

Personal adornments from the Eneolithic necropolis of Chirnogi-Șuvița Iorgulescu (Romania): a picture of symbolism in prehistoric communities

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ABSTRACT – *The Necropolis of Chirnogi – Șuvița Iorgulescu (Călărași county) was located on the high terrace of the Danube and was investigated by Done Șerbănescu (in 1989) by means of the archaeological excavations carried out for the construction of the Danube-Bucharest Channel. For this study, we analysed the archaeological assemblage preserved in the Museum of Gumelnița civilization from Oltenița (Călărași county) coming from 10 graves, out of a total of 58, which are attributed to the Gumelnița culture (the second half of the 5th millennium BC). The personal adornments are mainly bracelets made of Spondylus valve (16 specimens) which appear in most of the graves, along with an equal number of perforated plates made of Sus scrofa canine, this time the pieces being grouped into two graves. The funeral inventory is complemented by small cylindrical, tubular or biconvex beads, made of various raw materials: Spondylus valve, bone, malachite, copper and green slate. At the technical level, attention is drawn towards the technological transformation scheme of the raw material, which is extremely uniform for the two main categories of ornaments. Also, the analysed pieces showed different degrees of use-wear, demonstrating on the one hand that they were worn before the deposition in graves, and on the other that the accumulation of these items took place over time.*

KEY WORDS – Gumelnița culture; raw materials; technological transformation schemes; use-wear marks

Osebni okras na eneolitskem grobišču Chirnogi-Șuvița Iorgulescu (Romunija): podoba simbolizma v prazgodovinskih skupnostih

IZVLEČEK – Grobišče Chirnogi-Șuvița Iorgulescu (okraj Călărași, Romunija) se nahaja na visoki terasi nad Donavo in ga je izkopal Done Șerbănescu (leta 1989) v okviru raziskav ob izkopu kanala Donava – Bukarešta. Za ta prispevek smo analizirali arheološki zbir, ki je shranjen v Muzeju civilizacije Gumelnița v Olteniti (okraj Călărași), in ga sestavljajo najdbe iz 10 grobov od skupno 58, ki so pripisani kulturi Gumelnița (druga polovica 5. tisočletja pr. n. št.). Osebni okras sestavljajo predvsem zapestnice, izdelane iz zaklopk Spondylusa (16 primerkov), ki so navzoče v večini grobov skupaj z enakim številom preluknjanih ploščic, izdelanih iz kaninov divje svinje, v tem primeru so najdbe združene v dveh grobovih. Grobni inventar dopolnjujejo majhne cilindrične, valjaste ali bikonveksne jagode, izdelane iz različnih surovin: zaklopk Spondylusa, kosti, malahita, bakra ali zele-nega skrila. Iz vidika izdelave se posvečamo shemi tehnološkega preoblikovanja surovin, ki deluje zelo poenoteno pri obeh glavnih kategorijah okrasa. Predmeti, ki smo jih analizirali, kažejo tudi različne stopnje sledov uporabe, kar po eni strani kaže na njihovo uporabo preden so bili odloženi v grob in po drugi strani kaže na zbiranje teh predmetov skozi čas.

KLJUČNE BESEDE – kultura Gumelnița; surovine; shema tehnološkega preoblikovanja; sledovi uporabe

Introduction

For traditional societies personal adornments have many connotations: they play a central role in the affirmation of identity and represent a visual landmark of belonging to a community, social class, sex or age group (e.g., *Preston-Whyte 1994; Sciama, Eicher 1998; Trubitt 2003; Siklosi 2004; Vanhaeren 2005; etc.*). So, according to the context, they can display for each owner a different message. Generally, the need for individualization in comparison to the others seems to prevail, and this translates into the use of exotic raw materials brought from long distances or of local raw materials that were difficult to obtain, or which did not have a certain significance in dietary habits. Given this multitude of meanings, special emphasis has been laid on the remarkable importance of such ornaments in the reconstruction of social structures within prehistoric communities, the identification of geographic boundaries and, implicitly, the exchange system practiced in these ancient societies (e.g., *Newell et al. 1990; Taborin 1993; Séferiadès 1996; Trubitt 2003; Vanhaeren, d'Errico 2006; Szabó et al. 2007; Rigaud 2011; Rigaud et al. 2015*). Equally, their study also offers information regarding the technical and economic aspects specific to a human group. The economic aspects introduce into the discussion issues concerning the means of acquiring the raw materials, while the technical ones have to do with the identification of the processing marks and their integration in the operational sequence.

Starting from these general considerations about the nature of the information which the study of personal adornments can offer us, the aim of this paper is to evaluate the artefacts discovered in the graves attributed to the Gumelnița culture (in the second half of the 5th millennium BC), from the necropolis of Chirnogi-Șuvița Iorgulescu. For this study, we analysed the archaeological assemblage preserved in the Museum of Gumelnița civilization from Oltenița (Călărași county) coming from 10 graves out of a total of 58 from this period (*Șerbănescu 1996, 2008*). We have adopted the following goals: determining the sour-

ces of raw material acquisition (local and exotic), drawing the technological transformation schemes of the raw materials and the identification of use-wear marks which would indicate the use of artefacts prior to the depositing as funeral inventory.

The methodology used in this study relied on macroscopic and microscopic analysis of the technological and use-wear marks found on the archaeological items. The personal ornaments were microscopically examined using a Keyence VHX-600 digital microscope, with magnifications ranging from 30x to 150x, while the images were taken using a microscope digital camera. The analytical criteria for the technological and functional interpretations were established by referring to recent publications on the use of personal ornaments in prehistoric contexts (e.g., *Bonnardin 2009; Rigaud 2011; 2013; Cristiani, Borić 2012; Vanhaeren et al. 2013; Cristiani et al. 2014; Tata et al. 2014; Rigaud et al. 2015; Langley, O'Connor 2016; Clark et al. 2018; Guzzo Falci et al. 2018*).

Archaeological background

The necropolis of Chirnogi-Șuvița Iorgulescu (Fig. 1) was placed on the high terrace of the Danube River in south-east Romania, north of the Balkan Peninsula. It is situated in the vicinity of the multilayered settlement of Căscioarele and several Neolithic necropolises around Chirnogi area. Based on the archaeological features uncovered within the necropolis of Chirnogi, it was determined as belonging to the Eneolithic Gumelnița culture (in the second half



Fig. 1. Location of the Chirnogi-Șuvița Iorgulescu necropolis.

of 5th millennium BC), part of the Kojadermen-Gumelnița-Karanovo VI culture (Șerbănescu 1996; 2008).

It was discovered by Barbu Ionescu in 1961 when excavations of terraces were carried out in the area. He made the first archaeological surveys and found a grave in a crouched position. Done Șerbănescu undertook rescue archaeological excavations in 1989 on the occasion of the excavations carried out for the construction of the Danube-Bucharest Channel (Bălțeanu, Cantemir 1991).

As a result of these, 74 graves from various historical periods have been discovered. Most of the graves belonged to the Gumelnița culture, 58 graves, with three graves from post-Neolithic periods, while for 13 graves the funeral inventory was missing and could not be attributed to a historical period (Șerbănescu 1996).

According to the anthropological data (Bălțeanu, Cantemir 1992), 62 skeletons were discovered in the Chirnoși-Șuvița Iorgulescu necropolis, with these from 36 men and 13 women, with 13 of indeterminate sex. Most were mature people (37 skeletons), followed by young adults (20-30 years, 11 skeletons), with children and adolescents being represented by 10 skeletons. The bodies were buried in a crouched position, predominantly oriented towards ESE. The graves were oval-shaped and irregular, their depth, compared to the current level, being -0.10/-1.00m.

Although there are two anthropological studies (Bălțeanu, Cantemir 1991; 1992),

no archaeological data has been published to allow the correlation of the skeletons with the various funerary inventories. Thus, at this point, we know from what graves come the adornments but cannot asso-

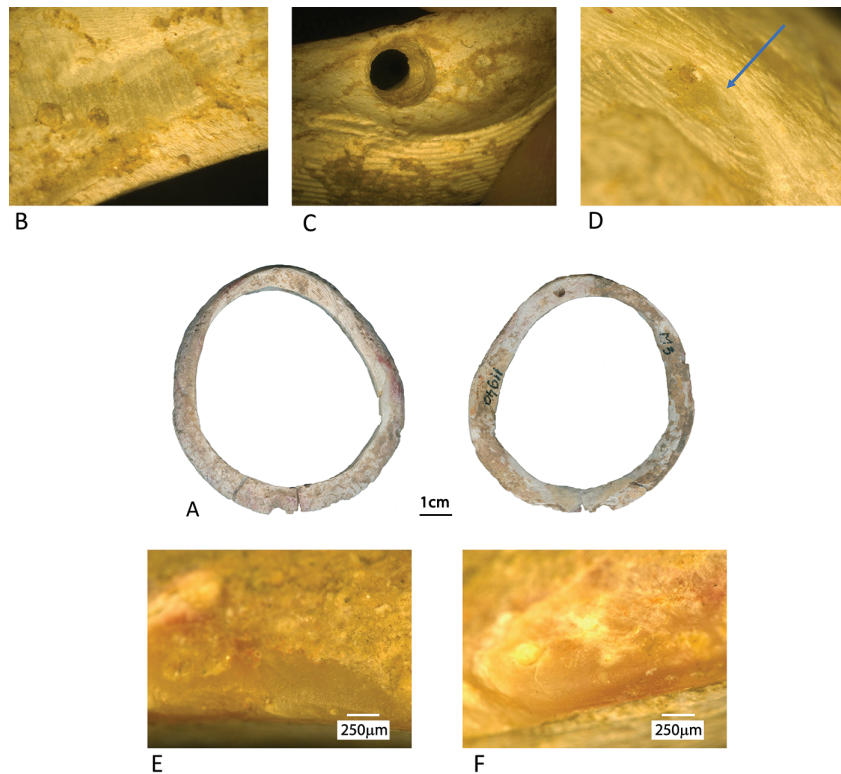


Fig. 2. A Spondylus bracelet (grave no. 3); B abrasion marks; C perforation detail; D use-wear depression; E, F use-wear marks.

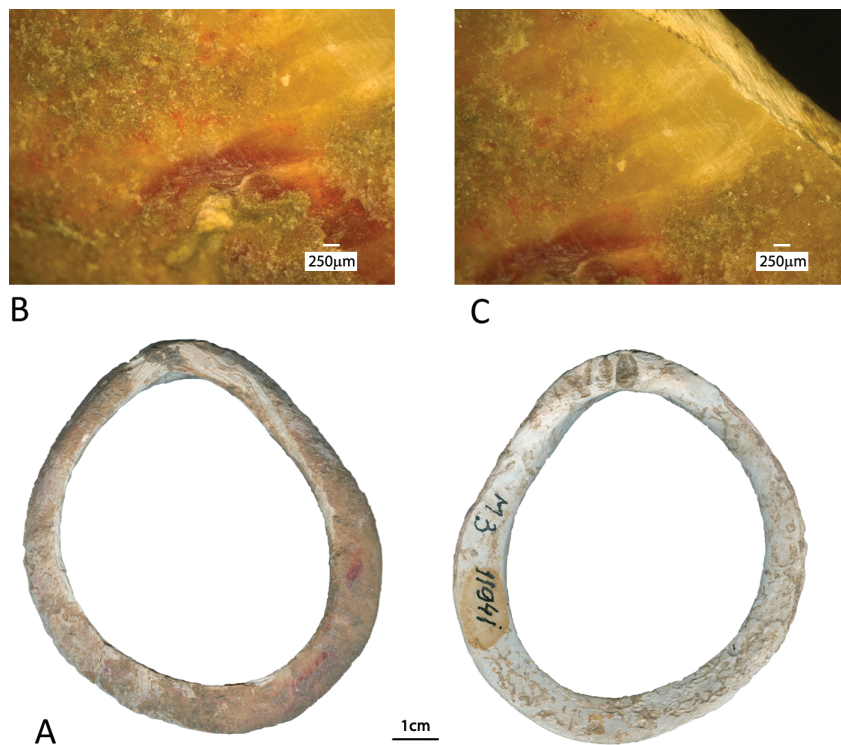


Fig. 3. A Spondylus bracelet (grave no. 3); B, C abrasion marks.

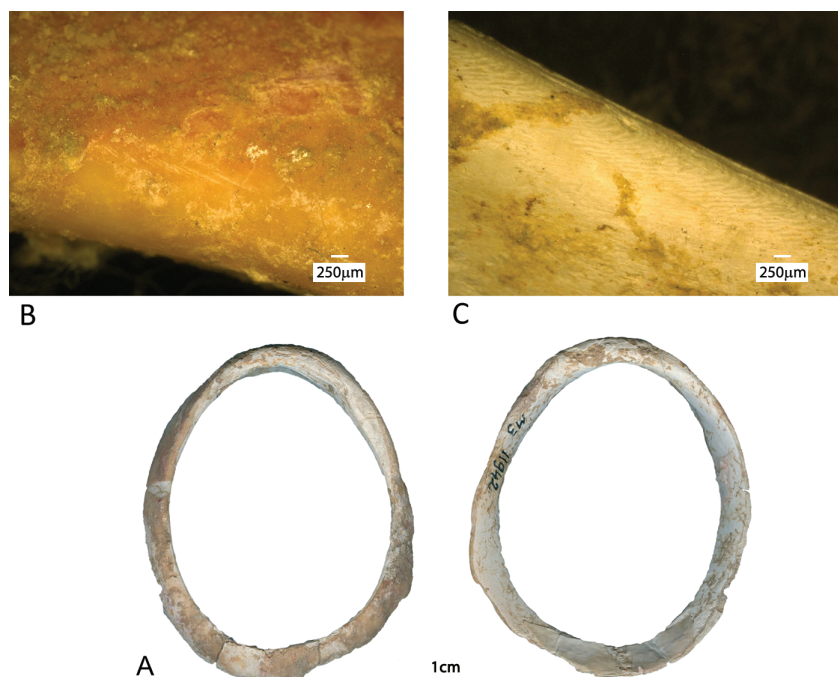


Fig. 4. A Spondylus bracelet (grave no. 3); B abrasion marks; C use-wear marks.

ciate them with a skeleton. We also do not have data on their position in the graves or in relation to the skeleton, or if the graves contained other offerings. Consequently, we cannot make any considerations about the eventual distribution of ornaments by age or gender.

Funeral inventory

Grave no. 3 contains four bracelets made of *Spondylus* valve as funeral inventory. The first bracelet (Fig. 2A) is complete, medium preserved on its surface. The natural edge of the valve was retained and

smoothed and the surface is fine to the touch – probably due to use-wear/friction (Fig. 2E-F). The outer diameter of the piece is 70mm and the inner diameter is 53.8mm.

The second bracelet (Fig. 3A) is not so well preserved, having side deposits that almost entirely cover the natural red colour on its exterior. The valve modification procedure is similar to the previous piece, only not so rigorous, in the sense that it still bears traces of cardinal pits and teeth. In spite of the surface deposits, we identified marks specific to the shaping operation on the exterior side, very visible compared to other specimens (Fig. 3B-C). Nevertheless, we were not able to identify any use-wear marks of this piece under the microscope. The outside diameter is 66.2mm and the inside diameter is 47

mm.

Similarly to the first item, the third one (Fig. 4A) was rigorously abraded (Fig. 4B), eliminating the total cardinal plateau as well as the red exterior layer. The bracelet is degraded, with deposits on the external face, so we could not identify any use-wear marks

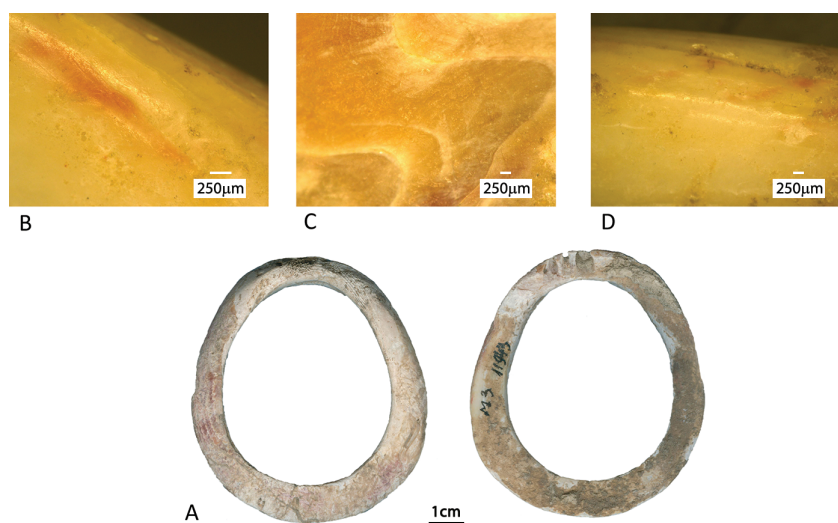


Fig. 5. A Spondylus bracelet (grave no. 3); B, C abrasion marks; D use-wear marks.

(Fig. 4C). Morphometric data are as follows: an outer diameter of 64mm, and inner diameter of 52mm.

The last item (Fig. 5A) is well preserved, allowing data to be obtained on the presence of use-wear. In this case, a portion of the cardinal plateau is still present on the internal side. The exterior side was also carefully shaped (Fig. 5 B-C), but an oval, not rectangular section was created, like in the other examples described above. Even though the internal side has significant deposits, in small areas we were able to identify use-wear marks (Fig. 5D), probably resulting from the skin/clothes friction process. The outer morphometry of the piece is 65.6mm and the inner one is 46mm.

Grave no. 7 contained a single bracelet (Fig. 6A), similar to those found in the *grave no. 3*. The item is complete, very well preserved, without significant deposits on the surface. There is an identical technological procedure with regard to the raw material transformation, after which the piece acquired an oval section at the ventral level and a rectangular section at the umbo area. The external side retains areas of red colour with a special aesthetic impact (Fig. 6B). Both the perforation wall and the internal side have a regular fine surface with a macroscopic polish (Fig. 6C-D), indicating the piece was worn before becoming a funeral inventory. The outer diameter of the bracelet is 84mm and the inside diameter is 65.2mm.

The grave inventory is completed with 30 beads (Fig. 7A), of which: 20 are cylindrical, nine biconvex and one tubular. The morphological differences are mainly given by the shaping procedure which created the rectilinear or convex sides. All items have a circular perforation in the centre. We could not identify debitage marks for any of the specimens, due to subsequent technological interventions. From the raw material block, a blank which was perforated by bifacial

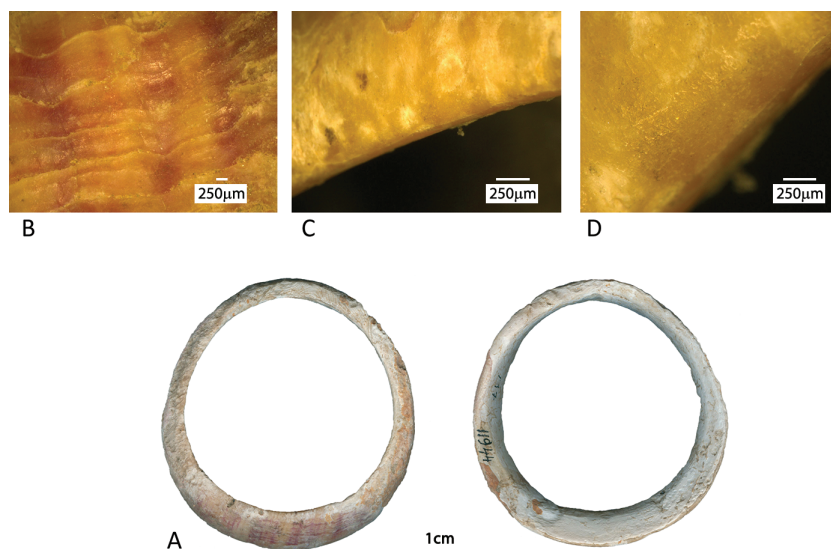


Fig. 6. A Spondylus bracelet (*grave no. 7*); B abrasion marks; C, D use-wear marks.

rotation was obtained (Fig. 7B, E, H, K). In a second stage, the surface was shaped by abrasion (Fig. 7C, F, I, L) to give the pieces their circular shape. The beads show use-wear marks, which confirms they were worn. The perforations have small depressions,

No.	Raw material	Diameter (mm)	Thickness (mm)	Perforation diameter (mm)
1	Spondylus	7.80	5.75	3.17
2	Spondylus	7.58	4.72	3.02
3	Spondylus	5.52	2.65	2.40
4	Spondylus	4.80	2.95	2.38
5	Spondylus	4.12	2.03	1.92
6	Spondylus	4.84	3.58	2.20
7	Spondylus	4.32	5.78	2.44
8	Spondylus	5.12	3.95	2.06
9	Spondylus	3.97	2.42	1.52
10	Spondylus	4.54	1.76	1.88
11	Bone	4.20	1.98	2.04
12	Bone	5.40	3.20	2.48
13	Bone	5.20	2.90	2.16
14	Bone	5.80	2.30	2.20
15	Malachite	5.16	2.72	1.54
16	Malachite	4.26	1.62	1.48
17	Malachite	4.38	1.92	1.28
18	Malachite	3.90	1.74	1.56
19	Malachite	4.10	2.23	2.04
20	Malachite	4.64	1.56	2.25
21	Green slate	5.52	2.88	2.46
22	Green slate	5.06	2.50	2.24
23	Green slate	6.65	2.94	2.45
24	Green slate	4.52	2.48	2.20
25	Green slate	4.49	1.42	2.17
26	Green slate	5.25	3.09	1.90
27	Green slate	4.53	1.94	2.16
28	Green slate	5.59	2.76	2.24
29	Green slate	3.96	1.80	1.83
30	Green slate	5	2.48	2.23

Tab. 1. Sizes of the beads discovered in *grave no. 7*.

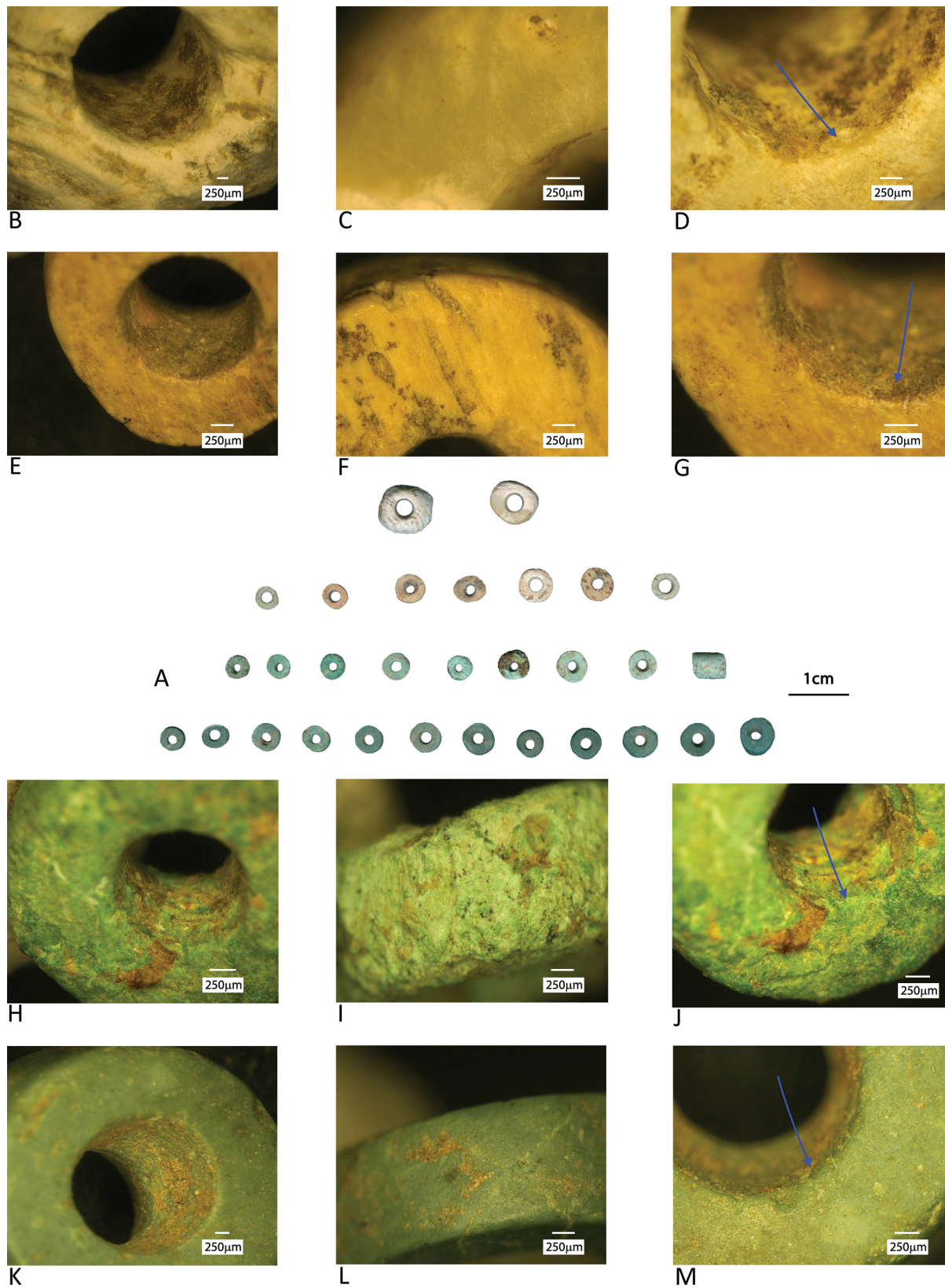


Fig. 7. A beads made of various raw materials; B, E, H, K perforation details; C, F, I, L abrasion marks; D, G, J, M use-wear depressions at perforations level.

characterized by a wall deformation, the disappearance of rotation scratches and a macroscopic polish (Fig. 7D, G, J, M). This type of use-wear appeared as a result of placing several pieces on a thread in the form of necklaces or bracelets. The morphometric data are presented in the Table 1.

Grave no. 15 is similar to no. 3, having four bracelets made of *Spondylus* valve, of which there are two full pieces and two fractured ones. The technological transformation scheme of the valve is identical, except the method of shaping at the umbo level, which determined an oval (two items) or rectangular (two items) section. One of the pieces is very well preserved (Fig. 8A-B), with a use-wear area on the internal wall characterized by macroscopic polish and perpendicular fine scratches (Fig. 8C-D), also indicating in this case the previous use of the bracelet before its deposition as a funeral item. The dimensions of the items are as follows: 1. outer diameter 73mm, inner diameter 56mm; 2. outer diameter 73mm, inner diameter 58mm; 3. outer diameter 68.5mm, inner diameter 56mm; 4. outer diameter 78mm; inner diameter 63.59mm.

Two bracelets made of *Spondylus* valve were inventoried in *grave no. 16*. The surface of the first item is rather damaged. As a result of abrasion, the piece has a rectangular section at the umbo level. The outside diameter of the piece is 86mm and the inner diameter 63mm. The second bracelet (Fig. 9A) is exceptionally well preserved and has, in addition, a more intense abrasion (Fig. 9B), the wall being very thin with a circular section. The use-wear of the piece is advanced, with macroscopic polish on the inner wall and the internal side (Fig. 9C-D). The outside diameter of the piece is 79mm and the inner diameter is 66mm.

Grave no. 17 contained a single bracelet from the *Spondy-*

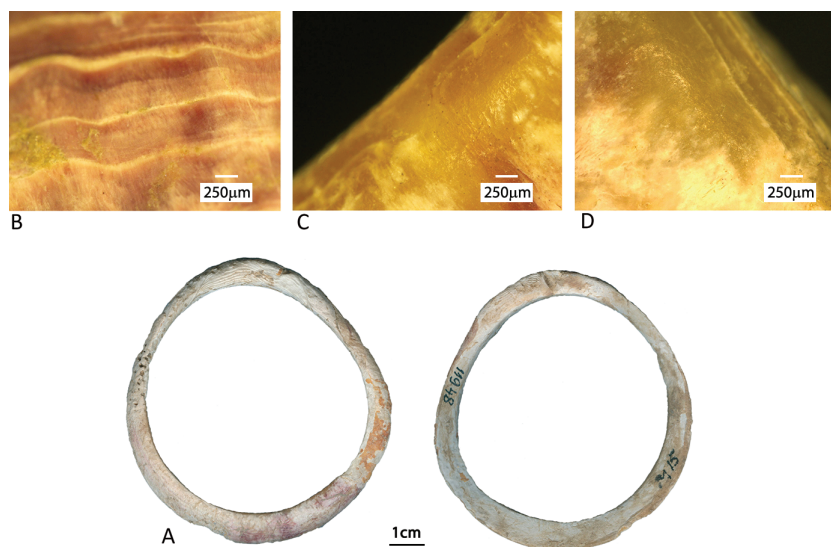


Fig. 8. A *Spondylus* bracelet (*grave no. 15*); B abrasion marks; C, D use-wear marks.

lus valve (Fig. 10A). It is intact and differs from the previously described specimens given the obvious preservation of a part of the cardinal plateau, which creates a special morphology. Being that well preserved, we could identify on its external side scratches resulting from the abrasion procedure (Fig. 10B). The use-wear is characterized by an intense polish and scratches perpendicular to the hole bracelet (Fig. 10C-D). The outside diameter is 77mm and the inner diameter 63.5mm.

The funeral inventory is much more complex in the case of this grave, being composed of nine perforated plates made of *Sus scrofa* canines (Fig. 11). Unfortunately, the whole assemblage has a relatively degraded surface and, moreover, the pieces were co-

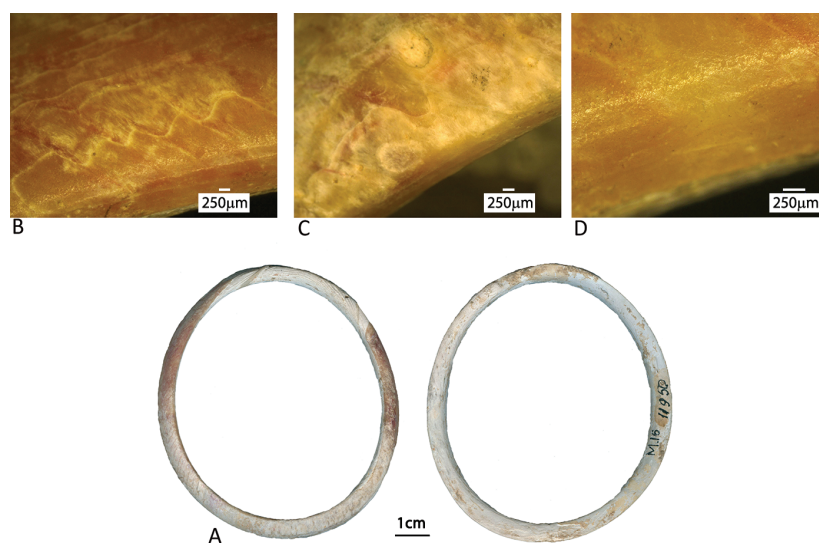


Fig. 9. A *Spondylus* bracelet (*grave no. 16*); B abrasion marks; C, D use-wear marks.

No. of piece	Length (mm)	Medium width (mm)	Thickness (mm)	Medium diameter of perforation (mm)
1	49	8.6	3.8	4
2	48.2	13.2	3.6	4
3	50.8	14	4.6	4.8
4	51	9.6	4.3	3.8
5	61	14	5.2	4.8
6	55	15	5	4.5
7	47	13	4	4.3
8	46	18.2	4	5.2
9	45.3	17	4.6	4.4

Tab. 2. Dimensions of perforated plates made of *Sus scrofa canines* found in grave no. 17.

vered with a layer of varnish which, in some cases, cracked away from the tooth's enamel through dehydration. However, the detailed analysis allowed us to reconstitute the technological transformation schemes of the raw material as well as the gripping system of the pieces. Two of the specimens have a triangular morphology (Fig. 11A, C). The other seven plates (Fig. 11B, D-I) have a quasi-rectangular morphology, a convex-concave section with biconcave edges. Regardless of morphology, the same procedures were used to obtain the finished items. The tooth was cut longitudinally and the scraping did not help us identify the procedures due to the shape of debitage edges, overlaid with abrasion (Fig. 12A-B). Transversally, the segmentation at both ends was achieved by sawing. The procedure is illustrated by several marks left at the periphery of the segmentation plane (Fig. 12C-D), which was then abraded. The internal side of the plates has been adjusted by abrasion (Fig. 12E-F). Three or four perforations – on each item – were made by bifacial rotation (Fig. 12G-H).

It was not possible to identify the use-wear marks due to the fact that the pieces were covered with varnish. It has become obvious that the only element of use-wear identification consists in changes of the initial volume comprising small depressions at the perforation level, identified on the internal side in the area between the perforations associated with the disappearance of rotation scratches (Fig. 12I-K). On the external side, the use-wear resides in the formation of a small flatten-

ed facet associated on some specimens (probably with an advanced use-wear) with the appearance of a small depression (Fig. 12L). The use-wear details show us the individual sewing of the perforated plates. Morphometric data are as follows (Tab. 2).

A *Spondylus* bracelet was discovered in *grave no. 36*, unfortunately fractured and poorly preserved. The natural shape has been preserved and has been removed from the convex side through an identical procedure to the one showed for the bracelets described above. The outer diameter is 88mm and the inner diameter is 76mm. The same raw material was also used to make two tubular beads (Fig. 13A). They have a circular section and parallel rectilinear sides. We could not identify marks of the debitage operation because of the technological interventions during the shaping operation. In addition, the items have a degraded surface (Fig. 13B). The perforation was made by bifacial rotation. The rotation scratches are difficult to identify within the perforation (Fig. 13C). The morphology of the extremities is generally strongly rounded with the appearance of a small concavity (Fig. 13D). We assume this area was affect-

No. of piece	Length (mm)	Medium width (mm)	Thickness (mm)	Medium diameter of perforation (mm)
1	44	13	4	4,8
2	53	17,5	4	4,5
3	54	16	3,8	4,5
4	50	15,6	3,5	4,2
5	64,4	17,6	4,5	4,8
6	54	15,6	4	4
7	50	17	4	4m5

Tab. 3. Dimensions of perforated plates made of *Sus scrofa canines* found in grave no. 36.

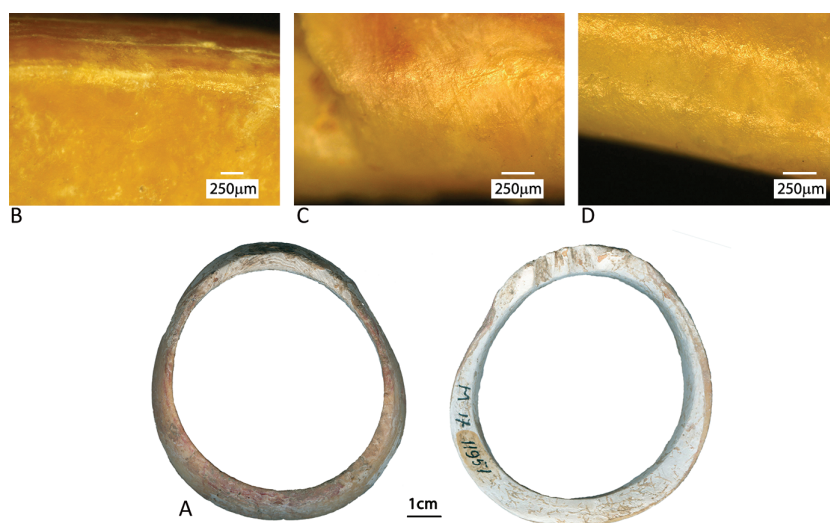


Fig. 10. A Spondylus bracelet (grave no. 17); B abrasion marks; C, D. use-wear marks.

ed by use-wear. Morphometric data for the two beads are as follows: 1. length 21.6mm, diameter 5.5mm, perforation diameter 3.7mm; 2. length 16mm, diameter 5.5mm, perforation diameter 3.5mm.

Seven perforated plates made of *Sus scrofa* canines were also discovered in this grave (Fig. 14). The pieces have an approximately rectangular morphology, a convex-concave section and biconcave edges. A longitudinal bipartition of the tooth was applied in order to obtain the blank. We were not able to identify the debitage procedures due to the shaping of the edges by abrasion (Fig. 15A-B). The interior side was also cleaned through abrasion (four pieces) (Fig. 15C), longitudinal scraping (1 piece) (Fig. 15D) or combining both techniques (two pieces). Segmentation was performed by sawing (Fig. 15E) which was then overlaid with abrasion (Fig. 15F). At the corners, four perforations were made by bifacial rotation. Unlike the items from the previous grave, where the use-wear was quite unitary for all the specimens, in this case we deal



Fig. 11. Perforated plates made of *Sus scrofa* canines (grave no. 17).

with different degrees of use-wear. Thus, we have specimens for which the perforations preserve the rotation scratches with no depression development in the peripheral area, the use-wear being absent (Fig. 15G-I). There are also items where the wear depression starts to form (Fig. 15J) or items characterized by the development of depressions (both on the internal and external sides) (Fig. 15K-L), which illustrate long-term use. The gripping system is identical to the perforated plates from *grave no. 17*, which means individual sewing.

From the same grave, there are two circular beads made of copper foil (Fig. 13E). The overlapping area of the foil edges is still visible (Fig. 13F-G). Even on this type of objects a deformation of the initial volume can be identified, as a result of their use. Thus, at one of the specimens the perforation is deformed, with the appearance of a small concavity (Fig. 13H), while the end has a smoothed aspect, most likely resulting from the friction and pressure of the thread. The dimensions of the items are as follows: 1. length 7.8mm, diameter 6.4mm, inner diameter 4.3mm; 2. length 4.4mm, diameter 4.1mm, and inner diameter 1.9mm.

Grave no. 64 contains two thin *Spondylus* valve bracelets, unfortunately quite degraded in the surface, so technological and use-wear marks are difficult to be identified. However, the same method of

Grave no.	Raw material	Typological category	Number of pieces
M3	<i>Spondylus</i>	bracelet	4
M7	<i>Spondylus</i>	bracelet	1
		tubular bead	1
		biconvex bead	2
		cylindrical bead	7
	bone	cylindrical bead	4
	malachite	biconvex bead	6
green slate	cylindrical bead	9	
	biconvex bead	1	
M15	<i>Spondylus</i>	bracelet	4
M16	<i>Spondylus</i>	bracelet	2
M17	<i>Spondylus</i>	bracelet	1
	<i>Sus scrofa</i> tooth	perforated plate	9
M36	<i>Spondylus</i>	bracelet	1
		tubular bead	2
	<i>Sus scrofa</i> tooth	perforated plate	7
	copper	circular bead	2
M64	<i>Spondylus</i>	bracelet	2
M68	copper	circular bead	1
M69	<i>Spondylus</i>	bracelet	1
M71	copper	circular bead	1

Tab. 4. The funeral inventory according to the grave number.

abrasion appears clearly on both sides, with the elimination of the cardinal plateau, the pieces gaining a circular section. We were able to detect the morphometric data for one piece: outer diameter 76mm and inner diameter 51mm, the other being fractured.

In *grave no. 68* a single personal adornment was identified, a circular bead of copper foil. A small concavity on the extremity resulting from the use-wear of the piece is visible. Its diameter is 8.8mm, the thickness of 7.3mm, and the inner diameter of 5.7mm.

Grave no. 69 contains a *Spondylus* bracelet (Fig. 16A), very well preserved. An abrasion was applied to the entire surface (Fig. 16B-C), eliminating most of the cardinal plateau (Fig. 16D). The item has a rectangular section at this level. On the internal side and on the walls of the opening the surface is smoothed. This procedure is marked by a powerful macroscopic polish and fine scratches (Fig. 16E-G). The outer diameter is 82mm and the inner diameter is 62.5mm.

Finally, in *grave no. 71* a circular copper bead was discovered (Fig. 17A-C), unfortunately fractured. Its

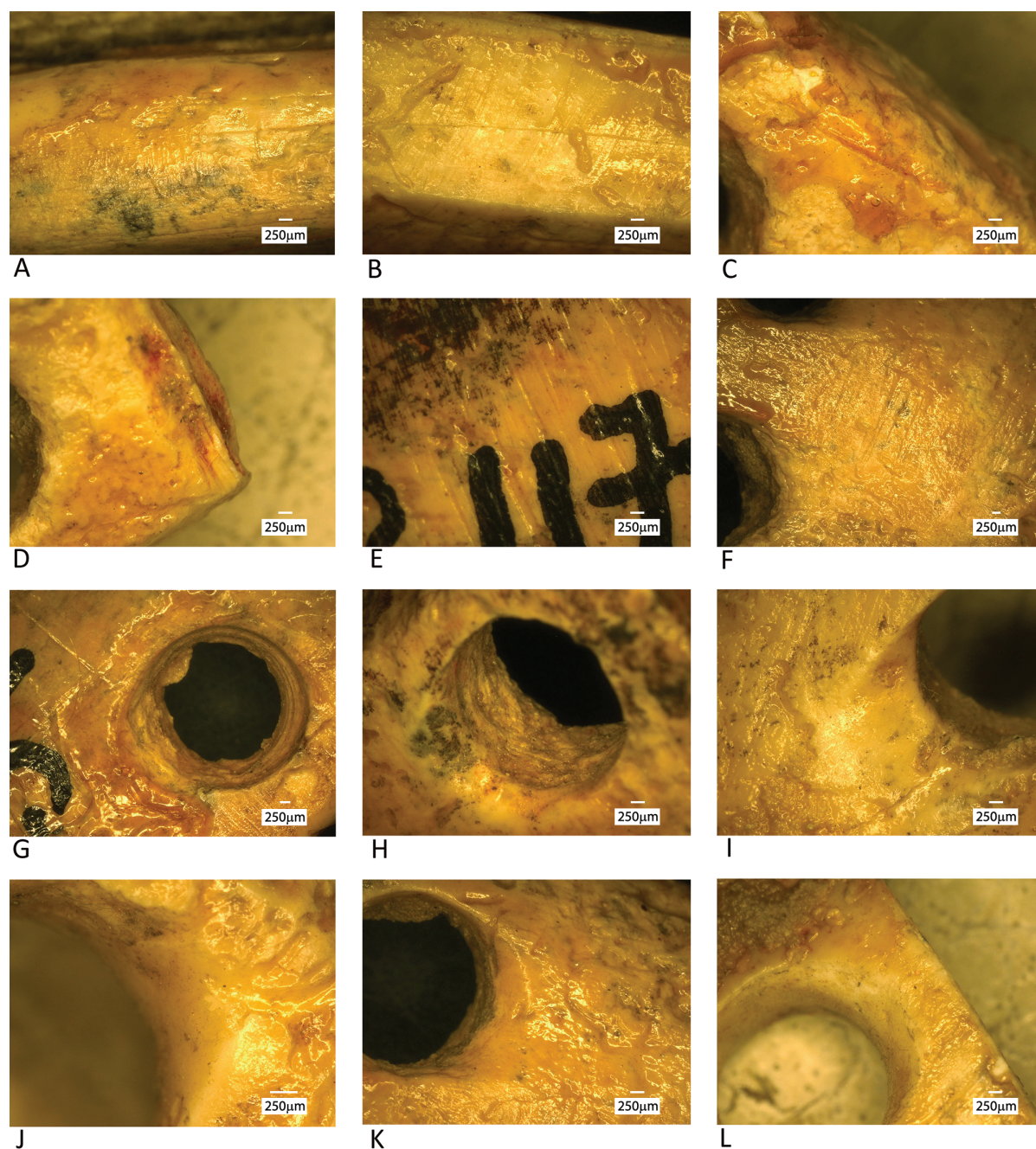


Fig. 12. A, B *shaping of the debitage edges*; C, D *sawing marks*; E, F *abrasion marks*; G, H *perforation details*; I, J, K, L *use-wear deformation at perforations level*.

dimensions are: 9mm diameter, 6.8mm length, and 6mm inner diameter.

Discussion

Spondylus valve was mainly processed into bracelets (16 items). We assume this type of adornment has a significant value since a whole valve was used for a single bracelet, in contrast to the small beads – several pieces of this type being produced from a single valve. The study of these items (regardless of their place of occurrence) proves a special unity of the technological transformational scheme, illustrating a true ‘fashion’ with regard to thin bracelets. Moreover, the existence of this fashion is confirmed by the presence of at least one bracelet in almost each grave.

The two valves composing the mollusc are different in shape and thickness (Borrello, Micheli 2004). The left valve (the upper one) is quite fine, more rounded, shaped like a lid, having small ears on each side of the ligament and a relief of prominent thorns all over its surface. On the right valve (the lower one), which is longer and thicker, concentric lamellas are developed in relief. These different morphological aspects have generated constraints and determined the selection in order to create a certain type of object. Thus, for the bracelets discovered in the necro-

polis of Chirnogi, only the left valve could be used to obtain bracelets with a round morphology, while for making beads it seems the right valve has been used (Tsuneki 1989).

A method of processing through abrasion was applied to all specimens. On the external side, the median area of the valve was removed. The valve was also abraded on the internal side in order to remove the cardinal plateau. The scratches specific to the shaping procedure are difficult to identify due to the valve structure and various forms of surface damage. Specimens with a better preserved exterior have a

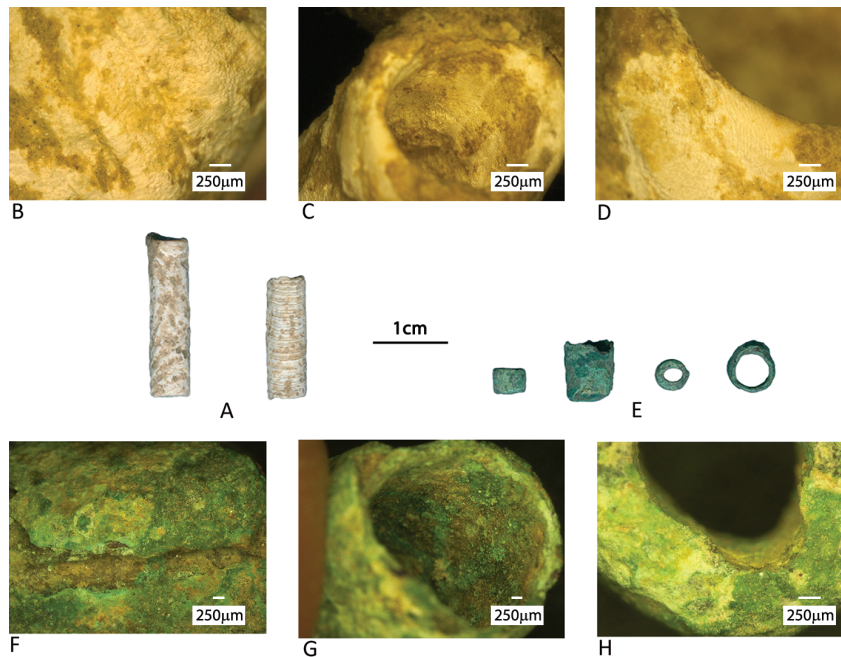


Fig. 13. A *Spondylus tubular beads (grave no. 36); B surface detail; C perforation detail; D use-wear concavity; E beads made of copper foil (grave no. 36); F overlapping area of the foil edges; G perforation detail; H deformation of perforation.*



Fig. 14. Perforated plates made of *Sus scrofa canines* (grave no. 36).

fine area to touch, with a macroscopic polish on the internal side.

The issue regarding the origin of this mollusc species has not yet been resolved. Michel L. Sэфѳіадѳs (1996; 2000; 2010) and Paul Halstead (1993) thus consider they are of Mediterranean origin, denying the existence of this species in the Black Sea. In contrast, Henrietta Todorova (2002) speaks about the possibility of a Black Sea origin. A practice often encountered with a series of prehistoric communities is that of using fossil species as well, yet the dif-

ferentiation between the living valves and the fossil ones can only be made using isotopic analyses (Shakelton, Renfrew 1970; Shakelton, Elderfield 1990; Vanhaeren et al. 2004). The studies carried out so far (Bajnóczi et al. 2013) indicate that, at the level of the European Neolithic, the used blanks were bivalves coming from the Mediterranean Sea and not from fossil deposits or from the Black Sea.

Another specific element to the Chirnogi community is the perforated plates of *Sus scrofa* canine. Again, it draws our attention to the technological scheme

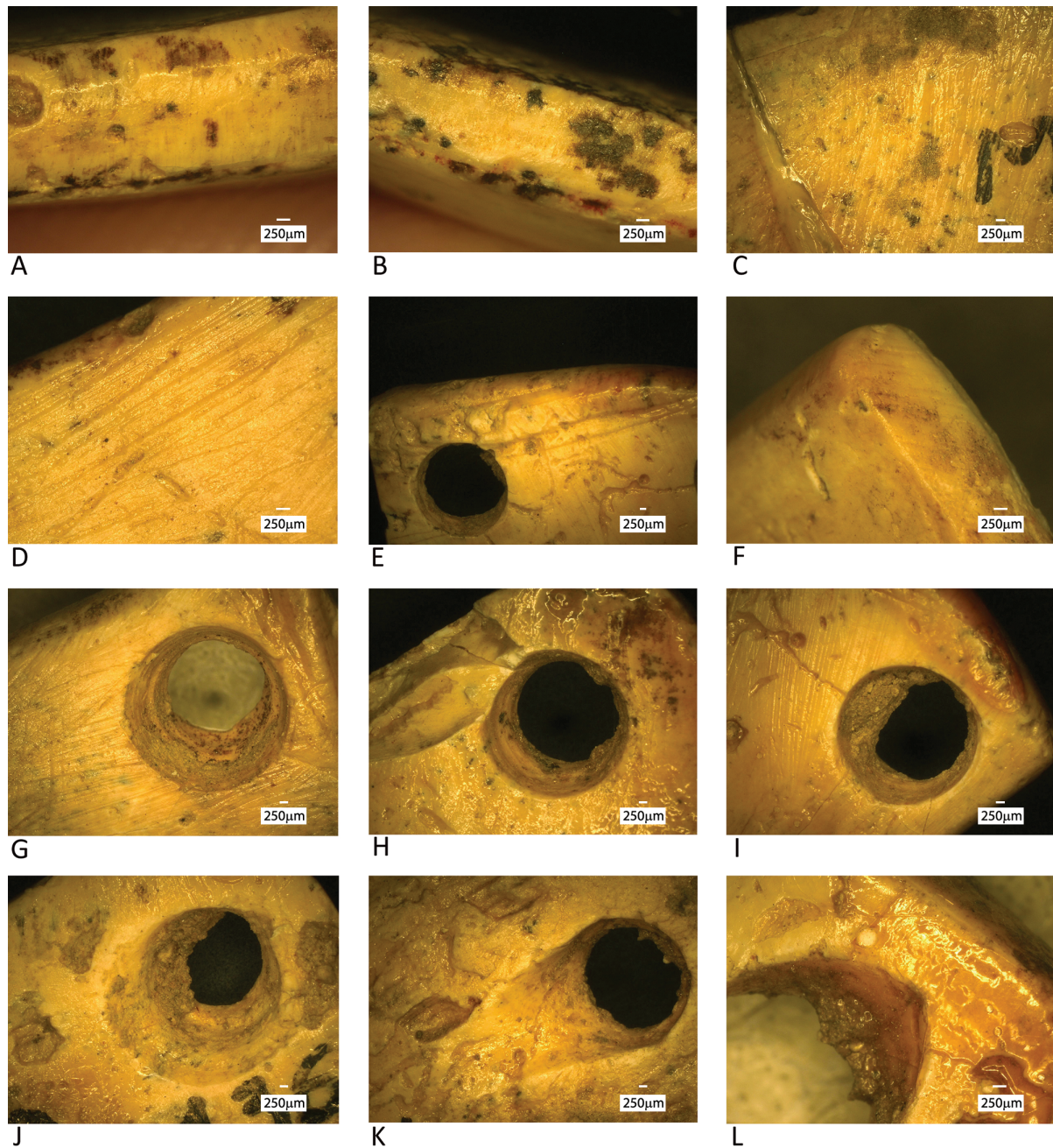


Fig. 15. A, B shaping of the debitage edges; C, D shaping or the interior side; E sawing marks; F abrasion marks; G, H, I, J perforation details; K, L use-wear deformation at perforations level.

of raw material transformation, which proves to be extremely unitary. A bipartite debitage method was used, combined with a segmentation debitage. If in the first case we could not determine the techniques, in the case of segmentation the sawing technique was used. The surface modification procedures were abrasion and scraping combined on certain items, while the only volume modification procedure was the perforation with a single technological variant: the bifacial rotation. We have identified marks that show these pieces have been worn in the form of *appliqués* sewn to the garments, before being deposited in the graves. However, the degree of use-wear is variable among items, indicating the pieces were sewn at different time intervals.

The small beads of various raw materials also illustrate similar procedures applied mainly in the shaping operation, with the execution of a bifacial rotation perforation and a fine abrasion to give the piece the desired shape. These beads were clearly worn, showing small depressions at the periphery of the perforation resulting from the gripping system. The pieces were placed on a thread in the form of necklaces.

The identification of the sources for the raw material used to create adornments is crucial because, maybe more than any other artefact category, an adornment may provide indicators in connection to the limits within which the human groups moved or in connection to their exchange networks. Being exclusively pieces from the funeral inventory, they had reached the finishing stage of their processing. Thus, in the case of plates of *Sus scrofa* canines or beads of lithic materials, bone and copper, we cannot say whether they were made

by the local community or if they reached it through exchanges. Only in the case of the *Spondylus* valve can we assume this is an import. The variables which can be invoked are those of a direct import of raw material or of the already finished pieces and, at the same time, of direct exchange or movement from group to group (*kula*-like exchanges, as those from Polynesia). The archaeological evidence supports the existence of specialized centres in the processing of *Spondylus* valves, especially on the actual territory of Greece, Montenegro, Albania and Croatia (*Séfériadès 2010*). For other territories, the rarity and importance of this valve obligated the communities to recycle the raw material in the situation of the fragmentation of the pieces – see the case of Hârșo-

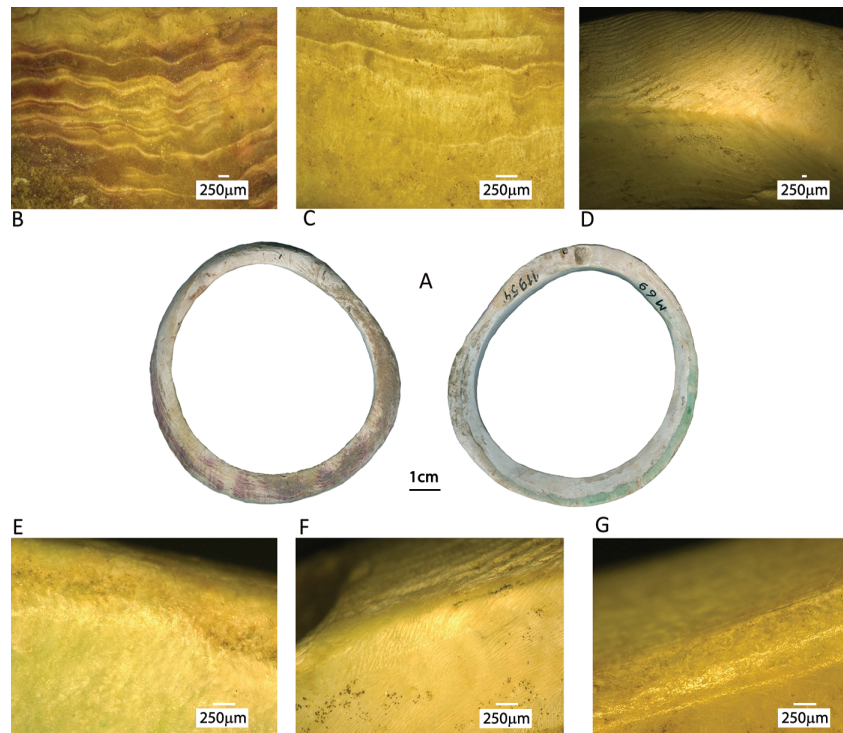


Fig. 16. A *Spondylus* bracelet (grave no. 69); B, C, D abrasion marks; E, F, G use-wear marks.

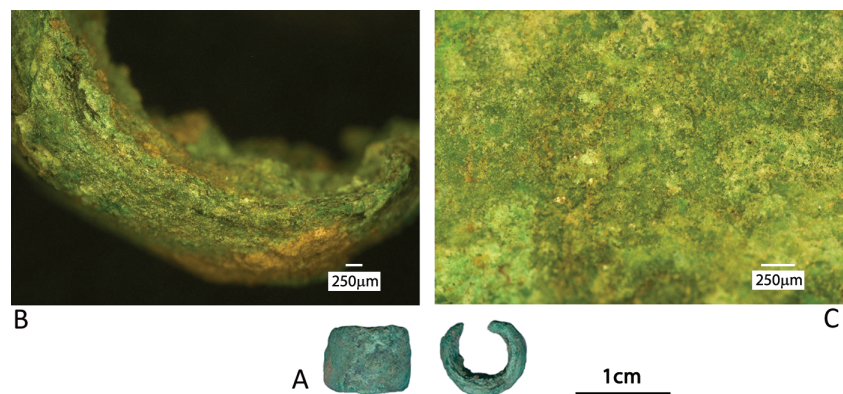


Fig. 17. A copper bead (grave no. 71); B, C surface details.

va (Romania) (*Galbenu 1963*) or Omurtag (Bulgaria) (*Gaydarska et al. 2004*). Moreover, the probable difficulty in procuring this raw material forced the Chirnogi community to imitate the ornaments of this raw material in bone, as we have seen in grave no. 7. The situation is not unique, as it is also identified in the necropolis of Sultana-Malu Roșu (*Lazăr et al. 2009*).

Following this analysis, it is clear that the assemblage has an advanced degree of use-wear, demonstrating that the artefacts were worn before their deposition in graves. The existence of use-wear marks on the specimens identified in prehistoric graves was also recorded in other studies (*e.g., Beldiman et al. 2008; Polloni 2008; Bonnardin 2009; Mărgărit, Vintilă 2015; Lazăr et al. 2018, etc.*) and it seems to be a common practice, so we cannot assume these kinds of ornaments were created for the unique purpose of being deposited in graves. Another important observation related to the studied archaeological assemblage is the variable degree of use-wear of items from the same archaeological context, *i.e.* the boar tooth perforated plates found in two graves. As we have already pointed out, the plates in *grave no. 7* have an advanced and quite unitary wear, while in

grave no. 36 the degree of use-wear varies between items, demonstrating their accumulation over the years.

This study provides us with a picture of the symbolism in the human community at Chirnogi from the second half of the 5th millennium BC, for which two types of personal adornments – the thin bracelets of *Spondylus* valve and the perforated plates of the *Scrofa scrofa* canine – seem to have been ‘prestige goods’ whose symbolism continued beyond the death of the person.

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