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The old man and the three *babi*: an exceptional burial from the 'Pamukli bair' barrow near Malomirovo, southeast Bulgaria

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Abstract

In 2021, excavations of an Early Bronze Age barrow were carried out on the hill 'Pamukli bair' in Malomirovo near Elhovo, Upper Thrace, Bulgaria. Among others, three typical Yamna culture burials were discovered. Especially important is Grave no. 17 – the burial of a man aged 60–70. Radiocarbon dating showed that the burial was c 3000–2900 calBC. This discovery is the starting point for the description of the funeral rite of the Yamna culture in Upper Thrace. Burials of this type are distinguished by a specific use of ochre. A unique discovery concerned the anthropomorphic stelae placed near the grave as part of the funeral practices. Burials of the early Yamna culture in southeastern Bulgaria are often related to the second phase of barrow cemeteries. This phase is preceded by graves presenting a slightly different, less clearly defined funeral ritual and dated to the end of the 4th millennium calBC.

Keywords: Early Bronze Age, Yamna culture, Upper Thrace, funeral rites, chronology

3.1 Introduction

In studies of the Early Bronze Age (EBA) barrow communities in the Balkan zone, the great importance of the migration of people from the area of the North Pontic steppes is often emphasized (e.g. Panayotov 1989). Of particular importance due to its demographic scale are the people of the Yamna culture (here in Ukrainian and Bulgarian languages; Yamnaya – in Russian; Pit-Grave/Ochre-Grave culture – in English), whose burials are most often discovered in barrows dated early in the sequence (Heyd 2011; Dani et al. 2022). The Yamna funeral ritual is characterized by supra-regional unification in comparison with the earlier period (e.g. Rassamakin 2013). Burials are very similar to each other throughout the western Yamna province (i.e. between the Balkans and the Dnieper). Typical graves of this culture were also discovered in Upper Thrace, in southeastern Bulgaria (e.g. Alexandrov 2020). This zone has recently been characterized as specific due to the barrow funeral rite, which is different, for example, than in the area of northeastern Bulgaria (Alexandrov & Kaiser 2016). Contrary to many other regions, the local character of some ritual features was emphasized in the cemeteries of Upper Thrace, such as the presence of pottery of local cultural groups or the large number of burials in a barrow. It should be added, however, that also in this area, graves were discovered showing a strong connection with the allochthonous Yamna tradition. Significant results confirming this phenomenon were also obtained in the course of the recently conducted excavation presented below.

3.2 The excavation

In 2021, a Bulgarian-Polish team excavated a burial mound located on the 'Pamukli bair' hill near Malomirovo, Elhovo Municipality, Yambol District (Fig. 1:4). This joint work helped to establish a sequence of BA barrow graves which is currently the best starting point for studying the chronology and

Figure 1. Malomirovo, 'Pamukli bair' barrow. 1–3 – the three stelae found in Grave no. 17; 4 –aero-photo of Grave no. 17. Illustrations P. Włodarczak & M. Podsiadło.

nature of changes in the mortuary practices of barrow communities in Upper Thrace. For the 'Pamukli bair' barrow, three main phases of the construction of the mound during the EBA were distinguished, associated with a sequence of eight burials. Two more EBA graves were dug into the central part of the completed barrow. Later, during the Middle Bronze Age, during the first half of the 2nd millennium calBC, three graves were dug into the upper part of the barrow fill. Finally, during the late Antique period, one more grave was dug into the central part of the burial mound (Alexandrov & Włodarczak 2022).

In the stratigraphy of the Malomirovo barrow, the position of graves with features of the early Yamna culture is noteworthy. Five such features belong to the second (Graves nos. 16, 17 and 20) and the third construction phases (Graves nos. 1 and 14). Burials from the oldest phase (Graves nos. 18, 19 and 21) have features of other funeral traditions of the late 4th millennium BC. Their difference is shown by the types of the grave constructions, the arrangement and orientation of the deceased, and the lack of ochre.

Features nos. 16 and 17 were dug into the central part of a small barrow (approximately one meter high) erected above Grave no. 19. The chronological relationship between them remains undetermined but the suggestion is that they were built at a similar time. Grave no. 16 was destroyed by treasure hunters in the early 2000s. Two golden hair-rings, kept in the museum in Elhovo, come from its burial level. During the 2021 research, the construction of this feature was shown to be a rectangular shape of the chamber, with an east–west orientation along the longer axis; the presence of ochre at the level of the skeleton; a wooden roof composed of longitudinally arranged boards; and a monumental stone structure surrounding the burial chamber. On these stones, chaotically scattered human remains were found (Grave no. 20). This can possibly be interpreted as a sacrificial burial placed before erecting the barrow over the Graves nos. 16 and 17. Next, Grave 20 was probably associated with Feature no. 16, which is also supported by radiocarbon dates at the beginning of the 3rd millennium calBC (Alexandrov & Włodarczak 2022: 222, Tab. 1).

To the north of the partially destroyed Grave no. 16, an intact Feature no. 17 was discovered. Its good state of preservation makes it possible to define the funeral rite as belonging to the early Yamna culture.

3.3 Grave no. 17 from Malomirovo

Grave no. 17 (Figs. 1:4, 2–4) was dug into the central part of the small barrow piled above Grave no. 19. Its chamber had a regular rectangular shape, 1.65 m in length, 0.95 m in width and 0.90 m in depth, dug into the barrow fill and the buried soil to the level of the undisturbed limestone bedrock. The pit was covered with 14–15 wooden planks, longitudinally oriented and c 3.5 m in length. The planks were then covered with a mat of organic material and numerous stones. The walls of the grave were vertical and had been smoothed. In addition, the pit was marked with a stone wreath, which also consisted of three stelae, placed horizontally on the east and north sides. They were located at the edge of the pit, on a wooden structure. The eastern stele bore clear traces of ochre staining. Traces of red dye were also less visible on the other two. The destruction of the roof caused wooden elements and numerous stones to fall into the empty burial chamber to a depth of 0.30–0.35 m above the burial level. This destruction took place quite a long time after the construction of the grave. Previously, the bottom of the chamber was covered with a layer of dark, humic earth that had washed in slowly from the side of the leaky roof. Such conditions enabled the burial to survive in a good condition.

The bottom of the grave was lined with a rectangular mat made of an unspecified organic material. Traces of ornaments (zigzags) made with red dye were preserved in the western part of the grave. Most of the surface of the mat was stained brown by ochre. The deceased lay on his back with his lower limbs bent and his knees turned upwards; the pressure of the earth made the limb bones tilt slightly to the right. The upper limbs were placed alongside the body, resting the palms of the hands on the ground. The head was slightly tilted

Figure 2. Malomirovo, 'Pamukli bair' barrow, Grave no. 17. 1–3 – details; 3, 4 – silver hair-rings found near the skull; 5 – general view of the burial. Illustrations M. Podsiadło (1, 2, 5) & B. Preda-Bălănică (3, 4).

upwards. Two small, heavily corroded hair-rings were found near the skull (Fig. 2:3, 4). The burial showed an east–west orientation with the head to the west.

The deceased from Grave 17 was a robust, right-handed man aged 65–75, estimated to be 173.7 cm tall. He had, physically, a very active lifestyle. The work involved mainly the muscles of the upper limbs and the chest. Also, the

skeleton displayed an unusual high number and degree of joint degeneration compared to other Yamna burials, probably at least in part due to the rather high age. This can be seen as indicator that he remained physically active even at an advanced age. Frequent exposure to wind and cold caused inflammatory reactions of the external auditory canal, known as "surfer's ear". In addition, changes resulting from horse riding (Trautmann et al. 2023) and working in a squatting position were identified on the bones. There were no signs of inter-personal violence on the skeleton. However, traces of several trivial accidents were noticed: a healed crush fracture of the left index finger with ancylosis and slight deviation of the distal joint; a healed crush fracture of the 2nd or 3rd right toe with ancylosis of the distal joint; and a healed flexural fracture of the 6th (?) left rib.

3.4 Use of red ochre

Grave no. 17 from Malomirovo shows the use of red pigment in a manner characteristic of exceptional ('elite') male burials of the Yamna culture (Shaposhnikova et al. 1986: 20). Traces of ochre have been documented on the bones of the skull, upper limbs, lower limbs, feet, ribs and sternum. Two types of this dye were documented on a mat at the bottom of the burial chamber. This surface was covered with brown ochre. In addition, nodules of bright red pigment were deposited near and below the skull. The same substance was used to make an ornament in the form of zigzag lines on the mat (preserved around the head). The stone stelae were also stained with red ochre. The colouring of the skull is also noteworthy. The colour in this case is more intensely red than on the other bones. Only the upper part of the skull was stained. A similar way of using the dye is documented on the skulls of the dead of the Yamna culture in other regions of Europe, such as Dobruja, Moldova, middle Dniester or Southern Bug area. This custom was connected with specially distinguished male burials (Shaposhnikova et al. 1986: 20).

Analysis of samples of the red pigment from the grave allowed comparison of ochre from the stone stelae, the bones of the deceased and the bottom of the grave-pit. The samples were analyzed using an optical microscope, a scanning electron microscope (SEM), an X-ray fluorescence spectrometer (XRF) and infrared spectroscopy. The results obtained are as follows:

1. The sample from the mat-floor (Fig. 3:1, 2) clearly showed the existence of iron oxide Fe_2O_3 (Table 1).
2. The sample from the human bones showed a high quantity of Fe_2O_3 as well (Table 2).
3. The two samples from the stelae analyzed show a high proportion of SiO_2, CaO and Al_2O_3 that could be related to the mineral composition of the stone itself. By contrast, the iron oxide (Fe_2O_3) was directly related to the red coloring of the stone surface (Table 3).
4. These results showed that the red pigment used in all three samples was iron oxide (Fe_2O_3). The similarity of the obtained results of the elemental composition in the conducted studies: scanning electron microscopy, X-ray fluorescence analysis and optical microscopy give us reason to assume that red ochre from the same source was used in the execution of the burial ritual.
5. The comparison between the infrared spectrum measured on the red pigment from the stela (black) and the vegetable resin-gum (rose) suggests that the latter was used as an ingredient and connecting component.

Spectrum	**O wt %**	**Mg wt %**	**Al wt %**	**Si wt %**	**K wt %**	**Ca wt %**	**Fe wt %**	**Total**
Sp 13 red	9.83		2.65	5.54	0	2.49	79.5	100
Sp 14 white	52.06	4.75	6.21	20.28	0.59	5	11.11	100
	O at %	**Mg at %**	**Al at %**	**Si at %**	**K at %**	**Ca at %**	**Fe at %**	**Total**
Sp 13 red	25.65		4.09	8.23	0	2.59	59.43	
Sp 14 white	68.64	4.12	4.86	15.23	0.32	2.63	4.2	

Table 1. Results of the XFR analysis of the mat-floor.

Sample	MgO	Al_2O_3	SiO_2	P_2O_5	CaO	Fe_2O_3	Cu	Zn
Skull	1.28	2.13	11.42	7.5	12.69	12.99	0.0218	0.0319

Table 2. Results of the XFR analysis of an ochre sample from human bone.

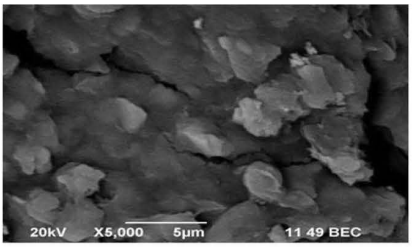
Stela	MgO	Al_2O_3	SiO_2	P_2O_5	CaO	Fe_2O_3	Cu	Zn
S-01.MAL		9.79	45.98	0.12	4	1.79	0.0019	0.003
S-02.MAL	0.84	4.44	26.69	0.16	6.87	2.17	0.0026	0.446

Table 3. Results of the XFR analysis of an ocher sample from a stone stele.

3.5 Exceptional burials of the Yamna culture

Yamna culture burials are not strongly differentiated in terms of the rank or prestige of the deceased. The standarization of the ritual is evidenced by the lack of rich furnishings and similar construction techniques for the grave pits. In many barrows, however, one can distinguish graves that stand out due to their particular location and the amount of labour invested in the aesthetics of the burial. These are often graves located in the centre of the barrow, connected with the first or subsequent phase of the mound construction. In such features, burials of adult males are usually discovered, oriented with their heads to the west. The dead lie on their backs, with the upper limbs placed along the body – straightened or slightly bent at the elbow joint. Associated features include chambers of relatively large size, with solid wooden and stone roofing elements and often additional stone structures.

► Figure 3. Malomirovo, 'Pamukli bair' barrow, Grave no. 17. 1 – morphology of the sample from the pit-floor; 2 – electron microscope picture of the sample from the pit-floor, zoom x100; 3 – infrared spectrum of the red pigment from the stela (black) and the vegetable resin-gum (rose); 4 – graphic reconstruction of Grave no. 17. Illustrations B. Rangelov (1–3) & M. Podsiadło (4).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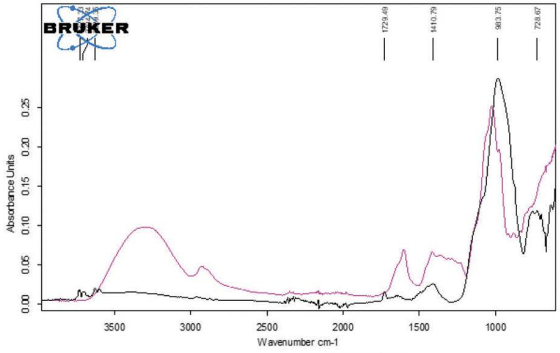
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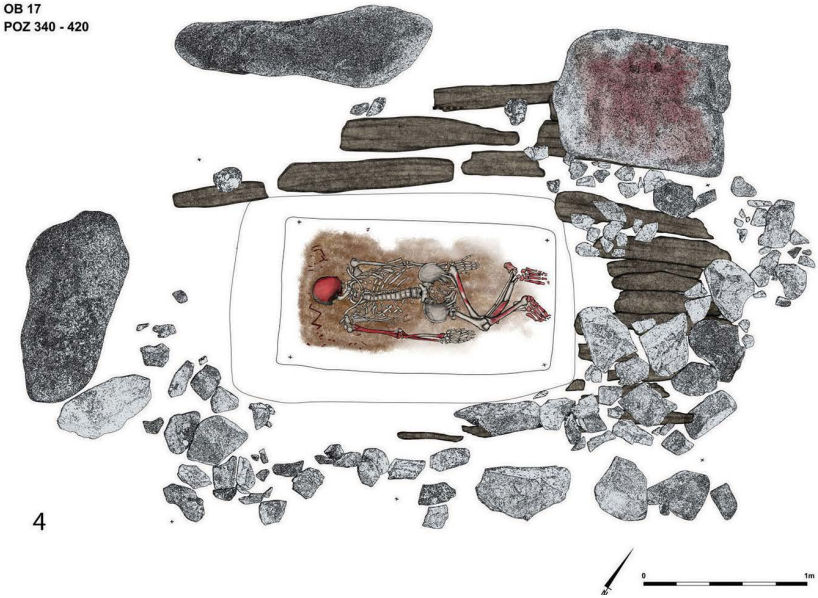
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Figure 4. Malomirovo, 'Pamukli bair' barrow, artistic reconstruction of Grave no. 17. Illustration M. Podsiadło.

A permanent element of the ritual is the use of ochre. Its traces are present at the bottom of the grave pit, mainly in the form of lumps of bright red pigment, placed near the head. Ochre is also documented on the bones of the deceased, commonly producing a strong discolouration of the upper part of the skull. The only repetitive element of the equipment are usually paired silver or golden hair-rings, placed near the head of the deceased. Other finds are more rarely documented, such as the fragments of a wagon in Grave no. 1 from 'Golyamata mogila' Plachidol in southern Dobruja (Panayotov 1989: 100–101, Figs. 64–67).

Burials of this type are found throughout the western zone of the Yamna culture, including the area of the northwestern Black Sea region. Representing

the area of Upper Thrace, Grave no. 17 from Malomirovo is a good example of this supra-regional ritual. It is not particularly unique in the scale of the micro-region either. From the barrows in the middle Tundzha River area, examples of analogous burials can be found, including Grave no. 13 from Barrow 1 in Boyanovo (Iliev & Bakărdžiev 2020: 174–175, Taf. 50–51), Grave no. 20 from 'Lozyanska mogila' in Boyanovo (Agre 2015: 29, Fig. 20) and Grave no. 29 from the 'Goyamata mogila' in Mogila (Iliev & Bakărdžiev 2020: 132–133, Taf. 8:3, 9). In the middle Maritsa River, Grave no. 3 from Barrow 1 in Merichleri can be identified as a similar type (Iliev 2018: 319, Fig. 2).

The presence in the Malomirovo grave of three stone stelae (traditionally called *babi* in Slavic languages) can be regarded as an element of special distinction of the deceased (Fig. 1:1–3). This is a unique discovery in the area of Upper Thrace. On its basis, it is difficult to conclude whether stone stelae are strongly connected in the rituals of the Yamna culture with particularly distinguished burials of men, since the Malomirovo stelae were re-used as an element of the grave construction. The colouring of one of them with red ochre on both sides may indicate an original vertical placing of the stone. It cannot be excluded that stone monuments related to the older, 'pre-Yamnaya' phase of the Malomirovo burial mound were re-used in the Yamna period. The stelae associated with the pre-Yamnaya period (viz. the 4th millennium calBC) are known from the northwestern Trans-Black Sea zone and stylistically do not differ from anthropomorphic representations in the Yamna culture (Yarovoy 2001). Regardless of their origin, the stelae became an important element of the funeral ritual in the burial of the man from Feature no. 17, which is supported by the use of ochre of the same type from the grave itself.

The use of ochre leads to the assumption that the anthropomorphic stone representations were buried together with the deceased and were not only a structural element of the enclosing grave. Therefore, they should be considered as an expression of exceptional honour for the buried person.

3.6 The Yamna horizon in Upper Thrace

Distinguished burials are often associated with the older phase of the Yamna culture. The dating of the bone sample of the deceased from Grave no. 17 in Malomirovo points to the years 3008–2890 calBC (Poz-141946: 4315±35 BP; calibration using OxCal v4.4.4). A bone sample coming most likely from Grave no. 16, found as a secondary deposit in a robber trench, indicates a similar age: 3002–2885 calBC (Poz-150130: 4300±35 BP; Alexandrov & Włodarczak 2022: 222, Table 1). Thus, the horizon of the early Yamna culture in the 'Pamukli bair' barrow is dated to the very beginning of the 3rd millennium calBC. It is important to note that the horizon of the indicated burials takes place in barrows from Upper Thrace after the phase of graves presenting slightly different elements of the funeral ritual. Primary graves often contained burials on the side or semi-supine burials, with the head oriented to the east. They do not show the ritual application of ochre in the same way as in graves of the early Yamna stage, since only small lumps of red pigment are found in some features. The pits are usually oval in shape, or rectangular with clearly rounded corners. In the middle Tundzha Valley, a sequence of graves similar to that in Malomirovo was documented at 'Lozianska mogila' in Boyanovo. Here, above the primary Grave no. 21, where the deceased's head faced east, Grave no. 20 of the early Yamna culture was discovered (Agre 2015). Moreover, in 'Golyamata mogila', from the 'Golyama kayryak' site in Mogila, a poorly preserved primary grave (no. 30) was discovered with features of the body's arrangement and orientation similar to Grave 19 from Malomirovo (Iliev & Bakărdžiev 2020: 85). Into the earliest barrow, however, there were dug graves with features of the early Yamna culture (primarily: Features nos. 24, 25 and 29). The most likely analogies come from partially unpublished sites: 'Golyamata mogila' in Popovo (Agre 2007) and 'Sechenata mogila' in Sinapovo (Agre & Dichev 2013). In other regions of Upper Thrace, graves of the early Yamna culture are placed in barrows with burials presenting a different (older) funerary tradition, as at Merichleri (Iliev 2018) and Troyanovo (Alexandrov & Kirov 2017).

3.7 Conclusion

Studies on the funeral rite of barrows from Upper Thrace clearly indicate that the horizon of the early Yamna culture was preceded by a phase of burial mounds of a slightly different nature. At the turn of the 4th and 3rd millennia calBC, there were at least two Yamna burial traditions: an older and a younger. This observation complicates the description of cultural phenomena. An intriguing research postulate is currently to establish the relationship between these two trends through aDNA analysis. Archaeological assessments currently do not provide a clear answer about the causal relationship between the Yamna culture and the immediately preceding barrow cultural groups.

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