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# BRONZE AGE TUMULARY GRAVES RECENTLY INVESTIGATED IN NORTHERN WALLACHIA

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**Key words:** Bronze Age, barrows, graves, ochre, Prahova, Wallachia.

**Abstract:** The present study aims to unfold the results of the rescue archaeological excavations carried out during 2011-2012 in several barrows located around Ploiești, in Ariceștii-Rahtivani (2), Păulești (3), Strejnicu, Blejoi. It also includes the main data regarding two mounds investigated in Blejoi and Ariceștii-Rahtivani after 2000. In 2011 we conducted geomagnetic investigations of three mounds in Ținteanca and Ciorani (2) that generated additional data. To provide a broader basis for analysis the paper also includes information about the investigations from Ploiești-Triaș, bringing to light unpublished data and materials. Chorological and other types of connections cover a much larger area, although barrows were rarely unearthed in northern Wallachia. The issue of Bronze Age tumulary burials in Romania and other areas was largely approached in recently published studies and volumes, thus we prefer to focus the analysis on the new discoveries, most of them unpublished.

**Cuvinte-cheie:** Epoca bronzului, tumuli, morminte, ochru, Prahova, Muntenia.

**Rezumat:** În acest studiu ne-am propus să valorificăm rezultatele cercetărilor preventive derulate în anii 2011 și 2012 într-o serie de tumuli amplasați în jurul orașului Ploiești, respectiv în localitățile Ariceștii-Rahtivani (2), Păulești (3), Strejnicu, Blejoi. În interiorul acestui studiu vom relua și principalele date privind tumulii cercetați în localitățile Blejoi în anul 2004 (E. Paveleț 2007) și Ariceștii-Rahtivani în 2005 (A. Frînculeasa 2007). De asemenea, în anul 2011 am realizat și investigații geomagnetice în cazul a trei mabile situate în localitățile Ținteanca și Ciorani (2) ce au generat date suplimentare. Pentru a avea o bază de analiză mai extinsă vom include și o serie de informații despre cercetările de la Ploiești-Triaș, aducând la lumină inclusiv date și materiale inedite. Conexiunile chorologice, și nu numai, vor acoperi o arie mult mai largă, deși astfel de obiective în nordul Munteniei au fost rar abordate. Problematika mormintelor tumulare din epoca bronzului de pe teritoriul României și nu numai, a fost din plin exploatată în studii și volume publicate recent, de aceea nu vom relua toată discuția, ci vom aborda această temă din prisma noilor descoperiri, în cea mai mare parte inedite.

## Introduction

Unearthing tumulary graves is a rather difficult task that implies a large amount of work in contrast with the scantiness of data that can be achieved. This difficulty may lie behind the small number of mounds investigated in Romania. Starting from a narrow basis for analysis, research has generated an unsatisfactory level of information directly reflected in the existing knowledge on this phenomenon. In this context the publication of the results of recent excavations carried out in a significant number of mounds located in a well defined geographical area will contribute to a better understanding of the phenomenon of Bronze Age barrow burials.

During World War II, Ion Nestor and M. Petrescu-Dîmbovița carried out rescue excavations of two barrows located near the Ploiești marshalling yards (Prahova County)<sup>1</sup>. *Mound I* was unearthed in

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<sup>1</sup> Nestor 1943; 1944; Petrescu-Dîmbovița 2005, p. 35; 2006, p. 34.

1941-1942 and contained 8 ochre graves, including a double burial<sup>2</sup>, while in *Mound II*, investigated in 1943, 21 graves were discovered, attributed as follows: 13 „ochre graves”, 5 dated to the IV century A.D., two Christian burials and one unattributed cremation grave<sup>3</sup>.

The present study aims to unfold the results of the rescue archaeological excavations carried out during 2011-2012 in several barrows located around Ploiești, in Ariceștii-Rahtivani (2), Păulești (3), Strejnicu, Blejoi. It also includes the main data regarding two mounds investigated in Blejoi in 2004 and Ariceștii-Rahtivani in 2005<sup>4</sup>. In 2011, we conducted geomagnetic investigations of three mounds in Ținteanca and Ciorani (2) that generated additional data. To provide a broader basis for analysis the paper also includes information about the investigations from Ploiești-Triaș, bringing to light unpublished data and materials.

Chorological and other types of connections cover a much larger area, although barrows were rarely unearthed in northern Wallachia. The closest discoveries come from Smeeni and Sudiți<sup>5</sup>, while others are located further east in Ulmeni, Coconari, Viziru, Baldovinești, Horia, Ianca, Găvani<sup>6</sup>. To the south-east are known the excavations from Gurbănești, Preasna, Mircea Vodă, Piscu Crăsani, Adâncata, Vlădeni, Ciulnița, Coslogeni<sup>7</sup> etc. The barrow burials from Gorgota and Văleni-Dâmbovița<sup>8</sup> are related to a different, although partially contemporaneous cultural phenomenon, encountered in the Subcarpathian hills of Wallachia during the Early Bronze Age<sup>9</sup>.

Within this area, inhumation graves containing red ochre were discovered at Brazi, Boldești-Grădiștea, Târgșoru Vechi, Gherăseni, Râmnicelu, Lișcoteanca, Brăilița and Cireșu<sup>10</sup>. These burials can be related either to tumularly funerary complexes that were probably worn down/destroyed over time or to cemeteries plane necropolises/isolated graves prior to the construction of the barrows.

Except for the 11 tumuli unearthed in Prahova County (pl. 1), 30 barrows coming from 22 localities were excavated in Wallachia, adding to 25 other barrows from 12 localities<sup>11</sup> in Oltenia. Primary statistics show that the tumuli investigated in Prahova County cover 36% of the excavations carried out in Wallachia and 20% of the ones from southern Romania (except for Dobruja).

The issue of Bronze Age tumularly burials in Romania and other areas was largely approached in recently published studies and volumes<sup>12</sup>, rendering a reassessment of the available data unnecessary. Thus, we prefer to focus the analysis on the new discoveries, most of them unpublished.

### Catalogue of discoveries

I. Ariceștii Rahtivani – *Crângu lui Bot* (Aricești I), unearthed in 2005; the barrow was 2.10 m high and had 54 m in diameter (pl. 2). Three inhumation graves were discovered. The main burial – Grave (Gr.) 3 (pl. 2/3) was found under the mantle that had a maximum height of 0.80 m and a diameter of 14.5 m; this mantle was overlaid with another earth layer that covered Gr.1, buried in the central area (pl. 2/3). Gr.2 was placed towards the periphery, however on the central axis of the tumulus; the skeleton was buried into the earth layer arranged after the funeral of Gr.1<sup>13</sup>.

<sup>2</sup> Nestor 1944, p. 30.

<sup>3</sup> Mitrea, Preda 1966, p. 88; Comșa 1989, p. 181.

<sup>4</sup> Paveleț 2007; Frînculeasa 2007.

<sup>5</sup> Simache, Teodorescu 1962; Frînculeasa 2011.

<sup>6</sup> Zirra 1960; Harțușche 1979, p. 70; Constantinescu 1994, p. 165; Motzoi-Chicideanu 2011, p. 87-88; Pandrea *et al.* 2012, p. 219-220.

<sup>7</sup> Rosetti 1959; Morintz 1978; Harțușche 1979, p. 72; Neagu 1992; Cavruc, Neagu 1995; Simion, Rența, Nițulescu 2003-2004; Vlad, Matei 2003-2004, p. 205; Motzoi-Chicideanu 2011, p. 87.

<sup>8</sup> Muscă 1996; 1998; Motzoi-Chicideanu, Olteanu 2000.

<sup>9</sup> Schuster 1997; Motzoi-Chicideanu, Olteanu 2000; Frînculeasa 2011a.

<sup>10</sup> Nestor 1944, p. 30; Harțușche, Anastasiu 1968; Harțușche 1973, p. 18-20; 1979 p. 69-71; 2002; Diaconu 1977; Sîrbu 1980, p. 27; Teodorescu 1994, p. 193; Constantinescu, Grigoraș 2004; Frînculeasa 2010, p. 214, note 197.

<sup>11</sup> In northern Oltenia a series of barrows were investigated at Milostea, however they can not be related to the Jamnaja funerary horizon.

<sup>12</sup> Burtănescu 1996; 1998; 2002; Comșa 1998; Nikolova 1999; Brudiu 2003; Schuster *et al.* 2011; Motzoi-Chicideanu 2011; Heyd 2011.

<sup>13</sup> Lichiardopol *et al.* 2006; Frînculeasa 2007.

Gr.1 – it was found in the central area of the barrow at a depth of -1.30-1.35 m from the highest point of the barrow (pl. 3/1). The grave pit could not be traced. The individual was oriented W 270° - E 90°, lying supine with the legs initially drawn up, tumbled to both sides in *Froschlage*-type position and the arms along the body. The skeleton was in an extremely poor condition. Red ochre was sprinkled around and over the body, especially near the skull. The grave-goods consist of two simple ring-shaped silver earrings (pl. 3/3), placed near the left mastoid and a two-twisted spiral silver hair ring near the left temporal (pl. 3/2). Anthropological data: indeterminate, 20-30 years old.

Gr.2 – it was discovered under the main stratigraphic deposit, on the central axis of the tumulus, placed about 12.80 m south of the reference point, at a depth of -0.60 m from the current surface of the barrow. The skeleton was oriented WSW 230° - ENE 50°. Very few bones were preserved; the individual seemed to be lying in a contracted position on its left side (pl. 3/4). No grave-goods accompanied the skeleton. Anthropological data: indeterminate, adult.

Gr.3 – it was the main burial placed approximately in the centre of the barrow (pl. 3/5). The grave pit was traced at a depth of -2.20 m from the reference point and its bottom reached -2.80 m. It was rectangular with slightly rounded corners, 1.60 m long, 0.85 m wide, W-E oriented. The pit was dug from the ancient level and perforated the gravel layer found at a depth of -0.60 m. The skeleton was in very good condition, lying supine, oriented W 275° - E 85°. The legs were bent at the knees, initially drawn up, tumbled to the southern edge of the pit. The arms were slightly flexed, the hands rested on the pelvis. The grave-goods consisted of two silver hair rings placed symmetrically near the temporal bones, a necklace of kaolin beads and a flint arrowhead. One of the hair rings was semi-lunar (pl. 3/7), while the other was a spiral hair ring with thinned, overlapping ends (pl. 3/6). Of the necklace pieces, 10 were whole and some others were found in a fragmentary state caused by the high friability of the raw material (pl. 3/9). The size of the beads ranged between 2-5 mm and the shape varied: bitruncated rosette-like (1), tubular (1), ring-shaped (the rest). The flint arrowhead was placed under the right femur, near the pelvis and had dimensions of 2.8x1.9x0.3 cm. It was processed by bilateral removals, had a concave base and was broken in ancient times (pl. 3/8). The entire pit bottom and especially the skull area was sprinkled with significant amounts of red ochre, including lumps. The individual was probably lain on a mat (probably made of twigs), which left visible, shallow traces, up to 2-3 cm thick, on the pit bottom. A river stone was placed under the skull. Anthropological data: male, 20 years old, 165.12-166.5 cm.

II. Ariceștii-Rahtivani – *General Construct Distribution* (Aricești II) – at the time of the excavation, the barrow had 45 m in diameter and a maximum height of 2 m (pl. 4/1). The mantle that covered the main burial was built of black clay, had about 24 m in diameter and a height of 1.50 m. Above this mantle was added another reddish clay layer (degraded marl), on top of which there is the ploughing layer (pl. 4/2-3). One single grave was unearthed.

Gr.1 – it was centrally placed under the mantle and perforated the natural gravel layer (pl. 4/3). On the northern (long) and southern sides of the pit there were small strips, 0.20-0.30 m high, with a diameter of 1.80 x 1.60m x 1.20 m. They represent the gravel and yellow clay removed during the digging of the funerary pit. The pit was traced at a depth of -1.90 m and its bottom reached -2.72 m. It was rectangular with rounded corners, east-west oriented, 1.50 m long (east-west), 0.80 m wide (north-south), and 0.80-0.85 m deep. On the northern side of the pit there was an interior step, 0.30 m wide and 0.20 m deep. The relatively well preserved skeleton was oriented west-east with the face towards east, the chin approached the chest. It was lying supine with the legs initially bent at the knees and drawn up, tumbled to the right, on the southern edge of the pit, the arms were placed along the body. A small amount of red ochre was sprinkled on the pit bottom on both sides of the skull (pl. 4/4). No grave-goods accompanied the skeleton. Anthropological data: male, 25-30 years old, 160-165 cm.

III. Ariceștii - Rahtivani - *Allianso* (Aricești III) – the mantle, built of gray dust mixed with small pebbles, had 14 m in diameter and a maximum height of 0.80 m. Above the mantle was added another reddish-clayish layer that didn't cover the highest area of the barrow but got thicker towards the periphery, reaching a maximum diameter of about 35 m. On top of it there was the ploughing layer, the barrow reaching a maximum height of 1.20 m (pl. 5). In the ancient layer there were several atypical, black coloured ceramic fragments. One single grave was unearthed.

Gr.1 – placed approximately in the central area of the barrow, the grave was discovered in the north-eastern surface at a depth of -0.95 m (pl. 5/3). The grave pit was traced from the upper part of the gravel layer, at a depth of -1.05 m. It was dug starting from a depth of -0.80 m and its bottom reached -1.30 m. It was rectangular with rounded corners, east-west oriented, 1.50 m long (west-east), 0.80 m wide (north-south), and 0.50 m deep. The pit was filled in with brown clay. The material removed during the digging of the grave pit was placed on its southern side, taking the shape of a lens of earth overlaid with a strip of gravel, 0.28 m high. The relatively well-preserved skeleton was lying supine, west-east oriented, the chin approached the chest. The lower limbs were bent at the knees, drawn up and tumbled to the left, to the northern edge of the pit, the upper limbs were placed along the body (pl. 5/3). No grave-goods or ochre pieces accompanied the skeleton. Anthropological data: male, 50-60 years old, 164.22 cm.

IV. Păulești – *Lizieră Pădure-mound A* (Păulești I) – the barrow had a maximum diameter of 40 m, a height of 0.50 m and it was placed on a 1.20 m high ridge. The ridge seemed remodelled, had elongated shape, with a long diameter of 30 m (east-west) and a short one of 22 m (north-south). The natural reddish clay of the ridge was overlaid with an alluvial (?) sandy layer up to 0.20-0.30 m thick. A 0.50 m high mound was built over the graves (pl. 6). Two burials (Gr.1 and Gr.2) and a prehistoric pit – CPL A were unearthed (pl. 6/1).

Gr.1 – it was discovered in the north-western surface, □13/XIV, at a depth of -0.40 m, somehow laterally placed, above the sandy layer. The grave pit could not be traced. The skeleton was in a mediocre condition, approximately east-west oriented, the skull was facing south. The individual was lying supine with the legs tumbled to the left. The arms were flexed and the hands rested on the abdomen (pl. 6/3). No grave-goods accompanied the skeleton. Anthropological data: adult, female.

Gr.2 – placed in the centre of the barrow, it was discovered in the north-western surface, □12 - 13/XIV, at a depth of -0.65-0.70 m. The grave pit perforated the sandy layer but its edges could not be traced. The skeleton was in a mediocre condition, approximately SSW – NNE oriented, the skull was facing west. The individual was lying in a contracted position on its left side; the arms were flexed and brought towards the face (pl. 6/4). No grave-goods accompanied the skeleton. Anthropological data: female, 45-50 years.

V. Păulești – *Lizieră Pădure-mound B* (Păulești II) – had a maximum diameter of 35 m and a height of 0.90 m. The mantle was built of gray coloured dust mixed with gravel, had 14 m in diameter and a height of 0.80 m (pl. 7). Three human skeletons and inhumation remains of a fourth individual were discovered in three graves (Gr.1, Gr.2, and Gr.3). One of the burials was dated to the XI-XIII century A.D. It was uncovered in the south-western surface, under the northern baulk, at a depth of -0.40 m. The skeleton was west-east oriented, lying in extended position, the arms were placed along the body (pl. 8/1). The grave also contained parts of a horse skeleton, a horse skull was placed near the human skull and the extremities of its legs were placed under the lower limbs of the individual. Several iron grave-goods were found: a horse bit with two rings was found between the jaws of the horse skull, 2 arrowheads, a ring-shaped object, an indeterminate piece (8/2)<sup>14</sup>.

Gr.2 – it was placed approximately in the centre of the mound, south of M1, unearthed in the south-western surface at a depth of -0.50 m (pl. 7/3; 8/3). The grave pit could not be traced. The skeleton was oriented west-east, lying supine with the legs bent at the knees and tumbled to the left, the arms along the body. Ochre was sprinkled north of the skull. The skeleton was in a poor condition, damaged by animals, a bone showing chew marks was found at 0.60 m west of the lower limbs. Several grave-goods were uncovered: two tubular pearls curved from copper plate (pl. 8/4, 5), placed on the upper part of the body, one whole kaolin bead and three other fragments (pl. 8/6, 7). On the right clavicle, the right cubitus and also on some ribs and vertebrae green traces were visible. Anthropological data: indeterminate, 15 years old. In close proximity to this skeleton, to the west, inhumation remains of a female were discovered (Gr.2A).

Gr.3 – the main burial was found at the centre of the mound, at a depth of -1.40-1.45 m (pl. 8/8). The grave pit was dug approximately 30 cm into the gravel layer, the material was removed and placed on its southern and northern sides. The slightly oval pit, 1.20 m long and 0.70 m wide, was traced at a depth of -1.03 m and its bottom reached -1.45 m. The skeleton was lying in a contracted position on its left side, SSE – NNV oriented, its spine was arched, the skull was facing west, the chin approached the chest. The

<sup>14</sup> Frînculeasa *et al.* 2012.



upper limbs were flexed, the left one brought towards the chin. No grave-goods or ochre pieces accompanied the skeleton. Anthropological data: male, 30-40 years-old, 155.38 cm.

VI. Păulești – *Metro* (Păulești III) – the mantle, built of gray dust and fine gravel, had approximately 20 m in diameter and a height of 1.1 m. It was overlaid with a secondary reddish-brown layer, with a thickness ranging between 0.30 and 1.1 m towards the periphery. Above this level there was a black clayish layer, very thin at the centre of the mound (0.20 m) and thicker towards the periphery, on top of which there was the ploughing layer. At the time of the excavation, the barrow had a diameter of about 44 m and a height of 1.6 m (pl. 9/1, 2). Four graves containing 8 individuals were discovered (pl. 9/3).

Gr.1 – it is a secondary grave, unearthed in the northern surface, at a depth of -0.40 m. The grave pit could not be traced. (pl. 9/1, 3). Inhumation remains of four individuals, an adult and three children were discovered over a surface of 0.80x0.50 m. Many of the adult individual's bones were preserved while the children were represented mainly by skull and long bones fragments. The bones were not in their anatomically proper place (they were re-inhumed), having been arranged on the width of the pit that was probably oriented north-south. The complex was disturbed by the excavator bucket, but all the bones were recovered. Gr.1A and Gr.1D, placed on the short sides of the pit, were partially disturbed. Anthropological data: Gr.1A – female, 40-50 years-old, Gr.1B – child, 7 years-old, Gr.1C – child, 5 years-old, Gr.1D – child, 4 years-old.

Gr.2 – it was unearthed in the northern surface at a depth of -1.50 m, at the bottom of the barrow. The pit was rectangular with rounded corners, 1.70 m long, 0.90 m wide and 0.90 m deep; its bottom reached -2.40 m. The skeleton was oriented west/south-west – east/north-east, lying supine with the legs bent at the knees, tumbled to the right and the arms along the body. The left radius and ulna were missing, probably disrupted by a visible animal path. No grave-goods accompanied the skeleton, only ochre was sprinkled 20 cm to the right of the skull and chin (pl. 10/1). The pit bottom seemed plastered with a thin layer of clay that adhered to both the natural gravel and the human bones. Anthropological data: male, 18-20 years old, 163.03 m.

Gr.3 – it is a secondary burial, uncovered in the western surface at a depth of -0.70 m. The grave pit could not be traced. The skeleton was in a poor condition, west-east oriented, lying supine with the legs bent at the knees and tumbled to the left, the arms along the body. Small amounts of ochre were sprinkled near the skull (pl. 10/3). Anthropological data: male, 35-45 years old.

Gr.4 – it was unearthed at the bottom of the barrow, at a depth of -1.55 m. It was partially covered by the stratigraphic deposit between the northern and western surfaces. The pit contained a double burial, thus it was larger, 1.80 m long, between 0.85-0.92 m wide. It was rectangular with rounded corners, north-south oriented, wider on the southern side and was dug -0.25-0.30 m into the gravel layer (pl. 10/4). Two individuals (Gr.4A and Gr.4B) were discovered:

- Gr.4A - north-south oriented, it was lying in a contracted position on the left side, the legs were bent at the knees, the arms were flexed and brought towards the face, the chin approached the chest (pl. 10/4). The skeleton was accompanied by several grave-goods: a greenish glassy paste bead (pl. 10/8), four tubular pearls made of an "ossified" material (pl. 10/5-7, 9, 10, 13), and several pieces of a highly friable white material (perhaps kaolin?) (pl. 10/11, 12). Anthropological data : male, 26-32 years-old, 159.63 cm.

- Gr.4B – it was placed south of the lower limbs of Gr.4A, on the short side of the pit, approximately east-west oriented, perpendicular to Gr.4A. The skeleton was lying supine with the legs strongly flexed, tumbled to the left, the tibiae and fibulae approached the femurs. The right arm was bent and oriented towards the shoulder. The skull was placed under the left femur, while the mandible was *in situ*, on its anatomical proper place (pl. 10/4). This side of the pit was larger, reaching a maximum width of 0.92 m. Anthropological data: male, 33-42 years-old, 160.12 cm.

VII. Strejnicu, *Don* – the mantle with an initial diameter of about 20 m and a maximum height of 0.90 m was overlaid with a clayish layer that got thicker towards the periphery. At the time of the excavation the barrow had a diameter of about 40 m and a maximum height of 1.20 m (pl. 11). Three funerary complexes were unearthed, one of which (CPL 1/Gr.1) was dated to the XI-XIII century A.D. The burial contained a horse skull and the extremities of its legs, east/north-east – west/south-west oriented,

associated with several iron pieces: a horse bit with two rings, a rhomboidal arrowhead, and two other indeterminate pieces, in a precarious condition. This was the grave of a nomad horseman from the XI-XIII century A.D., the absence of human bones may indicate a cenotaph (pl. 12/1-2). Small fragments of human bones, possibly from a disturbed grave (Gr.2?) were discovered south of the horse skeleton<sup>15</sup>.

Gr.2 – secondary grave placed in the central area of the barrow, approximately 1 m north of CPL 1, was uncovered at a depth of -0.40 m. The grave pit could not be traced. Only the lower limbs of the west-east oriented human skeleton were preserved, therefore its position was very hard to determine. He might have been lying supine with the legs tumbled to both sides, in *Froschlage*-type position. The burial might have been disturbed during the digging of the pit of CPL 1/Gr.1. Although there was no such direct evidence, the different orientations of the two burials and the presence of a human tooth near the horse bones could support this hypothesis (pl. 11/3; 12/3). Anthropological data: adult.

Gr.3 – the main burial was found at the centre of the barrow (pl. 11/1, 3). The grave was unearthed at a depth of -1.10 m and its bottom reached -1.50 m. The grave pit was rectangular with rounded corners, 1.90 m long, 0.90 m wide and 0.50 m deep. The skeleton was lying supine, west-east oriented, with the legs initially drawn up, tumbled on the southern side of the pit. The arms were placed along the body, the hands rested on the pelvis (pl. 12/4). No grave-goods or ochre pieces accompanied the skeleton. Traces of burnt wood were discovered in the earth that filled in the pit and on its edges. Anthropological data: male, 35-40 years.

VIII. Blejoi - *Mobel* (Blejoi I) – rescue excavations were carried out in 2004. At that moment, the barrow had a diameter of 40 m and a maximum height of 1.90 m. The mantle that covered the main burial was built of dust, had a diameter of about 12 m and a height of about 0.90 m (pl. 13/1-2). The excavations uncovered a single grave surrounded by a stone ring<sup>16</sup>.

Gr.1 – The stone ring was placed in the central area of the barrow and had a maximum diameter of 4.90 m on the exterior and 2.70 m on the interior (pl. 13/3). Inside the ring, slightly laterally, a skeleton was lying supine with the legs bent at the knees and tumbled to the right, the arms flexed and brought towards the mandible (pl. 13/3). The individual was accompanied by a bitruncated pot with rounded body and trumpet-like neck, decorated with eight circular „pills” on the belly, arranged in groups of two (pl. 13/4) placed near the legs, and a badly preserved tubular pearl curved from copper plate, found between the femurs (pl. 13/5). The skeleton was lying in the south-western area of the ring on a gravel „bed” about 4-6 cm thick. Anthropological data: female, 30 - 40 years-old, 1.60-1.65 m.

Gr.1B – near the left humerus of Gr.1 a fragment of a right scapula from another individual was discovered. Anthropological data: adult. Inside the ring black traces of burnt materials were visible while outside it some mammal bones and two ceramic fragments were found, one of which was decorated with an alveolar girdle<sup>17</sup>.

IX. Blejoi – *Serus* (Blejoi II) – the rescue excavations were performed in 2012. The barrow had a diameter of about 40 m and a height of 1 m (pl. 14/1); the mantle was built of gray dust mixed with fine gravel, had 20 m in diameter and a maximum height of 0.60 m. It was overlaid with the brown-reddish vegetal layer, up to 0.30 m thick (pl. 14/1). One single grave was unearthed.

Gr.1 – the main burial placed at the centre of the barrow. The grave pit dug into the gravel layer was traced at a depth of -0.95-1 m and its bottom reached -1.22 m. It was rectangular with rounded corners, 1.55 m long, 0.68 m wide, west-east oriented. The gravel removed during the digging of the pit was placed to the west, forming a semicircular strip, about 0.25 m high, 1.60x0.70 m (NS-EW). The badly preserved skeleton was lying supine with the head oriented to the west; the lower limbs were bent at the knees and tumbled on the southern edge of the pit, and the upper limbs lying along the body (pl. 14/3). No grave goods or ochre pieces accompanied the skeleton. Anthropological data: male, adult, 169.81 cm.

X. Ploiești-Triaj *Mound I* (Ploiești-Triaj I) – investigated during 1941-1942, the barrow was partially destroyed during the construction works to expand the Ploiești marshalling yards. The barrow contained

<sup>15</sup> Frînculeasa *et al.* 2012.

<sup>16</sup> Lichiardopol *et al.* 2005; Paveleț 2007; Frînculeasa 2011, p. 214-215.

<sup>17</sup> Paveleț 2007.

eight graves with skeletons lying in contracted positions and oriented in various directions. The grave-goods consisted of adornment pieces made of copper, silver, kaolin, shells, bone, a copper flanged axe (*Randleistenbeil*), and ceramics<sup>18</sup>. Detailed information is only available on Gr.3 and Gr.4. Gr.3 was a secondary grave, the individual, probably a child, was lying in a contracted position<sup>19</sup> and was accompanied by a copper pendant in the form of eyeglasses, belonging to the *Brillenspirale* type (pl. 17/1), a fragmentary copper bracelet found near the right arm (pl. 17/2), a necklace of flat kaolin beads (pl. 17/8) and tubular copper pearls (pl. 17/6-7), shell pearls and valves, a spiral silver hair ring (fig 9/10), a pot with spheroidal body (pl. 17/10) placed near the legs<sup>20</sup> and red ochre sprinkled on the upper limbs and abdomen<sup>21</sup>. Gr.4 was considered the main burial of the barrow<sup>22</sup> and contained two skeletons (♂ and ♀), accompanied by a flanged axe belonging to the *Randleistenbeil* type (pl. 17/3) placed near the male (Gr.4a), tubular copper/bronze pearls together with a necklace of bone pieces placed between the two skeletons<sup>23</sup> and a small lump of ochre placed near the left tibia of the male individual<sup>24</sup>. A pot with spheroidal body and cylindrical neck was found in Gr.5 and three other cups were discovered in different secondary graves<sup>25</sup>. Some of the burials were not accompanied by grave-goods<sup>26</sup>. Several pots were attributed to the Monteoru Ia pottery<sup>27</sup>. A tubular copper pearl was found in Gr.2 (pl. 17/5).

XI. Ploiești-Triaj *Mound II* (Ploiești-Triaj II) – unearthed in 1943, it had a diameter of 47 m and a height of 1.50 m. Thirteen ochre graves were discovered (pl. 15, 16), most of them placed in the northern area of the barrow, arranged in a semicircle. Only one skeleton was lying supine with the legs drawn up, the rest of the individuals were lying in a contracted position. Two double graves were found. Grave-goods were usually placed in children burials: three pots discovered in Gr.15, Gr.20, Gr.21 (pl. 16/4, 15, 12) and metal items – three tubular copper pearls in Gr.5 (pl. 15/1), a spiral silver hair ring in both Gr.15 (fig. 9/6-7) and Gr.20 (fig. 9/8-9). An animal tooth was discovered in Gr.21. Adult individuals were not accompanied by grave-goods<sup>28</sup>, except for Gr.19 that contained a necklace made of 10 *Canis familiaris* canines and a *Sus domesticus* canine, all of them perforated (pl. 16/9).

### Physical-geographical context

All the barrows investigated were located in the piedmont plain of Ploiești which is an extension of the II<sup>nd</sup> terrace of Prahova River (Câmpina). The average altitude is 150 m, as a result of the overlapping and jointing of the alluvium attributed to the Upper Pleistocene that cover a folded structure subjected to local subsidence movements. The deposits of Quaternary sedimentary stratum are represented by clays, argillaceous sands, fluvial gravels with coarse sand intercalations, loess deposits. The alluvium thickness varies, decreasing from north to south (70-5 m). The plain surface has a low inclination. The rivers have meandering streams and at the periphery of the dejection cone they change direction towards southeast, following the general slope of the plain. There are various types of soils developed according to the lithological and morphological particularities of the area: hydromorphic soils (the confluence of Teleajen with Prahova and of Cricov with Ialomița), undeveloped soils (meadows), eu-mesobasic brown soils (Prahova and Cricov), mollisols (Teleajen and Prahova chernozems, cambic rendzinic and rendzinic soils formed on limestone gravels)<sup>29</sup>.

The area is bordered by the Teleajen River to the east, the Prahova River to the west and the Subcarpathian hills to the north, near Bănești. The Teleajen flows into Prahova River at the northern

<sup>18</sup> Nestor 1944, p. 30; Comșa 1976, p. 42-43; 1998, p. 22; Vulpe 1987, p. 177; Motzoi-Chicideanu 2011, p. 138.

<sup>19</sup> Popa 2010, p. 15; Motzoi-Chicideanu *op.cit.*, p. 138.

<sup>20</sup> Comșa 1998, p. 22.

<sup>21</sup> Zirra 1960, p. 103.

<sup>22</sup> Vulpe 1987, p. 177.

<sup>23</sup> Comșa 1976, p. 43; Comșa 1998, p. 22.

<sup>24</sup> Zirra 1960, p. 103.

<sup>25</sup> Zirra 1960, p. 103.

<sup>26</sup> Nestor 1944, p. 30.

<sup>27</sup> Morintz 1978, p. 97, 99, 111; Harțuche 1979, p. 81.

<sup>28</sup> Comșa 1989.

<sup>29</sup> Frînculeasa *et al.* 2012, p. 140.

boundary of the Independența village. All the barrows investigated and approached in this study were concentrated around Ploiești (pl. 1), in the Teleajen-Prahova interfluvium, an area crossed by several low flow rivers, of which Dâmbul and Leaotul are the most significant.

### Field research methodology

The excavation methodology implied the preservation of control baulks that intersected in the central area of the barrows, in order to clarify the strata conditions of the tumuli. The baulks were oriented approximately north-south (baulk I) and east-west (baulk II). They were squared from 2 to 2 m with Roman (baulk I), and Arabic numbers (baulk II) resulting in squares of 2x2 m in a perfect horizontal plan. The baulks were 1m wide and about 50 m long. Thus, the mound was divided into 4 surfaces named according to their geographical orientation as follows: 1- the south-eastern surface; 2- the south-western surface; 3- the north-eastern surface; 4- the north-western surface. A reference point was set up, to which all the depths were related using a surveyor's level.

To unearth the four surfaces, a mechanical excavator was used to remove the earth in altimetric levels from top to bottom. The surfaces were uncovered alternately, in opposite plans, in order to allow the preservation of baulks, but also for a more effective control of the excavation. In order to provide accurate observations, the investigation of archaeological complexes was carried out manually; the profiles were scraped clean using shovels and trowels before the drawing and recording of the strata conditions of the barrows, while the funerary complexes were carefully cleaned up by trowel and brush.

While the secondary burials were always at risk of being disturbed by the excavator bucket, the pits of the main burials were easy to trace due to the fact that they were dug into the natural gravel deposit. The removed material was placed on the edges of the grave pit, forming strips. These strips were visible at a higher level than the funerary pits and were always a first indication of the existence of a main grave or of a secondary burial that perforated the gravel layer. The pit was relatively easy to trace because it was filled in with earth coming from the ancient layer.

Secondary graves mainly appeared at depths ranging between -0.30 - 0.60 m from the current surface level, they were usually dug into the mantle built above the main burial. It was not possible to trace the grave pits for several reasons: they were dug into the mantle of the barrow and filled in with the same material; they were affected by the intensive ploughing from the last half century and the erosion by wind and rain.

The field research methodology was different for the excavations carried out during 2004 and 2005 in Blejoi I and Aricești I. There were excavated large trenches that crossed the mounds on a north-south direction; in between a series of 1 m wide control baulks were preserved. The mechanical excavation of these two mounds was made in altimetric levels from top to bottom<sup>30</sup>.

Mechanical excavation is generally *apriori* rejected by most Romanian archaeologists. Debates occur mainly outside the academic framework. Due to major investment projects carried out in recent years the archaeologists were faced with deadlines for the archaeological discharge. This fact rendered necessary the use of mechanized means in archaeology; however, debates concerning the impact of the "new methodology" on the outcome of the research are not reflected in the archaeological literature for the moment. We fully agree that mechanized excavations are not able to provide an amount of details and information leading to a satisfactory level of knowledge regarding the evolution of burials, the characteristics and constructive stages of the funerary structure, the possible scenario of the funeral ritual etc. However, the data achieved from previous and present research, along with modern analyses, that we consider absolutely necessary, could compensate some of these primary frustrations. It is also true that some of the studies showing images during the mechanical removal of mounds can only inspire reservations and doubts regarding this methodology and approach to research. We accepted/adopted this solution as a tool that should not be dismissed, but rather understood within its limitations. We do not intend here to make an apology of using mechanized means in archaeology; however, we do not find it useful to hide from the present day socio-economic reality under the mask of scientific over-rigorousity.

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<sup>30</sup> Paveleț 2007; Frînculeasa 2007.

### **Stratigraphy and the construction of funerary structures**

At the time of the excavations, the barrows had diameters ranging between 35 and 60 m and heights from 1.2 to 2.2 m. They were built exclusively of earth, namely dust mixed with small pebbles (granulometry 0.5 – 5 cm) or of reddish clay (degraded marl), raw material specific to the area. Moreover, in proximity to the barrows the surface showed depressions, probably as a result of earth extraction.

The mounds were built directly over the ancient surface layer, that was 0.30-0.60 m thick. Beneath this layer there is the natural deposit of Quaternary gravel, with variable thickness (up to tens of meters). Only at Aricești II an arrangement of the central area of the mound is indicated by sporadic lenses of yellow sandy clay. This barrow was built on the edge of a natural ridge, traces of a former river bed were identified to the west-north-west. Another situation was that of the tumulus from Blejoi II, built over the natural gravel layer. In this case, some arrangements were probably made and the earth initially removed was used in the construction of the mound. The barrow from Păulești III seemed to have undergone changes over time due to successive arrangements. The main grave (Gr.4) was initially placed in the central area, but after the funeral of Gr.2 another earth layer was added that changed the appearance of the mound, in both vertical and horizontal planes, displacing the initial centre of the mound (pl. 9/1).

Of the nine mounds recently investigated, four contained one single grave (Blejoi I, Blejoi II, Aricești I, Aricești II), and five contained several graves, ranging from two to four (Aricești I, Păulești I, Păulești II, Păulești III, Strejnicu). The two mounds from Ploiești-Triaj contained 8, respectively 13 graves. At Blejoi I, Păulești II and Păulești III along with the main skeletons human remains of other individuals were discovered, even three as is the case of Gr.1 from Păulești III. Double graves were also unearthed at Ploiești-Triaj I, Ploiești-Triaj II.

The main grave was usually placed in the central area of the mound, always perforating the ancient surface level and the superior level of the gravel layer. The pits were rectangular with rounded corners and were dug up to 0.50 m into the gravel. The material removed during the digging was placed on one or two sides of the pit and formed irregular strips, reaching a maximum height of 0.30 m. This gravel was never used to fill in the pit or placed on top of it. Some 0.20-0.30 m must be added to the depth of the pits, representing the thickness of the ancient soil layer overlaying the gravel deposit.

The pits of secondary graves perforated the initial mantle or the individual was placed immediately above it. They were identified at depths ranging between -0.35 m and -0.60 m, except for two cases. The first is Gr.2 from Păulești III whose pit was traced at a depth of -1.50 m because it was dug into the gravel layer (0.90 m deep). In order to dig the grave pit, the mound was perforated over a much wider area, the gravel removed was visible above the initial mantle, at a depth of -0.40 m from the current surface level. The second case is Gr.1 from Aricești I, identified at a depth of -1.35 m. The grave pit could not be traced, the individual was placed immediately above the mantle built over the main grave (Gr.3).

Wood was discovered in a single grave (Gr.3/Strejnicu), however it did not consist of significant segments arranged in such a way as to suggest a wooden cover or beams lining the walls of the pit, but rather appeared to be the remnants of a fire that were mixed with the earth used to fill in the pit. In Gr.3 from Aricești I traces of plants (branches) were found in the earth placed above the pit. In the case of skeletons lying supine, the legs that were initially drawn up seemed displaced to the edge of the pits or even tumbled to both sides. Thus, the presence of a cover that would have created an empty space for a certain time period, may be presumed.

After the individual was placed inside the pit with the cover above him, the pit was covered with earth coming from the ancient layer. Afterwards, a first mound (mantle) was built, 10 up to 30% smaller than the current size of the mounds. The size of the construction was given by a layer superposing the mantle, with a different consistency, texture and colour, up to 0.20-0.40 m thick. This layer was affected at the surface by ploughing. At the time of construction, the mounds were probably narrower in base and higher; however, anthropogenic and natural factors contributed to their flattening over time.

At Aricești I and Păulești III rearrangements were observed – above the initial mantle there was another soil layer, covering the secondary graves. Moreover, the construction of Gr.2 from Păulești III shows how the gravel removed during the digging of the pit was placed on the level of the initial mantle (built for the main grave - Gr.4), followed by a further tumulus heightening.

The only grave with a stone ring is the one from Blejoi I (pl. 13/3). The individual was lying on a stone "bed" inside a ring made of gravel, which had a diameter of about 5 m, a thickness that varied from 0.80 to 1.80 m and a maximum height of 0.20 m. For this grave no funerary pit was dug, the skeleton was placed directly on a platform set into the gravel (pl. 13/2).

The profiles of pits were rectangular on both axes, the only grave generating discussions is the one from Aricești II that had an interior step on the northern, long side (pl. 4/4).

### Positioning and orientation of skeletons

The graves contained skeletons in a contracted position or lying supine with the legs originally bent at the knees and drawn up, then tumbled on the edge of the pit. In a secondary grave from Aricești I the skeleton was lying supine with the legs tumbled to both sides, in *Froschlage*-type position (pl. 3/1); probably, at the time of burial, they were bent and drawn up. A similar situation was found in Gr.2 from Strejnicu; however, the extremely poor condition of the skeleton rendered accurate observations impossible (pl. 12/3).

➤ Contracted position – such graves were discovered at Blejoi I (Gr.1), Aricești I (Gr.2), Păulești I (Gr.2), Păulești II (Gr.3), Păulești III (Gr.4A), Ploiești-Triaj I and Ploiești-Triaj II. The graves from Păulești I, Păulești II, Păulești III, Ploiești-Triaj I and Ploiești-Triaj II are the main burials of the barrows. The individuals were lying on both sides.

➤ Supine – Blejoi II (Gr.1), Aricești I (Gr.1, Gr.3), Aricești II (Gr.1), Aricești III (Gr.1), Păulești I (Gr.1), Păulești II (Gr.2), Păulești III (Gr.2, Gr.3, Gr.4B), Strejnicu (Gr.2, Gr.3). At Ploiești – Triaj II only a skeleton was lying on his back (Gr.6) while the information regarding Ploiești-Triaj I is lost. The graves from Blejoi I, Blejoi II, Aricești I, Aricești II, Aricești III, Strejnicu, Păulești III are the main burials of the barrows.

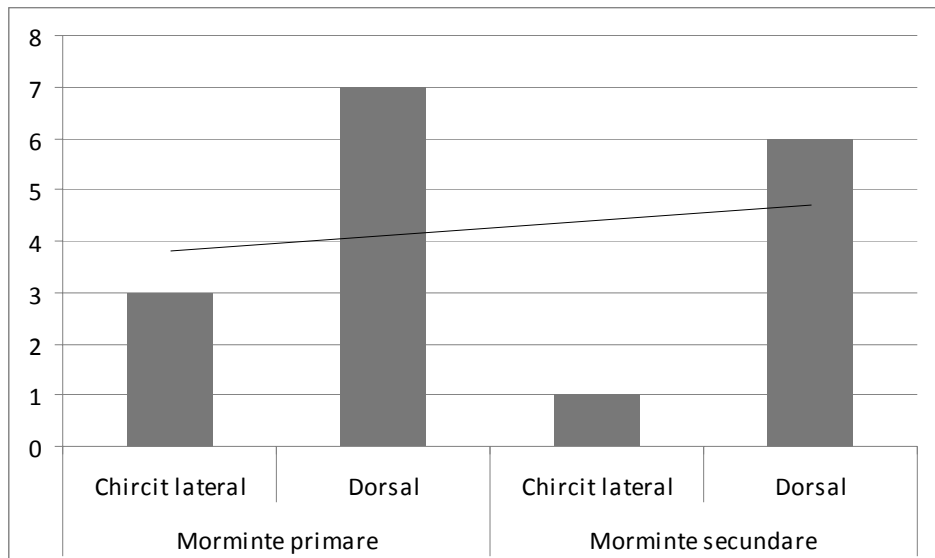


Fig. 1. The relationship between primary and secondary graves, with the evolutionary trend

The above mentioned cases indicate the chronological anteriority of the graves with skeletons in contracted positions over the ones lying supine with the legs drawn up and tumbled to a side. This is the case of the graves from Păulești II, Păulești III and Ploiești-Triaj II. A main grave containing an individual lying supine with the legs drawn up and tumbled to a side was never superposed by a secondary grave with a skeleton in a contracted position, lying on a side.

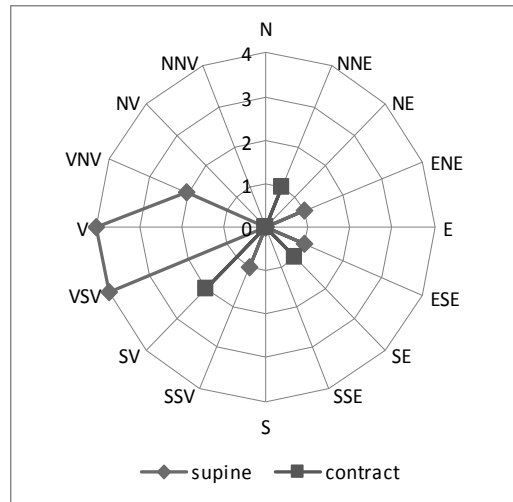
In other situations the graves with skeletons in a contracted position were superposed by similar burials, as is the case of Gr.5/Ploiești-Triaj II which was overlaid by Gr.1<sup>31</sup> and also of the main burial (Gr.4) from Ploiești-Triaj I, superposed by other graves with skeletons in a contracted position<sup>32</sup>.

<sup>31</sup> Comșa 1989, p. 182.

<sup>32</sup> Nestor 1944.

Most of the individuals lying supine with the legs drawn up and tumbled to a side were west-east oriented (fig. 2), had the arms along the body or the hands placed on the pelvis. All of them were adult males. The grave from Blejoi I which belonged to a woman showed an atypical position, although the skeleton was lying supine with the legs tumbled to a side, the arms were flexed and brought towards the face (pl. 13/3).

Fig. 2. The orientation chart of graves related to the position.



This position of the upper limbs may indicate that events subsequent to the funeral led to the movement of the body from lateral position in dorsal decubitus. An “unusual” situation was noticed in Gr.3/Păulești II where the skeleton was lying in a contracted position, had a curved spine, but had the arms placed on the abdomen (pl. 8/8). A similar situation was found in Gr.7 from Ploiești-Triaș II (pl. 15/7).

In the graves recently unearthed, skeletons in contracted positions were oriented in various directions, with their heads towards south-west, south-east, north-east (fig. 2), data confirmed by the orientation chart of the graves from Ploiești-Triaș II (fig. 6).

Regarding the typology of skeleton positioning we have to recall the scheme proposed by A. Häusler<sup>33</sup>. It may be presumed that certain categories were determined by accident rather than a ritual practice. The typology of supine positions with the arms placed asymmetrically should be reconsidered. When the upper limbs are placed on the pelvis and/or along the body sometimes postfunerary “displacements” may lead to erroneous classifications. Even though it is not included in the above mentioned typology<sup>34</sup>, the so-called *Froschlage* position of the legs might be due to changes occurring in a postfunerary phase. Other much more detailed typologies were developed<sup>35</sup>; however, we consider that many of the conclusions reached do not reflect the burial practices of those communities, but rather images that came to the attention of the archaeologists due to a personal history of each complex.

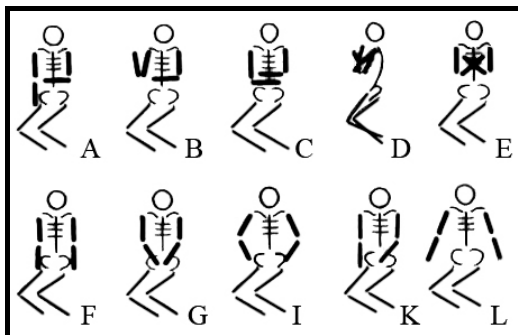


Fig. 3. The typology of skeleton positioning in ochre graves (after Häusler 1974, plate 1).

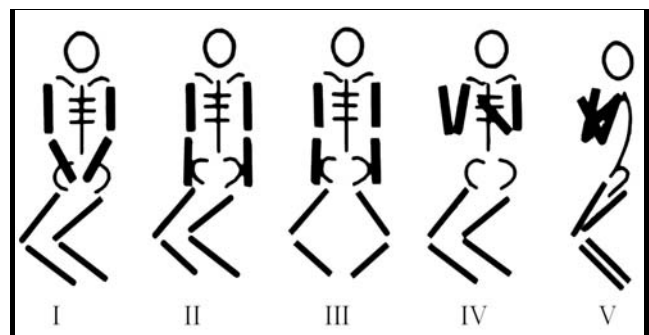


Fig. 4. Prahova County – The typology of skeleton positioning.

<sup>33</sup> Häusler 1974, fig. 1.

<sup>34</sup> Häusler 1974, fig. 1.

<sup>35</sup> Jarovoi 1985, pl. 2; Burtănescu 1998; Burtănescu 2002.

The graves unearthed during the investigations from Prahova County contained skeletons in five positions, of which only I and V do not seem to cast any doubt on the original position (fig. 4). The position number IV, identified in the grave with stone ring from Blejoi I, could also be the result of the movement of the body in a post-funerary phase. In this case the skeleton was lying supine, but its legs and arms were placed in a manner specific to a contracted position.

We also have to remark the presence of multiple burials in the barrows from Păulești II, Păulești III, Blejoi I, Ploiești-Triaj I, Ploiești-Triaj II, with possible analogies throughout the Yamnaya area. In graves from Blejoi I and Păulești II, along with the main skeletons were found human remains belonging to other adult individuals. At Păulești III were unearthed two funerary complexes that contained multiple burials. Thus, in a secondary grave (Gr.1) were found human remains of four individuals: an adult female and three children, and in the main grave (Gr.4) two skeletons with different positions and orientations were buried together (pl. 10/4). This situation raises the question of possible successive stages of burial. Double graves were discovered at Ploiești-Triaj, two were in *Mound II* and another one (the main burial) in *Mound I*<sup>36</sup>.

### Anthropological data

The sample consists of 24 skeletons discovered in 17 graves (Table 1) and does not include the skeletons unearthed at Ploiești-Triaj. At Păulești II/Gr.2, along with the skeleton of an indeterminate sub-adult were identified remains of an adult individual, possibly a female. At Păulești III a multiple grave contained the skeletal remains of four individuals: a female and three children. At the bottom of the same mound, two adult males were buried together. The main burial from Blejoi I which belonged to a female also contained a fragment of a right scapula from an adult individual, possibly a male.

Age distribution is as follows: four sub-adults and 20 adults; sex distribution: ten males, five females and nine indeterminate. From the 24 analysed skeletons, 12 adult skeletons show pathological conditions: three females, eight males and one indeterminate (Table 1).

*Osteoarthritis* was identified in eight cases (six males și two females). This disorder has various causing factors: mechanical stress and physical activity, inflammatory metabolic diseases, infections, congenital condition; in addition, there is a variation by age and sex, weight or climate<sup>37</sup>. *Osteoperiostitis* (identified in one male) is generally associated with infections and traumas<sup>38</sup>.

*Cribra cranii* was identified in three cases (males), a possible effect of the combined action of several factors such as inadequate diet, poor hygiene, infectious disease<sup>39</sup>. The dental diseases found were caries produced by fermentation of dietary carbohydrates<sup>40</sup> (two females, four males, one indeterminate); abscesses (three cases, two males and one female); enamel hypoplasia (one male), considered an indication of some episodes of malnutrition and disease during childhood<sup>41</sup>; calculus was found in two males.

The male individual (Gr.1) from Aricești II presents pathological conditions that indicate an active lifestyle: healed fractures of the first and fourth metacarpals, a roughly oval-shaped perforation on the occipital bone (possibly occurred perimortem as the result of a blow), and a 13.63x10.71 mm osteoma on the posterior side of the left parietal bone. The bones show well-developed muscle insertions as a result of prolonged physical activity and the area of insertion of the medial head of the gastrocnemius muscle shows possible traces of a healed muscle tear. Osteoarthritis affecting the joints and Schmorl's nodes was identified, possibly as a result of congenital defects of the spine, ageing and trauma<sup>42</sup>. The skull and one of the ribs had evidence of microporosity, a possible sign of infection in the body before the time of death (possibly tuberculosis), or an indication of a vitamin C deficiency (early stage of scurvy?).

The skeleton from Blejoi II shows traces of a trauma and/or a perimortem surgical intervention (at the half of left tibia an area of 48x15.5x3.3 mm on the both surfaces of anterior crest).

<sup>36</sup> Comșa 1989; Vulpe 1987, p. 177.

<sup>37</sup> Larsen 1997, p. 162-184; Waldron 2009, p. 28.

<sup>38</sup> Ortner 2003, p. 208.

<sup>39</sup> Walker *et al.* 2009, p. 114.

<sup>40</sup> Larsen *op.cit.*, p. 65-67.

<sup>41</sup> Goodman 1989, p. 265-266.

<sup>42</sup> Faccia, Williams 2008, p. 29-30.



The prehistoric skeletons found at Ploiești-Triaș were included in a study on the relationship between dental pathologies and population lifestyle in various time periods<sup>43</sup>. From this sample, about 158 teeth (belonging to eight individuals) were studied. Dental caries occurred in seven cases, affecting three individuals (37.6% of the total number of individuals)<sup>44</sup>.

Table 1

Anthropological determinations, orientations and skeleton position in recently unearthed graves in Prahova County

Name of site	Grave label	Sex	Age	Orientation	Position	Pathology	Stature	
Păulești Lizieră Pădure - Mound A (I)	M1	F	Adult	E-V	dorsal decubitus	Caries, osteoarthritis, abscess	-	
	M2	F	45-50 years	VSV-ENE	laterally crouched on the left	Osteoarthritis	-	
Păulești Lizieră Pădure - Mound B (II)	M1	M	20-22 years	V-E	Dorsal	-	162,90 cm	
	M2	M2, Ind. 1	IND	15 years	VNV-ESE	dorsal decubitus	-	-
		M2, Ind. 2	F	Adult	-	-	-	-
M3	M	30-40 years	SSE-NNV	laterally crouched on the left	Caries, osteoarthritis	155,38 cm		
Păulești Metro (III)	M1	M1A	F	40-50 years	Re-inhumed	-	Caries	-
		M1B	IND	7 years	Re-inhumed	-	-	-
		M1C	IND	5 years	Re-inhumed	-	-	-
		M1D	IND	4 years	Re-inhumed	-	-	-
	M2	M	18-20 years	V-E	dorsal decubitus	Enamel hypoplasia, osteoperiostitis	163,03 cm	
	M3	M	35-45 years	V-E	dorsal decubitus	-	-	
	M4	M4A	M	26-32 years	N-S	laterally crouched on the left	Caries, <i>cribra cranii</i> , osteoarthritis	159,43 cm
M4B		M	33-42 years	SSE-NNV	dorsal decubitus	Caries, abscess, <i>cribra cranii</i> , osteoarthritis	160,12 cm	
Blejoii Mobel Auto (I)	M1	M1A	F	30-40 years	SSV-NNE	laterally crouched on the right	-	160-165 cm
		M1B	IND	Adult	-	-	-	-
Blejoii Serus (II)	M1	M	Adult	V-E	dorsal decubitus	Trauma and/or surgical intervention perimortem	169,81 cm	
Ariceștii-Rahtivani General Construct (II)	M1	M	25-30 years	V-E	dorsal decubitus	Calculus, Schmorl nodes, osteoarthritis, fracture, traumas on the skull, possibly tuberculosis or scurvy	165,26- 167,98 cm	
Ariceștii-Rahtivani Allianso (III)	M1	M	50-60 years	V-E	dorsal decubitus	Caries, osteoarthritis	164,22 cm	
Ariceștii Rahtivani Crângul lui Boi (I)	M1	IND	20-30 years	V-E	dorsal decubitus	Caries	-	
	M2	IND	Adult	VSV-ENE	laterally crouched on the left?	-	-	
	M3	M	20 years	V-E	dorsal decubitus	<i>Cribra cranii</i> , calculus	165,12-166,5 cm	
Strejnicu Don	M2	IND	Adult	V-E	dorsal decubitus	-	-	
	M3	M	35-40 years	V-E	dorsal decubitus	Abscess, osteoarthritis	-	

<sup>43</sup> Firu, Nicolăescu-Ploșșor, Negrea 1965.

<sup>44</sup> Firu, Nicolăescu-Ploșșor, Negrea 1965, p. 195, table 2.

For the skeletons found at Ploiești-Triaj II some data on the anthropological features is known<sup>45</sup>; however, the primary diagnosis was made by the archaeologist during field research or by the author of the article, while reconsidering some features of the funerary ritual<sup>46</sup>. Thus, the information is only partially reliable regarding the age groups (Table 2). Although other anthropological data can be found in several studies, they do not provide age and sex estimation, but only information concerning pathologies or cranial measurements<sup>47</sup>.

Table 2

Ploiești-Triaj *Movila II*, positions, orientations, anthropological determinations, grave-goods

Grave label	Position	Orientation	Age	Sex	Inventory	Ochre
M1	contracted on the right side	NE 45° - SV 225°	Adult	F	-	x
M3	contracted on the right side	VSV 250° - ENE 70°	Adult	M	-	x
M4	contracted on the right side	V - E	Child	-	-	-
M5	contracted on the right side	SSV 200° - NNE 20°	Child	F	3 tubular copper pearls	-
M6	supine	ENE 70° - VSV 250°	Adult	-	-	x
M7	contracted on the right side	NNE 30° - SSV 210°	Adult	M	-	x
M8	contracted on the left side	NNV 340° - SSE 160°	Senile	M	Ceramic fragment	x
M10	contracted on the right side	ENE 70° - VSV 250°	Child	-	-	-
M14a	contracted on the left side	NNV 347° - SSE 167°	Child	-	-	-
M14b	contracted on the left side	NNV 347° - SSE 167°	Adult	-	-	-
M15	contracted on the left side	ENE 50° - VSV 230°	Child (foetus)	-	Spiral hair ring made of silver, pot	x
M19a	contracted on the right side	Pit orientation NNV 320° - SSE 140°	Adult	-	10 perforated teeth, 1 perforated fang of boar	-
M19b	-		Adult	-		-
M20	contracted on the left side	ESE 110° - VNV 290°	Child	-	Spiral hair ring made of silver, pot	x
M21	contracted on the right side	VSV 250° - ENE 70°	Child	-	Tooth, pot	x

### Grave-goods

What seems to be characteristic of the uncovered burials is the lack of accompanying grave-goods, only few burials contained ornaments, pots or weapons. Here a distinction is in order between the grave-goods that are part of the funerary ritual (reflecting traditions and/or religious beliefs), which can be related to the group/cultural community (ethos) and the items associated with the individual that are rather the expression of the social status, the age and sex group, the type of activity etc. (ornaments, weapons, tools). Ochre is another important element of ritual<sup>48</sup> that seems to define, along with the funerary

<sup>45</sup> Comșa 1989.

<sup>46</sup> Comșa 1989, p. 187-188, note 6.

<sup>47</sup> Haas, Maximilian 1958, p. 142; Fîru, Nicolăescu-Plopșor, Negrea 1965, p. 195, table 2; Comșa 2005.

<sup>48</sup> According to other researchers, ochre cannot be considered a grave-good, but rather "it constitutes an element of the internal structure of the grave" (Motzoi-Chicideanu 2012, p. 219).

structure, a common feature of these graves, regardless of their orientation, positioning and inventory. Depositions of pots, animal offerings or food remains may also be related to the burial ritual.

Of the seventeen graves recently unearthed in Prahova County, eleven were not accompanied by grave-goods. Ochre was found in six graves; only in three cases it was associated with other pieces. Of the graves with individuals lying in a contracted position, only one had inventory and none had ochre. Four of the skeletons lying supine were accompanied by grave-goods and six by ochre pieces. Inventories were found in burials belonging to adult individuals: females (Blejoi I – Gr.1), males (Aricești I – Gr.3, Păulești III – Gr.4A), indeterminate (Aricești I – Gr.1) and to children (Păulești II – Gr.2). At Ploiești-Triaj (I and II) inventory items appear mainly in children burials (M1/Gr.3; M2/Gr.5, Gr.15, Gr.20, Gr.21), rarely in adult graves (Mound I/Gr.4a, Gr.4b; Mound II/Gr.19a).

Grave	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
Ploiești-Triaj II/Gr.21	●	●	●	●				●	●			●											
Ploiești-Triaj II/Gr.4				●					●														
Ploiești-Triaj II/Gr.10				●					●														
Ploiești-Triaj II/Gr.14A				●					●														
Ploiești-Triaj II/Gr.19A	●	●							●										●				
Ploiești-Triaj II/Gr.5				●					●	●													
Ploiești-Triaj I/Gr.3			●	●	●	●	●	●	●	●	●	●	●	●									
Ploiești-Triaj II/Gr.15				●					●	●	●	●	●	●									
Ploiești-Triaj II/Gr.20				●					●	●	●	●	●	●									
Păulești II/Gr.2				●						●		●	●										●
Păulești I/Gr.2										●									●				
Păulești II/Gr.3									●										●				
Ploiești-Triaj II/Gr.14B									●										●				
Ploiești-Triaj II/Gr.1									●				●						●				
Ploiești-Triaj II/Gr.3									●				●						●				
Ploiești-Triaj II/Gr.7									●				●						●				
Ploiești-Triaj II/Gr.8									●				●	●					●				
Păulești III/Gr.4A									●			●			●	●			●				
Blejoi I/Gr.1								●		●									●				●
Ploiești-Triaj I/Gr.4									●			●					●	●	●				
Aricești I/Gr.3										●	●	●	●	●					●	●	●	●	●
Aricești I/Gr.1											●	●	●	●					●			●	●
Aricești II/Gr.1												●	●	●					●			●	●
Păulești III/Gr.2												●	●	●					●			●	●
Păulești III/Gr.3												●	●	●					●			●	●
Ploiești-Triaj II/Gr.6												●							●			●	●
Aricești III/Gr.1																			●			●	●
Păulești I/Gr.1																			●			●	●
Păulești III/Gr.4B																			●			●	●
Strejnicu/Gr.2																			●			●	●
Strejnicu/Gr.3																			●			●	●
Blejoi II/Gr.1																			●			●	●

Fig. 5. Seriation of tumularly graves unearthed in Prahova County.

Ochre – it accompanied exclusively the individuals lying supine, either sprinkled in large amounts (Aricești I – Gr.1, Gr.3) or barely noticeable (Aricești II – Gr.1, Păulești II – Gr.2, Păulești III – Gr.2, Gr.3). In Gr.3/Aricești I, ochre was found near the skull and the right humerus of the individual while in Gr.1 it was placed also near the lower limbs. As for the rest of the cases, ochre was spread around the skull, but never over the bones<sup>49</sup>. In Gr.2/Păulești III ochre was not found near the skull, but near the right humerus. It is noteworthy that in all the barrows recently unearthed, ochre was not found in graves with skeletons in a contracted position. A different situation occurred at Ploiești-Triaj II where ochre accompanied eight graves containing skeletons in contracted position, sprinkled near the skull or over the bones<sup>50</sup> and at Ploiești-Triaj I, where it was sprinkled on the upper limbs and abdomen of Gr.3 and placed in a small lump near the legs of Gr.4a<sup>51</sup>.

<sup>49</sup> Although in Gr.1/Blejoi I the presence of ochre over the bones is mentioned, we consider this observation not accurate (note A. Frînculeasa, present during field research).

<sup>50</sup> Comșa 1989, p. 186.

<sup>51</sup> Zirra 1960, p. 103.

Pots – in the recently investigated barrows only one single pot was discovered at Blejoi I, decorated with small clay “pills” on its maximum diameter. Vessels were found in three graves from Ploiești-Triaj II<sup>52</sup> and several graves from Ploiești-Triaj I<sup>53</sup>. In the ancient level of Gr.3/Strejnicu several atypical, very friable ceramic fragments were discovered. Other sherds in secondary position were found in the barrows from Aricești III, Blejoi I. At Păulești I, somehow outside the funerary complex, a pit was unearthed. It was traced at a depth of - 2.90 m from the maximum height of the barrow (which was placed on a ridge) and -0.40 m from the current surface level. The pit was rectangular, 1.60 m long, 1.20 m wide and 0.60 m deep. The earth that filled in the pit contained black ceramic fragments and several stones.

Metal pieces made of copper, bronze, silver and even gold were found in a small number of graves. At Aricești I two of the graves contained 5 silver pieces, including a spiral gold-plated hair ring<sup>54</sup>. A relatively large number of metal grave-goods were uncovered at Ploiești-Triaj: three silver pieces and more than ten copper items. Metal pieces were not found in the recently investigated mounds, except for two tubular pearls from Blejoi I and Păulești II. A small copper piece was documented in Gr.2 from Sudiți<sup>55</sup>.

In Gr.3/Ploiești-Triaj I was found a copper pendant in the form of eyeglasses<sup>56</sup> (*Brillenspirale*) (pl. 17/1), associated with a silver hair ring<sup>57</sup>. In the same barrow, in Gr.4a there was a flanged axe (*Randleistenbeil*) (pl. 17/3) with a length of 8.1 cm, and a blade width of 3.2 cm<sup>58</sup>.

Another category of ornaments is that of hair rings - *Lockenringe* - found at Aricești I and Ploiești-Triaj I and II. The silver hair ring from Gr.1/Aricești I that weighs 5.4 grams, was plated with a gold sheet, only partially preserved (fig. 9/1-3). Two other silver hair rings were discovered in the main burial from Aricești I (fig. 9/4-5). In Gr.3/Ploiești-Triaj I (fig. 9/10) was found a spiral silver hair ring<sup>59</sup> and two other similar pieces were documented at Ploiești-Triaj II<sup>60</sup> in Gr.15 (pl. 16/4; fig. 9/6-7) and Gr.20 (fig. 16/7, fig. 9/8-9). In Gr.1/Aricești I near the left mastoid of the skeleton two poorly preserved small rings (pl. 3/3) made of silver wire were discovered<sup>61</sup>.

Tubular pearls (*Blechröhrchen*) curved from copper plate come from women and children graves: Blejoi I/Gr.1 (pl. 13/5), Păulești II/Gr.2 (pl. 8/7-8), Ploiești-Triaj I/Gr.2, Gr.3, Gr.4 (pl. 17/5-7), Ploiești-Triaj II/Gr.5 (pl. 15/1). At Blejoi I the right metacarpal I and the corresponding phalanges showed traces of copper oxide, which suggests the existence of a piece that was not preserved.

For the time being, a unique discovery is a partially preserved bracelet (*Blecharmband mit eingerollten Rändern*) (pl. 17/2), made of a copper plate with the edges rolled towards the interior, found in Gr.3/Ploiești-Triaj I<sup>62</sup>. In the same barrow, a copper awl (*Pfriem mit Knochengriff*), square in cross-section, with a bone handle decorated by incision was found in secondary position (pl. 17/4).

Bone pieces – bone pearls occurred in graves from Ploiești-Triaj Mound I<sup>63</sup>. In Gr.19/Ploiești-Triaj II (pl. 16/6) 10 canines of *canis familiaris* and a perforated canine of *sus domesticus* were discovered<sup>64</sup>, while in Gr.4 there was a bone necklace<sup>65</sup>. Another teeth necklace was found in the same barrow but the information regarding its context of discovery is lost.

Pieces made of stag antlers occurred at Ploiești-Triaj II<sup>66</sup> and Păulești III (pl. 10/2), in close proximity to the graves. Mammal bones were found at Ploiești-Triaj II<sup>67</sup> and in the main burial from Blejoi I<sup>68</sup>.

<sup>52</sup> Comșa 1989.

<sup>53</sup> Nestor 1944, p. 30.

<sup>54</sup> Chiojdeanu, Cristea-Stan, Constantinescu 2011, p. 690, table 3.

<sup>55</sup> Frînculeasa 2011, p. 254, fig. 3/5.

<sup>56</sup> Roman *et al.* 1992, p. 105; Matuschik 1996, p. 348, Motzoi-Chicideanu 2011, p. 138.

<sup>57</sup> Nestor 1944, p. 30.

<sup>58</sup> Vulpe 1975, p. 66-67, no. 342, pl. 37/242.

<sup>59</sup> Nestor 1944, p. 30.

<sup>60</sup> Comșa 1989, p. 183, 185.

<sup>61</sup> Frînculeasa 2007, p. 185, pl. 3/1.

<sup>62</sup> Nestor 1944, p. 30; Comșa 1998, p. 22.

<sup>63</sup> Motzoi-Chicideanu 2012, p. 138.

<sup>64</sup> Comșa 1989, p. 185.

<sup>65</sup> Zirra 1960 p. 103.

<sup>66</sup> Comșa 1989, p. 185.

<sup>67</sup> Comșa 1989, p. 185.

<sup>68</sup> Paveleț 2007, p. 111.

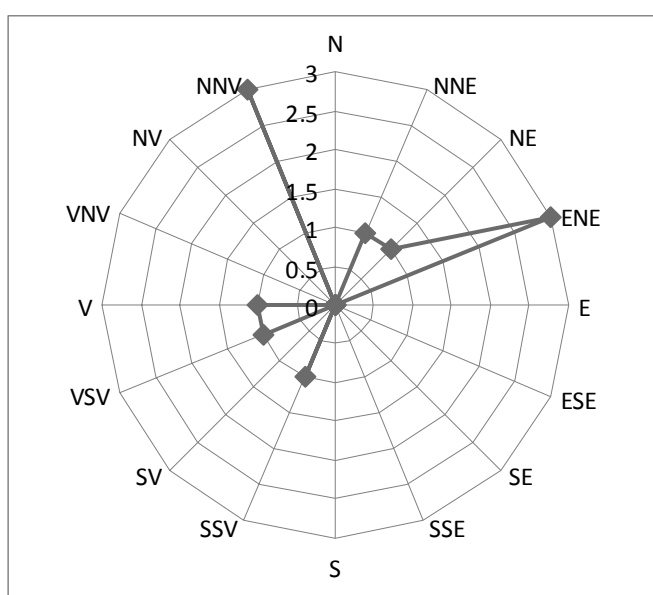
A necklace made of 73 ring-shaped kaolin beads (preserved) (pl. 17/8) comes from Gr.3/Ploiești-Triaj I along with several shell pearls<sup>69</sup>. The kaolin beads from Aricești I had various shapes: tubular, ring-shaped or rosette-like<sup>70</sup>, while the ones from Gr.2/Păulești II were ring-shaped (pl. 8/6, 7).

In the main grave from Păulești III (Gr.4a) a necklace of tubular pearls made of an „ossified” material was discovered along with a small, perforated, greenish, oval bead (pl. 10/5-13). The bead seems to be made of glassy paste, or eventually smelting waste and is 9.8 mmx6 mm (pl. 10/8). The pearls made of “ossified”/mineralized material are 2-3.5 cm long and have 0.5-0.8 cm in diameter.

In the main grave from Aricești I, under the right femur and close to the pelvis of the individual a flint arrowhead was found. The 2.8x1.9x0.3 cm arrowhead was made of inferior quality, yellowish-gray flint with white spots (pl. 2/8). It was shaped by bilateral removals, with a concave base, and its active part was broken in ancient times<sup>71</sup>.

Without considering it an inventory piece, we mention the poorly preserved mat the individual from Gr.3/Aricești I was lain on.

Fig. 6. Ploiești-Triaj *Mound II*: orientation diagram<sup>1</sup>.



Some aspects regarding the excavations carried out at Ploiești-Triaj *Mound II* are worth mentioning<sup>72</sup>. Thirteen graves containing 15 individuals (Gr.14 and Gr.19 were double graves) were attributed to the pit-grave (Yamnaya) burials. They belonged to eight adults (one was classified as senile) and seven children. Information regarding the sex of the individuals is rarely mentioned (Gr.1 and Gr.5 are considered females and Gr.3, Gr.7, Gr.8 males), while estimations are made according to the funerary standards, especially the position of the skeletons<sup>73</sup>. The age and sex groups were determined by the archaeologist, thus, they cannot be taken into account for a more detailed analysis. Upon closer examination, some inadvertencies are noticeable. For instance, the orientations of the skeletons mentioned in the text do not correspond to those indicated in the illustration (Gr.1, Gr.3, Gr.4, Gr.5, Gr.7, Gr.8, Gr.19).

Grave-goods could usually be found in children burials, as is the case of the three pots uncovered in Gr.15, Gr.20, Gr.21, of the metal pieces: 3 tubular copper pearls in Gr.5, two spiral silver hair rings in Gr.15 and Gr.20, and of the animal teeth discovered in Gr.21. It seems necessary to draw attention to the similar inventories of Gr.15 and Gr.20 (children), namely the association between pots and silver hair rings. As for the adult graves, only Gr.19 contained a necklace formed of 10 perforated canines of *canis*

<sup>69</sup> Comșa 1998, p. 22.

<sup>70</sup> Frînculeasa 2007.

<sup>71</sup> Frînculeasa 2007.

<sup>72</sup> Comșa 1989.

<sup>73</sup> Comșa 1989, p. 187-188.

*familiaris* and a canine of *sus domesticus*<sup>74</sup> with two perforations (pl. 16/9). A parallel to the above mentioned situation can be found at Smeeni, where during the first phase of burials, grave-goods such as ceramics or mammal teeth were placed exclusively in children's graves<sup>75</sup>.

Another child burial with a rich inventory is that of Gr.3/Ploiești-Triaj I containing a copper pendant in the form of eyeglasses (*Brillenspirale*) (pl. 17/1), a bracelet fragment found near the right hand (pl. 17/2), a necklace of flat kaolin beads (pl. 17/8), several tubular copper pearls (pl. 17/5-7), shell pearls and valves, a spiral silver hair ring (fig. 9/10), a pot (pl. 17/10) placed near the feet of the individual<sup>76</sup> and ochre sprinkled over the upper limbs and abdomen<sup>77</sup>. The main burial from the same mound (Gr.4a-b, adults, male and female), was accompanied by a flanged copper axe (*Randleistenbeil*) (pl. 17/3) placed beside the male individual, tubular copper pearls and a necklace of bone pieces in between the two skeletons<sup>78</sup> and a small lump of ochre near the left tibia of Gr.4a<sup>79</sup>. Gr.5 together with three other graves contained a pot each, and two burials were not accompanied by grave-goods<sup>80</sup>.

### Metal pieces<sup>81</sup>

A relatively small number of metal pieces were found in both primary and secondary graves. Typologically, they belong to various categories: pieces of adornment (hair rings, tubular pearls, a pendant, a bracelet, two ring-shaped earrings), weapons (a flanged axe), tools (an awl with bone handle). The hair rings are made of silver and the rest of the pieces are made of copper. Some of the pieces found at Ploiești-Triaj I and II were subjected to a first metallographic analysis in the mid-twentieth century<sup>82</sup>.

We have to remark the composition of the spiral hair ring from Gr.3/Aricești I (pl. 20/1-3), made of silver and gold. Two technical possibilities of attaching the gold sheet obtained from a nugget were identified, either by tapping or by using adhesive resins<sup>83</sup>. The rest of the metal pieces contain more than 99% copper, while tin, lead and zinc occur in very small proportions in several pieces. The small proportion of arsenic and brom may originate from the copper ore used. These elements are not found as exploitable minerals, but usually occur in copper ores as mineralization<sup>84</sup>. It is noteworthy that "*in Romania chalcopyrite (CuFeS<sub>2</sub>), the principal mineral from which Cu is extracted, is associated with arsenic minerals*"<sup>85</sup>.

The source of arsenic is very difficult to identify and lead could also come from the copper ore. Lead isotope analysis can not be applied to determine the source of arsenic<sup>86</sup>. Given the fact that the pieces may come from exchanges it is difficult to establish correlations between the context and the raw materials in the absence of isotope analysis of both the pieces and ores known in these areas<sup>87</sup>. Although arsenic concentrations are small, their importance should not be underestimated. A concentration of no more than 0.2% raises the melting temperature and increases its corrosion resistance, while one of up to 8% allows an improved casting, shaping and hardness<sup>88</sup>. The very low concentrations of arsenic are natural, only those higher than 2% up to 6-8% seem to be related to metal processing technologies<sup>89</sup>.

<sup>74</sup> Determination by A. Bălășescu (The National Museum of the History of the Romania) to whom we express our gratitude.

<sup>75</sup> Simache, Teodorescu 1962, p. 276.

<sup>76</sup> Comșa 1998, p. 22.

<sup>77</sup> Zirra 1960, p. 103.

<sup>78</sup> Comșa 1976, p. 43; 1998, p. 22.

<sup>79</sup> Zirra 1960, p. 103.

<sup>80</sup> Nestor 1944.

<sup>81</sup> The analyses introduced in Table 3 were made on the surface of the objects through the X-ray fluorescence method by dr. Bogdan Constantinescu, dr. Cătălina Chiojdeanu and Daniela Cristea-Stan from "Horia Hulubei" The National Institute of Physics and Nuclear Engineering, with the portable spectrometer X-MET 3000TX.

<sup>82</sup> Junghans *et al.* 1968.

<sup>83</sup> Chiojdeanu, Cristea-Stan, Constantinescu 2011, p. 690.

<sup>84</sup> Constantinescu, Matei 1996, p. 28-29.

<sup>85</sup> Neacșu 2010, p. 17.

<sup>86</sup> Haustein, Gillis, Pernicka 2010, p. 817.

<sup>87</sup> Haustein, Gillis, Pernicka 2010, p. 831.

<sup>88</sup> Vulpe 1999, p. 44; Petrescu-Dîmbovița, Vulpe 2001, p. 239.

<sup>89</sup> Ryck, Adriaens, Adams 2005, p. 262.

Three pieces from Gr.3/Ploiești-Triaj I contained tin in very low concentrations (0.1% or only traces). Other data come from a Yamnaya burial from Glăvănești (Mound 1/Gr.11), where some pieces of adornment contained 1.55% and 3.4% tin<sup>90</sup>. The analyses may be clues, although not unequivocal, that these graves belong to an early chronological time frame.

Table 3

Analyses of the metal pieces from tumularly graves investigated in Prahova County

	Piece	Complex	Cu(%)	As(%)	Pb(%)	Ag(%)	Au(%)	Sn(%)	Fe(%)	Br(%)	Zn(%)	
1a	Hair ring with two spirals	M1 - Ariceștii-Rahtivani <i>Crîngu lui Bot</i>	First measurement	1.2	-	-	95.8	1.7	-	0.6	traces	-
1b			Second measurement (on the gold sheet)	0.7	-	-	61	36.3	-	2	-	
2	Semi-lunar hair ring	Gr.3 - Ariceștii-Rahtivani <i>Crîngu lui Bot</i>	3.8	-	0.1	94.7	0.3	-	0.7	traces	-	
3	Semi-lunar hair ring	Gr.3 - Ariceștii-Rahtivani <i>Crîngu lui Bot</i>	2.2	-	0.1	95.3	0.7	-	1	traces	-	
4	Earring?	Gr.1 - Ariceștii-Rahtivani <i>Crîngu lui Bot</i>	6.6	-	traces	90.4	traces	-	2.9	traces	-	
5	Earring?	Gr.1 - Ariceștii-Rahtivani <i>Crîngu lui Bot</i>	4.2	-	traces	93.8	traces	-	2	traces	-	
6	Flanged axe	Gr.4a - Ploiești-Triaj, <i>Mound I</i>	99.2	traces	traces	-	-	-	0.5	-	-	
7	Bracelet	Gr.3 - Ploiești-Triaj <i>Mound I</i>	99.5	0.2	-	-	-	0,1	-	-	0.1	
8	Tubular pearl	Gr.2 - Ploiești-Triaj <i>Mound I</i>	99.3	0.1	-	-	-	0,1	0.4	-	0.1	
9	Tubular pearl	Gr.3 - Ploiești-Triaj <i>Mound I</i>	99.5	traces	-	-	-	traces	0.3	-	0.1	
10	<i>Brillenspirale</i> pendant	Gr.3 - Ploiești-Triaj <i>Mound I</i>	99.4	-	-	-	-	-	0.6	-	-	
11	Hair ring	Gr.15 - Ploiești-Triaj, <i>Mound II</i>	2.9	-	traces	96.2	traces	-	0.7	-	-	
12	Hair ring	Gr.20 - Ploiești-Triaj, <i>Mound II</i>	0.5	-	0.1	97.3	0.3	-	1.4	traces	-	
13	Tubular pearl	Gr.1 - Blejoi <i>Mobel Auto</i>	96	traces	-	-	-	-	0.3	-	-	
14	Tubular pearl (big fragm.)	Gr.2 - Păulești <i>Tumulus B</i>	99.2	0.5	-	-	-	-	0.3	-	-	
15	Tubular pearl (small fragm)	Gr.2 - Păulești <i>Tumulus B</i>	99.1	0.4	-	-	-	-	0.5	-	-	

Metal pieces such as copper or precious metal ornaments and copper weapons are frequently occurring categories of grave-goods in Yamnaya burials, following ceramics<sup>91</sup>. In the burials unearthed in Prahova County precious metal ornaments were found in both main (Gr.1/Aricești I) and secondary graves (Gr.3/Aricești I; Gr.3/Ploiești-Triaj I; Gr.15/Ploiești-Triaj II; Gr.20/Ploiești-Triaj II). They accompanied skeletons placed in contracted position (Ploiești-Triaj I, Ploiești-Triaj II), as well as individuals lying supine (Aricești I). Copper pieces occurred in both main (Gr.4/Ploiești-Triaj I; Blejoi I) and secondary graves (Gr.2 and Gr.3/Ploiești-Triaj I, Gr.5/Ploiești-Triaj II, Gr.2/Păulești II). For the time being the copper flanged axe (*Randleistenbeil*) from Gr.4a/Ploiești-Triaj I is an isolated discovery among the tumularly burials at the Lower Danube. Metal, as well as other weapons are rare findings in Yamnaya graves<sup>92</sup>, no such pieces occurred west of the Prut to the present time<sup>93</sup>.

<sup>90</sup> Vulpe 1974, p. 246.

<sup>91</sup> Motzoi-Chicideanu 2011, p. 276.

<sup>92</sup> Ibidem, p. 277.

<sup>93</sup> Burtănescu 2002, p. 258.

By 2006 in the north-west-Pontic area (the Odessa region, the Buceag steppe and partially the Republic of Moldavia) there were known 322 metal artifacts discovered in 163 graves (of 2112 unearthed) from 129 tumuli (of 556 investigated). Of these pieces, 210 were made of copper/bronze, 107 of silver, 4 of gold and one of lead. They belong to different categories: weapons (axes, hatchets), tools (knives, awls) and adornments (bracelets, earrings, hair rings, tubular or ring-shaped pearls). The raw material from which they are made seems to originate from the Balkans<sup>94</sup>.

E. Chernykh noticed the difference between the Yamnaya and Katakombnaja communities of the north-Pontic steppes. The former had access to their own natural resources<sup>95</sup>, due to a strategic geographical position in an area with rich copper ore deposits in the southern Ural Mountains and the basins of the Ural, Samara and Belaya rivers<sup>96</sup>. These resources were exploited as demonstrated by metallographic analysis of the pieces discovered in Yamnaya graves<sup>97</sup>. Analysis of the Kargaly rich resources (in the southern Ural Mountains) revealed an intense exploitation of copper ores over an area estimated at 500 km<sup>2</sup> conducted in the chronological time frame of the Yamnaya communities, until around 1400 BC<sup>98</sup>.

### Data on the absolute and relative chronology

Given the lack of absolute dates for the barrows investigated in Romania, the chronological time frame of their occurrence was established only in reference to a broad base of discoveries from the eastern area, the Tisza river basin and the south of the Danube. Discussions inevitably focused on the relative chronology, only recently the rich series of absolute datings clarified the chronology and evolutionary phases of these funerary complexes.

For the Yamnaya funerary horizon from the eastern area a large number of absolute dates are known<sup>99</sup>; out of over 270 dates<sup>100</sup>, more than 220 are for the Ukrainian steppe<sup>101</sup>. A number of 191 dates were attributed to the Katakombnaja culture<sup>102</sup>. For the western area and the south of the Danube the sample is much smaller, there are some dates for the tumuli investigated in Hungary, Bulgaria and Serbia<sup>103</sup>. For the moment, Romania represents a white spot on the map of radiocarbon dates covering this area<sup>104</sup>.

The earliest discoveries go back as far as 3650 BC, while the more recent ones reach 2000 BC<sup>105</sup>. A set of dates and dendrochronological analyses for the kurgan from Sugokleja, placed north of the Black Sea, indicate the time frame between 3650 and 2600 BC<sup>106</sup>. Dates covering a shorter time span belong to the graves from Mogila Tarasova, of 2780 - 2610 BC<sup>107</sup>, or the more recent ones from Zatoka-Akkiembitsij, falling between 2460 and 2030 BC<sup>108</sup>. For the tumuli in the western area dates indicate the interval of 3100 - 2495 BC<sup>109</sup>, although relatively recent analyses for the graves from Sárrétudvari-Órhalom in eastern Hungary go back as far as 3300 BC<sup>110</sup>.

For the Romanian territory there are three dates for the complexes investigated at Baia Hamangia (2), Cernavoda, but two of them have large error margins ( $\pm 160$ ,  $\pm 100$ )<sup>111</sup>. A single date for a "red

<sup>94</sup> Subotin 2008.

<sup>95</sup> Chernykh 2009, p. 130.

<sup>96</sup> Chernykh 1992, p. 85.

<sup>97</sup> Chernykh 1992, p. 86.

<sup>98</sup> Hanks, Doonan 2008, p. 2.

<sup>99</sup> Klochko, Kruts 1999; Kaiser 2003; Govedarica *et al.* 2006; Rassamakin, Nikolova 2008, Table 1; Rassamakin 1999; Nikolova, Kaiser 2009.

<sup>100</sup> Chernykh 2009, p. 126.

<sup>101</sup> Rassamakin, Nikolova 2008, p. 60-61; Nikolova, Kaiser 2009, table 1.

<sup>102</sup> Kaiser 1999; 2003; Chernykh 2009, p. 126.

<sup>103</sup> Ecsedy 1979, p. 52; Dani, Nepper 2006; Panayotov 1989; Boyadziev 1995, p. 186; Görsdorf, Bojadziev 1996, p. 155-156; Nikolova 1999, tab. A, p. 406.

<sup>104</sup> Rassamakin, Nikolova 2008, fig. 4.

<sup>105</sup> Govedarica *et al.* 2006; Rassamakin, Nikolova 2008, table 1.

<sup>106</sup> Nikolova, Kaiser 2009.

<sup>107</sup> Nikolova, Kaiser 2009.

<sup>108</sup> Szmyt, Chernyakov 1999.

<sup>109</sup> Heyd 2011, p. 541.

<sup>110</sup> Dani, Nepper 2006, p. 44.

<sup>111</sup> Forenbaher 1993, p. 241; Laszlo 1997, p. 265.



ochre” grave from Baia Hamangia may be taken into consideration with an acceptable margin of error, of  $4530 \pm 65$  BP (in radiocarbon years), meaning 3380-3010 cal. BC at 2 sigma (91,9% probability)<sup>112</sup>. The date for a red “ochre grave” from Galați is too recent at 3400 BP<sup>113</sup>.

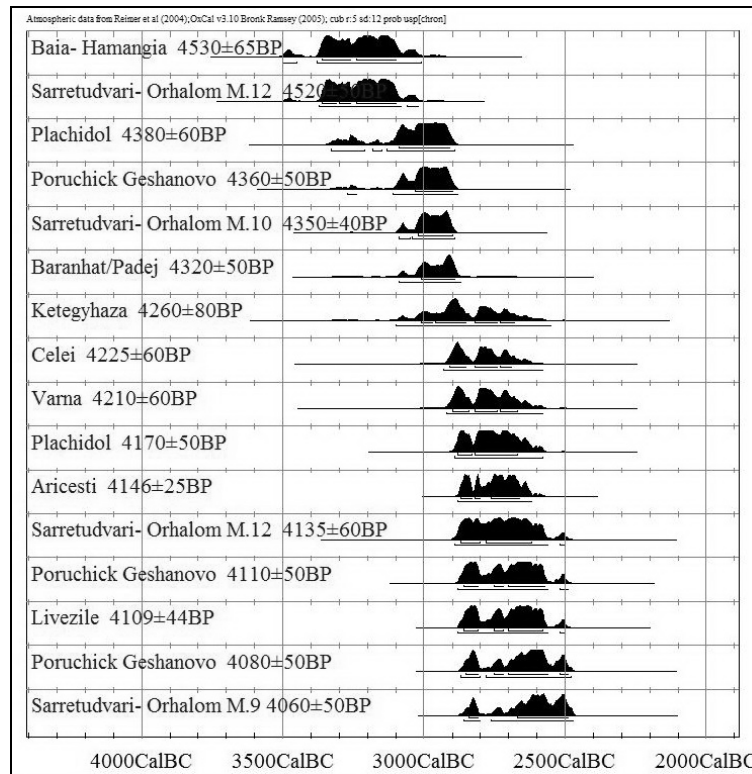


Fig. 7. Diagram of <sup>14</sup>C data for tumular graves from the western area.

It seems necessary to mention some additional dates, even though they do not belong to tumular graves. A noteworthy date comes from Dwelling 1 of the second level from Celei, of  $4225 \pm 60$  BP, falling in the range between 2920 - 2620 cal. BC at 2 sigma, 94.4% probability<sup>114</sup>. This stratigraphic context is later than the 2c level in which two spiral hair rings were discovered<sup>115</sup>. Another date is the one from Ampoița, attributed to the Livezile group, of  $4109 \pm 44$  BP, indicating the interval of 2880-2560 cal. BC at 2 sigma (93.7% probability)<sup>116</sup> and two others for the grave from Costișa of  $4044 \pm 30$  BP and  $4031 \pm 20$  BP, fall in the range between 2640-2470 cal. BC at 2 sigma and 2620-2470 cal. BC at 2 sigma<sup>117</sup>.

For the western area are worth mentioning the dates from Sárretudvari-Órhalom: Gr.12 -  $4520 \pm 50$  BP, Gr.10 -  $4350 \pm 40$  BP, Gr.4 -  $4135 \pm 60$  BP, Gr.9 -  $4060 \pm 50$  BP, thus calibrated to Gr.12 - 3354-3104 BC, Gr.10 - 3077-2894 BC, Gr.4 - 2886-2561 BC, Gr.9 - 2637-2489 BC (one should note that Gr.4 contained a spiral golden hair ring<sup>118</sup>). Another date for Mound 3/Gr.4 from Kétegyháza of  $4260 \pm 80$  BP, could be calibrated to 3011-2707 BC<sup>119</sup>.

South of the Danube there are dates for Yamnaya burials investigated in the tumuli from Plachidol I ( $4380 \pm 60$  BP and  $4170 \pm 50$  BP, ranged between 3090-2910 cal. BC at 2 sigma, respectively 2880-2620 cal. BC at 2 sigma, 95,4% probability) and Poruchik Geshanovo ( $4360 \pm 50$  BP,  $4080 \pm 50$  BP,

<sup>112</sup> Motzoi-Chicideanu 2011, p. 226, 328, fig. 17.

<sup>113</sup> László 1983, p. 365.

<sup>114</sup> Motzoi-Chicideanu, Olteanu 2000, List 3; Popescu 2010, p. 167.

<sup>115</sup> Nica 1982, p. 20.

<sup>116</sup> Ciugudean 1996, p. 146.

<sup>117</sup> Popescu, Băjenaru 2008, p. 68.

<sup>118</sup> Dani, Nepper 2006, p. 44, 48.

<sup>119</sup> Ecsedy 1979, p. 52.

4110±50 BP, calibrated to 3100-2880 BC, 2760-2470 BC and 2880-2560 BC), both located in Bulgaria<sup>120</sup>.

Another date for this area, but of questionable origin is known from Varna, of 4210±60 BP, ranging between 2920-2620 cal. BC at 2 sigma, 95,4% probability<sup>121</sup>. From Serbia a single date is known, for a tumular grave from Baranhat/Padej, of 4320±50 BP, thus 3090-2870 cal. BC at 2 sigma<sup>122</sup>.

As for the occurrence of these graves in the western area we have to remark the date for Gr.12 from Sárretudvari-Órhalom<sup>123</sup>, which is very close not only to the reliable sample from Baia-Hamangia<sup>124</sup>, but also to a series of dates from the eastern area<sup>125</sup>. <sup>14</sup>C data from the west of the Carpathians and the south of the Danube (fig. 7) indicate a contemporaneity of this cultural phenomenon with discoveries from the Eastern area, including during the earliest phases<sup>126</sup>.

The new date from Aricești II/Gr.1<sup>127</sup> of 4146±25 BP falls between 2880 and 2620 cal. BC at 2 sigma (95.4% probability) (fig. 8). This date fits in well with the chronological time frame of the Yamnaya burials at the Lower Danube. The diagram shown above (Fig. 7) seems to indicate a certain time period when this phenomenon has had the most intense manifestation in the western area. However, due to the scantiness of information, dates should be interpreted with caution.

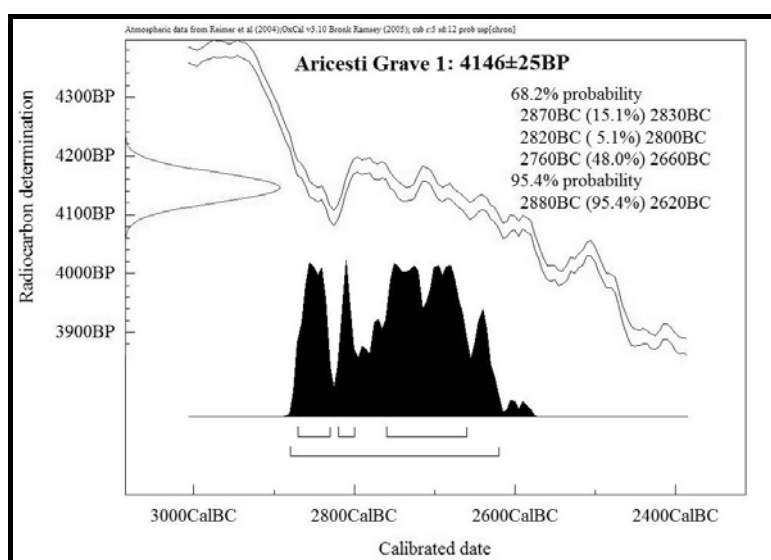


Fig. 8. Diagram <sup>14</sup>C - Aricești II/Gr.1.

Another issue is related to some of the secondary graves that may be dated to chronological horizons subsequent to Yamnaya burials. E. Comșa attributed Gr.3/Ploiești-Triaj I<sup>128</sup> and Gr.19/Ploiești-Triaj II to the Srubnaja funerary horizon<sup>129</sup> based on some elements of the funerary structure: the pit walls lined with boards and a cover made of wooden beams<sup>130</sup>. This attribution was rejected by I. Motzoi-Chicideanu who considers that Gr.19 from Ploiești-Triaj II is "outside the Srubnaja area"<sup>131</sup>.

<sup>120</sup> Panayotov 1989; Górsdorf, Bojadziev 1996, p. 156; Nikolova 1999.

<sup>121</sup> Forenbaher 1993, p. 241; Motzoi-Chicideanu 2011, p. 252.

<sup>122</sup> Forenbaher 1993, table; Nikolova 1999, p. 402.

<sup>123</sup> Dani, Nepper 2006, p. 44, 48.

<sup>124</sup> Motzoi-Chicideanu 2011, p. 226, 328, fig. 17.

<sup>125</sup> Rassamakin 1999.

<sup>126</sup> Motzoi-Chicideanu 2011, p. 226.

<sup>127</sup> The sample was dated by dr. Bernd Kromer at *Heidelberger Akademie der Wissenschaften, Radiometrische Altersbestimmung von Wasser und Sedimenten*.

<sup>128</sup> Comșa 1976, p. 41-42; Comșa 1998, p. 22.

<sup>129</sup> Comșa 1989, p. 189.

<sup>130</sup> Comșa 1989, p. 187.

<sup>131</sup> Motzoi-Chicideanu 2011, p. 258.

Moreover, graves lined and covered with wooden beams are well-known in Yamnaya burials from the Lower Danube area, found in several barrows from Glăvăneștii Vechi, Bogonos, Vânători, Ripiceni, Erbiceni, Baldovinești, Gurbănești, Smeeni, Sultana, Plenița, Rast, Seaca de Câmpie, Luncavița, Ceamurlia de Jos, Mihai-Bravu, Nalbant, Sabangia, Tulcea, Medgidia or Olănești, Cociltiansk, Kapuak, Ogorodnoe, Sokolova, Bolgrad, Bastanovka, Nerusaj, Kapuak, Kălugerica, Kjulevka, Placidol, Zeglarici-Orljak, Purucik-Gëshanovo, Goran-Slatina etc.<sup>132</sup>.

We could also recall the catacomb graves from Smeeni<sup>133</sup> and Sudiți<sup>134</sup> or the graves subsequent to catacomb burials from Smeeni<sup>135</sup> that may belong to more recent periods than the Yamnaya burials, although dates for the Eastern area<sup>136</sup> indicate a long period of cohabitation of these two communities or funerary practices<sup>137</sup>. Of more than 460 <sup>14</sup>C dates known for the eastern area, around 68% indicate a coexistence of the two burial customs, most likely in the chronological time frame between XXVII - XXI century BC<sup>138</sup>.

### Discussion

Tumuli occur grouped in the piedmont plains of Wallachia, at distances of more than 100 m from one another, rarely closer, but also isolated and separated by hundreds of meters, even kilometers<sup>139</sup>. In the Prahova-Teleajen interfluvium the barrows are rather small (0.80 - 2.80 m high and 35-60 m in diameter), but larger mounds that reach heights exceeding 4 m can be found further north in Băicoi and Florești. Other large mounds are placed in the lower basin of the Cricovul Sărat River in Parepa, Sălciile, Boldești-Grădiștea, Ciorani. Of the tumuli investigated in northern Wallachia the one from Smeeni was rather large "approximately 4 m high, with diameters of 55 x 49 m"<sup>140</sup>.

The graves are usually simple rectangular pits, except for the ones attributed to the Catacomb culture from Smeeni and Sudiți<sup>141</sup>. The attribution of Gr.20 from Ploiești-Triaj II to the catacomb burials (F. Burtănescu 1998, p. 105) cannot be accepted, for it lacks the defining element<sup>142</sup>. The pits of the main graves were rectangular with rounded corners, except for Gr.3/Păulești II that seemed rather oval (pl. 8/8). Moreover, rectangular pits are the most common pit shape known in Yamnaya burials<sup>143</sup>.

Internal steps inside grave pits were identified in some of the burials from Smeeni, Gurbănești<sup>144</sup> and during recent excavations from Aricești II (Gr.1) Based on an extensive analysis rectangular pits with steps were attributed to a later phase of the internal evolution of this archaeological phenomenon, subsequent to simple rectangular pits<sup>145</sup>. In a single case the main burial was made in an oval pit (Aricești II/Gr.3), with a skeleton lying in contracted position. Another pit with internal step was found in Gr.7/Sudiți, however, this is the case of a catacomb burial<sup>146</sup>.

The pit bottom of Gr.2 from Păulești III was plastered; over the natural gravel a thin layer of yellow clay that adhered to the human bones was added. A similar situation was noticed in the main grave

<sup>132</sup> Panayotov 1989; Kitov, Panayotov, Pavlov 1991; Vasiliu 1995c, p. 149-150; Burtănescu 2002; Brudiu 2003; Schuster *et al.* 2011, p. 68-69; Motzoi-Chicideanu 2011.

<sup>133</sup> Simache, Teodorescu 1962.

<sup>134</sup> Frînculeasa 2011.

<sup>135</sup> Simache, Teodorescu 1962, p. 279.

<sup>136</sup> Kaiser 1999; 2003; Görsdorf 2003, p. 339-340, Nikolova, Kaiser *op.cit.*.

<sup>137</sup> Chernykh 2008, p. 83; 2009, p. 126, 126, fig. 8/6; Frachetti 2012, p. 6, fig. 2.

<sup>138</sup> Chernykh 2009, p. 126, fig. 8/6.

<sup>139</sup> A demographic study based on current field observations is unrealistic, the old maps marked numerous mounds that disappeared in the meantime.

<sup>140</sup> Simache, Teodorescu 1962, p. 273.

<sup>141</sup> Simache, Teodorescu 1962, p. 273; Frînculeasa 2011.

<sup>142</sup> Motzoi-Chicideanu 2011, p. 280.

<sup>143</sup> Harțuche, Anastasiu 1971, p. 129; Comșa 1978, p. 23; Laszlo 1983, p. 363; Dergacev 1994, p. 124; Vasiliu 1995, p. 60; Burtănescu 1998, p. 237-238; Brudiu 2003, p. 56; Simion, Rențea, Nițulescu 2003-2004, p. 99; Schuster *et al.* 2011, p. 66-67; Motzoi-Chicideanu 2011, p. 266-267.

<sup>144</sup> Simache, Teodorescu 1962, p. 277; Rosetti *op.cit.*, p. 800.

<sup>145</sup> Motzoi-Chicideanu 2011, p. 267.

<sup>146</sup> Frînculeasa *op.cit.*, p. 255, fig. 3/1.

from Blejoi I where the arrangement consisted of a small "platform" of fine gravel, up to 4-6 cm thick. In this case, no funerary pit was dug, the individual was placed on a gravel "bed" arranged over the ancient surface, at the same level as the ring base<sup>147</sup>. On the pit bottom of the main grave from Aricești I (Gr.3) traces of a mat the corpse was lain on were preserved<sup>148</sup>. Mats or other organic materials placed on the pit bottom are common in Yamnaya graves<sup>149</sup> and similar findings could also be found in Smeeni<sup>150</sup>.

Stone rings are considered specific to Yamnaya burial customs<sup>151</sup>; however, for the moment, such arrangements, common in both early tumular burials and in Yamnaya complexes from the Eastern North-Pontic area, are rare findings in this region of Wallachia, except for the main grave from Blejoi I. Thus, stone rings can be found in graves of the Late Eneolithic – Transition Period<sup>152</sup> and are known in Usatovo and Yamnaya burials east of the Prut<sup>153</sup>. In Romania, they rarely occur, like those found in Dobruđja in mound II from Mihai Bravu, Independența, Sabangia, possibly Tariverde<sup>154</sup>, but also in Wallachia, at Milostea, even though the last complex can not be related to Yamnaya burials<sup>155</sup>. Similar funerary structures were found in the cremation necropolis from Budureasca, dating from the final phase of the Early Bronze Age<sup>156</sup>.

Stone rings do not occur in the area framed by the Prut river and the Carpathians<sup>157</sup>, however, they appear east of the Prut and south of the Danube at Balaban, Baștanovka, Bolgrad, Goran-Slatina, Târnava, Gura Galbenei, KalugERICA, KJulevka, Nerusaj, Sărățeni<sup>158</sup>. Other noteworthy funerary structures such as circular ditches and earth rings were found in several mounds from Vânători, Liești, Vasil'evka, Doibani, Sărățeni, Galați, Medgidia, Valea Lupului, Țelinoe<sup>159</sup>. Geomagnetic investigations of a 4 m high mound (B) from Ciorani (Prahova County) revealed the existence of a surrounding ditch (pl. 20/4).

The grave with stone ring from Blejoi I may belong to an early stage of tumular burials prior to the emergence in this area of what is known as the Yamnaya cultural horizon. Similar observations were made south of the Danube, where the earliest burials seem to be placed in a chronological time frame anterior to Zimnicea discoveries, such as the Cernavoda I, Late Usatovo - Cernavoda III findings, which contained graves with stone rings and skeletons in a contracted position or lying supine with the legs flexed<sup>160</sup>.

In tumular graves the individuals were lying supine with the legs bent at the knees and drawn up, only rarely in extended position (especially in Catacomb graves), but also in a contracted position, lying on a side. On the Romanian territory ochre graves frequently contained skeletons lying supine with the legs drawn up and tumbled to a side<sup>161</sup>. Skeletons lying in similar positions were found in Wallachia at Ploiești-Triaj II, Smeeni, Gurbănești, Preasna, Adâncata, Blejoi<sup>162</sup>, in Oltenia at Plenița, Rast, Verbița<sup>163</sup>, but also in Dobruđja at Baia, Chilia-Veche, Medgidia<sup>164</sup>, etc.

<sup>147</sup> This burial without a grave pit gives evidence to the inaccurate manner of identifying Yamnaya burials based strictly on this defining characteristic.

<sup>148</sup> Frînculeasa 2007, p. 185.

<sup>149</sup> Dergacev 1994, p. 124; Manzura, Sava 1994, p. 173; Burtănescu 2002, p. 239; Motzoi-Chicideanu *op.cit.*, p. 267.

<sup>150</sup> Simache, Teodorescu *op.cit.*, p. 276-277.

<sup>151</sup> Motzoi-Chicideanu 2011, p. 266.

<sup>152</sup> Häusler 1974; 1976; Manzura 1994, p. 109; Rassamakin 2004; Govedarica 2004; Korenevskij 2010.

<sup>153</sup> Motzoi-Chicideanu *op.cit.*, p. 266.

<sup>154</sup> Vasiliu 1995c, p. 150.

<sup>155</sup> Popescu, Vulpe *op.cit.*, p. 150, fig. 4.

<sup>156</sup> Frînculeasa 2011a.

<sup>157</sup> Burtănescu 2002, p. 226.

<sup>158</sup> Häusler 1976; Panayotov *op.cit.*; Kitov, Panayotov, Pavlov *op.cit.*; Kaiser 2003; Motzoi-Chicideanu 2011, p. 266, pl. 97; Alexandrov 2011, p. 316.

<sup>159</sup> Levički, Manzura, Demcenko 1996; Burtănescu 2002, p. 226; Brudiu *op.cit.*; Schuster *et al.* 2011, p. 61; Motzoi-Chicideanu *op.cit.*, p. 266.

<sup>160</sup> Alexandrov *op.cit.*, p. 317-318.

<sup>161</sup> Harțuche, Anastasiu 1971, p. 129; Burtănescu 2002, p. 262, Motzoi-Chicideanu *op.cit.*.

<sup>162</sup> Comșa 1989, p. 182; Simache, Teodorescu *op.cit.*, p. 276; Rosetti 1959, p. 791-800; Simion, Rența, Nițulescu *op.cit.*; Lichiardopol *et al.* 2005; Paveleț *op.cit.*.

<sup>163</sup> Berciu, Morintz 1952, 164, fig. 1; Firu, Rîșcuță, Nicolăescu-Plopșor 1956; Dumitrescu 1980; Berciu, Roman 1984, fig. 1.

<sup>164</sup> Berciu, Morintz 1953, p. 126-127; Vasiliu 1995, p. 61; Schuster *et al.*, *op. cit.*

In Moldavia about 53% of the individuals were lying in this position, which is "*the most common way of disposal of the dead in Yamnaya individual graves*"<sup>165</sup>. In the area framed by the Prut and the Dniester rivers, over 60% of the individuals found in about 2000 Yamnaya graves were lying supine with the legs bent at the knees<sup>166</sup>. In the area between the confluence of the Olt River with the Danube and the basin of Tisza all the individuals were lying supine except for one single case<sup>167</sup>.

Skeletons in a contracted position lying on a side are also common, in Prahova County they appeared in mounds containing several burials (Păulești I, Păulești II, Păulești III, Ploiești-Triaj I, Ploiești-Triaj II, Aricești I), but also in the main graves (Ploiești-Triaj I, Ploiești-Triaj II, Păulești I, Păulești II, Păulești III).

The skeletons lying supine are oriented mainly west-east, while those in a contracted position are oriented predominantly towards WSW and ENE, but other directions are also attested. The small number of graves renders inappropriate a more detailed discussion on the relationship between the age/sex groups and the prevailing orientations. However, these findings are similar to the numerous burials investigated within the Yamnaya funerary area<sup>168</sup>.

Having been used for ritual purposes as early as the Paleolithic<sup>169</sup>, ochre occurred north of the Danube during the Late Eneolithic, as is the case of the Decea Mureșului necropolis<sup>170</sup>. Ochre is common in Yamnaya graves, either as lumps or powder, sprinkled on the pit bottom or over the body of the individual<sup>171</sup>. In Moldavia, approximately 70% of the Yamnaya graves contained ochre, mainly attributed to the "classical age"<sup>172</sup>. Large amounts of ochre placed near the skull of the individual were discovered in Gr.6 from Ploiești-Triaj II<sup>173</sup>, but also at Vlădeni in Gr.3, Gr.4, Gr.6<sup>174</sup>. In the Yamnaya burials from Smeeni, ochre was placed especially at the left side of the skull<sup>175</sup>, similarly to Gr.1 and Gr.3 from Aricești I<sup>176</sup>.

In the recent excavations from Prahova County, ochre was never found in graves with skeletons in a contracted position. As for the individuals lying supine, they were accompanied by ochre in six cases, usually placed near the skull. It was generally sprinkled in small quantities, except for two graves from Aricești I. Here the main grave (Gr.3) contained substantial quantities of ochre, including lumps, placed near the head and shoulders (pl. 3/5). In Gr.1, although less abundant, ochre was placed in various areas (pl. 3/1), both near the skull and the feet of the individual<sup>177</sup>.

The inventories seem austere rather than poor, most of the individuals were not accompanied by grave inventory. Of the seventeen graves recently unearthed in Prahova County, eleven did not contain grave-goods and only six had ochre. Of the thirteen burials from Ploiești-Triaj II, only five were accompanied by grave-goods, plus a ceramic fragment found in Gr.8, while at Smeeni only six of the 23 graves had inventories. At Sudiți of the nine graves unearthed, data regarding inventories include 4 graves<sup>178</sup>.

Ceramics is the first notable inventory category. Pots were found at Ploiești-Triaj I and II, Blejoi, Sudiți, Smeeni. The pot from Blejoi finds few analogies in this area; the only aspect that can be considered is the decoration consisting of clay "pills" applied on the body of the vessel. In this regard the findings from Bolotești are worth mentioning<sup>179</sup> along with those uncovered in the plane graves from

<sup>165</sup> Burtănescu 2002, p. 232.

<sup>166</sup> Dergacev 1994, p. 124.

<sup>167</sup> Motzoi-Chicideanu *op.cit.*, p. 275.

<sup>168</sup> *Ibidem*, p. 275 ff.

<sup>169</sup> Wreschner 1980.

<sup>170</sup> Kovacs 1932.

<sup>171</sup> Laszlo 1983, p. 363; Dergacev 1994, p. 125; Manzura, Sava 1994, p. 173; Burtănescu 2002, p. 241.

<sup>172</sup> Burtănescu 2002, p. 241-242.

<sup>173</sup> Comșa 1989, p. 182.

<sup>174</sup> Vlad, Matei 2003-2004, p. 205.

<sup>175</sup> Simache, Teodorescu *op.cit.*, p. 276.

<sup>176</sup> Frînculeasa 2007, p. 185.

<sup>177</sup> *Ibidem*.

<sup>178</sup> Frînculeasa 2011.

<sup>179</sup> Buzdugan, Bobi, Cernea 1987, p. 229, fig. 5/2, 6/4.

Cârliگی-Aldești. The latter were attributed to the transitional period (the Horodișteea-Erbiceni horizon)<sup>180</sup>, or to the Early Bronze Age according to other authors<sup>181</sup>, covering a time frame slightly posterior to Late Tripolje manifestations<sup>182</sup>. The pots from Cârliگی-Aldești show strong shape-related analogies with the pottery from the Zimnicea cemetery<sup>183</sup>. Similar decorations applied to vessels also appear on the Ezerovo horizon pottery<sup>184</sup>. The earliest models are frequently identified on the Cucuteni C-type vessels<sup>185</sup> and later on the pottery attributed to the Foltești cultural horizon<sup>186</sup>.

The vessels from Ploiești-Triaj display a decoration made in the cord-impression technique dated to the Late Eneolithic - Early Bronze Age time period<sup>187</sup>. The decoration of the pot from Gr.21/Ploiești-Triaj II<sup>188</sup> shows analogies to the one from Gr.12/Smeeni<sup>189</sup>. The corded-ware ceramics from Ploiești-Triaj II was attributed to the last phase of the culture, in a time frame contemporary with the Early Bronze Age manifestations<sup>190</sup>. Corded-ware pots were found in Yamnaya burials at Preasna<sup>191</sup>. Two pots with cord-impressed decoration were discovered in Gr.7 (catacomb grave) from Sudiți<sup>192</sup>, their shapes show good analogies to the pottery characteristic to the Catacomb culture<sup>193</sup>.

Another piece worth mentioning is the flanged axe (*Randleistenbeil*) from Gr.4a/Ploiești-Triaj I<sup>194</sup>. Such pieces occurred during the Eneolithic and persisted until the Late Bronze Age<sup>195</sup>. The flanged axe (*Randleistenbeil*) from Ploiești was attributed to the Glina III culture, but we consider that this attribution serves mainly as a chronological mark<sup>196</sup>. The piece was included in the Șincai type along with other findings from Șincai, Sighișoara, Valea lui Mihai, Banat, Târpești, Hlăpești, Grădina, Moldova Veche<sup>197</sup>. All these items, except for the one from Ploiești-Triaj, come from accidental discoveries or settlements. Similar pieces were found in Yamnaya graves only east of the Prut at Bzčok, Koržovo, Alkaliya<sup>198</sup> and south of the Danube in Gr.8/Mound 3 from Goran-Slatina<sup>199</sup>, although in the last case the piece was considered a chisel<sup>200</sup>. The two findings from Ploiești-Triaj and Goran-Slatina are small sized (8.1 cm and 12.5 cm long)<sup>201</sup>.

In Gr.3 from Ploiești-Triaj I was found a copper pendant in the form of eyeglasses (*Brillenspirale*)<sup>202</sup>. A similar copper piece was documented in Gr.1/Mound III from Ampoița<sup>203</sup> associated with two golden *Lockenringe*. Other pieces attributed to the Early Bronze Age were discovered at Poiana Aiudului (3 items), Livezile, Meda, Ampoița<sup>204</sup>. The findings from Sărata Monteoru, Beba Veche, Pitvaros, Periam, Pecica, Mokrin, Tiszafüred<sup>205</sup> are dated to the final phase of the Early Bronze Age or to the Middle Bronze Age.

<sup>180</sup> Dumitroaia 2000, p. 33, fig. 86/2, 3.

<sup>181</sup> Burtănescu 2002, p. 99.

<sup>182</sup> Motzoi-Chicidăanu 2011, p. 211-212.

<sup>183</sup> Alexandrescu 1974, pl. 5.

<sup>184</sup> Roman *et al.* 1992.

<sup>185</sup> Dodd-Opriteșcu 1981.

<sup>186</sup> Petrescu-Dîmbovița, Dinu 1974.

<sup>187</sup> Roman *et al.* 1992.

<sup>188</sup> Comșa 1989, fig. 3/2.

<sup>189</sup> Simache, Teodorescu *op.cit.*, p. 276, fig. 3/1.

<sup>190</sup> Roman *et al.* 1992, p. 103-105.

<sup>191</sup> Rosetti *op.cit.*, p. 796, fig. 8.

<sup>192</sup> Frînculeasa 2011, fig. 3, 4.

<sup>193</sup> Dergacev 1986, p. 102, 1994, fig. 6; Kaiser 2003.

<sup>194</sup> Vulpe 1975, p. 66-67, no. 342, pl. 37/242.

<sup>195</sup> Mareș 2002, p. 79-81, 117 ff.; Vulpe *op.cit.*, p. 68; 1999, p. 44.

<sup>196</sup> Vulpe 1975, p. 67.

<sup>197</sup> Vulpe *op.cit.*, p. 66-67; Dumitroaia 1985, p. 469-471; Monah 1986, p. 34; Gogâltan 1999, p. 135.

<sup>198</sup> Burtănescu 2002, p. 258.

<sup>199</sup> Panayotov *op.cit.*, p. 140-141.

<sup>200</sup> Kitov, Panayotov, Pavlov *op.cit.*, p. 109.

<sup>201</sup> Motzoi-Chicidăanu 2011, p. 255.

<sup>202</sup> Roman *et al.* 1992, p. 105; Matuschik 1996, p. 348.

<sup>203</sup> Ciugudean 1996, p. 33, fig. 31/12.

<sup>204</sup> Vlassa, Takacs, Lazarovici 1985-1986; Rîșcuță, Popa, Ferencz 2009, p. 267, 270; Popa 2010.

<sup>205</sup> Bóna 1975; Bârză 1989, p. 78, fig. 28/10; Soroceanu 1991, p. 89, 113; Matuschik *op.cit.*; Gogâltan *op.cit.*, p. 169-170; Popa 2010; 2011.

Most of the eyeglasses (*Brillenspirale*) pendants are attributed to the Late Eneolithic and the Early Bronze Age<sup>206</sup> and are very common in Central and Northern Europe<sup>207</sup>. In the eastern space<sup>208</sup> they occur in Middle Bronze Age graves and persist until the Late Bronze Age in the Don River basin or the Upper Volga basin, in the Abashevo cultural area<sup>209</sup>. A pendant and two fragments were part of the Late Bronze Age hoard from Băleni and another piece was found in an Early Hallstatt hoard from Dridu<sup>210</sup>. This type of pendant is common during the entire Bronze Age and persists until the first Iron Age<sup>211</sup>.

Decorative motifs imitating this type of pendant are displayed on the Coțofeni pottery at Răchita, Sebeș, Seușa<sup>212</sup>, in Banat in the Wietenberg cultural space at Piatra Ilișoiaiei, Albești<sup>213</sup>, but also on stelae from Switzerland at Sitten, Sion or from Italy at Ossimo<sup>214</sup>.

The pendant from Ploiești-Triaj represents an isolated discovery in this area, a similar piece was found in the area of the cemetery no.4 from Sărata Monteoru<sup>215</sup> and another one was part of the Late Hallstatt hoard from Dridu<sup>216</sup>. The findings from Romania were attributed to the „Danubian group”, placed in a chronological time frame corresponding to the Late Eneolithic and the Early Bronze Age, unlike the Western-Alpine variant attributed to the Middle and Late Eneolithic<sup>217</sup>. The pieces discovered in the tumularly graves from the Apuseni Mountains were attributed to the Early Bronze Age (BT.II), in a chronological time frame earlier than the pendant from Ploiești-Triaj<sup>218</sup>.

One of the earliest absolute dates of a grave containing an eyeglasses (*Brillenspirale*) pendant comes from the Varna cemetery, dated in the interval of 4560-4450 BC<sup>219</sup>. An absolute date of 3380±60 BC was obtained for Gr.412 from Krusza Zamkowa, which contained two eyeglasses (*Brillenspirale*) pendants along with other grave-goods<sup>220</sup>.

For more recent dates, immediately subsequent to the Yamnaya horizon, Gr.16 from the Mokrin cemetery provides an interesting case. The grave contained seven eyeglasses (*Brillenspirale*) pendants and a *Randleistenbeil* axe, unique in this cemetery, along with tubular copper pearls and ceramics<sup>221</sup>. The first two types of pieces were also documented in Gr.3 and Gr.4a from Ploiești-Triaj I and, for the time being, they are unique findings in the tumularly graves north of the Lower Danube. The absolute dates for the graves containing *Brillenspirale* pendants from Mokrin indicate 3650 ± 35 BP (M.227) and 3595 ± 35 BP (M237), which range between 2140 -1940 cal. BC at 2 sigma, respectively 2040-1870 cal. BC at 2 sigma<sup>222</sup>. It is worth mentioning that Gr.4 from Ploiești-Triaj I which contained the *Randleistenbeil* flanged axe is considered the main grave of the barrow<sup>223</sup>, while Gr.3 which was accompanied by the *Brillenspirale* pendant together with tubular copper pearls and other pieces is a secondary, thus subsequent grave. Gr.4a was attributed to the Glina culture (Early Bronze Age)<sup>224</sup> which evolves in a chronological time frame ranging between 2650-2450 BC<sup>225</sup>. These two categories of pieces also occur in the Ib phase and partially in the transition phase of the Periam-Pecica (Mureș) culture<sup>226</sup>.

<sup>206</sup> Ciugudean 2000, p. 37.

<sup>207</sup> Matuschik *op.cit.*; Primas 1997; Harding 2000; Veliačik, Masniková 2004.

<sup>208</sup> Bandrivs'kyi 2011, p. 82.

<sup>209</sup> Chernykh 1992, fig. 44/5, 49/9, 68/3, 4.

<sup>210</sup> Dragomir 1967, no. 73, 79-80; Enăchiuc 1987, p. 77, fig. IV/30.

<sup>211</sup> Gedl 1976; Rihovscy 1979; Furmánek 1980; Makarová 2008; Jankovits 2010, p. 50-51.

<sup>212</sup> Roman 1976, fig. 43/7; Ciugudean 2000, pl. 141; 2002, pl. 3.

<sup>213</sup> Baltag, Boroffka 1996, p. 389.

<sup>214</sup> Ciugudean 1996, p. 119-120; Harisson, Heyd 2007; Matuschik *op.cit.*, fig. 9/5.

<sup>215</sup> Zaharia 1973, p. 22, fig. 6; Bârză 1989, p. 78, fig. 28/10.

<sup>216</sup> Enăchiuc *op.cit.*.

<sup>217</sup> Matuschik 1996, p. 20 ff.

<sup>218</sup> Popa 2010, p. 16.

<sup>219</sup> Higham *et al.* 2007.

<sup>220</sup> Matuschik *op.cit.*, plate 9/1.

<sup>221</sup> Girić 1971, p. 46, pl. 7, 90.

<sup>222</sup> Gerloff 1993, p. 94.

<sup>223</sup> Vulpe 1975, p. 66-67, pl. 37/342; 1987, p. 177.

<sup>224</sup> Vulpe 1975, p. 66-67.

<sup>225</sup> Băjenaru 1998.

<sup>226</sup> Soroceanu 1984, Plate 6.

A  $^{14}\text{C}$  date for the ZnIIa level from Năieni falls in the range between 2350-1950 BC, another one for the Ic3 level from Sărata Monteoru, indicates 3690±60 BP, thus 2230-1910 BC<sup>227</sup>. The  $^{14}\text{C}$  date of 3576±28 BP for Gr.24 from the Cârломănești necropolis, attributed to the Monteoru Ic1 style/phase becomes 2030-1870 cal. BC at 2 sigma (93.4% probability)<sup>228</sup>. Some of the secondary graves from Ploiești-Triaj I<sup>229</sup> contained pots attributed to the Monteoru Ia phase<sup>230</sup>, but this information cannot be considered completely reliable. We also mention the eyeglasses (*Brillenspirale*) pendant found in the cemetery No. 4 from Sărata Monteoru; however, the fact that it was discovered in a secondary position<sup>231</sup> renders further discussions impossible.

Tubular copper pearls (*Blechröllchen*) were documented in both plane and tumular graves from Moldavia, at Șendreni - four pieces come from a disturbed grave, Târpești, Răcăciuni<sup>232</sup>, in the Buceag area at Cholmomscoe, Semenovka, Roșcani, Borisovka, Plavni, Taraclia, Liman, Arcalia<sup>233</sup>, but also further north in the Republic of Moldavia<sup>234</sup>, and in Ukraine, east of the Dniester at Orlovka, Slobozia, Nerujai, Podgornoe etc<sup>235</sup>. In Dobrudja, similar pieces were found at Mihai Bravu, Luncavița<sup>236</sup>. They occurred as well in the cemetery from Brăilița, in Gr.3<sup>237</sup>, Gr.8, Gr.9<sup>238</sup> and in the IInd level from Periam<sup>239</sup>. The earliest findings were discovered in the Eneolithic necropolis from Decea-Mureșului<sup>240</sup> and the latest are part of the Late Bronze Age hoard from Băleni<sup>241</sup>.

In Central Europe tubular copper pearls are commonly encountered in cemeteries dating from the Early Bronze Age and the beginning of the Middle Bronze Age<sup>242</sup>. In Gr.26 from Melk/Sielberg, attributed to the Unterwöblinger group they are associated with eyeglasses (*Brillenspirale*) pendants and with *saltaleone* pieces<sup>243</sup>. A similar situation was found in Gr.32 from Rumanovej attributed to the Ünětice culture<sup>244</sup>. These three types of pieces were also part of the Early Bronze Age hoard from Arbedo-Castione<sup>245</sup>. The same association of pieces occurred in the Early or Middle Bronze Age cemeteries from Kules, Ujhatryán-Vatya, Desyk, Batonya<sup>246</sup>. A date for Gr.170 from Branč which contained similar pieces, falls between 2134 - 1978 BC<sup>247</sup>. In the eastern area, tubular copper pearls occurred during the Eneolithic- transitional period<sup>248</sup>, including in the Usatovo cultural area, in some of the graves from Sofievka<sup>249</sup>.

Several precious metal pieces belong exclusively to the ornaments category, both spiral and semi-lunar hair rings – *Lockenringe* (fig. 9). The typology of hair rings was long-ago discussed<sup>250</sup>, however more recent approaches cover a wider area and contain some completions and reconsiderations<sup>251</sup>.

<sup>227</sup> Motzoi-Chicideanu 2011, p. 281, note 321.

<sup>228</sup> Motzoi-Chicideanu, Chicideanu-Șandor 2010, p. 29, pl. 30/B.

<sup>229</sup> In the Prahova County Museum of History and Archaeology collection there is a handle commonly encountered in Monteoru Ic3-Ib phase (pl. 16/11). Its context of discovery is unknown, however the fragment comes from the excavations conducted by Ion Nestor at Ploiești-Triaj.

<sup>230</sup> Morintz 1978, p. 97, 99, 111; Harțuche 1979, p. 81; Oancea, Drâmbocianu 1977, p. 526, note 35.

<sup>231</sup> Bârzu 1989, p. 78.

<sup>232</sup> Dragomir 1976, p. 55, fig. 4, 5; Marinescu-Bâlcu 1964, p. 241; Tudor 1973, p. 283, fig. 2/4.

<sup>233</sup> Burtănescu 2002, p. 257; Agulnikov 1995, p. 82; Subotin 2008, fig. 3.

<sup>234</sup> Dergacev 1994, p. 125, fig. 3A/8; 2002, plate 64, 96B.

<sup>235</sup> Subotin *op.cit.*, fig. 4.

<sup>236</sup> Vasiliu 1995b, p. 126, 155.

<sup>237</sup> Dragomir 1959, p. 676, fig. 5/7-8.

<sup>238</sup> Harțuche 2002, p. 47-48.

<sup>239</sup> Gogâltan 1999, p. 176.

<sup>240</sup> Kovacs *op.cit.*, p. 100.

<sup>241</sup> Dragomir 1967, no. 67, 68.

<sup>242</sup> Kalicz 1968; Vldar 1973; Bóna 1975; Batora 1996, pl. 5/2, 7/2; Gogâltan 1999, p. 176; Veliačik, Masniková 2004.

<sup>243</sup> Leeb 1994, p. 129, fig. 11.

<sup>244</sup> Veliačik, Masniková 2004, p. 197, fig. 5.

<sup>245</sup> Primas 1997.

<sup>246</sup> Bóna *op.cit.*; Szabo 1999; Motzoi-Chicideanu 2011.

<sup>247</sup> Gerloff *op.cit.*, p. 95.

<sup>248</sup> Chernykh 1992, fig. 8/25; Rassamakin 2004.

<sup>249</sup> Dergacev, Manzura 1991, pl. 112/1-12; Chernykh 1992, fig. 30/1, 2.

<sup>250</sup> Zaharia 1959; Kalicz *op.cit.*

<sup>251</sup> Primas 1995; 1996; Motzoi-Chicideanu, Olteanu *op.cit.*, p. 28 ff.; Popescu 2010.



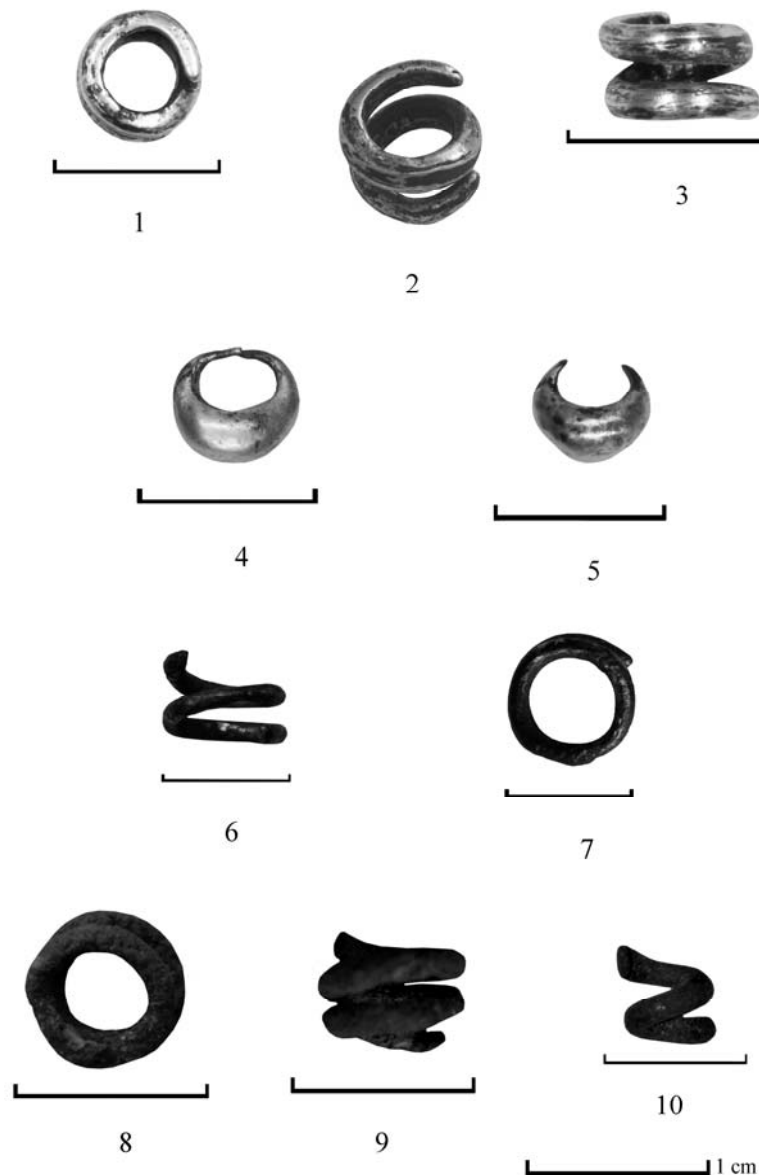


Fig. 9. Hair rings found in Prahova County.

In the graves unearthed in Prahova County, six precious metal hair rings were discovered, as follows: two semi-lunar hair rings in the main grave (Gr. 3) from Aricești I (fig. 9/4, 5); one spiral hair ring in a secondary grave (Gr.1) from the same barrow (fig. 9/1-3); two spiral hair rings in Gr.15 and Gr.20 from Ploiești-Triaj II (fig. 9/6-9)<sup>252</sup>; one spiral silver hair ring in Gr.3/Ploiești-Triaj I<sup>253</sup>. In the category of ornaments two small ring-shaped pieces found in Gr.1 from Aricești are also included. The pieces were made of silver wire and were found in a poor condition<sup>254</sup>.

At the Lower Danube, the earliest silver pieces appear in Yamnaya burials and are in most cases hair rings<sup>255</sup>. In Romania, there are 37<sup>256</sup> hair rings coming from 15 known locations attributed to the

<sup>252</sup> Comșa 1989, p. 185.

<sup>253</sup> Nestor 1944, p. 30.

<sup>254</sup> Frînculeasa 2007, p. 185, pl. 3/1.

<sup>255</sup> Popescu *op.cit.*, p. 165.

<sup>256</sup> To this number is added the piece discovered in Gr.15/Ploiești-Triaj II initially considered as made of copper (E. Comșa 1989, p. 183), and also the one from Gr.3/Ploiești-Triaj I (fig. 9/10).

Early Bronze Age<sup>257</sup>. Most of them (14) were unearthed in the plane cemetery from Zimnicea<sup>258</sup>. They belong to several types: spiral hair rings (Zimnicea, Aricești I, Ploiești-Triaj I, Ploiești-Triaj II, Chilia Veche, Mihai Bravu, Zebil, Văleni, Gurbănești, Stelnica, Verbița, Celei, Plenița, Broșteni, Vânători), simple hair rings with close or distanced ends, semi-lunar hair rings (Zimnicea, Zebil, Aricești I)<sup>259</sup>. East of the Prut, such findings occurred at Kurči, Sărățeni, Bălăban I, Bălăban II, Orhei<sup>260</sup> and south of the Danube at Placidol I, Goran-Slatina, Kălugerica, Pet Mogili, Madara<sup>261</sup>. Similar pieces were found in Hungary at Buj, Tiszaeszlár, Ketegyhaza<sup>262</sup>.

Spiral hair rings are the most common and widely spread in the area from the Middle Danube to the northern Caucasus<sup>263</sup> and occur mainly in tumularly ochre graves<sup>264</sup>. In the Caucasus, the hair rings discovered in funerary contexts come from barrows attributed to the Novotitarovka group, in a time frame ranging between 3000 and 2700 BC<sup>265</sup>. Although less common<sup>266</sup>, semi-lunar hair rings belonging to the „Zimnicea” type are spread over the same area, occurring in similar contexts, but within a shorter time period<sup>267</sup>. The two types of hair rings occur associated at Zimnicea, Goran-Slatina and Aricești I, defining a certain chronological phase<sup>268</sup>.

In Gr.1/Aricești I a spiral gold-plated hair ring was found<sup>269</sup>. Golden hair rings were discovered in funerary contexts at Ampoiața, Jurilovca, Vlădești<sup>270</sup>. Another spiral piece comes from a Schneckenberg settlement in Brașov<sup>271</sup>. A slightly larger number of similar items originate from Banat or Transilvania<sup>272</sup>. They also occur in Yamnaya graves south of the Danube at Târnava, Goran-Slatina<sup>273</sup>, east of the Prut at Glubokoe, Plavni<sup>274</sup>, in Hungary at Sárretudvari-Órhalom<sup>275</sup>. Other findings come from Mala Gruda and Leukas<sup>276</sup>.

Bone tubular pearls were found only in Gr.3/Ploiești-Triaj I. Similar pieces were uncovered in Gr.13 from Valea Lupului<sup>277</sup> and in a grave from Brad attributed to the Foltești horizon<sup>278</sup>. They occurred in Yamnaya burials north of the Black Sea<sup>279</sup>, but also in Early and Middle Bronze Age graves in Hungary<sup>280</sup>. In the north-Pontic space they appeared during the Eneolithic<sup>281</sup> and persisted until the Katacombnaia funerary horizon<sup>282</sup>. Several tubular pearls made from a mineralized (“ossified”) material were found in Gr.4a/Păulești III and a similar piece comes from Gr.4/Ploiești-Triaj I (pl. 17/9).

The ornaments made of mamal teeth discovered at Ploiești-Triaj II are similar to the finds from Glăvăneștii Vechi, Corlăteni, Valea Lupului, Brăilița, Vlădești, Sultana, Smeeni, Chilia Veche,

<sup>257</sup> Popescu 2010, p. 166.

<sup>258</sup> Alexandrescu 1974, pl. 8, 10.

<sup>259</sup> Zaharia 1959; Motzoi-Chicideanu, Olteanu 2000; Frînculeasa 2007; Popescu *op.cit.*.

<sup>260</sup> Levițki, Manzura, Demcenko 1996, p. 22; Sava 1996, p. 193; Subotin 2008, fig. 4, 5; Motzoi-Chicideanu, Olteanu *op.cit.*, p. 30-31.

<sup>261</sup> Panayotov *op.cit.*, p. 112; Kitov, Panayotov, Pavlov 1991; Motzoi-Chicideanu, Olteanu *op.cit.*.

<sup>262</sup> Kalicz *op.cit.*, p. 18-19, pl. I/8, 9, 10; Ecsedy *op.cit.*, p. 21-23.

<sup>263</sup> Popescu *op.cit.*, p. 166.

<sup>264</sup> Motzoi-Chicideanu, Olteanu *op.cit.*, p. 28.

<sup>265</sup> Kohl 2007, p. 266.

<sup>266</sup> Motzoi-Chicideanu, Olteanu *op.cit.*, p. 29.

<sup>267</sup> Popescu *op.cit.*, p. 167.

<sup>268</sup> Motzoi-Chicideanu, Olteanu *op.cit.*, p. 31-32.

<sup>269</sup> Chiojdeanu, Cristea Stan, Constantinescu 2011, p. 690.

<sup>270</sup> Ciugudean 1996, p. 33, 127-128, fig. 31/8-9; Vasiliu 2007, p. 122-123, fig. 4/2; Brudiu 2003, p. 69.

<sup>271</sup> Motzoi-Chicideanu, Olteanu *op.cit.*, p. 58, no. 38.

<sup>272</sup> Ciugudean 1996, p. 127-128; Gogâltan 1998, p. 20 ff.; 1999, p. 186 ff.

<sup>273</sup> Panayotov 1989.

<sup>274</sup> Häusler 1976, p. 108, pl. 30/15; Subotin 2008, fig. 5/7.

<sup>275</sup> Dani, Nepper *op.cit.*, p. 33-34, fig. 4, 5.

<sup>276</sup> Primas 1995, p. 84-85, fig. 2.

<sup>277</sup> Dinu 1959, p. 252, fig. 8.

<sup>278</sup> Ursachi 1995, p. 21, pl. 217/2.

<sup>279</sup> Häusler 1974; 1976.

<sup>280</sup> Bóna 1975.

<sup>281</sup> Rassamakin 2004.

<sup>282</sup> Kaiser 2003.

Luncavița<sup>283</sup>. They are spread over the entire Yamnaya area, including south of the Danube<sup>284</sup>, but also in Katacombnaia graves<sup>285</sup>. Similar pieces occur in Eneolithic graves from the north-Pontic area<sup>286</sup>, Late Tripolje graves from Giurgiulești and Usatovo<sup>287</sup>, but also in plane cemeteries or tumuli from the Central Europe<sup>288</sup>.

From Ploiești-Triaj I comes a necklace made of 72 perforated, circular, flat, white-coloured beads, with dusty surface, and shiny cross-section (pl. 17/8). These characteristics of the raw material match the talcum group, thus the beads were probably made of kaolin. This raw material can be also found in the form of stalactites; it cleaves, thus allowing its processing and the realization of beads<sup>289</sup>. The necklace was probably found in Gr.3<sup>290</sup>, other kaolin beads were found in Gr.4 from the same mound. In Gr.3/Aricești I was uncovered a necklace of kaolin beads with different shapes: cylindrical, rossete-like or spheroidal (pl. 3/9), and in Gr.2/Păulești I occurred several circular beads of which only one was complete (pl. 8/6, 7). Several small tubular pieces from Gr.4a/Păulești III seem made of the same raw material (pl. 10/11, 12).

In the category of ornaments we also included a perforated bead made of vitreous material discovered in the main burial (Gr.4a) from Păulești III (pl. 10/8). Here we must specify that the pieces (beads) made of vitreous materials that were defined in a broad sense as „glass/faience” or „paste” with no clear distinction between them, are rare findings in tumularly complexes at the Lower Danube. The earliest discoveries could originate from an Usatovo grave from Brăilița where it was mentioned a necklace of greenish beads<sup>291</sup>, but here there are several inconsistencies regarding the nature of the raw material used. Although the necklace is mentioned in a study on the appearance of glass in Central Europe<sup>292</sup>, following an earlier piece of information<sup>293</sup>, the authors of the finding identified as raw material a “slightly arenaceous” dark-green micaceous clay<sup>294</sup>.

As for the necklace found in M2 from Brad, dating from the same period, there is a fairly accurate description, namely „a necklace of beads made of a red paste and of bone, composed of 90 pieces”<sup>295</sup>. At Gorgota, a necklace of kaolin beads painted green was found in a stone cist inhumation grave dating from the Early Bronze Age<sup>296</sup>, but they seem rather made of glassy paste<sup>297</sup>.

Beads made of glassy paste or „faience” were identified in Monteoru graves at Poiana, Căndești, Sărata Monteoru-cemetery 4<sup>298</sup> and also in the Late Bronze Age cemetery from Câmpina in M20 and M58<sup>299</sup>. We should mention the cemetery 4 from Sărata Monteoru where, in Grave 142, were discovered 417 faience and glassy paste beads<sup>300</sup>, coloured in blue-turquoise or bright white<sup>301</sup>. In Grave 35 eight glass pieces were found, while M122 contained 10 pieces, several others being in Grave 21, Grave 32, Grave 72, Grave 88, Grave

<sup>283</sup> Simache, Teodorescu *op.cit.*, p. 276; Vasiliu 1995a, p. 66-67; 1995b, p. 125, pl. IV/4; Burtănescu 2002, p. 255; Brudiu *op.cit.*, p. 68.

<sup>284</sup> Häusler 1974; 1976; Kitov, Panayotov, Pavlov *op.cit.*, pl. 35.

<sup>285</sup> Kaiser 2003.

<sup>286</sup> Rassamakin 2004.

<sup>287</sup> Govedarica 2004, pl. 12; Dergacev 1986; Dergacev, Manzura *op.cit.*; Rassamakin 2004.

<sup>288</sup> Bona 1975; Kalicz *op.cit.*; Ecsedy *op.cit.*.

<sup>289</sup> Constantinescu, Matei 1996, p. 445-446.

<sup>290</sup> Motzoi-Chicideanu 2011, p. 138.

<sup>291</sup> Dragomir 1959, p. 685.

<sup>292</sup> Harding 1971, p. 195.

<sup>293</sup> Gimbutas 1965, p. 45.

<sup>294</sup> Dragomir 1959, p. 685; Harțuche 2002, p. 51.

<sup>295</sup> Ursachi 1995, p. 21; Dumitroaia 2000, fig. 85/3.

<sup>296</sup> T. Muscă 1996, p. 52.

<sup>297</sup> Frînculeasa 2007, note 4; the author of the discovery informed us that the raw material is „glassy paste” (A. F.).

<sup>298</sup> Dunăreanu-Vulpe 1938, p. ; Florescu 1978, p. 114, note 24; Bâzru *op.cit.*; Motzoi-Chicideanu 2003, p. 44; 2011, p. 425.

<sup>299</sup> Frînculeasa 2012, p. 100, pl. 39; Frînculeasa, Stihî 2013.

<sup>300</sup> Nestor, Zaharia 1961, p. 515-516, fig. 2/4.

<sup>301</sup> Bâzru 1989, p. 77-78.

103<sup>302</sup>. They also appeared in a pot discovered at Răcățâu associated with amber beads that formed a necklace<sup>303</sup>, in a Noua hoard from Ulmi-Liteni<sup>304</sup>, but also in other hoards dating from the Late Bronze Age – Hallstatt A1 period from Cioclovina and Dobrocina<sup>305</sup>. The items found at Lăpuș, Igrîța (two blue glass beads) also belong to the same chronological horizon<sup>306</sup>. Other glass beads were found at Pecica II<sup>307</sup>. The largest number of pieces, approximately 2,800 glass and faience beads, were found in the Cioclovina hoard<sup>308</sup>.

Such pieces are commonly encountered in the Central Europe in Nitra, Aunjetitz, Mierzanowice, Lausitz, Lusatian etc. cultures<sup>309</sup> or in Periam-Pecica and Otomani-Füzesabony cultures<sup>310</sup>. Although they occur in Western Europe starting with the Early Bronze Age<sup>311</sup> with probably local origins<sup>312</sup>, only in the late phase of this period they become common findings<sup>313</sup>.

In the eastern space beads made of vitreous materials are found in Late Tripolje sites<sup>314</sup>, occasionally in Yamnaya, Catacomb, Srubnaja funerary complexes, Sabatinovka, much more frequently in the Belozerk culture<sup>315</sup>.

The flint arrowhead from Gr.3/Aricești I represents, for the moment, an unique finding in the area. Such pieces can not serve as chronological markers, for they were found in both settlements and graves during a long time period and over a very wide area, from the Paleolithic to the Neolithic and during the entire Bronze Age<sup>316</sup>. In the ochre grave from Casimcea, attributed to the Stredni Stog II culture several flint arrowheads were discovered<sup>317</sup>. A flint arrowhead similar to the piece from Aricești I was found in an ochre grave attributed to the Yamnaya horizon from Baldovinești<sup>318</sup>. In „grave 4” from the Early Bronze Age necropolis of Gîrceni 5 flint arrowheads with concave base were found, placed near the pelvis of the individual<sup>319</sup>. A similar arrowhead was discovered in a Yamnaya grave from Sărățeni<sup>320</sup>. In the area between the Prut and the Dniester rivers, the most frequently occurring weapon pieces are flint arrowheads, triangularly shaped, with concave base, similar to the piece from Aricești I<sup>321</sup>. They were also discovered in tumular graves from the Dniester to the Urals<sup>322</sup>, „dated at the end of the classical period and in most cases, during the late Yamnaya phase”<sup>323</sup>. Such arrowheads are not encountered in Yamnaya graves between the Carpathians and the Prut River<sup>324</sup>. Other findings come from Goran-Slatina where flint arrowheads were discovered in Gr.1 from mound IV and in mound IX, in the latter case associated with a spiral hair ring<sup>325</sup>. Flint arrowheads with concave base were also found in Catacomb graves<sup>326</sup>.

<sup>302</sup> Bârzu 1989, p. 61, 75; Bârzu 1989.

<sup>303</sup> Căpitanu, Ursachi 1979, p. 143.

<sup>304</sup> Florescu 1961, p. 121, fig. 4, 5.

<sup>305</sup> Comșa 1966, p. 171; Emödi 1978, p. 487; Rusu 1963, p. 184, note 23; Petrescu-Dâmbovița 1974, p. 24, 57.

<sup>306</sup> Emödi 1978; 1980.

<sup>307</sup> Idem 1980.

<sup>308</sup> Comșa 1966; Emödi 1978.

<sup>309</sup> Gimbutas *op.cit.*, p. 45; Harding 1971; 2000; Harding, Warren 1973; Vladar 1973; Venclova 1986; Venclova *et al.* 2011; Batora 1995; Popescu 1999-2001; Motzoi-Chicideanu 2011, p. 425.

<sup>310</sup> Motzoi-Chicideanu *op.cit.*, p. 357, 495-496; Olexa 1987;

<sup>311</sup> Gimbutas *op.cit.*, p. 46; Henderson 1988, p. 435-436.

<sup>312</sup> Harding 1971; 2000, p. 190.

<sup>313</sup> Henderson 1988; Harding 2000, p. 268.

<sup>314</sup> Gimbutas *op.cit.*, p. 45; Manzura 1994, p. 110; Ostroverkhov 2001-2002, p. 39.

<sup>315</sup> Gimbutas *op.cit.*, p. 45-46; Ostroverkhov *op.cit.*; Agulnikov 1996, p. 66; Ostroverkhov *op.cit.*.

<sup>316</sup> Păunescu 1974.

<sup>317</sup> Popescu 1941, fig. 1-2.

<sup>318</sup> Harțușe, Anastasiu 1971, p. 149, fig. 5/2; 1976, p. 171; Harțușe 1973, p. 17-18, fig. 1/7.

<sup>319</sup> Florescu, Florescu 1959, p. 225, fig. 5/3-7.

<sup>320</sup> Levițki, Manzura, Demcenko 1996, p. 43, fig. 27/2.

<sup>321</sup> Dergacev 1986; 1994, p. 124.

<sup>322</sup> Häusler 1974; Kaiser 2003; Rassamakin 2004.

<sup>323</sup> Burtănescu 2002, p. 254.

<sup>324</sup> Ibidem, p. 253.

<sup>325</sup> Kitov, Panayotov, Pavlov *op.cit.*, p. 98, pl. 71/3.

<sup>326</sup> Toscev 1998, p. 52, fig. 4/29-30, 33-34.

Several general features can be traced from the analogies identified and discussed. A large part of the rite and ritual practices have their origins in time periods prior to the occurrence and cultural definition of the Yamnaya funerary horizon. All the inventory pieces are encountered in chronological horizons and cultural manifestations anterior, but also subsequent to the appearance of Yamnaya burials. The same items also appear in archaeological complexes located outside the Yamnaya cultural space. The funerary grave-goods reflect wide-range contacts, technical knowledge and natural resources exploitation denoting well structured cultural traditions. Although regional peculiarities are distinguishable, these communities seem to have provided a certain cultural uniformity and the spreading of goods and technology on a wide area defined by the expression "*the Steppe Belt*".

### Conclusions

The archaeological complexes investigated in Wallachia in recent years or in the past, by their elements of rite, ritual and inventory offer a micro-regional sample of a wider picture of these funerary practices that are spread, with certain particularities, over an area of 3000 km from Pannonia far beyond the Urals<sup>327</sup>.

The funerary complexes investigated in this area reflect a cultural phenomenon that occurred in Wallachia at the end of the Eneolithic, generated by a change of the social paradigm accompanied by transformations in the environment that favoured the development of economic activities specific to populations with greater mobility. The occurrence of tumulary graves in Wallachia may be related to a chronological time frame placed at the end of the Eneolithic and in the transitional period, while the catacomb burials from Smeeni and Sudiți could be dated to the final phase of tumulary burials in this area, probably in a time frame subsequent to or maybe contemporary with the latest manifestations attributed to the Yamnaya funerary horizon.

In the investigated area tumulary graves and plane cemeteries coexisted during the Early and partially the Middle Bronze Age, albeit in somewhat different areas, namely the plane cemeteries are encountered mainly in the hilly area, while the barrows are located in the piedmont plain. However, during the Early Bronze Age in northern Wallachia barrow graves occurred, defining a cultural horizon characterized by the presence of stone cists<sup>328</sup>. To the south, we have to pinpoint the plane cemetery from Zimnicea<sup>329</sup>. Plane cemeteries were exclusive in Wallachia during the Late Bronze Age, even if isolated (secondary) burials still occurred in tumuli<sup>330</sup>.

The grave-goods accompanying these burials are not very diversified, but rather austere. This austerity contrasts with the dimensions and the social effort involved in the construction of a tumulus. We consider that the inventories reflect more a ritual practice rather than a pauper society. The ritual was carefully followed every time, ochre was purchased, a mound was built or an already raised mound was used. For the graves containing individuals lying supine with the legs drawn up the deposition of offerings seems to have disappeared, none of the graves contained pots or animal bones. The pieces discovered indicate contacts over very large areas, reflecting the existence of trade with such objects but also phenomena of acculturation and imitation.

For the western area, radiocarbon dates are scanty; however, they indicate the presence of the Yamnaya phenomenon in a time frame contemporary with its manifestations in the eastern, presumably original regions. In this early chronological time frame the phenomenon reached both the Tisza basin and the area south of the Danube.

Based on recent investigations of barrows from northern Wallachia we propose an evolutionary scenario, with a strictly regional impact. Thus, graves with individuals in contracted position lying on a side define a first phase of barrow burials. This hypothesis is supported by all the cases where the two positions were encountered associated in the same tumulus. Besides the recently investigated barrows, this observation is suitable for Ploiești-Triaj II, but also for the first funerary phase from Smeeni. In every situation, the graves with skeletons lying supine with the legs drawn up are subsequent to

<sup>327</sup> Chernykh 2008, p 83.

<sup>328</sup> Schuster 1997; Motzoi-Chicideanu, Olteanu *op. cit.*; Frînculeasa 2005.

<sup>329</sup> Alexandrescu *op. cit.*.

<sup>330</sup> Cavruc, Neagu *op. cit.*.

burials with individuals in a contracted position, when the latter are attributed to main burials. A main grave containing an individual lying supine with the legs drawn up is never superposed by a secondary burials with an individual in a contracted position. We do not exclude the existence of a phase of contracted burials that may evolve parallel to the supine with raised legs graves, but also to the extended burials attributed to the catacomb graves.

We consider that the grave with stone ring from Blejoi I may be attributed to an early horizon of barrow burials, contemporary with the Late Tripolje-Usatovo manifestations. At Păulești III, Ploiești-Triaj II, Ist phase from Smeeni, possibly Păulești II graves which define an early Yamnaya horizon in this area were identified. The other graves containing individuals lying mainly supine are placed in a time frame when Yamnaya funerals are very well documented at the Lower Danube. Perhaps some of the findings from Ploiești-Triaj I, Smeeni, Sudiți mark the persistence of tumular graves at the beginning of the Middle Bronze Age in this area.

The research stage of these complexes and the inappropriate publication of findings generated a low information level on this cultural phenomenon in Wallachia. This seems to mark a rather subjective level of knowledge, rather than an objective view on these funerary practices.

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## ABRÉVIATIONS

- ActaAntArch – Acta Antiqua et Archaeologica. Acta Universitatis de Attila József Nominatae, Szeged.
- ActaArchCarpathica – Acta Archaeologica Carpathica, Krakow.
- ActaAnthung – Acta Antiqua Academiae Scientiarum Hungaricae, Budapest.
- ActaArchHung – Acta Archaeologica Academiae Scientiarum Hungaricae, Budapest.
- ActaDebr – Acta Classica Universitatis Debrecienensis, Debrecen.
- ArchHung – Archaeologia Hungarica. Dissertationes Archaeologicae Musei Nationalis Hungarici a Consilio Archaeologorum Academiae Scientiarum Hungaricae redactae, Budapest.
- ActaMN – Acta Musei Napocensis, Cluj-Napoca.
- ActaMP – Acta Musei Porolissensis, Zalău.
- Alba Regia – Alba Regia. Annales Musei Stephani regis, Székesfehérvár.
- AMNG I.1 – B. Pick, Die Antiken Münzen Nord-Griechenlands I.1. Die Antiken Münzen von Dacien und Moesien, Berlin, 1898.
- AMNG I.2 – B. Pick – K. Regling, Die antiken Münzen Nord-Griechenlands I.2. Die antiken Münzen von Dacien und Moesien, Berlin, 1910.
- Analele Banatului – Analele Banatului, Muzeul Banatului, Timișoara.
- AncSoc – Ancient Society, Katholieke Universiteit te Leuven, Leuven.
- ANRV – Aufstieg und Niedergang der römischen Welt. Geschichte und Kultur Roms im Spiegel der neueren Forschung. Herausgegeben von Hildegard Temporini und Wolfgang Haase, Berlin-New York.
- Antaeus – Antaeus, Communicationes ex Instituto Archaeologico Academiae Scientiarum Hungaricae, Budapest.
- AP URSS – Arheologichni pam'yatki URSS, Kiev.
- Apulum – Apulum. Buletinul Muzeului Unirii Alba Iulia, Alba Iulia.
- ArchPolski – Archeologia. Rocznik Instytutu Historii Kultury Materialnej Polskiej Akademii Nauk, Wrocław-Warszawa-Kraków-Gdańsk.
- ArheologijaKiev – Arheologija. Nacional'na akademiya nauk Ukraini. Institut Arheologii, Kiev.
- ArhMold. – Archeologia Moldovei, Institutul de Arheologie, Iași.
- ArhRozhledy – Arheologické Rozhledy, Praga.
- ARMSI – Analele Academiei Române. Memoriile Secțiunii Istorice, București.
- ASGE – Arheologicheskij sbornik Gosudarstvennogo Ermitaya, Leningrad.
- AȘUI – Analele Științifice ale Universității „Al. I. Cuza” Iași.
- BAR Int. Ser. – British Archaeological Reports, International Series, Oxford.
- BMA – Biblioteca Memoriae Antiquitatis, Piatra-Neamț.
- BerRGK – Bericht der Römisch-Germanischen Kommission des Deutschen Archäologischen Institutes, Frankfurt am Main.
- BMA – Biblioteca Memoriae Antiquitatis, Piatra-Neamț.
- BullÉp – Bulletin épigraphique, Paris.
- CAB – Cercetări Arheologice. Muzeul Național de Istorie, București.
- Carpica – Carpica, Carpica. Complexul Muzeal „Julian Antonescu” Bacău, Bacău.
- Cercetări Arheologice – Cercetări Arheologice, Muzeul Național de Istorie a României, București.
- CCA – Cronica Cercetărilor Arheologice din România, București.
- CIL – Corpus Inscriptionum Latinarum, Berlin.
- CIRB – Corpus Inscriptionum Regni Bosporani, Moskva-Leningrad, 1965.

- CCDJ – Cultură și Civilizație la Dunărea de Jos, Muzeul “Dunării de Jos”, Călărași.
- Dacia – Dacia. Recherches et découvertes archéologiques en Roumanie, București, I-XII (1924-1928); Nouvelle Série: Revue d'archéologie et d'histoire ancienne, București.
- DMÉ – Debreceni Déei Múzeum Évkönyve, Debrecen.
- Drevnejšij temenos Ol'vii – Drevnejšij temenos Ol'vii Pontijskoj, MAIET Supl. 2, Simferopol, 2006.
- Eurasia Antiqua – Eurasia Antiqua. Deutsche Archäologisches Institut, Berlin.
- EphemNap – Ephemeris Napocensis, Cluj-Napoca.
- EpigrAnat – Epigraphica Anatolica. Zeitschrift für Epigraphik und historische Geographie Anatoliens.
- FGrHist = F. Jacoby (éd.), *Die Fragmente der griechischen Historiker*, Berlin (et Leyde) 1923-.
- FolArch – Folia Archaeologica, Budapest.
- FHDR I – *Fontes ad historiam Dacoromaniae pertinentes / Izvoare privind Istoria României I*, București, 1964.
- FÖ – Fundberichte aus Österreich, Wien..
- Fuchs, Skulptur<sup>4</sup> – W. Fuchs, *Die Skulptur der Griechen*<sup>4</sup>, München, 1993.
- HD – Epigraphische Datenbank Heidelberg.
- Histria IX – M. Alexandrescu-Vianu, *Histria IX. Les statues et les reliefs en pierre*, București-Paris, 2000.
- Historia – Historia. Zeitschrift für alte Geschichte, Leipzig.
- IDRE I – C. C. Petolescu, *Inscriptions de la Dacie romaine. Inscriptions externes concernant l'histoire de la Dacie (Ier – IIIe siècles) I. L'Italie et les provinces occidentales*, București, 1996.
- IG VII – W. Dittenberger (éd.), *Inscriptiones graecae VII : Megaridis, Oropiae, Boeotiae*, Berlin 1892.
- IGBR I<sup>2</sup> – G. Mihailov, *Inscriptiones graecae in Bulgaria repertae*, Sofia, 1970.
- ILS – H. Dessau, *Inscriptiones Latinae selectae*, I-III, Berlin, 1892-1916.
- IOIb – T. N. Knipovich, E. I. Levi, *Inscriptiones Olbiae (1917-1965)*, St. Petersburg, 1968.
- IOSPE I<sup>2</sup> – V. Latyshev, *Inscriptiones orae septentrionalis Ponti Euxini I<sup>2</sup>*, Darmstadt, 1965.
- ISM I – D. M. Pippidi, *Inscriptiones Scythiae Minoris graecae et latinae I. Inscriptiones Histriae et vicinae*, București, 1968.
- ISM – D. M. Pippidi (éd., vol. I : *Histria et vicinia*), I. Stoian (éd., vol. II : *Tomis et son territoire*), A. Avram (éd., vol. III : *Callatis et son territoire*), *Inscriptiones grecques et latines de Scythie Mineure*, Bucarest-Paris 1983-1999.
- ISM II – I. Stoian, *Inscriptiones Scythiae Minoris graecae et latinae II : Tomis et territorium*, București, 1983.
- Istros - Istros. Buletinul Muzeului Brăilei. Brăila.
- JAMÉ – Jóna András Múzeum Évkönyve, Nyíregyháza.
- JRGZM – Jahrbuh des Römisch Germanischen Zentralmuseums zu Mainz, Mainz.
- KBN – Korpus Bosporskih nadpisej, Moskva-Leningrad.
- KESAM – Kocheniviki evraziskij stepi i antichnyj mir, Novocheercassk..
- KSIA – Kratkie soobshcheniya Instituta arheologii, Moskva.
- LIMC – Lexicon iconographicum mythologiae classicae, Zürich, 1981-1999.
- Materiale (MCA) – Materiale și Cercetări Arheologice, Institutul de Arheologie Vasile Pârvan, București.
- MemAntiq. – Memoria Antiquitatis, Piatra-Neamț.
- MFME – A Móra Ferek Múzeum Évkönyve, Szeged.
- MIA – Materialy i issledovanya po arheologii SSS, Moskva-Sk.Petersburg
- MittArchInst – Mitteilungen des Archäologischen Instituts der Ungarischen Akademie der Wissenschaften, Budapest.
- Mousaios – Mousaios. Buletinul Științific al Muzeului Județean Buzău NAV - Nizhnevolzhskij arheologicheskij vestnik. Volgogradskij gosudarstvennyj universitet, Volgograd.
- Nilsson, GGR I<sup>2</sup> – M. Nilsson, *Geschichte der griechischen Religion, I. Die Religion Griechenlands bis auf die griechische Weltherrschaft*, München, 1955.
- Památky Archeologické - Archeologický Ústav Akademie Věd České Republiky, Praha.
- RE – G. Wissowa (ed.), *Paulys Real-Encyclopädie der classischen Altertumswissenschaft*, Stuttgart, München.
- PBF – Prähistorische Bronzefunde, München.



- PAS – Praehistorische Archäologie in Südosteuropa, Berlin.
- PAV – Peterburgskij arheologičeskij vestnik, Sankt Peterburg.
- Pontica – Pontica. Studii și materiale de istorie, arheologie și muzeografie, Constanța.
- Pontus, Paphlagonien, Bythynien, Berlin, 1957.
- PZ – Praehistorische Zeitschrift, Berlin–New York.
- RA – Rossijskaya Arheologiya. Institut arheologii Rossijskoj akademii nauk, Moskva.
- Rapoartele M.N.A. – Rapoartele Muzeului Național de Antichități, București.
- Revista Muzeelor – Revista Muzeelor, București.
- RevBistriței – Revista Bistriței. Complexul Muzeal Bistrița-Năsăud, Bistrița.
- RG – W. H. Waddington, E. Babelon, Th. Reinach, *Recueil général des monnaies grecques d'Asie Mineure*<sup>2</sup>. 1, Pont et Paphlagonie, Paris, 1904–1925.
- RÖ – Römisches Österreich, Wien.
- Rphil (Botez) – Revue Philologique, Paris.
- SA – Sovetskaya Arheologiya. Institut arheologii Akademii nauk SSSR, Moskva.
- SAA – Studia Antiqua et Archaeologica, Iași
- SCIV(A) – Studii și cercetări de istorie veche (și arheologie), Institutul de Arheologie “Vasile Pârvan” București
- Studii și Cercetări de Antropologie – Studii și Cercetări de Antropologie, Institutul de Antropologie Fr. Rainer, București.
- SAI – Studii și articole de istorie, București.
- SGE – Soobshcheniya Gosudarstvennogo Ermitaya, Leningrad.
- SEG – *Supplementum epigraphicum graecum*, Leiden 1923-1971, Alphen aan den Rijn 1979-1980, Amsterdam 1979-2005, Boston 2006.
- SCIV(A) – Studii și Cercetări de Istorie veche și Arheologie, București.
- StCl – Studii Clasice, București.
- Stratum plus – Stratum, Vysshaya Antropologičeskaya Shkola, Chișinău.
- StSatu Mare – Studii și comunicări, Satu Mare.
- SNG BM – Sylloge nummorum graecorum, The British Museum, IX/1. The Black Sea, London, 1993.
- SNG von Aulock – Sylloge nummorum graecorum, Deutschland, Sammlung von Aulock.
- Thrac-Dacica – Thrac-Dacica, Academia Română, Institutul Român de Tracologie, București.
- Tyragetia – Tyragetia. Arheologie Istorie Antică, Muzeul Național de Arheologie și Istorie a Moldovei, Chișinău.
- VDI – Vestnik drevnei istorii, Institut vseobshchej istorii Rossijskoj akademii nauk, Moskva.



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