2 general views; 3 – 4 views of distal extremities;
5 – 6 views of proximal extremities.

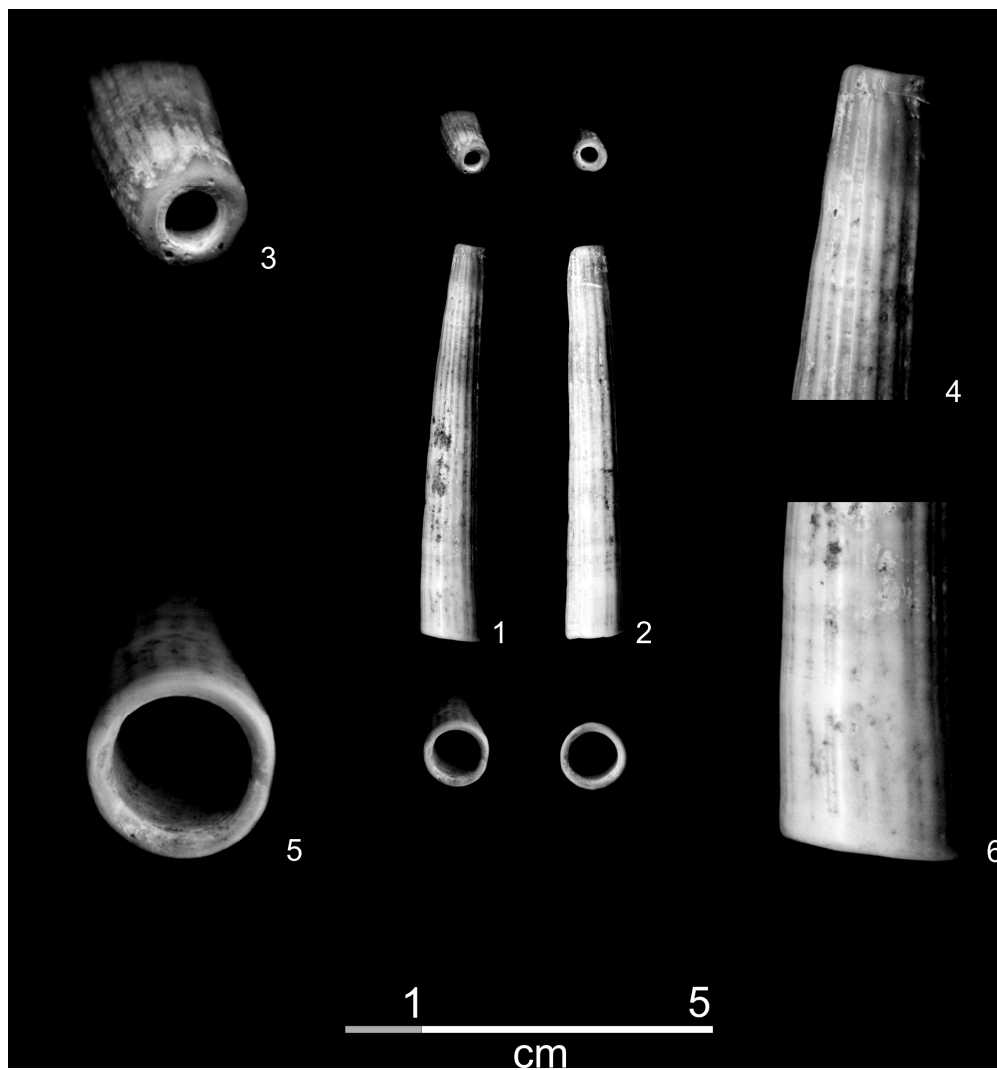


Fig. 2 CRM/III 2: 1 – 2 general view; 3 – 4 views of distal extremities;
5 – 6 views of proximal extremities.

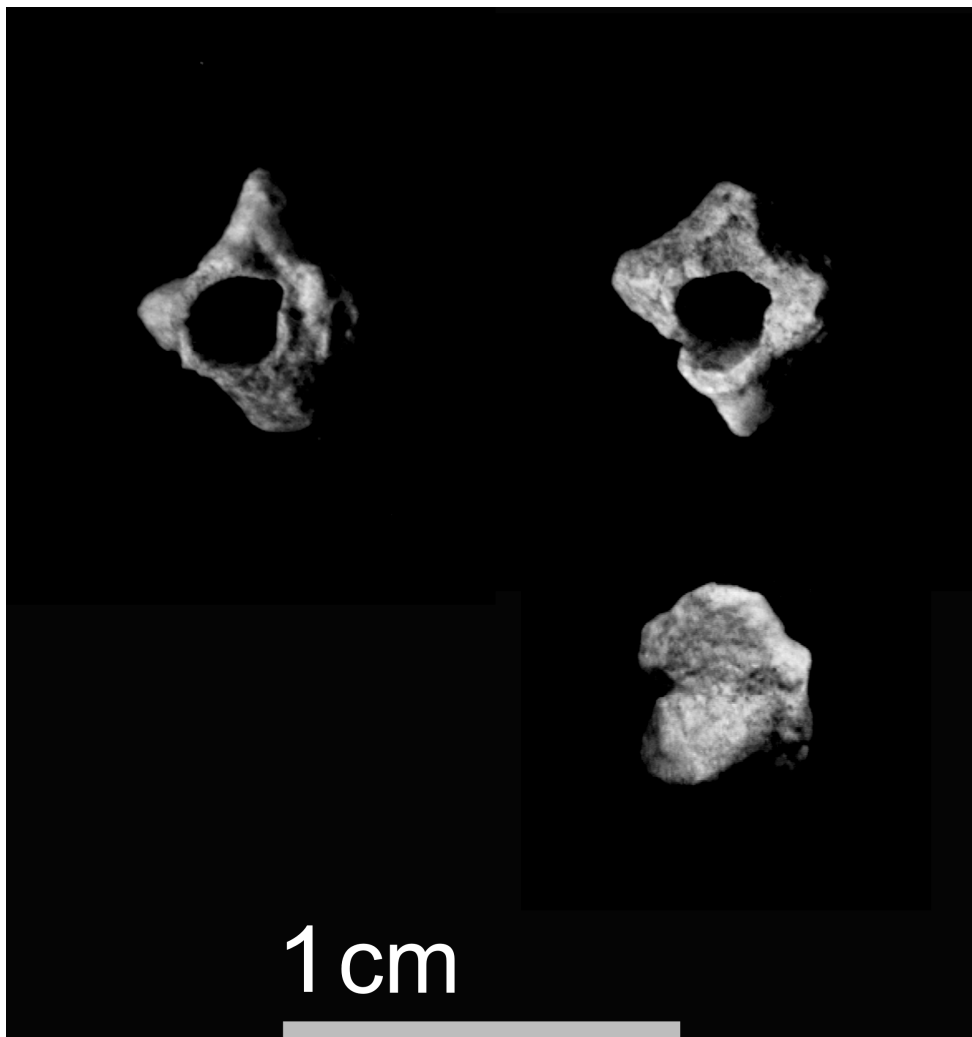


Fig. 3 CRM: ceramic bead found in the interior of one tubular *Dentalium* bead.

ACTA TERRAE SEPTEMCASTRENSIS

XI, 2012

**“LUCIAN BLAGA” UNIVERSITY OF SIBIU
FACULTY OF HISTORY AND PATRIMONY
INSTITUTE FOR THE STUDY AND VALORIFICATION OF THE
TRANSYLVANIAN PATRIMONY IN EUROPEAN CONTEXT**

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**LA TÈNE DISCOVERIES IN THE SETTLEMENT
OF TURDAȘ-LUNCĂ (HUNEDOARA COUNTY, ROMANIA)**

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Keywords: *La Tène, Dacians, ritual pit, Turdaș, Hunedoara County, Romania.*

Abstract: *In the settlement of Turdaș-Luncă several features belonging to the La Tène period have been discovered. After studying the archaeological materials discovered on this site, we can say that they belong to two different horizons. Features 139 and 1060 can be dated to the 5th-4th centuries BC and belong to the early phase of the Dacian civilization, while the other features can be chronologically placed between the 1st century BC-1st century AD. However, a more exact dating is also possible due to the fruit bowl found in feature 1001, which dates from the 1st century AD. Regarding the functionality of these features, we are of the opinion that these are pits with ritual depositions.*

The preventive archaeological research⁵² has been conducted by the National Brukenthal Museum with the purpose of saving the archaeological remains encountered in the area affected by the future investment objective - "Deva-Orăștie Bypass on highway standards". From a geographical point of view, the site of Turdaș - Luncă is placed on the left side of the Mureș Valley, 2.5 km from Turdaș village, south-west from it, near the DN7 national road.

⁵² The research was conducted during March-November 2011, by a team under the coordination of Professor Sabin Adrian Luca, PhD, whom we thank for his kindness and for the archaeological materials, the information that he made available for us. The research was carried out by the following archaeologists: Cosmin Ioan Suci, PhD, Lecturer (Lucian Blaga University of Sibiu), Florian Chioar-Dumitrescu, PhD, and Adrian Luca (National Brukenthal Museum), Sorin Tincu, PhD (Corvin Castel Museum Hunedoara) - whom we also thank for their support, as well as the authors of this article.

In the settlement of Turdaş-Luncă, several features belonging to the La Tène period have been discovered in two distinct areas, conventionally named by us as area 1 and area 2 (Pl. I; Fig. a).

The features of Area 1 are the following: 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008 (Pl. I, Fig. b), while the features of Area 2 are 139, 1060 (Pl. I, Fig. c).

The features of area 2

Feature 139 is an oval pit, with diameters of 1.9/1.46 m and a depth of 0.6 m (Pl. II, Fig. 1). The fill of the pit is dark grey, with yellow pigments and small pieces of charcoal. Inside the pit there was a level of deposition containing potsherds and bones (among which the skull of a dog and a sheep mandible). This level contained a potsherd which belongs to a type of vessels with straight walls, wide mouth and uncurved base (Crişan 1969, p. 72), which belongs to type II established by I.H. Crişan, early phase I, and is dated between 5th-6th centuries BC. Such vessels were discovered throughout the whole area of the Geto-Dacian civilization, both in Transylvania (Cluj-Mănăştur and Slimnic) and outside Transylvania (Cetatea II from Stăncesti, Butuceni, Poiana, Zimnicea), as well as in the territory between the Prut and Nistru rivers, in settlements like Solonceni and Vîhvatini (Crişan 1969, 75-77).

The discovered potsherd is handmade, brown and made of a coarse paste, with sand and pebble tempering; its firing is reduced. The rim is straight and the upper part of the vessel's body is decorated with conical knobs. The place below the rim, more precisely between the rim and the knobs, is decorated with a zigzag line (Pl. III, Fig. 1).

Feature 1060 is a circular pit in the upper part, with a diameter of 2 m, which gradually narrows to a depth of 1.4 m, then it descends straight and rectangular with rounded corners until a depth of 2.64 m; the dimensions of the sides are of 1.1 m (Pl. II, Fig. 2). In the upper part of the pit the fill is greyish-black and clayish, with charcoal pigments and potsherds; the walls of the pit are plated with river stones with diameters varying between 5 and 10 cm. This layer descends to the depth of 1.4 m, and is followed by another layer of fill, composed of sand and pebbles, without potsherds.

Inside the feature, in the upper layer of fill, three vessels were deposited, each at the depth of 1.2 m.

Vessel I

Bowl, with the following dimensions: rim diameter – 21.5 cm; maximum diameter – 24.5 cm; base diameter – 9.8 cm; height – 8.3 cm; wall thickness – 0.8 cm (Pl. III, Fig. 2).

The handmade bowl's outer surface is well-smoothed and its fine paste has sand and mica tempering; the firing is good and reduced, while the decoration consists of four elongated, downward pointing knobs which begin from the

maximum diameter of the pot. The vessel is brown on the outside and greyish-black in the inside. The rim is inverted.

The vessel can be attributed to the Proto-Dacian ceramics, type I, variant 1 (after I.H. Crișan), and dated between 6th-5th centuries BC (Crișan 1969, 52). Such vessels have the following features: inverted rim with rounded edge and straight base. They usually lack ornaments or, in some cases, are provided with four, sometimes perforated conical protrusions of different sizes, placed on the maximum diameter of the pot. These vessels are the most numerous, both in settlements and necropolises. Similar pieces were discovered in the Scythian inhumation graves from Târgu Mureș and Simeria (Pl. X, 11, 10; CXXVII 5, 2, I.H. Crișan).

Vessel II

Sack vessel with almost straight walls, having the following dimensions: rim diameter – 27 cm; maximum diameter – 28 cm; base diameter – 11.5 cm; height – 36 cm; wall thickness – 1.24 cm (Pl. III, Fig. 3).

The large sized vessel is handmade and has a semi-fine paste with sand and pebble tempering; its colour is pale brick, while its firing is weak and oxidant. It is decorated with two oval and elongated knobs which are placed perpendicularly on the vessel's body, slightly above its maximum diameter, and with two rows of fingertip impressions. One of these rows is placed on the upper part of the pot, just below the rim, while the other is placed between the two knobs (on their upper part). The rim of the pot is slightly everted and rounded.

The pot belongs to type II - characterized by wide rim and uncurved base - of the old phase, which was defined by I.H. Crișan and dated between 5th-4th centuries BC (Crișan 1969, 72). Such vessels were discovered in the whole area of the Geto-Dacian civilization and can be encountered both in Transylvania (Cluj-Mănăstur, Slimnic) and outside Transylvania (Cetatea II from Stâncești, Butuceni, Poiana, Zimnicea), as well as in the territory between the Prut and Dniester rivers, more exactly in Solonceni and Vîhvatini settlements (Crișan 1969, p. 75-77).

Vessel III

The third vessel is fragmentary, and only the upper part of the body was preserved. The pot is brown, with straight rim, coarse paste with sand, pebble and mica tempering; its firing is weak and reduced. It is decorated with notched knobs placed under the rim. It belongs to the same type as vessel II (Pl. III, Fig. 4).

The features of area 1

Feature 1001 is a circular pit with a diameter of 1.8 m and a depth of 0.66 m (Pl. 2, Fig. 3). The fill of the pit is compact, greyish-brown, with traces of adobe and charcoal. Inside the pit three restorable pots were found.

Vessel I

Fruit bowl (type V in I.H. Crișan's typology, dated to the 1st century AD).

Type V is represented by vessels which evolve from earlier types. The rim of these vessels is not so wide and everted, while their body, which became narrower and much deeper, generally keeps its semi-oval shape. The foot of these

pots is thin and bears a rib, while the base forms a pedestal. In the case of this type, the foot of some examples has shortened and, as a result, despite all its other features, the pot cannot be regarded as belonging to the high footed type. In comparison with the vessels of type IV, these vessels are smaller, better proportioned and, therefore, more elegant. This type can be chronologically placed in the 1st century AD, this being proven by the fact that in the settlement from Grădiştea Muncelului – Sarmizegetusa Regia only vessels of such type (fruit bowls) were discovered and they continue their existence even after the Roman occupation, both in and outside the Province. The foot of these pots becomes more and more shorter and their body is deep, as in the case of the vessels discovered at Cristeşti and Piatra Neamţ - Lutărie (Crişan 1969, p. 168).

The piece discovered by us is grey and wheel-turned, made of a fine paste with fine sand, mud and mica tempering, with good and reduced firing. Its dimensions are the following: rim diameter – 27.4 cm; base diameter – 12.2 cm; height – 18.2 cm; depth – 9.6 cm (Pl. IV, Fig. 1).

Vessel II

Bowl, type II in I.H. Crişan's typology, classical phase.

The bowls of type II, belonging to the classical period, are characterized by a more or less thickened rim, shoulder or, more precisely, a curving of the body, and an annular base (Crişan 1969, p. 180).

The example discovered by us is wheel-turned, and made of fine paste with fine sand and mud tempering. Its colour is whitish-grey, its firing good and reduced, while its body is well curved. Its dimensions are the following: rim diameter – 15.6 cm; maximum diameter – 16 cm; base diameter – 7.6 cm; height – 84.6 cm; wall thickness – 0.8 cm; depth – 4.2 cm (Pl. IV, Fig. 2).

Vessel III

Dacian cup (oil lamp) - the common type in the I.H. Crişan typology, belonging to the classical phase.

The main feature of these handmade pots is their truncated cone shape, with wide rim, narrow base and oblique walls. They are provided with a handle which begins under the rim and ends at the base of the vessel. In some cases, this handle is actually a continuation of the base, due to which the stability of pot increases. Usually, the paste of these pots contains many impurities (Crişan 1969, p. 153-154).

The piece discovered by us is handmade, and has a coarse, impure paste with large grained sand, pebble and mica tempering; its colour is reddish brown, while its firing weak and oxidant. Both inside and outside the pot, opposite the handle, there are traces of fumigation, resulted from usage. The pot is decorated with incised, parallel lines, placed on its rim; on the edge of the handle, the incised lines are crossed; on the edge of the base, the lines on the base half towards the handle are parallel, while the ones from the other half are crossed. The dimensions of the piece are the following: rim diameter – 14.2 cm; base diameter – 5.7 cm; height – 8 cm; depth – 5.2 cm (Pl. IV, Fig. 3).

Feature 1002 is a circular pit with a diameter of 1.2 m and a depth of 0.34 m (Pl. II, Fig. 4). The fill of the pit is compact, greyish-brown, with traces of adobe and charcoal. The potsherds discovered in this feature are decorated with incised lines and alveolar cordons. Judging from the decoration and the type of rim, which is everted, the potsherds can be dated to the same classical period (Pl. V).

Feature 1003 is a circular pit with a diameter of 1.7 m and a depth of 0.32 m (Pl. II, Fig. 5). The fill of the pit is compact, greyish brown, with traces of adobe and charcoal; inside the pit two restorable vessels were discovered. The feature was superposed by another, medieval feature.

Vessel I

This vessel is handmade, its paste is fine with sand and mica tempering. The surface of the pot is poorly smoothed and its colour is reddish-brown with black flecks. Its firing is good and oxidant. The upper part of the rim is decorated with a row of impressions made with a tool, while the upper part of the vessel's maximum diameter is decorated with raised cordons which bear incised, oblique lines. The dimensions of the vessel are the following: rim diameter – 14 cm; maximum diameter – 13 cm; base diameter – 10.2 cm; height – 23 cm (Pl. VI, Fig. 1).

Vessel II

Vessel II is fragmentary, only its upper part was preserved. Its rim is everted and the upper part of the vessel's maximum diameter is decorated with an alveolar cordon. It is handmade, with good, reduced firing, and made of a semi-fine paste with sand, pebbles and mica tempering (Pl. VI, Fig. 2).

Both pieces belong to the category of jar vessels from the third, classical phase, which is dated to the period between 1st century BC-1st century AD. The main features of these vessels are the following: narrow mouth, slightly thickened and everted rim, as well as curved shoulders. These vessels, used for food preparation, are generally medium sized, and are very frequently encountered both in the intra- and extra-Carpathian area of the Dacians; they are usually handmade (Crişan 1969, p. 161-162).

Inside the pit several other potsherds were discovered, which also belong to a category of vessels which can be dated to the classical period (1st century BC-1st century AD), with everted rim and decorated with raised cordons (Pl. VI, Fig. 3-9).

Feature 1004 is a circular pit with a diameter of 1.4 m and a depth of 1.4 m (Pl. II, Fig. 6). The fill of the pit is compact, greyish-brown and it contains traces of adobe, charcoal and small river stones (having a size of 5-6 cm).

Inside the pit two millstones of different sizes were discovered; the smaller one was deposited with its active part downwards, while the larger was deposited on its edge. Besides these, potsherds and large animal bones were also found.

The discovered potsherds date from the classical period of the Dacian civilization and are decorated with zigzag and straight lines made through polishing,

as well as incised lines, alveolar cordons and knobs; the rims are everted, while the bases are straight (Pl. VII).

Feature 1005 is a circular pit with a diameter of 2.7 m and a depth of 0.46 m (Pl. II, Fig. 7). The fill of the pit is compact, greyish-brown, with traces of adobe and charcoal. There were no archaeological materials inside the feature. Due to the type of the feature and the fact that it is nearby the other previously described features from area 1, we dated it to the same classical period.

Feature 1006 is a circular pit with a diameter of 1.12 m and a depth of 0.94 m (Pl. II, Fig. 8). The fill of the pit is compact, greyish-brown, with traces of adobe and charcoal.

Inside the pit potsherds belonging to different vessels were discovered, along with some sherds from a restorable jar vessel, decorated with an alveolar cordon (Pl. VIII, Fig. 1, 2), as well as a 4 cm long bronze plaque, provided with a rivet hole (Pl. VIII, Fig. 3). The materials discovered in this feature date from the classical period of the Dacian civilization.

Feature 1007 is a circular pit with a diameter of 1.6 m and a depth of 0.4 m (Pl. II, Fig. 9). The fill of the pit is compact, greyish-brown, with traces of adobe, charcoal and small river stones (about 5-6 cm).

Inside the pit, along with potsherds and large animal bones, the remains of a hearth were discovered which bears on its back traces of small sized river stones, large adobe fragments and loom weights.

The potsherds are decorated with raised cordons and incised lines; the rims are everted, and the bases straight and annular (Pl. IX); these materials are also dated to the classical period of the Dacian civilization.

Feature 1008 is a circular pit with a diameter of 2.1 m and a depth of 0.56 m (Pl. II, Fig. 10). The fill of the pit is compact, greyish-brown, with traces of adobe and charcoal.

Inside the feature, potsherds from the classical period of the Dacian civilization were found; such a fragment is decorated with a raised cordon which bears incised, oblique lines. Another fragment, more exactly a straight rim, belongs to a vessel with wide mouth (Pl. X). Along with these potsherds, remains of burnt clay plaster were also found.

After studying the archaeological materials discovered on this site, we can say that they belong to two different horizons.

The materials found in features 139 and 1060 can be dated to the 5th-4th centuries BC and belong to the early phase of the Dacian civilization.

The materials discovered in the other features can be chronologically placed in the 1st century BC-1st century AD. However, a more exact dating is also possible due to the fruit bowl found in feature 1001, which dates from the 1st century AD.

Regarding the functionality of these features, we are of the opinion that these are pits with ritual depositions. Such pits have also been discovered in other archaeological sites belonging to the same period, for example: a pit was discovered at Costești-*Cetățuie* (Glodariu et alli, 2000, no. 41); other five pits were discovered at Piatra Craivă, on the fifth terrace (Moga 1981, p. 110); another pit was discovered at Lupu (Alba county) in *Cimitirul Nou* (Gheorghiu 1999, nr. 79); such pits were also discovered in the settlement from Lancrăm-*Glod* (Gheorghiu 2005, p. 211).

BIBLIOGRAPHY

Crișan	1969	I.H. Crișan, Ceramica daco-getică. Cu specială privire la Transilvania, Bucharest, 1969.
Glodariu	2000	I. Glodariu, G. Florea, L. Suci, E. Iaroslavschi, G. Gheorghiu, A. Pescaru, C. Bodó, Costești, com. Orăștioara de Sus, jud. Hunedoara, punct Cetățuie, Cronica cercetărilor arheologice din România, 2000, nr. 41.
Gheorghiu	1999	G. Gheorghiu, I. Glodariu, V. Moga, L. Suci, Lupu-Cimitirul Nou, Jud. Alba, Cronica cercetărilor arheologice din România, 1999, nr. 79.
Gheorghiu	2005	G. Gheorghiu, Dacii pe cursul mijlociu al Mureșului, 2005.
Moga	1981	V. Moga, Așezarea și cetatea dacică de la Piatra Craivii (jud. Alba), Studii Dacice, 1981, p. 103 – 116.

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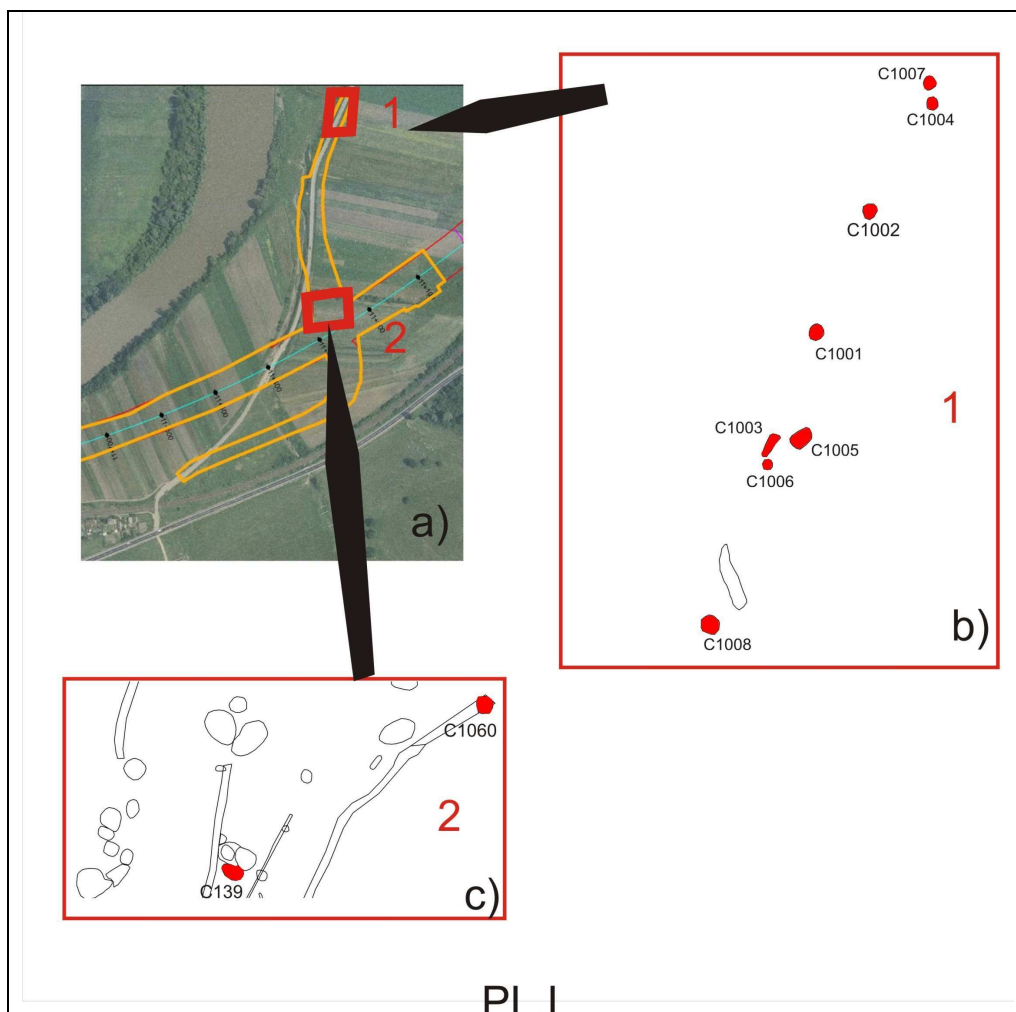
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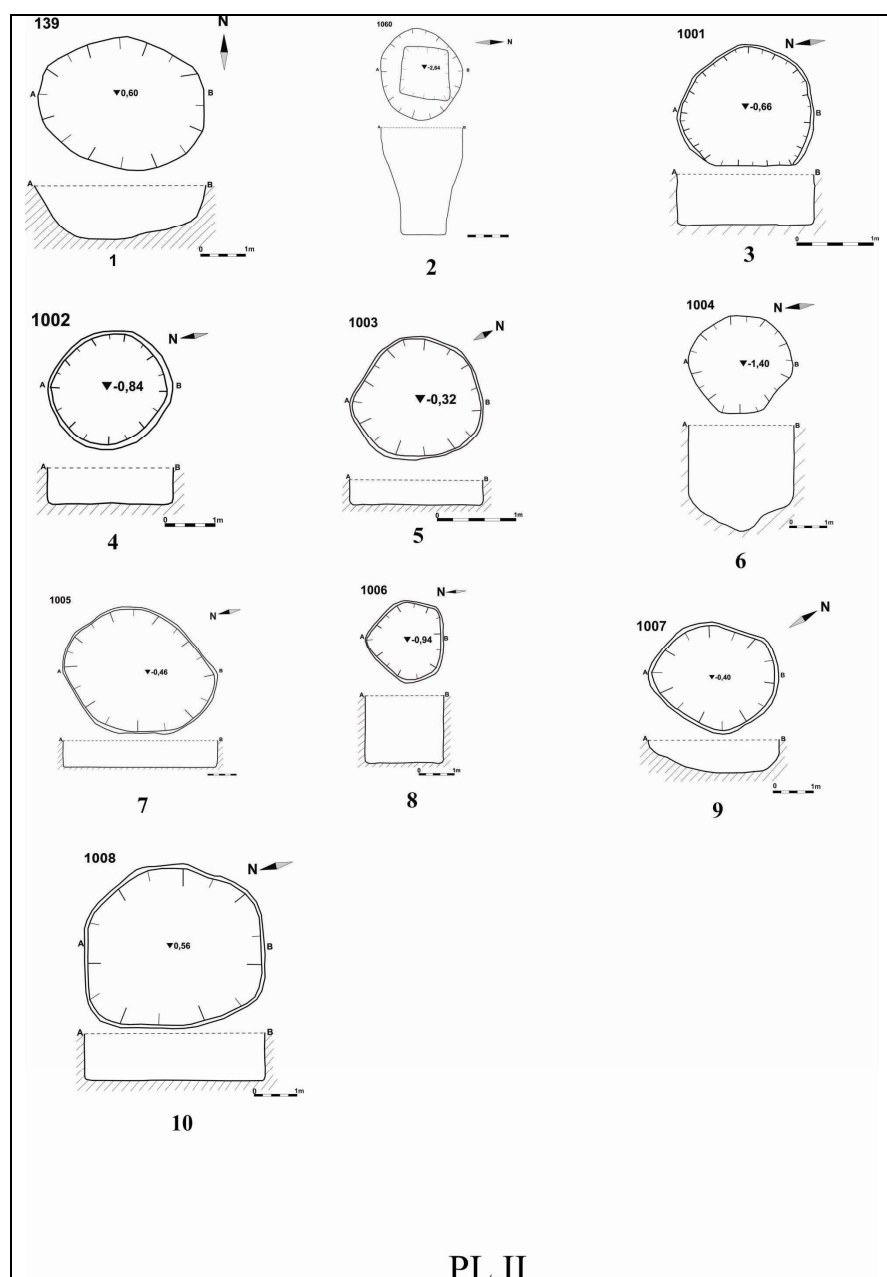
		bottom, there are several fingerprints which probably resulted during formation.
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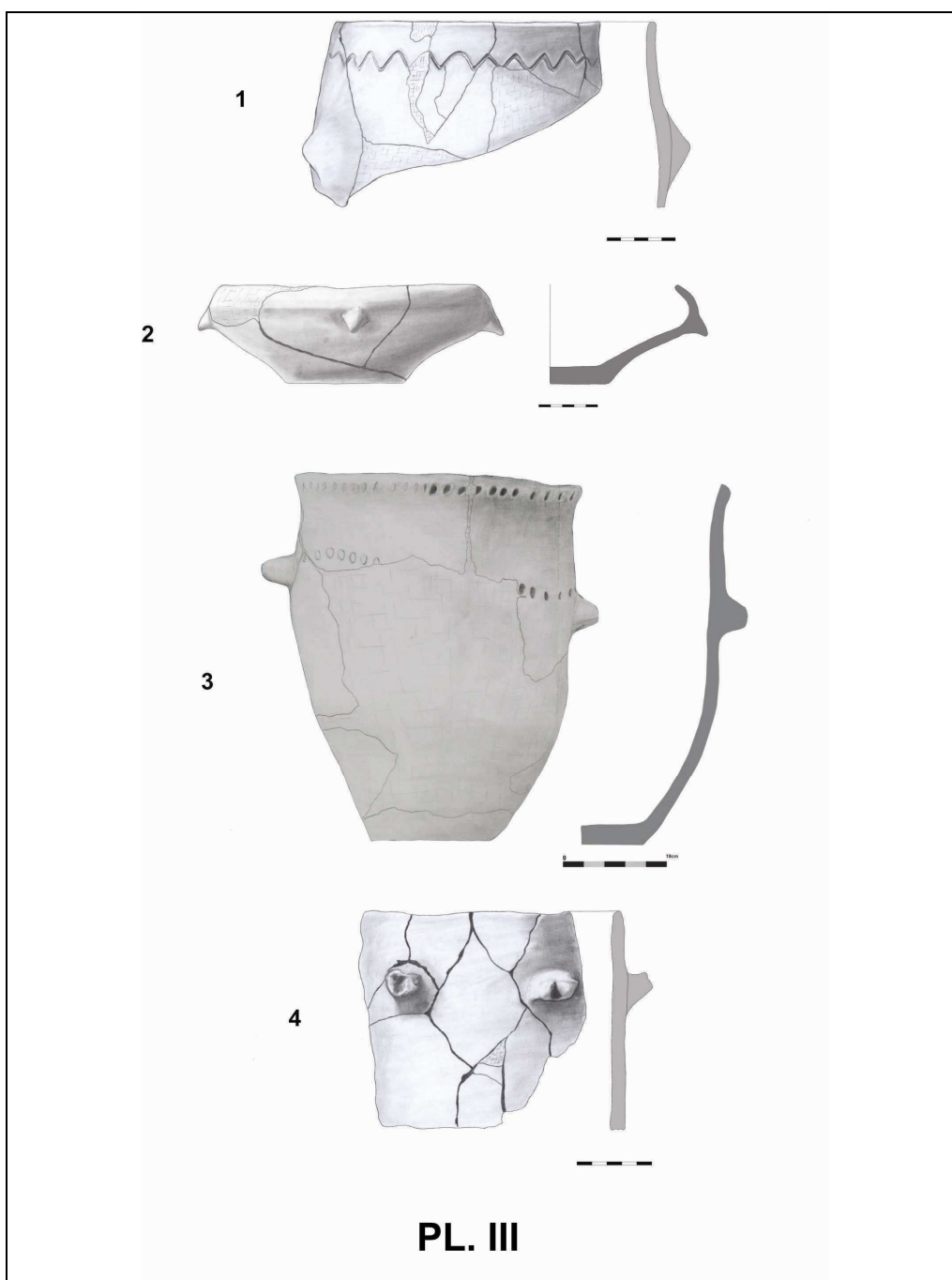
		tempering; greyish colour; good, reduced firing. The surface of the vessel is covered with a well polished slip. Slightly everted rim.
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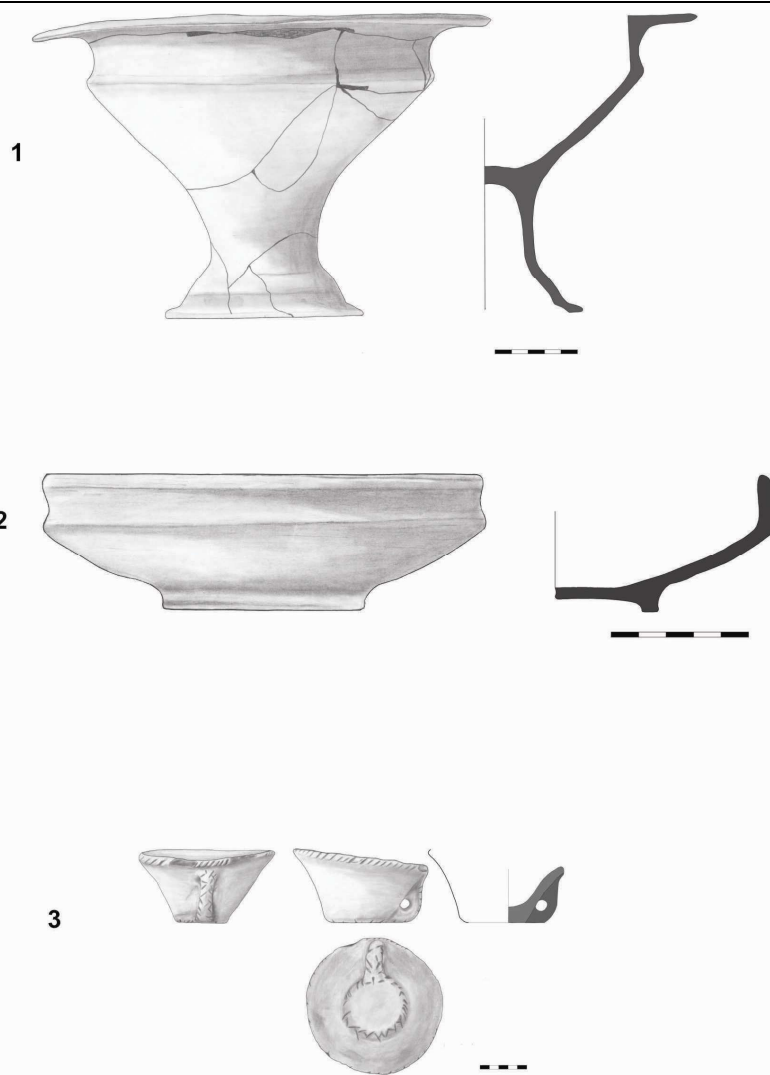
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	Photo 6	Feature 1007.

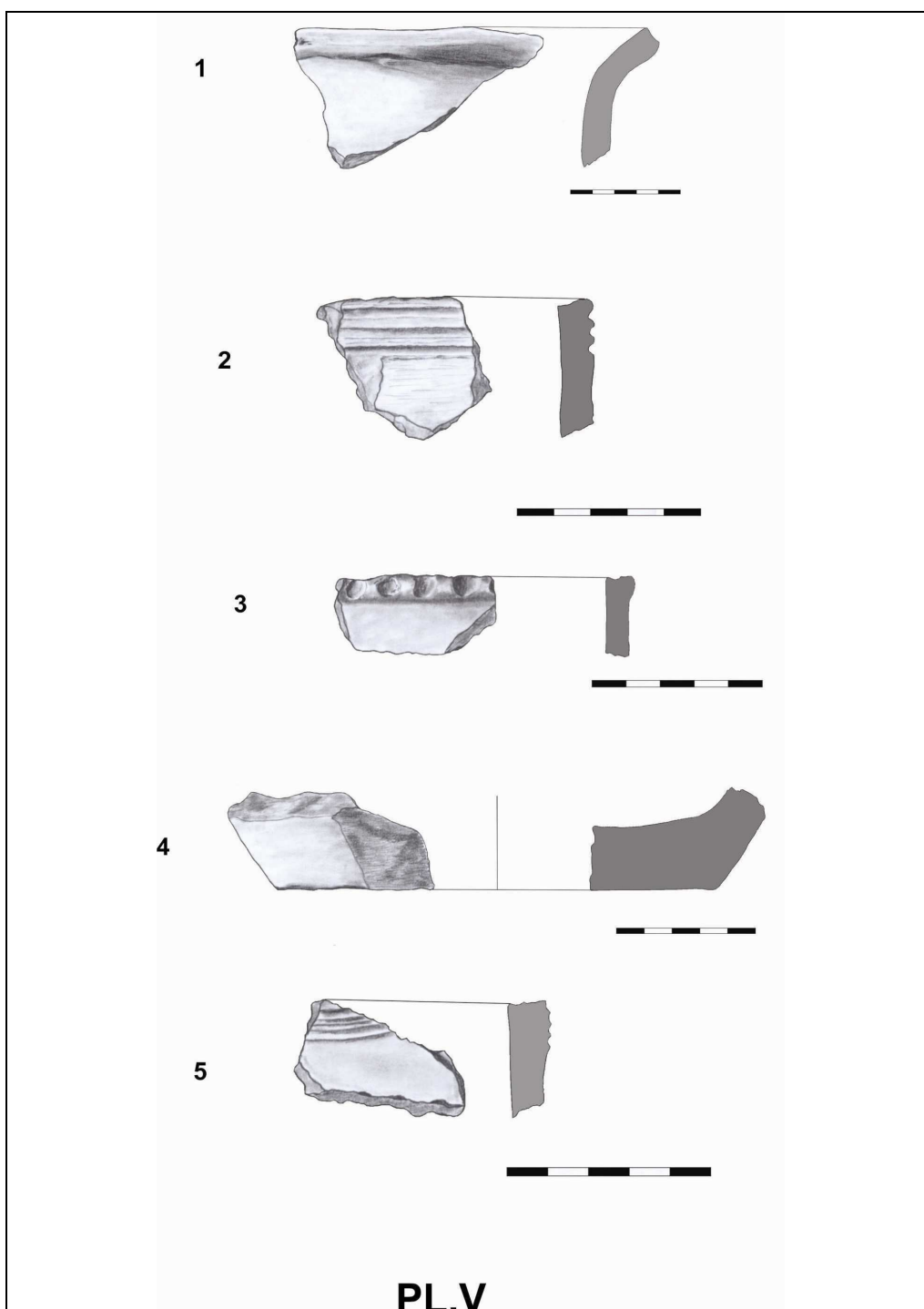


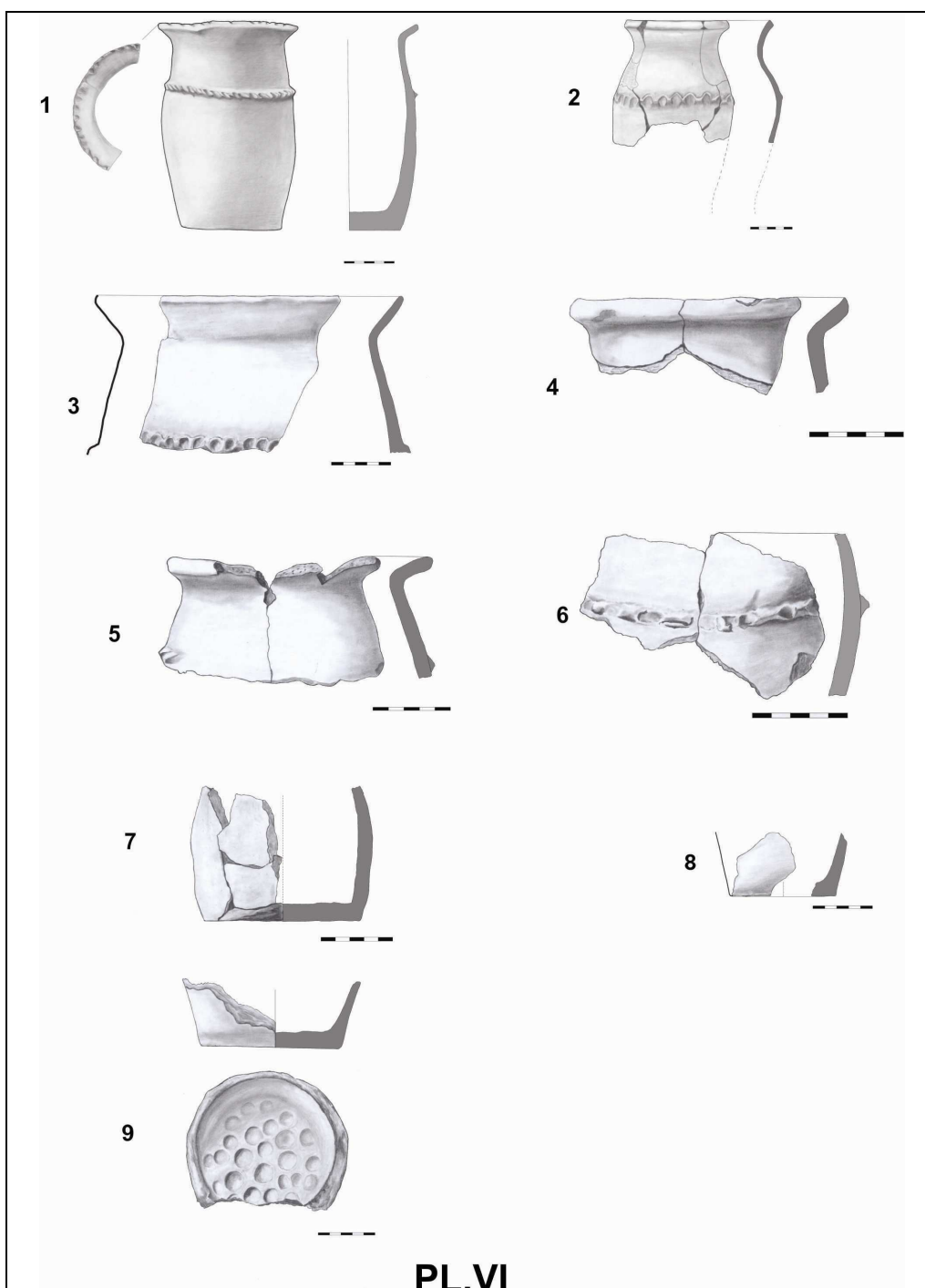


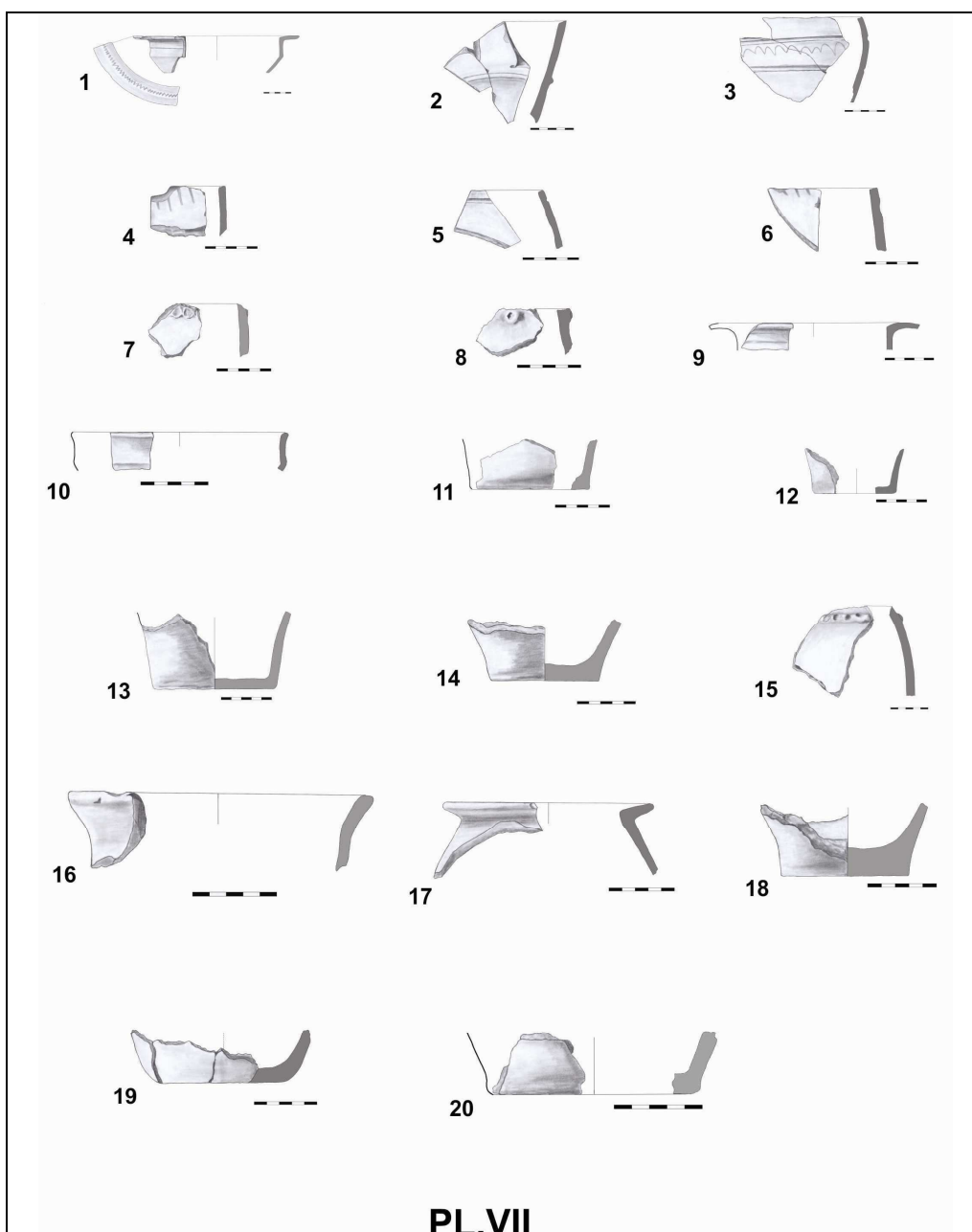


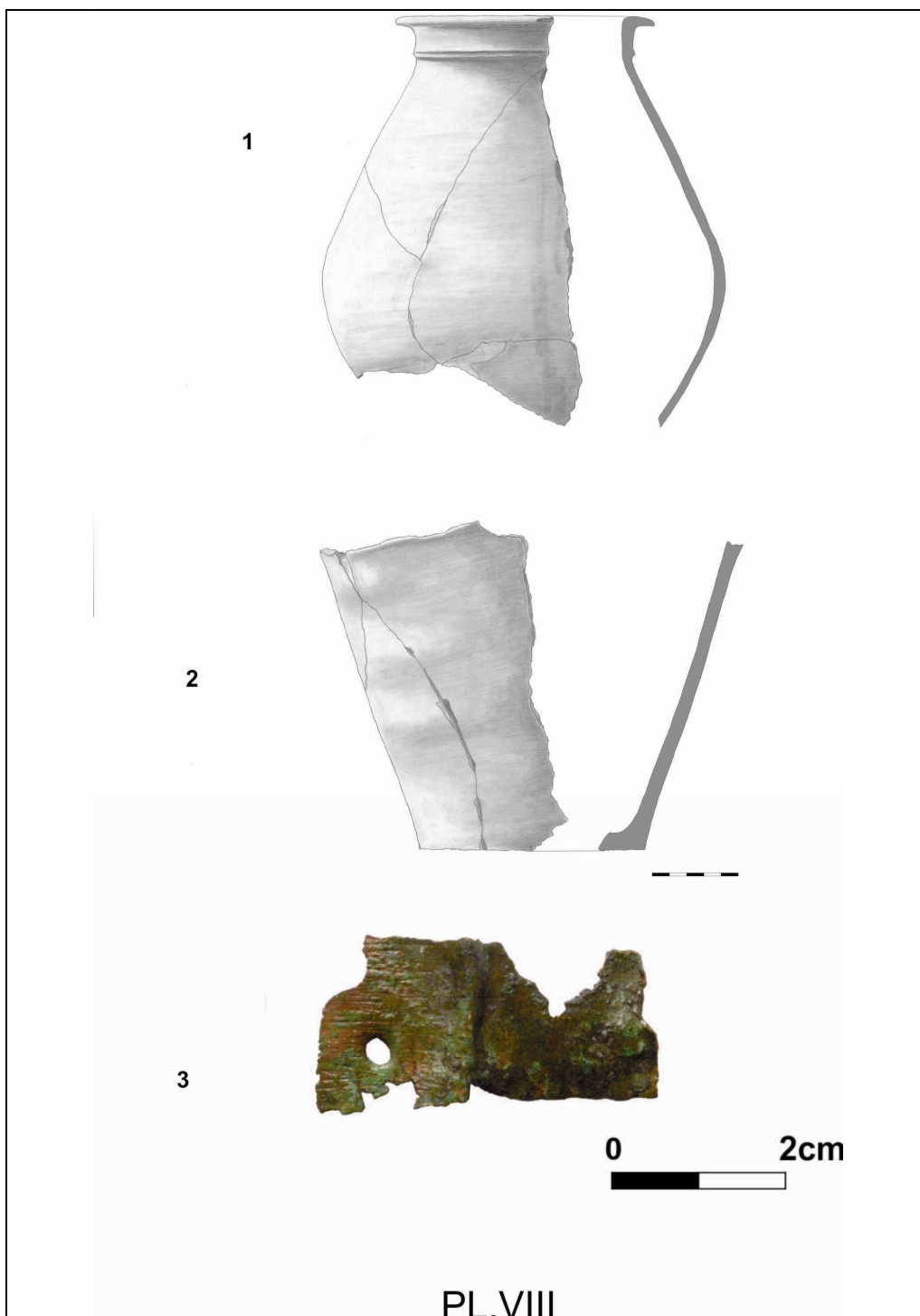


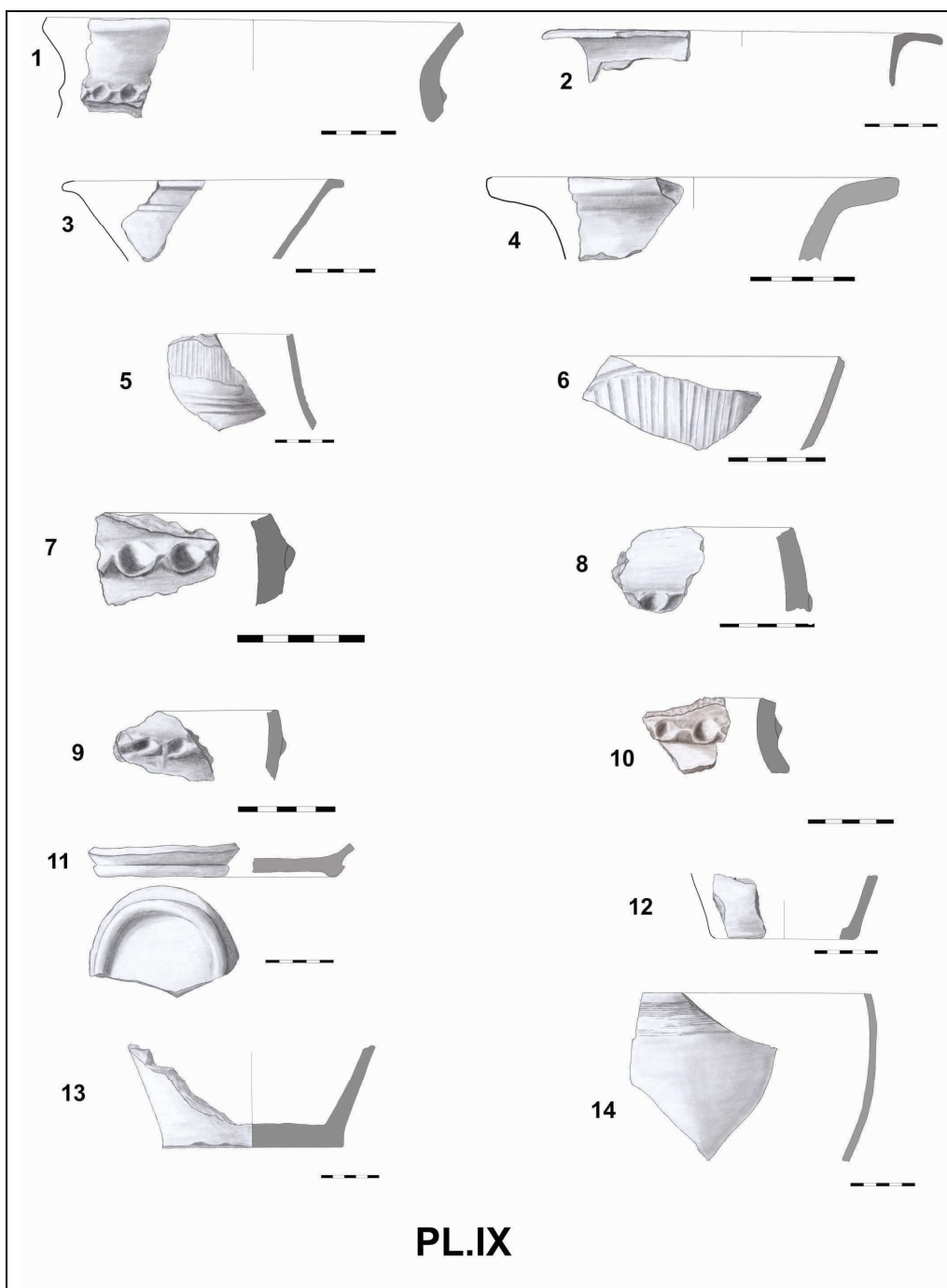
PL. IV

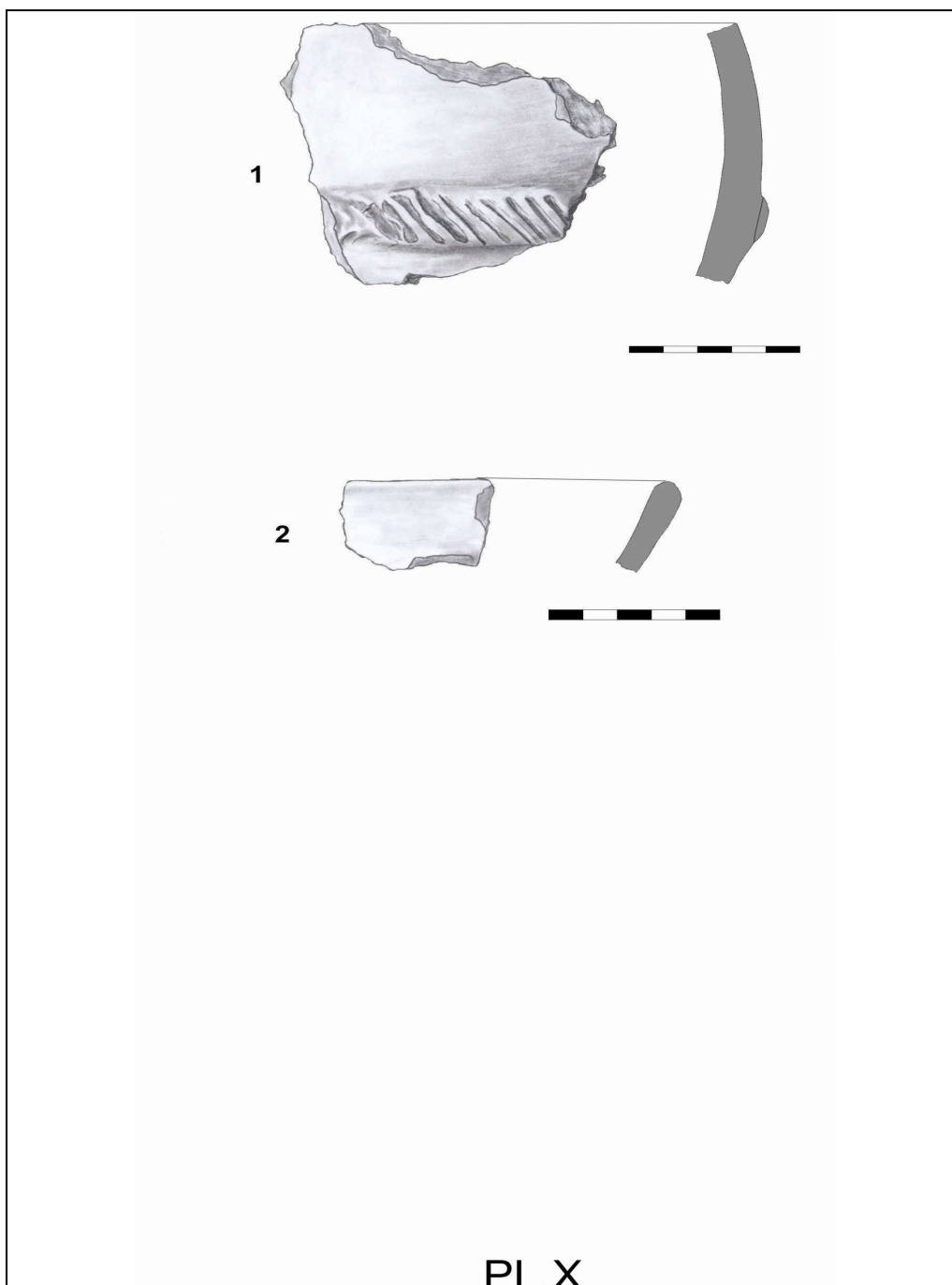


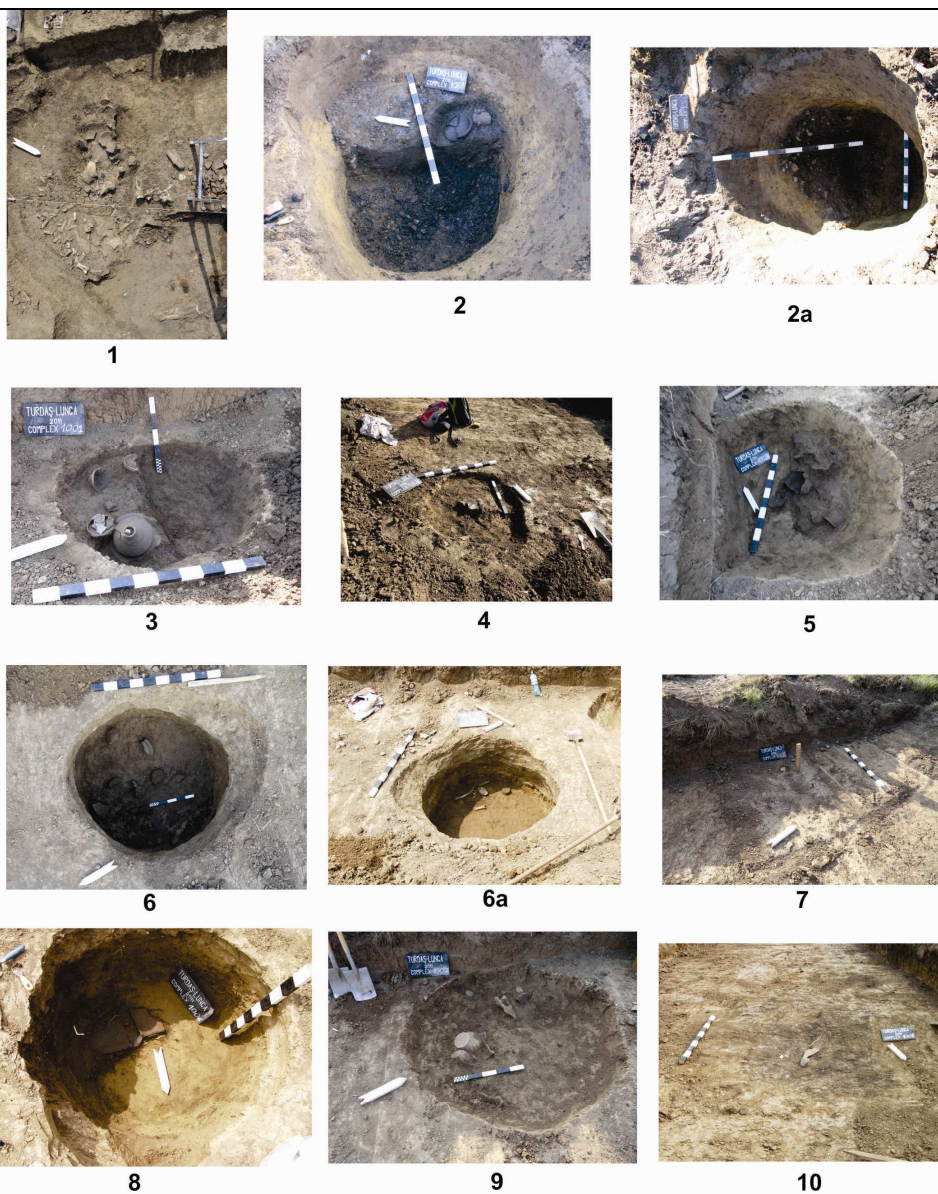












PL.XI



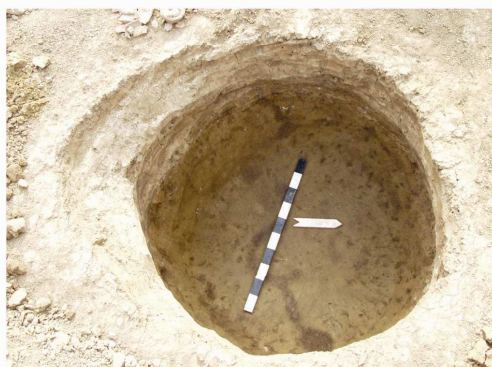
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PL.XII

MEDIEVAL POTTERY DISCOVERED AT TURDAȘ-LUNCĂ DURING THE RESEARCH OF 2011

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Keywords: *well, medieval, pottery, Turdaș*

Abstract: *The archaeological research carried out during 2011 on the track of the future highway A1, on the section from Sibiu to Orăștie, at the point Turdaș-Luncă (Hunedoara district), have revealed, apart from an impressive number of Neolithic structures and materials, a variety of items belonging to other historical epochs (in a much reduced number). Among these there is the medieval pottery discovered in the complexes C₁₀₀₃ and C₃₀₂.**

The 1003 complex was a medieval pit, which partially overlaps a Dacian pit. Only one pot was found in this structure, broken in old times and rebuilt after its discovery. The bellied pot with averted rim was modelled on a fast-turning wheel, was fired in an oxidizing environment and was decorated with two rows of impressions, two strips of straight lines and one strip of wavy lines (Pl. 1.2). The C₃₀₂ complex was a cylindrical pit with a 2.4 m diameter and a 5.5 m depth (6.5 m from the present level of the ground). At first it probably served as a well and after, at a later time, was turned into a garbage pit. The walls were vertical, straight. The upper part of the filling of the complex had a clayish aspect, in a black-greyish colour while the lower part had a clayish aspect with many ashes and coal intrusions, the colour being gray, with thin lenses of yellow clay. A large quantity of pottery was found in this complex, from Neolithic fragments to roman and medieval (spare fragments). Other materials (animal bones, clay bricks, weights, whorls, firestones and imperforated stone axe) were also found. Most of the medieval fragments were modelled on the fast-turning wheel, burned in an oxidizing environment and they show traces of secondary burning, sometimes strong. The ornamentation is scarce or lacks entirely. According to their typology the small bellied pots with averted rim (cups) sometimes with handles and adapted for caps are most common as well as the plates and the caps with a button. For the cups there are three types of rims: the rim that is very wide at the edge (Pl. 2.1.a, 2.1.d and 2.2), the rim that gradually thickens towards the edge (Pl. 3.2.b) and the rim with „S” section (Pl. 2.1.b and 3.2.a).

* I would like to thank to professor Sabin Adrian Luca and to my colleagues Gheorghe Natea, Vasile Palaghie and dr. Cosmin Suciu for making available the material for us and to my colleague dr. Anca Nițoi for the bibliographic help.

For the above mentioned pottery, as it generally happens in the dating of medieval pottery, the absolute dating reveals a number of problems. For the medieval pottery from Turdaş, the shape and the original destination of the complexes, characteristic to several historical periods and the lack of other contemporary items with our lot, to confine the chronology of the complexes, allow us to use only the characteristics of the pottery for dating.

For the pot from the C₁₀₀₃ complex there are several elements that can serve as guide points in dating: the type of pot, the shape, the decoration and the work technique.

The type of the pot, jar-vessel, is a common one for wide areas of the central and eastern Europe in the early Middle Ages. The shape was associated previously to the 9th and 10th Centuries. (Horedt 1951, 211) The ornamentation of the pot from C₁₀₀₃ complex shows partial similarities to pots discovered in the entire Carpathian Basin and at the Lower Danube and even in more distant areas, that chronologically cover a rather long period, starting with the 8th Century and ending with the 13th. The same type of pots (jar-vessels), with similar dimensions and proportions and also with ornaments in the upper part (between the maximum diameter and the neck of the pot) with strips of wavy lines framed by strips of straight lines, have been found in the archaeological research at Guşteriţa (Sibiu district). The most similar pot, unevenly burned, with ornaments in the upper part, with two strips of straight lines and one strip of wavy lines (from the collection of Brukenthal National Museum, inv. no. A 8548), is 22.7 cm tall, has an opening diameter of 15.5 cm and a base diameter of 9.7 cm. The author of the discovery suggests for the entire lot a dating within the 8th – 9th Centuries A. D. (Luca et alii 2003). The decorations with strips of straight and wavy lines, have a lot of parallels in the Carpathian Basin and at the Lower Danube: Bistriţa, Ciugud, Gâmbaş, Sebeş, Teiuş, Turdaş, (Horedt 1951, 189 sqq) Blandiana, (Anghel-Ciugudean 1987, 179 sqq) Guşteriţa, (Luca et alii 2003) Târgu Mureş (László 2008, 155 sqq). They are considered to be at their peak during the 9th Century, but with chronological extent in the next two Centuries. (Horedt 1951, 208 sqq, László 2008, 158) But among the discoveries mentioned above there are no impressions and the pots are modelled at the slow-turning wheel. Instead we find impressions on the pottery from Bratei *Nisipărie*, (Ioniţă 2009, 3 sqq) very rarely associated with strips of lines, but also modelled at the slow-turning wheel. (Ioniţă 2009, 80 sqq) The author of the study dates the items in the 12th Century. (Ioniţă 2009, 35) Rows of impressions we find also at Cosniciu de Jos (Sălaj county), at Bistriţa and in many other Transylvanian settlements, but not associated with strips of lines; the pots at Cosniciu de Jos and Bistriţa are made at the slow-turning wheel and the authors of the discoveries dates them from the second half of the 10th Century until the 12th Century. (Băcuş Crişan-Prigon 2008, 144; Gaiu 2008, 168) Returning to our item, the ornaments seem to date it in a very generous chronological period of time, between the 9th and the 12th Century.

But the fact that the pot was made at a fast-turning wheel (which left both on the inside and the outside, many parallel thin lines and which gave the product its

symmetrical shape) might confine this period. Considering the fact that the fast-turning wheel was still rarely used in the 12th Century, being used on a larger scale only in the next Century, (Ioniță 2009, 35) we can probably date the pot in the 12th Century. There are discoveries of pots modelled at the fast-turning wheel which can be traced earlier than that. (Stanciu 2000, 127 sqq) Those were tempered with rough sand and were fired in an oxidizing environment (sometimes incompletely). Their shape is either jar-vessels or pot with handles and they are decorated with straight or wavy lines or strips. (Stanciu 2000, 127 sqq) Still, the presence of such pottery has not been signalled previously in the Orăștie area. That is why placing the pot from Turdaș (C₁₀₀₃) in this category, without other clues for dating, remains problematic.

In the end by corroborating the dating imposed by the ornamentation and that given by the use of the fast-turning wheel, we consider that we can date the pot from C₁₀₀₃ at Turdaș in the 12th Century, leaving an opened possibility for an earlier dating.

For the pottery in complex C₃₀₂, the larger number of fragments and the higher occurrence of similar items, allow an easier dating. An important guide point is in this case the shape of the rim of the pots. Similar pots, with wider rim on the edge, discovered in Sibiu (Sibiu county) have been dated in the 13th - 14th Centuries, (Istrate 2007, 31 sqq), pots with the rim that gradually thickens towards the edge have also been dated in the 13th - 14th Centuries, (Istrate 2007, 28) and possibly in the 15th century, too, (Simina 2000, 100) and pots made with the same technique as those at Turdaș (modelled on the fast-turning wheel and fired in an oxidizing environment), with similar dimensions and with „S” shaped rim have been dated in the same period with the other two categories. (Istrate 2007, 27) Instead, there are caps similar to that with a button from Turdaș, which are dated later, in the 15th - 16th Centuries. (Kopczyński 2007, 120)

Considering the identified parallels for the medieval pottery from Turdaș-Luncă, we can deduce that the pottery in the two complexes at Turdaș and the two complexes, are not contemporary. They are chronologically separated by at least one century. The C₁₀₀₃ complex probably belongs to the 12th Century, while the C₃₀₂ complex may be dated only in the 14th - 15th Centuries. In both cases, by lack of other materials to absolutely date the structures, the chronological limits are left opened. The medieval pottery found during the archaeological research from 2011 at Turdaș can be added to the medieval pottery previously discovered in the area, (Horedt 1951, 206) without being contemporary with it.

The catalogue of the ceramic material:

The following abbreviations were used: RD – rim diameter, BD – bottom diameter, H – height, WT – wall thickness, D: dimensions.

Complex C₁₀₀₃

- Round shaped jar-vessel with averted rim, modelled on a fast-turning wheel and tempered with rough sand, incomplete oxidizing firing with traces of secondary burning, brown-reddish coloured with black-greyish. Wavy lines decoration between two groups of straight lines (all made with a 4 or 5 teeth comb), all between two rows of oblique impressions. The ornamentation is placed between the maximum diameter of the body and the neck of the vessel. The vessel is broken from long ago. H: 26 cm. RD: 16.5 cm. BD: 10 cm. (pl. 1.2)

Complex C₃₀₂

1. Fragment from the rim of a fast-turning wheel thrown vessel, tempered with sand with medium sized pebbles, reducing firing, grey coloured with shades variations, traces of secondary burning. Averted rim, thicker towards the edge and adapted for a lid. The fragment shows a vague line 1 cm lower from the neck. RD: 18 cm. WT: 1.6-0.4 cm. (pl. 2.1)
2. Fragment from the rim and body of a fast-turning wheel thrown vessel, tempered with sand with pebbles, oxidizing firing, yellow and brick-red coloured, traces of secondary burning in the lower part of the vessel both on the outside and inside. Averted rim, adapted for a lid. From the rim starts a handle 2.3 cm wide. The vessel shows vague lines lower than its maximum diameter. WT: 0.7-0.4 cm. (pl. 2.1)
3. Fragment from the rim of a fast-turning wheel thrown vessel, tempered with sand, reducing firing, black-greyish coloured, traces of secondary burning both on the outside and inside of the vessel. Averted rim, adapted for a lid. RD: 14 cm. WT: 0.9-0.4 cm. (pl. 2.1)
4. Fragment from the rim of a fast-turning wheel thrown vessel, tempered with sand with rare pebbles, incomplete oxidizing firing, yellow and brick-red coloured. Averted rim, thicker towards the edge and vague adapted for a lid. RD: 11 cm. WT: 1.2-0.4 cm. (pl. 2.1)
5. Two fragments from the rim of a fast-turning wheel thrown vessel, tempered with sand mixed a lot of small and medium sized pebbles, reducing firing, grey coloured with shades, traces of secondary burning mainly on the outside of the vessel. Averted rim, thicker towards the edge and probably adapted for a lid. Ornamented with two straight parallel lines lower than the neck. RD: 21 cm. WT: 1.7-0.5 cm. (pl. 2.2)
6. Fragment from the rim and the body of a fast-turning wheel thrown vessel, tempered with sand mixed with a lot of small pebbles, reducing firing, grey coloured with shades, traces of secondary burning both on the outside and

- inside. Averted rim, thicker towards the edge and vaguely adapted for a lid. A straight line marks the maximum diameter. RD: 16.4 cm. WT: 1.5-0.4 cm. (pl. 2.2)
7. Fragment from the rim and body of a fast-turning wheel thrown vessel, tempered with sand, oxidizing firing?, beige-greyish colour, traces of secondary burning on the outside. The rim is slightly inverted. WT: 0.8-0.9 cm. (pl. 3.1)
 8. Fragment from the rim, body and bottom of a fast-turning wheel thrown vessel, tempered with sand mixed with a lot of small pebbles, incomplete oxidizing firing, beige and grey coloured, traces of secondary burning on the outside. The rim is slightly inverted. RD: 24 cm. BD: 19 cm. WT: 0.9 cm. (pl. 3.1)
 9. Fragment from the slightly deformed bottom of a fast-turning wheel thrown vessel, tempered with sand mixed with rare pebbles, oxidizing firing, brown-brick red coloured, traces of secondary burning mainly on the outside. Ornamented with one row of vertical impressions. BD: 5.8 cm. WT: 0.5-0.7 cm. (pl. 3.1)
 10. Fragment from the bottom of a fast-turning wheel thrown vessel, tempered with sand mixed with medium sized pebbles, incomplete oxidizing firing, beige-brick red coloured on the outside, grey on the inside, traces of secondary on the outside. BD: 6.6 cm. WT: 0.7-0.9 cm. (pl. 3.1)
 11. Three fragments from the rim of a fast-turning wheel thrown vessel, tempered with sand, reducing firing, black coloured with beige-greyish spots on the outside, strong traces of secondary burning especially on the inside. Averted rim, adapted for a lid. A straight line marks the maximum diameter of the vessel. RD: 13 cm. WT: 0.4-0.7 cm. (pl. 3.2)
 12. Five fragments from the rim of a fast-turning wheel thrown vessel, tempered with sand mixed with a lot of small pebbles, incomplete oxidizing firing, pink-brick red coloured on the inside, black-greyish on the outside, traces of secondary burning on the outside. Slightly averted rim, thicker towards the edge. There are a few fine lines lower than the neck, probably a result of the modelling. RD: 14.5 cm. WT: 0.5-1.3 cm. (pl. 3.2)
 13. Fragment of a fast-turning wheel thrown lid, tempered with sand mixed with many medium sized pebbles, incomplete oxidizing firing, brick-red and grey coloured, traces of secondary burning on the inside and on the outside towards the edges. Short conical shape. RD: 18 cm. WT: 0.5-0.6 cm. (pl. 3.2)
 14. Fragment of a fast-turning wheel thrown lid with a button, tempered with sand mixed with many medium sized pebbles, oxidizing firing, beige coloured, vague traces of secondary burning on the inside. Short conical shape ended with a button. Maximum diameter of the button: 3.8 cm. Maximum diameter of what was left from the lid: 10 cm. WT: 0.8 cm. (pl. 4.1)

15. Fragment from the rim of a fast-turning wheel (?) thrown vessel, tempered with sand mixed with rare small sized pebbles, incomplete oxidizing firing, traces of secondary burning, brick-red coloured with black-greyish spots. Averted rim, thicker towards the edge and adapted for a lid. WT: 0.6-1.5 cm. (pl. 4.1)
16. Fragment from the rim of a hand modelled vessel, tempered with fine sand mixed with medium sized pebbles, oxidizing firing?, traces of secondary burning, beige coloured with a lot of grey spots. Straight rim. WT: 0.8 cm. (pl. 4.1)
17. Fragment of a fast-turning wheel thrown vessel, tempered with sand with rare medium sized pebbles, incomplete oxidizing firing, traces of secondary burning more visible on the inside, brick-red and grey on the outside, black-greyish on the inside. D: 5 x 5.50 cm. WT: 0.5 cm. (pl. 4.1)
18. Fragment of a hand modelled vessel, tempered with fine sand mixed with rare small pebbles, reducing firing, black coloured on the outside, beige-brick red on the inside. D: 6 x 5.50 cm. WT: 0.5 cm. (pl. 4.1)
19. Fragment of a fast-turning wheel thrown vessel, tempered with sand mixed with small pebbles, reducing firing, traces of secondary burning, grey and black coloured on the outside, brown with black spots on the inside. D: 8 x 5 cm. WT: 0.5 cm. (pl. 4.1)
20. Fragment of a fast-turning wheel thrown lid, tempered with fine sand mixed with big and medium sized pebbles, oxidizing firing, traces of secondary burning especially on the inside, beige-brick red, brown and grey on the outside, black on the inside. Short conical shape. D: 9.5 x 7 cm. WT: 0.8 cm. (pl. 4.2)
21. Fragment of a fast-turning wheel thrown vessel, tempered with sand mixed with a lot of medium sized pebbles, oxidizing firing, beige coloured. D: 8 x 5 cm. WT: 0.8 cm. (pl. 4.2)
22. Fragment of a wheel (?) modelled vessel, tempered with fine sand, reducing firing, grey coloured. D: 6.5 x 3.3 cm. WT: 0.8 cm. (pl. 4.2)
23. Six fragments of a fast-turning wheel thrown vessel long ago broken, tempered with sand mixed with small pebbles, oxidizing firing, traces of secondary burning on the outside, grey-beige with shades on the outside, brown-reddish with grey spots on the inside. D: 8 x 8 cm, 10 x 6.5 cm, 6.3 x 4.5 cm, 6.5 x 4 cm, 4.3 x 2, 2 x 2 cm. WT: 0.8 cm.
24. Fragment of a fast-turning wheel (?) thrown vessel, tempered with sand, oxidizing firing (?), traces of secondary burning especially on the inside, brown-greyish on the outside, black on the inside. D: 7 x 4.5 cm. WT: 0.5 cm.
25. Fragment of a fast-turning wheel thrown vessel, tempered with sand mixed with small pebbles, oxidizing firing, traces of secondary burning especially on the inside, brick red-brownish on the outside, grey on the inside. D: 5 x 4.7 cm. WT: 0.5 cm.

26. Fragment of a fast-turning wheel (?) thrown vessel, tempered with sand mixed with medium sized pebbles, oxidizing firing, traces of secondary burning, grey coloured. D: 6 x 4 cm. WT: 0.4-0.5 cm.
27. Fragment of a hand modelled vessel, tempered with sand mixed with a lot of small pebbles, oxidizing firing, traces of secondary burning, brown-greyish coloured. D: 5 x 2.7 cm. WT: 0.5-0.6 cm.

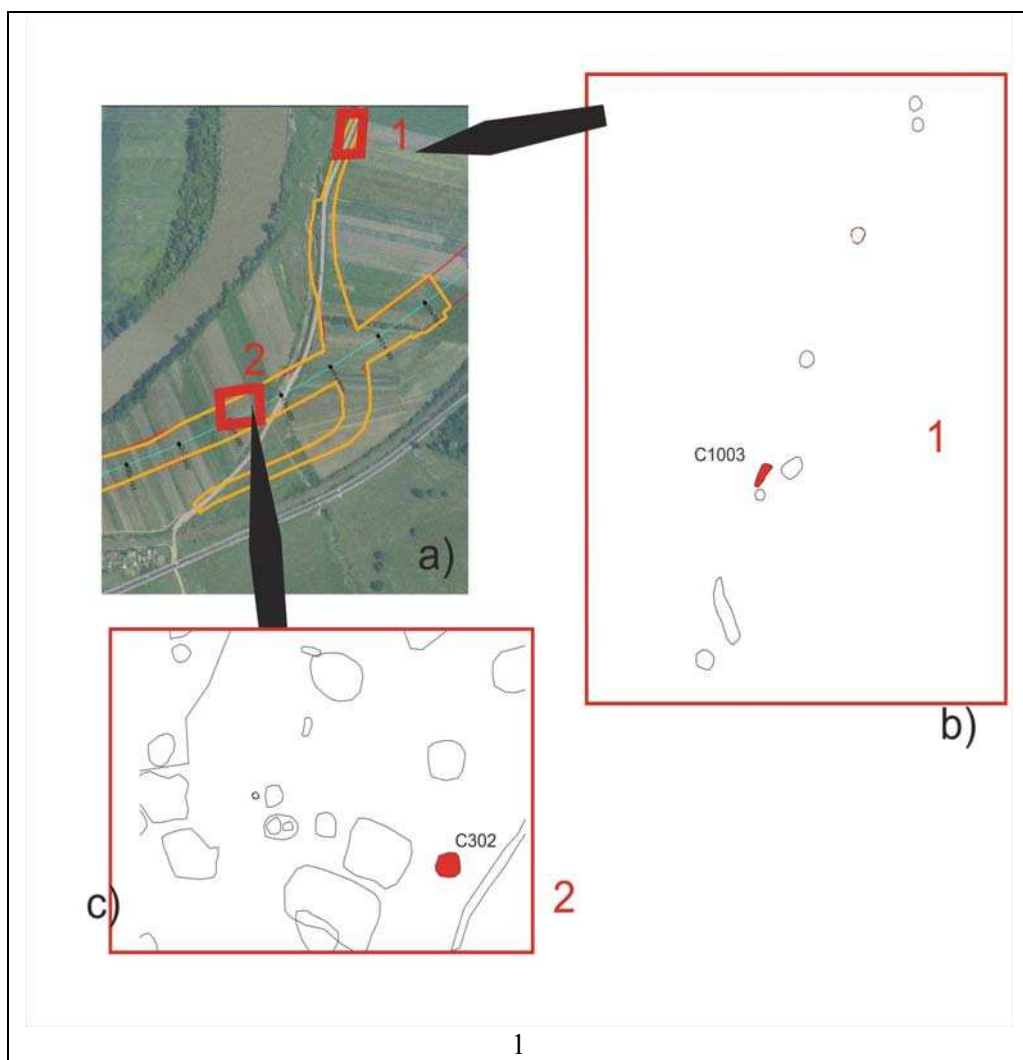
BIBLIOGRAPHY:

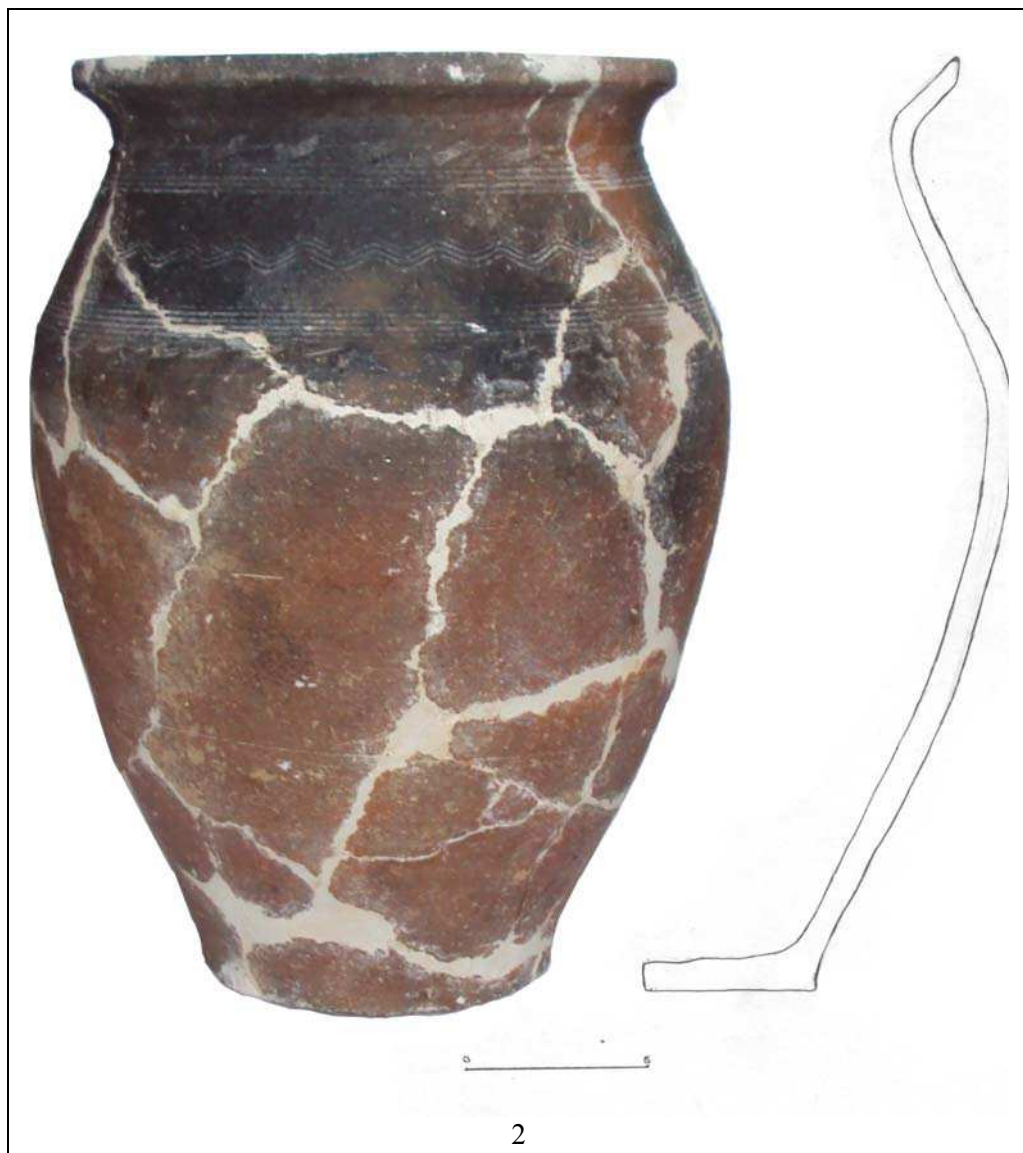
- Anghel-Ciugudean 1987 Anghel, Gh., Ciugudean, H., *Cimitirul feudal timpuriu de la Blandiana*, in *Apulum*, XXIV/1987, pp. 179-196.
- Băcueț Crișan-Prigon 2008 Băcueț-Crișan, D., Prigon, E., *Ceramica medievală timpurie de la Cosniciu de Jos (județul Sălaj)*, in *Vasaria Medievalia*, Bistrița Cluj-Napoca, 2008.
- Gaiu 2008 Gaiu, C., *Vestigii medievale timpurii din Bistrița*, in *Vasaria Medievalia*, Bistrița Cluj-Napoca, 2008.
- Horedt 1951 Horedt, K., *Ceramica slavă din Transilvania*, in *Studii și cercetări de istorie veche*, II-2/1951.
- Ioniță 2009 Ioniță, A., *Așezarea din secolele XII-XIII de la Bratei*, Alba Iulia, 2009.
- Istrate 2007 Istrate, A., *Sibiu. Piața Mare. Cercetări arheologice*, Alba Iulia, 2007.
- Kopeczny 2007 Kopeczny, Z., *Ceramică medievală locală (sec. XIV-XVII)*, in *Timișoara în amurgul evului mediu*, Timișoara, 2007.
- László 2008 László, K., *Date privind ceramica medievală timpurie din „Cetate” de la Târgu Mureș*, in *Vasaria Medievalia*, Bistrița Cluj-Napoca, 2008.
- Luca et alii 2003 Luca, S. A., Pinter, Z. K., Georgescu, A., *Repertoriul arheologic al județului Sibiu*, Sibiu, 2003.
- Stanciu 2000 Stanciu, I., *Despre ceramica medievală timpurie de uz comun, lucrată la roată rapidă, în așezările de pe teritoriul României (secolele VIII-X)*, in *Arheologia Medievală*, III/2000, pp. 127-191.
- Simina 2000 Simina, M., *Cetatea din Călnic (jud. Alba) (Considerații pe marginea cercetării arheologice)*, in *Arheologia Medievală*, III/2000.

ILLUSTRATIONS LIST:

Plate 1. 1. Fotoplan of Turdaș-Luncă (a), with the location of the medieval complexes (b, c); 2. Pot from the C₁₀₀₃ complex.

Plate 2-4. Pottery from the C₃₀₂ complex.





2
Plate 1

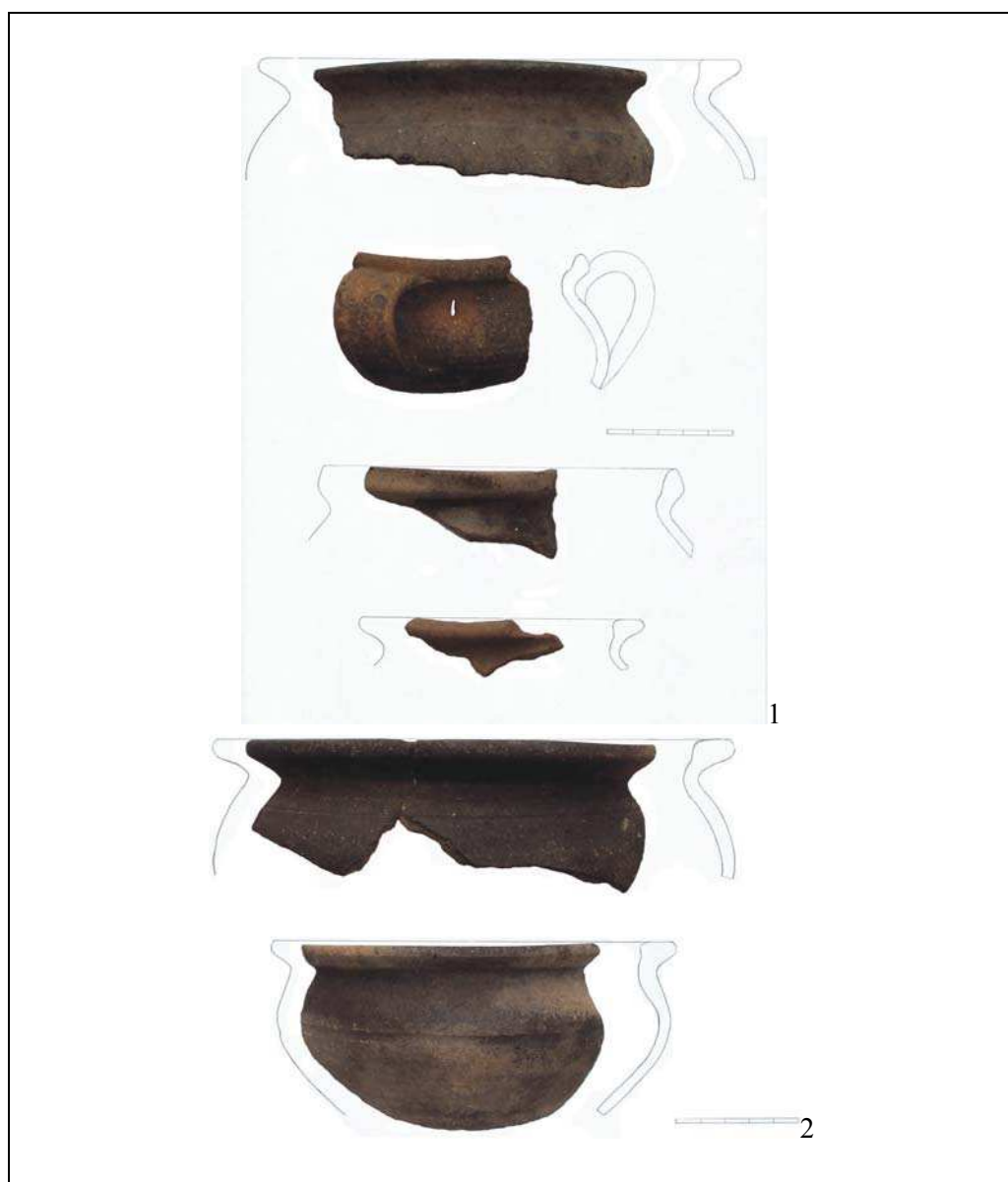


Plate 2



Plate 3

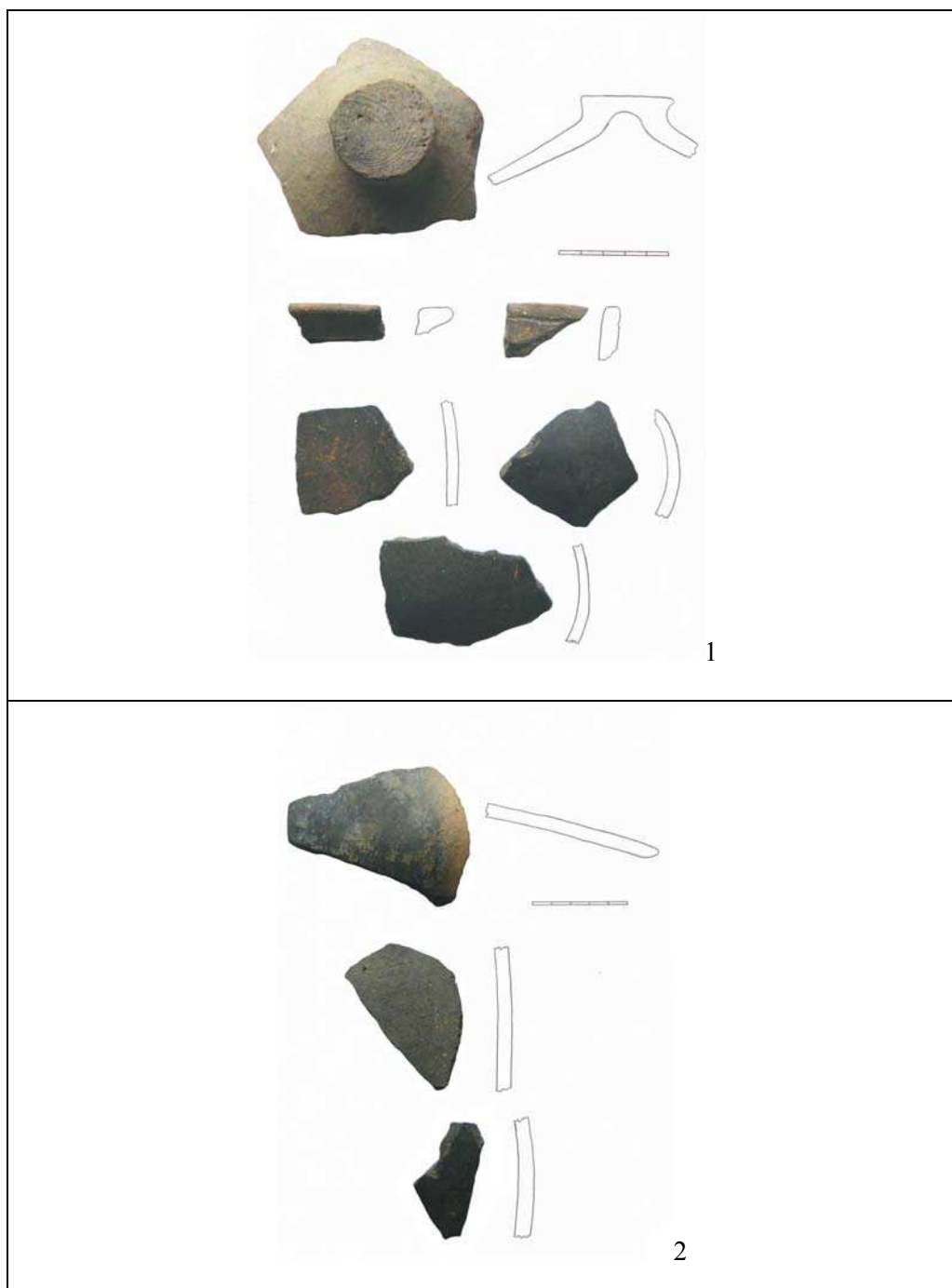


Plate 4

