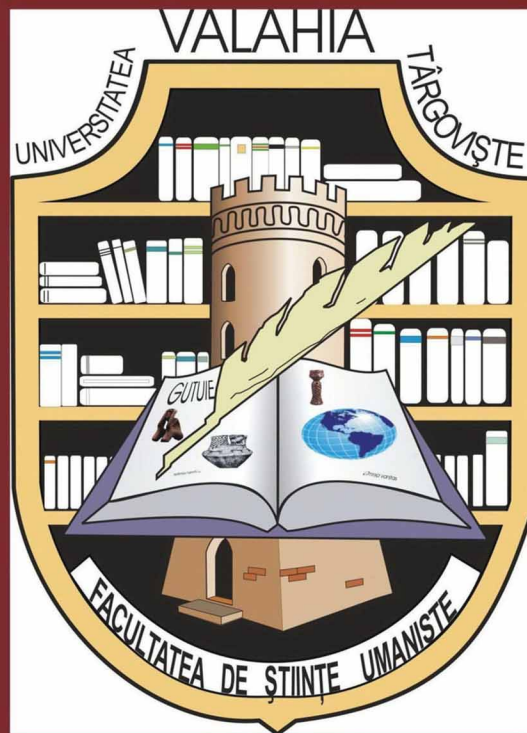


Ministère de l'Éducation Nationale  
L'Université Valahia Târgoviște  
Faculté de Sciences Humaines

# ANNALES

## D'Université "Valahia" Târgoviște



SECTION  
d'Archéologie et d'Histoire  
TOME XXIV

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2022

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L'Université Valahia Târgoviște  
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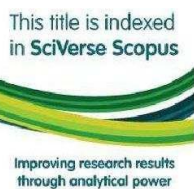
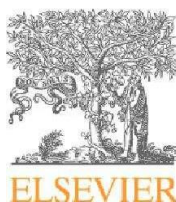
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## The Controversial Context of Discovery of Some Palaeolithic Figurines. Gravettian Venuses – a Too Easily Accepted Postulate

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**Abstract:** A number of Palaeolithic Venus figurines, which have become famous, are actually devoid of any archaeological context. This aspect is often forgotten and many of them are even considered as representative of such artefacts. Furthermore, including them mainly in the Gravettian culture has not been justified by any stratigraphic arguments or information related to absolute or cultural dating. In the absence of such evidence, a false postulate has been formulated by attributing them, in an exaggerated manner, to the Gravettian culture. The discovery of the Epigravettian figurine from Piatra Neamț 1, with a cultural stratigraphic context and coherent C14 dates, should trigger a re-evaluation of older finds.

**Keywords:** Venus, figurine, Gravettian, Piatra Neamț, anthropomorphic representation.

### Introduction

In his synthesis work *L'image de la femme dans l'art préhistorique*", [Henri Delporte \(1993\)](#) remarks, with concern, that out of about 20 female figurines in France, there are only a few of them whose stratigraphic position is known and when it comes to some of the most famous ones, there are only data concerning the identity of the site. This however does not prevent him from stating that “the Gravettian is a civilisation of figurines” (p. 230). The uncertain or completely unknown stratigraphic position is a much more serious matter in Italy, especially when we refer to the many Grimaldi figurines and the renowned Venus of Savignano, Chiozza di Scandiano etc. Under these conditions, specifying the context of Paleolithic female statuettes becomes an objective necessity (K. N. Gavrilov, 2018; K. N. Gavrilov, G.A. Khlopachev, 2018).

### History and postulates

On 19 September 1892, during a trip to **Brasempouy**, where he attended the Congress of the French Association for the Advancement of Science, E. Magitot would present, among other items found in the Pape Cave, the lower part of a human statuette. The disclosure of this discovery triggered a fierce polemic in the local press ([fig. 1/1](#)). This did not stop Edouard Piette from excavating that cave between 1894 and 1897. Despite his undeniable merits in carrying out the excavations from Brasempouy, it is common knowledge that he did not always take part in the archaeological excavations, which were

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rather carried out by a supervisor who would hand over the found items to him. According to Piette, the Pape Cave figurines were found in layer E, which is presumed to contain, just like the overlying layer (D), an industry that may be attributed to the Upper Perigordian or the Gravettian. The tools found in the upper part of layer D were however attributed to a Protomagdalenian. It is curious that the archaeological excavations carried out after 1981 in front of the Pape Cave revealed a level with Gravettian industry that does not preserve any hard animal materials, including ivory, which anthropomorphic figurines were made of. Furthermore, one should not ignore the fact that the cave deposit was seriously disturbed by waters and animals, which even Piette and the other subsequent investigations mentioned (H. Delporte, 1993).



Fig. 1 – Palaeolithic figurines or Venuses in Europe with no or poorly specified archaeological contexts. 1 – Branssenpouy; 2 – Lespugue (<http://donsmaps.com/lespuguevenus.htm>); 3 – Tursac; 4 – Sireuil; 5 – Laussel; 6 - Abri Pataud (acc. to G. Delluc, 2006); 7 – Willendorf; 8-11 – Grimaldi; 12 – Savignano (<http://www.donsmaps.com/savignano.html>); 13 - Trasimene (<http://www.pigorini.benicultural.it/caciatori-e-raccoglitori.html>); 14 – Chioza di Scandiano (<http://coursecontet.westhillscollge.com>); 15 – Parabita ([http://www.nihilum.republika.pl/Str\\_Parabita.html](http://www.nihilum.republika.pl/Str_Parabita.html)); 16 – Moravani (1; 3-5; 7-11; 16, acc. to C. Cohen, 2003).

**Venus of Lespugue**, made of ivory, was found in 1922 in the Rideaux cave (Haute-Garonne) in the Pyrenees by R. and S. de Saint-Périer, in a layer attributed to the Gravettian based on the presence of the Noailles burins (fig. 1/2). However, there are also retouches specific to the Solutrean on some

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items. Its age was estimated between 21,000 and 23,000 B.C., without any C14 dating (N. Rouquerol, F. Moal, 2018; H. Delporte, 1993). Due to its morphology, A. Leroi-Gourhan (1965; 1971) would regard the Venus of Lespugue as an anatomical heresy.

**Venus of Tursac** was made of a translucent, amber-coloured calcite, similar to that which Venus of Sireuil was carved in (fig. 1/3). The rock shelter of Facteur from Tursac revealed, in addition to some Aurignacian levels, a layer with Noailles burins attributed to a Perigordian, quite similar to the Gravettian from the Pataud rock shelter. There is a C14 date for this layer, namely 21.000 B.C. The Venus of Tursac was found by R. Antoine on 5 August 1959 at the bottom of layer of yellow clay and slabs of calcareous concretions overlying the Gravettian level. However, the statuette was assimilated to the Gravettian although no lithic material, which might justify such an option, was found in its vicinity. Instead, a bovine radius and cubitus were found nearby in anatomical connection.

**Venus of Sireuil**, carved in calcite, was found in 1.900, near Eyzies-de-Tayac (Dordogne), in a roadside gutter, with no materials, lithic or of any other nature, around (fig. 1/4). Due to the stylistic resemblance to the Tursac figurine, it was attributed to the Gravettian (H. Delporte, 1993).

The rock shelter of **Laussel** is located quite close to Les Eyzies in Dordogne. The deposit was excavated between 1908 and 1914, when several stone blocks carved in relief were found concentrated over an area of about 12/6 metres, delimited by stones suggesting some kind of sanctuary, considered to belong to a Gravettian level. Of the 5 blocks carved in low relief from Laussel, two are better-known, “Dame de Laussel” = “Femme à la corne” (fig. 1/5) and “Femme à tête quadrillée” (H. Delporte, 1993).

The artist must have been constrained by the morphology of the blank, thus, stylistically, the Laussel bas-reliefs are characterised by large breasts, as most of Palaeolithic Venus representations, but they are not voluminous, just flat and saggy, lacking the roundness typical of other representations, such as the famous Venus of Willendorf. What particularly impresses as well is the wide pelvis, similar to the Venus of Piatra Neamț.

No absolute dating analyses have been conducted to determine the age of the Gravettian level from which the Laussel sculptures are presumed to have been recovered.

The renowned “**Abri Pataud**” is located in Eyzies-de-Tayac in Dordogne. Its deposit was extremely laboriously and extensively researched, with exceptional scientific and technical means, between 1953 and 1964, under the supervision of H. L. Movius from Harvard University, the USA. This also explains why this shelter later became a Site Museum of undeniable value.

The Abri Pataud site yielded, among other things, a 60-mm bas-relief sculpture carved in a limestone slab 19/14 cm (fig. 1/6). It is most likely a carving of a young, very slender woman, recovered from the Gravettian level dated to between 19.000 and 26.000 B.C. The history of the discovery of this sculpture is, however, very interesting. This is how H. Delporte (1993) describes it: “On 18 August

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1958, a violent storm swept across the Eyzies region. Miss J. Bamberger was excavating in square F of Trench 2 and was working in the then called final Perigordian level (layer 3). In the course of a survey, an excavation square often includes a certain number of labels, arrow markers made of cardboard, glossy white cardboard or plastic, which indicate the position of conspicuous levels or items. As the wind was rising up and the rain was falling, J. Bamberger picked up the more or less flat stones she had labelled from the levels she had cleared in her square, in order to protect them. Three days later, on Thursday, 21 August, fine weather returned and the site was dry. J. Bamberger resumed her work. While picking the stones under the labels, she turned one of them and recognised a carved human figure in bas-relief. After a brief examination, it was noted that the patches of sediment adhering to it were identical to those in the Perigordian layer. Although there is no absolute certainty, it appears that this female figure, the authenticity of which has been disputed, belongs to the Gravettian (the final Perigordian or Perigordian VI level)” (p. 65).

This is how, in an archaeological Palaeolithic site in which the accuracy of excavation techniques used can by no means be questioned, due to completely unfavourable and unavoidable weather conditions at certain times, the authenticity of a very important discovery made in circumstances independent of the archaeologist’s will is challenged.

The well-known **Venus of Willendorf** (or Venus I) was found on 7 August 1908, following the archaeological excavations coordinated by J. Szombathy, J. Bayer and H. Obermaier in July and September 1908 in the Willendorf II site (fig. 1/7). The first two archaeologists were to return together or separately in 1909, 1912-1913, and in 1926-1927 J. Bayer continued to make small surveys (J. Bayer, 1930).

In 1955, excavations were resumed by F. Felgenhauer, who provided a description of the sequence of Palaeolithic levels in the loess deposit. Nine occupation periods were specified and attributed to the Aurignacian (occupation levels 3-4) and the Gravettian (occupation levels 5-9). Four contradictory dates were obtained for the lower levels (1-5) (Felgenhauer F., 1956-1959; F. Felgenhauer, J. Fink, H. de Vries, 1959): Level 1: GrN-1287 =  $3.530 \pm 250$  B.P.; Level 4: GrN-1273 =  $32.060 \pm 250$  B.P., Level 4: H249/1276 =  $31.700 \pm 1800$  B.P., Level 5: H246/231 =  $32.000 \pm 3.000$  B.P.

In 1981, M. Otte and P. Haesaerts carried out battering works in the area excavated by F. Felgenhauer in the 1950s, reaching a depth of 7 m, and established a number of stratigraphic units in which they observed the occurrence of clusters of lithic or osteological material at certain levels (M. Otte, 1990; P. Haesaerts, 1990). P. Haesaerts (1990). Without convincing demonstration and arguments, they claimed that the stratigraphic units determined in 1981 were compatible with those described by the excavations started in 1955. As regards the occupation levels 3-6, the similarities with a number of



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photos in Felgenhauer's monograph are invoked, whereas for levels 7-9, which are not illustrated in that monograph, things are presumed to be the same.

Following the 1981 works, materials were collected for absolute dating, yielding six ages. While [P. Haesaerts \(1990\)](#) presents the respective dates by stratigraphic units of the deposit, [M. Otte \(1990\)](#) assigns them to some of the cultural levels, as follows: level 2: 41,700 + 3700/ - 2500 B.P. (GrN 1195); 39,500 + 1500/-1200 B.P. (GrN 11190); level 5 (Gravettian): 30,500 + 900/-800 B.P. (GrN 11193); 23,830 ± 190 B.P. (GrN 11194); level 8 (Gravettian): 25,800 ± 800 B.P (GrN 11191). In 1993, a new excavation campaign was carried out at Willendorf I with a view to collecting new samples for the interdisciplinary research of the deposit ([P. Haesaerts et al., 1996](#)).

Most researchers claim that the Venus of Willendorf was retrieved from cultural level 9 ([H. Delporte, 1993](#); [M. Otte, 1990](#)). We should nevertheless mention that the attribution of the famous Venus of Willendorf to cultural level 9 is quite unclear. Even J. Bayer (1930), one of the coordinators of the first excavations at Willendorf, who was present at the time of the discovery of the figurine, has different opinions in this regard ([W. Antl-Weiser, 2008; 2009](#)). He considered that the statuette was associated with a small lithic cluster that was clearly distinct from level 9, so much invoked in the specialised literature later. Despite all these ambiguities and the inexistence of directly dating cultural level 9 from Willendorf, a postulate has emerged, which assigns the age of 24,000 B.P. for the Venus of Willendorf. The only reason, which is by no means a pertinent argument, would be that the underlying cultural level 8 is 25,800 ± 800 B.P. On the other hand, according to [M. Otte \(1990\)](#), level 9, which produced the Venus of Willendorf, belongs to stage III of development of the Gravettian in Europe, a facies with shouldered points (*à cran*), which might be found in Spadzista (Poland), Nitra Cerman (Slovakia), Molodova-layer 7 (Republic of Moldova), Kostienki I/1 (Russia), Abri Pataud-level 3 and Laugerie Haute (France); however, in many of these settlements, alongside a number of dates pointing to 24,000 B.P., there are also younger ages, of about 21,000 years B.P. Under these circumstances, one may wonder why, in the absence of direct dating of layer 9, the Venus of Willendorf must necessarily be 24,000 B.P. and not 21,000 B.P.

It should be mentioned that subsequent investigations of the deposit from Willendorf II have not archaeologically identified cultural level 9 ([P. Haesaerts et al., 1996](#); [Ph. R. Nigst et al., 2008](#)). Nevertheless, surprisingly, a number of four C14 dates [spanning between 24,910 ± 150 B.P. (GrA 5006) and 23,180 ± 120 B.P. (GrA 5005)] are being put forward, with the mention that they belong to “the position of level 9” and by no means to a possible archaeologically identified and characterised level 9 ([Ph. R. Nigst et al., 2008](#)). These dates could be questioned, especially since the dates provided for cultural level 7, just as curiously defined by “the position of level 7”, point to ages 2,000 years younger than the overlying level 8 ([Ph. R. Nigst et al., 2008](#)).

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Recently, a team of researchers have had the idea of reassessing the chronology of some representative Gravettian settlements in Central and Eastern Europe based on dating osteological materials recovered during initial archaeological excavations (Wilczyński J. et al., 2019). Among them, the renowned cultural level 9 of Willendorf, which produced the well-known Venus I. The materials used for radiocarbon analyses were found in cultural layer 9 in 1908-1909 and consist of a *Rangifer tarandus* metapodium, mandible and astragalus, a *Vulpes/Alopex* sp. mandible, *Equus* sp. molar and long bone, a *Mammuthus primigenius* bone. Unexpectedly, the dates span between about 10.000 and 21.000 B.P., as follows: Poz-100.126:  $10.080 \pm 70$  B.P.; Poz-99.666:  $12.910 \pm 100$  B.P.; Poz-99.661:  $13.270 \pm 100$  B.P.; Poz-99.668:  $13.350 \pm 100$  B.P.; Poz-99.662:  $15.690 \pm 130$  B.P.; Poz-99.664:  $17.130 \pm 140$  B.P.; Poz-99.665:  $18.370 \pm 180$  B.P.; Poz-99.952:  $18.400 \pm 100$  B.P.; Poz-99.994:  $21.400 \pm 140$ . Since the osteological material used for dating was impregnated with organic adhesive, those particular dates should be viewed with due caution, except for the age of  $21.400 \pm 140$  B.P. provided by a burnt mammoth bone which was not impregnated with adhesive. Even so, so far, these are still the only C14-dated materials that come, with certainty, from the much-disputed cultural layer 9, which delivered the Venus of Willendorf. Perhaps such attempts should be resumed and those materials should be decontaminated so as to more directly specify the age of the famous anthropomorphic figurine. Until then, we consider that the only direct dating of cultural level 9, and implicitly of the Venus of Willendorf, points to the age of  $21.400 \pm 140$  B.P. (Poz-99.994). Naturally, since it is a mammoth bone, we might think that it is older than the artisans who made that statuette.

With regard to how the Venus of Willendorf was found, apparently a worker named Johann Veran uncovered it at a time when none of the three archaeologists, J. Szombathy, J. Bayer and H. Obermaier, were present, which back then was not an unusual situation. However, there were some discussions leading to doubts that the documentation might not have been appropriately done upon determining the context of discovery (W. Antl-Weiser, 2009). Of course, these minor details did not diminish the importance of this find, which, over the years, has become one of the greatest archaeological discoveries of all time.

Fifteen figurines are presumed to come from **Grimaldi**; they were pirated through clandestine excavations particularly from the cave of the Prince and Barma Grande. The main perpetrator of this archaeological robbery was a certain Louis Alexandre Jullien, who carried out clandestine excavations between 1883 and 1895. He sold the first Grimaldi figurine to Salomon Reinach in 1896, then five others in 1897 and one in 1903 to the well-known prehistorian Eduard Piette. All seven of them were donated to the National Archaeological Museum of Saint-Germain-en-Laye, where they can be found today. The eighth figurine was sold by one of Jullien's daughters to Harvard's Peabody Museum (the USA). The

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other anthropomorphic sculptures were inherited by Louis Jullien's two granddaughters. Five of them were put up for sale in 1980 in a Montreal antique shop, where they were purchased by Pierre Bolduc, who, in 1993, submitted them to McGill University of Montreal. Advised by R. White and M. Bisson, he contacted Jullien's granddaughters and, surprisingly, managed to recover the last two sculptures (M. Bisson, P. Bolduc, 1994; P. Bolduc, J. Cinq-Mars, M. Mussi, 1996; R. White, R. Bisson, 1998; M. Mussi, P. Bolduc, J. Cinq-Mars, 2004).

Unfortunately, the initial archaeological context of these valuable Palaeolithic figurines was largely unknown (M. Mussi, 1991). That is perhaps why, at the time, their authenticity was disputed by many prehistorians, including G. de Mortillet and E. Riviere. Furthermore, some legends were born as to how these figurines had been found, the caves they came from etc. They started to be regarded with interest only after the discoveries of Brassempouy, attributed to the Palaeolithic. This probably explains the decision of Salomon Reinach and later of Eduard Piette to purchase a large part of them.

The rediscovery of the Montreal figurines was a good opportunity to re-evaluate their authenticity and attempt to reconstruct the context of discovery of the Grimaldi figurines as a whole, through the extremely laborious work of R. White and R. Bisson (1998). First and foremost, the place of discovery of each figurine was evaluated:

**Cave of the Prince:** Ivory figurine with red ochre (75.2 mm); *Polichinelle* (green steatite, 61 mm), *Losange* (green steatite, 63 mm) (fig. 1/8); *The Woman with two heads* (green-yellow serpentinite, 27.5 mm); *Double figurine* (yellow-green serpentinite, 47.2 mm); *Undescribed figurine* (green steatite, 38 mm); *Hermaphrodite* (green steatite, 52 mm) (fig. 1/9) and *The black head* (green steatite, 24 mm).

**Barma Grande Cave:** *The woman with the perforated neck*; *The Bust* (chlorite, 29.2 mm); *The flattened figure* (chlorite, 44.2 mm); *Yellow steatite figurine* (steatite, 47 mm) (fig. 1/10); *The woman with goitre* (fig. 1/11); *Figure ? stone (disk)* (23.2 mm).

**Jardin Abbo outdoor survey:** *The Brown Ivory Figurine* (67.7 mm).

The stylistic analysis and the absolute dates obtained have led to the belief that the age of the Grimaldi anthropomorphic representations spans over about 5,000 years. The oldest would be the *Hermaphrodite* and the *Ivory figurine with red ochre*, whereas the youngest are the *Woman with two heads* and the *Double figurine*. The *Ivory figurine with red ochre* from the cave of the Prince is estimated to be early Epigravettian (about 20,000 years). The same age, or perhaps slightly more recent, is attributed to some of the soft stone statuettes in the same cave.

The *Woman with the perforated neck* from the Barma Grande cave may be dated more precisely. It is known to have been found approximately 6 m deep, under a layer which contained a hearth and lithic tools specific to the early Epigravettian, with *à cran* items, for which there is a C14 date of 17.000 ± 180 B. P. (Gif-sur-Yvette A95072) (M. Bisson, N. Tisnerat, R. White, 1996). The yellow steatite

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figurine, recovered from a layer 420-470 cm deep, is associated with an evolved Epigravettian around 16.000 years, whereas the *Woman with goitre*, retrieved from a deposit 420-300 cm deep, is associated with a final Epigravettian, for which one date,  $14.101 \pm 50$  BP (Gif-sur-Yvette A95074), may be invoked (R. White, R. Bisson, 1998).

The Grimaldi figurines, with their complicated history, strike through their stylistic unity, very small sizes, the homogeneity of the raw material as well as their impressive number and origin, probably from a single site. Despite all ambiguities regarding their archaeological context, it should be remarked that there is absolutely no doubt about their classification under the features and stylistic patterns of Palaeolithic anthropomorphic representations, being indisputable examples of the specific characteristics of what has been defined as Palaeolithic Venus. We believe the issue of their authenticity cannot be raised because, when they were pirated from the sites of Grimaldi, only a few Palaeolithic statuettes were known, such as “*Venus impudica*” from Laugerie Haute (found in 1864) or the figurine of Trou Magrite (found in 1867). None of them could have been sources of inspiration for the Grimaldi Venuses, much more typical of and similar to later finds in Western Europe, Central Europe or the Russian Plain. If their authenticity is difficult to question, however, there are no direct arguments to attribute them to the Gravettian.

**Venus of Savignano**, 22.1 cm high, made of steatite or serpentinite (the serpentinite is confirmed by petrographic analyses), was found in 1925, during the excavation of a building foundation, about 1 m deep, without any other archaeological materials (fig. 1/12) (M. Mussi, 1996; 2005). It was uncovered absolutely by chance by the sculptor Giuseppe Graziosi, father of the future great prehistorian Paolo Graziosi. It was him who donated it to the Pigorini Museum of Prehistory in Rome (H. Delporte, 1993). The Venus of Savignano lacks any archaeological context and there is no reliable evidence of its age.

The **Trasimene** figurine was found in a private collection alongside various other artefacts, with no archaeological or geological context that would allow at least vague estimates regarding its age (fig. 1/13). Nor is the exact location of the discovery specified. Therefore, it is presumed to have been found in the vicinity of Lake Trasimene. It is carved in steatite of low hardness, grey-green in colour, reminding of that used to make some of the Grimaldi figurines, and is 3.7 cm high (P. Graziosi, 1939).

The figurine from **Chiozza di Scandiano** was found in 1940 in a Holocene alluvial deposit. It is impossible for one to make any considerations regarding its age (fig. 1/14). It was carved in hard brown sandstone, with feldspar and mica, and it is considerably high, 20.5 cm (P. Graziosi, 1943).

In 1966, two bone figurines, 9.0 cm high and 6.1 cm high, were found in a cave near the town of **Parabita**, in the province of Lecce (fig. 1/15). They were discovered in a part of the cave that was disturbed by a Bronze Age tomb, although levels that can be attributed to the Gravettian and the

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Epigravettian were identified in the cave. Comparing the sediment preserved on the figurines with that in the Palaeolithic levels, it was presumed that they come from the old Epigravettian layer (A. M. Radmili, 1966).

**Venus de Moravani** is made of ivory, 8 cm high, and was found in a furrow in 1938. It later ended up in a gendarme's collection, along with other lithic materials, attributed to various Palaeolithic cultures, from the site of Podkovicca (fig. 1/16). In the case of this item, otherwise particularly interesting, there is no possibility of reconstructing an archaeological context that would allow its attribution to a Palaeolithic culture.

### Discussions

Bringing an old topic, such as the stratigraphic position of several figurines attributed to the Palaeolithic, up to date is necessary, insofar as many of them are now considered to belong to the Gravettian. The only argument for this assumption seems to be stylistic.

In contrast to the aforementioned figurines without context, the 2019 archaeological excavations carried out in the site of Piatra Neamț 1 revealed the first Venus figurine in Romania, which was found next to a hearth in the Epigravettian level II (fig. 2). Dating the charcoal from that hearth has made it possible to estimate the age of the statuette. Thus, the Venus of Piatra Neamț was found in a cultural level well-defined as Epigravettian, whereas by dating the charcoal from the hearth near which the figurine was discovered, and the bones in that particular level, the age of the Epigravettian II level was established between  $16.080 \pm 50$  B.P. (19.580–19.225 cal. B.P.) (Beta 531.207) and  $17.190 \pm 50$  B.P. (20.925–20.554 cal. B.P.) (Beta 531.210) (E.-C. Nițu et al., 2022).

The figurine of Piatra Neamț 1 is made of sandstone and has the following dimensions: height = 9.9 cm; width = 6.9 cm; maximum thickness = 3.6 cm; maximum diameter of the head = 3.3 cm.

Although the Epigravettian female figurine of Piatra Neamț 1 appears to comply with the stylistic rigours typical of opulent statuettes, such as those from Central Europe (Willendorf, Dolni Vestonice), partly Western Europe (Savignano) and possibly Eastern Europe (Gagarino), this is much attenuated by the shape of the pebble in which the figurine was carved. This implies that a stylistic rule, which seems a taboo for many of the opulent Palaeolithic figurines, was disregarded this time due to the constraints imposed by the shape of the raw material used, given that most likely it was the initial shape of the pebble which inspired the Palaeolithic carver from Piatra Neamț 1 to use it as such. Eventually, the artisan was forced to adapt to the features of the raw material available at a given time (E.-C. Nițu et al., 2022). Without compromising those particular canons, constrained nevertheless by the shape of the raw material, the Palaeolithic sculptor found technological solutions to at least create the illusion of massiveness by deepening the grooves which delimit the outline of the breasts and buttocks, that is,

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Fig. 2 – Epigravettian female figurine from Piatra Neamț 1.

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precisely the morphological parts that are defining for many Palaeolithic figurines. From this point of view, the Piatra Neamț 1 figurine is an excellent example of stylistic adaptation to the initial shape of the blank in which it was carved, while complying with the rules specific to Gravettian statuettes (R. White, 2002). In this case, the raw material played an essential role through its nature, shape and qualities. The initial pebble shape definitely influenced the technique employed in making the figurine, its dimensions and, last but not least, the style and final appearance of the statuette from Piatra Neamț 1.

At the same time, these aspects may suggest the assumption of the conjunctural creation of such figurines. When performing urgent hunting rituals, the Palaeolithic hunter would use the raw material on hand and manufacture the statuettes required by such ceremonials quite fast.

All this shows how wrong the geometric pattern of construction of female figurines was, a model which relies on including the breasts, abdomen and pubis in a circle, whereas the bust and head, on the one hand, and the legs, on the other, are inscribed in a rhombus (A. Leroi Gourhan, 1965). The attempt to prove the stylistic unity of these figurines was prompted by the desire to induce the idea of most of them belonging to the Gravettian. In fact, that respective pattern was criticised by L. Pales (1972, 1976) and J.-P. Duhard (1995) shortly after it was launched.

In addition to the Palaeolithic artisan's need to adapt to the raw material, it is most likely impossible to strictly correlate the various models with the chronocultural periods, as the female figures represented in the Palaeolithic highlight recurrent universal stylistic characteristics (R. Burrillon, 2009). It is therefore no wonder that the entire range of graphic representations, from the most detailed to the schematic ones, is encountered throughout the Palaeolithic period. After all, all these attempts at classifying the manner of creating Palaeolithic female sculptures into strict patterns start from the misinterpretation of several aspects, such as exaggerating the Gravettian culture unity, abolishing the imagination of each of the creators of these sculptures, disregarding the chronological gaps and even the absence of reliable chronological landmarks for many of these artworks, the certain existence of regional cultural particularities, adaptation to raw material features and initial blank shape etc.

There are clearly a number of general features which define the Palaeolithic Venus sculptures, but there are also regional stylistic characteristics and even aspects that are proper to each representation, which are, ultimately, the individual contribution of its creator. Under such circumstances, one may expect the Palaeolithic artist to have carved a certain model every time, whether obese or slim, regardless of age, canon required by a certain cultural appurtenance, traditions etc.

H. Delporte (1993) remarks the heterogeneity of morphology of the figurines from Brassempouy, in the sense of the coexistence of obese and slim forms. This prompted E. Piette to launch the theory of "figurine-portraits", which assumes that the female population in the Palaeolithic logically

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consisted of filiform and corpulent women. The idea was developed by [J.-P. Duhard \(1993; 1994\)](#), according to whom there is no morphological difference between the bodies represented in the art of the Upper Palaeolithic and those of today. The settlement of Gagarino is perhaps the most typical example of coexistence, in the same cultural level, of obese and slender figurines ([S. Zamiatnine, 1934](#)). This means that the hypothesis that only the obese statuettes belong exclusively to the Gravettian should be discarded.

Maybe this better explains why the Venus of Piatra Neamț, which falls under the category of obese figurines often considered typical of the Gravettian culture, is a little over 17.000 B.P and belongs to a later period, i.e., the Epigravettian. The figurine discovered at Piatra Neamț 1 does not deviate from the general principles which define obese Palaeolithic statuettes. For example, although at first sight the Venus of Piatra Neamț seems to fit into the Willendorf model, on closer study one may note a series of quite different stylistic details, pointing to a stylisation and even slight schematisation tendency. Therefore, in terms of style and technique of Palaeolithic female figurines, we should not believe there is a definitive system at a certain chronological and cultural level ([H. Delporte, 1993](#)).

[R. Ronsfeld \(1977\)](#) remarked that certain stages in the process of schematisation of human representations are universal, such as selecting certain features or exaggerating other morphological parts. Some elements may reoccur in the artistic production of a human group or in a particular age or culture. Also, [C. Gamble \(1982\)](#) would point out the diversity of the treatment of details in Palaeolithic female representations, there being a wide variety in the detailing of the head, legs, additional decorations etc.

The figurine from Piatra Neamț 1, found in an Epigravettian level dated to  $17.190 \pm 50$  B.P. (20.925–20.554 cal. B.P.), made in a style typical of the Palaeolithic statuettes often referred to as Palaeolithic Venuses, but with enough original features entailed by the characteristics and shape of the raw material, will hopefully mark a new beginning in re-evaluating the age of all such discoveries that lack an archaeological context.

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## **Tattoo stone tools in the archaeological collection of the Ushki V site (North-Eastern Eurasia, Kamchatka)**

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**Abstract:** In the focus of the proposed article, the tattoo is considered as an ancient form of body modification in the Stone Age which arouses interest, first of all, in the technological features of the process. The article presents the results of a study of stone tools with traces of paints, preliminarily identified as tools for tattooing. The traces of paint were identified during microscopic analysis and subsequent study of the pigment spectrum using SEM-EDX. A morphometric study of stone tools from the cultural layer no. 7 of the Ushki V site (Kamchatka Peninsula), dated about 13,000–12,000 years BP, made it possible to suggest their use in working with leather and to reconstruct the types of symbolic behaviour of the ancient population. An important feature of the studied tools is the use of not only two functional types of tools (a cutting tool and a borer) but also their morphological difference, and may be, semantic context.

**Key words:** North-Eastern Eurasia, Kamchatka, Final Paleolithic, stone tools, use-wear, pigment, elemental composition

### **Introduction**

There are few archaeological materials that definitely testify to body modification through tattoos (I. Ingalls, 2011; B. Robitaille, 2007; \*\*\*, 1998; \*\*\*\*, 2000). The most reliable ancient evidence of the practice of tattooing in Eurasia dates back to the Upper Palaeolithic period (A. Deter-Wolf, T. Peres, 2013). Indirect signs of tattooing have been identified in anthropomorphic images in Siberia and Europe in the Upper Palaeolithic (M. Gerasimov, 1958; N. Conard, 2009). The evidences of body decoration with tattoos in the Stone Age are known from the materials of South American cultures (A. Deter-Wolf et al., 2016; \*, 2017; M. Kosut, 2015).

The tattoo traditions of the autochthonous peoples of various continents and territories show different aspects of indelible body marking in all regions. Obviously, being a universal tradition of body modification, the role of tattoos and scarification was in line with the idea that the human body was supposed to be “finished” in order to comply with a new social (or status) state according to the mythical model accepted in the community. Most studies in this area from the side of ethnography, cultural and social anthropology place tattoos in cultural, symbolic, aesthetic and pro-social frameworks (\*, 2017; M.

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Mednikova, 2007; L. Krutak, 2014 and etc.).

Tattoos are considered a vivid form of art and an expressive means of cultural, social, ethnic identity among the peoples of the North. Modern ethnic groups inhabiting the region under study (Eskimos, Chukchi, Aleuts, Koryaks, etc.) retained their traditional way of life up to the middle of the 20th century, and traces of faces and hands tattooing can still be found there. The first ethnographic research of these peoples began in the 18th century. Their results were published in the studies of the first academic expeditions (J. Lindenau, I. G. Georgi, V. I. Yokhelson, G. F. Miller, S. P. Krasheninnikov, K. G. Merck, E. V. Nelson). The work was continued by Russian researchers - archaeologists and ethnologists from the end of the 19th to the beginning of the 20th centuries (V. G. Bogoraz, I. S. Gurvich, E. P. Orlova, S. I. Rudenko, etc.). Information about tattoos is presented in folklore, specifically fairy tales and myths of the peoples of the North (I. Ponkratova, L. Lebedeva, 2022). Currently, there is no generally accepted classification of the peoples of the North Pacific tattoos although there are first attempts at ornamental and semantic systematization (L. Lbova et al., 2022).

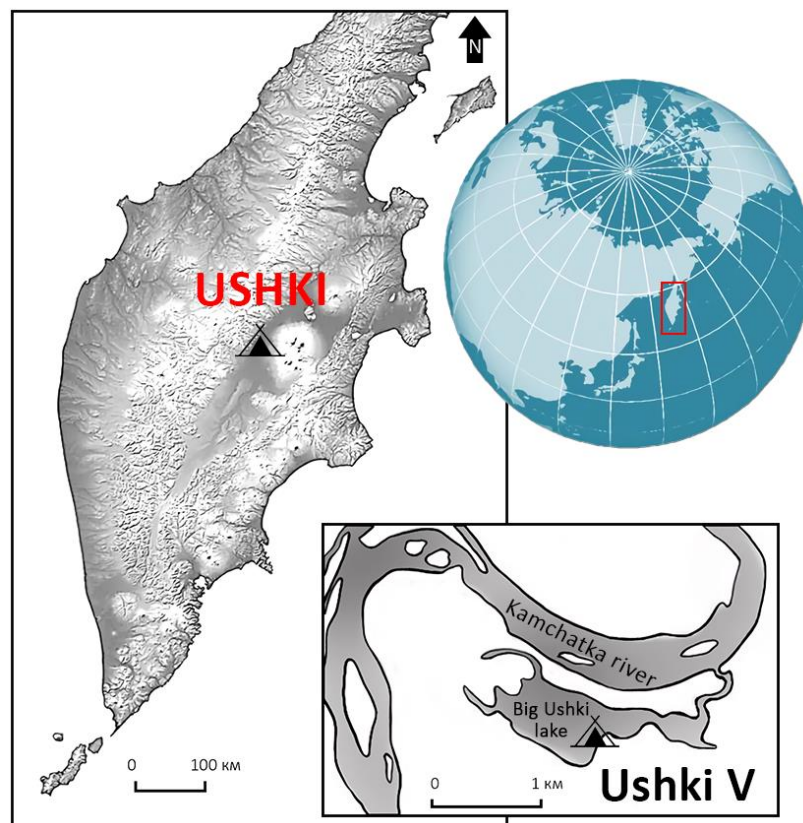


Fig. 1. Geography of the Ushki locality (modified from a digital relief model NASA/JPL/NIMA).

### Materials, methods and main results of the study

The emergence of man in Kamchatka dates back to about 13 thousand years ago. The complex of Ushki sites and particularly the Ushki V site is of particular interest for us. The site is being studied under the direction of I. Yu. Ponkratova since 2004. It is located on the southern shore of the Bolshoye

Ushkovskoye Lake in the Ust-Kamchatsky region (Kamchatka Peninsula) (fig. 1). As a result of its study, four periods of settlement from the end of the Pleistocene to the early Holocene were identified. In cultural layer no. 7, at a 2.7–2.8 m depth, in a brownish-pinkish loam with whitish fine-grained sand (volcanic ash, remains of bones (?)), with coals and ochre inclusions, a dwelling was found. The dwelling has a hearth, an exit oriented to the south and chipped stone concentration. The layer is dated according to  $^{14}\text{C}$  coal –  $11.330 \pm 50$ – $10.350 \pm 50$  B.P. (13.320–12.022 (cal. age) (fig. 2) (I. Ponkratova, 2021).

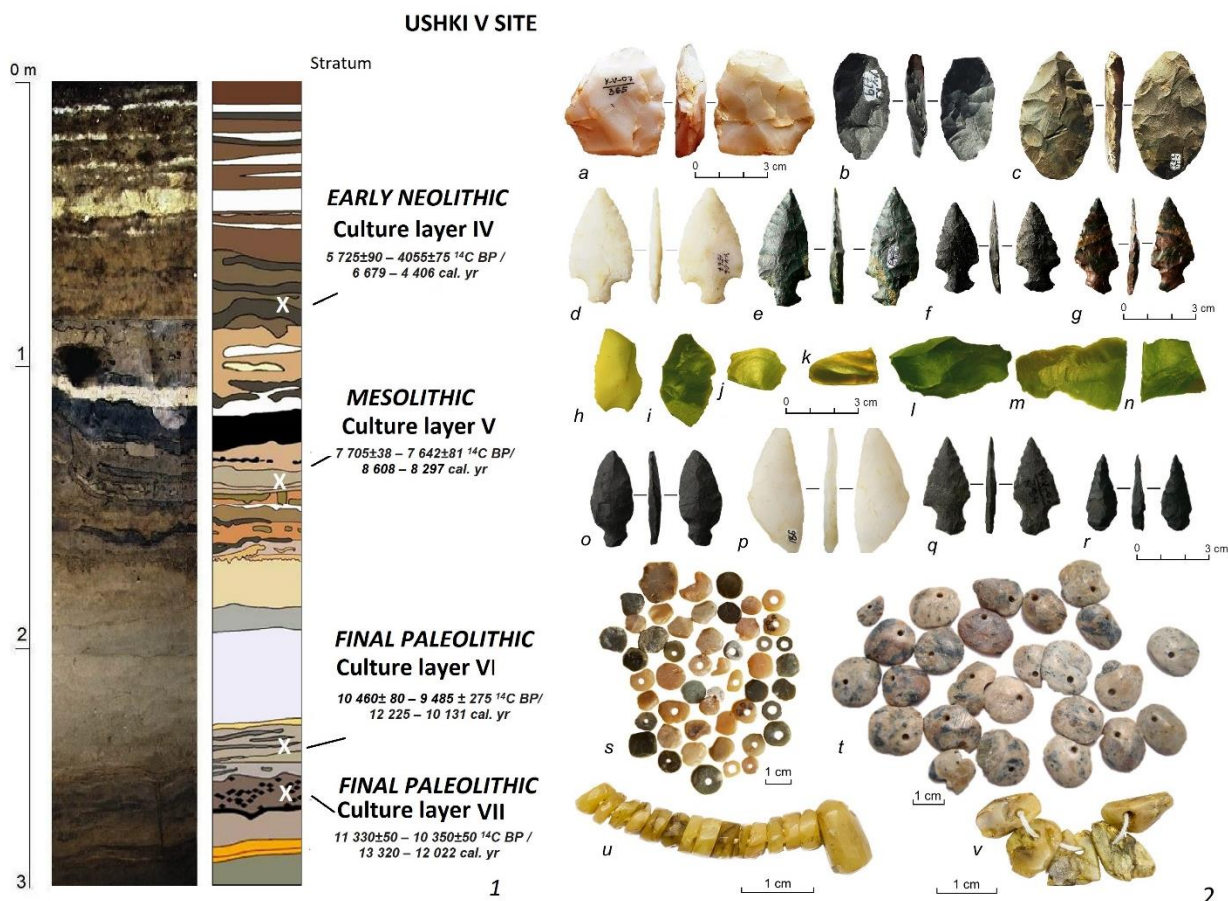


Fig. 2. Chrono-stratigraphy and archaeological inventories of the cultural layer VII of the Ushki V site.

The tool set is represented by bifacial arrowheads and tanged darts, percussion tools, fragments of calibrators, retouched flakes; knives, adze-like items, alternate retouched beaks and borers, grinding tablets. Jewellery is presented in the form of stone beads and pendants (fig. 2). Tools, as well as numerous scattered and gathered beads, pendants, their blanks and fragments, tools for their manufacture were found in a dwelling near the hearth. Also, the remains of fish (salmon) - teeth, vertebrae, scales, sticklebacks (needles) were found there. The complex layer no.7 Ushki V is the oldest in the composition of the site, in a chronological context it represents the culture of the final Pleistocene.

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About 15 bifacial arrowheads and darts (and their fragments) are known from the excavations of the cultural layer no. 7 of the Ushki V site and from the surface finds near the sites. A specific feature of the items is the presence of a stem and small use notches at the base. Standard average size value: length - 39.3 mm, width - 21.7 mm, thickness - 4.6 mm. The items have a flattened lenticular cross section, wide or narrow subtriangular or triangular shape. The items were made on flakes taken from irregular cores from a variety of materials – chalcedony, flint of various colours, and even basalt. Arrowheads are made predominantly with axial blade rotation using single bevelled blade designs (I. Ponkratova et al., 2022). The edges of the arrowheads were given additional sharpness by applying fine marginal retouch. Some of the items are fragmented possibly due to a mistake of the master or due to deliberate remaking. Two items have micro-notches on one or two edges of the feather.

Trace analysis was used to study a selection of tools recovered directly from layer no. 7 of the Ushki V site. The selection includes arrowheads, darts and their fragments (12 pieces), as well as flakes and chips (45 pieces). The studied subjects were located compactly in one dwelling.

A preliminary microscopic examination of the artifacts surfaces in the collection showed that they are well preserved and accessible for a detailed study of the use-wear traces found on them. The functional analysis of the finds was based on the methodology of experimental traceological studies developed and tested by S. A. Semenov and G. F. Korobkova (S. Semenov, 1957; G. Korobkova, 1999) and the method of Lawrence Keeley (L. Keeley, 1980). The experience of similar work with materials from archaeological collections of Palaeolithic and Neolithic sites in North Asia was also used (P. Volkov, 2013).

The types of rock from which the studied artifacts were made are different. Chalcedony items (having a hardness on the Mohs scale – 7) are extremely difficult for doing traceological research. Use-wear traces on the tools made of such material are formed extremely «slowly», after a very long work with tools and in the practice of traceology, they are extremely rarely recorded. On the chalcedony items of the collection of the site, use-wear traces (with rare exceptions) traces of their use as tools, were not found.

No less difficulties for traceological analysis appear when working with tools made of quartzite, the granular structure of which forms use-wear traces in very specific manifestations in which the functional characteristics of the tool are extremely complex and developed only after a relatively long and monotonous use of the tool in work.

Other siliceous materials, such as the greenish, fine-grained mineral used in the manufacture of tools, are noticeably more «convenient» for trace analysis. The relatively coarser material of the tool, in terms of adaptability for microscopic analysis, is intermediate between the quartzite of item 3 and the greenish material of item 1, 2.

In general, items from the archaeological collection are well preserved for traceological analysis at a detailed level. Traces of episodic and long-term use as working tools were found on 19 artifacts.

Identifiable use-wear traces of these tools have been found which make it possible to determine their functional purpose. The most distinct traces in the form of specific micro finishing and micro polishing can be traced on 11 tools.

Data on the localization of use-wear traces and orientation of the marked linear traces together with the identified specifics of the surface structure of micro polishes (P. Volkov, 2013) made it possible to determine the function of the studied tools as cutting tools for elastic organic material. Tools of this functional type are relatively widespread in Palaeolithic tool set. The cutting tool is like a knife and dismembers the material being treated. Unlike a knife, a cutting tool has a shorter part of the tool in direct contact with the material. The cutting part of the tool attacks the surface of the material at an angle noticeably blunter than when working with a knife. Therefore, the cutting tool is more convenient for cutting material along a complex path. It is more convenient for a cutting tool to cut skins, make intricate markings of ornament on bone, antler, etc. In fact, a cutting tool is like a burin and a knife at the same time (P. Volkov, 2013).

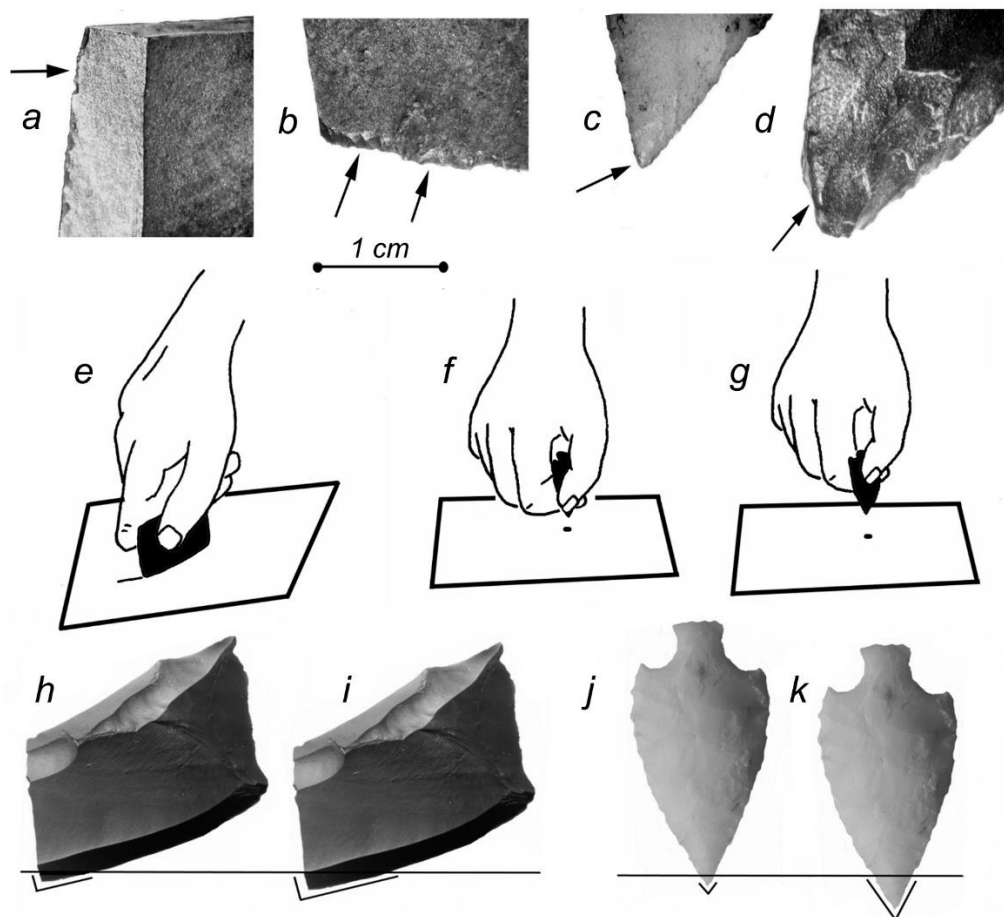


Fig. 3. Tattoo tools. Traces of work on a regular cutter (a) and a tattoo cutter (b); use-wear traces on a tattoo tool (c) and an ordinary skin awl (d). Ways of holding tools in work and the nature of their penetration into the skin during the ordinary work of the cutter (e, i) and using it for tattooing (h); arrowhead as a skin awl (g, k) and when using it for tattooing (f, j).

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The trace analysis of the studied collection revealed traces of the working contact of such cutting tools with a relatively soft, elastic material (fig. 3 a-d). Usually it is a well-made skin / hide. Practical function is a cutting before sewing.

A specific feature is the relatively shallow penetration of tools into the material being treated (fig. 3 h, j). For cutting tools used to work with animal skin (fig. 3 i, k), this is not typical. In such cases, use-wear traces from contact with the treated material extend relatively close to the cutting edge of the tool. Traceological observations record a relatively weak use-wear of all the tools found in the collection under study, and the specific localization of use-wear traces indicates a relatively shallow penetration of the tools into the dissected material. It is quite probable that special tool set was used for notching which was made during the tattooing of human skin.

In the course of experimental studies, tools made of siliceous material similar to archaeological samples were used. Notching and perforation was carried out on fresh pigskin to a depth similar to when creating wounds before implementing dye into them during tattooing. Figure 3 shows the result of one of the aspects of the experimental studies in which the process of use-wear traces formation led to the formation of a specific polishing after 1000, 1500 and 2000 perforations of the skin to a depth of 2-3 mm. A borer as a tool is similar to the modern awl and is very common in archaeological collections (fig. 3). With its help, narrow holes-slots were made in skins, leather, birch bark and other soft elastic materials. The movement of the tool is progressive; relative to the surface of the material being treated, its perforation is performed by a tool to a noticeable (5 mm or more) depth; the rotation around the axis of the tool is always less than 90° (P. Volkov, 2013).

Observations of the punctures identified as a result of the traceological analysis record relatively weak use-wear of this type of tools, and the specific localization of use-wear traces indicates a relatively shallow (1-3 mm) penetration of the tools into the dissected material. Experiments have shown that with a certain method of holding the tool during tattooing, in contrast to working with the same tool as an awl, it ensures the regularity of the kinematics which is important factor in the tattoo process (fig. 3 e - g).

The study of areas with possible traces of paints was carried out on an Altami binocular microscope (×5-100 zoom) with photographic fixation on a Nikon D3200 SLR camera with a Nikon and Micro NIKKOR macro lens (fig. 4 a) and subsequent processing using the DStretch plugin (fig. 4 b). The most obvious situations were analysed by the elemental composition and distribution of elements using scanning electron microscopy and energy dispersive X-ray spectroscopy (SEM-EDX) on a Bruker Nano GmbH Quantax 70 desktop electron microscope (Germany) and a Hitachi TM3000 elemental analyser (equipment of the Novosibirsk Centre for Collective Use «Geochronology of Cenozoic») (with ×1000 zoom) according to the methodology tested by the authors earlier (I. Ponkratova et al., 2020).

The non-destructive SEM-EDX method allows us to obtain the following results: the spectrum of elements from the studied artifact surface, a map of the distribution of elements over the analysed area



and a software interpretation of the spectrum in the form of tables of the content of elements in percentages (M. Ponting, 2004).

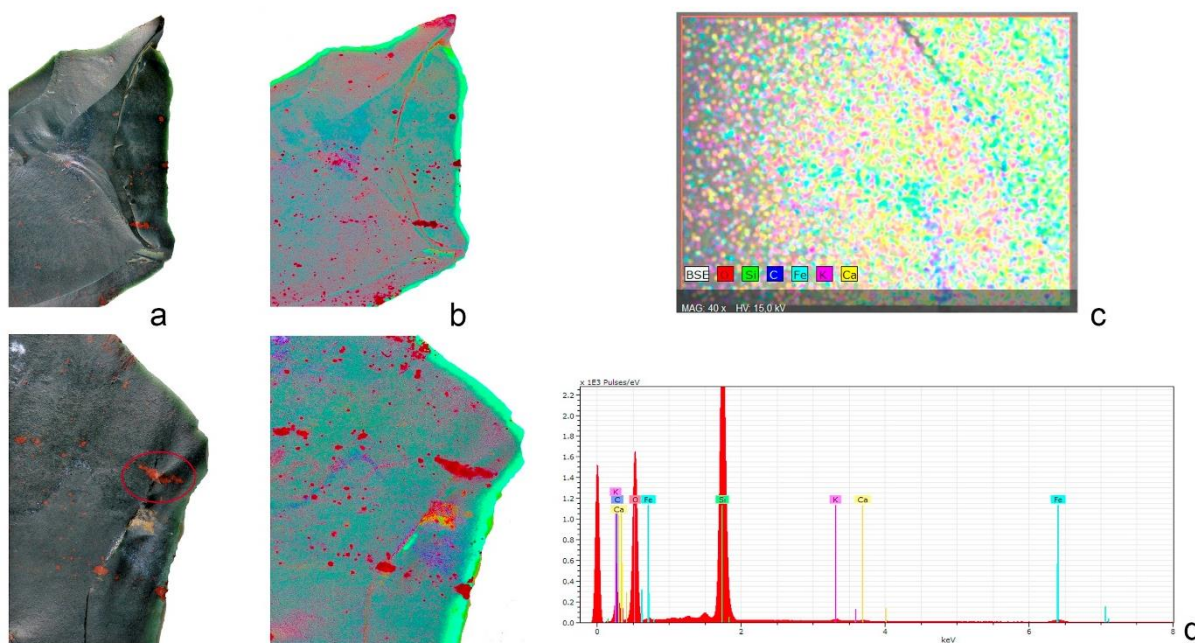


Fig. 4. Microscopic and spectral analysis of a coloured artifact and individual sections of its surface (lab. No. 208): a – macrophotography of the area with pigment, b – image processing using the DStretch plugin, c – mapping the distribution of chemical elements over the sample area, d – graph of chemical elements of red pigment.

The study used tables of the content of elements (general characteristics of the material), electronic images of the surface of samples (characteristics of the microstructure) and maps of the distribution of elements (interpretation of microstructure inhomogeneities) (fig.4 c, d).

As a result of the chemical composition study and distribution of elements in seven samples from the surfaces of six stone cutting tools, two pigment formulations were identified. They differ in the set of components and the nature of treating.

The red pigment was made on the basis of hematite. Mineral raw materials were ground into a fine powder and mixed with animal fat and clay. Animal fat played the role of a solvent giving the pigment a liquid state. Clay acted as a binder making the paint more viscous and uniform.

The yellow pigment was made according to a different recipe. Goethite was used as the base. It has been heat treated (strong fire heat with rapid cooling). Such treating could be used to simplify the process of grinding the material or to give the pigment a more saturated colour. Then goethite was ground into powder, and then animal fat (solvent), clay and pounded bone (binding components) were added to it. Previously, the authors analysed samples of red pigment found on the surface of jewellery (beads and pendants), stone tools (cutting tools), also found in cultural layer no.7 of the Ushki V site (I. Ponkratova et al., 2019; 2020). Their elemental composition is similar to that recorded in the study of red paint on

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items identified as tattoo tools presented in this study. This may indicate a certain stability of the formulation in the manufacture of red paint.

### **Discussion**

Stone Age researchers have recently begun to highlight important components of material culture that may be associated with various body modifications found around the world ([\\*\\*](#), 2013; [\\*\\*\\*](#), 1988; [E. Schildkrout, 2004](#); [\\*\\*\\*\\*](#), 2000). However, there are few reliable archaeological identifications nowadays ([T. Ingalls, 2011](#); [B. Robitaille, 2007](#)). Comparative ethnographic evidence demonstrates that both the tattoos themselves and the materials associated with them were of important cultural significance ([L. Dorfer et al., 1998; 1999; \\*\\*](#), 2013; etc.).

Blombos Cave finds have been identified as evidence of one of the earliest symbolic traditions ([C.S. Henshilwood, B. Dubreuil, 2009](#); [C.S. Henshilwood et al., 2009](#); [K. Knight et al., 1995](#); [I. Watts, 2009](#)). It should be noted that in addition to jewellery and paint (ochre with use-wear traces), the early Upper Palaeolithic levels in Blombos Cave showed about 30 formal pointed bone tools most of which were recovered from levels M2 (with dates about 76-84 thousand years BP). Some of the artifacts were recognized as probable items used in the practice of tattooing (bone points, shells and tools for rubbing ochre, pieces of pigment with use-wear traces) ([C.S. Henshilwood et al., 2011](#)).

Apart from individual opinions of researchers about the decoration of the Upper Palaeolithic ivory sculptures with numerous lines as the evidence of ancient tattoos (for example, Hohle-Felz ([Conard, 2009](#)) or Mal'ta case ([M. Gerasimov, 1958](#))), then the most reliable ancient evidence of the tattooing practice in Eurasia is the Grotte du Mas d'Azil complex presented by numerous evidences of using bone items with red ochre traces ([M. Pequart, S.J. Pequart, 1963](#)). Taken together, the evidence that was collected by the French researchers clearly met the criteria necessary for a reasoned definition and classification of Madeleine tattoo tool set ([A. Deter-Wolf, T. Peres, 2013](#)).

Recent studies in Melanesia have combined the discovery of blood and use-wear traces resembling the traces of piercing or cutting human skin (scarification) to identify a series of obsidian artifacts as probable ancient tattoo tools ([N. Kononenko, R. Torrence, 2009](#)). Unfortunately, the remains of blood and pigment cannot always be detected or identified both due to the fact that they are not preserved and due to the lack of tools (necessary technical means and analysers) for their determination. Finally, experimental testing has shown that analysis of use and use-wear is not in itself a definitive indicator of tattoo practice ([A. Deter-Wolf, T. Peres, 2013](#)).

As is known, quite ancient tattoos were found in the cultures of South America (such as the Chinchorro culture), dates about 8.000 years BP. Also, they were found on the body of the "ice mummy Ötzi", dates 5250 years BP ([A. Deter-Wolf et al., 2016](#)). Numerous studies aimed at finding technological solutions for tattooing show that both tools made of bones (animal, bird, fish), mollusc shells and tools

made of durable materials (stone metal) could be used for performing such tasks (\*, 2017; L. Krutak, 2014; M. Kosut, 2015).

If our assumptions (based on the results of traceological analysis) about the probable purpose of the studied tools as tools for tattooing are correct, then we can assume a dual purpose of this process traces of which are recorded in the materials of the studied Ushki V site.

The use of a cutting tool as a tool for tattooing leaves specific traces of a “notch” and scars on human skin. The use of the borers described above (for the same purpose) when filling the wounds formed on the human skin with a dye leads to traces similar to those of a modern decorative tattoo.

An important feature of the studied tools is the use of not only two functional types of tools (a cutting tool and a borer) but also their morphological difference. The cutting tools of the studied collection are made of flakes with non-systemic morphology. The borers are the arrowheads of a relatively perfect shape. In the first case, morphologically ordinary objects were used, in the second case (tools for hunting) artifacts were very extraordinary.

As mentioned above, microscopic examination revealed traces of paint on the surface of the artifacts. After processing with the DStretch plug-in, the amount of paint traces became much more noticeable. DStretch uses decorrelation stretching method, an image enhancement technique that is widely used in petroglyphs and aerial photography. Two pigment formulations were identified by SEM-ESX, they differ in the set of components and the nature of treating, and colour – red and yellow.

Based on this, it is probably that the Ushki’s tattoo could be of two kinds: decorative and ritual. It is possible that the application of a decorative tattoo could well be a process not as socially significant as the ritual application of images made with hunting tools to the body. Connection with hunting magic, initiation ritual, etc. actions is very probable. The presence of ochre near the hearth, the remains of fish in the bonfire allows us to suggest that the dwelling of cultural layer no. 7 of the Ushki V site was not only a workshop for the manufacturing of jewellery, but also, probably, a place for certain ritual practices associated with totemistic representations (the cult of fish).

Studies of artifacts from the final Palaeolithic Ushki V site have revealed a set of stable signs of their use. The standard kinematics of both cutting tools and borers, the small depth of their penetration into the material indicates a strict specialization of the tools, and their use in tattooing is quite likely.

An earlier analysis of the elemental composition of pigments on stone tools from the final Palaeolithic Ushki V site suggested that they were artificial. The key criterion for determining the pigments on stone tools as artificial paints was a variable set of chemical elements, the dominance of iron. The presence and quantitative indicators of elements such as aluminium, silicon, calcium, potassium, sodium, and arsenic indicate the use of organic and inorganic additives in the manufacture of paints (I. Ponkratova et al., 2020).

Thus, the identified recipes have analogies both among other materials from the Ushki V site and at other Stone Age complexes of Eurasia and Africa (O. Bader, 1965; N. Praslov, 1992; C. S.

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Henshilwood et al., 2018; P. Villa et al., 2015). It can be assumed that there are certain paints manufacturing technologies which were determined by the choice of colours and the purpose of pigments.

### **Conclusion**

The most common methods of body modification in the history of mankind: tattoo and scarification (or scarring) carried certain meanings and information about the owner of such a modification and testified to gender, social, ethnic, personal identity. Purposeful application of drawings on the skin (geometric signs, images of plants, people, animals, polychrome compositions, etc.) interspersed with dyes into a fresh wound can probably represent a primitive form of art that had a social, cultural, status, information and sign role in hunter-gatherer societies, and further spread widely in various and multi-temporal cultural phenomena. According to the 18th – early 20th cent. ethnographic descriptions of the North Pacific peoples, the drawings on the body and face were intended both to protect against diseases, evil spirits, enemies, infertility, and for attractiveness. In some cases, tattoos were signs of victory over the enemy or good luck in hunting. The methods of tattooing were different («embroidery», pricking) but still materials of organic origin were used. Tools for tattooing were bones of fish and birds, iron needles, deer hair, sinew threads. Colouring substances were coal, ash, colouring rocks. Animal fat was used to soften and disinfect the skin. The main type of ornament was simple geometric shapes (lines, dotted lines, geometric figures, grids, etc.), at the same time, stylized anthropomorphic and zoomorphic elements took place.

According to the results of the research, an assumption about the probable function of some stone items (cutting tools and borers determined by technical and morphological features) was made. Analogies with the existing archaeological, ethnographic or historical ideas about the processes of tattooing or scarification, the presence of traces of pigment on the surface of the studied artifacts are considered by us as the most convincing evidence and arguments in favour of the version of tattooing in the Stone Age of Kamchatka.

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## **Motherhood and early childhood in some cases of the Romanian Neo-Eneolithic and Bronze Age**

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**Abstract:** The paper refers to various aspects of biological, or pathological nature, to social and cultural ones, but also to funerary rituals of the Romanian Neo-Eneolithic and Bronze Age, in strict connection to women about to become mothers, or who were already mothers, but also to their infants.

**Keywords:** Prehistory, early childhood, pathology, funerary rituals, Romania.

### **1. Biological, social and cultural aspects of childhood in the prehistory of Romania**

Both in present and past times, biological reproduction of the community was assured by children. Therefore, they were of great importance, as they permitted not only the continuation of the biological traits and qualities of the people, but also of the social, cultural and spiritual aspects, existing and preserved by that society.

#### *1.a. Biological aspects*

From this point of view, infant and generally child skeletons could be studied, by using their biological age and sometimes even their sex, which, could be anthropologically determined by using some certain criteria (development and eruption of dentition, length of the long bones, presence of the growth plates) (M. Stloukal, H. Hanáková, 1978; H. Schutkovsky, 1993). We are sure that genders were distinctly considered in past communities, as boys were the ones which would have replaced the older labour force, but also the warriors, which assured the protection of the community. On the other hand, girls, with their more fragile appearance, were an important "source" of other new generations, by later giving birth to children for their own community. From this latter point of view, they were also valuable and available for marriages trade, which could have assured some better living conditions, or even alliances to their native community.

#### *1.b. Social aspects*

Based upon the importance of the up mentioned biological aspects, it was a main goal of the families to maintain their children alive and to keep them so, until they got at least juveniles and

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were able to take care of themselves. Moreover, especially the mothers, took care of the social and cultural conditions, which made possible that their babies could be considered as being part of their community.

In order to be socially accepted as members of their tribe, children had to assimilate some skills, by imitation and gradual learning, which enabled them to maintain the knowledge of that society, mixed together with their own personal experiences. Their confirmation as *social persona* came at a certain moment, when they could have reached a specific age, in connection with a level of their skills, or even of their mental development. The latter one could be determined by their reactions to certain events, which were important to the community and based upon which they could have been also selected, in order to accomplish a specific social, or economic role (e.g. power and prompt reflexes, for warriors). It seems that also, each child maintained the rank of its family. Still, it is interesting to note that the little babies, especially the new-born ones, were probably considered as being not full-members of the community and, maybe this was the reason why, they were not always buried in the cemeteries, when dying at such a young age. As we know, during the Neo-Eneolithic of Romania, such babies were frequently buried close, or under their dwelling (under its floor, upon it, on, inside, or in the proximity of the hearths) (M. Bodea, 1997; R. Kogălniceanu, 2008; Băcuet-Crișan, Bejinariu, 2010), as we find in some Neo-Eneolithic material cultures, like Starčevo-Criș, Vinča, Ariușd-Cucuteni-Tripolje, Boian, Gumelnița etc. probably to be closer to their mother (E. Comșa, 1987). Another explanation for the babies' burials found in the dwelling, had considered that. If they were not initiated yet, the babies belonged to the dwelling's family and not to the community (M. Bodea, 1997). On the other hand, the older children (most probably the *infans II*), who were already confirmed as social individuals, were more frequently included in the cemeteries, sometimes even in double burials, together with possibly related adults (probably mother, father, or a closer relative), as we could find both woman-child burials (e.g. Gura Baciului, Cernica, Sărata Monteoru etc.), but also man-child burials (e.g. Cernica) (R. Kogălniceanu, 2008). Still, the up mentioned assertions were not a rule. There might have existed various cases, in which, the confirmation, or non-confirmation of children as *social persona* might have been determined, or influenced not only by the age, but also by other characteristics of that respective individual, (e.g. precocity, dental, physical, or cognitive development etc.).



1.c. *Cultural aspects*

In this regard, the role of the children was not only to perpetuate the existing biological “assets”, but also the cultural wealth of the society, with all its material and spiritual components. This was the reason why, according to their age and capabilities, they were more or less involved in all activities of their family, but also in some rituals, which were performed exclusively by their restrained, or extended family, or by the entire community, depending on the necessities of the respective tribe. In some specific situations, children and adult persons, selected by certain criteria, were sacrificed, for a certain purpose but, anyway, for the welfare of the community. Moreover, there were also funerary finds, in which the child skeletons were dismembered and found in unusual contexts, placed in the cemeteries, or settlements (R. Kogălniceanu, 2012). These individuals might have lost their meaning as *social persona* but, acquired another new, most frequently symbolical one, depending on the context of their discovery.

**2. Being a mother, in the Neolithic and Bronze Age of Romania**

It is a certain fact that, both during the prehistory and later times, reaching even up to our times, procreation was very important for the society and consequently, it was stimulated, by various means! We should not forget that, child delivery had several important meanings, which were economic, cultural, social and symbolical ones, each of them with a certain weight, depending upon the community which we would refer to. First of all, the women, even as little girls, must have had in their mind their role of giving birth to children, an idea which was imprinted to them from early childhood, by their family and relatives. We believe that those women who had many children were usually more valued, while those who were not fertile were somehow socially rejected, or marginalized but, in some certain moments, they were given the chance to get “recovered”, during some rituals of fertility, which were both dedicated to the Mother Earth (or another divinity related to fecundity and fertility) and to women.

We should not forget that, in the past, but even reaching up to the first half of the 20<sup>th</sup> century, Romanian women had to get married at a very young age, otherwise being considered “old spinsters” and being marginalized by the community. As it was important to give birth to a child soon after their marriage, when considered necessary, they tried to stimulate their fertility by using natural remedies, or even magical “treatments”. We should not forget that, both white and black magic could be employed on a pregnant woman, in the first case in order to keep her safe and sound, while in the second case to have a miscarriage, a still born baby, not to get pregnant, or simply to die, during the childbirth. In such a situation, some sort of rituals and incantations were

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practiced, in the first case most often being used a pregnant representation of a protecting goddess, or even of the women herself, while in the second, the opened belly of the woman was rendered, the figurine being probably also pierced. In few situations, like the one of a figurine from Căscioarele (Călărași County), with its prominent belly bearing a horizontal opening, in the region of its womb, the same like another one, from Vidra (Ilfov County) (R.-R. Andreescu, 2002) we consider that they could be connected with abortion, or with some other aspects, related to miscarriage.

### **3. Pregnancy**

Until reaching to child delivery, we should briefly concentrate upon this up mentioned aspect. Pregnancy seems to have been very important in the past communities and this might have been the reason why, such a condition was mostly rendered. on Neo-Eneolithic figurines. This physiological condition of women was put in a close connection with the fertility of the nature, which was determined by a divine force, who had interacted with the respective human community, in order to assure its general welfare and abundance. On the other hand, people could influence the actions of that divinity by performing all kind of ceremonies and rituals, in order to obtain its benevolence. In such ceremonies, it was very possible that they used some pregnant female figurines. Even beginning with 1995, Eugen Comșa had pointed out the existence of female anthropomorphic figurines rendering women of different ages, some of them being girls, others being adults and matures (E. Comșa 1995). Later on, Radian Romus Andreescu had emphasized the presence of representations with pregnancy, which was presented in various stages (R. R. Andreescu, 2002). Maybe, in order to stimulate the feminine fertility even further, some of them, like the figurine discovered at Căscioarele (Călărași County), had the belly looking like that of a pregnant woman, but filled inside with small clay balls, or pebbles, thus having also the function of a rattle (R. R. Andreescu, 2002), possibly being used in some rituals.

But, like always, there might have also existed cases when a family desired a child that would not come too soon and this had significant consequences, as the community considered that those individuals did not accomplish the most important role which they had in their society. This was the reason why, in certain moments, they had also used some specific practices, being either therapeutical, or magical ones, in order to stimulate their fertility.

#### *Midwife*

The so-called practice of “midwifery” seems to have been taken over after analysing the animal domestication, that took place during the Neolithic time, which was surely associated with the need of the humans to find the necessary veterinary skills (selection, mating, assisting birth),

especially in obstetrics, in order to help the domesticates during their labour. In fact, this was a permanent interrelation from that time on, as many medical treatments and practices were applied from animals to humans and the reverse (e.g. trephination). This is how, women had come to be also assisted during their childbirth and this seems to have been one of the important elements placed at the basis of the intense population growth noticed in the mentioned period (E. Scott, 1999).

In past communities, the midwife was a very esteemed and revered person, who had one of the most significant roles in helping women to deliver their babies. As known from the ethnological sources, even from today Romania, such individuals were always of female sex and this occupation was transmitted along generations, from mother to daughter, as each practitioner had acquired valuable empirical knowledge, which was further passed over. For instance, they learned to use plants, animal and mineral products and their dosage, which could help the pregnant woman, in order to maintain herself healthy and have a safe delivery. They also advised the woman with regard to her food regime, during her pregnancy. At the moment of birthing, the midwife knew the proper physiological characteristics of the future mother and the most appropriate position of the foetus, before coming out through the birth canal. If the latter was not the appropriate one, she knew how to move slowly the delicate body of the baby, in order to help him in order to come out and not to get blocked inside, a fact which could have been very dangerous, both for the mother and her baby. After the process was ended, the mentioned woman had assured herself that the new mother could manage herself with the breastfeeding of the newly-born child. This personage continued to have an important role even some longer time after the birthing moment, because some special conditions had to be maintained, in order to protect the vulnerable new-born baby and his mother from infections and disease. Therefore, a restricted access to them must have existed and this was the result of the empirical experiences of the various ancient communities. Based upon the existing ethnological sources, it is almost sure, that the woman and her baby were protected by amulets, but also by some incantations, addressed against the evil spirits, who could have stolen the soul of the infant, either from the womb of its mother, or from him, right after his births. Such archaic rituals are still preserved by the rural communities of today Romania.

#### **4. Birthing positions**

Usually, during the pregnancy, which is a period of more intense nutritional demands, each woman had a specific food regime, in order to help her remain alive and give birth to a healthy child. But this is not a rule! In some less developed societies, it was observed that such women, had undergone restrictions, determined by specific taboos in connection to pregnancy, which did not

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permit the intake of some products, being considered that either they make the pregnant woman feel sick, they make her become too fat, they hurt the foetus, they don't allow the birth process to follow its normal stages (D. Tsegaye et al., 2021). Moreover, we should not forget that, in those remote times it was also a frequent situation when a community had not some fruits, or vegetables available, for some time. These aspects made the pregnant woman become an undernourished person and this was one of the main reasons that created disturbances, not only in the general metabolism of that future mother, but also some others, affecting her foetus. One of the most important consequences of malnutrition had resulted in dystocia. When such a woman was close to the moment of delivery, the midwife prepared for her the necessary space, which, in most communities was restricted to men, was silent, had a dimmer light, in order to induce her deeper relaxation and facilitated an easy and fast delivery. When we get to this moment, we could say that, as it results from the studies of the anthropomorphic figurines, the position used in those moments was very important for the prehistoric communities, the same like it is in our days. Most probably, its representation was also an element which, when being used in some rituals, had stimulated the general fertility (of the nature and its beings, who were either plants, animals, or humans). In fact, as we will see further, women had used several birthing positions, that would have had assured them not only the alleviation of the pains, but also a rather comfortable child delivery. We should not forget that, such positions, even if culturally determined, were adapted to the physical appearance and physiology of each woman and, in our opinion, they had three main goals!

- To facilitate the easy expulsion of the baby from the womb of his mother;
- To ease the contractions during the process, thus creating some comfort for the mother;
- To facilitate the intervention of the midwife, or, when this one was missing, of another female person (who had experienced birthing), in order to help the woman during her child delivery.

From the specialized literature, we could identify several positions used for the mentioned purposes and these are: 1. Standing; 2. Sitting, or semi-sitting, also including that on birthing stools, or thrones; 3. Crouching; 4. Kneeling; 5. Squatting; 6. Lying down; 7. Reclining; 8. Hands and knees; 9. Side-lying; 10. Lunging; 11. Supine; 12. Forward leaning (E. O'Donnell, 2004; Jing Huang et al. 2018; <https://www.thebump.com/a/birthing-positions>).

In our opinion, for the first three of them, the ancient people had empirically used the benefit of the gravity which, due to the weight of the baby, would have helped the delivery and, in such cases, the women could have also finished birthing, even on their own. Moreover, the pelvic girdle

was more expanded, so that the rotating infant, that advanced through the birth canal could have come out more easily.

As examples of birthing in a crouching position, in Romania, we have the figurines discovered at Căscioarele (Călărași County) and belonging to the Gumelnița Culture and also the one unearthed at Târgu Frumos, belonging to the Precucuteni Culture (Iași County) (fig. 1). These representations, as symbols, being part of the larger theme of birthing women which is known even beginning since the Paleolithic, could be encountered in the Aegean-Anatolian-Balkan Neolithic

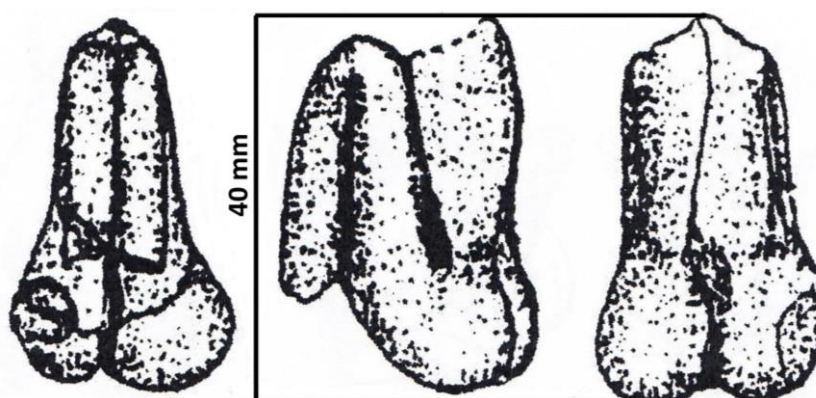


Fig. 1 - Figurine rendering a woman in birth position (after N. Ursulescu et al., 2006).

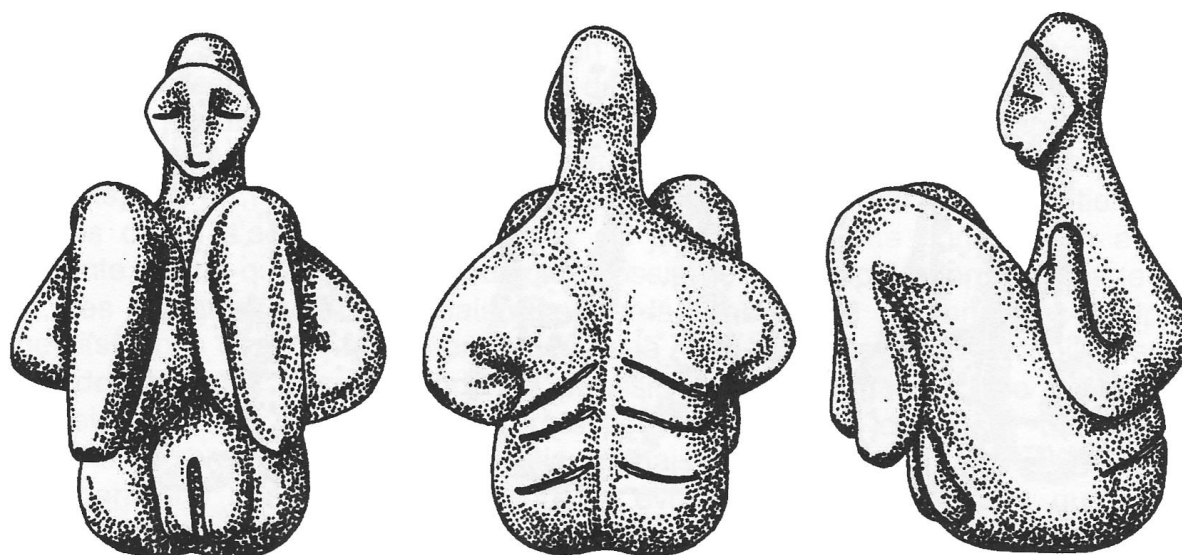


Fig. 2. Figurine Sesklo, from Achileion, Greece, in birthing position (after N. Ursulescu et al., 2006).

space, being in tight connection with the goddess who generated life and was also protecting the women after their child delivery (N. Ursulescu et al., 2006). An evidence, that these figurines were

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rendering the birthing process was another one, discovered at Achilleion, in Greece, having the same position and her vulva opened. The respective figurine belonged to the Early Sesklo layer (fig. 2) (N. Ursulescu et al., 2006).

In the kneeling, or squatting positions, women had used a posture which was familiar to them in those times. Related to this birthing position, even decades ago, archaeologist Eugen Comşa had advanced the idea that, it is possible that, at least some of the kneeling female figurines of the Dudeşti and Hamangia settlements might have rendered women during the birthing process (E. Comşa, 1987).

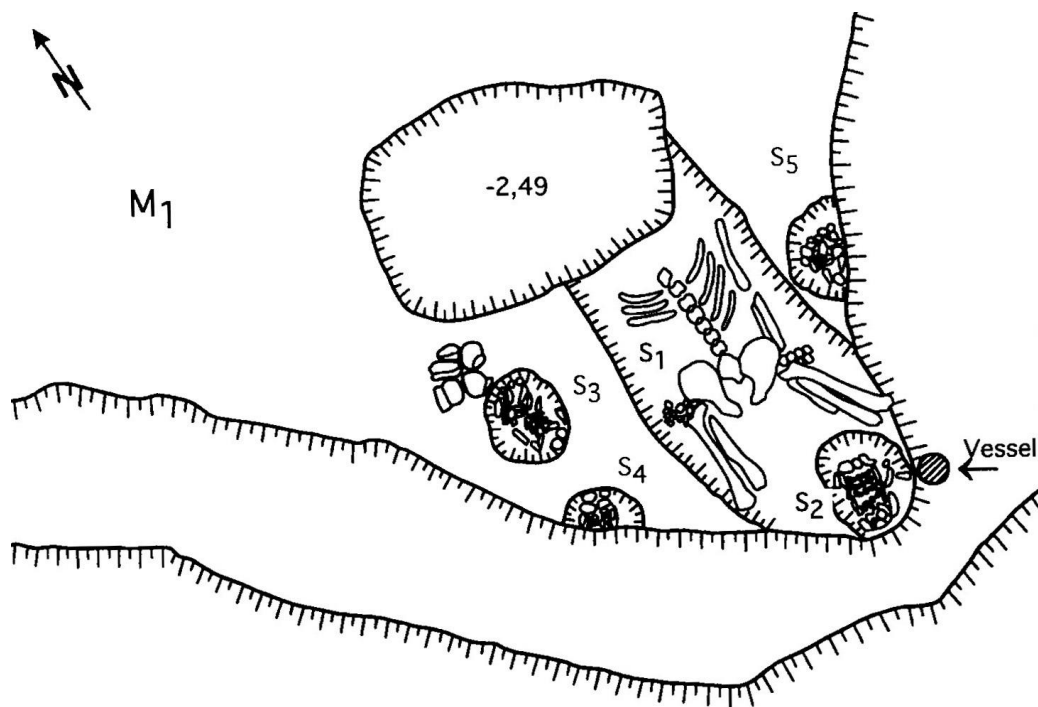


Fig. 3. The female skeleton from Copăceni and her new-born babies, as found during the excavations (after A. Comşa, 2014-2015).

In our times, the kneeling, or squatting birthing position would be very uncomfortable, as most of the women in the modern world and people, in general, perform their activities while sitting. Therefore, in recent communities, such positions would be very demanding, for the woman's body, at least when we refer to those situated at a certain level of civilisation. Still, some clinical studies had emphasized that the squatting birthing would be very helpful for the future mother, as it tilts the pelvis forward and places the baby in alignment, in order to acquire the best position for passing through the birth canal. Moreover, the mentioned position support and intensify

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the uterus contractions and relieve the pressure exerted on the back of the body (<https://www.verywellfamily.com/squatting-for-birth>; <https://www.healthline.com/health/pregnancy/squatting-birth>).

In order to provide also a relevant example about the birthing positions used by prehistoric communities, we could present a Bronze Age funerary find, from Copăceni-*La Moară* (Cluj County). The mentioned burial, discovered by archaeologist Mihai Rotea, contained the skeleton of a woman with the age of 25-26 years found in a kneeling birthing position, being surrounded by 4 infant skeletons, one of them being found right between her legs (figs. 3-4). The babies had the following age and sex:

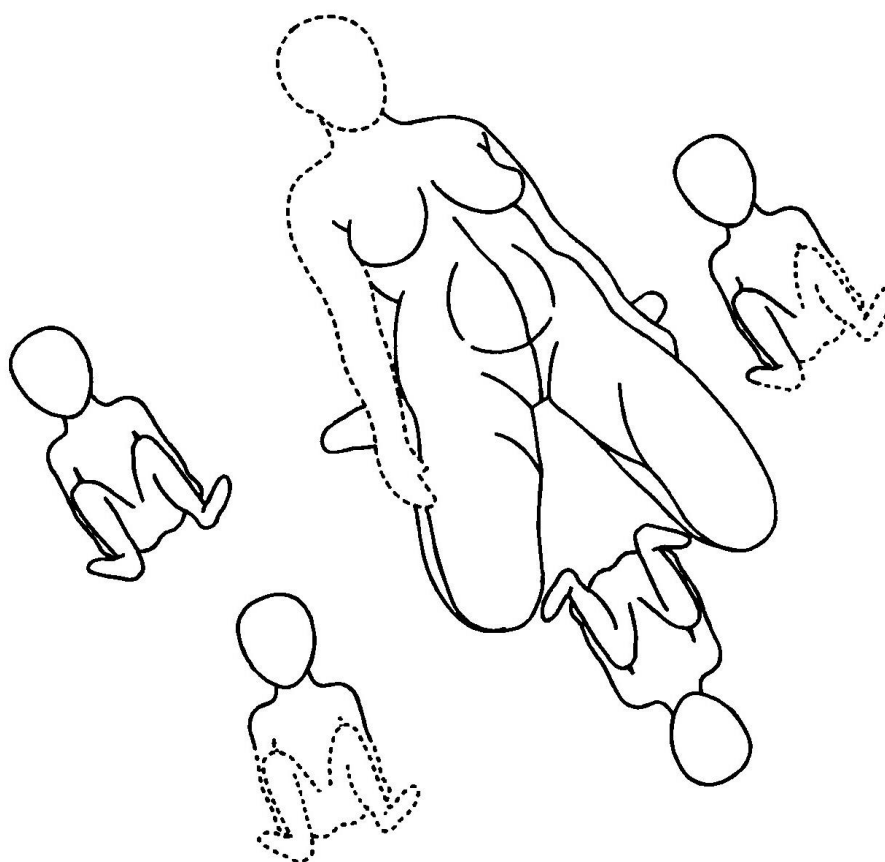


Fig. 4. Reconstruction of the birthing position of the women (kneeling) (after A. Comșa, 2014-2015).

-No. 2 (after the women skeleton which was no. 1) was male, based on the method of H. Schutkovski and had 0-6 months, estimated upon the dimensions of its long bones. Together with this skeleton, a tibia of a 0-6 month baby was found, but this was not belonging to either of this, or to the other individuals;

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-No. 3. Its sex could not establish, due missing relevant elements, in this sense. It had just its age established, to 0-6 months but it was a little bit younger than the previous individual, as shown by the dimensions of its long bones

-No. 4 had its sex not established, due to the lack of relevant elements, in this sense. Its age was of 36-38 gestational foetal weeks, meaning 8-9 gestational months. It could be either aborted, or prematurely born, maybe even still born. This skeleton was placed on the right side of the female skeleton, near her legs;

-No. 5 had the male sex ([H. Schutkovski, 1993](#)) and had the age of 0-1 month;

The most plausible interpretation for this burial, given by the archaeologist, was its use for a foundation sacrifice, in connection with the dwelling situated in its proximity ([A. Comşa, 2014-2015](#)).

### **5. Places Used for Child delivery**

Regarding the place used for this process, in the Romanian folk traditions, there are still existing accounts which state that it was better for women to give birth to children while being seated on the ground, on hearth, oven, or in their proximity, this custom being also related to the magic acts for fertility. In our opinion, this fact was also connected to the season when birth happened, as it was difficult to deliver a child during the cold winters of the temperate climate, without being placed in the proximity of a source of heating. But, this practical act would not have diminished, at all, the symbolical meaning of the hearth, or oven! In fact, a warmer temperature would have been required not only for the comfort of the future mother, but also for assuring the viability of the new-born baby! Another important aspect, besides the environmental temperature, dim light and quietness used for the mentioned process, which were already mentioned above, it was the physical contact between the baby and the skin of his mother! This was how, he could feel the smell of her body and this helped him to make a distinction between her identity and that of other persons, because, in its early stages of his life, the baby cannot see very well, but he has well developed the senses of smell and hearing.

### **6. Health status of the future mother**

But what was the mother's health status? Based upon the existing paleo-demographic studies from Romania, which show a high general mortality, the living conditions in prehistory were not very favourable for the human communities and they varied, between poor and very poor, from one region to another, depending on various factors, like: genetic endowment existing in that society, nutrition, habits, occupations, endogamy level, but also on other environmental and cultural



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factors (O. Necrasov et al., 1985). For instance, due to the interring of some children in the intramural spaces (R. Kogălniceanu, 2008), the paleodemographic data had changed accordingly and this resulted in biased results and a higher life expectancy for the Neo-Eneolithic populations from Romania (e.g. *infans I* with 2.32 and *infans II* with 4.30 in the necropolis from Cernica) (E. Comşa, G. Cantacuzino, 2001), even if this fact could not be a real one, compared with the Bronze Age. But, returning to the health of the mothers in those times, we could say that both anatomically and physiologically, women were not well prepared for having children. Such a situation was determined by their early age of becoming mothers, which was socially and culturally determined. But, (young) age was a very important biological element, which made their skeleton and muscles to have not been fully developed for such a function, despite their nobility. Sometimes, nutritional depletion was also present, which did not provide them with the necessary energy and nutrients, which were involved both in pregnancy and child delivery, but even afterwards, to get recovered, as well. For instance, as resulted from studies referring to some later communities from Greece, women had suffered from malnutrition and other health problems. Such deficiencies had consequences upon their natural capacity of giving birth to children. Especially malnutrition, resulted in dystocia (from the Gr. *dystokia*, meaning difficult child birthing), which consists in the larger developed skull of the new born baby, the baby's unusual position, or conformation before delivery (which make the infant to get blocked during its passage through the opening of the birth canal), the enlarged, or narrowed pelvis, or its different deformations determined by various reasons. the same like the under developed pelvis of its mother (G. Cantacuzino, C. Fedorovici, 1971).

In the archaeological site from Cernica (Ilfov County) a large Eneolithic necropolis, of 374 burials, was discovered of which 356 were archaeologically studied, the remaining ones being destroyed. Related to our topic, 204 were anthropologically analysed, of which four, containing the skeletons of women deceased during their child delivery were unearthed. These were the only existing cases at that time in Europe and, consequently, they were also very spectacular. The respective burials were no. 158, 251, 256 and 303. In the region of those skeleton's pelvis, remains of foetuses were identified by the anthropological study, undertaken on the bones. All women were adults (fig. 5):

- the one in *Burial no. 158*, with the individual's age of 23-27 years, had a well preserved skeleton, being laid on its back, with the legs tied at their ankles, with a less developed pelvis, which did not allow the foetus to pass through it and get delivered. Consequently. the pressure of the baby moving along the birth canal had provoked the uterus rupture, during the labour, which

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resulted in a strong haemorrhage and determined the death of both the mother and her baby. In our opinion, for the female discovered in Burial no. 158 it is hard to believe that she had her first pregnancy at this age and especially in those times, but, probably, the authors of the anthropological study had referred just to the pregnancy taken up to its final point (G. Cantacuzino, C. Fedorovici,

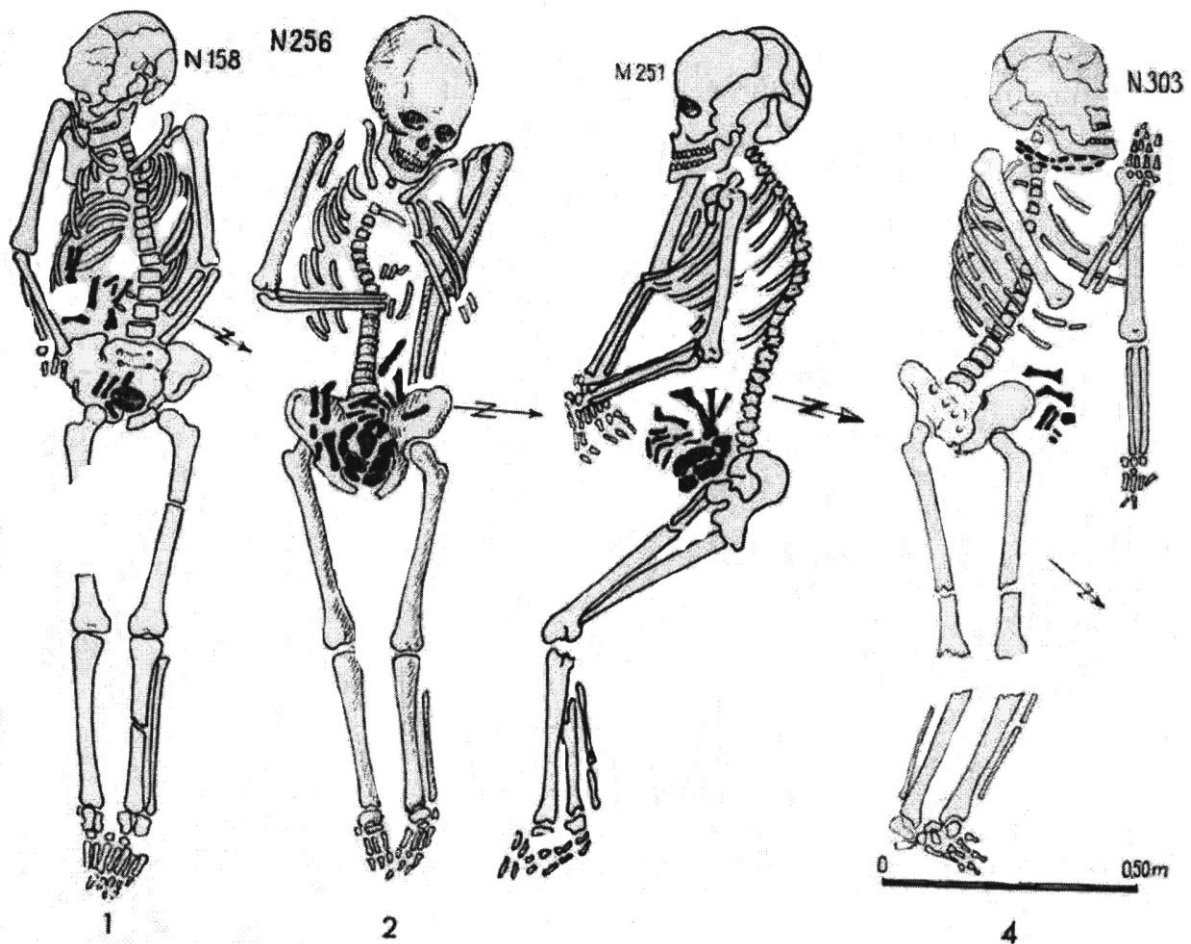


Fig. 5. Skeletons of women who died during their childbirth from the necropolis at Cernica (after G. Canacuzino, C. Fedorovici, 1971).

1971). Indeed, when considering the dimensions of the pelvic bones of the respective woman, it was established that they were under developed but, this is not a strong argument, in order to show that she had no previous pregnancies. She might have had possible miscarriages, or, hard to be accepted by some specialists in our times, she might have used treatments, consisting of natural products, in order to avoid pregnancy. This might have been a consequence of a first traumatizing such

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experience, when being unable to maintain a foetus in her womb, until the end of the pregnancy period, of nine months, right because of her anatomical and physiological problems.

It is also strange to notice that this same person had her ankles tied, a fact which is not normal. As it looks, anyway, the bond was probably applied shortly after her death. Still, we could also imagine that this was a means of trying to prevent her from birthing, while she was still alive. Yet this our latter interpretation was not supported by the archeoastronomical study, which showed that this individual was buried amongst the others, in the necropolis. If this bond would have been a punishment, most probably, the interment of this woman would have been located closer to the peripheric area of the necropolis from Cernica, which was not the case (I. Szücs-Cillit et al., 2010).

- the one in *Burial no. 251*, with the individual's age of about 35-40 years, being laid on its right side, had well preserved bones. It had a pathogenic process on its right femur neck, which had also affected its cotyloid cavity. This had resulted in an even lesser developed pelvis, compared with that of skeleton from Burial no. 158 and did not allow the child to be born. Therefore, the mother had died during the process of child delivery, together with her little baby.

- the one in *Burial no. 256*, with the individual's age of about 30 years, being laid on its back, had a relatively well preserved skeleton, containing the baby's bones inside of its lower abdomen, with the same under developed pelvis which did not allow the child delivery and determined the death of both individuals;

- the one in *Burial no. 303*, with the individual's age of 25-30 years, being laid on its left side, with its both patella missing, otherwise, its bones having a medium preservation state. As the pelvis was almost completely destroyed, it could not be established the exact cause of the death, for the mother and her baby but, it was assumed that this was the same dystocia, like in the other three cases (G. Cantacuzino, C. Fedorovici, 1971).

Such situations were determined by the under developed pelvic girdle of those women, which is, usually a congenital defect, in which, sometimes, other factors, like malnutrition, get also involved (G. Cantacuzino, C. Fedorovici, 1971). We should point out that, most probably, these women were suffering of a pronounced malnutrition. What we could emphasize is that, in the Romanian prehistory, such health problems were not found in other female skeletons and this seems to have been a local, endemic aspect, affecting the community, for a rather short time (years).

Discussing about dystocia, later sources, from the Greek and Roman world, had mentioned the embryotomy, as a surgical intervention meant to save the life of the mother in such cases, by sacrificing her unborn baby. This might have been also a solution in more remote times, despite the

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risk of septicaemia that could have occurred and could have resulted in the death of the respective woman. The caesarean delivery, which consists in the surgery upon a living woman, in order to extract the baby from her womb, seems to have been used much later, probably from various reasons, like the persistence of septic conditions, the lack of hygiene, the inappropriate instruments etc. Still, just later, in 1500, such an intervention was successfully done by the Swiss butcher Jacob Nufer, on his own living wife (G. Cantacuzino, C. Fedorovici, 1971).

### **7. Birth control**

As mentioned by some authors, the nursing of a baby was difficult in past times, because a woman could not carry properly except one child in her arms, on her hip or, on her back. But the situation was even more complicated, when including the food and other things necessary to a child. Moreover, we cannot emphasize which was the real role and implication of the males, family and community, in this child raising process. We consider as worth to be mentioned that, on some Neolithic figurines from Romania, there are rendered some triangular pieces, maybe of textile nature, that were placed with their larger basis around the waist of that person and with the pointed part upwards. These “devises” were considered as having served for carrying the babies, an interpretation which should not be neglected (E. Comşa, 1974).

Besides these aspects, there were also others, which resulted in a birth control. In fact, there are accounts which emphasize that, even beginning since Palaeolithic, there were natural contraceptives used for this purpose (E. Scott, 1999). But physiological factors were also involved and the most important one was that, during the breastfeeding of a child, women were not able to get pregnant. We should not forget that in those remote times the children used to be weaned much later than today, around the age of 3 years, sometimes even later. This also created a “space” between the pregnancies and childbirths, accordingly. But later weaning was also correlated with other factors, especially nutritional ones, which not depended on the control of the community and which could be missing. Therefore, breastfeeding was a simple and efficient manner of assuring the feeding of the infant, despite the fact that, after the age of 6 months, its regime should include a more diverse food, rich in iron, protein and minerals, otherwise being possible for the child to get ill.

In some communities, also starting since Palaeolithic, another manner of controlling the childbirth was also the infanticide (E. Scott 1999). With regard to this later mentioned aspect, we don't know which was the situation in the Neolithic and Bronze Age of Romania, as this aspect is hard to be studied and documented. By all means, there were also other factors, with a large

implication upon the birth control. For instance, the illnesses with sexual transmission, the same like today, had diminished either the fertility of one gender, or of both, but might have even resulted in the death of some individuals. Apart from these, we could mention the possible complications which could appear for the mother soon, or during childbirth, like placenta brevis, haemorrhages, septicaemia etc. which might have had as consequence the death of the woman, sometimes together with her infant. Moreover, some epidemics, or childhood disease, had also exerted an influence and, as we could find from the demographic studies, the mortality of the children had reached around 30%, especially during the Romanian Bronze Age (O. Necrasov et al., 1985).

When we refer not to the physiological, or pathological conditions, we could point out the presence of the so-called chastity-belt, which was meant to prevent women either from being raped, or from having sexual relations with another man than her partner. This kind of Neo-Eneolithic objects were made of an *Ostrea edulis* valve. Such artifacts were discovered in some burials belonging to young women, placed on the lower part of their abdomen, bearing perforations for being suspended at their waist. These were found in some Neo-Eneolithic necropolises from Romania (e.g. Cernica) (E. Comşa, G. Cantacuzino, 2001). A similar find, but made of a *Spondylus* valve, made at Sântandrei-*Ocsăpla* (Timiș County) by Florin Draşovean, was considered as resembling more closely to other items, discovered in the Western and Central Europe. In the opinion of the mentioned archaeologist, the initial functionality of this *Spondylus* valve seems to have been the one of a clothing accessory, being not mentioned the interpretation of its utility as a chastity belt. In time, after the intense use of the mentioned object, its functionality was changed, by making a perforation in it, through which a small bead was suspended. Thus, it seems that it became a pendant (F. Draşovean, 2018).

#### *Emotional impact of the mother and her baby's death*

In most of the situations, a child delivery ends up in good conditions but, as we already mentioned, there were also situations when women and their babies had died, during the birth process, or right after it, as the highest mortality risk of the new-born babies occurs until they reach their first year of life.

Every time when a woman had died under such conditions, the community was strongly emotionally affected. And this happened not only because she could have been a further source of children which was lost, but also because the cause of her passing away had psychologically affected not only her family, but it acted as a chain-reaction, upon the other pregnant women. These, might have considered that they could have died from the same reason like her. The effect upon other families with children of the same age like the dead ones, was that they could have also

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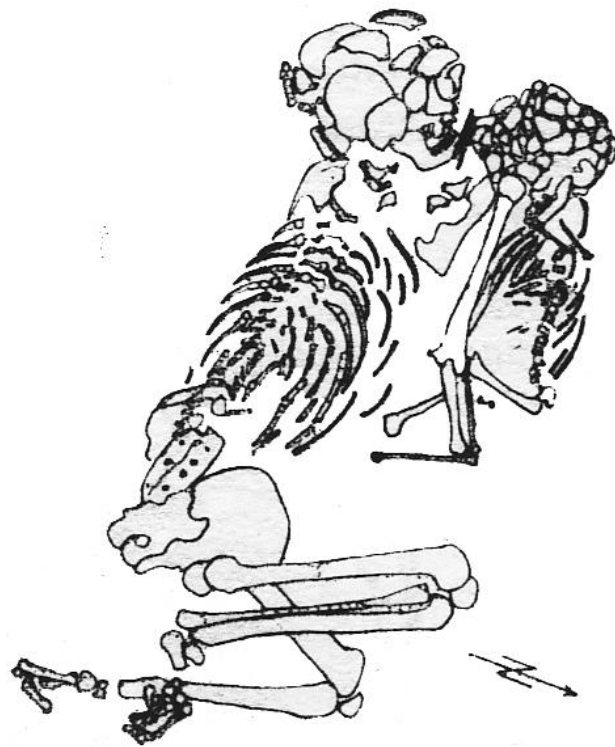


Fig. 6. *Burial no. 9* from Sărata Monteoru, 4<sup>th</sup> cemetery (after L. Bârzu, 1989).

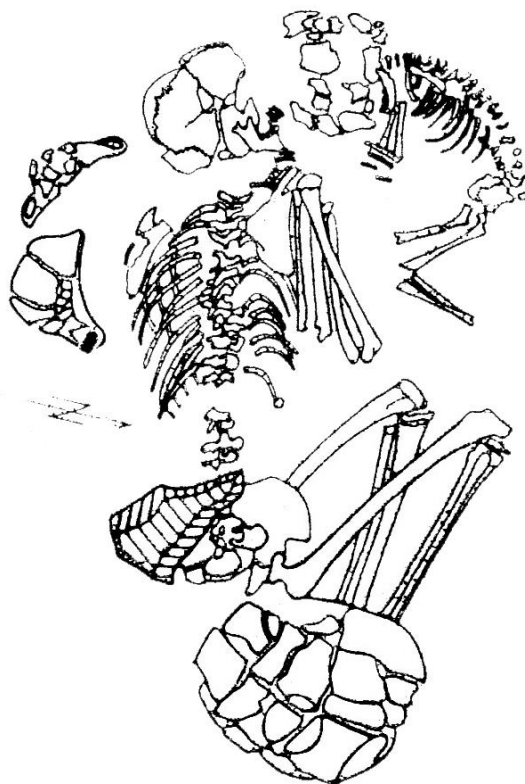


Fig. 7. *Burial no. 35* from Sărata Monteoru, 4<sup>th</sup> cemetery (after L. Bârzu, 1989)

lost them under the same circumstances. On the other hand, the mother and her baby, were important for the society and were given the proper attention, even after their death. This was the reason why we have tried to indirectly establish what was the social reaction to those deaths. Consequently, we have checked which was the situation for the up mentioned four women from Cernica! Were they rejected by their community, were they marginalized in the necropolis? In order to find some more information, we have decided to undertake an archeoastronomy study of those burials. Even from a first look at the plan of the necropolis, we could find that, those deaths were accepted by their people, as the burials of the pregnant women were disseminated amongst the others of the cemetery and not grouped together, towards its edge. Still, it was also observed that, the burials were orientated towards the sunrise, or sunset, as it appeared in the day of the deceased burial, or in the day of his death. The archeoastronomy study had indicated us that, those women had passed away in distinct periods of a year: *B.158* was buried in January, or December, *B.251* in October, or March, *B.256* in September, or April and *B.303* in May, or August. Moreover, a possible social differentiation existed in the cemetery, as those with more qualities (rich, healthy, protected), were situated towards the middle of the necropolis. Another distinction had also existed, when the burials orientation was taken into consideration (the foreign, not native, derived from another community), such interments being located towards the margin of the burial ground (I. Szücs-Cillit et al., 2010). During the Neo-Neolithic of Romania, we have no burials, which might suggest the image of the emotional compound connected with the death of two such people, like an adult and a child but, in the Bronze Age, in the Monteoru Culture, we have burials, like those no. 9 and 35 in the *Necropolis no. 4* from Sărata Monteoru (Buzău County) in which, some strongly emotional scenes were being rendered (figs. 6-7). Unfortunately, we don't know for sure which was the sex of the individuals buried with the children, because the anthropological analysis was not carried out on all the individuals of that cemetery (C. Maximilian et al., 1962) but, at least in some of the cases, we could assume that they were female ones and these were their probable mothers.

### **8.Swaddling of babies**

This seems to have been a very old practice, on the territory of Romania being also found such a representation of a swaddled baby, at Vidra (Ilfov County), an archaeological site belonging to the Gumelnița Culture (fig. 8) (E. Comşa, 1995). This procedure was learned on an empirical basis, because the infants could not easily regulate the heating process of their body. This was an essential condition for their life and, besides, when being kept in a warmer ambience, they used to feel better and to sleep well. This condition was even more important to be accomplished for the preterm born babies. It was also considered that it helped to a good development of the lower limbs,

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as it was interpreted that swaddling maintained them undistorted. In fact, this is a conception that must have been present and still persists, even in the rural milieu from Romania. By all means, as this was a cultural achievement, swaddling was applied in distinct ways to female and male babies, taking into account their anatomical parts. But, as observed by later studies, this practice had not only advantages, but also side effects, like physiological stress upon the cardio-respiratory systems, hip dysplasia, contact dermatitis, hyperthermia (A. Syrogianni, 2020). In fact, this was also part, as an external factor, in the *Sudden Infant Death Syndrome* (SIDS), a multifactorial cause of death, which existed for thousands of years, being also mentioned in the Bible (1 Kings 3:19) but, which was studied in detail just in recent times. With regard to this condition, it was found that a combination of intrinsic and extrinsic risk factors would have been involved, in order to determine the passing away of the infant. Still, the most frequent cause of death in this syndrome, at least for past communities, was the overlaying of the baby by one of his parents, or relatives, being known that, until recent times, families used to share their bed with their little infants. But, despite this simple explanation, some other very serious causes should be taken into consideration, like: genetic



Fig. 8. Representation of a swaddled baby from Vidra (after Comşa, 1995)

factors, early birth of the infant, nervous system abnormalities, cardiovascular problems etc. (D. L. Russell-Jones, 1985; D. R. Duncan, R. W. Byard, 2018). During history, the incidence rate of this



syndrome was situated between the rate of 2-6 per 100 live births, while in recent time a significant decrease of this rate was noticed, as the rate had reached 0.2-0.5 per 100 live births. But, this fact seems not to be a real one, being mostly determined mostly by the use of a terminology (e.g. undetermined, unknown cause of death) that somehow avoids the classification of that event in the mentioned syndrome (D. R. Duncan, R. W. Byard 2018).

### **9.Social rank of the children**

We believe that, both in the Neo-Eneolithic and Bronze Age of Romania even beginning from their birth, the infants had inherited the social status of their family. This was the reason why, they were usually buried in specific conditions, according to their rank, meaning that, when belonging from a family of a higher rank, they were placed towards the centre of the cemetery, were accompanied with more valuable objects, compared to other individuals, or, in some cases, those items were in a larger number, of a better quality, or made of rare raw materials. Moreover, in some cases, restrained to the Bronze Age, the funerary rites and rituals had a social meaning as well, as we could find, as an example, in the Monteoru Culture (A. Comșa, 1998), where the “play” between inhumation and cremation had emphasized the rank of the buried individual.

### **Some conclusions**

The problems related to motherhood and childhood, no matter if they referred to Neolithic, Bronze Age, or other historical times, are very challenging and provide a lot of unexpected results. Moreover, they help to better outline the life of the past societies, by approaching more in-depth the customs and behaviour of their members, which, put together, create a more vivid and complete perspective about the people of the remote periods that we intended to study. They also emphasize the relationships existing in a community, or family, the sanitary conditions, the development of medical knowledge, the ideology and spirituality connected to various aspects of life, which explain, in further details the archaeological finds.

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## Considerations on the bone tools of Gumelnița discovered in Muntenia

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**Abstract:** Archaeological research from the sites attributed to the Gumelnița Culture carried out over time north of the Danube, especially in Muntenia, intensified as time went by, which led to a better understanding of the evolution of the communities of Gumelnița in the Lower Danube Basin. The settlements of Gumelnița are arranged on the rivers and their tributaries that cross Muntenia, but also in the Danube Valley. The environment in which the communities of Gumelnița lived was favorable, benefiting from conditions for animal husbandry or practicing incipient farming. The space, which the communities of Gumelnița occupied and from where the bone tools that we will present in our material were recovered, occupies a large part of Muntenia, geographically located in the Romanian Plain. Through this approach, we intend to present the main tools made of bones from domestic animals, discovered in the settlements of the communities of Gumelnița, from a typological perspective, but also from the point of view of their functionality. Typologically, our research has led to the identification of three types of tools from bones of domestic animals, namely: tips, chisels and spatulas, which we will present below in this material, referring also to their functionality, where we had available information given by specialized analyses. The raw material was provided by two methods: the reuse of osteological residues from the processing activities of animal products, especially domestic, but also wild, or, the second process, the collection of the horn of *Cervus elaphus*. As for the supports, both volume and flat supports were used. The large number of types of supports clearly shows an opportunistic way of selection, with the community using the supports at hand, predominant of those of domestic animals.

**Keywords:** Romania, Gumelnița Culture, bone tools, domestic animals, typology.

### Introduction

Archaeological research from the sites attributed to Gumelnița Culture carried out over time north of the Danube, especially in Muntenia, intensified as time, which led to a better understanding of the evolution of the communities of Gumelnița in the lower Danube basin.

The space, which the communities of Gumelnița occupied and from where the bone tools that we will present in our material were recovered, occupies a large part of Muntenia, geographically located in the Romanian Plain.

## Considerations on the bone tools of Gumelnița discovered in Muntenia

The settlements of Gumelnița are arranged on the rivers and their tributaries that cross Muntenia, but also in the Danube Valley.

Vladimir Dumitrescu considered that the center of the region where Gumelnița culture developed was the Lower Danube, from the east of Olt until near the spill, along it, pulsating the life of prehistoric settlements. The waters of the great river were the ways of trade and spiritual ties. To the cultural unity of this region, the Danube has contributed decisively since prehistory (V. Dumitrescu, 2002).

The Muntenia Plain, as in fact, the entire Romanian Plain, overlaps the Moesica Platform, on which sedimentary deposits have accumulated, from the Cretaceous ones to the quaternary ones. Quaternary formations are the newest in age and generally overlap the surface of a pre-existing relief. These were practically the direct physical environment with which man came into contact and from which he supplied himself with raw materials necessary for everyday life, throughout an evolutionary process (M. Cârciumar, 2001).

The environment in which the communities of Gumelnița lived was favorable, benefiting from conditions for animal husbandry or practicing incipient farming.

Through this approach, we intend to present the main tools made out of bones from domestic animals, discovered in the settlements of the communities of Gumelnița, from a typological perspective, but also from the point of view of their functionality.

Animal husbandry was one of the most important activities of these communities. The domestic animals raised by the people of Gumelnița were cattle, ovicaprines, pigs and dogs (A. Bălășescu et al., 2005).

During the period when the communities of Gumelnița evolved, there were no changes in the species of animals bred by the community compared to the previous period, of the Boian culture. Moreover, during this period of evolution, in the lots of osteological remains discovered inside the settlements predominate the remains of domestic animals, which denotes that animal husbandry becomes a more important occupation, than hunting.

We see an evolution of animal husbandry not so much in the breeding of species exploited by domestication (although the number of faunal remains increases considerably in the

case of Gumelnița culture), but in the way they are managed for by-products or primary products (D. Bailey, 2000).

In addition to the use of domestic animals for various activities or for by-products (milk, wool, etc.) a part of the bones resulting from processing were used to make certain categories and types of objects.

### **Typology of hard animal materials**

Typologically, our research has led to the identification of three types of tools from bones of domestic animals, namely: points, chisels and spatulas, which we will present below in this material, referring also to their functionality, where we had available information given by specialized analyses.

#### **Bone points**

As a result of research carried out at Pietrele, in 1943 and 1948, a number of objects made of bone were also discovered. In dwelling 1, discovered in layer III, corresponding to the Gumelnița A2 phase, were discovered, among others, 12 bone awls (D. Berciu, 1956). The author of the research makes no other references to this batch of pieces.

In the year 2019, M. Mărgărit makes the analysis of the pieces discovered at Pietrele in the two campaigns 1943 and 1948, of the bone pieces analysed, very few of those described by D. Berciu were found. Thus, in the entire batch of analyzed parts were identified 3 bone points, 2 spatulas and a perforated washer. One of the points, worked on a metapod of ovicaprine, comes from the Gumelnița A2 level (fig. 1/1), and the other two, one of which is double (figs. 1/2, 3), worked on the bones of large mammals, belong to the level Gumelnița B1. The points are mainly linked to domestic activities such as leather punching or weaving textile fibres, while for the double point we can assume the intention of using it in hunting activities (but not having been used) (M. Mărgărit, M. Toderăș, 2019).

In the research campaigns, carried out at Pietrele in the period 2002-2008, 1338 pieces of bone and horn were discovered. 1147 pieces were made out of bone, of which 20% are represented by needles and awls. A bone ax was made after the initial attempt of making a statuette (Toderăș et al., 2009).

## Considerations on the bone tools of Gumelnița discovered in Muntenia

As a result of the research between 1980 - 1982, from Măgura Cunești, Călărași county, in Gumelnița A2 level, a series of bone pieces were discovered. Statistically, potholders are the most numerous, after flint pieces (fig. 1/4). The author of the research identifies two types of poking tools: those made on long bones of young animals, polished at the active end, and those made by grinding on large animal chips, but small in size. Comșa considers that this type of piece was used for leather processing, much rarer being large pieces considered daggers (E. Comșa, 1999).

A batch of 42 bone pieces originating from the settlement of Cunești was part of the analysis carried out by Monica Mărgărit. Two types of points have been identified on this occasion: points worked on support in volume (4) (fig. 1/5) or on flat support (15) (figs. 1/6, 7) made by processing the bones of ovicaprine, *Sus domesticus*, *Bos taurus* or *Canis familiaris* (M. Mărgărit et al., 2013).

During the research campaigns carried out in Bordușani - Popină, between 1992 and 1995, 122 pieces of bone were discovered, most of them being in archaeological contexts. Most of them were discovered in occupational levels (household areas or foundation ditches), with very few being found in homes destroyed by fires. The most numerous are the points (30), worked either on volume support or flat support, from bones of ovicaprine or *Bos taurus* (V. Voinea, 1997).

The large number of bones of domestic animals discovered at Bordusani-Popina, during the research carried out in 2012-2014, in Gumelnița A2 level, in various stages of processing allowed to establish the techniques used, but also gave details about the activities carried out by the community here. 61 pieces made out of bone were discovered, out of a total of 97 objects belonging to the hard animal materials industry. By identifying all categories of parts, and including finite parts, parts under processing, supports and knapping debris, it was concluded that these parts were made in the settlement, as well as the existence of a stock of materials for future parts. Twenty-three tips were made from bone and worked on both volume (fig. 2/1) and on flat support (fig. 2/2) (D. Popovici et al., 2014).

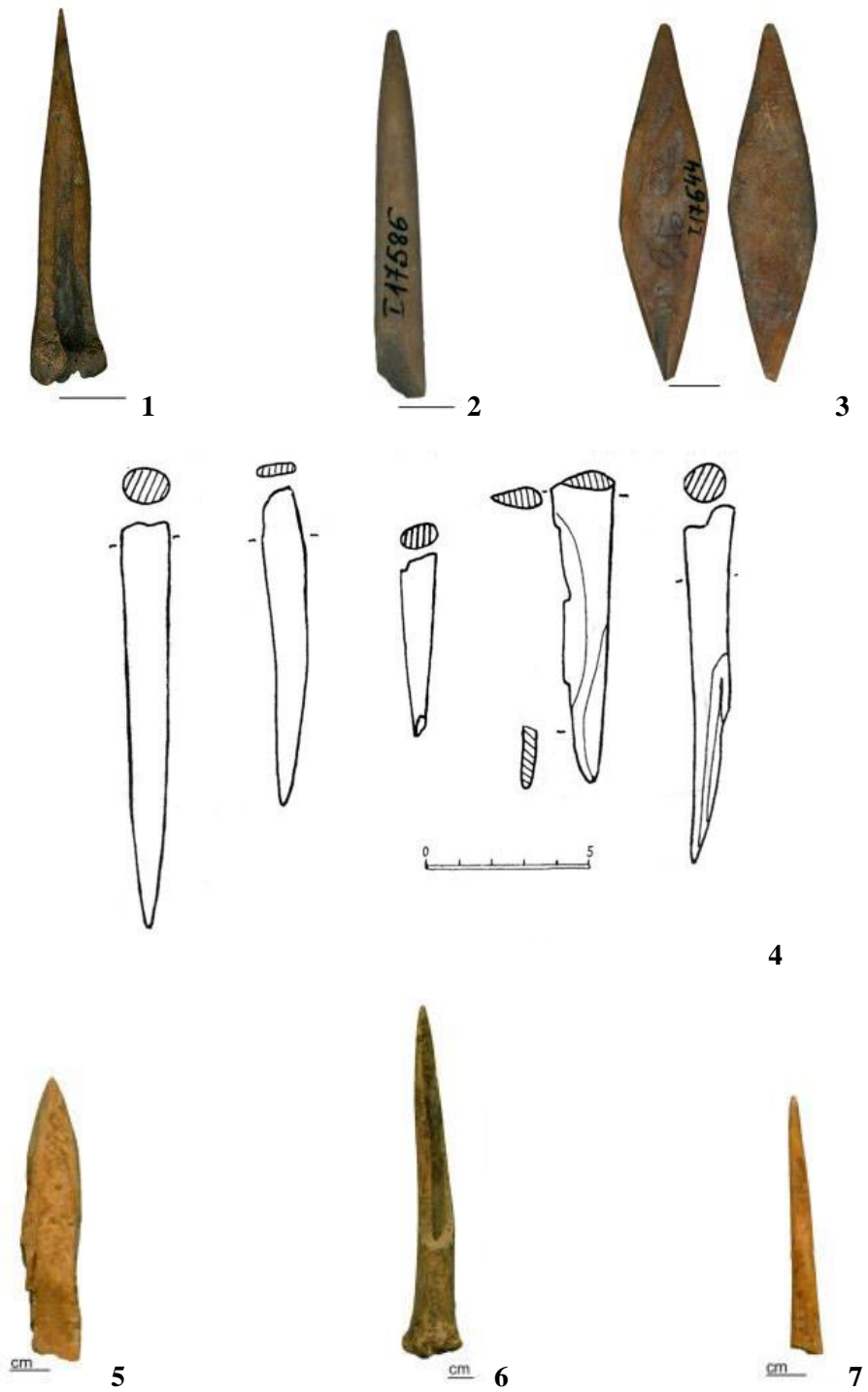


Fig. 1 - Bone points. 1-3 Pietrele (after M. Mărgărit, M. Toderaș, 2019); 4-7. Cunești (after E. Comsa, 1999; M. Mărgărit et al., 2013)



## Considerations on the bone tools of Gumelnița discovered in Muntenia

Archaeological research from Vitănești (Teleorman county) has brought to light, besides the other categories of objects, many bone pieces, from the classic poking tools and chisels, to perforated spatulas (R. Andreescu et al., 2003 a; 2009). Typologically, as in other settlements of Gumelnița, points (92), made on flat supports (90), predominate (fig. 2/3) and only two made on the support in volume (fig. 2/4) (A. Bălășescu, M. Mărgărit, 2014).

In the stratigraphic survey of Gumelnita, conducted by Vladimir Dumitrescu in 1960, some bone pieces that can be linked to domestic activities were discovered. Thus, in all three levels of habitation, some tools made out of bone were also discovered, the most common being the awl, well sharpened and polished (fig. 2/5). Several large, neatly polished specimens were considered daggers (V. Dumitrescu, 1966).

And at Căscioarele-Ostrovel, bone pieces that can be linked to bone processing activities were discovered. Thus, in house 2, from Gumelnița B1 level, several poking tools made on flat support, were discovered, well sanded with visible traces of use (V. Parnic, 2001).

In the house SL 2 from Măriuța-La Movilă, located in the central-southern area of the settlement, a large quantity of bone pieces was discovered. On the floor of the second chamber, an impressive cluster of bone tools was discovered, including 7 poking tools. Two needles of considerable size are also made of bone (approx. 20 cm). Both pieces are sanded all over the surface, one of them having a perforation at the proximal extremity (fig. 2/8-9) (V. Parnic, A. Păun, 2004).

A batch of parts from hard animal materials was analyzed by M. Mărgărit. Of the 110 bone pieces analyzed, the most numerous was the bone point category (28). Of the total identified points, 24 are made on flat support (fig. 2/6) of tibia (2) and metatarsus (2) of *Bos taurus*, tibia (1) and metatarsus (3) of *Ovis/Capra* and metatarsus (3), rib (3) and diaphysis (11) of *Cervus elaphus*. Another 4 pieces were worked on the support in volume (fig. 2/7) from the ulna (1) and tibia (2) of *Ovis/ Capra* and tibia of *Canis familiaris* (M. Mărgărit et al., 2014).

### Chisels

In the lot of 42 bone pieces originating from the settlement of Cunești, M. Mărgărit (M. Mărgărit et al., 2013) a series of chisels worked on support in volume (4) have been identified



Fig. 2 - Bone points. 1, 2 Bordușani-Popină (after [D. Popovici et al., 2014](#)); 3, 4 Vitănești (after [A. Bălășescu, M. Mărgărit, 2014](#)); 5 Gumelnița; 6-9 Măriuța (after [M. Mărgărit et al., 2014](#))

## Considerations on the bone tools of Gumelnița discovered in Muntenia

(fig. 3/1) or on flat support (6) (fig. 3/2) made by processing the bones of *Sus domesticus*, *Bos taurus*, *Cervus elaphus* or *Canis familiaris* (M. Mărgărit et al., 2013).

Of the lot of 122 bone pieces, discovered at Bordușani - Popină, between 1992 and 1995, there are also 35 chisels that were made of *Ovis* or *Bos* bones, have the surface strongly polished, as well as the oblique wear of the active part, which proves an intense use (V. Voinea, 1997).

Analyzes on bone parts from Bordușani - Popină, for the period 2012-2014, led to the identification of 18 chisels (fig. 3/3), most of them being worked on volume support (D. Popovici et al., 2014).

Archaeological research from Vitănești (Teleorman county) has brought to light, besides the other categories of objects, many bone pieces, including the classic chisels (R. Andreescu et al., 2003 a; R. Andreescu et al., 2009). Of the total parts made of bone, 54 are chisels (fig. 3/4), all made on flattened support (A. Bălășescu, M. Mărgărit, 2014).

As a result of the research carried out at Pietrele, in 1943 and 1948, a series of objects made of bone were discovered. In level III, corresponding to the Gumelnița A2 phase, a bone plate chisel was discovered (fig. 3/5) 5.7 cm long, 3 cm wide (D. Berciu, 1956).

From the research campaigns, carried out at Pietrele, during 2002-2008, 1338 pieces of bone and horn were recovered. There were 1147 pieces made from bone, of which a significant percentage are worked on both volume and flat support (fig. 3/6) (M. Toderăș et al., 2009).

In the house SL 2 from Măriuța - La Movilă, located in the central-southern area of the settlement, a large quantity of bone pieces was discovered. Chisels (15) are the most numerous categories of bone tools, followed by points. Most parts have a high degree of wear and tear on the working part, but there are also a few pieces being processed (V. Parnic, A. Păun, 2004).

A batch of parts from hard animal materials was analyzed by M. Mărgărit. Of the 110 bone pieces, 28 were interpreted as chisels. Of these, 23 were worked on flat support, such as the tibia of *Ovis/Capra* (1), the mandible (1) (fig. 3/7), radius (1) (fig. 3/8) and metatarsus (2) of *Bos taurus*, femur of *Sus scrofa* (1), rib (1), radius (1), femur (2), tibia (1) and diaphysis of long bone (12), belonging to indeterminate species. Another five pieces were made on the support in volume (fig. 3/9) from the ulna of *Bos taurus* (M. Mărgărit et al., 2014).

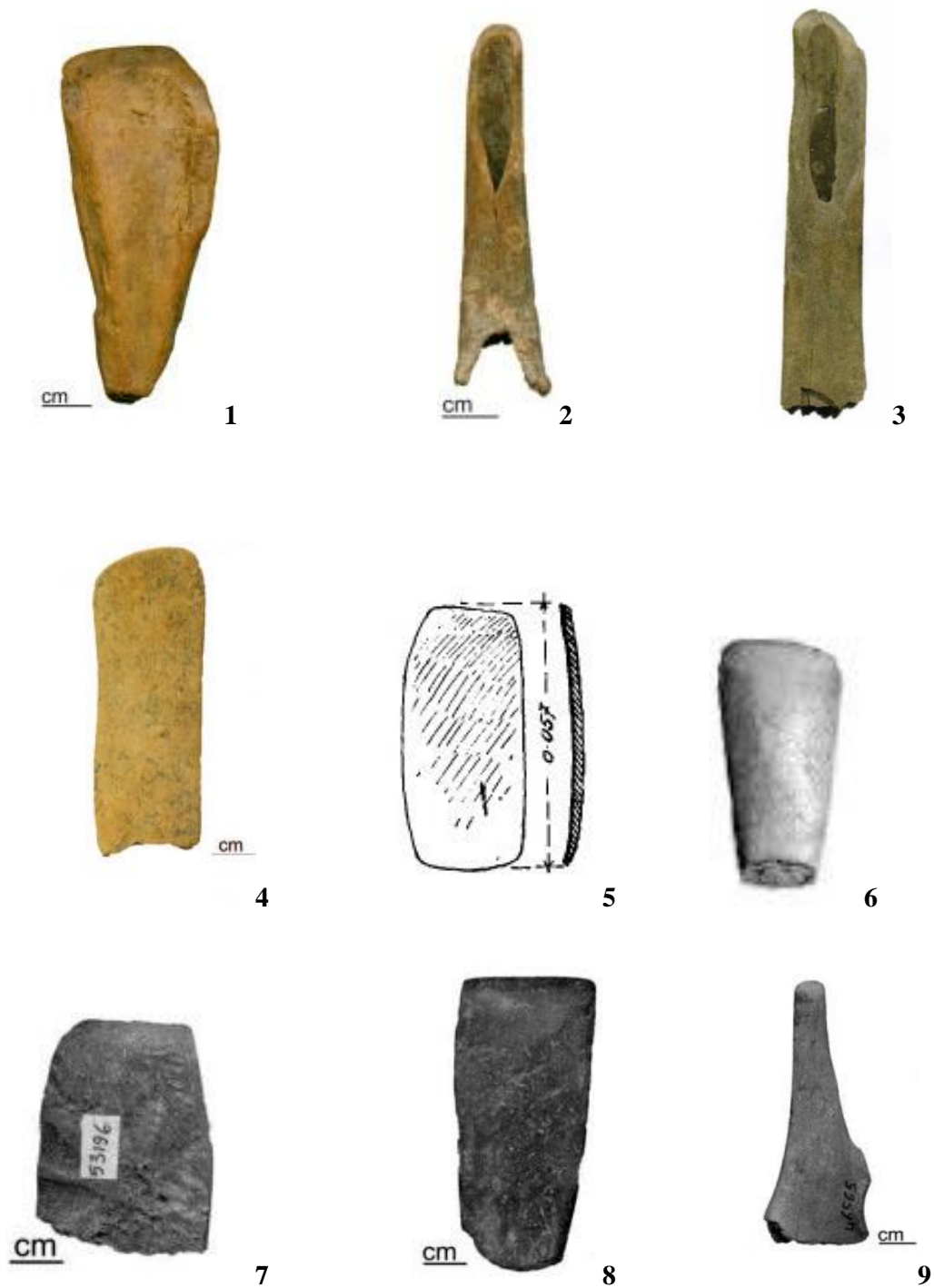


Fig. 3 - Chisels. 1, 2 Cunești (after M. Mărgărit et al., 2013); 3 Bordușani-Popină (after D. Popovici et al., 2014); 4 Vitănești (after A. Bălășescu, M. Mărgărit, 2014); 5, 6 Pietrele (after D. Berciu, 1956; M. Mărgărit, M. Toderaș 2019); 7-9 Măriuța (after M. Mărgărit et al., 2014).

## Considerations on the bone tools of Gumelnița discovered in Muntenia

### Spatulas

In the year 2019, M. Mărgărit published an article, in which he analyzed the pieces discovered at Pietrele in the two campaigns of 1943 and 1948, of the bone pieces analysed there are very few of those described by D. Berciu. Thus, in the entire batch of analyzed parts were identified 3 points, 2 spatulas and a perforated washer. One of the spatulas was discovered in the Gumelnița B1 level and was worked from a large mammal rib (fig. 4/1). For the second, D. Berciu does not specify the stratigraphic context. Both spatulas were perforated. The two spatulas could be used for processing soft materials - leathers, but in their case, the use in stitching or stitching actions can also be invoked due to the presence of perforation (M. Mărgărit, M. Toderăș, 2019).

The batch of pieces analyzed for the settlement of Cunești, following the research carried out by Eugen Comșa (E. Comșa, 1999) also contains 3 spatulas (fig. 4/2) made of large mammal ribs (M. Mărgărit et al., 2013).

From the lot of 122 bone pieces, discovered at Bordușani-Popină, between 1992 and 1995, there are also 4 spatulas (fig. 4/3) made of ribs of large animal (V. Voinea, 1997).

Following archaeological research in Vitănești (Teleorman county), in addition to the other categories of objects, many bone pieces, including spatulas were recovered. (R. Andreescu et al., 2003 a; R. Andreescu et al., 2009). Of the total pieces made of bone, 11 are spatulas (fig. 4/4), all made on flattened support, with various morphologies (A. Bălășescu, M. Mărgărit, 2014).

In the dwelling SL 2 from Măriuța - La Movilă, located in the central-southern area of the settlement, was discovered a bone spatula fragment with a perforation for hanging (V. Parnic, A. Păun, 2004). In the batch of pieces from Măriuța, the spatulas are represented by eight samples. They were made, without exception, from large mammalian ribs (probably cattle or equidae) (figs. 4/5, 6), cut lengthwise, this is, by the way, the most suitable type of bone for the manufacture of spatulas (M. Mărgărit et al., 2014).

Bone tools were also identified at Sultana, following the research carried out in the period between 1980-1982, the most numerous being the points, chisels and spatulas. In the opinion of

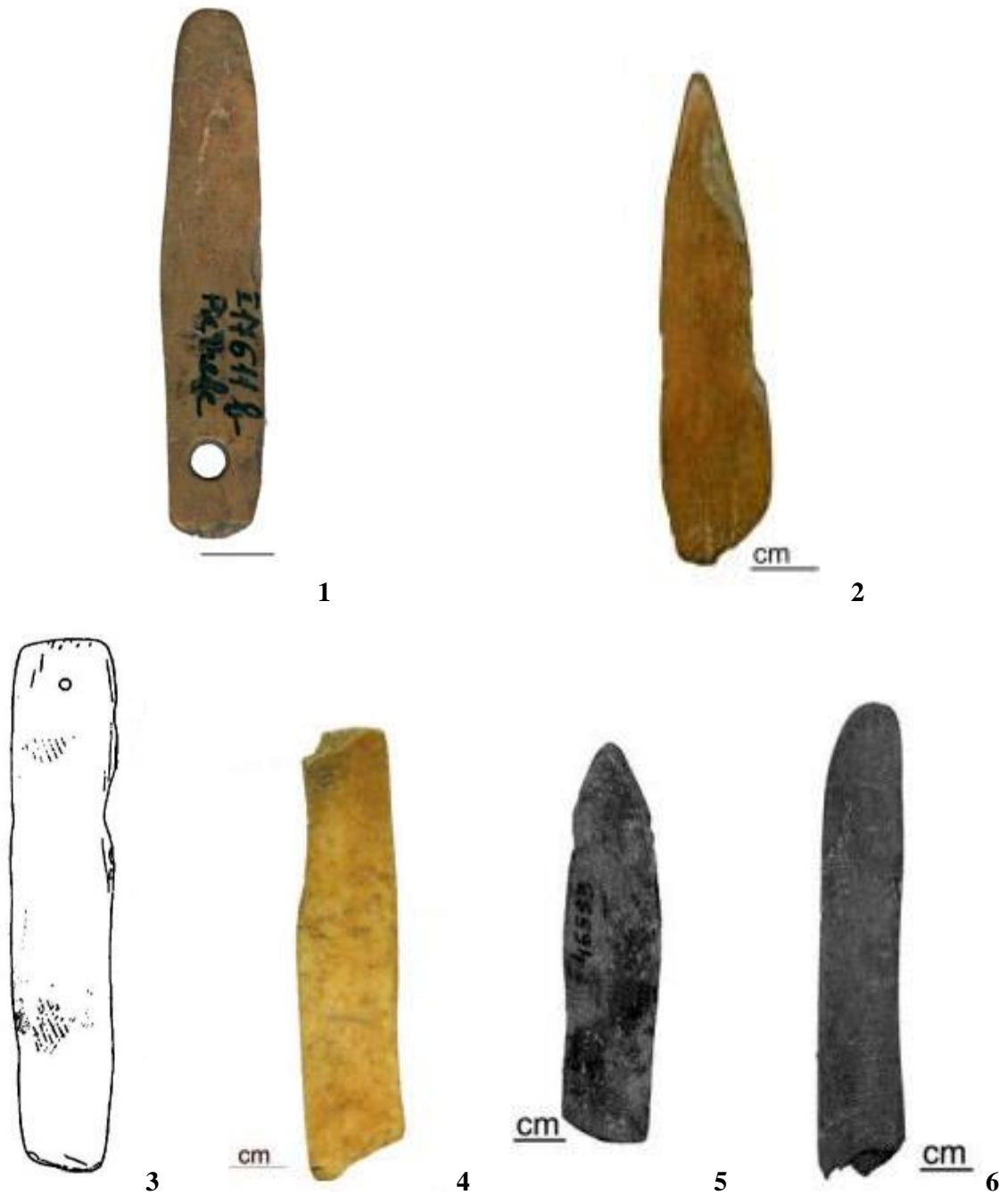


Fig. 4 - Spatulas. 1 Pietrele (after [M. Mărgărit, M. Toderaș, 2019](#)); 2 Cunești (after [E. Comșa, 1999](#)); 3 Bordușani-Popină (after [D. Popovici et al., 2014](#)); 4 Vitănești (after [A. Bălășescu, M. Mărgărit, 2014](#)); 5 - 6 Măriuța (after [M. Mărgărit et al., 2014](#))

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Fig. 5 - Căscioarele-Ostrovel. Dog mandible tools (after [V. Radu et al., 2019](#))

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the author of the research, the points, as well as chisels, are made of long bone chips, well-polished and with a polished body (C. Isăcescu, 1984).

A special situation is encountered in the case of the settlement from Căscioarele - Ostrovel, in Gumelnița A2 level. Three mandibles of *Canis familiaris* were discovered in this level (fig. 5/1-3) with interventions in the joint area and traces of use. For the use of these mandibles, their natural form was used, only minimally intervening at the level of the vertical branch. They were used in the processing of soft materials, of animal or vegetal origin. We can imagine necessary interventions in the processing of leather, cleaning vegetal fibers, as well as in the process of preparing various foods of plant or animal origin (V. Radu et al., 2019).

On the south-eastern edge of dwelling 2, at Căscioarele - Ostrovel, a pile of pig and a few cattle *ankle bones* (probably knapping debris) were discovered, left without any signs of burning, some of them visibly polished (V. Parnic, 2001).

In Măriuța, by identifying all categories of parts, and including finite parts, parts under processing, supports and knapping debris, it was concluded that these pieces were made in the settlement, as well as the existence of a stock of materials for future parts. From a functional point of view, the author of the analyses from Măriuța puts these pieces in connection with domestic activities, such as piercing leather or weaving textile fibers. There is also a belief that these communities used textile fibres and knew different interweaving processes (M. Mărgărit et al., 2014).

In Cunești, the pieces have been used in various activities, such as leather processing or wood and bark processing (M. Mărgărit et al., 2013).

By analogy with the other settlements where the material was analyzed from a technological and typological point of view and in Bordușani, this type of pieces were used in various activities, such as leather processing or wood and bark processing.

### Discussions

Starting from the samples studied in various settlements, and mention here Pietrele (M. Mărgărit et al., 2019), Cunești (M. Mărgărit et al., 2013), Bordușani (D. Popovici et al., 2014),



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Măriuța (M. Mărgărit et al., 2014), Vitănești (M. Mărgărit et al., 2022), we can affirm that the raw material was provided by two procedures: the reuse of osteological residues that come from the processing activities of animal products, especially domestic, but also wild, or, the second process, the collection of the horn of *Cervus elaphus*.

As a result of the analyses carried out, it was concluded that in Vitănești, most of the raw materials used as support for the bone industry come from large wild mammals, while for domestic mammals the supports come from *Bos taurus* at the expense of *Ovis* or above (A. Bălășescu, M. Mărgărit, 2014).

The same situation is encountered in Măriuța (M. Mărgărit et al., 2014) where the remains of *Cervus elaphus* are a majority, followed by *Bos taurus*, *Ovis* and *Sus*.

In Bordușani the remains of *Bos taurus* predominate, followed by *Ovis* (V. Voinea, 1997), a similar situation being encountered in Cunești where 52% of the pieces are made of *Bos* scraps, followed by *Ovis* and *Sus* (M. Mărgărit et al., 2013).

As for the supports, both volume and flat supports were used. The large number of types of supports clearly shows an opportunistic way of selection, with the community using the supports at hand, predominant of those of domestic animals.

The various research campaigns carried out over the years in the sites of Gumelnița have revealed finds of bone pieces in most sites.

Thus, points or chisels made out of bone are also mentioned at Alexandria-Gorgana (R. Andreescu et al., 2003 b), Blejești (D. Berciu, 1956), Boian (V. Christescu, 1925), Bucșani (C. Bem, 2001), Chitila - Fermă (M. Adameșteanu et al., 2004), Geangoești (G. Mihăescu, A. Ilie, 2004), Însurăței-Popină I (S. Pandrea et al., 2002), Măgura Jilavei (E. Comșa, 1976), Petru Rareș (D. Berciu, 1959), Tangâru (D. Berciu, 1959).

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## *Lion of Judah?*

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#### **Interpretations Regarding the Symbolism of the Artefact**

„Qui n'a pas d'armes porte un lion”  
(Proverb, 13<sup>th</sup> century)

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**Abstract:** Faced with unseen dangers, the mediaeval man resorted to an arsenal of practices, gestures, rituals, as the church and religious faith were a powerful wall against malevolent forces. To ward off evil, Christians would generally wear sacred objects, such as wafers, relics, crosses, but especially unconventional items with so-called magical powers, such as amulets. Their use was widespread in almost all ancient civilisations and belief in their powers has been known since the beginning of history of humanity. People would attribute prophylactic and apotropaic qualities to them, but the protection granted to the community was also very important, as amulets sheltered it from perils, catastrophes, seen and unseen enemies. In addition to their intrinsic magical significance, these items were often the bearers of a special kind of imaginary and of a set of cultural symbols. The artefact which is the subject of this study falls under this category of amulets and was found in 2020 on the archaeological site of the Princely Court of Târgoviște, in a mediaeval habitation complex dated to the 15<sup>th</sup>-16<sup>th</sup> centuries. The amulet, which is small in size, is made from bone and catches the eye through its anthropozoomorphic representation that combines human and lion traits. Such an item, particularly unusual due the deep meaning of representation, challenges the historian to penetrate into and often remain captive inside the tempting and complex maze of symbols and mediaeval imaginary.

**Keywords:** Târgoviște, Princely Court, archaeological research, amulet, anthropozoomorphic representation, 15<sup>th</sup>-16<sup>th</sup> centuries, symbolism, Lion of Judah.

### **Introduction**

The importance of the city of Târgoviște in the mediaeval history of Wallachia is undeniable, as it was an essential economic centre and princely residence of the state south of the Carpathians for a long time (the 14<sup>th</sup>-17<sup>th</sup> centuries) (fig 1). The first mention dates back to 1396, when the written document (\*) states that alongside of Argeș, Târgoviște was the capital of Wallachia. The trade route connecting the Transylvanian city of Brașov to the mouths of the Danube had a major impact on the genesis and development of Târgoviște, whereas the political

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ascendancy over the resulting material benefits often put the Wallachian princes into conflict with the Brașov merchants supported by the Hungarian king (Ș. Papacostea, 1988). Despite

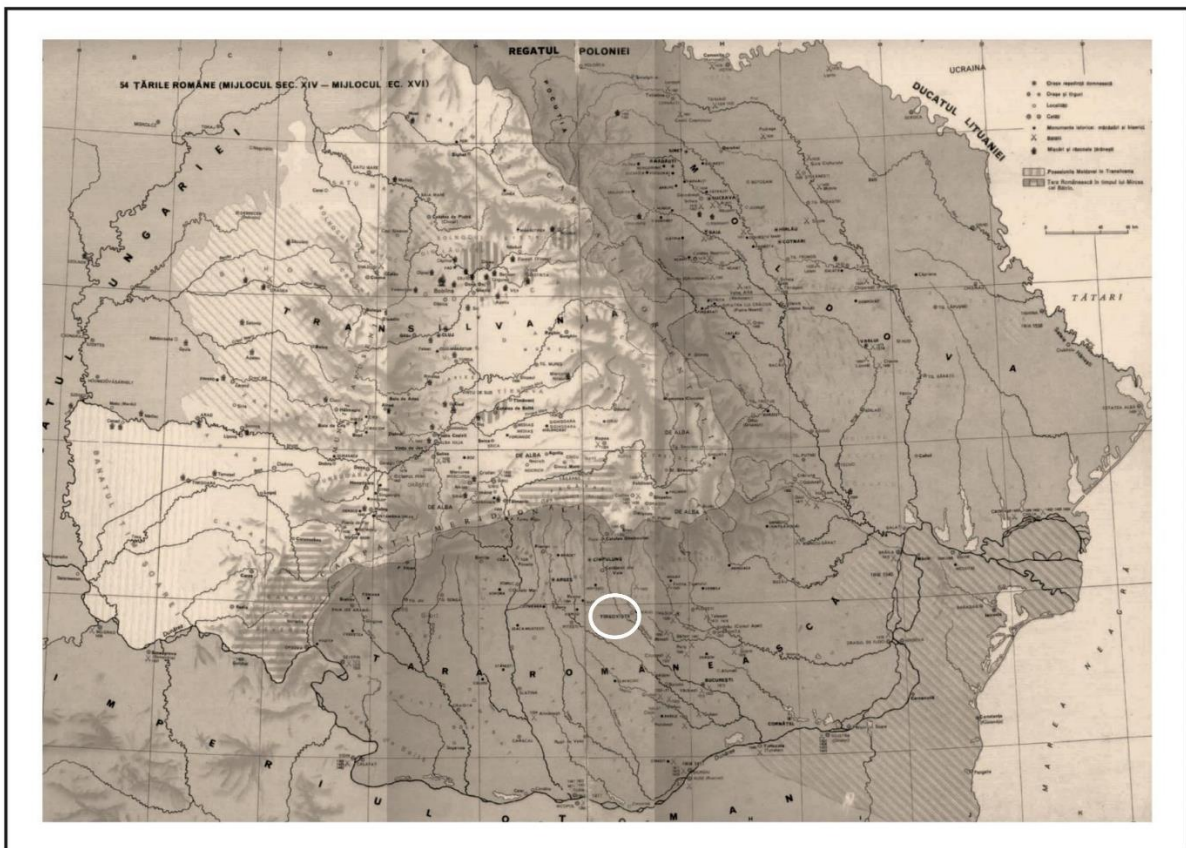


Fig. 1 - Map of the historical provinces of Transylvania, Moldavia and Wallachia during Middle Ages (14<sup>th</sup> -16<sup>th</sup> C). Location of the city of Târgoviște.

the great political, military and economic pressures exerted by the Ottoman Empire and the Kingdom of Hungary upon Wallachia, Târgoviște managed to maintain its status of main political centre of the country, at least until 1660 (\*\*; \*\*\*). Located in the central part of the country, Târgoviște became one of the major capitals of mediaeval and premodern Europe. A cosmopolitan space, transited by messengers, merchants and numerous travellers, the city bore the marks of exogenous influences due to certain aspects of administrative organisation and to its architecture. These influences are visible not only on the soil surface, for archaeological investigations have uncovered artefacts that point to Wallachia's actual connection to the realities of Christian European civilisation.

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The most representative architectural complex of the former capital city, which preserves the traces of mediaeval times to this day, is the Princely Court (fig. 2). Its evolution as an aulic space, reflected by the many vestiges, points to old Byzantine forms in the ecclesiastical and palatial architecture. Originally conceived as a castle in which the fortified element was prevalent, the court of Târgoviște began to display, starting in the 16<sup>th</sup> century, the characteristics of European residences influenced by the Italian Renaissance.

Today, the court of Wallachian princes reveals itself through the constructions preserved in-situ in the form of an open-air museum complex, where one can visit the ruins of the “Vlad Dracul” princely palace (1436-1447) and those of the princely chapel (15<sup>th</sup> century), the “Chindia” Tower (15<sup>th</sup> century), “Sf. Vineri” Church (mid-15<sup>th</sup> century), as well as the ruins of the “Petru Cercel” palace (1583-1585) or “Adormirea Maicii Domnului” Princely Church (late 16<sup>th</sup> century) (fig. 3).

The artefact under discussion in this study was found during the systematic archaeological excavations carried out at the Princely Court of Târgoviște, a long-standing research which has managed to reconstitute the main stages of evolution of the aulic ensemble.

Thus, a first large-scale action unfolded between 1934 and 1938, when the archaeologist Virgil Drăghiceanu removed the rubble that had covered the princely palace and other structures nearby (N. Constantinescu *et al.*, 2009). As of that moment, numerous mediaeval history enthusiasts have been able to observe the ruins reminding of a glorious military past of Wallachia. Such princes as Mircea the Elder (1386-1418), Vlad Dracul (1436-1447), Vlad the Impaler (1456-1462), Radu of Afumați (1522-1529), Michael the Brave (1593-1601), Matei Basarab (1632-1654) and Constantin Brâncoveanu (1688-1714) would now find a new place in the imagination of those visiting the old walls.

Later, in the 1960s and 1970s, during the communist regime, under the direct authority of Nicolae Ceaușescu (1965-1989), a programme of “ideological” valorisation of several architectural complexes and archaeological sites was implemented with a view to promoting the national past (\*\*\*\*). This is the context in which the Princely Court of Târgoviște became the subject of extensive research coordinated by the archaeologist Nicolae Constantinescu. Synthetically published and later gathered in a monographic volume (N. Constantinescu *et al.*, 2009), the investigations had the merit of identifying various archaeological contexts, which revealed the complexity of the site, requiring the application of interdisciplinary methods soon afterwards.

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Fig. 2 – The Princely Court Monumental Ensemble of Târgoviște (14<sup>th</sup> -18<sup>th</sup> C).



Fig. 3 –Representative monuments of the Princely Court of Târgoviște: the Chindia Tower (15<sup>th</sup> C), the “Sfânta Vineri” Church, the Princely palaces (14<sup>th</sup> -18<sup>th</sup> C), the Great Princely Church (16<sup>th</sup> C).

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It was not until the 2000s that the investigations were resumed, approaching areas considered to be insufficiently analysed, such as “Bălașa House” (17<sup>th</sup> century) (P. V. Diaconescu *et al.*, 2013) or the “Church-Chapel” (15<sup>th</sup> century). The finds were far beyond expectations, as new complexes, dated to before the reign of Mircea the Elder (1386-1418), were discovered (G. Olteanu *et al.*, 2019).



Fig. 4 – The Princely Court of Târgoviște, C Sector, on the premises of the “Sfânta Vineri” Church. Detail of the researched area during the years 2020-2022.

Since 2018, the archaeological research has focused on the area next to the “Sf. Vineri” Church, in the so-called C Sector (fig. 4), located, in the 15<sup>th</sup> century, outside the princely court, which at that time consisted only of the palace, a church and a bell tower (later called “Chindia” Tower) (N. Stoicescu, C. Moisescu, 1976; T. Sinigalia, 2000). Then, starting in the late 16<sup>th</sup> century, an enlargement process of the aulic ensemble was to encompass the “Sf. Vineri” Church and its courtyard within its walls.

The excavation campaigns conducted in the aforementioned perimeter in 2020-2021 had spectacular results (F. G. Petrică *et al.*, 2021; F. G. Petrică *et al.*, 2022), among which a boulder cellar-type structure of appreciable sizes stands out (fig. 5). Its being identified in the immediate vicinity of the church and the material resulted from the analysis of the structure made us



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consider that this is a boyar residential complex, which was functional in the 15<sup>th</sup>-16<sup>th</sup> centuries (M. Cârciumar, F. G. Petrică, 2022; M. Cârciumar, 2022).

The same research carried out in 2020 was to also surprise through the discovery of a novel artefact, chosen to be the subject of this study.

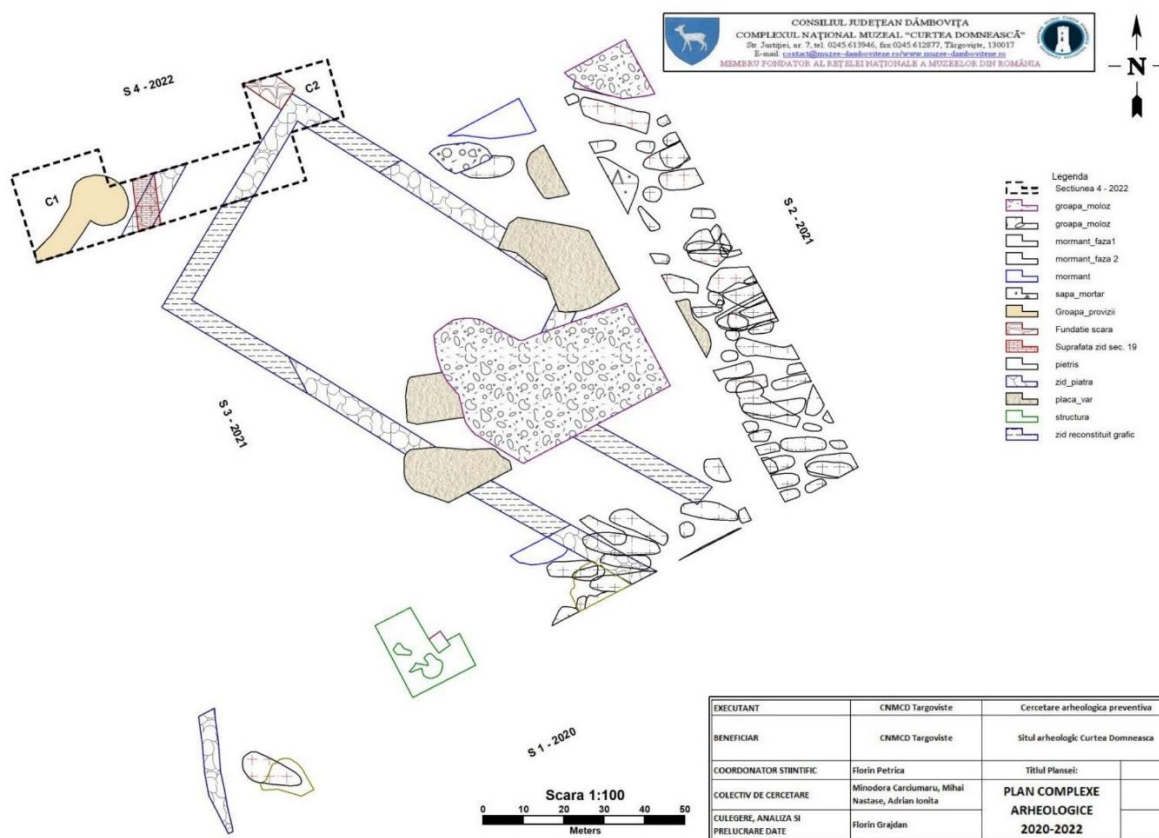


Fig. 5 – Archaeological site plan in C Sector, on the premises of the “Sfânta Vineri” Church. 2020 archaeological season (after F. G. Petrică *et al.*, 2021), 2021 archaeological season (after F. G. Petrică *et al.*, 2022).

**The archaeological context of the discovery**

In a blackish soil with traces of charred wood, – 1.55 m deep, among ceramic fragments, rusted metal and very many animals bone remains, i.e., in a place that, just before the year 1600, had become a demolition pit and later a household waste dump, the point of a trowel revealed a very small, light, dark-coloured and oddly shaped object (F. G. Petrică *et al.*, 2021) (fig. 6 a, b, c). The archaeologist would look at it in wonder, especially because the item seemed to be

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looking back at him. Indeed, though soiled by the damp dirt, a human face with piercing eyes, like those of a beast, would see sunlight again after four centuries of darkness. Its entry into our world slightly opened the doors of its world to us as well. Without intending to chase a supra-meaning of this item, we tried, as much as possible, to discern its function, symbolism and cultural importance.



Fig. 6 – The amulet rendered in different stages: image captured in the moment of its discovery; a. the appearance of the artifact immediately after discovery; b. the appearance after the application of the first conservation treatment; c. the current appearance of the amulet.

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The artefact was identified within the walls that formed the access to the stone cellar (the narrow entrance area) (fig. 5). The context of the object was dated to the 15<sup>th</sup>-16<sup>th</sup> centuries by corroborating stratigraphic information with data extracted from the burial inventory of graves found in this sector.

**Description of the item**

Unique among the archaeological finds in Romania, the item is made from a bone fragment and has the following dimensions: length 3 cm, width 2.7 cm, thickness 3.5 mm, weight 4.3 g<sup>1</sup> (fig. 7). The choice for a flat surface that would allow the artisan to obtain the



Fig. 7 – The amulet discovered at the Princely Court of Târgoviște. a. profile of the amulet; b. lower face, unprocessed; c. drawing created by Andrei Scarlătescu, graphic artist.

<sup>1</sup> The item is part of the collection of the “Princely Court” National Museum Complex Târgoviște, inventory no 38620/VI.

desired image, the spongy structure, specific to the internal part of the bone (fig. 7 b) as well as the thickness of the fragment (fig. 7 a) are details that prompted us to assume that this segment was taken from the pelvic area of a skeleton. Thus, by making numerous and skilful incisions only on the upper face of the item, the face of a man bearing the physiognomic characteristics of a lion was outlined (fig. 7). The specific traits of this animal also determined the shape of the object. The outline of details, such as the ears, the rich fur of the mane, the mane lobes and the jaw, can be noticed in the lower, rough part of the artefact as well (fig. 7 b). Small incisions, a few dozen in the cheekbone area, highlight the presence of hairs here, equally simulating the human beard and the fur of the animal-lion.

Therefore, we are dealing with an anthropozoomorphic image, the entire external face of the item being individualised with specific traits: the piercing eyes, elongated in shape, harmoniously frame the nose and mouth, marked by incisions, the depth and direction of which highlight elements in the appearance of the animal-lion. These features are so realistically rendered that everything resembles a classical drawing or engraving, which may point to the fact that the artisan was acquainted with that particular technique and, hence, with the pattern as well.

Taking the whole figure as a whole, we notice the artist's skill in tracing the lines with such precision and confidence that are hard to imagine. The same ability is also evident in the achievement of symmetry of the item sides, which take something over from the physiognomic elements of the representation. An imaginary folding of the item, both vertically and horizontally, suggests an exact match of these particularities.

Observing the artefact through the magnifying lens of the digital microscope, we were able to thoroughly examine it and extract some data regarding the method and technique of execution (fig. 8).

Thus, the outline of the object was marked on a carefully chosen bone fragment by sketching the main physiognomic traits. Traces of this action are still preserved in the ear area. In this stage, the previously mentioned side symmetry had already been created. The active front of the tool used for incision, most likely a small type of chisel, varied in width, judging by the aspect of lines: from the finesse of hairs in the cheekbone area to the depth created in defining the eyes, mouth or mane etc. (fig. 8 b, e, f).

Once the reference points were established, the artist proceeded to the perforation of the item from the upper face towards the inside in order for it to be worn by suspension, but no

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such wear and tear has been noticed (fig. 8 a). The hole, with a diameter of 6 mm, is bounded by a concentric circle 3 mm, which we would not include in the actual decoration, but would rather attribute to the imprint left by the perforation mechanism. This tool may have operated according to the principles of compasses.



Fig. 8 – The amulet with anthropozoomorphic representation: a. perforation detail; b. eye detail; c. chin detail; d. profile detail, with traces of incisions; e. mouth detail; f. ear detail.

The hole succeeded the decoration because the piercing process affected the outline of the left eye, sketched, therefore, in a previous stage (fig. 8 b).

We do not exclude the existence of a stage of completing the details, as shown by the undulation underlining the inside of the left ear, executed after the concentric circle of the hole (fig. 8 f), as well as one of nuancing the existing elements.

Once the decoration completed, the object was cut according to the established outline with a chisel-type of tool. The very fine, vertical and oblique, traces observed on the thickness of the item confirm the use of this tool (fig. 8 d). We believe that the size and fragility of the

bone required the use of a mechanism similar to a vice for the stabilisation and precision of the finishing process. The cutting of the desired shape in this stage is reflected in the marks in the chin area (fig. 8 c) and in the upper part of the amulet in the hole area, where segments of the drawing are missing (fig. 8 a).

The touch of originality is undeniably given by the unusual type of representation as well as by the nature of the material used, bone. In this context, one should not overlook the time in which the item was made, possibly the 15<sup>th</sup>-16<sup>th</sup> centuries, when the technical possibilities could have allowed the engraving of the desired image on any type of blank and, most importantly, in a much shorter time. However, the choice of the artisan/customer was not at all random. A symbolically representative type of material was sought and bone was the most liable to bestow the protective side on the item, thus potentiating the deeply symbolic nature of the engraved message. The very finely traced incised lines denote discreetness, as the item was most likely not worn in plain sight.

### **Interpretations regarding the function of the item**

Due to its small size and especially due to the deep meaning of the representation, the artefact found at the Princely Court of Târgoviște falls into the category of amulets worn on the body, particularly around the neck or encapsulated (\*\*\*\*\*).

Ever since the Palaeolithic, man had been known to be drawn by curious objects taken straight from nature, such as various fossils, minerals or stones that impressed through their special shapes or colours (M. H. Moncel *et al.*, 2009; M. Cârciumaru *et al.*, 2011). There are also many items made mainly from hard animal materials, such as teeth, antler or bone, manufactured and transformed by the Palaeolithic man into pendants in the belief that the power of that particular animal would be transferred to the possessor (H. Delporte, 1989; M. Otte *et al.*, 1995; R. Alleau; M. Cârciumaru, 1999; F. d' Errico, 2006). Beyond their intrinsic magical significance, these objects have been the bearers of a particular imaginary, of a set of graphic symbols and spiritual identities (D. C. Skemer, 2006). In the ancient Mediterranean world and mostly during the Late Roman Empire (2<sup>nd</sup>-5<sup>th</sup> centuries) the amulet industry flourished; stylistically and typologically, they came in a variety of shapes, some being inscribed, others not. Their main functions were therapeutic and apotropaic and they were made from organic and inorganic materials, e. g. papyrus, precious or base metal blades, bone, antler, precious or semiprecious stones (\*\*\*\*\*).

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Given the geographical area, the place and the archaeological context, in particular, we have considered that the artefact found at the Princely Court of Târgoviște falls, in the most likely case, into the category of Christian amulets. In terms of size, shape and representation, it corresponds to the utility for which it was created. Thus, the image translates into shape and the shape, into image. The object carries Christian symbolism and connotations, although the representation chosen by the artist might be thought to apparently conceal these elements. It is not a clothing accessory and does not create the illusion of being anything other than an amulet.

Also, there is the matter of the nature of the organic material (A. A. Rusu, F. Mărginean, 2005). Why a bone fragment? It is difficult to carve a face so complicated to read in its original key in this kind of blank with such artistry, such plastic harmony. Why not a metal piece, which is easy to work, to engrave, to mould into some shape, to sell on a large scale, as happened in most cases of amulets found in the Christian world and not only (T. de Bruyn, 2017). Why not a precious stone? The answer may be sought in the nature of the organic material, which is directly related to the represented image. The choice of any other material would have pulled one away from the idea one wanted to represent, for the material itself would blend with the very meaning of the representation.

No doubt, the process of crafting the amulet involved real artistic skills, but the meaning behind the image implies deeper theological knowledge beyond anything that might be generally required from an ordinary artisan, even from a very capable one. Rather, in this case, we may speak about a craftsman who was acquainted with the art of engraving, perhaps one who belonged to a team of printers working in Târgoviște in the 16<sup>th</sup> century (P. P. Panaitescu, 1939).

At the time of its creation, the image could be known by means of the eyes, which is still true today, but the symbolism of the message can only be seen by means of one's mind's eye. Nevertheless, due to the organic material from which it is made, due to the possible meaning of the representation and especially due to its unusualness (though we might be even tempted to say this is a spectacular unique work), this amulet poses some difficulties regarding the interpretation of its symbolism. It is important to note that the central elements of the representation are Man, above all, and then Lion. We have said that Man is the main emphasis of the item because of his verbal communication skill suggested by the artist himself, whereas Lion comes second on account of its significant power of representation, a Man-Lion, as the

artisan of the unusual object pointed out. Consequently, it is this duality that has guided us in identifying cases of spiritual and iconographic man-lion symbiosis throughout the history.

Therefore, an incursion into the general symbolism and the particular, Christian, symbolism of the *lion* is important in trying to hypothetically unravel the meanings of this remarkable artistic representation.

According to the mediaeval thought, “any object, any element, any living creature is thus the figuration of something else, which corresponds to it on a higher or eternal plane and the symbol of which it is” (J. Le Goff, J.- C. Schmitt, 2002, p. 747). Plastic composition is that which provides the internal coherence and intelligibility of the image. It is always subordinated to the expression of an emotional message, of a complex human creation (R. Huyghe, 1971). Perhaps that is why the study of symbols requires one not to draw too clear a boundary between the real and the imaginary, which always is an integral part of reality. Therefore, the discovery of such an object with an unusual representation, such as that shown on the amulet from Târgoviște, prompts the historian to penetrate into and often remain captive inside the tempting and complex maze of symbols (R. de Solier, 1978; M. Eliade, 1994; L. Boia, 2000) and of mediaeval imaginary (G. Durand, 1999; L. Mesina, 2015).

### **The issue of Christian amulets**

Fear, whether real or imaginary, triggers various and complex behavioural manifestations and mutations in humans, simultaneously with certain religious or supernatural protective measures, according to each menace (J. Delumeau, 1986). Thus, in the history of humankind, this feeling has been expressed, symbolised and materialised through words, images and objects, particularly in the Middle Ages, which was also a world of terrors (D. H. Mazilu, 2001), superstitions, of a demonic and dreadful imaginary (R. Muchembled, 1997). To protect themselves against possession by various demons and to ward off evil, Christians would wear sacred objects, such as wafers, relics, crosses, but especially unconventional items with so-called magical powers, such as amulets (T. de Bruyn, 2017). In fact, religious faith includes representations of real, ideal or imaginary things. Through religious representations, man feels stronger to face life’s hardships and to overcome them (E. Durkheim, 1995).

The amulet can be defined as a three-dimensional object, which reflects outer reality, plastic creation and inner reality. *Christian amulets* are a particular case (T. de Bruyn, 2017), as they were assimilated by the mediaeval clerics with the fight against supernatural forces and were thus acknowledged by the church (J. L. Crow, 2009). Their use was condemned not only



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by St. Augustine, the “father of mediaeval symbolism”, as [M. Pastoureau \(2022, p. 13\)](#) called him, but by many synods. The main imputation was that amulets evoked and invoked the evil forces and created an implicit pact ([J. L. Crow, 2009](#)). However, in mediaeval times, only the members of the clergy were educated enough to make amulets, hence, all of them were also the main providers to parishioners. The Fathers of the Church would separate the miracles performed by means of relics („*moaște*”) from the sacred words of the Bible („*verba sacra*”), while delegitimising amulets, the use of which was labelled as superstitious magic, a term meant to condemn their usage, hence their association with demonic works. But the ignorant or the uneducated people could hardly tell the difference between the magical amulet and the church-approved one. Even so, the interdiction to wear them, asserted and often imposed by the Church, had no effect on believers. Furthermore, in the 15<sup>th</sup>-16<sup>th</sup> centuries, their manufacture became a business enterprise between the local clergy and the common people of the parish, who were the main buyers ([J. L. Crow, 2009](#)).

**The symbolism of the lion**

The amulet found at the Princely Court of Târgoviște is undoubtedly unusual; due to the image it bears, like a **metaphor of royalty**, it alludes both to the animal realm, in which the lion is seen as the king ([M. Pastoureau, 2022](#); [H. S. Pyper, 2014](#)), and the world of men, also ruled by emperors, kings, princes etc.

Who is the symbolised character and what is his spiritual importance? Who was the customer? Who could have been the creator of the image? Is the amulet independent in terms of its execution, can it be merely the result of some particular inspiration, which willingly ignored the canons of Christian symbolism? These are questions, the answers to which we seek to *suggest*, answers which we are somehow privileged to be the first to provide, as discoverers.

We already know the *lion*, in its various mythological invocations ([A. Oisteanu, 1989](#)), plastic representations or ideological and religious revendications ([V. Simion, 1983](#)), was assumed in the history of mankind only by a small part of society, namely the top of it. It has a secular symbolism, but mainly a sacred one. The lion has its own *human* history (i.e., its role in the human world) and, implicitly, a matched historiography, we might say even beyond belief, as compared to the attention given to other animals or historical themes ([B. A. Strawn, 2005](#); [D. Jäckel, 2006](#); [M. M. Székely, 2012](#)). The special interest given to this animal, coming

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especially from various research directions, such as history (of power) and religion (mainly the Christian view), is highly indicative of the importance of the theme (C. I. Ciobanu, 2012).

The *lion* is also the king of heraldic figures, of bestiaries; it is sculpted, painted; it is the motto of justice *inter leones et coram populo* (L. Charbonneau-Lassay, 1992, p. 9), an essential religious symbol. The *lion* is the king of animals, a demonic force (J. Le Goff, J.- C. Schmitt, 2002), a formidable creature one must run away from by all means, begging for divine protection. The Lion is **Jesus** Himself (L. Charbonneau-Lassay, 1992).

This interpretative register shows that, throughout history, the *lion* has been marked by some moral ambiguity, for it has been interpreted as both *ad bonam* and *malam partem* (B. A. Strawn, 2005, p. 49). There is a dangerous, cruel, lawless lion, embodying the forces of evil, but there is also a lion that puts its entire power in the service of the common good, whose “roar conveys the word of God” (M. Pastoureau, 2022, p. 63). During the Christian Middle Ages, the *lion* was no longer just a sign of power, but turned into an ideology of power. This was mainly due to the Christian religious texts, the Bible and Bible-related comments, the writings and exegeses of the Fathers of the Church and, naturally, other numerous mediaeval authors (A. Jacobs, 2003; H. M. Jackson, 1985).

Ever since the artefact was found, we have gone through a long bibliographic list and, without any claim to cover the issue exhaustively, have come to believe that the amulet from the Princely Court of Târgoviște is definitely a contribution to this fascinating topic whose main character is the *lion*, as a Christian symbol. In the world of symbols, “suggesting is often more important than asserting, feeling than understanding, evoking than proving” (J. Le Goff, J.- C. Schmitt, 2002, p. 754), i.e., precisely what the mediaeval buyer did in the case of the item found at the court of Târgoviște. The artisans of the Middle Ages would not ignore the material and particularly symbolic quality of the blank used to create their objects, and we are warned that “*the archaeologist of today should not ignore it either*” (J. Le Goff, J.- C. Schmitt, 2002, p. 755).

Nevertheless, in Christian theology, the *lion* has primarily a remarkable Christological dimension. It possesses the virtues of the leader and of the warrior (force, courage, dignity, nobleness, spirit of justice, sacrifice and mercy). The *lion* conveys the word of God, is the bravest of all animals, the emblem of Judah’s tribe, the most powerful tribe of Israel. From this perspective, it is associated with David, his lineage, therefore, with Jesus (\*\*\*\*\*). Regarded as a bad animal by some Fathers of the Church, mainly in the Old Testament, the *lion* finally

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regains its positive aspects in the New Testament, when is it seen as the lord of all animals and a figure of Christ (M. Pastoureau, 2022, p. 63).

A fundamental study in the interpretative history of the *lion* in Western Europe (N. Harris, 2021) identifies five categories of symbolic attributes of the animal: 1. The threatening lion, 2. The Christian lion, 3. The noble lion, 4. The sinful lion, 5. The clement lion.

The *New and Old Testament* and the *Gospel of Thomas* (apocrypha) as well include numerous references to the *lion*, but three of them have a particular influence, from our analytical perspective:

1. In “St. Peter”, the *lion* has a negative connotation, for the devil appears as a roaring lion, searching for someone to devour: “*Be sober-minded; be watchful. Your adversary the devil prowls around like a roaring lion, seeking someone to devour. Resist him, firm in your faith (...)*” (\*\*\*\*\*).

2. In contrast, in *Revelation to John*, the *lion* appears as the incarnation of Jesus Christ: the Lion of Judah’s tribe, the root of David: “*Do not weep! See, the Lion of the tribe of Judah, the Root of David, has triumphed. He is able to open the scroll and its seven seals*” (\*\*\*\*\*).

Henceforth, many authors of Late Antiquity and the Middle Ages would consider the *lion* first and foremost as the symbol of Jesus Christ and, very rarely, as a sign of the devil.

3. In the *Gospel of Thomas*, Jesus said: *Blessed is the lion which the man eats, and the lion will become man; and cursed is the man whom the lion eats, and the lion will become man* (\*\*\*\*\*).

But, despite the negative aspects, for most writers of the Middle Ages, the *lion* represents *Jesus*, especially because of the writing known as *Physiologus* (“Naturalist”) (\*\*\*\*\*). Here, the interpretations of the lion’s features converge towards unanimity, but we shall only refer to the third trait, the most popular actually: it is the scene in which the *lion* resurrects its stillborn cubs after three days; in this case, a selection of interpretations is given by Petrus Berchorius (1290-1362) in his work *Reductorium morale*, in the chapter on the lion (L. Charbonneau-Lassay, 1992, p. 9). In a first interpretation, *Lion* is *God*, while the cubs are the human race and the three days signify the three ages of life: the age of nature, the age of law and the age of grace. In the second interpretation, *Lion* is *Jesus*, the lion of the tribe of

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Judah, who, three days after the *Last Judgment*, will resurrect the world, some being raised to life, others to death. One may thus say that the dead cubs are in fact sinful souls, or even the human race, dead in sin and redeemed by Jesus on the cross. The third interpretation points to Jesus, resurrected by God the Father three days later.

Let us nuance the symbolic nature of the *lion* by rendering some verses taken (L. Charbonneau-Lassay, 1992, p. 9) from a 13<sup>th</sup>-century work (*Divine bestiary*) of William of Normandy:

“Quand cest lion fut en croiz

mis

Par les leves, ses anemis,

Qui le jugièrent a grant tort,

L'umanitéi soffrit mort

Quand l'espérit de cors

Rendi

En la sainte croiz s'endormi,

Si que la deitéveilla”.

Through this interpretation, the author thus agrees with Saint Augustine, who sees the way the *lion* sleeps as an allusion to the divine nature of Christ, who did not die in the grave even when his human nature underwent real death. The same idea is also expressed by the cleric Ulrich von Lilienfeld: as the *lion* shares its food freely with the other animals, so does the *lion of the tribe of Judah*, Christ, in the *Last Supper*, share not only his food, which is the most generous gesture of his grace, but also the food of his own holy body and the sweetness of his blood, with the Apostles (N. Harris, 2021, p. 195).

This excursus on the Christian symbolism of the *lion* already announces the interpretative path, namely, that the image on the amulet might represent **Jesus – Lion of Judah**, in an original variant.

The shape, image and symbolism of the object have, for now, entailed a single register of interpretation, that related to Jesus. Clearly, this preliminary analysis may be far below the true or full understanding, the vastness or completeness of the real conceptual and spiritual dimension of the object. Still, in favour of our hypothesis, we should invoke the amulet

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inscribed with the name of **Christ** in Hebrew, Greek and Latin, worn by Priscillian, bishop of Ávila (340-385). The fact that the name was accompanied by the image of a **Lion** and the phrase “Rex regum et dominorum dominus est” (“King of kings and Lord of lords”) ([Priscillian of Avila, 2010](#), p. 56-59; [T. Breyfogle, 1995](#), p. 448) is even more eloquent.

Notwithstanding the many and various opinions that may naturally exist in terms of the interpretations regarding the identification of the character rendered on the amulet or its symbolism, when it comes to aspects related to its artistic realisation, we should all agree that this is a genuine **art object**.

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## Gravettian Stone Pendants in Europe (A Proposal for a Possible Repertory)

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**Abstract:** This article is intended to be a challenge with a view to creating repertories of Palaeolithic pendants, classified in terms of cultures and the raw material used. Recently, a significant number of Gravettian stone pendants have been found in Romania, which has prompted us to start this project with precisely this category. The journal *Annales d'Université Valahia Targoviste, Série d'Archéologie et d'Histoire* has offered to publish any study meant to complete this attempt at compiling Palaeolithic pendants, regardless of culture and raw material used.

**Keywords:** stone pendants, Gravettian, symbolism, repertory.

### Introduction

Personal ornaments may be regarded as a synthesis of an encoded message man wanted to convey in the Palaeolithic. Very often, the features of the raw material they were made of, their position on the body or on garments was not random, for it is not excluded that their aesthetic significance was subordinated to the symbolic one. They were the means by which an individual or a social group expressed and individualised themselves, differentiated from one another and proved their social identity and their belonging to a certain ethnic group. It was therefore a symbol of social belonging and a means of communication inside and outside the group, a token of power, a mark of age, gender, taste, faith and status or even a support of ideas and cultural symbols and traditions (M. Maudet, 2003). As they were passed on from one generation to another, personal ornaments became bearers of information on traditions within exchange networks, disseminating ideas, conferring some cultural vitality and dynamics typical of Palaeolithic societies (P. Paillet, 2018).

Among Palaeolithic personal ornaments, pendants are a well-defined category. Those that have stood the test of time and have been discovered by archaeologists were made of ivory, bone or stone. Stone pendants were made of various rocks with different petrographic features and colours. Their perennity is given by the higher rock hardness as compared to those made of hard animal materials. However, the number of Palaeolithic stone pendants is not so great, probably because, more often than not, they were lost outside the settlements. Usually flat in shape, they were sometimes decorated with incisions on the circumference and, in rarer cases, engraved on one face or both faces, which gives them

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additional symbolic attributes. In general, the decoration on stone pendants involved special techniques and extra effort. That is why, engraved pendants are quite rare and their discovery is a fortunate event.

Because the message they set forth is extremely complex and diverse due to the manner of engraving, the context in which they are found etc., we believe that compiling a repertory according to Palaeolithic cultures is a pertinent endeavour. To begin with, in this study we aim to initiate the compilation of a repertory of Gravettian stone pendants, which is to be subsequently completed, as some discoveries are still unknown to us. The pendants are to be synthetically presented depending on the finds in every country, the data available at present, hence, the collection will remain open to further additions. Therefore, this study is an invitation to all colleagues to bring their contribution to completing the information on Gravettian stone pendants. Furthermore, the initiative to create a repertory of stone pendants from other Palaeolithic cultures would be more than welcome and necessary, as would be the attempt to compile pendants made of hard animal materials, such as ivory and bone. The journal *Annales d'Université Valahia Targoviste, Section d'Archéologie et d'Histoire* can host the studies focusing on this project in the long run. It is essential that the studies submitted for publication be accompanied by as suggestive and rich an illustration as possible so as to facilitate revealing comparisons.

The need for such a project, we believe, is absolutely justified for decoding the meaning of these ornaments in terms of the raw material used, the decoration often influenced by its features etc. The initiative of creating a repertory of Palaeolithic pendants emerged following a discussion with our colleague and friend Andrei Sinitsyn and, later, with other specialists in the field.

### **Description of pendants**

#### **RUSSIA**

##### **Sungir**

The Sungir site is located on a promontory of about 50 m on the left side of the Klyazma River, near the city of Vladimir, which is 200 km from Moscow. Following the excavations of [O. N. Bader \(1978\)](#) in 1956-1977, the site was estimated to cover an area of about 7,000 sq. m ([L. Iakovleva, 2008](#)).

The Sungir site has been attributed to the Late Streletsian, often referred to as the Sungirian. In terms of the age of this site, in addition to a number of old dates obtained in the 1960s and 1970s, between 14,000 and 24,000 B.P., considered to be too young, radiocarbon dating carried out on reindeer bones and charcoals at the Groningen laboratory indicate ages between  $24.430 \pm 400$  B.P. (GrN 5446) and  $25.500 \pm 200$  B.P. (GrN 5425). A more recent date obtained on a bison bone revealed by the 1987 excavations points to the age  $27.700 \pm 500$  B.P. (GIN 5880) ([L. Iakovleva, 2008](#)). Lately, there have been attempts to make stratigraphic correlations with the Kostenki sites, mainly with the location and age of the ash layer, dated to 39,000 B.P., which might therefore imply older ages than this date for the

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Sungir-Streletsian culture (G. Bosinski, 2017). We believe that the age of the Sungir graves is far from clear. We are inclined to think that, according to existent C14 dates, the Sungir site is Gravettian with special features, which should be defined as such, without any pressure regarding a possible ageing of the Sungir phenomenon.

The site of Sungir has provided three stone pendants with suspension hole (fig. 1/1-3) and one with an incomplete perforation (fig. 1/4).



Fig. 1 – Stone pendants from Sungir (modified after V. S. Zhitenev, 2017)

Two pendants have the suspension hole made from one side (fig. 1/1; 1/3), another one has a biconic perforation (fig. 1/2), and the fourth has an unfinished hole (fig. 1/4). One pendant was found on the man's chest (fig. 1/1) and another on the chest of the child (12-13 years old) (L. Iakovleva, 2008;

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R. White, 1999). The pendant on the man's chest (fig. 1/1), according to R. White (1993), was made of schist and was painted with red ochre and a black dot on one face. The stone pendants of Sungir should be viewed as part of the countless ornaments found in the famous tombs of this site, the best-known of which is the tomb of a very robust man aged 35-45 and his two children, a boy aged 11-13 and a girl aged 9-10 (S. V. Zhitenev, 2017).

### GEORGIA

#### Dzudzuana Cave

Dzudzuana Cave is located at the foot of the Caucasus Mountains, at an elevation of 560 m, in the Chiatura region, Georgia. The cave was researched in two stages. Between 1966 and 1975, the excavations were supervised by D. Tushabramishvili and covered an area of 40 sq. m (D. Tushabramishvili, 1984; D. Tushabramishvili, A. K. Vekua, 1982), while the investigations of 1996-2008 were conducted by a joint team of specialists from Georgia, the USA and Israel (O. Bar-Yosef et al., 2011; T. Meshveliani et al., 1999; 2004), who excavated 24 sq. m, reaching the cave bed at a

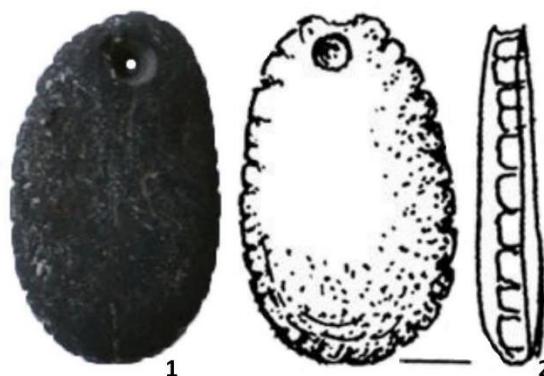


Fig. 2 – The pendant from Dzudzuana Cave (after O. Bar-Yosef et al., 2011)

maximum depth of 4.50 m and a minimum of 3.25 m. The deposit was divided into several stratigraphic units. Stratigraphic unit C, consisting of subunits C1-C5, was dated to between  $23.240 \pm 200$  B.P. (27.592–28.227 cal. B.P.) (RTT-3.823) and  $19.920 \pm 300$  B.P. (23.410–24.285 cal. B.P.) (RTT-5.744). The lithic assemblage in unit C recalls Gravettian features. Two stone pendants are mentioned in the upper part of this stratigraphic unit, one of which has a relevant illustration (fig. 2). It was recovered from the upper part of stratigraphic unit C, with dates between  $21.930 \pm 190$  B.P. (25.874–26.734 cal. B.P.) (RTA-3.435) and  $20.620 \pm 155$  B.P. (24.290–24.886 cal. B.P.) (RTT-3.822). The pendant was made of a small pebble about 3.5 cm long and 2.2 cm wide. The craftsman made a suspension hole and the decoration consists only of the 31 incisions placed on the entire circumference. Other ornaments made of animal teeth or bone fragments, beautifully decorated with engravings, were also found in the same layer as this pendant (O. Bar-Yosef et al., 2011).

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The second pendant, if it is the one in fig. 6/12 of the study by [O. Bar-Yosef et al. \(2011\)](#), rather seems to be, in our opinion, a claviform.

### THE REPUBLIC OF MOLDOVA

#### Cosăuți

The Palaeolithic settlement is located 0.5 km from the village of Cosăuți, Soroca district, on the second terrace on the right side of the Middle Dniester, in the Republic of Moldova (48°13' N and 28°15' E) ([I. Borziac 1991; 1993; 1996](#)).

A marlstone pendant, sometimes referred to as an amulet-pendant ([I. Borziac, V. Chirica 1996](#)), amulet ([P. Noiret 2009](#)) or simply pendant ([I. Borziac, M. Otte, P. Noiret 1998](#)), was found in level 2a of the Cosăuți site. The dating of this level pointed to an age between 17.230 ± 140 B.P. (GrN 21.792) and 16.860 ± 770 B.P. (LE 3.304).

Rather fragmented at the time of discovery, it was eventually reconstructed from four parts, which resulted in a final disc shape with a diameter between 5 and 4 cm and a section 0.9 cm thick ([I. Borziac, M. Otte 1996](#)). The pendant circumference is decorated with an impressive number of transversal incisions. Given that the pendant is quite fragmented, 60 incisions have been preserved, but the estimated initial number is 76 or even 78 engraved incisions. The space between them is around 1.2 mm ([fig. 3](#)).

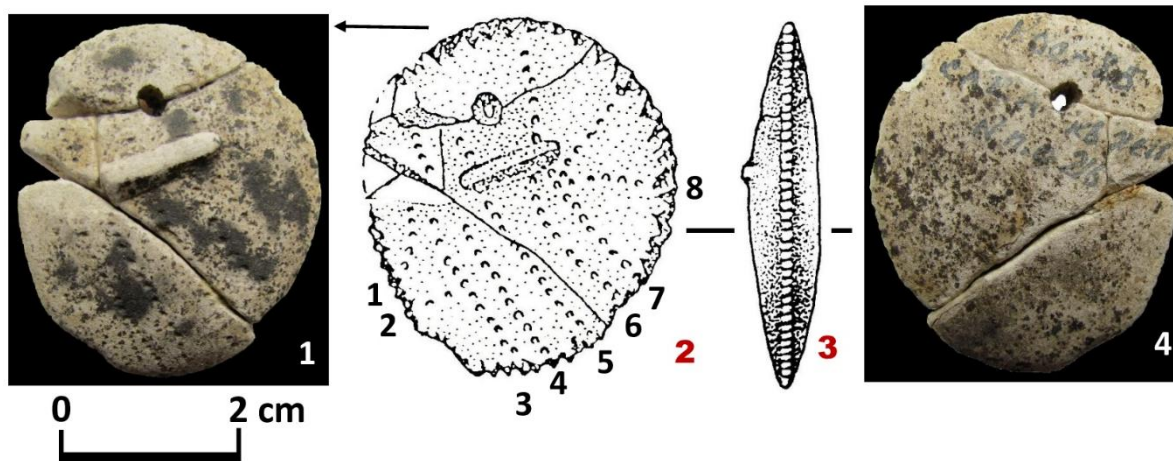


Fig. 3 – The pendant from Cosăuți (1, 4 after [M. Cârciumaru et al., 2019](#); 2-3 after [P. Noiret, 2009](#))

The decoration on the upper face is quite complex, consisting of linearly arranged dots. It has been claimed that there are nine rows ([I. Borziac 1994; 1996; I. Borziac, V. Chirica 1996; I. Borziac, M. Otte 1996 ; I. Borziac, M. Otte, P. Noiret 1998](#)), but there is also an assumption that, in fact, there are only eight rows, with a different continuity: 1 = 6; 2 = 2; 3 = 12; 4 = 15; 5 = 15; 6 = 17; 7 = 17; 8 = 6 ([fig. 1/2](#)) ([M. Cârciumaru et al., 2019](#)).

## Gravettian Stone Pendants in Europe (A Proposal for a Possible Repertory)

The complexity of ornamentation on the upper face is completed by a protrusion 12 mm long, 3 mm wide and 1.4 mm high. It is difficult to determine whether it was part of the initial blank morphology or the surface was intentionally worked in this way as a sign of personalisation of the personal ornament. Sadly, the upper face, in particular, is covered with a layer of bitumen which hinders any technological study and even any relevant macroscopic observations. As this layer of bitumen conceals many of the engravings, it may be the result of postdepositional processes. Otherwise, we can see no reason for the initial decoration being shaded without an additional aesthetic benefit. Slight traces of red and brown ochre have been noted quite scattered on the pendant surface.

### ROMANIA

#### Mitoc-Malul Galben

The Palaeolithic settlement of Mitoc-Malul Galben is part of Mitoc commune, Botoşani County, and lies on the middle terrace on the right side of the Prut, at the confluence with the Ghireni rivulet. In 1981, V. Chirica found an “amulet pendant” in this site, which was retrieved from the workshop of complex 27, in squares B 3-5, consisting of two hearths and a lithic workshop, 7.10 m deep in the lower Gravettian level (V. Chirica, 1982).



Fig. 4 – Gravettian stone pendants and suspension hole from Romania. a-b the pendant from Mitoc-Malul Galben (we are grateful to Vasile Chirica for the photograph); c-d highly silicified marly sandstone pendant from the Cioarei Cave; e-f siltite pendant from Poiana Cireşului-Piatra Neamţ.

This was the first discovery of a Palaeolithic stone pendant in Romania. In our opinion, the author’s choice of the term “amulet pendant” should have been supported by a minimal explanation that might justify the amulet function of such an ornament, i.e., of protecting the individual who wore it,

keeping them away from harm, such as diseases or even death etc. In such a situation, the context in which the pendant was found, for example its discovery in a tomb, would have been of great importance. Otherwise, the pendant may as well be considered a talisman, acknowledged for its role of conveying a message that sought to attract prosperity. In fact, [M. Vanharen \(2010\)](#) emphasises that in many traditional societies, the personal ornament is a sacred object symbolising the connection with one's ancestors and conferring identity and continuity on the community.

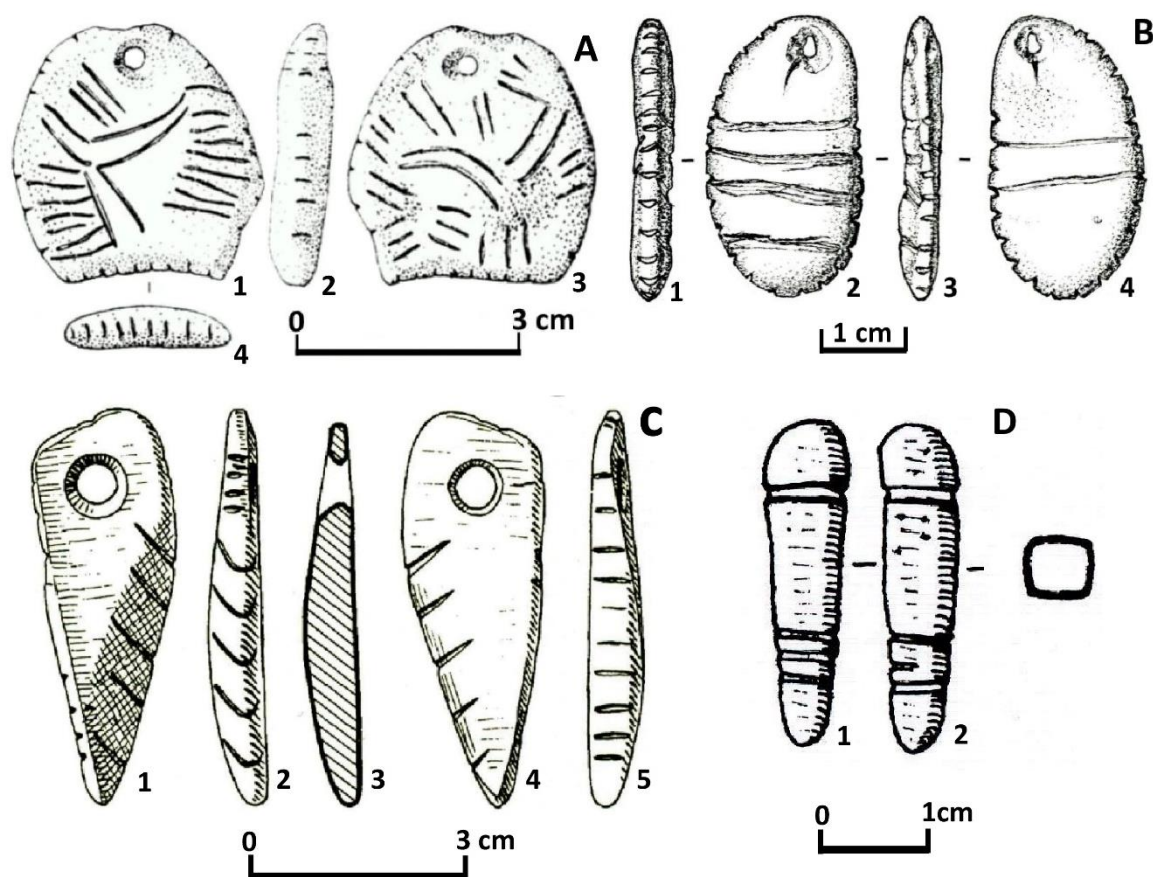


Fig. 5 – Drawings of Gravettian stone pendants engraved on both faces. A-Pendant from Mitoc-Malul Galben (drawing after [V. Chirica, 1982](#)); B-Siltite pendant from Poiana Cireşului; C-marly sandstone pendant from the Cioarei-Boroşteni Cave; D-circular pendant from the Cioarei-Boroşteni Cave.

The Gravettian pendant from Mitoc-Malul Galben was made from a relatively oval “middle cortical flake”, the part opposite the perforation being slightly concave, measuring 3.4/3.4/0,8 cm ([fig. 4a-b; fig. 5A](#)) ([V. Chirica, 1982](#), p. 229). After having been prepared by scraping, the two faces were decorated with radially arranged straight and curved incisions, with asymmetric V- or U-shaped profile ([C. Beldiman, 2004](#)). The hole is biconic and was made through an alternative rotation. The aesthetics of the pendant is completed by 23 parallel incisions on the circumference, 7 on each of the convex sides and 9 on the concave side.

## Gravettian Stone Pendants in Europe (A Proposal for a Possible Repertory)

There are some uncertainties with regard to the age of this pendant. Initially, the age  $20.495 \pm 850$  B.P. (GX 8.503) was suggested based on a sample taken from a hearth, 7 m deep, without specifying whether this is one of the two hearths mentioned as being part of complex 27, located 7.10 m deep (V. Chirica, 1982). Seven years later, the “amulet pendant” in complex 27 lying 7.10 m deep, consisting of workshops and two hearths, was said to be  $26.700 \pm 1.040$  B.P. (GX – 9.418) following the dating of charcoals from one of the two hearths. Culturally, the pendant was attributed to the Gravettian II from Mitoc-Malul Galben (V. Chirica, 1989). Although a subsequent study reiterated the idea of this “amulet pendant” belonging to the Gravettian II level (V. Chirica, P. Noiret, 2007), surprisingly, two years later, P. Noiret (2009) assigned the date  $26.700 \pm 1.040$  B.P. (GX – 9.418) to the Gravettian I level, 7a, which is associated with another date,  $25.840 \pm 90$  (GrN – 15,808).

### Cioarei-Boroșteni Cave

#### *Highly silicified marly sandstone engraved pendant*

Cioarei Cave is located at the foot of the Vâlcan Mountains, at the contact with the Sub-Carpathian depression, near the village of Boroșteni, Peștișani commune, Gorj County. The 1995 archaeological excavations conducted in the Cioarei Cave in section XVII, 75 cm deep, in the Gravettian level, revealed a highly silicified marly sandstone engraved pendant.

The pendant has the following dimensions: length of 5.3 cm, maximum width of 1.9 cm, maximum thickness of 0.7 cm, 0.25 cm thick at the extremity towards the perforated end, whereas the suspension hole diameter is 0.5 cm (fig. 4c-d; fig. 5C). Relatively triangular in shape, the pendant has sides of 5.25/4.95/1.5 cm. The longest side, converging towards the distal part (fig. 5/C2), is decorated with oblique incisions, which develop on both faces and form an angle whose vertex points to the distal part, suggesting the *chevron* engraving. There are four other transversal incisions in the proximal part. The second long side, which is also the thickest, is decorated with eight deeper transversal incisions and two less visible ones (fig. 5/C5). In contrast, the shortest side has only two incisions. The pendant surface, particularly the upper face, was smoothed by abrasion. In order for the pendant to be worn by suspension, the artisan made a perforation mainly from the upper side, hence the unidirectional aspect of the hole (fig. 5/C3). This was possible because this part of the pendant was visibly thinned in advance. The pendant was painted with ochre over the entire surface.

The Cioarei Cave Gravettian is dated to between  $25.900 \pm 120$  B.P.(GrN 15.051) and  $23.570 \pm 230$  B.P. (GrN 15.050) (M. Cârciumaru, R. Dobrescu, 1997; M. Cârciumaru, M. Otte, R. Dobrescu, 1996; M. Cârciumaru, E.-C. Nițu, 2018).

#### *Highly silicified sandstone circular conic pendant*

The archaeological excavations carried out in 1996 in the Cioarei Cave, in the Gravettian level, 70-82 cm deep, in section XVII, led to the discovery of a small circular, elongated slightly conic pendant with decorations consisting of circular incisions (fig. 5/D; fig. 6). The pendant is 3 cm long, its maximum



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thickness of 0.7 cm and minimum thickness of 0.45 cm. 0.7 cm from the thicker end, the deepest incision on the circumference was made probably in order for one to wear the pendant by suspension. The manner

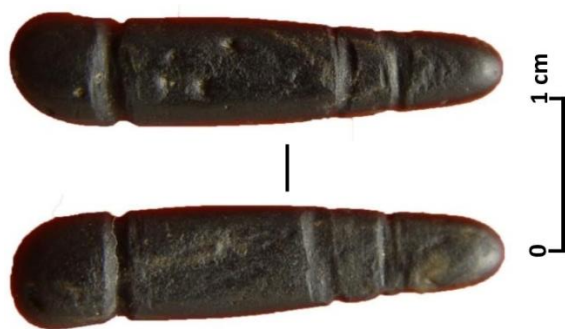


Fig. 6 – Circular pendant from the Cioarei-Boroșteni Cave

of suspension is not without precedent and gives the item the status of pendant. At the opposite end, there are two other circular engravings, which are less deep and without continuity over the entire circumference, located 13 mm and 7 mm, respectively, from the thinner end of the blank (M. Cârciumaru, R. Dobrescu, 1997; M. Cârciumaru, E.-C. Nițu, 2018). The dots on the rock surface are natural, characteristic of the material structure. In addition, its general shape may point to a phallus. Stylistically, in terms of its shape and manner of decoration, the pendant resembles an ivory item found in a much more recent cultural level at the Gontzi site in Ukraine, considered to have been a needle (Z. Abramova, 1995), or, perhaps more accurately, a *poinçon*.

### Poiana Cireșului - Piatra Neamț

The settlement of Poiana Cireșului is located on the right side of the Bistrița valley, near the confluence with the Doamna river. Administratively, the site belongs to the municipality of Piatra Neamț, Neamț County (46°55'919" N and 26°19'644" E).

### Engraved siltite pendant

Following the archaeological excavations carried out in 2013 at Poiana Cireșului-Piatra Neamț, a siltite pendant, geometrically engraved on both faces, with *encoche*s (notches) on the circumference, was found 190 cm deep in the Gravettian I level, section X, square A-1 (fig. 4e-f; fig. 5/B) (M. Cârciumaru, E.-C. Nițu, 2018; M. Cârciumaru et al., 2016; 2018; 2019). The rock has a slight greenish tint, which intensifies when wet. It is not excluded that this rock feature might have been noticed by Gravettian hunters (M. Cârciumaru et al., 2016).

The Gravettian I, between 170 and 210 cm deep, has been provided with a considerable set of extremely coherent C14 dates, which establish the age of this cultural level between 19,320 ± 80 B.P. (OxA-36785) (23,538-22,992 cal. B.P.) and 20,154 ± 97 B.P. (ER 12,163) (24,096 cal B.P.).

## **Gravettian Stone Pendants in Europe (A Proposal for a Possible Repertory)**

The pendant is 3.4 cm long, 1.9 cm wide, 4.5 mm thick. It is oval in shape, kidney-like, and the two sides are convex-slightly concave. At one end, the artisan made a biconic perforation intended for the suspension of the pendant. The current dimensions of the orifice, given its obvious wear and tear resulted from hanging, are as follows: 2.2 mm maximum length and 1.4 mm maximum width. The suspension marks are visible to the naked eye, in that, an elongation of the hole, which most likely was initially more or less circular, occurred. Using the fibre-optic digital microscope, a revealing image was obtained, confirming the wear and smoothness of the upper part of the orifice (M. Cârciumaru, E.-C. Nițu, 2018).

An element which particularises the decoration on the two faces of the pendant is the two incisions next to the hole. The incision on the upper face (fig. 5/1) is placed slightly to the left, whereas the one on the lower face (fig. 5/4) is directed towards the middle of the perforation. It is possible that they were traced in order to mark the position of the future hole that was to be made from both faces of the pendant (M. Cârciumaru et al., 2016).

The decoration on both pendant faces consists of geometric motifs. The craftsman's choice might have been entailed by the roughly regular and oval shape of the pendant, which favoured the engraving with linear incisions in independent registers, with a view to achieving a visual balance (Y. Taborin, 2004).

The pendant circumference is decorated with 23 transversal and parallel incisions, arranged about 3 mm apart from each other (fig. 5/1, 3). They still preserve traces of ochre, far more evident here than on the pendant sides, where they have been much smoothed due to the conditions in which the pendant had lain in the deposit.

The pendant from Poiana Cireșului stands out through the manner of engraving on both faces, considering that most of Gravettian pendants in Europe do not excel in decoration (fig. 4e-f; fig. 5/2, 4) (M. Cârciumaru et al., 2016). The double or triple number of incisions arranged in independent rows point to the Gravettian artisan's intention to give the respective surface a greater aesthetic charge.

The wearing of the pendant by suspension is a certain fact proved by the hole which was elongated due to long usage as well as by the smoothness of the distal part of the lower face resulted from the contact with the body or the garments of the person who used it (M. Cârciumaru, E.-C. Nițu, 2018).

### **SLOVAKIA**

#### **Trenčianskych-Bohuslaviciach**

The Gravettian settlement of Trenčianske Bohuslavice is located in western Slovakia, at the foot of the Western Carpathians, at an absolute altitude of about 200 m, on the 10-15-m terrace of the Bošáčka rivulet, a tributary of the Váh river, 14 km south-west of the city of Trenčín (Slovakia). The site was extensively researched between 1982 and 1986 by J. Barta (1988), who determined an important

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Gravettian occupation here. Later, the materials were submitted to new investigations (Z. Ondrej, 2007) and even to interdisciplinary research meant to better define the Palaeolithic occupation in this site (J. Wilczyński et al., 2020).

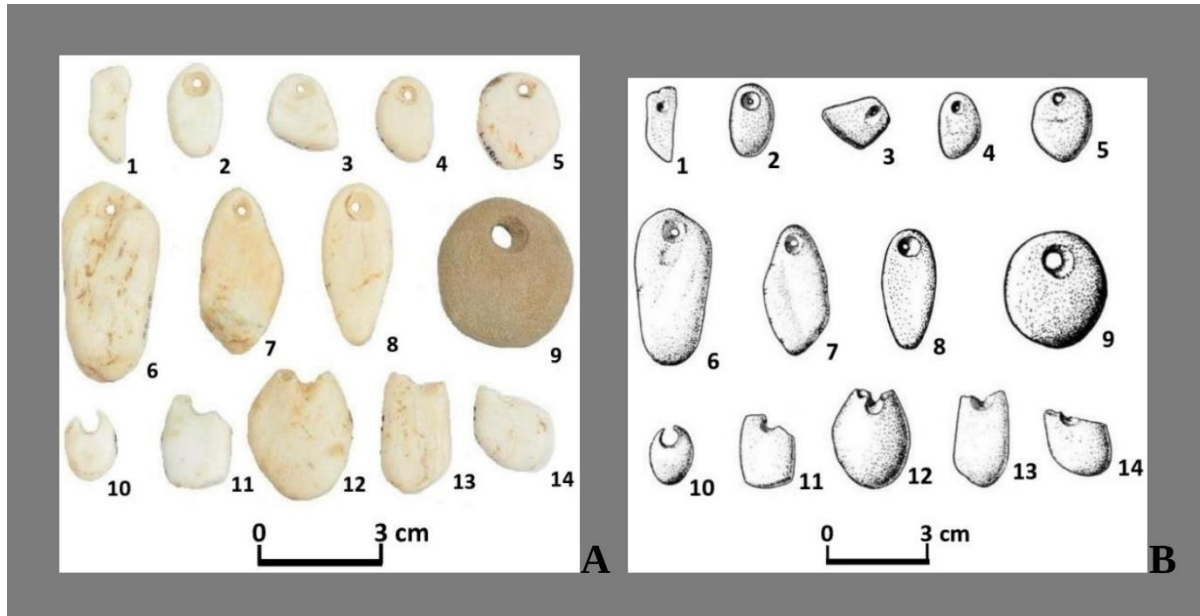


Fig. 7 – Pendants of quartzite (1-8; 10-14) and sandstone (9) from Trenčianske Bohuslavice. A-photos; B-drawings [after J. Wilczyński et al., 2020 (A) and O. Žaár, 2007 (B)]

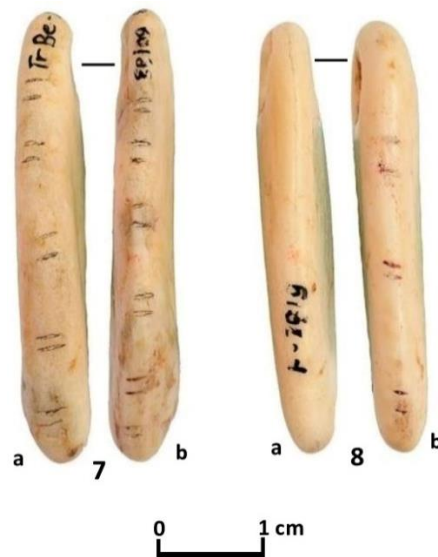


Fig. 8 – Engraved profiles of pendants 7 and 8 in fig. 7.

The 14 stone pendants in this settlement (fig. 7) were found by J. Barta in the Gravettian B-1 layer, for which there are a number of radiocarbon readings pointing to ages between  $22,180 \pm 220$  B.P.

## Gravettian Stone Pendants in Europe (A Proposal for a Possible Repertory)

(Poz-97362) and  $24.600 \pm 180$  B.P. (Poz-97.253). Only one pendant is made of sandstone (fig. 7/9), whereas the others are made of quartzite, a rock hard enough to be penetrated in order to make a hole typical of these ornaments. Except for one of them, with an unfinished perforation (fig. 7/1), all the others have biconic holes. Five of them were fragmented close to the suspension hole (fig. 1/10-14). Only two have incisions on the circumference (fig. 7/7-8), more specifically, pairs of two incisions which on one pendant (fig. 7/7; fig. 8/7) form five series on one side and six on the other, whereas on the other pendant there are only 3 series of such pairs of lines (fig. 7/8; fig. 8/8) (J. Wilczyński et al., 2020). Given that the pendants with the damaged perforation are the smallest, the hypothesis that breakage occurred during working is not excluded. This may be confirmed if no wear-and-tear marks are found in the hole area. The fact that most pendants are of white quartzite and only one is made of sandstone of a different colour may point to an arrangement, possibly to form a necklace with that particular item placed in the middle.

### THE CZECH REPUBLIC

#### Dolní Věstonice - Pavlov

The Gravettian (Pavlovian) sites Dolní Věstonice – Pavlov are located in southern Moravia (the Czech Republic), on the slopes of the Pavlov Hills, along the river Dyje, at absolute altitudes of 200-240 m and a relative altitude of about 30-70 m, in relatively similar geomorphological conditions. In the Gravettian, these settlements benefited from good visibility from the Děvičky Peak and over the entire valley, as the movement of herds was best observed from this area in order to establish hunting strategies (J. Svoboda, 2011 a).

#### Dolní Věstonice

Radiocarbon analyses for the Pavlovian in the famous settlement of Dolní Věstonice have produced ages ranging from  $27.790 \pm 370$  B.P. (GrN 6.859) to  $23.540 \pm 180$  B.P. (GrN 19.498). In



Fig. 9 – Stone pebble pendants from Dolní Věstonice. 1 - height 2.4 cm, width 2.1 cm; 2 - height 5.8 cm, width 2.1 cm; 3 - length 11.1 cm, width 3.9 cm; 4 – height 4.5 cm, width 3.2 cm; 5 - height 2.4 cm, width 2.1 cm (modified after K. Valoch, M. Lázničková-Galetová., 2009).

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addition to an impressive number of art objects, made of various raw material sources, several stone pendants have also been found at Dolni Věstonice. No special attention has been paid to them, for their virtues have been overshadowed by the value of the other discoveries. A few of them have been mentioned by [K. Valoch and M. Lázničková-Galetová \(2009\)](#). We are referring to 5 pendants made of stone pebbles of various shapes on which the artisan intervened only to make a biconic perforation that should allow them to be worn as personal ornaments by suspension ([fig. 9](#)).

A sixth pendant from Dolni Věstonice was illustrated in the form of a drawing ([fig. 10](#)) by [P. Škrdla \(2000\)](#).

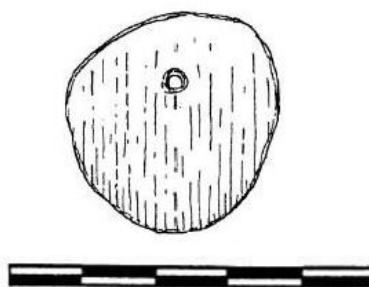


Fig. 10 – Stone pendant from Dolni Věstonice (after [P. Škrdla, 2000](#)).

### Pavlov

As regards the sites uncovered at Pavlov, we have information on the presence of stone pendants only from three of them, Pavlov I, II and VI.

#### *Pavlov I*

The settlement of Pavlov I was excavated by B. Klima from 1952 to 1972. The Gravettian level is dated to between  $26.730 \pm 250$  B.P. (GrN 4.812) and  $25.020 \pm 150$  B.P. (GrN 1.325). A slate pendant of irregular circular shape was mentioned in this settlement. In addition to the suspension hole, the circumference is marked by at least 12 incisions located at various distances, whereas the two faces of the pendant were intensely engraved ([fig. 11](#)).



Fig. 11 – Pendant from Pavlov I (after [Svoboda J., Frouz M., 2011](#))

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On one side, these incisions are organised in two registers:

- The first one, in the upper part, towards the hole, consists of 10 relatively parallel incisions on most of the surface;

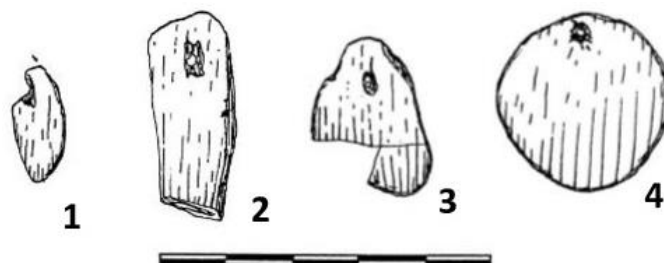


Fig. 12 – Pendant from Pavlov I (modified after P. Škrdla, 2000).

- The second one, in the lower part, consists of 17 perpendicular incisions, slightly tilted in relation to the upper ones.

On the other side, a first group of 7 parallel incisions, tilted relative to the position of the hole, partly intersect a second group of 7 other more or less parallel incisions, arranged at various distances and generally less regularly worked. This last group of incisions is intersected by 5 other relatively parallel incisions, positioned towards the hole, creating, along with the others, a rhombic decoration on a certain part of the surface.

Four other lithic pendants have been retrieved from the Pavlovian settlement of Pavlov I, but no operation, other than the hole, was performed on the circumference or the two sides (fig. 12).

### *Pavlov II*

Two C14 dates have been produced for the Pavlov II settlement: GrA 44,392: 27,029 ± 140 B.P. and GrA 44,290: 27,190 ± 140 B.P.

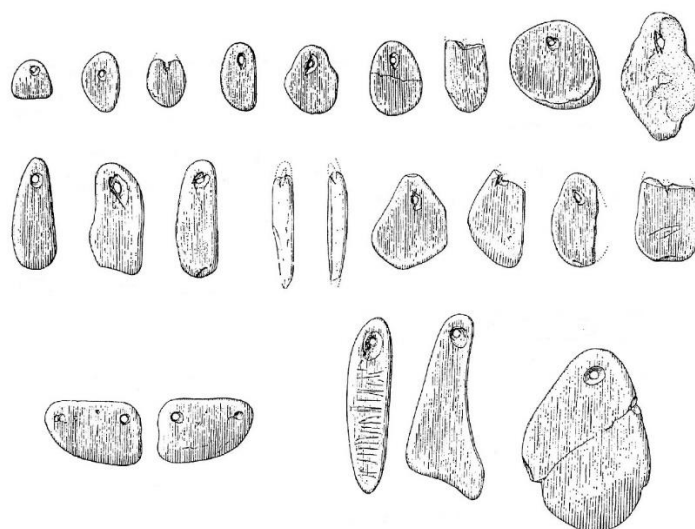


Fig. 13 – Stone pendants from Pavlov II (modified after P. Škrdla, 2000).

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22 pendants are mentioned at Pavlov II (fig. 13), with observations only on how perforations were made, provided by the experimental studies of Petr Škrdla (2000).

### *Pavlov VI*

A small settlement, which was excavated almost entirely in one campaign in 2007, was discovered at Pavlov VI (J. Svoboda, 2012). Radiocarbon analyses conducted on charcoals produced ages between  $25.950 \pm 110$  B.P. (GrA 37.627) and  $26.660 \pm 140$  B.P. (OxA 18.306) for the Gravettian level. Although the excavated area is modest, the Pavlov VI settlement has provided an important collection of phyllitic slate pendants (fig. 14), which has been studied by M. Lázníčková-Galetová (2011).

The first pendant is semi-circular in shape and has a biconic hole at one end (fig. 14/1). On one face, on the hole edges, one can quite clearly see incisions in which ochre obtained from hematite has been preserved.



Fig. 14 – Pendants from Pavlov VI (after M. Lázníčková-Galetová, 2011; J. Svoboda, M. Frouz, 2011)

The second pendant is made of a small oval pebble. Ochre is also present here in the perforation (fig. 14/2). Furthermore, abrasion marks are visible in the form of grooves which preceded the perforation.

The third of them is similar in shape to the first, resembling a kidney viewed sideways. It also has a biconic hole located approximately in the middle of the pendant (fig. 14/3). The surface near the

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perforation underwent a prior preparation on both faces, which consisted in making some grooves radially arranged around the hole, often parallel or perpendicular to each other. This is the only pendant from Pavlov VI which has engravings on one face consisting of more or less parallel lines, placed between the hole and the edges of the item.

The fourth pendant was made of a small oval pebble which probably had a hole at one end. [M. Lázníčková-Galetová \(2011\)](#) claims that the perforation cannot be confirmed with certainty. Looking at the illustration presented in fig. 4 in her work, one would tend to agree with her (fig. 16/4 images below). But, if one were to refer to the images published by [J. Svoboda \(2012, fig. 14\)](#), the presence of traces of a hole is quite evident (fig. 14/4 upper image).

### Predmosti

As regards the settlement of Predmosti, [K. Valoch \(2013\)](#) published a pendant found by K. J. Maška, made of an elongated slate pebble, oval in cross-section, 5.2 cm long and with a diameter between 0.6 and 0.9 cm, with a hole at the thicker end. The perforation was hollowed out from both sides, after a brief preparation of that surface.

Along with this pendant, other items were also published, namely a disc, a semi-circular flat pebble, both perforated in the middle, and a triangular pebble with two incisions on two sides.

## ITALY

### Florestan Cave

Of the countless archaeological materials lost from the Florestan Cave, a superb green steatite item has been retrieved and laboriously studied (fig. 15 A) ([G. Malerba et al., 2014](#)).

The item found in the Florestan Cave is flattened in shape, with a sub-rectangular outline, a plano-concave face and a convex one, decorated with variously oriented rectilinear incisions. It is 35.8 mm long, 23.4 mm wide and 9.0 mm thick. One aspect that should not be neglected is the presence of a quite deep perforation on the plano-concave face. The engraving of this item has been the subject of an extremely extensive study ([G. Malerba et al., 2014](#)).

The hole on the plano-concave face is located towards the middle of the surface, is conic in shape, deep, with an oval outline with a maximum diameter of about 9.5 mm and a minimum one of approximately 7.5 mm. The perforation is 7 mm deep, slightly smaller than the thickness of the item in that area, which is an additional argument for the intention to pierce the object entirely. In our opinion, this attempt at making the perforation shows the artisan's intention to create a suspension system specific to a pendant. This would also better justify the so complex engravings on this object. All this prompts us to consider this superb item from the Florestan Cave to be in fact a pendant with an unfinished suspension hole.



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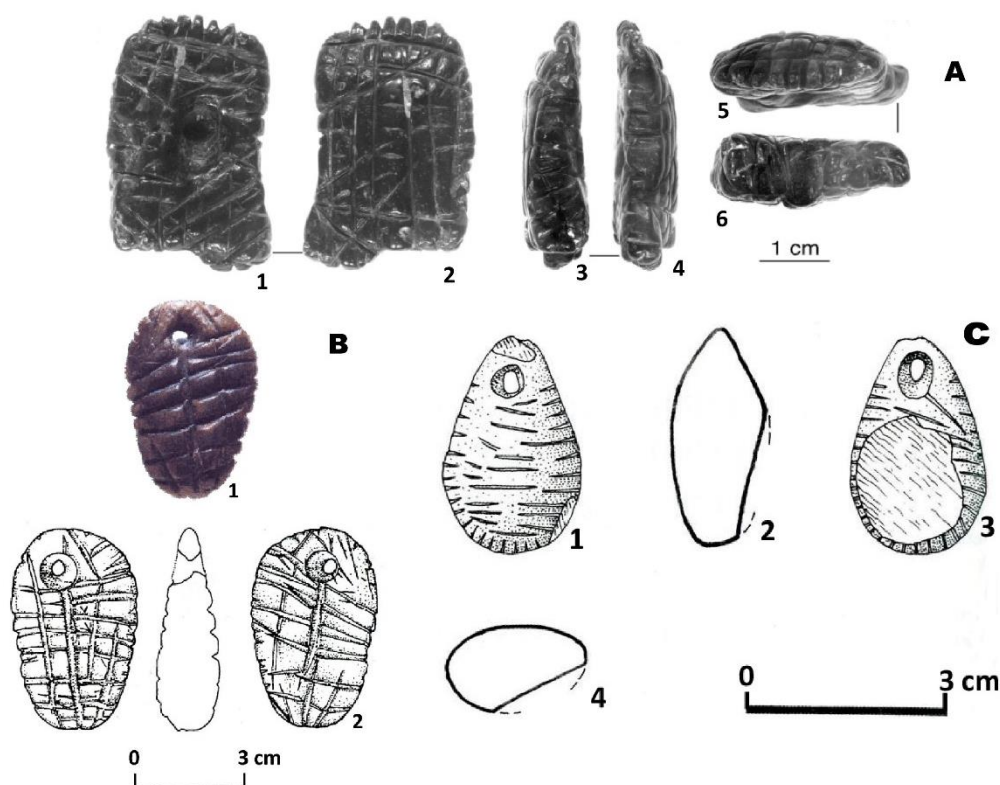


Fig. 15 – Stone pendants from Italy. A – Gravettian engraved item from the Florestan Cave. 1 General view: 1 – plano-concave face; 2 – convex face; 3-4 – side parts; 5 – notched extremity; 6 – base of the item; B – Steatite pendant from Gavorrano; C – The pendant from Trasimene (A after [G. Malerba et al., 2014](#); B after [S. de Beaune, 2004](#)).

### Gavorrano

At Gavorrano (Tuscany) two pendants without a certain stratigraphic context have been discovered. They are assumed to belong to an early Epigravettian because some lithic tools, which are thought to belong to this period, have been found in this town. Moreover, their decoration has been compared to the “Black head” from the Prince Cave.

The two pendants are 25 mm long, 19 mm wide, 4 mm thick and 53 mm long, 33 mm wide, 17 mm thick, respectively. The hole is biconic and was made by rotating a sharp lithic tool. The decoration of faces was done by abrasion, polishing and incision ([fig. 15 B](#)) ([M. Mussi, 1991](#)).

### Trasimene

This pendant was recovered by D. Beluci from the surface, from the deposits around Lake Trasimene (Ombria) ([fig. 15 C](#)). It was attributed to the Gravettian or the Epigravettian based on the existence of settlements belonging to these cultures in this area ([D. Zampetti, F. Alhaique, 2004](#)).

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### FRANCE

#### Isturitz

The Isturitz Cave is located in the Gaztelu hill (Isturitz commune) in the Pyrénées-Atlantiques. It is a tunnel-type of cave about 120 m long, with widths sometimes reaching 50 m. Among the numerous art objects delivered by this famous cave, a number of extremely interesting Gravettian stone pendants have been identified (fig. 16). One of them, despite the unfinished perforation, stands out through the figurative engravings on one face. They are fragmentary figurations consisting of a bovid head and several isolated limbs, one of which has a hoof (O. Rivero, D. Garate, 2014; P. Foucher et al., 2008).

#### Gâchettes

The settlement of Gâchettes lies at an absolute altitude of 50 m, in a terrace of a tributary of the Argens river, 4 km from Muy (between Marseille and Nice).

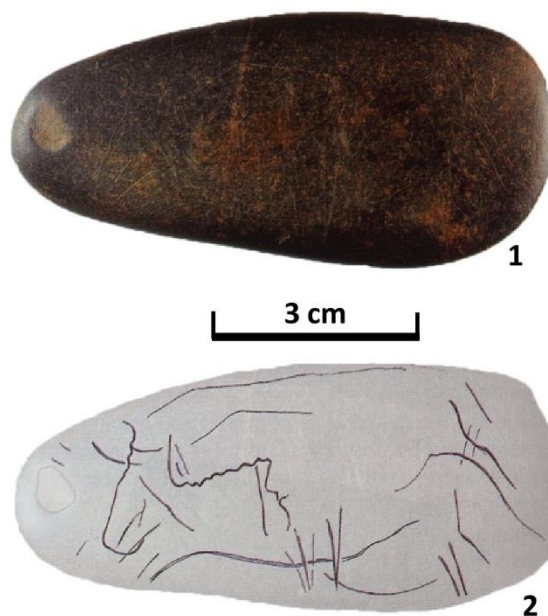


Fig. 16 – Engraved Gravettian pendant from Isturitz (after O. Rivero, D. Garate, 2014)

Archaeological excavations carried out by M. Escalon de Fonton (1979) revealed the existence of an early Gravettian. The site produced a steatite item, flattened and elongated in shape and with a somewhat oval outline, relatively triangular in section. It is broken towards one end and it measures 42.2 mm in length, 24.5 mm in width and 11.8 mm in thickness (fig. 17/1). Deep incisions, transversal or oblique relative to the main axis, extend over the entire surface, sometimes having continuity on two sides of the item. On one of the main faces there are three V-shaped circular perforations, with the diameter between 3 mm and 6 mm. Parallel striations have been preserved on their walls, which shows they were made by the alternate semi-rotation of a lithic perçoir following the decoration with incisions of the surface. This item resembles the one in the Florestan Cave (G. Onoratini et al., 2016).

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It is interesting that, in addition to the similar decorations on both items, the perforations here are also unfinished. It is both remarkable and difficult to explain. But this does not prevent us from considering, at least hypothetically, that the artisan's aim was to turn the Gâchettes object, and the Florestan one, for that matter, into a pendant.

### Rainaude 1 Cave

The Rainaude 1 Cave is located 7 km north-north-west of Muy, at an elevation of 250 m from a torrent feeding on the Endre rivulet, a tributary of the Argens. The Gravettian level revealed an irregularly shaped steatite item, dark in colour, without incisions but with a superficial perforation on one side (fig. 17/2). It is 28.0 mm long, 17.5 mm wide and 7.8 mm thick. The slightly oval hole has a maximum diameter of 7.5 mm and the minimum diameter of 6.0 mm (G. Onoratini et al., 2016). The inner striations prove that the perforation was made by rotating a perçoir in a semi-circular motion, as in the case of the items from Florestan and Gâchettes.

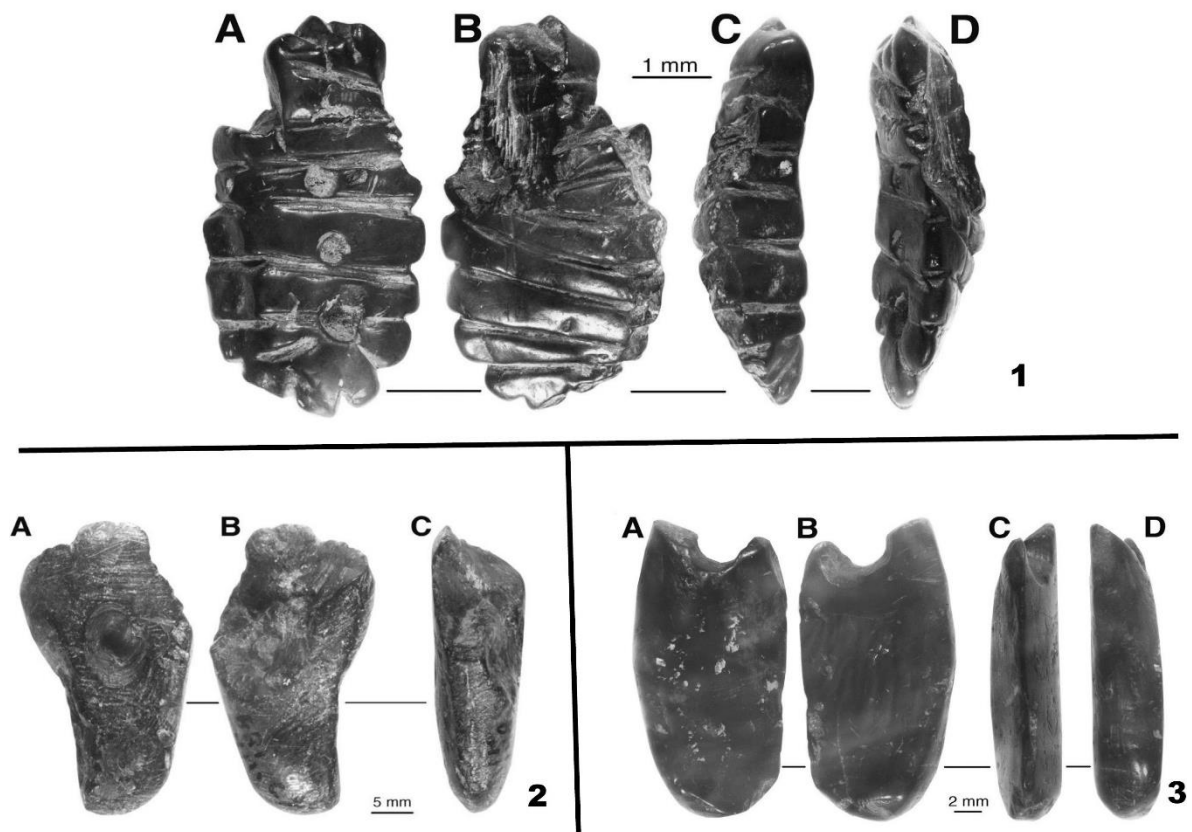


Fig. 17 – Stone pendants from France. 1 – Steatite objects from the open-air site of Gâchettes; 2 – Steatite object from the Rainaude Cave 1; 3 – Steatite pendant from the Bouverie Cave (after G. Onoratini et al., 2016).

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### Bouverie Cave

The Bouverie Cave opens in a rhyolite cliff, 8 km north-east of Muiy, at a relative altitude of about 140 m. The Gravettian level has produced a black steatite pendant, flattened and ovoid in shape, 18.3 mm long, 10.2 mm wide and 5.0 mm thick (fig. 17/3).

Unfortunately, the pendant is fractured in the perforation area. However, its aspect remains revealing enough to argue for the suspension role of the hole and for the fact that its initial shape was biconic, slightly more flared on one side. The surface of the pendant blank was abraded by scraping (G. Onoratini et al., 2016).

### Discussions

Most pendants are generally oval and flat and the perforation was usually hollowed out in the part with a less wide concavity.

The first impression, after this first attempt at creating a repertory, is that, viewed as a whole on our continent, Gravettian pendants with suspension holes reveal an interesting aspect related to the tendency of manufacturing them from pebbles carried by flowing waters, particularly in Central and Eastern Europe. At the same time, in France and Italy, pendants are more often made of steatite, generally dark in colour.

A number of river pebble pendants stand out through the blank circumference marked by transversal incisions, which gives them a touch of originality, an additional symbolic value and thus an important role in social relationships (Y. Taborin, 1987). This manner of decoration is rooted in the Aurignacian because it is found on a schist pendant in the Isturitz Cave (M. Lorblanchet, 1999) and on a pierced mica-schist pebble with deep *encoches* on the contour, discovered in the Aurignacian II level in the southern chamber of the Isturitz Cave (D. Sacchi, 1987).

Some pendants are made of rocks which, in contact with a wet environment, have the property of intensifying their colour, such as the siltite pendant from Poiana Cireşului. A similar situation is described by L. Lbova (2010; 2012) in relation to a number of pendants found in Siberia, at the settlements of Khotyc and Prerelenneskiy-punkt 1, dated to between 25.000 and 30.000 B.P. It is hard to believe that this aspect was not known to the Gravettian hunter-gatherers, who could not remain indifferent to this quality of such rocks. Their symbolic value probably acquired additional connotations.

A possible compilation of a repertory of pendants lays the basis for a global view of these ornaments, for comparing and particularising specific features depending on raw material types, cultural facies, geographical regions, cultural chronology etc. Furthermore, in this way, one may more easily ascertain the evolution of the techno-typological features of pendants in a certain stage or area.

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## Norme de redactare

1. Annales D'Universite "Valahia" Targoviste, Section d'Archeologie et d'Histoire, acceptă lucrări ca articole științifice originale, lucrări de sinteză despre o temă specifică elaborate într-o limbă străină de circulație internațională (franceză, engleză, germană). Acuratețea traducerii este obligația și responsabilitatea autorului.

2. **Scrisoare de intenție.** Autorul corespondent (persoana de contact) trebuie să specifice foarte clar că lucrarea trimisă nu a mai fost publicată, trimisă sau acceptată la altă revistă și că autorii (dacă sunt mai mulți) sunt de acord cu trimiterea lucrării în forma actuală spre publicare.

Lucrările trebuie trimise electronic redactorului șef ([mcarciumaru@yahoo.com](mailto:mcarciumaru@yahoo.com)) într-un singur atașament (sau fișier) în format PDF, incluzând întregul text, tabelele și figurile, aranjate conform normelor revistei. De asemenea, autorii trebuie să trimită textul și tabelele și în format MS Word, iar figurile într-un document separat în format JPG sau TIFF. Autorii sunt responsabili pentru calitatea imaginilor, care trebuie trimise în forma finală la rezoluție de minim 300 dpi.

Documentul trimis trebuie să fie însoțit de: (1) scrisoarea de intenție, (2) lucrarea, (3) titlul figurilor, (4) figurile/planșele, (5) tabele.

Lucrarea nu trebuie să depășească 25 pagini, inclusiv bibliografia și trebuie să fie scrisă în Times New Roman (TNR), 11 justified, dimensiunile paginilor vor fi cele corespunzătoare formatului A4 (21 x 29,7 cm) și se vor lăsa 2,5 cm pentru fiecare margine. Paginile nu vor fi numerotate. Lucrarea trebuie să conțină un rezumat obligatoriu în limba engleză și eventual un al doilea rezumat într-o altă limbă, dar diferită de cea în care este redactat textul lucrării. Rezumatele în limba engleză sau în alte limbi acceptate de revistă trebuie să includă și titlul articolului.

### Prepararea lucrării

Lucrarea trimisă trebuie să fie aranjată după cum urmează: (1) titlul, (2) numele autorului/autorilor, (3) adresa autorului/autorilor, (4) rezumat, (5) cuvinte cheie, (6) lucrarea, (7) bibliografia, (8) explicația figurilor, (9) figurile, (10) tabelele;

**Titlul:** Acesta trebuie să fie scurt, specific și informativ. Se va scrie în TNR 13, bold, centrat.

**Autorii:** La două rânduri sub titlu, centrat, în TNR 11 italic, se va scrie numele complet al autorului/autorilor (cu asterisc).

**Adresa:** După două rânduri libere, în TNR 10 justified, se va menționa adresa autorului/autorilor (cu asteriscurile menționate la autori), inclusiv adresa de e-mail.

**Rezumatul:** urmează după două rânduri în TNR 10 (bold numai **Rezumat:**), între 300-500 de caractere, care nu trebuie să conțină prescurtări sau citări. Trebuie să reprezinte o sinteză a lucrării incluzând metodele folosite, rezultatele principale și, eventual, scurte concluzii. Rezumatul în limba engleză este indispensabil, precum și traducerea titlului.

**Cuvintele cheie:** După două rânduri, sub rezumatul în limba engleză, cinci sau șase cuvinte cheie; atunci când lucrarea este însoțită de un al doilea rezumat într-o altă limbă, vor fi traduse și cuvintele cheie în limba rezumatului;

### Textul principal:

1. Urmează instrucțiunile de mai jos pentru subtitlurile paragrafelor:

-Primul subtitlu de paragraf - literă mare, bolduit și aliniat la stânga paginii).

-Al doilea subtitlu de paragraf - literă mare numai la începutul cuvântului, aliniat la stânga paginii).

-Al treilea subtitlu de paragraf - caracter italic, literă mare numai la începutul cuvântului, aliniat la stânga paginii).

2. Caracterul "italic" va fi folosit pentru termeni sau abreviații de genul "et al.", et collab. "etc".

3. Unitățile de măsură trebuie să fie reprezentate prin simboluri aparținând Sistemului Internațional de Măsură.

4. Autorii citați:

a - Sistemul de trimiteri bibliografice este unic, și anume cel britanic, adică note în text, inițiala prenumelui va precede numele autorului, după care se va menționa anul apariției lucrării respective, exemplu – (M. Otte, 1995), iar când în text se utilizează un citat, care se va pune între ghilimele, citarea va cuprinde pagina (M. Otte, 1995, p. 56-57).

b - Dacă numele autorului face parte dintr-o propoziție, numai anul se pune în paranteză, de exemplu "...M. Otte (1995) a demonstrat.....".

c - Pentru cazul a doi autori care trebuie citați, se va pune numele celor doi și anul, (M. Otte, P. Noiret, 2004), iar pentru cazul mai multor autori (mai mulți de



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trei) se va cita primul autor urmat de "et al", (M. Otte et al., 2006).

d - Autorii trebuie asezati în ordine alfabetică și se va folosi a, b pentru cazul în care un autor trebuie citat și are mai multe lucrări în același an. Se pune virgulă între același autor și punct și virgulă când apare un alt autor citat (M. Cărciumaru, 2002; M. Cărciumaru, 2002b; M. Anghelinu, 2005).

### Bibliografia

1 - Titlul **BIBLIOGRAFIE** se va redacta în TNR, 12 bold, centrat, cu majuscule;

2 - Se vor include autorii citați în text, precum și autorii figurilor, tabelelor, planșe etc. citate în text;

3 - Se vor aranja autorii în ordine alfabetică după numele primului autor și apoi după numele celui de-al doilea autor. Dacă unul dintre autori este citat cu mai multe lucrări, se aranjează în ordine cronologică;

4 - Pentru lucrările cu mai mult de doi autori se aranjează după numele primului autor și apoi în ordine alfabetică;

5 - Nu se vor prescurta numele revistelor și ale editurilor citate;

6 - Pentru cele mai multe dintre situații urmează exemplele de mai jos:

a - Lucrări în reviste:

Numele autorului/autorilor, Inițiala prenumelui autorului/autorilor, Anul, Titlul articolului (italic), Numele revistei, Tome/Volum, Număr, Paginile.

Demars P.-Y., 2008, *Paleogeographie de l'Europe dans la premiere partie du Paleolithique superieur – Premiers travaux*, Annales d'Universite « Valahia » Targoviste, Section d'Archeologie et d'Histoire, Tome X, Nombre 1, p. 29-45.

b - Cărți:

Numele autorului/autorilor, Inițiala prenumelui autorului/autorilor, Anul, Numele cartii (italic, bold), Editura, Orasul în care a fost publicata, Numarul de pagini, figuri, tabele și planșe, ISBN;

Cărciumaru M., Anghelinu M., Nitu E.-C., Cosac M., Muratoreanu G., 2007, *Geo-Archeologie du Paleolithique moyen, Paleolithique superieur, Epipaleolithique et Mesolithique en Roumanie*, Editura Cetatea de Scaun, Targoviste, 187 p., 48 fig., ISBN 978-973-8966-38-3.

c - Capitole în cărți:

Numele autorului/autorilor, Inițiala prenumelui autorului/autorilor, Anul, Titlul capitolului (italic), în Numele autorului/autorilor, Inițiala autorului/autorilor [ed(s)], Numele cartii (italic, bold), Editura, Orasul

unde a fost publicata, Numarul de pagini, figuri, tabele și planșe, ISBN, paginile capitolului.

Cărciumaru Marin, 1978, *Studiul paleoclimatic și geocronologic asupra unor statui paleolitice din Banat*, în Florea Mogosanu, *Paleoliticul din Banat*, Editura Academiei Romane, Bucuresti, 152 p., 53 fig., p. 83-101.

d - Lucrări prezentate la congrese

Numele autorului/autorilor, Inițiala prenumelui autorului/autorilor, Anul, Titlul lucrării (Italic), în Numele simpozionului sau a conferinței (Italic, bold), Editura, Orasul unde a avut loc etc., ISBN, Numarul de pagini a comunicării.

Cărciumaru Marin, 1994, *Paleoenvironnement et chronostratigraphie du Paeolithique moyen et superieur en Roumanie, Paleoecologie et geochronologie des industries du Paleolithique superieur ancien de la Roumanie*, în *"El Cuadro geochronologico del Paleolitico superior inicial"*, Museo y Centro de Investigacion de Altamira. Monografias, No. 13, ISBN 84-8181-024-X, p. 15-23.

e - Teze (doctorat, master, licențe) și rapoarte nepublicate:

Numele autorului/autorilor, Inițiala prenumelui autorului/autorilor, Anul, Titlul lucrării (raportului), Universitatea, Institutul sau Compania, Orasul, Tipul lucrării, Pagini:

Geneste J.-M., 1985, *Analyse lithique d'industries moustერიennes du Perigord: une approche technologiques du comportement des groupes humains au Paleolithique Moyen*, These presentee a L'Universte de Bordeaux I pour l'obtention du titre de Docteur, Universtite de Bordeaux I, 572 p.

f – Harti:

Numele autorului/autorilor, Inițiala prenumelui, Anul, Tipul, Titlul și numărul hartzii, Scara, Editura, Orasul publicării, Seria hartzii, Numarul foii:

Patruluius D., Dimitrescu R., Dessila-Codarcea M., Gherasi N., Popescu I., Popa E., Bandrabur T. (redactori coordonatori și redactori), 1968, *Harta geologica*, Scara 1:200.000, Brașov, Comitetul de Stat al Geologiei, Institutul Geologic, Bucuresti, 68 p.

### Titlurile figurilor

Titlurile figurilor se vor pune pe o pagină (pagini) separate, paginate consecutiv și vor fi incluse după bibliografie.

Titlurile figurilor trebuie să fie însoțite de numărul figurii și descrierea acesteia. Descrierea trebuie să fie clară și să conțină explicația tuturor simbolurilor folosite.

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### Figurile

1. Fiecare figură (hartă, grafic, fotografie) trebuie incluse pe pagini separate, fiecare figură fiind însoțită de numărul corespunzător din text și numele primului autor al articolului.
2. Figurile trebuie trimise într-un format cât mai apropiat de formatul final în care vrem să apară editate.
3. Dimensiunile caracterelor ce acompaniază figurile trebuie să aibă o marime între 8 și 12. Este indicat a se folosi o scară pentru dimensiunea reală și a se include unitățile de măsură.
4. Hartile trebuie să aibă indicat Nordul geografic, să aibă cel puțin două coordonate pe fiecare axă și să aibă o scară grafică. Localitățile și siturile menționate în text este de preferat să apară pe hartă.
5. Sunt acceptate fotografii alb-negru cu un bun contrast precum și fotografii color (în limitele capacității de publicare și în funcție de interesul pe care îl poate suscita). Ele trebuie să prezinte obiectul de interes într-o mărime adecvată.

6. Citarea figurilor în text trebuie să fie făcută ca Fig. 1 - de exemplu.

### Tabelele

- Trebuie să fie incluse pe pagini separate, pagini consecutiv paginate.
- Marimea tabelor trebuie să fie aproximativ de 21 X 29 cm.
- Citarea tabelor în text trebuie să apară ca Tab. 1 - de exemplu.

Manuscrisul trebuie trimis spre publicare în forma completă, respectând normele revistei. Editorii își rezervă dreptul de a returna autorilor materiale necorespunzătoare, pentru corectarea greșelilor. Dacă articolul va fi returnat de două ori, va fi publicat eventual într-un număr viitor. A treia respingere face imposibilă publicarea articolului în revistă.

## Printing normes

1. The Annales D'Universite Valahia Targoviste, Section d'Archeologie et d'Histoire, accept contributions in the form of original research papers, review papers written in French, English or German. The accuracy of the translation is the author's responsibility.

2. In a cover letter, the corresponding author must clearly state that the submitted manuscript has not been published submitted or accepted elsewhere, and that all authors agree with the content and the submission of the manuscript.

All manuscripts should be submitted electronically to the Chief Editor ([mcarciumaru@yahoo.com](mailto:mcarciumaru@yahoo.com)) in one single attachment in a PDF file, containing the text, the figures and tables and they must fulfill the requirements of the journal. The text and the tables must be submitted in a MS Word format and the figures in a separate JPG or TIFF file.

The authors have to be responsible for the figure quality which have not has more than 300 dpi in size in the final format.

The manuscript should be accompanied by: (1) cover letter, (2) manuscript, (3) figure captions, (4) figures, (5) tables.

The manuscript should not exceed 25 pages, including bibliography, written in Time New Roman (TNR), and font size 11, justify. The pages dimension is A4 (21 x 29.7 cm) with a 2.5 wide margin. The manuscript must contain an abstract in English and preferably a second abstract in a foreign language different from that of the manuscript. The abstract in other languages should include the title too.

### Manuscript preparation

The submitted manuscript should be arranged as follow: (1) title, (2) author's names, (3) author's affiliations, (4) abstract, (5) keywords, (6) manuscript, (7) references, (8) figure captions, (9) figures, (10) tables.

**Title:** This should be short, specific and informative and be written in Time New Roman, size 13, in bold and centered.

**Authors:** Write the full name(s) of author(s) in TNR, size 12, font italic, centred below the title.

**Affiliation:** Write the affiliation(s), complete postal address and e-mail address in TNR, size 10, justify, below the author's name.

**Abstract:** It contains between 300 – 500 words and should not contain abbreviations or reference citations. The abstract should be brief and objective, and represent a summary of the paper that includes the methods used, the main results and conclusions. It should be written in TNR size 10 and the word “abstract” has to be in bold, as well as the translation of the title.

**Key words:** Five to six keywords should be given below the abstract. When there is a second abstract the key word will be translated also in the language of this abstract.

### Main text:

1. Follow the structure shown below for the headings:

-First level (Bold capital and lower case, left)

-Second level (Bold capital and lower case, left)

-Third level (Bold italic, capital and lower case, left)

2. Italics should be used for terms or abbreviations in other languages “et al.”, et collab, “etc”.

3. Measure units must be represented by their symbol in the International System of Units.

4. Chemical and isotopic analyses as well as radiometric and paleontological dating must be referred to sampling locality and include coordinates.

5. References cited:

a) References are cited in the text by the initial of the author, last name of the author and the year (M. Otte, 1995). In the case of a citation of a paragraph, this will be put in quotation and the page will be cited (M. Otte, 1995, p.56-57)

b) If the authors' name is part of the sentence, only the year is bracketed: “M. Otte (1995) determined...”

c) For references with two authors use the initial followed by their names and the year, (M. Otte, P. Noiret, 2004) and for those with three or more authors, use the last name of first author followed by “et al” (M. Otte et al., 2006).

d) References cited should be arranged chronologically; use a, b, c, etc. for references to one author in the same year. Separate with coma the references to same author and with semicolon the references to different authors: (M. Carciumaru, 2002 a; M. Carciumaru, 2002 b; M. Anghelinu, 2005).

## Printing norms

### References

1. The title "References" will be written in TNR, size 11, bold, centered, upper case.

2. Include only references cited in the text, figures, captions, and tables.

3. Arrange the references alphabetically by first author and then alphabetically by second author. If more than one reference of the same author(s) is included, arrange them chronologically.

4. For references with more than two authors, list alphabetically by first author and then chronologically.

5. Do not abbreviate journal titles or publisher names

6. For the most common cases, follow the examples:

a) Papers in periodical journals

Last name(s), Initial(s), Year, Article title (italic font), Journal title, volume, pages.

Demars P.-Y., 2008, *Paleogeographie de l'Europe dans la premiere partie du Paleolithique superieur – Premiers travaux*, Annales d'Université Valahia, Targoviste, Section d'Archeologie et d'Histoire, Tome X, Numero 1, p. 29-45.

b) Books

Last name(s), Initial(s), year, Book title (Italic, bold), Publisher, City of publication, no. of pages, no of figures, tables, ISBN

Carciumaru M., Anghelinu M., Nitu E-C., Cosac M., Muratoreanu G., 2007, ***Geo-Archeologie du Paleolithique moyen, Paleolithique superior, Epipaleolitique et Mesolithique en Roumanie***, Editura Cetatea de Scaun, Targoviste, 187 p., 48 fig., ISBN 978-973-8966-38-3

c) Chapters in books

Last name(s), Initial(s), year, Chapter title (in Italic), in Last names(s), Initial(s) (ed(s).), Book title (Italic, bold), Publisher, City of publication, No. pages and figure, ISBN, chapter pages.

Carciumaru M., 1978, *Studiul paleoclimatic si geocronologic asupra unor statiuni paleolitice din Banat*, in Florea Mogosanu, ***Paleoliticul din Banat***, Editura Academiei Romane, Bucuresti, 152 p., 53 fig., p. 83-101.

d) Proceedings from symposia and conferences

Last name(s), Initial(s), Year, Title (Italic), in Symposia/conference name (Italic, bold), Publisher (Italic), City of publication, ISBN, pages.

Carciumaru M., 1994, *Paleoenvironnement et chronostratigraphie du Paleolithique moyen et superior en Roumanie, Paleoeologie et*

*geochronologie des industries du Paleolithique superieur ancien de la Roumanie*, in ***El Cuadro geochonologico del Paleolítico superior inicial***, Museo y Centro de Investigacion Altamira. *Monografias*, No.13, ISBN 84-8181-024-X, p. 15-23.

e) Unpublished thesis or reports

Last name(s), Initial(s), Year, Title, University, company, etc, City, Type of work, pages.

Geneste J-M., 1985, *Analyse lithique d'industrie mousteriennes du Perigord: une approche technologiques du comportement des groupes humains au Paleolithque Moyen*, These presentee a L'Universite de Bordeaux I pour lobtention du titre de Docteur, Universite de Bordeaux I, 577 p.

f) Maps

Author(s), Initial(s), Year, Type, Title and map number, scale, Publisher, City of publication, Map series, number of sheets.

Patruilus D., Dimitrescu R., Dessila-Codarcea M., Gherasi N., Popescu I., Popa E., Bandrabur T., 1968, *Harta geologica, Scara 1:200.000*, Brasov, Comitetul de Stat al Geologiei, Institutul Geologic, Bucuresti, 68p

### Figure captions

A list of figure captions should be supplied on a separate sheet(s), numbered consecutively and included after the list of references.

The captions should include the figure number and a figure description. The description should be precise and contain the explanation of all symbols and abbreviations used.

### Figures

Each figure (maps, graphs, photographs) must be submitted on a separate sheet, be clearly identified with figure number and first author name.

Submit figures as close to the final size as possible.

Lettering should be between 8 and 12 points type size. Use graphic scale and include units of measure.

Maps must indicate the North, have at least two coordinate data on each axis, and have a graphic scale. Localities mentioned in text, should be included in maps.

Good, clear contrast black and white photographs are acceptable. The color photographs are accepted with restrictions (ask about this the

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editor managers). All the photographs should show the object of interest in an adequate size.

References to figures in the text should appear as Figure 1.

#### **Tables**

Tables should be submitted on separate sheets, numbered consecutively, and be identified by author's names.

1. Size of the tables should be of 21X29 cm.
2. References to tables in text should appear as Table 1.

The manuscript should be submitted to be published in a complete format and it has to fulfill the format specifications of the journal.

The Editor has the right of returning the manuscripts to the authors for further corrections.

If the manuscript will be returned to the authors twice, its publication will be postponed for a further volume of the journal.

If the manuscript will be returned three times the paper will be rejected for the publication in this journal.