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FROM BLOCK TO FINISHED OBJECT. THE FUNCTION OF PERSONAL ORNAMENTS IN THE ENEOLITHIC SETTLEMENT OF HÂRŞOVA-*TELL* (JUDEȚUL CONSTANȚA, ROMANIA)

ABSTRACT

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From the settlement of Hârşova-*tell* comes a series of personal ornaments made of various raw materials, in different processing stages, from entire bivalve shells and bones, simply perforated, through irregular fragments to finished beads. The material we studied has been attributed to the Gumelnița culture (the second half of the 5th millennium B.C.). The aim of the present inquiry is to reconstruct the processes of raw material acquisition, production, use and discarding, to understand how the beads were produced and interpret their possible social and symbolic significance.

Key words: South-eastern Romania; Eneolithic; Gumelnița culture; personal ornaments; raw materials; processing techniques

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INTRODUCTION

The history of personal ornaments goes as far back in time as the history of modern man as shown by the archaeological record on the first *Homo sapiens* in Africa — marine shell beads discovered in Blombos Cave (South Africa) in a layer dated to approximately 75,000 BP (d'Errico et al. 2005) or the perforated marine shells from Grotte des Pigeons (Taforalt, Morocco) dated by thermoluminescence and uranium to 82,000 BP (Bouzouggar et al. 2007)[1]. These artefacts increase in number in later periods of prehistory and during the Neo-Eneolithic they are represented by an exceptional diversity of forms and raw materials. Ornaments recovered on the European continent have been analyzed in detail, starting from methods of raw material acquisition, manufacturing techniques, the ways of using the ornaments through to their dis-

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posal after breakage or repairs made to them and subsequent reuse (Bonnardin 2006; 2009; Chapman, Gaydarska 2007; Chapman, Gaydarska, Slavchev 2008; Choyke 2001; Dimitrijević, Tripković 2006; Gaydarska et al. 2004; Ifantidis 2004; Ifantidis, Nikolaidou [eds.] 2011; Laporte 2009; Louboutin 2008; Miller 2003; Nikolaidou 2003; Polloni 2005–2008; Ricou, Esnard 2000; Séfèriadès 1995; 2010; Skeates 2010; Thomas 2011; Todorova 2000; 2002; Vitezović 2012, etc.). Regrettably, despite their archaeological potential similar Neo-Eneolithic finds from Romania are much less well studied, some of the contributions now no longer fresh (Comşa 1973; Galbenu 1963) and only a small number of studies made using up-to-date methodology (Beldiman 1999; 2007; Beldiman, Sztancs 2005; Beldiman, Lazăr, Sztancs 2008 etc.).

Ornaments had many uses: they played a central role in the affirmation of identity being visual signs of membership in a community, social class, sex or age group (Preston-Whyte 1994; Sciama, Eicher [eds.] 1998; Siklosi 2004; Trubitt 2003; Vanhaeren 2005; White, Beaudry 2009 etc.). Thus, depending on context, they communicated a different message about their wearers. In general, it seems that the principal need that ornaments were meant to satisfy was that of "individualization"; this is suggested by their material — teeth and shells, that were predominantly used, comes from rare animal species not likely to have been harvested as a staple food source. Given this multitude of meanings, special emphasis has been laid on the remarkable importance of the ornament in the reconstruction of social structures within the prehistoric communities, the identification of geographic boundaries and, implicitly, the exchange system practiced (Newell 1990; Rigaud 2011; Sciama 1998; Séfèriadès 1995; 2010; Taborin 1993; Trubitt 2003; Vanhaeren, d'Erico 2006, etc.). Following the above-mentioned facts, the polysemantic character of personal ornaments becomes evident, but, passing from a general to a more specific level, their study also furnishes information on technical and economic aspects proper to a given human group. The economic aspects include issues such as the means of raw material acquisition whereas technical aspects have to do with the identification of traces left by the processing techniques and their integration in the operational sequence. An essential element of this type of study is identifying the production waste because, until now, the multitude of data contained therein has not been taken into account. If there is no production waste there are two possible explanations: either this absence reflects the archaeological reality (the pieces were made outside and brought to the site as ready forms or resulted from exchange between different communities), or sampling techniques used during archaeological excavation to recover different categories of material are at fault. The sorting of all the elements of an operational sequence — waste, preforms and finished objects — provides the key to the analytical decryption of the manu-

facturing methods and techniques, to reassembling and even of gestures and intentions, in other words, the savoir-faire and, why not, eventually, even the identification of the ethnical originality (Terssac 1990).

HÂRŞOVA-*TELL*: SITE, SAMPLER

The *tell* at Hârşova (judeţul Constanţa) lies in south-eastern Romania within the modern city, near the river Danube (Fig. 1–2), rising to approximately 13 m, its surface area 200 × 150 m and the culture deposit of over 12 m (see Fig. 3). As regards the levels of prehistoric habitation, the oldest vestiges belong to the Boian and Hamangia cultures (the first half of the 5th millennium B.C.), continuing with those of Gumelniţa cultures (the second half of the 5th millennium B.C.) and Cernavoda I (the beginning of the 4th millennium B.C.; *cf.* Galbenu 1962; Popovici et al. 1992; Popovici, Rialland 1996).

Starting with 1993, when the digging strategy was fundamentally modified, the testing of the informational level of the different types of stratigraphic units (SU) discovered during the research was initiated, so that a sampler strategy should be developed tailored to the research goals but also to the existing technical and financial possibilities (Popovici et al. 1998–2000; Randoin, Popovici, Rialland 1998–2000). Needless to say, excavating a *tell* is extremely difficult given its complicated stratigraphy which is the

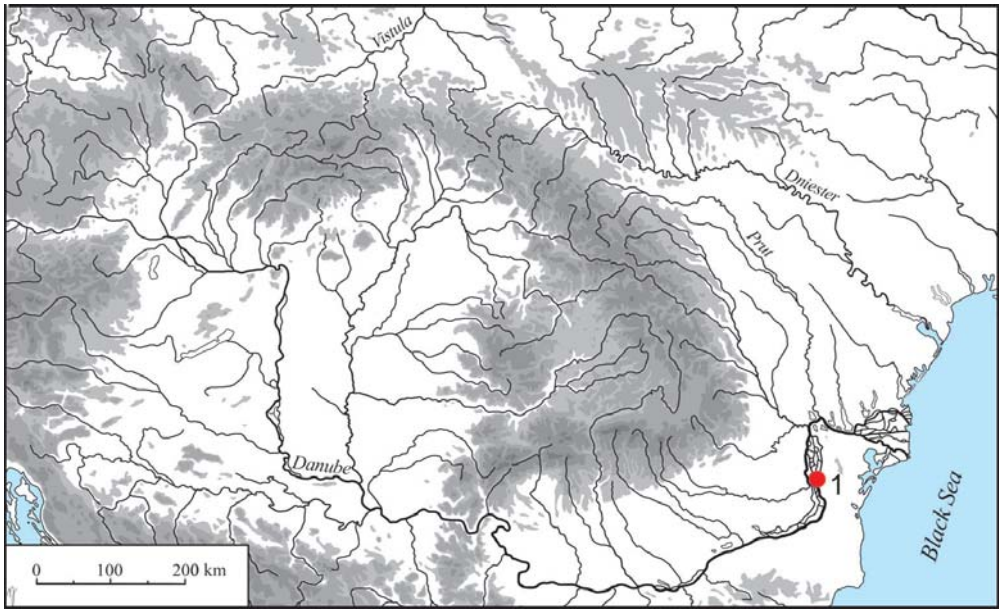

Fig. 1. Location of the site; drawn by I. Jordan and P. Jarosz.

1 — Hârşova-*tell*, judeţul Constanţa, Romania.

Fig. 2. Hârşova-*tell*, judeţul Constanţa, Romania. A general view of the site; Photo by Dr. N. Popovici.

result of multiple episodes of habitation. The strategy used at Hârşova was to evaluate the content of different SUs, understood to represent individual occupational episodes, that were either interior (rarely), or exterior. Only in special situations (occupational SU from inside the dwellings, rests due to the use of the combustion structures etc.), sediment from other contexts was subject to sieving. Samples were mainly screened in columns of sieves, under spurts of water, with the purpose of obtaining significant data.

Given the conditions in which the sieving of the different types of sediments focused mostly on areas of domestic waste (the type of complex defined for the first time during the archaeological researches in this site), the discovery of ornamental objects presented in our study, mainly in these contexts is explainable and, at the same time, the obtained image can be suspected of being disproportionate or somehow different from reality.

Our study addresses a group of ornaments attributed to the Gumelniţa culture, phase A2, not very large but quite heterogeneous, both in their raw material and manufacturing techniques. One of the aims of our research was to gain a better understanding of problems of economic nature, such as the means of obtaining the raw materials. Thus, we sorted the finds into four

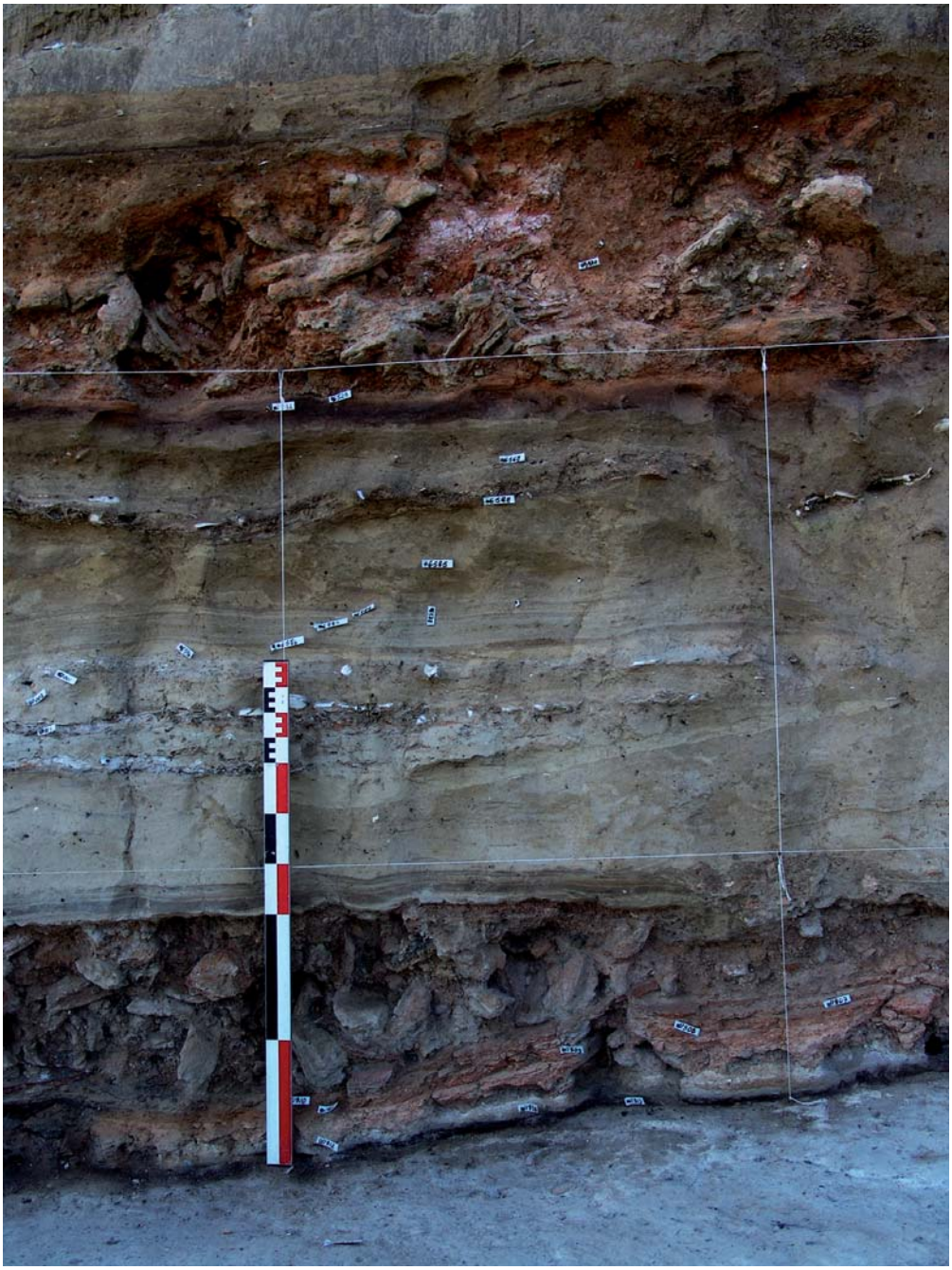

Fig. 3. Hârşova-*tell*, judeţul Constanţa, Romania. Western Profile;
Photo by Dr. N. Popovici.

groups, by their raw material additionally using typological categories corresponding to their degree of modification of their original morphology: bivalves (*Cardium, Unio, Spondylus*), scaphopods (*Dentalium*), fish opercules and mammal bone.

RESULTS

Bivalves

Cardium

In the settlement of Hârşova-*tell*, we identified eighteen perforated *Cardium* shells (Fig. 4:a). It is significant that fifteen of them have a similar archaeological context, a habitation level, suggesting they belonged to a necklace or that the area was a special place used for manufacturing beads.

All these pieces were perforated in the area of the umbo, this being the only intervention on the natural morphology of the shell. In the case of two pieces, abrasion was used (Fig. 4:d), in order to thin the surface for perforation. Around the opening, a level surface covered with fine parallel scratches can be seen, the form of the perforation depending on the form of the worked surface (Fig. 4:e). With the others, percussion was used and its marks are obvious. The punctual indirect percussion produced perforations of a sub-circular outline (Fig. 4:b), roughly irregular or with a bilobate outline (Fig. 4:c), when two working planes were used. The edges of the perforations present an irregular aspect, with numerous fissures starting from the impact point. At one side of the pieces, the microscopic study shows a wall usage, towards the superior area of the perforation, where the percussion marks attenuated (Fig. 4:f). Thus, we can assume that this was the area affected by the friction from the affixation thread.

At Hârşova-*tell*, the presence of marine *Cardium* shells seems connected exclusively to the production of ornaments (Bălăşescu, Radu, Moise 2005). It may be the result either of exchange, or from expeditions organized for collecting, given the fact that the Black Sea is not too far away from the *tell*.

Beads made from *Unio* sp. shell

The recovered series of *Unio* sp. shells includes pieces in different stages of transformation, from entire shells, simply perforated, and irregular splinters, to finished beads, used as personal ornaments. For the first stage of the transformation process, we identified three entire shells, perforated approximately in the same place, where the shell is thicker (Fig. 5:a). The next stage consisted of bending the piece around the perforation, closer and closer, giving these pieces a sub-rectangular form (Fig. 5:b). With one of them, a starting point for perforation, by drilling (Fig. 5:c) is obvious only from the inner face,

Fig. 4. Hârşova-*tell*, judeţul Constanţa, Romania; Photo by M. Mărgărit.
a — perforated valves from *Cardium*; b, c — indirect percussion (50×); d — abrasion (50×); e — detail of the perforation by abrasion (100×); f — wall usage, towards the superior area of the perforation (200×).

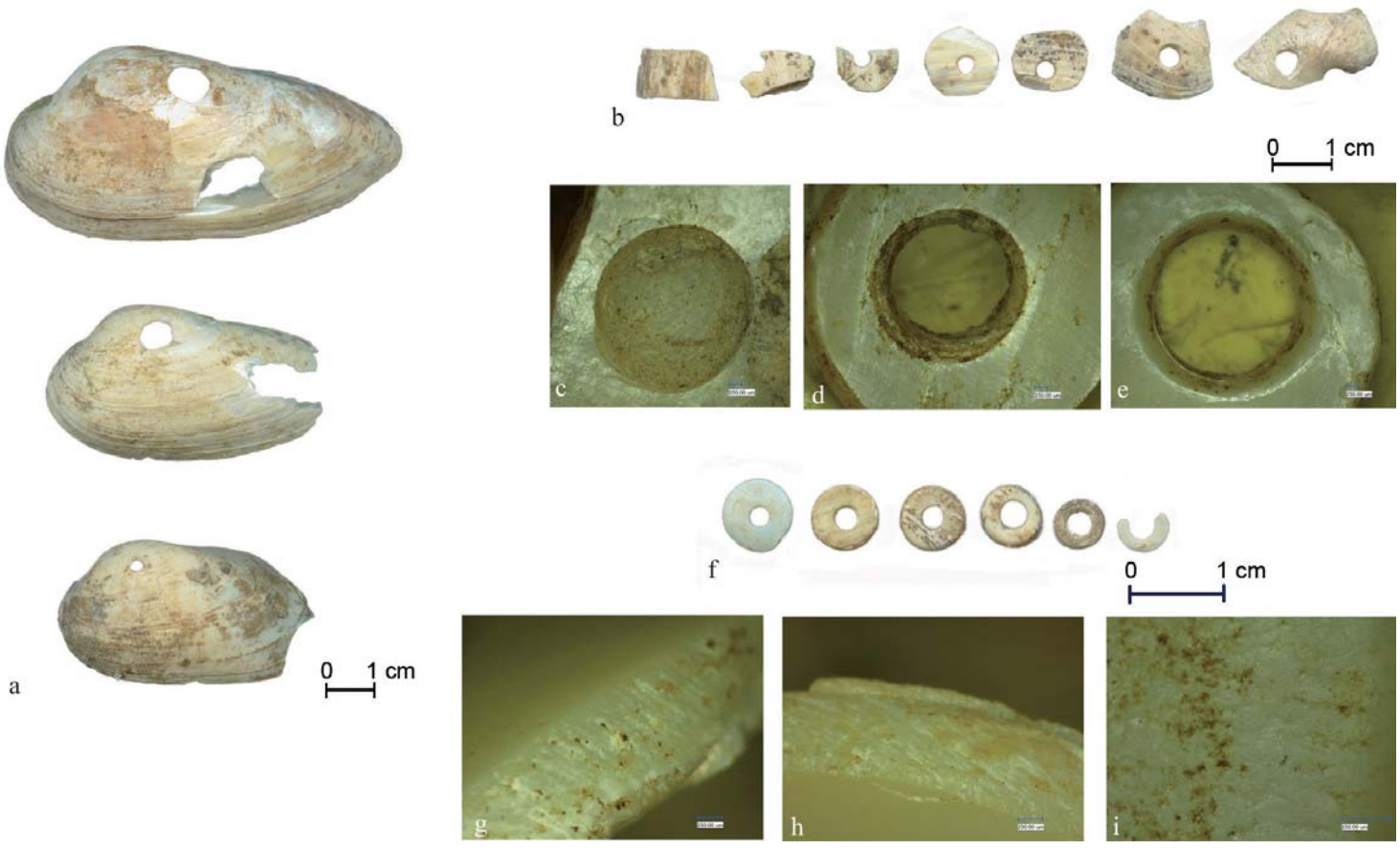

Fig. 5. Hârşova-*tell*, judeţul Constanţa, Romania; Photo by M. Mărgărit.

a — First stage (entire valves, perforated right under umbo); b — Second stage (bending the piece around the perforation); c–e — Perforation by rotation (50×); f — Last stage (shaping the piece circumference, through abrasion); g–i — Abrasion of the edges and of the superior side (150×).

which was not completed, but which allows us to distinguish clearly the perforation technique.

We attributed a set of finished pieces (Fig. 5:f), of circular section and with a central perforation (Fig. 5:c–e), to the last stage. The execution technique, for the final stage, consisted of shaping the circumference of the ornament, by abrasion, in order to give the edges a circular morphology (Fig. 5:g–h). In some specimens the abrasion was also applied to the upper face, in order to thin the piece (Fig. 5:i). Their dimensions are fairly uniform indicating that effort was made to achieve standardized specimens, used in composite ornaments. Most of the pieces were recovered from layers containing domestic waste or layers of backfill, suggesting they had been dropped possibly as a result of some mishap (the string broke, or some of the component parts broke, they had lost significance, etc.) of the composite piece to which they belonged.

In this case, we interpreted the resource as local, obtained as a by-product of the gathering process. Among the food waste products from the settlement of Hârşova-*tell*, the *Unio* sp. shells are well-represented quantitatively, their nutritional contribution being quite substantial. Moreover, a surplus which exceeded far the immediate needs of the community was documented (B ă l ă ş e s c u, R a d u, M o i s e 2005).

Tubular beads made from *Spondylus* sp. shell

The assemblage recovered at Hârşova-*tell* includes five beads made of *Spondylus* shell, transformed so that they could be suspended (Fig. 6:a–c). These pieces have a straight profile, their section circular, the extremities are horizontal, slightly oblique, the edges parallel rectilinear, (4) and convex (1). The preforms of the future beads were obtained by both a longitudinal and transversal debitage. At the same time we cannot identify the debitage technique conclusively, due to the final, extremely fine polishing (Fig. 6:g), with the exception of a single specimen: a process of thinning the extremities by small cutting around the entire circumference (Fig. 6:d). The perforations are, in four cases, perfectly cylindrical, suggesting that the perforation was made from both sides, carefully regularized, so we could not identify internal scratches typical of a rotation action (Fig. 6:e). Only in a single case were we able to observe a conical perforation, which suggests that it was made from one side. The morphology of extremities presents, with two of the pieces, a concave aspect. Moreover, the concave extremity seems to correspond, in length, to a flattened and fine surface. We can assume that this is the area affected by use-wear (Fig. 6:f).

Regarding the archaeological context, all the pieces come from a waste product area. The origin of the *Spondylus gaederopus* shells is not local and, for the Neo-Eneolithic, this raw material has strong symbolic connotations.

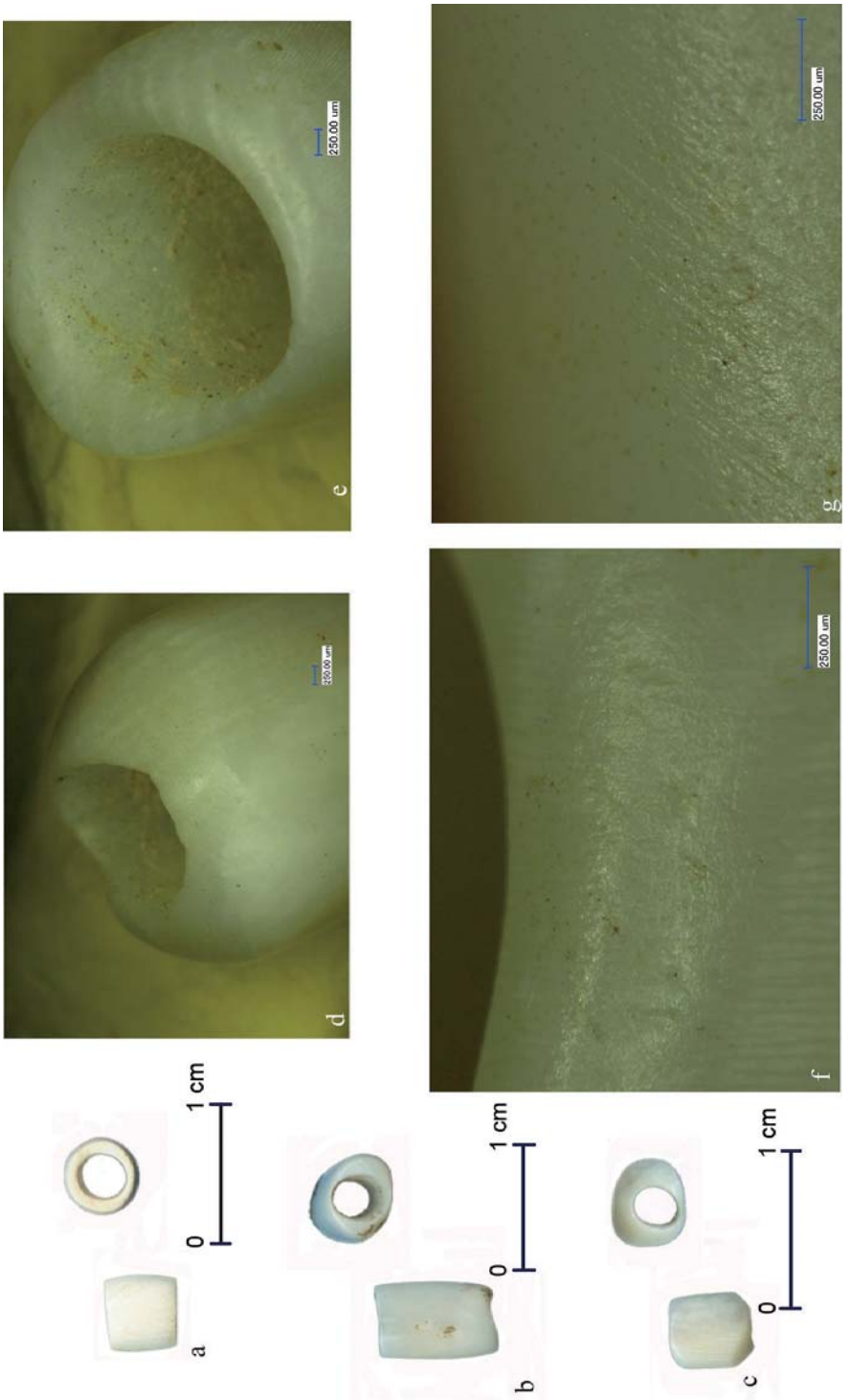

Fig. 6. Hârşova-*tell*, judeţul Constanţa, Romania; Photo by M. Mărgărit.
a–c — beads made of *Spondylus* valve; d — process of thinning the extremities by cutting (50×); e — extremity with a concave aspect (50×); f — concave extremity (200×); g — polishing of the support (200×).

Scaphopods

Dentalium shells

Two fragments of *Dentalium* shell were recovered, made ready for suspension (Fig. 7:a–b). Entire *Dentalium* shells, gathered from the beach, have a conical form, relatively strongly curved. The unfractured extremities have a sharp and pointed edge. However, neither specimen retained its natural extremity and their profile is no longer as curved, as a result of segmentation. A second characteristic element of these specimens is the abrasion on a rough surface, that blurred the specific longitudinal protuberances (ribs), but also a part of the marks of the fracturing action (Fig. 7:c).

Two fracturing techniques were observed on these pieces: bending (Fig. 7:e–f) and sawing. Each of these types creates a different morphology of the edges. Fine scratches, produced by the side-slip of the tool during sawing, often appear near the extremity. We were able to identify such a mark by microscopic study (Fig. 7:d).

As regards the archaeological context, one of the *Dentalium* finds surfaced in an area of domestic waste and the other from a burnt down dwelling (as a matter of fact, the piece is also burned black). The presence of these pieces raises, as in the case of the *Spondylus* ones, the issue of some imports.

Opercula

Beads made of *Cyprinus carpio* operculum

We have identified a series of 23 beads made of *Cyprinus carpio* operculum, in different stages of transformation. Two of these (Fig. 8:a) are in the first stage of working: the operculum was flexed around the entire circumference, conferring a sub-circular morphology. During the second stage (three specimens; *cf.* Fig. 8:b) a central perforation was made, by drilling, from the internal side, without previous working of the surface (Fig. 8:e–f). In the next stage (four specimens) the edges started to be evened out using abrasion which conferred a sub-circular aspect to the pieces, without the pieces having reached the final working stage (Fig. 8:c).

Finally, in the last stage the entire abrasion of the fracture edges, around the circumference, was accomplished, giving a circular shape of the piece (Fig. 8:d). In this stage we inventoried 14 pieces. The fact that they reached the final processing stage is also proved by similarity of their diameter (5–7 cm), thickness (1–2 cm) and the perforation diameter (2–3 mm). The microscopic study showed that, for this stage, in some cases, not only the fracture edges (Fig. 8:g), but also the surface of these pieces was evened out (Fig. 8:h).

All the *Cyprinus carpio* operculum beads, regardless of their processing stage, surfaced in areas of waste products. The origin of these raw materials

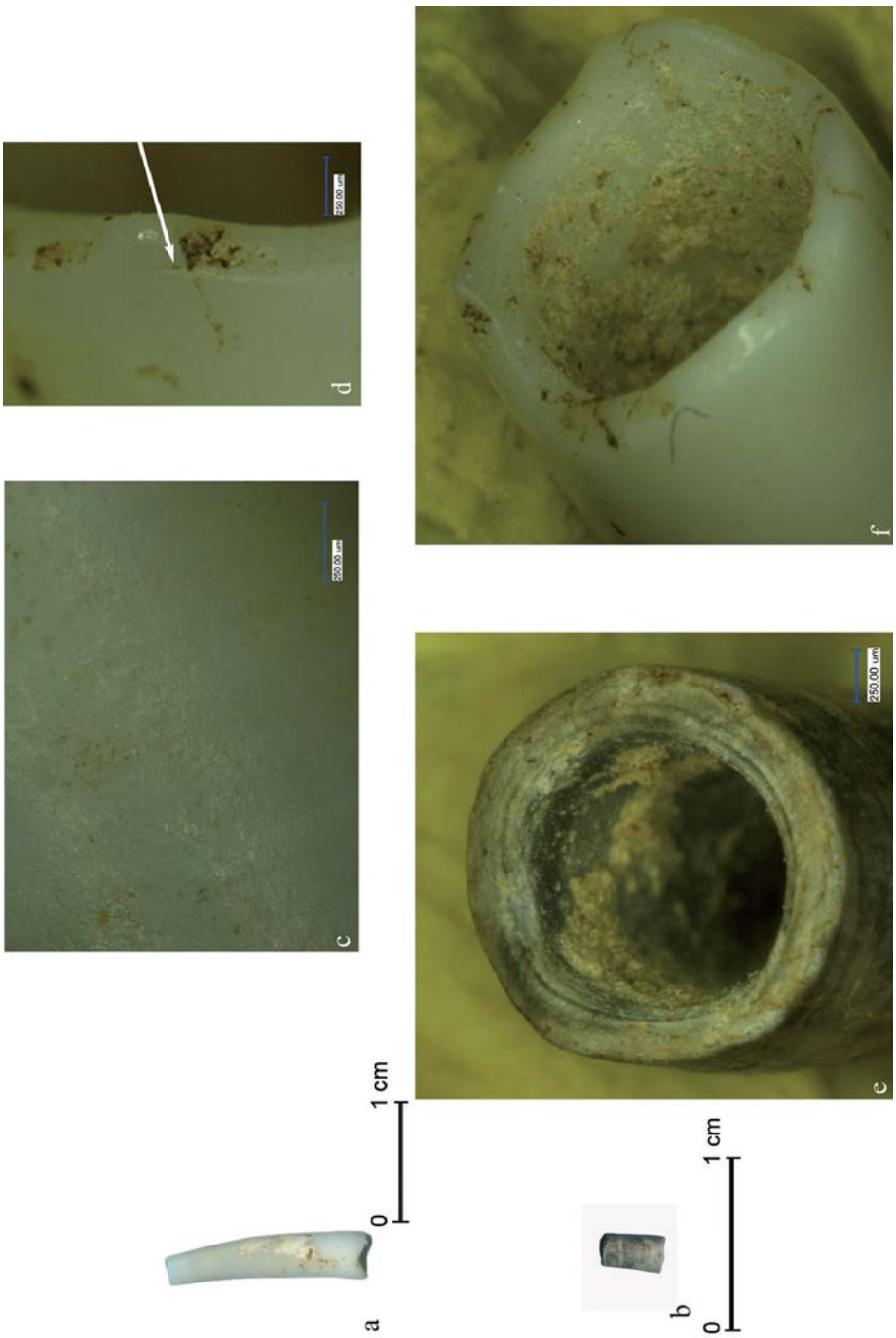

Fig. 7. Hârşova-*tell*, judeţul Constanţa, Romania; Photo by M. Mărgărit.

a–b — fragments of *Dentalium*; c — abrasion of the surface (200×); d — mark of the sawing (100×); e, f — fracturing tecnique by bending (100×).

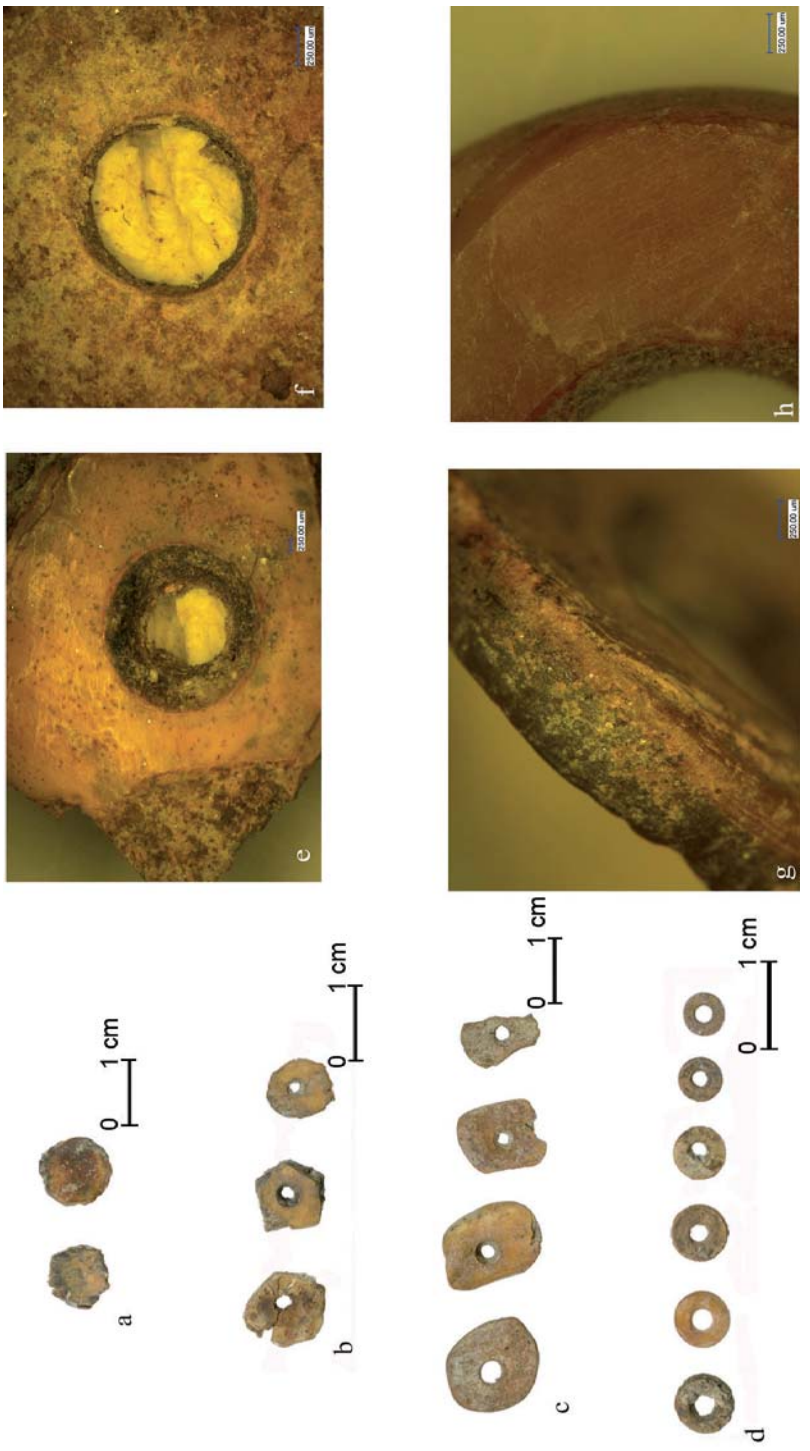

Fig. 8. Hârşova-*tell*, judeţul Constanţa, Romania; Photo by M. Mărgărit.
a–d — different stages of transformation for the *Cyprinus carpio* operculum; e, f — perforation by circular rotation (30×); g — abrasion of the edges (100×); h — abrasion of the surface (100×).

is, obviously, local, as carp was a staple food resource (Bălăşescu, Radu, Moise 2005).

Bones

Tubular beads

From the settlement of Hârşova-*tell* comes a series of tubular beads, made of bone, which could represent ornamental elements (Fig. 9:a). They were made of bone diaphysis of a small/medium sized mammal. The epiphyses were removed by sawing, its marks still obvious, formed mostly when the tool slipped (Fig. 9:c–d). The debitage method consisted of sawing around the entire circumference, rotating the piece, followed in the end by flexing. Moreover, we have a possible debitage waste, the epiphysis of a metapod, detached by the same sawing technique (Fig. 9:b). The debitage surfaces were subsequently shaped to make them more even, but only in two cases that we have interpreted as products from the final processing stage (Fig. 9:e).

In some areas, the interior wall presents a *lisse* aspect, with obvious concentric micro-scratches, that can be considered the result of friction with a thread (Fig. 9:f–g).Two pieces originate from the inhabiting area and the other two from an area of domestic waste.

Circular beads

This category includes seventeen bone beads (Fig. 10:a). All of them have a straight profile, parallel edges, slightly oblique extremities. We were not able to identify exactly the debitage technique, due to the abrasion of the entire surface, which had obliterated the marks of the earlier working (Fig. 10:b–c). The perforation was made by drilling, usually from two sides (Fig. 10:e–f).

We have five pieces in which the uniformity of the dimensions (thickness — 1 mm, diameter — 4 mm, perforation diameter — 2 mm) and shaping extent reflect, with certainty, serial manufacturing modalities (Fig. 10:d). The making of these extremely fine beads, with a thickness of only 1 mm, illustrates substantial skill and a long time dedicated to their manufacturing. Unfortunately, as they were strongly burned, we cannot identify the marks of the manufacturing techniques. In this case the existence of specialization is evident.

Almost all of the circular bone beads surfaced in an area of domestic waste, except for the five specimens recovered from a burnt down dwelling (SL 58), a fact that confirms that they belonged to a single composite piece.

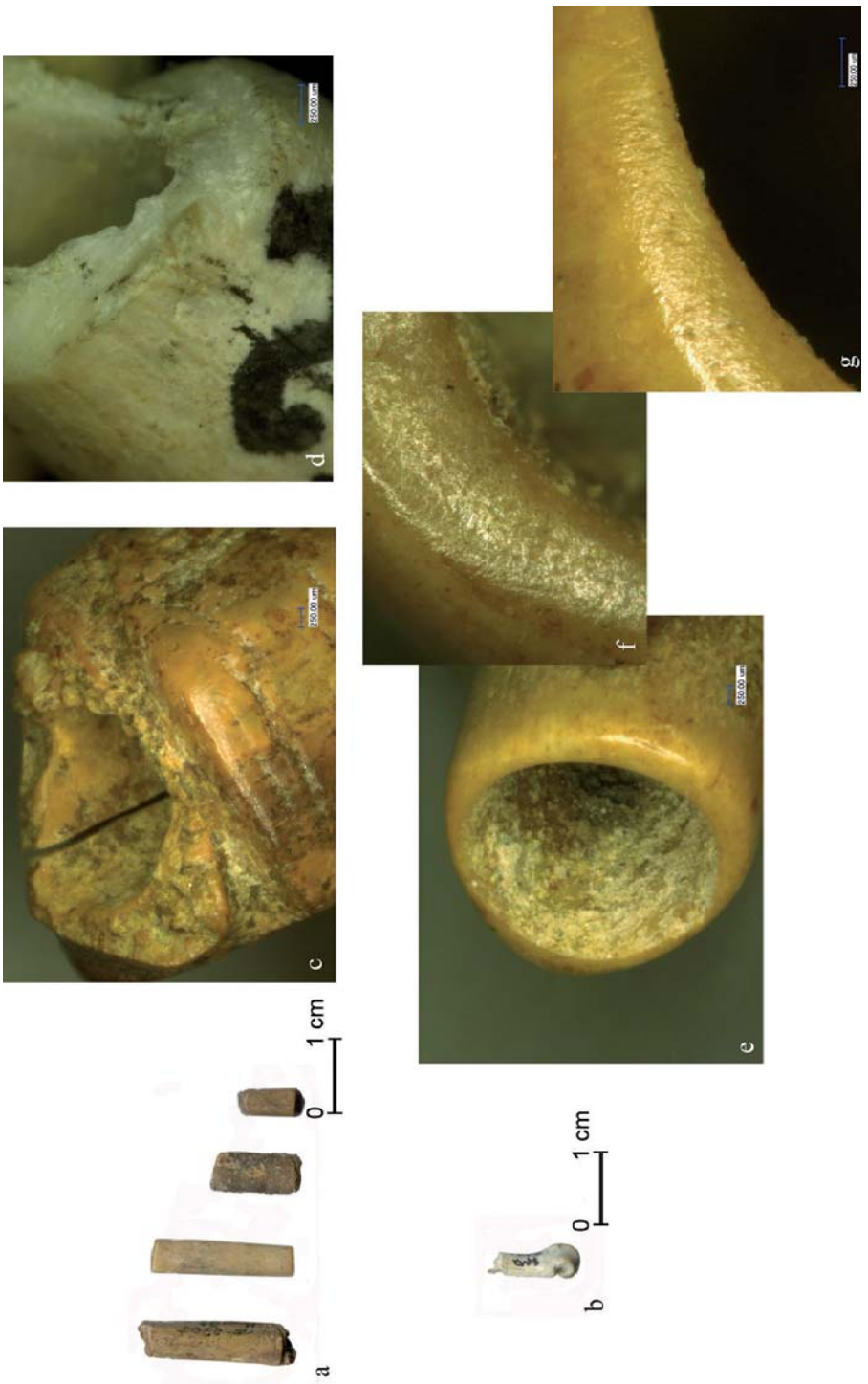

Fig. 9. Hârşova-*tell*, judeţul Constanţa, Romania; Photo by M. Mărgărit.

a — tubular beads made of bone; b — waste of debitage; c, d — marks of the sawing technique (30×); e — extremity with a shaping surface (50×); f, g — extremities with the wear traces (100×).

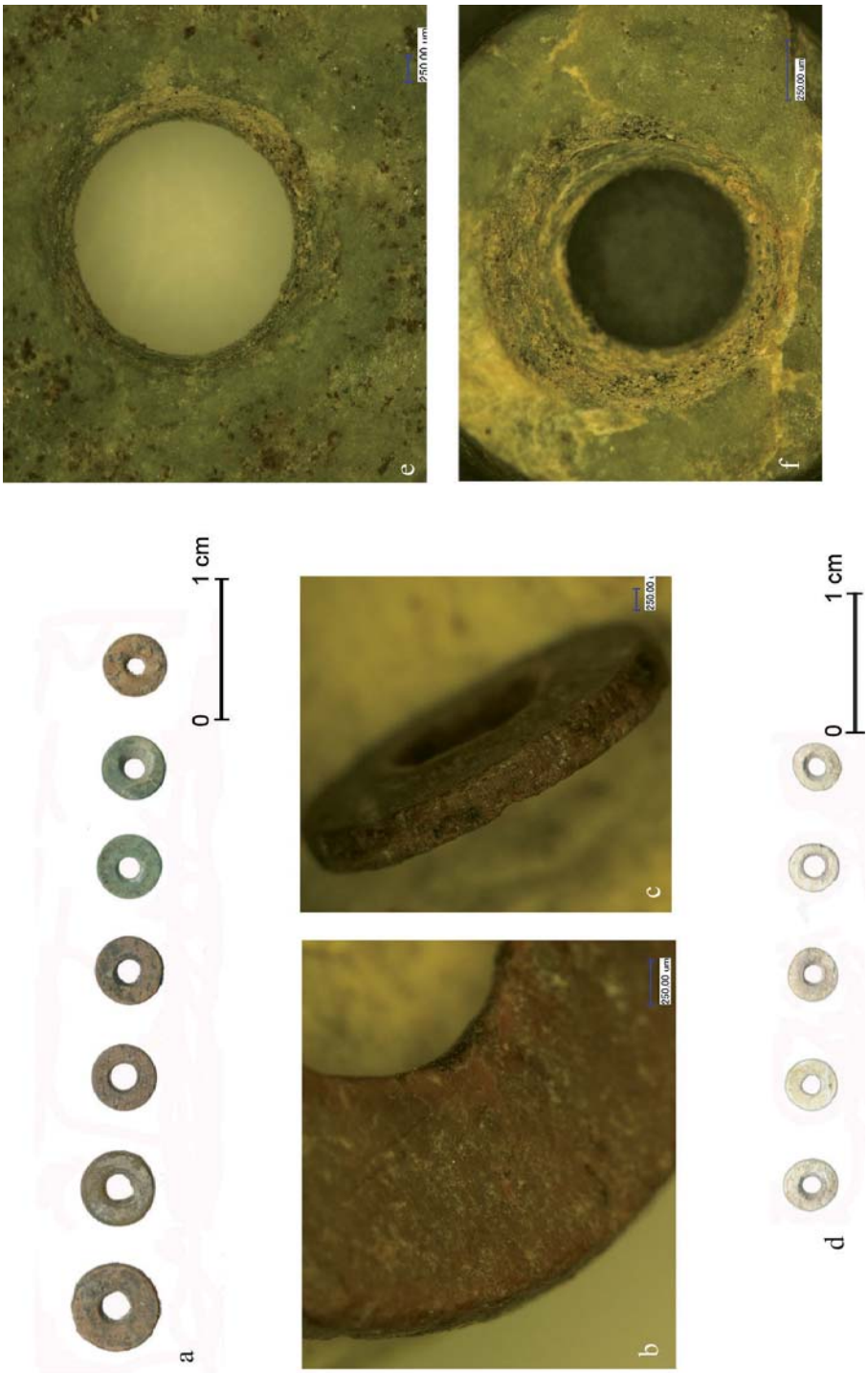

Fig. 10. Hârşova-*tell*, judeţul Constanţa, Romania; Photo by M. Mărgărit.

a, d — circular beads of bone; b, c — abrasion of the edges and the surface (50×; 30×); e, f — perforations by rotation (30×, 50×).

DISCUSSION

The raw material

According to ethnological observations traditional societies use, for ornamental objects, a great diversity of blanks, excelling those used in the subsistence activities (for instance, *Cardium* and *Dentalium* were not used for consumption, their presence in the settlement of Hârşova-*tell* is connected exclusively to the ornaments). These blanks are not chosen at random, each is charged with different symbolic connotations. It is difficult to reconstruct the symbolic context in which the prehistoric human group from Hârşova-*tell* selected their resources, depending on one of the many messages the ornament may convey, as shown at the beginning of this article. For the Hârşova community, it is only the exotic raw materials that may provide, starting from their limited number, some clues regarding possible membership of the owners to a specific social, age or gender category.

Table 1

Correlation between types of ornaments and raw materials used

No.	Ornament type	Raw material	Method of procurement	Nutritional value
1.	Unworked	*Cardium* sp.	Gathering or exchange	No
2.	Circular beads	*Unio* sp.	Gathering	Yes
		Bone	By-product of hunting	Yes
		Cyprinus carpio operculum	By-product of fishing	Yes
3.	Tubular beads	*Spondylus* sp.	Exchange	No
		Dentalium sp.	Exchange	No
		Bone	By-product of hunting	Yes

For the settlement of Hârşova-*tell*, according to the table above, there were three normal means of obtaining these raw materials:
— Gathering (*Unio* sp., *Cardium* sp.(?);
— By-product of hunting and fishing (bone, operculum);
— Exchange (*Cardium* sp. (?), *Spondylus* sp., *Dentalium* sp).

As regards the origin of the *Dentalium* shells specialists cannot agree as to their provenience (Bălăşescu, Radu 2004) — the Black Sea or the Mediterranean Sea — but, if their Mediterranean origin is confirm we will have definite proof of intercommunity exchange. Shells of *Spondylus gaederopus* also raise discussions as to their origin: M. Séfèriadès (1995; 2010) at-

tributes a Mediterranean origin to them, denying the existence of this species in the Black Sea. H. Todorova (2002) has argued otherwise. The use of fossil shells is another problem (this is a practice confirmed in some prehistoric communities), but shell harvested from living molluscs can be distinguished from fossil shell only by isotopic analysis (Shakelton, Elderfield 1990). These studies suggest that bivalves from the Mediterranean Sea were used instead of fossil deposits or from the Black Sea. Anyway, it would be interesting to determine whether unworked shells were imported finished pieces and whether the exchange was accomplished directly or from group to group (as in type *kula* exchange known from Polynesia). M. Séfèriadès (2010) has argued that during the European Neolithic objects made of *Spondylus* shell were manufactured in coastal centres on the Aegean and the Adriatic seas, especially on the present territory of Greece, Montenegro, Albania and Croatia. As for the *Cardium* shells, their presence on the Black Sea coast suggests they may have been obtained by the community of Hârşova-*tell* either by gathering expeditions or by direct or indirect exchange.

The Greek Neolithic discoveries raised the possibility that the selection of the raw material could express some differentiation dictated by the gender of the wearer. Thus, the use of the *Dentalium* shells was associated with the male gender and those of *Cypraea* with the feminine gender (Nikolaidou 2003). In Neolithic finds made in France pieces fashioned from *Spondylus* were discovered only in a funerary context. Even in the Neolithic settlements from Switzerland the same preference for mollusc species from the Mediterranean Sea and the Atlantic, with the predominance of the *Dentalium, Spondylus* and *Cardium* (Ramseyer 1995), was highlighted. This casuistry shows a variability that can be explained only by possible symbolic value of both the type of ornament and /or the resource from which it was made.

Technical transformation scheme

The studied ornaments may be classified into two categories: specimens fashioned from unworked raw material (shells or fragments of perforated bones whose morphology is recognizable) and specimens obtained by working the material (beads made of *Spondylus*, *Unio* or of bone).

Processing a shell by abrasion or making a perforation in it to fashion it into an ornament requires only a few minutes and a single tool (an abrasive stone or a drill, depending on the context), whereas, for a tubular bead made of *Spondylus*, the stages are far more complex, starting with the extraction of a support from a large mollusc shell, to the perforation from one side to another of an element which, by its length, can break the tip of the drill. It is what S. Bonnardin (2006) named the invested production (complex) and the uninvested production (simple). The fact that both are present in the set-

tlement of Hârşova-*tell* proves that they do not exclude each other; on the contrary, they can reunite in order to serve a unique intention, that of producing ornamental objects.

The manufacturing of these objects centred around four technological stages:
— debitage — obtaining the blank of the future object,
— shaping — to produce the perform of the future object,
— perforation — that allows us to diagnose a piece as an ornamental object,
— finishing — aimed on, mainly, processing the raw material for aesthetic purposes.

As an observation, in the shaping stage, for the abrasion of the pieces, the techniques aim either for the separate abrasion of each pieces, or for the abrasion in assemblage, confirmed at Hârşova-*tell* by the five bone beads with identical dimensions. At Marolles-sur-Seine (Neolithic, France), it was proved that these series of beads were obtained using an abrasive stone with a groove having a ditch modelled, in which they fixed the beads that were to be shaped, caught on a thread, stones discovered in association with ornaments, in the manufacturing course, in the lateral hollow of a dwelling (Bonnardin 1995). On the other hand, at Ponthezières and Perroche (France), both Neolithic settlements, uniform series of beads apparently were obtained by threading, the disposal on an abrasive boulder serving as an anvil, and through polishing by longitudinal movements, with a small rubber stone so that they acquired a strongly concave aspect (Ricou, Esnard 2000).

Archaeological context

As regards the archaeological context, we can ascertain that 66 pieces (77.65%) out of a total analysed in the present study were discovered in areas of waste products or exterior habitation SU, the rest was associated with some habitation features. Of course, this situation may be due, to a great extent, to the sampling method used during the excavation, as already mentioned, i.e. the sieving, with preponderance, of the sediment obtained from levels of exterior habitation. However, other explanations are equally possible precisely because sediment from other contexts was also sieved, but in these particular contexts the number of the discovered pieces was small. In this sense, we may also advance the hypothesis that the predominant discovery of the pieces in areas of domestic waste may be explained by their being intentionally abandoned, not entering, therefore, in this context, the category of transmissible objects. They could have marked a moment in the life of an individual, after which they had lost significance and were thrown away. In ethnology, examples are countless. With the Wano population (Indonesia), the first hunting trophies (mandible, peak, claws, teeth) obtained by a young man are kept and worn as a necklace in order to demonstrate his capacity as a hunter, then, a few years later, they are thrown away, in favour of another form asserting a specific

social image (Pétrequin 1998). We have also registered four examples of private stratigraphic contexts — dwellings respectively — that justify the attribution of the beads deriving from the same context to unique composite pieces which probably fulfilled, at that moment, an ornamental function. We may note that the discovery of ornaments, whole or, more often, fragmentary in similar contexts is also mentioned in the case of the researches at Dikili Tash and Dimitra in Greece (Karali-Yannacopoulos 1992; 1997).

Statistical analysis

Since specimens fashioned from *Dentalium* and *Cardium* shell have a total weight of approx. 23.5% of the total sample, in addition to those of *Spondylus* (5.88%) and *Unio* shells (18.82%), we may notice, thus, a total weight of 48.22% of the ornaments manufactured out of raw material obtained from the aquatic environment, from the total of the ornaments. If we add specimens fashioned from fish opercula (27.05%) we arrive at a weight of 75.27%, of the total of the studied pieces. Even if the analysis is not exhaustive, the statistical weights may be considered at this moment as representative.

In this category of raw materials harvested from an aquatic resource, 29.4% of the total (*Cardium, Dentalium* and *Spondylus*), or approximately, one third of the total finds which are the subject of this analysis, were obtained from raw materials that do not exist in the immediate proximity of the settlement. Very likely, the former originate from the Black Sea and the latter may come from the Mediterranean Sea. In this context, we think it may be possible that this data should be considered relevant for the existence of exchange circuits and, especially, for their intensity. A similar situation is recorded in the case of settlement at Sitagroi where the sieving of the archaeological sediment was practised on a large scale and where 54% of the total of the ornament pieces were made of shells, most of them probably brought from a distance of approx. 25 km, the mollusc shells from the immediate proximity of the site not exploited for this purpose, although they played an important role in nutrition (Nikolaidou 2003). Moreover, in this site, the selection cannot be explained only by practical reasons, the marine shells were probably preferred in the first place due to aesthetic reasons, to which we can also add a symbolic value.

This statistical situation is likely to represent a specific option for the Gumelniţa community from Hârşova-*tell*, suggesting an important position that the aquatic world, with its resources, had in the wider frame of spiritual life. This situation does not seem to be random if we also consider the general significance the aquatic resources had in the economy of animal resource management in the case of the inhabitants of this *tell*. However, it is extremely interesting if we consider the way and manner in which this structure of the food resources and, generally, the aquatic world, find their reflection in the

spiritual manifestations of this community which, from other points of view, does not seem to individualize from other contemporary ones. Another argument seems to complete these observations namely, that at Hârşova-*tell* the lack of perforated teeth (at least in the case of the assemblage studied here), harvested from game species, universally present in prehistory, may symbolize the fact that the ornament was not (or at least in a diminished manner) involved in the hunting ritual (for instance the tooth of an animal worn by the one who hunted it, in order to appropriate the animal's qualities and to ensure success in hunting). Furthermore, the lack of perforated gastropod shells, easy to obtain near to the Danube, raises the problem of a special symbolism of the settlement of Hârşova-*tell*.

At the present stage of analysis it is difficult to confirm that the community had any special character since the sampling techniques performed here were not used during the researches at other settlements in Romania. Instead, we can note a variety of the manifestation forms that can be documented, given that efforts are made for the recovery, as complete as possible, of all the information categories that a site can provide.

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