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MARIA BITIRI

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GRAVETTIAN AND EPIGRAVETTIAN PERSONAL ORNAMENTS IN EASTERN CARPATHIANS

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***Key-words**: Upper Palaeolithic, personal ornaments, symbolic behavior, Romania, Republic of Moldova*
***Abstract**: The Upper Palaeolithic in the eastern Carpathians is characterized by a high density of sites, mostly attributed chronologically to the Gravettian or the Epigravettian. In order to identify some differences and/or similarities in the cultural manifestations of the communities at the sites located between the Carpathians and the Dniester, our study will focus on the analysis of the ornaments in this region. The results indicate the existence of periods in which such objects are numerous in certain sites, as well as notable differences in the types of personal ornaments for occupations chronologically close in time.*

***Cuvinte-cheie**: Paleolitic superior, podoabe, comportament simbolic, Romania, Republica Moldova*
***Rezumat**: Paleoliticul superior din estul Carpaților este caracterizat printr-o densitate mare de situri, majoritatea aparținând cronologic Gravetianului sau Epigravetianului. În scopul identificării unor diferențe și/sau similitudini în manifestarea culturală a comunităților paleolitice din siturile localizate între Carpați și Nistru, studiul nostru se va concentra pe analiza podoabelor din această regiune. Rezultatele indică existența unor perioade în care astfel de obiecte sunt numeroase în anumite situri, precum și diferențe notabile ale tipurilor de podoabe în cazul unor locuiri apropiate cronologic.*

INTRODUCTION

The Upper Palaeolithic in the eastern Carpathian area stands out through a high density of sites, most of them multi-stratified, but not every settlement has provided art objects and, of these, only in a few cases one may speak of occupations rich in such finds. Our study will include an analysis of the personal ornaments found in sites in Romania and the Republic of Moldova, located between the Carpathians and the Dniester, in order to highlight the differences and/or similarities in the cultural manifestations of the communities in this region, chronologically assigned to the Gravettian and the Epigravettian.

In the area between the Carpathians and the Prut, the existence of such Palaeolithic ornaments was acknowledged relatively recent, namely in 1982, when an engraved stone pendant was found at the settlement of Mitoc-Malu Galben (Chirica 1982). This discovery put an end to the myth that this area was devoid of Palaeolithic art objects and created hopes for future finds. On the other hand, between the Prut and the Dniester, Palaeolithic personal ornaments were found as early as the 1960s (Chetraru 1965). When investigations were resumed at the settlement of Poiana Cireșului in 1998, there was an attempt at a new approach to archaeological excavations. Due to high accuracy of recovering materials, results soon started to show and this settlement revealed numerous and various Palaeolithic ornaments and art objects (Cârciumaru, Nițu 2018).

That is why, in order to paint a more revealing picture, in this study we shall present the ornaments according to their age, from the oldest to the most recent, from the six settlements where such artefacts were found and where Palaeolithic occupations benefited of coherent chronology (even though some settlements have older dating) (Fig. 1).

28.000 B.P. – 25.000 B.P.

Only four sites with personal ornaments date to the early phase of the Gravettian, namely Poiana Cireșului-Piatra Neamț, Mitoc-Malu Galben, the Brînzeni Cave and Molodova V, with items from chronologically close occupations (27–25 ka uncal. BP).

A significant number of perforated snail shells have been recovered from the Gravettian III layer of Poiana Cireșului, dated between 27.321 ± 234 B.P. (ER 11.859) (31.969 cal P.B.) and 25.390 ± 140 B.P. (Beta Analytic 244.073) (29.895-29.030 cal B.P.). Most of them, 53 samples, belong to the *Lithoglyphus naticoides* species (Cârciumaru *et alii* 2019). They were discovered during several excavation seasons, between 2004 and 2019 (Fig. 2). A few items were attributed to the *Lithoglyphus apertus* species, based only on their slightly larger sizes (the difference in size may be due to sexual dimorphism within the same species, L. *naticoides*). The maximum diameter is, in most samples, over 6.3 mm, whereas the minimum diameter is over 5 mm. The most voluminous specimens have a maximum diameter of 10.1 mm and a minimum one of 5.8 mm. Although they seem fragile at first sight, only 18 of the 53 specimens are fragmented (Fig. 2) (Nițu *et alii* 2019). One sample is black due to burning processes, but one cannot tell if this was accidental or deliberate.

The *Lithoglyphus naticoides* lives in fresh waters, attached to rocks and even on nearby wet banks. The occurrence of the species points to its abundance in the Pontic Basin along the rivers Don, Donets, Dnieper, Dniester, and also along the Danube and some of its tributaries (Grossu 1956).

Microscopic analyses have revealed that the perforation of each specimen of *Lithoglyphus* found at Poiana Cireșului was made in order for them to be suspended as ornaments; use-wear marks indicate they were strung, bead by bead, most likely in the shape of necklaces, bracelets or similar accessories. In addition to microscopic observations, experiments have shown that the perforation of the small shells of *Lithoglyphus* was performed from inside the shell to the outside, by pressure exerted with an antler or hardwood sharp point, inserted through the aperture, after previously having the shell fixed on a stable blank. Also, the position of the hole was chosen on the last whorl in such a way so as to better exploit the shell resistance and so that the gravity centre should determine a similar position in all specimens and invest them with specific aesthetic attributes (Cârciumaru, Țuțuianu-Cârciumaru 2012; Nițu *et alii* 2019).

In 2016, 10 perforated shells of the *Homalopoma sanguineum* species originating from the Mediterranean Sea were found in the same level of Poiana Cireșului. Those shells belong to adult specimens, most of them very well preserved. The largest of the specimens has a maximum diameter of 8.14 mm and the minimum diameter of 6.99 mm, whereas the smallest has the maximum diameter of 5.78 mm and the minimum, 4.96 mm (Nițu *et alii* 2019).

There is great unity in terms of the location of the perforation on each shell, in that all specimens have the hole placed in the middle of the umbilicus, i.e. on the last anfract or whorl. It is located near the suture between the umbilicus and the whorl preceding it. Technologically, the orifice was made by grinding, pressure and rotation (Fig. 3). The shells have preserved marks of wearing by suspension, consisting in the obvious roundness, smoothness and deformation of the perforation in the area in which it was in permanent contact with the suspension thread. Smoothing and polishing traces are also preserved on external areas of the shells, most likely resulting from beads' friction against each other, whereas the manner of suspension is similar to the *Lithoglyphus* shells (Nițu *et alii* 2019).

In 1981, the first pendant in the Romanian Palaeolithic was discovered at Mitoc-Malu Galben, 7.10 m deep, in a level attributed to the Lower Gravettian (GX–9.418: 26.700 ± 1.040 B.P.) (Fig. 4/1). The pendant is 3.4 x 3.4 x 0.8 cm, made of the cortex, relatively oval-shaped, slightly concave at the base, with a biconical perforation made by alternative rotation, whereas the entire circumference is decorated with 23 parallel notches (Chirica 1982). According to C. Beldiman (2004), the two surfaces were first prepared by scraping and afterwards the decoration, consisting of engraved straight and curved, radially arranged lines, with an asymmetric U or V profile, was made.

The pendant found at Mitoc-Malu Galben was an extremely important find because it broke the myth of the inexistence of such art objects in the Palaeolithic in Romania.

During the 1965 excavations in the Brînzeni Cave, N. A. Chetraru (1989) found an ivory pendant that is very interesting in terms of its shape and its decoration of high complexity and artistic virtues. Z. Abramova (1965) considered it an enigmatic item, perhaps even an unmatched statuette (Fig. 5/1). P. Noiret (2009) considers this

pendant to originate from the lower level of the cave, because of the two ^{14}C dates: 26.600 ± 370 B.P. (OxA-4122) and 26.200 ± 360 B.P. (OxA-4124).

The upper part of the pendant is a flat elongated blade, with a triangular section perforated towards the end. The lower part consists of a triangle with two relatively curved sides and irregular base. The pendant is 11.1-cm long and 0.38 to 0.70-cm wide. The decoration of the upper part consists of four regular rows of dots, of different number of dots: 27, 10, 9, 3, whereas at the contact with the upper part, one of the triangular faces has a register of 78 dots arranged in three oval rows. Other 100 dots complete the decoration on the triangle sides in the upper part of the pendant (Chirica, Borziac 1995; Borziac, Chetraru 1996).

Level 7 (25.280 ± 210 B.P.-GrA 9456 – 21.070 ± 150 B.P.-GrA 9443) of the Molodova V settlement has yielded a shell of the *Cardium* sp. and one of the *Neritea* sp., a snail shell of an undetermined species (Abramova 1995) and a perforated polar fox canine. Also, from level 8, dated by a rather uncertain ^{14}C, > 24.600 B.P. (LU-14), an ivory pendant is mentioned, interpreted by A. P. Cernîș (1987) as a schematic female statuette. This hypothesis was not shared by Z. A. Abramova (1995). Furthermore, a perforated shell of the *Cardium* sp. was recovered from the same occupation.

≥ 24.000 B.P. – 21.000 B.P.

In this chronological interval, there is only one settlement where personal ornaments were found, the Duruitoarea Veche Cave (Fig. 5/3). The occupation they originated from (level II) is dated to 24.000 ± 600 B.P. (Le 11.813). Archaeological excavations in this cave took place between 1958 and 1960 and were later resumed in 1965 (Chetraru 1965). The following items have been retrieved from this settlement:

- Ivory pendant (Fig. 5/3), broken on one side. Its current length is 3.6 cm and it is 1.8-cm wide and only 5-mm thick. The hole, located at one end, is slightly biconical and has preserved marks of wearing by suspension. As the pendant has suffered serious post-depositional damage, due to the specific exfoliation of the ivory, only some of the initial engravings are still preserved. On both sides, one may notice the linear decoration consisting of parallel oblique lines, quite distant from one another. V. Chirica și I. Borziac (1995) interpreted this item as a bracelet fragment. We should mention that such an assumption is not supported by the other finds in the area, where no bracelet, of those that are known, has any decoration (Cârciumaru *et alii* 2019).
- Pendant made from the mesial part of an internal shell of a fossil cephalopod, which belonged to a flattened species of belemnite (Fig. 5/5). The item has been preserved quite well because the inner grooves specific to such a fossil are still visible. As the internal structure of belemnites consists mainly of calcite, it has given rise to confusions regarding the raw material this pendant was made of. For example, A. Z. Abramova (1965) stated that this pendant was manufactured from calcite, which is not entirely wrong, but the fossil should have been mentioned, not the material from which it was predominantly made.

The hole is biconical and was made first by percussion of the surface, then by the rotation of a lithic tool. In fact, the blank used for the pendant required several operations, such as the detachment by knapping of a part of the belemnite shell body, more specifically halving the fossil circumference in its natural state, then achieving the proximal and distal parts by sawing, whereas the sides and the grooves on the internal face were probably obtained by abrading and polishing.

The existence of a belemnite pendant is quite rare and gives such a find an unusual nature. In western Europe, only one case from the middle Gravettian of Abri Pataud, which has a groove supposed to have been intended for suspension, is mentioned (Moncel *et alii* 2009). Instead, belemnite pendants, similar to that of Duruitoarea Veche, have been found at Kostenki 17 (Sinitsyn 2012, 2018; Kozlowski 1992).

- Bone flake pendant with irregular shape with biconical perforation (Fig. 5/4). The polish on both faces as well as the deformation of the hole may point to long wearing by suspension.
- Bone flake perforated in the middle (Fig. 5/6), whose shape points rather to an utilitarian item, possibly a fastener for clothing. This may imply that a leather string was introduced through the hole and was fixed to clothes or accessories by means of a knot. After a slight preparation of the surface, the bone perforation was made from the upper part by the rotation of a lithic tool.
- Two red deer canine personal ornaments. The first canine is 1.8-cm long and has a maximum width of more than 1 cm (Fig. 6/11) and preserves the marks of a perforation. The second canine has been recomposed from several fragments and has a hole in a rather atypical position (Fig. 6/10), considering that over 80% of the similar canines found in archaeological contexts are perforated in the root area (Barge-Mahieu, Taborin 1991). One should not rule out the possibility that, because the canine root had been damaged for some reason, the Palaeolithic artisan may have tried to recover it by making a perforation in the globular crown (Cârciumaru *et alii* 2019).

≥ 20.000 B.P. – 18.000 B.P.

The settlement of Climăuți has revealed several fragments of ivory bracelets, unique in this area, in a layer attributed to the Gravettian, for which a date has been determined, namely 20.335 ± 230 BP (Lu-284). Both have a slight curvature, which is specific to such ornaments, but, unfortunately, they lack the holes necessary for fastening. One of them is in the shape of a rectangular plaque, 7-cm long, 3.7-cm wide and 1-cm thick, polished on both faces and on the smaller sides, whereas the long sides are fragmented (Fig. 7/3). The second one is 6-cm long, 3.4-cm wide and 1.7-cm thick (Fig. 7/4). Two ivory preforms intended for the making of such bracelets have also been found in various stages of completion (Borziac et *alii* 2007). Such a find is obviously extremely important for reconstructing the operational sequence. One of these items is a fragment of cylindrical mammoth tusk, with a maximum diameter of 8 cm and thickness of 4.5 cm (Fig. 7/1). The concentric layers typical of the ivory were removed by abrasion and polishing up to 1.5 cm deep, on both faces, between the centre and the outer part of the tusk. A biconical shape was thus created. The fact that the hole in the middle was made first is no accident, because this made the gradual removal of ivory layers easier, until the thickness desired for the bracelet was obtained. The final touching of sides and the outer surface of the bracelet as well as the possible decorations may have been performed later. The second preform is in a slightly more advanced stage of working and confirms the already described operational sequence (Fig. 7/2).

A significant number of perforated shells (60 specimens, 24 of which are intact and 15 are stained with ochre) have also been found in the same Gravettian layer of Climăuți. They seem to have been gathered from the Sarmatian deposits flanking the valley of the Dniester, belonging to the species *Cerithium vulgatum* and *Nassa reticulata* (Fig. 8/B, 1–22). The collection of personal ornaments found at Climăuți is completed by six tubular bone beads, 2 cm in diameter (Fig. 8/A), which were stained with red ochre, whereas four of them preserve incisions on the bone surface (Fig. 8/A, 1, 3–5).

The 1993 archaeological excavations conducted at the settlement of Mitoc-Malu Galben revealed a second pendant at the site, attributed to the Gravettian IV level, which has two ^{14}C dates, 20.945 ± 850 B.P. (GX-8503) and 19.910 ± 990 B.P. (GX-8724). The pendant was made from a fragment of large herbivore diaphysis, the shape is trapezoidal, with slightly convergent curved sides (Fig. 5/2). The item is 4.5-cm long, 1.9-1.5-cm wide and 0.8-0.2-cm thick. The perforation is conical, about 0.5 cm in diameter (Otte *et alii* 1995).

A splendid engraved siltite pendant was found in 2013 in the Gravettian I layer of Poiana Cireșului-Piatra Neamț (Cârciumaru *et alii*, 2016; 2018; 2019; Cârciumaru, Nițu 2018). For this occupation, there is a set of 18 extremely coherent ^{14}C dates, which place it between 20.154 ± 97 (Erl 12.163) and 18.607 ± 87 B.P. (RoAMS 67.33). Siltite is a rock with a greenish tint, the colour of which intensifies when moist (Fig. 4/2). The pendant is oval, with a convex-slightly concave profile, 3.4-cm long, 1.9-cm wide and 4.5-mm thick. The perforation is located at one end. The pendant is decorated, on both faces, with regular linear incisions in independent registers, providing a visual balance. The engraving of both faces is quite rare on Gravettian pendants in Europe, particularly those decorated with geometric motifs. Most of the pendant circumference is marked by 23 parallel incisions arranged, in an overwhelming proportion, roughly 3 mm apart and only a few of them, located on the upper part of the right side, are about 2 mm apart. All the incisions on the pendant circumference preserve red ochre to a greater or lesser extent. The entire pendant may have been painted with ochre, which, due to the lying conditions, was better preserved in incisions.

In addition to the pendant described above, an impressive and diverse collection of personal ornaments was found in the same occupation. In 2014, the first calcareous marl bead from the Palaeolithic in Romania was discovered (Fig. 4/6). It is oval, with the diameter between 1.8 and 2.1 cm and thickness of 0.2-0.6 cm (Cârciumaru *et alii* 2018; 2019). The 0.3-0.4-cm hole meant for suspension is located roughly in the centre of the item and is biconical, tilted relative to the upper face. This kind of bead is a very scarce occurrence in the Gravettian in Central and Eastern Europe.

During the 2002 archaeological excavations, a beautiful, perforated wolf canine was recovered (Fig. 6/1). The dimensions of this canine are not at all negligible, which proves it belonged to a fairly large adult animal: 5.4-cm long, maximum width of 1.5 cm and maximum thickness of 1.1 cm (Cârciumaru *et alii* 2012; Cârciumaru, Nițu 2018; Cârciumaru *et alii* 2018; 2019). The hole was made from one direction, by subjecting one of the surfaces to rather deep scraping and then to abrading. Two fox canines were also found. The first one is perforated at the tip of the root (Fig. 6/6), was fragmented post-depositionally and is 2.2-cm long and 0.67 cm maximum width. The second was recovered in 2018 (Fig. 6/7). Quite fragmented, it measures only 2.49 cm in length, 0.6 cm in width and 0.3 cm in thickness. Furthermore, two red deer canines were discovered. One is quite fragmented and was found in 2001

(Fig. 6/9). Its current dimensions are of 2 cm in length, 1.3 cm in width, and 0.9 cm maximum thickness. This type of red deer canine is a residual tooth specific to the deer. The other item was found in 2014 and is 2.4-cm long, 1.3-cm wide and its maximum thickness is 0.7 cm. Because it was found near a hearth, the canine was rather burnt (Fig. 6/8). However, both its faces preserved marks of wearing by suspension, probably on a leather support.

The collection of ornaments found in the Gravettian I layer of Poiana Cireșului is completed by perforated fossil shells and a specimen of the *Dentalium* sp. A perforated *Potamides bicostatus* shell was discovered in 2018 (Fig. 9/1) (Cârciumaru *et alii* 2019). It is a fossil species the Gravettian communities picked from the Sarmatian deposits cropping out in the Moldavian Plateau. The shell recovered is almost intact, having been damaged only in the upper part of the aperture in earlier times, and is 22.1-cm long and 7.8-mm wide. The hole was placed on the last three spires and was made from the outside by abrasion and penetration using a lithic tool. In 2015, a shell of the *Tritia* sp. with a maximum diameter of 8.1 mm and height of 4.9 mm (Fig. 9/3) and a bead of the *Dentalium* sp., the first one of this kind in the Romanian Palaeolithic, were found. The bead is 3.3-4.0-mm long, 4.2-4.5-mm in diameter whereas the wall is 1-mm thick (Fig. 9/6). Such finds are rare in Eastern Europe, which makes the Poiana Cireșului discovery a singular occurrence for the Gravettian in this region (M. Cârciumaru *et alii*, 2018; 2019). The second *Dentalium* bead was retrieved in 2019 (Fig. 9/7). Although it seems to be more fragile than the previous one, this sample is slightly longer.

Near Poiana Cireșului, the archaeological diagnosis carried out in 2019 in a new discovered site, the Piatra Neamț 2 Palaeolithic settlement, led to the find of a perforated shell of the species *Potamides disjunctus quadricinctus* (Fig. 9/2) in level II, assigned to the Epigravettian. According to a ^{14}C date, the age determined is 19.180 ± 70 B.P. (Beta 545.814).

≥ 18.000 – 16.000 B.P.

No other personal ornaments from the period following 18.000 B.P. have been found in the settlements located between the Carpathians and the Prut. In the Republic of Moldova, such items are mentioned only from the settlement of Cosăuți, which we shall further describe.

An engraved stone pendant was found in the Epigravettian level 2 (Borziac, Chirica 1996; Borziac *et alii* 1998; Noiret 2009), dated to between 17.230 ± 140 B.P. (GrN 21.792) and 16.860 ± 770 B.P. (LE 3304). At the moment of its discovery, it was fragmented in four pieces. After reconstruction, it was revealed that it was disc-shaped with the diameter between 5 and 4 cm and a section 0.9-cm thick (Borziac, Otte 1996). Only 60 incisions were preserved on the pendant circumference, the remaining 76 or even 78 had been destroyed. The first description mentions nine rows of various numbers of dots arranged on the upper face of the pendant (Borziac 1994; 1996; Borziac, Chirica 1996; Borziac, Otte 1996; Borziac *et alii* 1998). Recent investigations point to only eight rows of dots, arranged as follows: 1 = 6; 2 = 2; 3 = 12; 4 = 15; 5 = 15; 6 = 17; 7 = 17; 8 = 6 (Fig. 4/3) (Cârciumaru *et alii* 2019). On the upper face, under the hole, there is a protuberance, which may have been part of the initial rock structure or may suggest that the ornament was customised.

A sandstone bead was recovered from the Epigravettian level 3, dated to between 18.030 ± 150 B.P. (GrN 21359) and 16.160 ± 250 B.P. (GIN 4149) (Fig. 4/4). I. Borziac, M. Otte, P. Noiret (1998) describe this item as a pendant. However, in terms of the central position of the hole, we believe that it is closer to the notion of bead (Cârciumaru *et alii* 2019).

In the Epigravettian level 3a, dated to between 18.000 ± 180 B.P. (OxA 5237) and 17.780 ± 90 B.P. (GrA 7554), several ornaments have been found, among which an amber pendant and two very small fossil coral beads of local origin (Fig. 9/8–10). In addition to these, there is an item that P. Noiret (2009) defined as a marl bead, with a biconvex perforation located in the centre (Fig. 4/5), which I. Borziac, C.-V. Chirica (1996) consider to be a spindle whorl. This second hypothesis could not by supported by experiments.

Three perforated reindeer teeth, found in level 3b, complete the inventory of personal ornaments in this settlement (Fig. 6/12–14). The layer was dated to between 18.000 ± 180 B.P. (Oxa 5235) and 17.390 ± 580 B.P (LE 3307). There are also three perforated fox canines (Fig. 6/2–5) and two shells of an undetermined species, the context of which is not very well specified (Fig. 9/4–5).

Apart from the abovementioned ornaments, the Cosăuți settlement stands out through the discovery of ivory bracelets, adornments of a particular aesthetic value, which define the Epigravettian communities in this area. Unfortunately, they are fragmented due to their fragility.

A first fragment, which was part of a bracelet made up of several pieces, comes from the Epigravettian level 3a (18.000 ± 180 B.P. and 17.780 ± 90 B.P.) (Fig. 10/4). Although fragmented, it preserves working marks and even three perforations intended for joining the pieces in one ornament (Borziac *et alii* 1998). Level 3 has provided three

other beautiful fragments of ivory bracelets (Fig. 10/1-3), one of which is quite intact (Fig. 10/1). Finally, the Epigravettian level 2c (OxA 5233: 17.900 ± 200 B.P. – GrN 21793: 17.620 ± 210 B.P.) has revealed two other fragments of ivory bracelets, with elliptical section, one of which still preserves the two holes, whereas the other has only one perforation (Fig. 10/5–6).

CONCLUSIONS

The oldest Palaeolithic personal ornaments east of the Carpathians are attributed to the Early Gravettian. They are exclusively represented by perforated snail shells at Poiana Cireșului-Piatra Neamț; so far, 53 specimens belonging to the species *Lithoglyphus naticoides* (Fig. 2) and 10 specimens attributed to the species *Homalopoma sanguineum* (Fig. 3) have been found. As previously mentioned, they belong to the Gravettian III layer, and, according to ^{14}C dates, the age of the occupation falls between 27.321 ± 234 B.P. and 25.390 ± 140 B.P. They are the oldest personal ornaments in the Palaeolithic in this area. On the other hand, the Mediterranean origin of the *Homalopoma sanguineum* species, more than 900 km away, raises the issue of the existence of possible organised exchange networks, of important migrations along this path and even of the origin of some Gravettian facies (Nițu *et alii* 2019).

We know that, between 27.000 and 26.000 B.P., on both sides of the Prut, stone and ivory pendants (Fig. 11) were among the personal ornaments of Gravettian communities. As regards the cortex pendant from Mitoc-Malul Galben (Fig. 4/1), there is a date with a rather large margin of error (GX–9.418: 26.700 ± 1.040 B.P.), whereas the exquisite pendant found in the Brînzeni Cave (Fig. 5/1) comes from a layer dated to between 26.600 ± 370 B.P. and 26.200 ± 360 B.P.

In the current stage of research, one may say that, in terms of the early Gravettian east of the Carpathians, the abundance of finds of perforated shells of the species *Lithoglyphus naticoides* and *Homalopoma sanguineum*, both quite small in size, points to the preference for such ornaments of the communities in the Bistrița Valley (Cârciumaru, Nițu 2018). On the other hand, the small number of items found in the Prut Valley, only a stone pendant and an ivory one (Cârciumaru *et alii* 2019), does not allow for a description of the communities in terms of their ornaments.

Between 24.000 and 21.000 B.P., the only known ornaments are concentrated in the Duruitoarea Veche Cave and consist of ivory, bone, belemnite and red deer canine pendants. The concentration of Gravettian ornaments in only one settlement in this stage is more difficult to explain, possibly due to a hiatus in research. Instead, in the next stage, between 20.000 and 18.000 B.P., one may note a real explosion of Gravettian ornaments east of the Carpathians, both in terms of the number of settlements where such artefacts have been found and in terms of diversity (Fig. 11). In this respect, the settlement of Poiana Cireșului stands out through the Gravettian I finds, followed by that of Climăuți (Cârciumaru, Nițu 2018; Cârciumaru *et alii* 2016, 2018, 2019). In fact, the variety of Gravettian I ornaments at Poiana Cireșului is unprecedented for the Palaeolithic in this area, being represented stone pendants and beads, the adornments made of wolf, fox, red deer teeth or of *Tritia, Potamides* and *Dentalium* shells. Furthermore, at the settlement of Climăuți, on the right side of the Dniester, in addition to a number of ornaments of gastropods, tubular bone engraved beads, one can also mention the occurrence of ivory bracelets, unique in this area and in this chronological level. The discovery of preforms of such bracelets is certainly a particularity which individualises this Gravettian settlement. Except the two sites, Poiana Cireșului and Climăuți, one should also refer to a bone pendant found at Mitoc-Malu Galben.

In the Early Epigravettian, the only settlement between the Carpathians and the Dniester where personal ornaments have been found is that of Cosăuți. Various ornaments, such as a stone pendant and two stone beads, an amber pendant, coral beads, items made of gastropods, reindeer and fox canines have been recovered. The fragments of ivory bracelets are of particular importance, as they define this settlement in the eastern Carpathian area and continue the tradition of these fascinating ornaments from the nearby settlement of Climăuți. This is a significant aspect which probably turns the settlements located on the banks of the Dniester into a centre of production and use of such ornaments.

Although the Palaeolithic occupations between the Carpathians and the Dniester are spread throughout the entire period of the Gravettian and the Epigravettian (30–20 ka uncal. BP), one cannot doubt the existence of periods in which ornaments are more numerous (27–26 ka and 20–19 ka uncal. BP) or of stages of hiatus (24–21 ka uncal BP; 18–16 ka uncal. BP), in which such finds were made only in one settlement at a time. Naturally, this may be due to the stage of the research, but, until new discoveries are made, we can only assume the existence of different traditions in the Upper Palaeolithic in this area, as well as the individualisation of certain communities through personal ornaments.

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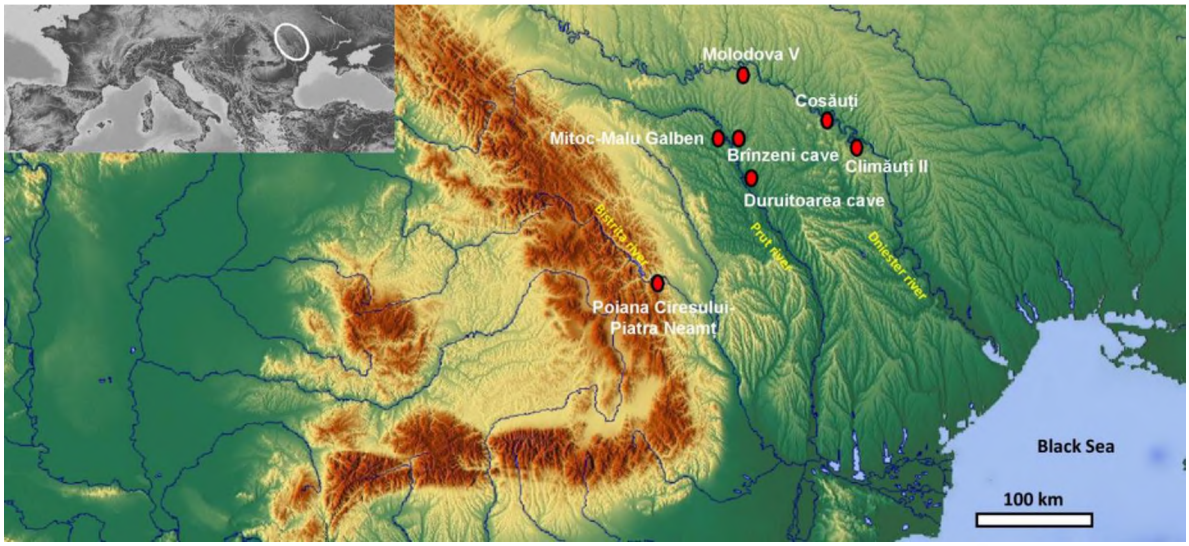

Figure 1 – Settlements east of the Carpathians where Palaeolithic personal ornaments have been found (after Cârciumaru *et alii* 2019).

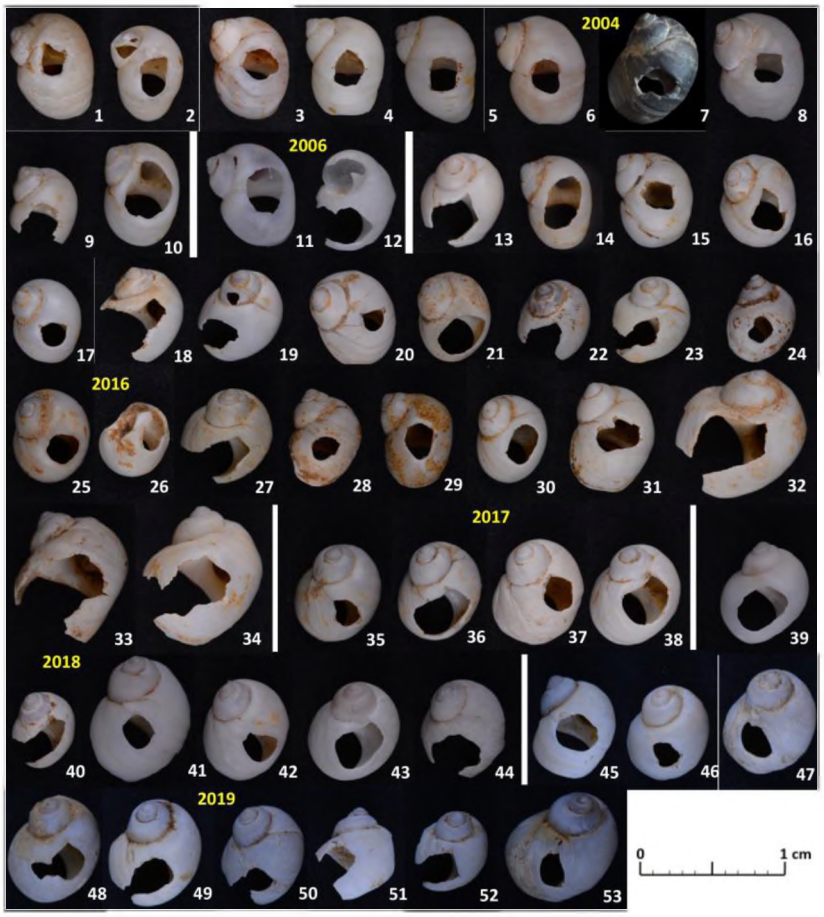

Figure 2 – Perforated *Lithoglyphus naticoides* shells found in the Gravettian III layer of Poiana Cireșului.

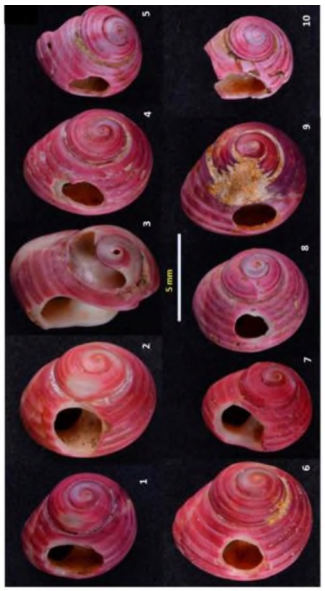

Figure 3 – Perforated *Homalopoma sanguineum* shells found in the Gravettian III layer of Poiana Cireșului.

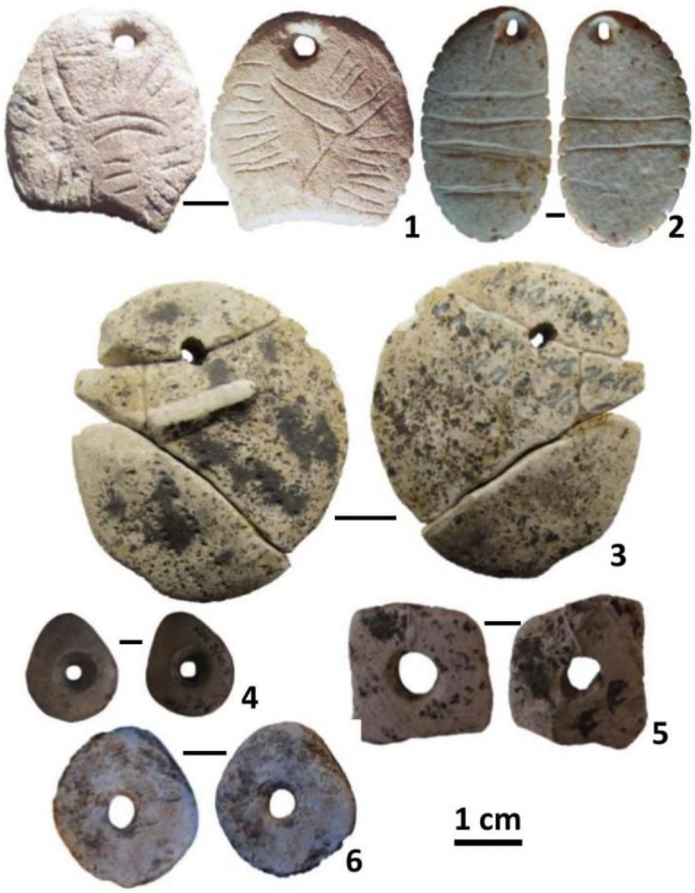

Figure 4 – Stone pendants and beads found in Palaeolithic settlements in the Eastern Carpathians.
1-Mitoc-Malu Galben; 2, 6-Poiana Cireșului-Piatra Neamț; 3–5 – Cosăuți.

Figure 5 –Ornaments made of osseous material found in the Palaeolithic settlements in the Eastern Carpathians. 1-the Brînzeni Cave; 2-Mitoc-Malu Galben; 3–6 – the Duruitoarea Veche Cave; 7-Climăuți.

Figure 6 – Personal ornaments made of wolf canines (1), fox canines (2-7) and red deer canines (8–14) in the Palaeolithic east of the Carpathians. 1, 6–9 – Poiana Cireșului Piatra Neamț; 2–5, 12–14 – Cosăuți; 10–11 – Duruitoarea Veche.

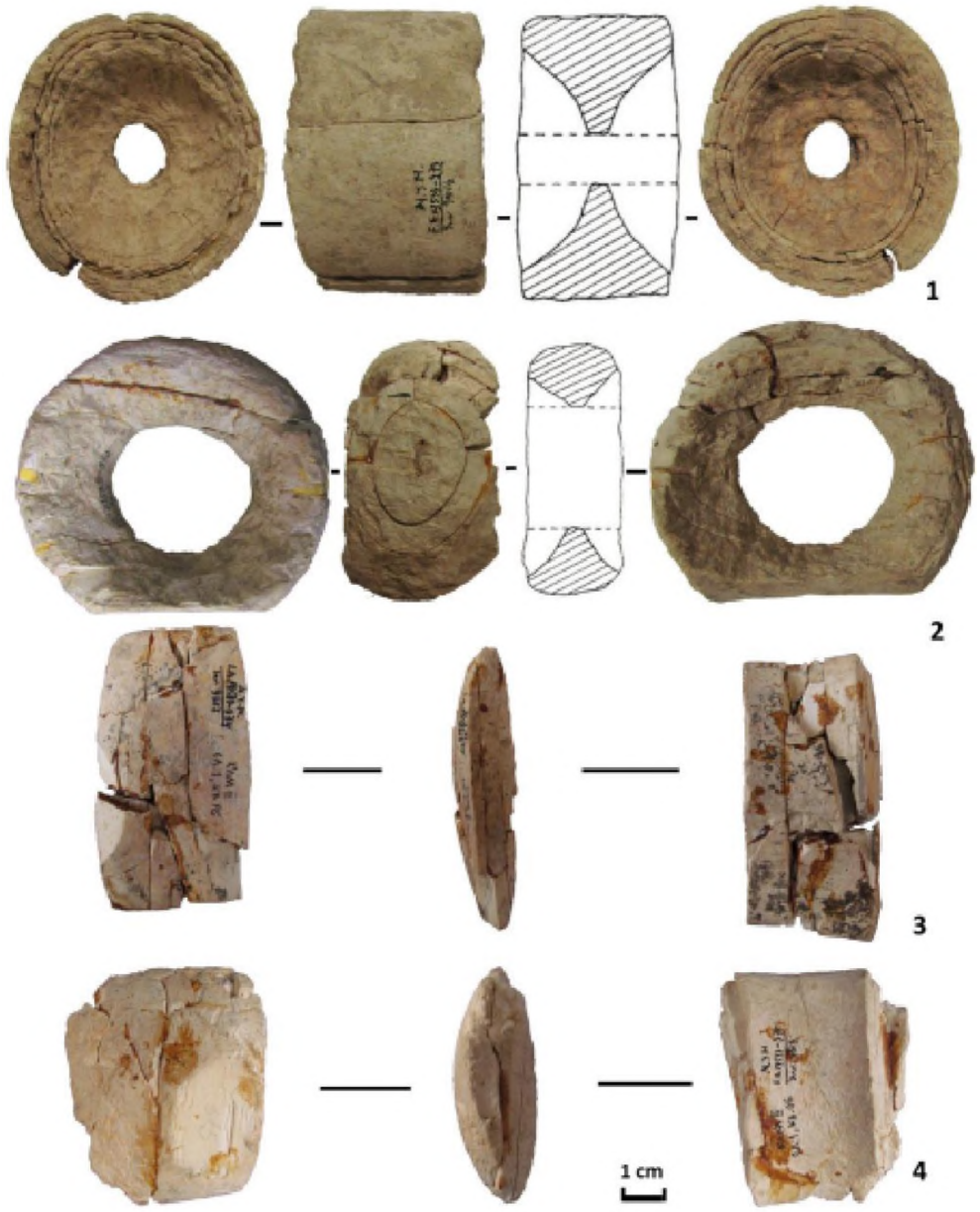

Figure 7 – Ivory fragmented bracelets (3–4) and pre-shapes intended for the making of bracelets (1–2) in the settlement of Climăuți (after Cârciumaru *et alii* 2019).

Figure 8 – Tubular bone beads (A 1–5) and perforated snail shells from Climăuți (B 1–22).

Figure 9 – Perforated shells and corals. 1-3, 6 – Poiana Cireșului Piatra Neamț; 4–5, 7–10 Cosăuți.

Figure 10 – Ivory bracelets from the Epigravettian levels at Cosăuți.

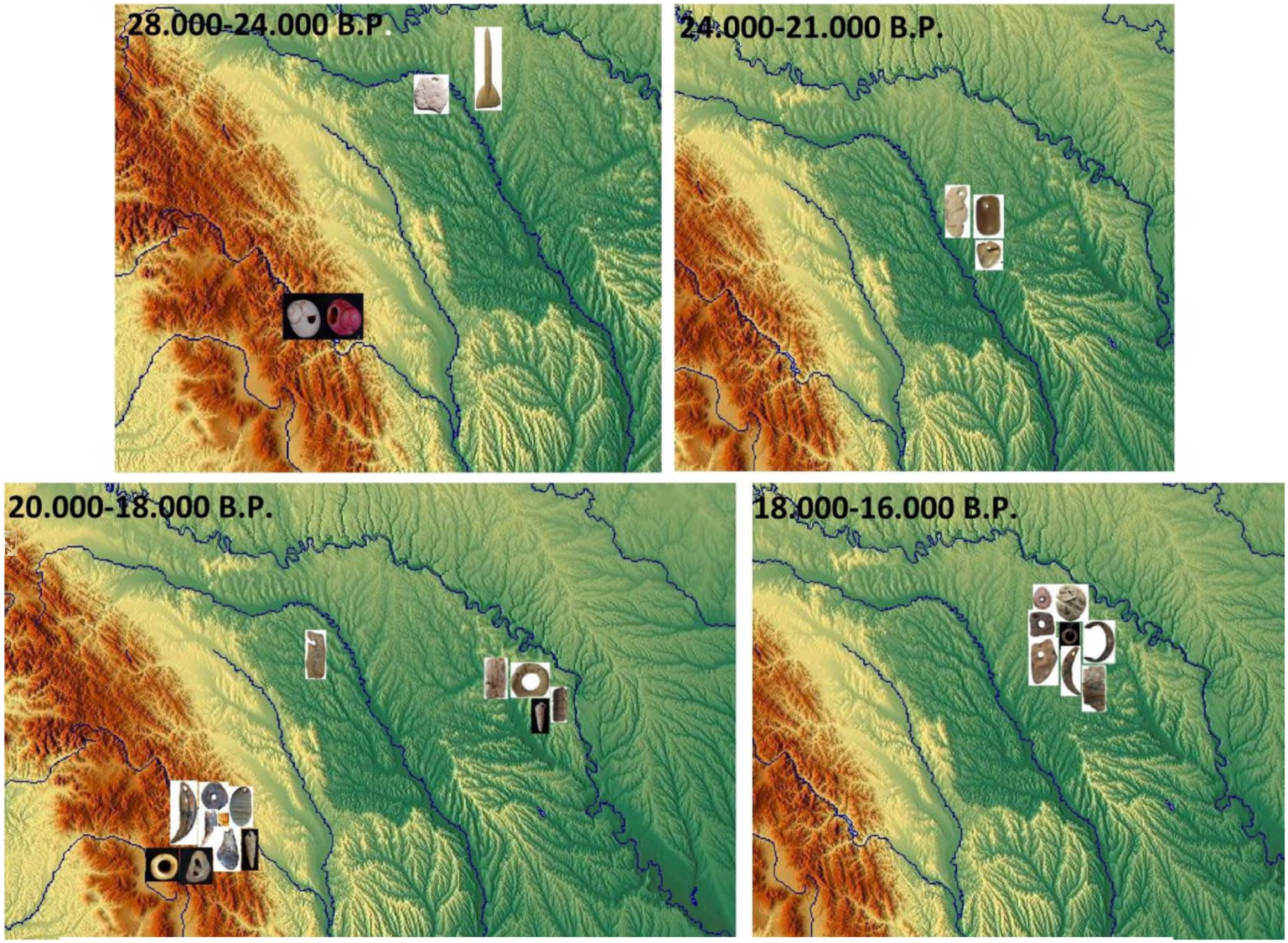

Figure 11 – Distribution and concentration of personal ornaments in the Eastern Carpathians, in the Gravettian and the Epigravettian.