# Some considerations about a new grave discovered at Sultana-Ghețărie (Southeastern Romania)

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**Abstract:** During the archaeological campaign of 2012 in the area of the Sultana-Ghețărie flat settlement, Mânăstirea commune, Călăraşi county, an inhumation grave belonging to the Gumelnița culture was discovered. The grave contained the skeleton in anatomical connection and moderate state of preservation, laid in a lateral foetal position, on the left side, oriented E - W. The legs were accentuated flexed. The both arms were bent with the hand towards the skull. The funerary inventory consists in a bi-lobed needle and a stone axe. The unusual location of this isolated grave will be discussed in this article.

**Rezumat:** În timpul campaniei arheologice din anul 2012, în perimetrul așezării plane de la Sultana-Ghețărie, com. Mânăstirea, jud. Călărași, a fost descoperit un mormânt de inhumație atribuit culturii Gumelnița. Mormântul conținea un schelet în conexiune anatomică, cu o stare de conservare medie, depus în poziție chircită, pe partea stângă, orientat E-V. Inventarul funerar consta într-un ac de os bilobat și un topor de piatră șlefuită. Localizarea neobișnuită a acestui mormânt izolat o vom discuta în acest articol.

**Keywords:** Eneolithic, Boian and Gumelnița cultures, isolated grave, bi-lobed needle, stone axe. **Cuvinte cheie:** eneolitic, culturile Boian **s**i Gumelni**t**a, mormânt izolat, ac bilobat, topor de piatră.

#### Introduction

The flat settlement from Sultana-*Ghețărie* belonging to the Boian culture, Vidra phase. It is located in the southeast of Romania, on the right bank of the old Mostiştea River (which has been converted into several artificial lakes), about 7 km from the Danube river, near the border with Bulgaria (fig. 1). From an administrative point of view the site is located in the Sultana village, Călărași County.

From topographical point of view the settlement is placed on a promontory at the western limit of the high terrace of the Mostiștea Lake (fig. 2), at 320 m ( $\pm$ 1 m) west from the Sultana-*Malu Roșu* cemetery (C. Lazăr *et alii* 2012). The geographic coordinates of the Sultana-*Ghețărie* flat settlement are 44°15'37.83072" N / 26°51'47.93720" E and the corresponding absolute altitude of this area is at least 44.891 m and maximum 46.399 m. All data are reported in the STEREO-70 projecting system of coordinates and 1975 Black Sea elevation system reference.

This settlement is known from the archaeological literature for a long time (D. Şerbănescu, G Trohani 1978), however, unfortunately, systematic excavations have not been made. Due to the continuous degradation of the site as result of clay exploitations by local people, in 2008 were realized two test pits (R. Andreescu *et alii* 2009) and in 2012 systematic excavations were started. Thus, more surfaces have been opened as well as the profiles of some of the pits excavated by locals for clay extraction have been cleaned and straightened. The research led to the discovery of more Boian pits, as well three inhumation graves. Of these, two graves are from a later chronological sequence than the Eneolithic (graves no. 2 and 3), but one (grave no. 1) was assigned to the Gumelnița culture. This grave forms the subject of the present article.

### Context and stratigraphy

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Grave no. 1 was discovered in Son 2/2012, A4 Square, at the altitude of 44.81 m.a.s.l. The geographical coordinates of the grave are  $26^{\circ}$  51' 47.8033" E and 44° 15' 37.8363" N.

From stratigraphic point of view the grave was identified in the stratigraphic unit (s.u.) 1005, which is a yellow, compact and homogenous sediment containing numerous pieces of white carbonates and few archaeological materials.



**Fig. 1.** Location of Sultana-*Ghețărie* archaeological site. Localizarea sitului arheologic Sultana-*Ghețărie.* 



**Fig. 2.** General plan of high terrace of Mostiștea Lake and location of Sultana-*Ghețărie* flat settlement. Planul general al terasei înalte a lacului Mostiștea și localizarea așezării plane de la Sultana-*Ghețărie*.

All the Eneolithic features researched at Sultana-*Ghețărie* are cutting this unit. S.u. 1005 is corresponding *grosso modo* to s.u. T1003 from the cemetery<sup>1</sup>, which is equivalent of a prehistoric walking level. At the top, this stratigraphic unit (s.u. 1005) is overlapped by s.u. 1002, which is a yellowish-brown sediment with archaeological materials, that corresponds to the occupational level of the prehistoric settlement. At the bottom, s.u. 1005 is overlapping a natural level of *loess*.



Fig. 3. Grave no. 1 from Sultana-*Ghețărie*. Mormântul nr. 1 de la Sultana-*Ghețărie*.

### ♦ Grave structure

The funeral pit had an oval shape made for an individual grave without any traces of related constructions (fig. 3). It presents a maximum length of 1.218 m and a maximum width of 0.564 m. The surface of the pit was 0.531 m<sup>2</sup> and the base of the pit was at 44.63 m.a.s.l. (s.u. 1005). The filling of the funeral pit (s.u. 1012) was a yellow, homogenous and compact sediment, containing carbonates. Also, it was disturbed by a few burrows, some of them shifting the position of the bones.

The level of digging of the pit was not identified, but most probably, this was somewhere between the lower limit of the s.u. 1002 and the upper limit of the s.u. 1005. At the top no traces of marking of the grave area were identified.

#### Funerary treatment

The grave contained the skeleton in anatomical connection and moderate state of preservation, laid in a lateral foetal position, on the left side, oriented E - W (fig. 3). The legs were accentuated flexed. The both arms were bent with the hands towards the skull.

<sup>&</sup>lt;sup>1</sup> The Sultana-*Malu Roșu* cemetery and the flat settlement of Sultana-*Ghețărie* are on the same terrace of the Mostiștea Lake, so it is normal to be some correspondence between stratigraphic units of these two sites.

Generally, the funerary treatment applied to the dead from this grave is similar with that observed at the neighbouring necropolis of Sultana-*Malu Roşu*, which contained graves belonging to the Boian and Gumelnița cultures. In terms of the basic elements of the funerary ritual, the individual from the grave no. 1 reflects common burial practices characteristic for the Gumelnița communities.

The deposition of the dead in a foetal position, preferentially on the left side and E – W oriented has been documented in several other necropolises belonging to the Kodjadermen-Gumelniţa-Karanovo VI cultural complex in Bulgaria and Romania (E. Comşa 1960, 1974, 1995; H. Todorova *et alii* 1975, 2002; D. Şerbănescu 1985; I. Angelova 1986, 1991; C. Lazăr 2001, 2011, etc.).



**Fig. 4.** Location of the inventory pieces in relation to the body of the dead: the stone axe (left) and the bone needle (right).

Localizarea pieselor de inventar în raport cu corpul defunctului: toporul de piatră (stânga) și acul de os (dreapta).

#### Grave goods

The funerary inventory is not consistent from a quantitative point of view as only two pieces were deposited in the grave (a stone axe and a bone needle). However, from the perspective of their typological representativeness the two objects are special (figs. 5/a-b and 6).

In terms of location of the grave goods in relation to the body of the dead, both pieces were found in the skull area (fig. 4). Thus, the needle was found on the back of the skull, at a distance of ca. 8.5 cm NNE of the skull (fig. 4). The stone axe was found in front of the skull with the blade entering the cranium (fig. 4). Even if, apparently, the axe seems to have been stuck in the deceased' head, a situation which may suggest the cause of the death, this is not the case. The position of the axe simply reflects post-depositional phenomena, the sliding of the axe over the skull, and by no means a violent action.

<u>The bi-lobed needle</u> was made by a long bone diaphysis diverted from a large mammal (fig. 5/a-b). The item is proximally fractured and, moreover, presents lime scale in surface, which make indecipherable the technological actions which led to its processing.

Morphologically, it is formed of two lobes and a trunk with circular section. From a morphometric perspective, it presents a maximum width, at the level of the lobes, of 31 mm, a maximum thickness of 4 mm and a diameter at the trunk level of 5.5 mm.

Only at the intersection of the lobes we identified technological marks (fig. 5/c), consisting of several cuts made by sawing, probably meant to ensure the release of the two lobes. Without any doubt it was also applied a method of shaping the fracture sides, but we do not know the used technique. At the trunk level, appear several red coloured spots (fig. 5/e), but it is hard to say if they appeared after sedimentation or if they are anterior to this stage (painted piece, contact with painted hair, etc.). As functional hypothesis we can invoke that of hair pin, stating both from its morphology and from the discovery context (at the skull level).

Even if they are not present in great number, such hair pins, with a bi-lobed morphology, are also mentioned in other Neolithic or Eneolithic necropolises or settlements in Romania and Bulgaria. It is the case of the necropolis from Cernica, belonging to the Boian culture (Gh. Cantacuzino, S. Morintz



**Fig. 5.** The bi-lobed needle: a, b – anterior and posterior views; c – cutting marks, for the lobes release (50x); d – lobe extremity, attesting a shaping method of the fracture sides (50x); e – traces of red colorant, present on the trunk of the piece (100x); f – the morphology of the piece at the intersection of the trunk and one of the lobes (30x).

Acul bilobat: a, b – vedere anterioară și posterioară; c - stigmate de tăiere, destinate degajării lobilor (50x); d – extremitatea lobului, atestând o metodă de regularizare a marginilor de fractură (50x); e – urme de colorant roșu prezente pe trunchiul piesei (100x); f – morfologia piesei la intersecția trunchiului cu unul dintre lobi (30x).

1963, fig. 7), where was found a hair pin which was considered a stylized representation of a feminine figure but which, in its superior side, presents the same bi-lobed morphology. In the Gumelnita culture it appears mostly in settlements, as is the case of the pieces from Vidra, Pietrele, Ruse or Tangâru (G. Georgiev, N. Angelov 1957, fig. 56/1; E. Comșa 1997, fig. 3/1-3; S. Hansen *et alii* 2011, abb. 77).

<u>The stone axe</u> was made of polymictic sandstone with quartz and biotite (dark mica) with carbonate cement and rare calcite diaclase. Morphologically, the axe is pentagonal in shape (fig. 6) and has a hole for hafting at its proximal part ( $\emptyset = 18.05 \times 17.64$  mm). The length of the axe is 192 mm, the maximum width is 48 mm, and has a thickness of 28.67 mm. From a functional perspective, the axe has no use-wear traces, what allows us to put forward the hypothesis of a pure symbolic function for this piece and not a utilitarian one. This type of axe, quite rare in discoveries belonging to the Kodjadermen-Gumelniţa-Karanovo VI cultural complex, present especially in necropolises, in some cases do not present use-wear traces<sup>2</sup> (e.g., grave no. 43 from Varna I cemetery), reason for what it can be considered a prestige item. Similar pieces with the one from Sultana-*Gheţărie* were found rarely in settlements (e.g., Ruse, Gumelniţa, Vlădiceasca) but quite frequent in graves (e.g., Chirnogi-*Şuviţa lorgulescu*, Curcani, Durankulak<sup>3</sup>, Gumelniţa I, Gumelniţa II, Liljak, Spanţov, Varna I, Vinitsa, etc.) (VI. Dumitrescu 1925; G. Georgiev, N. Angelov 1952, 1957; D. Ovcharov 1963; E. Ghianopoulos 1966; A. Radunčeva 1976; I. Ivanov 1978; K. Kănchev 1978; D. Şerbănescu 1985; S. Marinescu-Bilcu 2000; H. Todorova *et alii* 2002).



Fig. 6. The stone axe found in grave no. 1 from Sultana-*Ghețărie*. Toporul de piatră din mormântul nr. 1 de la Sultana-*Ghețărie*.

# Anthropological data

Even though the skeleton from grave no.1 from Sultana-*Ghețărie* being partially complete, the bones are very fragmentary. In terms of representativeness, at the level of the cephalic segment, the following bones have been identified: the frontal bone (a fragment of squama, the supraorbital margin

<sup>&</sup>lt;sup>2</sup> There are some cases of axes of this type which present use-wear traces (e.g., Varna I cemetery) or traces of degradation (e.g., the isolated grave from Curcani) (E. Ghianopoulos 1966; K. Kănchev 1978).

<sup>&</sup>lt;sup>3</sup> Very interesting is the fact that the pieces from this necropolis are in a fragmentary state.

and the right frontal eminence), the parietal bones (approximately complete), the left temporal bone, the right temporal bone (petrous pyramid and a fragment of the mastoid process) and the occipital bone (a fragment of squama occipitalis and two fragments from the basilar part with the occipital condyles). The elements of the facial skeleton are lacking.

The dento-maxillary apparatus is represented by the left maxilla (a fragment containing the alveoli of the premolars), the right maxilla (a fragment containing alveoli for incisors, canine and premolars) and the mandible (a fragment of the body with alveoli of the canine and left premolars, the right hemimandible being approximately complete, lacking a fragment of the horizontal ramus containing the corronoid process and the mandibular condyle).

The dentition is permanent, being identified the following teeth (the lacking teeth were lost *post-mortem*):

Right	Left
$  P^2 P^1 C' I^2 I^1$	- $I^2 C' P^1 P^2 M^1 M^2$ -
$M_3 \hspace{0.1in} M_2 \hspace{0.1in} M_1 \hspace{0.1in} P_2 \hspace{0.1in} P_1 \hspace{0.1in} C_{'} \hspace{0.1in} I_2 \hspace{0.1in} I_1$	- I <sub>2</sub> C <sup>,</sup> P <sub>1</sub> P <sub>2</sub> M <sub>1</sub>

The axial skeleton is very weak represented, among its constitutive elements being identified only three cervical bodies of vertebrae, 12 fragments at the levels of vertebral arches and four rib fragments.

From the level of the shoulder girdle are lacking the scapulae. The left clavicle is lacking the sternal extremity, and the right one is represented by a fragment of diaphysis.

The skeleton of the upper limbs is represented by the left humerus (four fragments of diaphysis, without anatomical connection), the right humerus (the proximal third is missing), the left radius (proximal extremity) and the left ulna (a fragment of diaphysis).

From the pelvic girdle are preserved only two fragments comprising the bilateral acetabular fossa.

The lower limbs are represented by the left femur (approximately complete, unrestorable, with damages at the level of proximal and distal extremities and of the trochanter), the right femur (complete diaphysis, and fragmentary at the level of extremities), the left patella (approximately complete), the left tibia (fragmentary, with the proximal third lacking), the right tibia (a fragment of diaphysis and the distal extremity), the left fibula (a fragment of diaphysis), the right fibula (a fragment of diaphysis and the distal extremity), the left tarsus (astragalus and calcaneus) and the right tarsus (astragalus, with damages).

<u>Sex determination</u>. For determining this parameter were utilized the general morphological characteristics of the skeleton, especially those at the level of the skull (the pelvis, which reflects also the sexual dimorphism, being largely damaged, was not utilized). The characteristics were scored/calculated after the algorithm established by J.E. Buikstra and D.H. Ubelaker (1994, p. 16-21) as follows: nuchal crest (+3), mastoid process (+3), supraorbital margin (+5), glabella (+4) and mental eminence (+4). The results show that the analysed individual was a male.

<u>Estimation of age at death</u>. Due to a high degree of fragmentation of bones, as well as due to the lack of that elements which assure a high accuracy in establishing the age at death (pubic symphisis, auricular surface, rib extremities), the age of the analyzed individual was estimated based on the degree of dental wear of the molars, utilizing the system described by D. R. Brothwell (1981, p. 72). All molars present a strong and unequal attrition (degree 5+ and 5++) what indicates an age at death of above 45 years (old adult).

<u>Stature estimation and pathological conditions</u>. The estimation of the stature was not possible as none of the long bones were completely preserved. Also, no dental or osseous pathological modifications were observed.

<u>Non-metric characteristics</u>. There were evaluated both the epigenetic traits at the level of the skull, following the book of G. Hauser and G. F. De Stefano (1989) and those at the level of the postcranial skeleton, based on the study of M. Finnegan (1978). There were identified the following characteristics: right supraorbital groove, a sutural (wormian) bone on the track of the left lambdoid suture (at this level, the wormian bones have the highest frequency of occurrence), *foramen mentale* (right), and a right hypotrochanteric fossa (with unclear origin: genetic, metabolic or mechanical).

*Biometry*. The calculated measurements and the related indices were given after R. Martin (1914) and G. Bräuer (1988, *apud* R. Martin 1914) and are presented in the following table:

Dimensions and mandibular indices	Values (mm)
69. height of mandibular symphysis	29.96
69(1). height of mandibular body (right) [beside foramen mentale]	26.81
69(2). height of mandibular body (right) [beside M2]	22.85
69(3). thickness of mandibular body (right) [beside foramen mentale]	8.72
69b. thickness of mandibular body (right) [beside M2]	12.38
71. width of mandibular vertical ramus (right)	30.55
- height index of mandible (right) [69(2) : 69)]	76.26
- height-width index of mandibular body (right) [69(3) : 69(1)]	32.52
Dimensions and indices for postcranial skeleton	Values (mm)
– width of humeral epicondyle (right)	64.63
– minimum perimeter of humeral diaphysis (right)	66.00
– sagittal diameter (anterior-posterior) radial head (left)	20.85
<ul> <li>– circumference of radial neck (left)</li> </ul>	44.00
– maximum length (height) of patella (left)	40.66
– maximum thickness of patella (left)	22.58
– width of distal fibular epiphysis (right)	31.17
– maximum length of astragalus (left)	59.15
<ul> <li>maximum length of astragalus (right)</li> </ul>	60.44
– width of astragalus (right)	45.03
– height of astragalus (right)	31.06
<ul> <li>index length-width of astragalus (right)</li> </ul>	74.50
<ul> <li>index length-height of astragalus (right)</li> </ul>	51.38
<ul> <li>maximum length of calcaneus (left)</li> </ul>	77.25
- height of calcaneus (left)	39.36

# Discussion and conclusions

Following research conducted in the summer of 2012, we can say that the flat settlement of Sultana-*Ghețărie* has two occupational levels (s.u. 1001 and s.u. 1002), both assigned to the Vidra phase of the Boian culture. All researched features are pits, most of them being garbage pits. No dwelling structures are identified until present. All these data indirectly indicate that the promontory where research was conducted is a marginal area of the settlement, where various specific activities probably took place. The actual settlement, with the related housing structures, is to be found probably further south, on the high terrace of the Mostiștea Lake.

Returning to the chrono-stratigraphical situation, along with artefacts and features belonging to the Boian culture, pits and stray finds assigned to post-Eneolihic periods were also discovered. However, there are no other materials or features attributable to the Gumelniţa culture. Under these circumstances the question put forward is: how can be explained the presence of a Gumelniţa grave in a settlement belonging to the Boian culture?

A first working hypothesis proposed was that the Eneolithic necropolis from Sultana-*Malu Roșu* extended until this area, taking into account the fact that the distance between the two sites is quite small (only 320 m). To verify this hypothesis, between the area under research from Sultana-*Malu Roșu* necropolis and the small valley separating at east the promontory where the settlement of Sultana-*Ghețărie* is located (fig. 2), we made an alignment of 17 test pits, with dimensions of 3 x 1 m placed from 10 to 10 metres, paralleled by an alignment of 19 drill cores. These test pits led to the identification of numerous features from the Eneolithic (both Boian and Gumelnița cultures) and also from later periods. Some graves were discovered close to necropolis but not more than 80 metres west of the cemetery. Otherwise, the Eneolithic features discovered are pits of different dimensions. Based on these results and also on the absence of evidence for other Gumelnița funerary discoveries

in the perimeter of the promontory from Sultana-*Ghețărie*<sup>4</sup>, we considered this first hypothesis unfounded.

A second working hypothesis proposed was that of the presence in the researched area of an another cemetery (or of a group of graves) belonging to Gumelniţa communities but chronologically later than the period of use of the settlement from Sultana-*Ghețărie*. To verify this hypothesis, we made a long trench (Son 21/2012) with dimensions of 20 x 2 m, oriented from north to south. The trench was put in the immediate vicinity of the grave no. 1. We started from the idea that if the Gumelniţa grave belongs to a necropolis than close to grave no. 1 must be also other contemporary graves. Unfortunately, in this trench were discovered only pits belonging to the Boian culture or later periods, but no graves or other features attributable to the Gumelniţa culture. As a result, this working hypothesis was also abandoned.

We can conclude that, based on data collected and taking into account the rejection of the above mentioned hypotheses, we are dealing with an isolated grave belonging to the Gumelnița culture, of whose presence in the perimeter of the settlement of Sultana-*Ghețărie* we can not explain. Why the Gumelnița people from the *tell* of Sultana-*Malu Roșu* chose to bury a member of the community not in the neighbouring cemetery but in an isolated place, remains a question to which we can not respond at this time. The fact that the grave contained special funerary inventory excludes any suppositions related to punishment or opprobrium. We hope that future research and maybe other similar discoveries will contribute to a better understanding of the problems put by this isolated grave.

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<sup>&</sup>lt;sup>4</sup> Remember that the area where the settlement of Sultana-*Ghețărie* is situated, was, and still is utilized by local people for clay extraction for various household activities. Starting in 2001, we checked yearly all the pits resulting from these activities, but we never discovered materials or features belonging to the Gumelnița culture.

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