CONSIDERATIONS REGARDING BARROW BURIALS AND METAL DEPOSITIONS DURING THE EARLY BRONZE AGE IN THE CARPATHIAN-DANUBE AREA

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Abstract. The beginning of the Early Bronze Age brought significant changes in the Carpathian-Danube Area, including new burial customs, a different economy and innovative technologies, most of them with eastern steppe origins. Thus, burial barrows appeared in the landscape raised over rectangular grave-pits, sometimes with wood or stone structures containing individuals lying in contracted or supine position with flexed legs, stained with ochre, rarely accompanied by grave-goods like wares, ornaments or weapons made of stone, bone and precious metals. Among the metallurgical innovations, items such as silver hair rings, copper shaft-hole axes and tanged daggers are considered specific to the new era. However, a careful approach of the deposition contexts of these artifacts, as compared with the eastern space, indicates that in some cases the objects were not just adopted, but reinterpreted and involved in different social practices. This paper aims to analyze the manner in which metal pieces were disposed of and to identify the rules governing this behavior.

Keywords: barrow burials, metal depositions, weapons, ornaments, Early Bronze Age.

The plains landscape of southern and eastern Romania is dominated by thousands of burial mounds (also called barrows, kurgans or tumuli) containing inhumation burials, out of which only approximately 150 were archaeologically investigated. In terms of their absolute chronology, they were largely assigned to an interval between the last third of the IVth and the third quarter of the IIIrd millennium BC.

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North of the Lower Danube, this time frame is defined in various ways, despite extensive debates scholars have more or less convincing arguments for placing the beginning of the Early Bronze Age during different periods¹. Some consider that the first phase of this time span was a transition from the Eneolithic to the Bronze Age, placing the rise of the new era together with the emergence of Zimnicea type elements², others state that the Baden-Coţofeni complex already displays the features that characterise the proper Bronze Age, for the beginning of which they propose a date around the half of the IVth millenium BC³, while the Transylvanian archaeologists speak about the Final Eneolithic⁴. In regards to the end of the Early Bronze Age most scholars seem to agree it took place once the cultures of the Middle Bronze age, such as Monteoru, Tei, Verbicioara, Wietenberg and Otomani were fully consolidated⁵.

The difficulty in defining this period, which will be named here the Early Bronze Age, comes from the very nature of its characteristics, profound changes in the ideological and technological background, the emergence of the tumulus as a burial monument, as well as new objects and materials. Seen from this perspective, the topic of metal pieces coming from both mound graves and depositions should prove fruitful, given that the occurence of certain categories of items starting with the second half of the IVth millennium BC considered typical of the Bronze Age, such as shaft-hole axes, tanged daggers or precious metal hair rings, were related to the kurgan burial phenomenon of the steppe⁶. Thus, besides a new set of funerary practices, from the eastern area also arrived technological innovations, the metallurgical ones playing a major role. Some of these artefacts were addressed in individual studies⁷. Up to the present day the scholarly literature has not come up with an overview on how metal goods were manipulated during the Early Bronze Age. Such

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¹ See Heyd, 2013, Fig.1 for a discussion on the beginning of the Bronze Age in different regions of Europe, as seen by scholars; a detailed analysis of the research history and contemporary theories in Gogâltan, 1999; Ciugudean, 2000; Băjenaru, 2010a.

² Roman, Németi, 1978, 59; Roman, 1986, 30, 32.

³ Vulpe, 1997a, 46; Vulpe, 2001a, 218; Vulpe, 2001b, 423.

⁴ Gogâltan, 1999, 14; Ciugudean, 2000, 15.

⁵ Băjenaru, 2010a, 203.

⁶ Motzoi-Chicideanu, Olteanu 2000, 28; Băjenaru, Popescu 2012, 369;Szeverényi, 2013, 666.

⁷ For shaft-hole axes see Bátora, 2003; Hansen, 2009; Băjenaru, 2010b; Szeverényi, 2013; Dani, 2013; Băjenaru, Frînculeasa 2014; for tanged daggers Băjenaru, 2010b; Băjenaru, Popescu 2012; for silver hair rings Motzoi-Chicideanu, Olteanu 2000; Popescu, 2010.

an approach should lead to the identification of certain patterns in the social practices in which they were involved.

The present analysis is focused mainly on the present day territory of Romania, following the necessity to delimit the studied area, even though such a border can only be artificial. However, observations regarding the manner in which these phenomena manifested themselves in neighboring regions is also included. This time frame is generally perceived as a period of intense circulation of goods and ideas in very wide areas. Thus, approaching the metal pieces that were characteristic products of the Bronze Age can only be accomplished in close connection with the notions of mobility, exchange and relations between distinct points placed at considerable distances from one another. The aim of this paper is to study the occurence of metal items within the already mentioned time span and space, starting from the following questions:

- I. What metal items are to be found in burial mounds, respectively in depositions?
- II. Are there some noticeable patterns in the use of objects in one context or another?
- III. How can the presence of these items in specific contexts from the perspective of the social practices of human communities be interpreted?

From the beginning, an important aspect must be mentioned regarding the informational basis of this analysis, namely that it is constituted as a result of very different types of events such as: preventive or systematic archaeological research, fortuitous discoveries or destruction of archaeological sites. Therefore, the consistency and accuracy of data are not evenly distributed, depending on the discovery conditions. If burial mounds are usually archaeologically investigated and, at least in theory, they should be accompanied by a proper documentation, metal depositions are found overwhelmingly fortuitously. However, these preliminary observations are refined after a detailed assessment, taking into account that many excavations performed in barrows were not published properly, some of them are just mentioned, others are briefly described, while only a small part benefit from a complete documentation, including plans, drawings of the features, anthropological determinations, radiocarbon dating and other types of analyses. Despite these shortcomings, information regarding metal items from burials is much more detailed when compared to that available for depositions, especially axes. The fact that the last mentioned artefacts

were generally found by accident and recovered after the moment of their discovery created significant lacks in the reconstruction of the archaeological context they were placed in⁸.

Burial mounds – At the moment of their discovery the majority of these funerary monuments were assigned, in a broader approach, to the "red ochre burials" or the "Yamnaya culture." This phenomenon spread over a wide area stretching from the Ural Mountains and the Caspian seashore in the east, up to Central Europe in the west, near the Tisza river⁹, to the south-east the border is represented by the Caucasus Mountains, to the south by the northern shore of the Black Sea, while in the south-west mounds can be found reaching the Maritsa river¹⁰. It characterises the plains landscape or that vast region called the steppe belt of Europe. As can be seen in Figure 1, the region north of the Lower Danube is placed in the western area of this phenomenon of burials in earthen mounds.



Fig. 1 – map of the Yamnaya area (base map Cezar Buterez); map of mounds investigated in Romania, no scale (base map Bogdan Olariu); (following Motzoi-Chicideanu, 2011, fig. 31, redrawn)

A main issue in studying this archaeological phenomenon is the fact that it can be known only from graves, not from settlements, which led to the construction of a theoretical model of populations living a

⁹ Ecsedy, 1979; Dani, Nepper 2006.

⁸ Băjenaru, 2010b, 152.

¹⁰ Motzoi-Chicideanu, 2011, 224; Alexandrov, 2011.

nomadic life, based on pastoralism, moving with the aid of wooden carts, therefore leaving traces that are difficult to identify using archaeological methods¹¹. The visibly standardized funerary ritual defined by inhumationburials performed in earthen mounds, in rectangular pits, containing deceased placed in supine or crouched position, oriented predominantly to the west and stained with ochre, rather poorly furnished with grave-goods such as pottery and ornaments made of precious metals or bone, created a fertile ground for theories about a possible penetration/migration in Central Europe of successive waves of steppe populations, assumptions that were seriously amended subsequently¹².

Modern research states that infiltrations of steppe populations took place earlier, before the Yamnaya period, but a flow of lower intensity¹³. The definition of the kurgan burials phenomenon is now connected to terms such as circular migration or the Yamnaya package¹⁴. This latter concept¹⁵ includes eleven defining elements related to the ideological field (the tumulus, the rectangular grave pit, the supine position of the deceased, ochre staining), the technology (the development of metallurgy indicated by the emergence of new objects such as shaft-hole axes, tanged daggers, hair rings), but also to the economic system (pastoralism, horse domestication, mobility) that had a significant impact including in Central Europe. Other scholars have different views, considering that "Yamnaya" should not be understood as an ethnic entity, but rather as the expression of a way of furnishing burials¹⁶. In Romania, even though more than 150 mounds were excavated up to present, the results were in many cases briefly published, only recent research provides detailed documentations and other types of analyses. However, some important approaches must be mentioned, that tried to integrate this phenomenon placed north of the Lower Danube in the wider frame of the eastern, western, and south of the Danube Yamnava discoveries¹⁷.

Metal depositions – The topic of metal depositions was largely debated in the scholarly literature, raising numerous questions and being interpreted in different ways as a result of the high variation in

¹¹ Morgunova, Khokhlova 2006, 304.

¹² Rassamakin, 2006.

¹³ Harrison, Heyd 2007, 194; Heyd, 2011, 544, 548.

¹⁴ Heyd, 2011, 536.

¹⁵ Harrison, Heyd 2007, 196-197.

¹⁶ Motzoi-Chicideanu, 2011, 226; Hansen, 2010, 311.

¹⁷ Burtănescu, 2002a, 213-276; Motzoi-Chicideanu, 2011, 224-284.

dimensions and content, but also in time and space of this practice¹⁸. Did metal objects end up into the ground or other environments such as ravines, rivers or marshes as a consequence of deliberate actions or by accident? Were the items selected for deposition, and if so, according to what criteria? What interpretation should receive the depositions of this recyclable material that would otherwise allow for endless reuse¹⁹? Was their character religious or economic? These are only some of the questions asked by scholars²⁰ which were very often answered in completely different ways despite starting from the same data set.

Detailed studies performed on clearly defined geographical regions showed that some types of objects were found only in certain contexts, avoiding others²¹. Furthermore, in several cases patterns of mutual association or exclusion could be noticed, the goods found in hoards were absent from burials²², indicating the intentional, but also the selective and structured nature of depositions²³.

Intended or unintended? – When studying metal items a problem that must always be taken into consideration is the fact that the archaeological record contains only a small part of the total amount of objects produced and circulating in prehistoric times, namely the ones that were either lost, thrown away, or intentionally deposited, most of them were melted down for reuse²⁴. The main difficulty lies in distinguishing between the intended or accidental character of events leading to the presence of objects in certain contexts which is very difficult if not impossible to overcome²⁵. This issue of the intentional nature of depositions was frequently mentioned in the analysis of single finds, which were treated separately from depositions for a long time²⁶.

However, losing or throwing away the metal pieces so as to create patterns is very unlikely²⁷. Furthermore, as already pointed out, it was their quality that mattered, not their quantity and there is no difference between depositing one or more objects as far as intention is concerned²⁸.

¹⁸ Harding, 2000, 352.

¹⁹ Hansen, 2011, 137-138.

²⁰ Harding, 2000, 352, 361; Fontijn, 2002, 7; Bruck, Fontijn 2013, 198.

²¹ Fontijn, 2002, 5.

²² Neumann, 2010, 238; Bruck, Fontijn 2013, 205.

²³ Fontijn, Fokkens 2007, 356; Târlea 2008.

²⁴ Dietrich, 2015.

²⁵ Neumann, 2010, 237.

²⁶ Harding, 2000, 353; Ţârlea, 2008, 68.

²⁷ Ţârlea, 2008, 68-69.

²⁸ Harding, 2000, 361.

Anticipating the conclusions, the category of shaft-hole axes is represented mainly by isolated finds. This observation is valid for a wider area comprising the Carpathian Basin and south-eastern Europe, entitling scholars to consider that the occurence of these items was not the result of a coincidence, but of a specific type of cultural practice²⁹.

Selective and structured? - Accepting the intended character of depositions raises numerous questions regarding their functions and the identity of the persons performing them. In an attempt to encompass the variety of this phenomenon into analysable categories, scholars classified depositions according to their discovery context and content³⁰. The distinction between different contexts was considered significant to defining their function, being estimated that hoards placed into water, a non-retrievable environment, were permanent and played a ritual role³¹, while the ones from retrievable locations such as in the ground, were temporary and utilitarian³².

In terms of their content, depositions were classified as follows: whole/fragmentary items, with one type/with several types of objects, economic/votive, and regarding their owners: traders', founders', male/female hoards etc³³. Even though such efforts have the merit of trying to put in order an impressive amount of material, the question that arises is to what extent the created categories contribute to our knowledge, understanding and better interpretation on the meaning of depositions and are not just projections, in modern, economic terms, onto prehistory³⁴?

This is all the more legitimate since in some cases assigning the hoard to a certain category automatically triggered an interpretation as well. Good examples are the so-called traders' hoards, which for a very long time have been considered as being hidden during unsteady moments and not retrieved subsequently³⁵. However, during the last two decades approaches seem to have reached a common ground in interpreting depositions, their ritual function being nowadays widely accepted³⁶. Even in some cases of hoards previously assessed as

²⁹ Szeverényi, 2013, 667. ³⁰ Fontiin, 2002, 15.

³¹ Fontijn, 2002, 16.

³² Fontijn, 2002, 17, tab. 2.4; Gori, 2014, 274.

³³ Harding, 2000, 354; Târlea, 2008, 64; Gori, 2014, 274.

³⁴ Harding, 2000, 354.

³⁵ Fontijn, 2008b, 5, 11.

³⁶ Fontijn, 2002, 5; Neumann, 2010, 238; Hansen, 2012, 8; Hansen, 2013, 179; Gori, 2014, 270:Dietrich, 2015.

economic or industrial such as traders' hoards, detailed analyses indicated votive purposes as being more likely³⁷.

Given the complexity of this phenomenon it has been suggested that in order to better understand it, not only the context and content of the hoards should be carefully analysed, but also the way in which these two correlate in every particular case³⁸. Nevertheless, studying the relationship between people, objects and places remains in many situations an impossible mission. Most of the depositions are found fortuitously and as a consequence there is a general lack of detailed information regarding the features of the landscape in which they took place, as already mentioned in the literature³⁹.

The other essential element is the content of depositions. In the opinion of M. Gori the existence of a pattern as the result of social practices involves the standardization of the practices themselves, probably having as a starting point social rules shared by prehistoric communities⁴⁰. In other words, the relationship between people and objects determines their manipulation in specific contexts. During the Bronze Age this relation seems different from the modern one in which objects and individuals are completely separated, instead, the former were inalienable and contributed to the construction of the identity of the latter⁴¹. Thus, the selection of items in order to be included in or excluded from depositions or burials was a means of constructing specific types of characters during particular events⁴².

Nevertheless, however varied, most of the interpretations started from the idea that metal objects were prestige goods at the beginning of the Bronze Age. They represented technological innovations, rare and exotic items, this pleading for their special status⁴³. Belonging to either one person or even a segment of the population, as it was assumed for hoards containing a large number of items, their deposition was related to increasing the prestige inside the community⁴⁴. Even though they were offerings to the gods, at the same time depositions could codify the

³⁷ Hansen, 2012, 8; Fontijn, 2008b, 15.

³⁸ Harding, 2000, 361.

³⁹ Fontijn, 2008a, 87; Neuman, 2010, 243; Hansen, 2013, 179.

⁴⁰ Gori, 2014, 272-273.

⁴¹ Bruck, Fontijn, 2013 202.

⁴² Bruck, Fontijn, 2013 205.

⁴³ Fontijn, 2008a, 87.

⁴⁴ Gori, 2014, 277, 282.

existing relationships between individuals within a group, contributing to the construction of collective identities⁴⁵.

These brief clarifications concerning the notions mentioned in the title of this paper will be followed by an analysis of the metal pieces relevant to the proposed topic. Metal objects were divided into ornaments and weapons, according to the traditional approach, the category of adornments being comprised of copper torques, spectacle-shaped pendants and hair rings, while weapons are represented by flanged axes, shaft-hole axes and tanged daggers.

Copper torque – The category of torques is represented by one single piece in barrow burials north of the Lower Danube, discovered in a tumulus excavated in Ariceștii-Rahtivani (Ariceștii IV), Prahova County. It was found in the main burial of the mound, containing three individuals, and it accompanied Gr.5B. The deceased was an adult male, aged between 35,2 and 38,4 years old. It was lying in a crouched position on the right side, oriented on the east-west direction. Near his head there was a small cup with raised handle and around his neck he was wearing the copper torque with rolled ends. Subsequently to excavations, a spiral hair ring made of silver wire was found inside his skull⁴⁶.

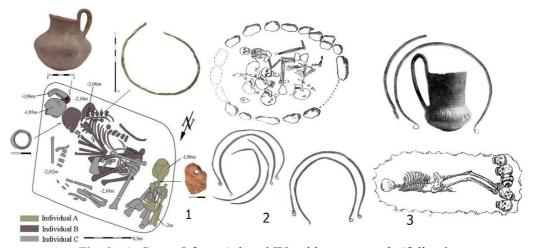


Fig. 2 - 1. Grave 5 from Aricești IV, with grave goods (following Frînculeasa *et alii* 2014, Pl. 9-10); 2. Lichtenwörth 3. Leobersdorf (following Willvonseder, 1937, Abb 1-4)

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⁴⁵ Neumann, 2010, 239.

⁴⁶ Frînculeasa et alii 2014, 189.

The piece has rolled ends, it is circular in cross-section and has the body slightly twisted, the authors mentioned that at the time of discovery the torque was broken into three pieces⁴⁷. The elemental analysis indicated the following composition: 98,4% Cu, 0,7% As, 0,5% Fe, 0,3% Ag, 0,1% Ni⁴⁸.

Given the unique character of this finding, analogies should be sought in other areas and a larger period⁴⁹. The closest parallels to this grave, as shown by both the features of metal pieces and ceramic pots, are placed in Central Europe during the second half of the IVth millennium BC and are to be found in burials of the Baden cultural complex. Thus, copper torques with rolled ends like the one from Aricești IV come from graves unearthed in Leobersdorf and Lichtenwörth⁵⁰. In Leobersdorf⁵¹the burial contained a whole torque along with a fragmentary one, a cup with raised handle and channelling decoration, a flint arrowhead and a necklace made of animal teeth, while the collective grave from Lichtenwörth was furnished with several torques, flint arrowheads and two stone shaft-hole axes⁵².

Another piece found in Königshöhle⁵³cannot be securely attributed given it was found in a multi-layered archaeological site and was assigned to the same period based on its typological similarity with the other torques⁵⁴. Two more items found in a hoard from Vel`ká Lomnica⁵⁵ have twisted bodies, being the only two that share this feature with the Ariceşti IV torque⁵⁶. Such pieces dating from the first half of the IIIrd millennium BC have not been discovered in Eastern Europe or at the Lower Danube until now⁵⁷. The piece from Ariceşti IV, given its unique character in barrow burials up to present, does not allow a more complex discussion. However, it should be emphasized that it was found arounf the neck of an adult male associated with a silver hair ring⁵⁸.

⁴⁷ Frînculeasa *et alii* 2014, 201.

⁴⁸ Frînculeasa et alii 2014, 201.

⁴⁹ Frînculeasa *et alii* 2014, 201-202.

⁵⁰ Frînculeasa et alii 2014, 202.

⁵¹ Willvonseder, 1937, Abb 1, 3.

⁵² Bognar Kutzian, 1963, 449.

⁵³ Ladenbauer-Orel, 1954, Taf. 1.

⁵⁴ Bognar Kutzian, 1963, 449.

⁵⁵ Novotná, 1984, 9, pl. 1.

⁵⁶ Frînculeasa *et alii* 2014, 202.

⁵⁷ Frînculeasa et alii 2014, 202.

⁵⁸ Frînculeasa *et alii* 2014, 196.

Spectacle-shaped pendant – Another unique ornament found in a mound up to presentis the spectacle-shaped pendant (*Brillenspirale*) discovered during the rescue excavations of a tumulus from Ploiești-Triaj, Mound I (Prahova County), destroyed during the Second World War. This situation prevented the proper documentation of the unearthed features, thus the available information is limited to a brief description of the burials and grave goods. Drawings, plans or any stratigraphic details are completely missing. The *Brillenspirale* type pendant came from a secondary burial (Gr.3)⁵⁹,the deceased, probably a child, was lying crouched, accompanied by a fragmentary bracelet found near his right arm, a necklace made of flat kaolin beads and other tubular copper pearls, shell pearls and valves, a silver spiral hair ring and a pot placed near the lower limbs of the deceased⁶⁰. The upper limbs and the abdomen were stained with ochre⁶¹.

This category of adornments is found in a larger time interval, as they emerged in the Eneolithic and developed up to the Iron Age, covering wide areas in Europe⁶². The items from Romania were assigned by I. Matuschik to the "Danubian group" dated to the end of the Eneolithic and the Early Bronze Age⁶³, while C. I Popa distinguished a west-Transylvanian type within this "Danubian group" located in the Apuseni Mountains⁶⁴. In earlier times, decorations reproducing such ornaments were noticed on Coţofeni pottery from Transylvania, in layers assigned to late phases. The use of these pieces by Coţofeni communities was assessed by scholars despite the fact that no actual pendants have been found for the moment⁶⁵.

Thus, the closest analogies are found in Transylvania and represent, when the discovery context is known, grave goods of tumular burials assigned to the Livezile group, dated to the Early Bronze Age⁶⁶. Here must be mentioned the findings from Livezile *Dealu Sârbului*, Poiana Aiudului *Dealul Velii*, Ampoiţa *Peret* and Mada *Chiciorele*⁶⁷. The items usually accompanied deceased lying crouched either on the left (Gr.4/Mound 9 from Poiana Aiudului *Dealu Velii*, Gr.5/Mound 3 from

⁵⁹ Frînculeasa *et alii* 2013, 28-29.

⁶⁰ Comşa, 1998, 22.

⁶¹ Zirra, 1960, 103.

⁶² Popa, 2010-2011, 36.

⁶³ Matuschik, 1996, 20 ff.; Frînculeasa *et alii* 2014, 201.

⁶⁴ Popa, 2013, 80.

⁶⁵ Popa, 2010, 12, pl. 5; Popa, 2013, 80, pl. 7-8.

⁶⁶ Popa, 2010, 2.

⁶⁷ Vlassa et alii 1985-1986; Ciugudean, 1996; Rișcuță et alii 2009.

Mada *Chiciorele*), or on the right side (Gr.1/Mound 1 from Livezile *Dealu Sârbului*) oriented on the NE-SW or SW-NE direction, along with other grave goods such as pottery, stone axes, copper bracelets, saltaleoni or gold hair rings⁶⁸.

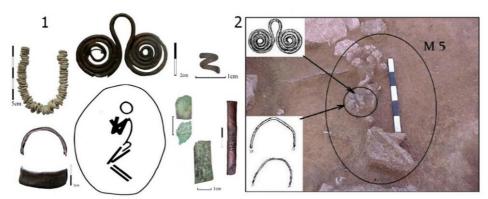


Fig. 3 - 1. Gr.3 from Ploiești-Triaj Mound I with grave goods (following Frînculeasa *et alii* 2013, pl. 17); 2.Gr.5 from Mada with grave goods (following Popa, 2010, pl. 4)

The function of these pieces and the way they were worn could be documented during archaeological research performed in the cemeteries from Livezile, Poiana Aiudului, Ampoiţa and Mada. At Livezile and Poiana Aiudului the item was placed at the chest of the deceased, indicating its pendant function, while in Ampoiţa it was found under the mandible⁶⁹. Additional information comes from Gr.5/Mada-*Chiciorele*, where there were traces of the cord to which the pendant was attached, probably made of organic material⁷⁰. As regards the Ploieşti-Triaj pendant, there are no details regarding its place in the grave, but given that tubular copper pearls along with flat kaolin beads and shell pearls were also found, it should be expected they were all part of a necklace. A representation of a similar piece (Fig. 4) worn as pendant was depicted on a funerary stela (stela no.2) from Le Petit Chasseur (Sion, Switzerland), assigned to a time frame contemporary to the Corded Ware, the size of the pendant being over-represented as compared to the arms⁷¹.

⁶⁸ Ciugudean, 1996, 33, 50, 61-62, pl. 37/2, fig 21/7, fig. 31/12; Vlassa *et alii* 1985-1986, 61-62, pl. XI/3; Riscută *et alii* 2009, 265.

⁶⁹Ciugudean, 1996, 33, 50, 62.

⁷⁰ Rișcuță *et alii* 2009, 270, fig. 9/1.

⁷¹ Harrison, Heyd 2007, 156, fig. 19; Popa, 2010, pl. 6.

In numerous cases the *Brillenspirale* pendants were associated with other types of ornaments made of precious metals. In Ampoiţa and Poiana Aiudului two pairs of saltaleoni were found, that probably helped guiding the cord towards the loop of the pendant⁷²; at Mada the funerary inventory was also comprised of two copper bracelets with round cross-section, while at Poiana Aiudului a flat copper bracelet was found on the left arm of the deceased, but there is no drawing or picture of the piece so we don't know if it was similar to the one discovered in Gr.3 from Ploieşti-Triaj I.

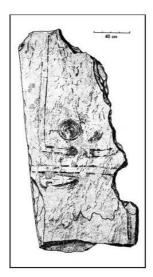


Fig. 4 - Funerary stela with the depiction of a pendant, Sion (following Popa 2010, pl. 6)

In the last mentioned burial a spiral hair ring was also found. Of particular importance are the two gold hair rings⁷³ found in Gr.1/Mound 3 from Ampoiţa *Peret*assigned to the Leukas type, with analogies in Montenegru in Velika Gruda⁷⁴and in Bulgaria in Gr.8/Mound I from Târnava⁷⁵, dated to the first half of the IIIrd millennium BC⁷⁶.

In the eastern area two burials with *Brillenspirale* pendants are known. In Dobrovody (in the upper basin of the Dniester), in Gr.10/Mound 2, the grave pit was rectangular with rounded corners,

⁷² Popa, 2010, 11.

⁷³ Ciugudean, 1996, 33, fig. 31/12.

⁷⁴ Primas, 1995, 83, fig 5.

⁷⁵ Panayotov, 1989, 88, fig. 46.

⁷⁶ Primas, 1995, 85.

covered by wooden beams. The deceased was lying on a mat, crouched on the right side, with his arms stretched to the knees, the pendants were discovered at his neck. The grave was dated to 3920±60 BP, calibrated to (2580-2200 BC)⁷⁷. However, F. Gogâltan considers their presence in the western Yamnaya area as a consequence of contacts with the southern Poland region, not with Transylvania⁷⁸. Two more pieces come from a tumulus unearthed in Krivaya Luka, on the Lower Volga, but there are no drawings of the burial⁷⁹.

Given the low number of these ornaments (it is not clear whether there are 4 or 6), found in approximately 200 burials attributed to the Livezile group, they were interpreted as prestige goods emphasizing the social rank of the deceased⁸⁰. The general lack of anthropological determinations, except for the grave from Ampoiţa⁸¹, which belonged to an adult male, makes it impossible to make any inference regarding the sex of the individuals wearing such pendants. Nevertheless, for the time being there are no indications that they were destined for women during the Early Bronze Age.

Hair rings – Hair rings made of precious metals are a category of pieces relatively frequently encountered in barrow burials, when compared with the general austerity that characterises these features⁸². Most of them are made of silver, more rarely copper or gold, being placed near the skull of the deceased. The silver ones are the most numerous, copper hair rings are only mentioned in few cases such as Gurbăneşti, Sultana and Glăvăneştii Vechi⁸³. However, the lack of metallographic analyses imposes some reservations regarding these attributions. Some of the ones assessed as being made of copper, may in fact be silver hair rings, as was the case of the items from Gr.15/Ploieşti-Triaj *Mound II* and Rahman I⁸⁴. These types of adornments are considered among the oldest silver objects that occured in large number at the Lower Danube, their arrival being simultaneous with the spread of the barrow burials funerary ritual⁸⁵.

⁷⁷ Bunyatyan, Nikolova 2010, 37, nr. 19, 40, fig. 10/6-7.

⁷⁸ Gogâltan, 2013, 53.

⁷⁹ Shishlina, 2008, 70, fig. 45/8.

⁸⁰ Motzoi-Chicideanu, 2011, 313, 315.

⁸¹ Perianu, 1990, 244.

⁸² Frînculeasa et alii 2014, 197.

⁸³ Rosetti, 1959; Serbănescu, Comșa 2012; Comșa, 1987; Comșa, 1989a.

⁸⁴ Ailincăi et alii 2014, fig. 5; Frînculeasa et alii 2014, 197, note 4.

⁸⁵ Popescu, 2010, 165-166.

Typologically, they were divided into several categories, each of them with sub-variants, as follows: spiral hair rings, with one and a half or more convolutions; round rings with touching ends and crescent rings (the Zimnicea type), with thinned ends that are either distanced, touching or overlapping⁸⁶. The spiral ones are the most numerous and cover a wider area, from the Middle Danube to northern Caucasus, however focusing in two main areas, north-west of the Black Sea and in northern Caucasus⁸⁷. The round hair rings were in the same area and context as the spiral rings⁸⁸.



Fig. 5 - 1. Gr.4/Aricești IV with grave goods (following Frînculeasa *et alii* 2014, pl. 6); 2. Gr.3/Aricești I with grave goods (following Frînculeasa *et alii* 2015a, pl.2)

Crescent hair rings, or the "Zimnicea type" are much less frequent and their occurrence seems more limited both territorially and chronologically⁸⁹. On the present day territory of Romania nine silver items are known (according to Annex 1), five from the Zimnicea cemetery, two from Ariceştii-Rahtivani and two from Zebil⁹⁰ to which can be added information regarding an unpublished item from Stelnica, and another one from Năieni, but assessed as being made of copper⁹¹. This type of hair-rings was also documented in Bulgaria, Hungary and the

⁸⁶ Motzoi-Chicideanu, Olteanu 2000, 28; Popescu, 2010, 166.

⁸⁷ Motzoi-Chicideanu, Olteanu 2000, 29; Popescu, 2010, 166.

⁸⁸ Popescu, 2010, 167.

⁸⁹ Motzoi-Chicideanu, Olteanu 2000, 31; Popescu, 2010, 167; Frînculeasa *et alii* 2014, 198.

⁹⁰ Popescu, 2010, 167.

⁹¹ Motzoi-Chicideanu, Olteanu 2000, 56.

Republic of Moldavia where they were also found in barrow burials⁹². Crescent hair rings generated debates concerning their origins, some scholars consider they were local products, created in the metallurgical centres that developed during the IIIrd millennium BC using silver brought from regions such as the Aegea or Anatolia⁹³, while in the view of others the above-mentioned areas were the origin spaces of the finished products, not only of the raw material⁹⁴

Items that were typologically similar to the Zimnicea hair rings, but made of gold, were the ones attributed to the Leukas and Mala Gruda types, represented by several findings from Bulgaria in Târnava, Transylvania in Ampoiţa, but also Dobrudja in Jurilovca, for the lastmentioned discovery the archaeological context being unknown⁹⁵. They were attributed to the Leukas type along with the ones discovered in the burials from Velika Gruda⁹⁶. In the opinion of I. Motzoi-Chicideanu, the Leukas and Mala Gruda types are in fact variants of the crescent hair rings, only more elaborated and covering a smaller area⁹⁷.

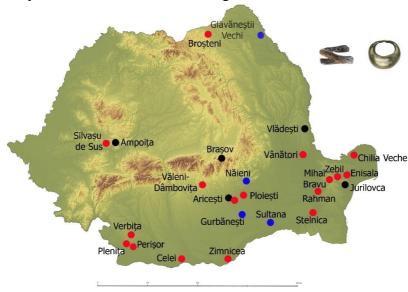


Fig. 6 – Hair rings from Romania (black - gold; blue – copper, red - silver) (following Frînculeasa *et alii* 2014, fig. 5, redrawn); (base map Bogdan Olariu)

⁹² Motzoi-Chicideanu, Olteanu 2000, 30; Popescu 2010, 167.

⁹³ Popescu, 2010, 172; Dani, 2013, 216.

⁹⁴ Motzoi-Chicideanu, Olteanu 2000, 31.

⁹⁵ Motzoi-Chicideanu, Olteanu 2000, 30; Vasiliu, 2007, 122-123, fig. 4/2.

⁹⁶ Primas, 1995, 83.

⁹⁷ Motzoi-Chicideanu, Olteanu 2000, 31.

The association between crescent and spiral hair rings was documented in Zimnicea and Goran-Slatina⁹⁸, indicating a chronological contemporaneity, at least partially, of these two ornaments. Gold hair rings, but spiral-shaped, were found in a burial from Vlădești⁹⁹, but also in the Schneckenberg settlement from Brașov¹⁰⁰. In Gr.1/Aricești I it was discovered a silver spiral hair ring that had attached a gold sheet¹⁰¹.

Site name	Grave	Sex	Age (years)	Pathologies	Height	Literature
Aricești I	Gr.1	Ind	20-30	Caries	-	Frînculeasa et
(Prahova County)	Gr.3	M	20	Cribra cranii, calculus	165-166 cm	alii 2013, 35
	Gr.4B	F	19.4-25	caries; osteo- arthrosis	154 cm	Frînculeasa <i>et</i> alii 2014, 196
Aricești IV (Prahova County)	Gr.5B	M	35.2- 38.4	caries, abscess; osteo- arthrosis; cribra cranii	ı	Frînculeasa <i>et</i> alii 2014, 196
Pleniţa (Dolj County)	Gr.1	M	>40	Severe attrition of the teeth	-	Firu <i>et alii</i> 1956, 99-102
Rahman I (Tulcea County)	Gr.2	M	20-23	Osteo- arthrosis	173 ±5 cm	Constantinescu, Soficaru, 2013, 489
Sultana	Gr.1	M	17-21	-	-	Şerbănescu, Comşa, 2012, 26
(Călărași County)	Gr.5	M	45-50	-	-	Şerbănescu, Comşa, 2012, 26
Vânători (Galați County)	Gr.13	M	20-22	Slight abrasion of the teeth (1)	>175 cm	Perianu, 1988, 132

Table 1 – Graves with hair rings and anthropological determinations excavated in Romania

⁹⁸ Motzoi-Chicideanu, Olteanu 2000, 31.

⁹⁹ Brudiu, 2003, 69, fig 32/4.

¹⁰⁰ Motzoi-Chicideanu, Olteanu 2000, 58, nr. 38.

¹⁰¹ Frînculeasa *et alii* 2014, 198.

Hair rings occured overwhelmingly in funerary contexts, except for the items from Celei, where in the 2c layer two spiral hair rings along with a gold pendant were found inside a pot with oblique rim¹⁰², and the gold item from the Schneckenberg settlement in Braşov¹⁰³.

Although relatively well represented in barrow burials, when compared to the general lack of inventories in such features, hair rings were prestige goods during the Early Bronze Age, being meant only for a restricted number of persons. This is suggested by the fact that they occured in a very small percent of the total number of unearthed burials, somewhere around 5%. Unfortunately, establishing a correlation with the age and sex of the deceased turns out to be very difficult, given that in Romania performing anthropological determinations of the osteological remains has been rather an exception than the rule of archaeological research until recently. However, taking into account those graves for which there is available information regarding the age and sex of the deceased (Table 1) it can be noticed that hair rings occured more often in male burials.

Shaft-hole axes are considered among the most important items characteristic to the new era. They occured at the Lower Danube at the beginning of the Bronze Age in more rudimental shapes and then developed typologically within the entire Carpathian Basin during the IIIrd millenium BC¹⁰⁴. For the Carpathian-Danube area the typology of copper/bronze age shaft-hole axes was established by Alexandru Vulpe and it is generally still in use today, although recent approaches proposed a reassessement of the criteria taken into account when building typologies, their adaptation to the research goal and the use of typologies as a starting point for the analysis, not as an end in itself¹⁰⁵. Thus, Alexandru Vulpe assigned to the Early Bronze Age several types of axes, namely Baniabic, Fajsz, Corbasca, Dumbrăvioara and Veselinovo¹⁰⁶. Among them, the Baniabic and Dumbrăvioara types will be addressed in this study given they serve best the proposed topic.

The items attributed to the Baniabic type were considered amid the oldest shaft-hole axes and were defined as "heavy axes, with simple shapes, whose shaft-hole is not detached from the body of the axe. The

¹⁰² Nica, 1982, 24.

¹⁰³ Motzoi-Chicideanu, Olteanu 2000, 58, no. 38.

¹⁰⁴ Băjenaru, 2010b, 152.

¹⁰⁵ Popescu, 2006, 432-433.

¹⁰⁶ Vulpe, 1970; Vulpe, Tudor 1970, fig. 1.

blade is rectangular in cross-section, with slightly convex sides"¹⁰⁷. An argument in favor of assigning them to an early time frame is the fact they had been cast in open bivalve moulds, which belonged to an older phase in the development of the axe casting technology, unlike the more evolved ones with hexagonal cross-section, indicating their casting into close moulds¹⁰⁸.

For A. Vulpe the typological ordering of artefacts was only the first step, once formally defined, the type "must be pursued within its geographical distribution and sought its connections with the material cultures in the area of which it is spread" In his approach the author offered a significant role to the geographical factor, avoiding to establish relationships between "types that are similar in shape, but are placed in areas very far apart" Vulpe also considered that formal similarities, especially in the case of simple shapes, can be the result of coincidence or of shared development stages, without necessarily involving their contemporaneity. Therefore, even though he noticed the resemblances between the Baniabic type and northern Caucasus axes, because of the large distance and the lack of findings in the intermediate space, A. Vulpe did not agree there was a connection between the items from these two regions 112.

In the current state of research there is a generally accepted view among scholars that shaft-hole axes were part of a set of technological innovations emerging in northern Caucasus during the second half of the IVth millennium BC, where they were found in Maykop burials¹¹³. Their dissemination into Southeastern Europe, through the North Pontic steppes overlapped the spread of burial mounds in the same time interval, a significant role in mediating the transmission of metallurgical knowledge to the west being conferred to Yamnaya populations¹¹⁴.

However, an important aspect of this process must be noted, already repeatedly stressed in the literature, namely the existence of differences in their use in the various regions where they occured: the northern Caucasus, the steppe area and the Carpathian Basin. This could

¹⁰⁷ Vulpe, Tudor 1970, 419.

¹⁰⁸ Vulpe, 2001a, 235; Szeverényi, 2013, 666.

¹⁰⁹ Vulpe, Tudor 1970, 418.

¹¹⁰ Vulpe, Tudor 1970, 418.

¹¹¹ Vulpe, Tudor 1970, 418.

¹¹² Vulpe, Tudor 1970, 418; Vulpe, 1974, 249-250.

¹¹³ Bátora 2003; Hansen, 2011, 143; Dani, 2013, 204; Szeverényi, 2013, 664; Băjenaru, Frînculeasa 2014, 14.

¹¹⁴ Dani, 2013, 218; Băjenaru, Frînculeasa 2014, 14-15.

be noticed from the different contexts of their deposition, indicating they were involved in other practices. As already mentioned, in the Caucasus area axes were generally found in lavishly furnished mound burials. The most famous example is Gr.5/Kurgan 31 excavated in Klady, assigned to the Maykop culture¹¹⁵. The outstanding grave inventory was composed, among others, of six metal pots, six axes of different types, nine daggers, a sword, precious metals beads, rings and pendants, pottery¹¹⁶. Two of the axes had typological characteristics also found in Baniabic type items. The proposed dating of this burial assigned it to the last quarter of the IVth millennium BC¹¹⁷. Another burial, dated to the half of the same millenium, was unearthed in Maykop and also contained an axe of this type, along with a dagger and other grave goods¹¹⁸. In the North Pontic steppe area the percent of axes in Yamnaya burials is smaller, but it does not completely disappear¹¹⁹.

In Central and Southeastern Europe none of the axes was found in funerary contexts or settlements, most of them were discovered as single items or in exceptional cases in hoards. However, they were never associated with other types of pieces that could ease their chronological assignment ¹²⁰. In one case, at Izbucul Topliței in Transylvania, two Baniabic axes were discovered in the same context with human bones, the authors stating that "somewhat distanced from the burials, they come from their inventory" ¹²¹. The illustration shown in the article doesn't help clarifying the relation between these pieces and the graves, but the available data are not sufficient to justify these allegations ¹²².

In the Carpathian-Danube area as well, Baniabic axes (Annex 2) were fortuitously found, generally as single items, much more rarely in hoards. A significant number come from the Intra-Carpathian region, where the most important finding was the Baniabic (Vâlcele) hoard, discovered in 1928¹²³. It was comprised of somewhere between 32 and 55 axes, being one of the largest hoards dated to this time frame¹²⁴. Given

¹¹⁵ Hansen, 2010, 301.

¹¹⁶ Hansen, 2010, 301.

¹¹⁷ Hansen, 2010, 303.

¹¹⁸ Hansen, 2011, 143.

¹¹⁹ Băjenaru, 2010b, p. 155.

¹²⁰ Băjenaru, 2010b, 154; Hansen, 2010, 305; Hansen, 2011, 143; Szeverenyi, 2013, 664, 667; Băjenaru, Frînculeasa 2014, 14.

¹²¹ Halasi, Emodi 1985, 232.

¹²² Băjenaru, 2010b, 154; Motzoi-Chicideanu, 2011, 319.

¹²³ Roska, 1933.

¹²⁴ Szeverényi, 2013, 661-662.

the pieces had been made in the same workshop, perhaps in the same batch, and show no traces of wear, this was interpreted as an indication of their production especially for deposition¹²⁵. In Transylvania, similar axes were found in Cheile Turului, Colţeşti, Cubleşul Someşan, Sebeş and Topliţa¹²⁶. In the Extra-Carpathian region these findings were less numerous, in the east in Rădeni and Rotunda¹²⁷, in Dobrudja in Mahmudia and Izvoarele¹²⁸, in Muntenia a piece was mentioned in Ploieşti¹²⁹, while in the south-west there was only one discovery, in Dănceu¹³⁰. Nevertheless, the spreading area of these axes was larger and included the entire Carpathian Basin and the area south of the Danube¹³¹.

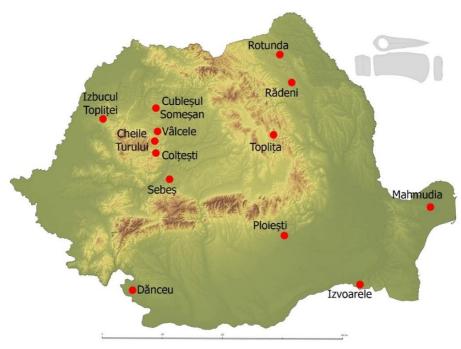


Fig. 7 – Map of the Baniabic axes from Romania (following Dani, 2013, fig. 1 redrawn; Băjenaru, Frînculeasa 2014, fig. 1) (base map Bogdan Olariu)

¹²⁵ Băjenaru, 2010b, 153.

¹²⁶ Vulpe, 1970.

¹²⁷ Dumitroaia, 1985, 465; Burtănescu, 2002b, 172.

¹²⁸ Vasiliu, 1996, 27; Irimia, 1998, 37.

¹²⁹ Băjenaru, Frînculeasa 2014, 14.

¹³⁰ Crăciunescu, 1998, 146.

¹³¹ Dani, 2013, fig 1; Băjenaru, Frînculeasa 2014, 14, note 5.

Given that in most cases these items were discovered fortuitously, lacking any information regarding their deposition contexts, and when such data was available it wasn't usually chronologically relevant, the attribution of Baniabic axes to a certain time frame proved to be a difficult task, the only useful criteria being the typological ones. Based on analogies with pieces from the north Caucasian area, which were dated starting with the second half of the IVth millennium BC, the axes from the Carpathian-Danube area were assigned to the same interval. Typologically, they were related to the Maykop 2 and 3 axes (or the Novosvobodnaya type) according to the typology made by S. Korenevskij¹³², the closest findings being the ones from the Dnieper area¹³³. In the opinion of S. Hansen the Baniabic axes can be related to the Baden culture, a hypothesis also issued by A. Vulpe¹³⁴

As already stated, the major difference between the areas where such items occured consists in their manipulation within different social practices. While in northern Caucasus they were usually grave goods, in the Carpathian Basin they were placed in the ground, generally as single items, very rarely in hoards. This was considered a social innovation, a special type of practice, the aware selective deposition as a hoard comprised of one single object¹³⁵.

How can it be explained this transformation of the way in which axes were used, that took place along with the spread of the new technology? It's been suggested that the process of adopting new material forms by a community involves several aspects: on the one hand the "technological domestication" meaning the control over all the stages of the production of objects, and on the other their "translation" into that society's own language, in other words the integration of their social and cultural meaning into its structure, all of these causing changes ¹³⁶. Thus, the value and meaning of objects are not considered as being static, determined by inherent qualities, but are rather contextual, changing the context sometimes producing different meanings of those objects ¹³⁷. In the particular case of shaft-hole axes, the object was not just taken from the steppe area into Central and Eastern Europe along with its original function and meaning, but rather seems to have been reinterpreted, in the

¹³² Korenevskii, 1974.

¹³³ Szeverenyi, 2013, 665-666.

¹³⁴ Hansen, 2010, 305; Vulpe, 1997a, 44; Vulpe, 2001b, 422.

¹³⁵ Hansen, 2010, 304, 306; Szeverenyi, 2013, 667.

¹³⁶ Gori, 2014, 272.

¹³⁷ Târlea, 2008, 66.

new environment it was no longer used in constructing identities during burial practices, but was deposited in ritual contexts¹³⁸.

How can it be understood the use of axes in depositional practices and what function did they fulfill during this period, given than metal objects were rare and exotic goods? In the interpretation of the archaeological record the presence of weapons was usually connected with martial values and warrior identities. If they were part of the funerary inventory, as was the case of the lavishly furnished burials from the northern Caucasus, the warrior identity was displayed or perhaps even constructed during funerary rituals by the mourners, but if the rule was to use them in other contexts, the warrior identity seems deliberately eliminated from the burial practices, being instead consituted through other types of practices¹³⁹.

Most of the interpretations had as a starting point the idea that copper axes were prestige goods. The Bronze Age was seen as a time when the competition for power was connected including to the individuals' capacity to prove they had access to exotic goods and technologies¹⁴⁰. Thus, owning such items and giving them up deliberately in a ceremonial frame during depositions could have been a way to express social status, to maintain or increase prestige¹⁴¹. They have also been connected to practices such as gift exchange and bringing offerings.¹⁴² Other interpretations gave a more collective meaning to these depositions, stating they are relevant for the relationship between objects and communities, as oppsed to placing axes in burials which would be indicative of the individual-object relationship¹⁴³.

The Dumbrăvioara type as defined by A. Vulpe, is characterised by "the pronounced profiling of the shaft-hole. The upper edge is straight. The blade's cross-section is pentagonal, but unlike the Fajsz and Corbasca types, the top of the pentagon is facing down. On some of the pieces from Transylvania it can be noticed a decoration made of facets, on the shaft-hole (Sf. Gheorghe and Jimbor) or on the entire surface of the axe (Mura Mare)"¹⁴⁴.

Some observations must be made in what these axes are concerned. In the Carpathian-Danube (Annex 3) area they were the

¹³⁸ Băjenaru, 2010b, 155; Szeverenyi, 2013, 667.

¹³⁹ Fontijn, Fokkens 2007, 354; Bruck, Fontijn 2013, 201.

¹⁴⁰ Szeverenyi, 2013, 667.

¹⁴¹ Popescu, 2006, 445.

¹⁴² Hansen, 2011, 145.

¹⁴³ Băjenaru, Frînculeasa 2014, 14.

¹⁴⁴ Vulpe, Tudor 1970, 420.

products of the local metallurgy, as demonstrated by the discovery of casting moulds during excavations performed in the settlement from Leliceni (Harghita County) attributed to the Jigodin group¹⁴⁵. This archaeological group was assigned to a time frame contemporary with the final phase of the Glina culture, anchoring Dumbrăvioara axes in a more advanced stage of the Early Bronze Age¹⁴⁶. This dating was supported by some of the items found into more relevant chronological contexts. Thus, the one from Blănoiu was found while digging a hole, in a Glina feature¹⁴⁷, and one single Dumbrăvioara axe was found in a settlement, during research performed in Sfântu Gheorghe, Örkö, probably placed in a Jigodin context¹⁴⁸. The item from Răcătău, discovered in a Monteoru Ic3-Ic2 settlement, was placed in a context that could be dated a millennium later¹⁴⁹.

As in the case of the Baniabic axes, none of the Dumbrăvioara pieces discovered in the Carpathian-Danube area were placed in burials. The axes from Mura Mare and Jimbor were fortuitous discoveries and had faceted surfaces, similar to an item found in Topolie, but also to the one from Mala Gruda¹⁵⁰. This aspect along with the already mentioned gold hair ring of the Leukas type, from Ampoiţa and Velika Gruda, attest the connections between the two regions¹⁵¹.

In this register of connections with other areas should be mentioned a burial excavated in Szczytina (Gr.4)¹⁵², attributed to the Corded Ware, in which the deceased was lying crouched, accompanied by an axe assigned to the Dumbrăvioara type along with a copper torque and other grave goods, indicating the existence of relations between south-eastern Poland and eastern Transylvania, which might explain the presence of the corded decorations present on pottery of the Jigodin group¹⁵³.

¹⁴⁵ Roman et alii 1992, taf. V/10-11, 78.

¹⁴⁶ Vulpe, 1997a, 44; Vulpe, 2001b, 422; Burtănescu, 2002b, 187.

¹⁴⁷ Băjenaru, 2010b, 154; Băjenaru, 2014, 239.

¹⁴⁸ Băjenaru, 2010b, 154.

¹⁴⁹ Băjenaru, 2010b, 154; Burtănescu, 2002b, 188.

¹⁵⁰ Vulpe, 2001b, 422.

¹⁵¹ Vulpe, 2001b, 423.

¹⁵² Czopek 2011, 249, no. 64.15.

¹⁵³ Dani, 2013, 209.

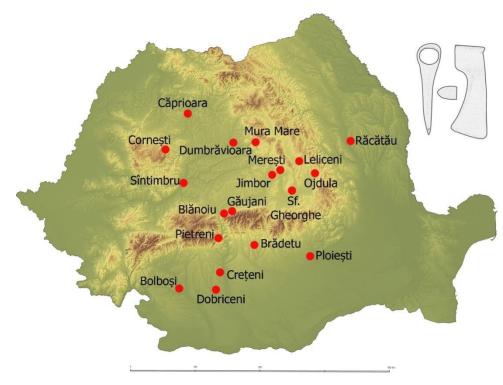


Fig. 8 – Map of the Dumbrăvioara axes from Romania (following Dani, 2013, fig. 5, redrawn); (base map Bogdan Olariu)

Tanged daggers occured at the Lower Danube during the Early Bronze Age and are considered specific to this period, unlike the ones with a hafting plate and rivets which existed from an earlier time frame, so this study will only focus on the former¹⁵⁴. As in the case of shaft-hole axes, the emergence of tanged daggers was connected to interactions with the north-Pontic steppes¹⁵⁵. They have an axtension of the blade's body, but clearly delimited, used for attaching the handle¹⁵⁶. The attribution of items to this type was problematic, as they were sometimes called: daggers, swords, short swords, knives, knife-daggers, however, nowadays daggers are defined as blades with two edges whose maximum length reaches 30 cm¹⁵⁷.

¹⁵⁴ Băjenaru, 2010b, 155; Băjenaru, Popescu 2012, 364.

¹⁵⁵ Băjenaru, 2010b, 155.

¹⁵⁶ Băjenaru, Popescu 2012, 366.

¹⁵⁷ Băjenaru, Popescu 365.

The tanged daggers found in Romania were discussed in detail in terms of their typology and chronology¹⁵⁸. This paper will only provide a synthesis of data available on this category of items, as a background for the analysis that will be performed. For the Early Bronze Age, 12 tanged daggers were cataloged, although their chronological attribution was sometimes uncertain, given the lack of typological expressiveness of items¹⁵⁹.

Among the set types, the Yamnaya one is of particular interest to the topic addressed here because it occured in the Carpathian area along with the barrow burials attributed to those communities. The noticeable difference between the origin area and the one in which this object was adopted lies in their deposition contexts. If in the north-Pontic area daggers were part of funerary inventories, found in Yamnaya and Katakombnaya burials, at the Lower Danube they were not usually placed in graves 160.

Among the characteristics of these items are their small size (10-12 cm), the flat, biconvex cross-section of the blade, the thin tang¹⁶¹. The following pieces were assigned to this type: the Băile Herculane, Odaia Turcului, Mihai Viteazu and Crăciunel daggers, although for the latter there is a controversy regarding its dating¹⁶²The dagger from Mihai Viteazu came from a destroyed barrow and will be addressed later along with other weapons from Yamnaya burials. The daggers from Romania were placed in the 4th group, following the typology of S. Korenevskij¹⁶³ and were dated to the end of the IVth and the beginning of the IIIrd millennium BC.

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¹⁵⁸ Băjenaru, Popescu 2012.

¹⁵⁹ Băjenaru, Popescu 2012, 380.

¹⁶⁰ Băjenaru, Popescu 2012, 387; Băjenaru, 2010b, 156.

¹⁶¹ Băjenaru, Popescu 2012, 387-388.

¹⁶² Băjenaru, Popescu 2012, 388.

¹⁶³ Băjenaru, Popescu 2012, 390-391; Korenevskij, 1978, 42, fig. 8.

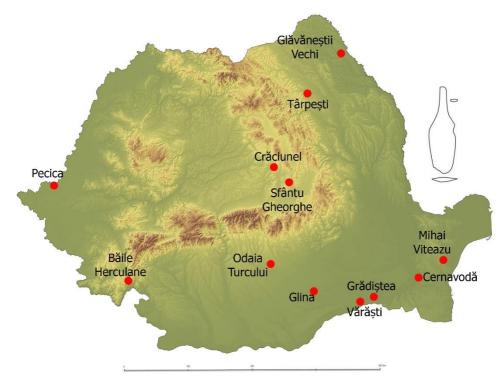


Fig. 9 – Map of the Early Bronze Age tanged daggers from Romania (following Băjenaru, Popescu, 2012, fig. 1, redrawn); (base map Bogdan Olariu)

Ar regards their discovery context, out of the 12 tanged daggers attributed to the Early Bronze Age (Annex 4), 7 were found in settlements, 3 in burials and two came from isolated discoveries, indicating their occurence especially in settlements and less as grave-goods, but also the fact that none of the daggers from the Carpathian-Danube were associated with other categories of objects from depositions¹⁶⁴.

During the IIIrd millenium BC the tanged dagger became an important piece of the burial standard in most of Europe, in the west through the Bell Beaker and in the north-Pontic area through the Yamnaya phenomenon¹⁶⁵. In the Danube area, however, the interpretation of the archaeological record doesn't lead to the identification of a pattern regarding the use of these items by prehistoric communities¹⁶⁶. It should be stated that the few daggers that came from burials were in fact fortuitous findings, the pieces being recovered after the destruction of

¹⁶⁴ Băjenaru, 2010b, 156; Băjenaru, Popescu 2012, 399.

¹⁶⁵ Băjenaru, 2010b, 156, Băjenaru, Popescu 2012, 401-402.

¹⁶⁶ Băjenaru, 2010b, 156; Popescu, Băjenaru, 2012, 402.

graves, so the information regarding the burial ritual could not be recovered¹⁶⁷. In terms of their function and functionality, daggers were traditionally interpreted as weapons, even though the characteristics of some pieces make them completely ineffective from this perspective¹⁶⁸. Another hypothesis is that they were used during animal sacrifices or to slice meat¹⁶⁹. It was also stated that they could have changed their function over time, given the variability of contexts in which they occur¹⁷⁰.

As can be seen from the analysis of both the Early Bronze Age shaft-hole axes and daggers, the category of weapons is under-represented in Yamnaya barrow burials at the Lower Danube, an aspect already noticed in the scholarly literature¹⁷¹. However, although rare, there are some features that should be mentioned.

An isolated finding was the flanged axe discovered in Gr.4/Ploiești Triaj I. It was a double burial and it was considered the primary grave of the mound, along with the *Randleistenbeil* type axe the deceased were accompanied by tubular copper pearls and a necklace made of bone pieces, placed between the two individuals. A small lump of ochre was found near the tibia of the deceased that also had the flanged axe¹⁷².

In the typology of flanged axes, the item from Ploieşti was included into the Şincai variant along with others from Araci, Sighişoara, Valea lui Mihai, Banat, Târpeşti, Hlăpeşti, Grădina, Moldova Veche, Bretea Mureşană, Vârghiş, Sânzieni¹⁷³. The piece from Ploieşti-Triaj was the only one found in a burial context, all the others come from fortuitous findings or settlements¹⁷⁴. South of the Danube analogies in mound burials were unearthed in Bulgaria in M3/Gr.8 from Goran Slatina¹⁷⁵.

On the current territory of Romania there is one single dagger found in a bronze age mound, in Mihai Viteazu. The dagger was found close to a destroyed skeleton¹⁷⁶. South of the Danube there is an analogy in the kurgan from Lovech¹⁷⁷ and possibly Yambol¹⁷⁸. In Bulgaria it was

¹⁶⁹ Skak-Nielsen, 2009, p. 352.

¹⁶⁷ Popescu, Băjenaru 2012, 402.

¹⁶⁸ Băjenaru, 2010b, 157.

¹⁷⁰ Harding, 2006, 506; Băjenaru, 2010b, 157.

¹⁷¹ Motzoi-Chicideanu, 2011, 277.

¹⁷² Zirra, 1960, 103; Comşa, 1976, 43; Comşa, 1998, 22; Frînculeasa *et alii* 2013, 29; Frînculeasa *et alii* 2014, 200.

¹⁷³ Vulpe, 1975, 66-67; Frînculeasa *et alii* 2014, 201; Băjenaru, 2014, 237.

¹⁷⁴ Frînculeasa *et alii* 2014, 201.

¹⁷⁵ Panayotov, 1989, 140-141.

¹⁷⁶ Irimia, 1981, 347.

¹⁷⁷ Băjenaru, 2013, 125, no. 334.

¹⁷⁸ Băjenaru, 2014, 244; Băjenaru, 2013, 252.

also excavated one of the most lavishly equipped burials from the western area, in Kamen. The main burial of the mound contained four individuals accompanied by two flat axes, two tanged daggers, two silver spiral hair rings and another one made of copper¹⁷⁹. Another grave containing a dagger was unearthed in Hungary in the mound from Sárretudvari-Örhalom/Gr.7 having as grave goods along the dagger, a shaft-hole axe and two hair rings, one made of silver and one of gold¹⁸⁰.

Two other pieces considered weapons found in Yamnaya burials are the axes with cylindrical butt from Fălciu (Vaslui County) and from Cuconeștii Vechi in the Republic of Moldavia. In Fălciu the burials were destroyed, Gr. 1 was the burial that contained a copper axe, a flint axe, a stone axe, two flint spearheads, flint blades and chips¹⁸¹. There are no information regarding the position and orientation of the deceased, however the presence of ochre could be noticed.

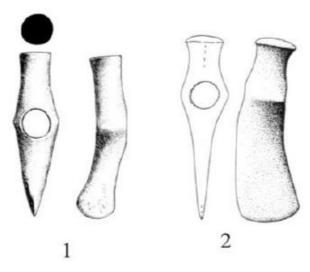


Fig. 14 – Axes with cylindrical butt : 1. Fălciu, 2. Cuconeștii Vechi (following Vasile, Ciubotaru 2015, fig. 2)

Given that the area had already been excavated before archaeological observations could be performed, it is not clear whether the graves were part of a mound or not¹⁸². Analogies to the copper axe with arched body, cylindrical butt, which closely resembles stone battle

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¹⁷⁹ Băjenaru, 2013, 109, no. CXXXV.

¹⁸⁰ Dani, Nepper 2006, 34, fig. 5.

¹⁸¹ Popușoi, 1987-1989, 15.

¹⁸² Popusoi, 1987-1989, 17.

hammer-axes, are to be found in the Şiria type¹⁸³, however the axe was assigned to the Corneşti type, the Fălciu variant, along with another piece from Cosmeşti¹⁸⁴. One more item comes from Argeş, but for this axe, as well as for the one from Cosmeşti there are no information regarding the discovery context¹⁸⁵.

Fot the axe from Fălciu the author stated that it had yellow stains, indicating that it might have been covered with a thin layer of yellow metal¹⁸⁶. It was dated to the late IVth or the early IIIrd millennium BC¹⁸⁷. Both axes from Fălciu and Cuconeștii Vechi have analogies in grave 5 from Klady, these findings being considered chronologically closed¹⁸⁸. This could suggest that in the particular case of these artefacts the initial meaning was preserved¹⁸⁹.

Final Remarks

The second half of the IVth millennium BC was the beginning of significant changes in the Carpathian-Danube Area, with consequences for the whole IIIrd millennium BC, including new burial customs and innovative technologies, most of them with eastern steppe origins. Thus, burial barrows appeared in the landscape, raised over rectangular gravepits, sometimes with wood or stone structures, containing individuals lying in contracted or supine position with flexed legs, stained with ochre, rarely accompanied by grave goods like pottery, ornaments or weapons made of stone, and more rarely of metal. Among the metallurgical innovations, items such as silver hair rings, copper shafthole axes and tanged daggers are considered specific to the new era, and their occurence at the Lower Danube was connected to the so-called Yamnaya populations of the north-Pontic steppes 190. This period coincided with the first phase of the formation of the circumpontic metallurgical province, as defined by Chernych, a phase in which the Carpatho-Danubian area was not included, as it was still part of the desintegrating Carpatho-Balcanic province, only during the IIIrd

¹⁸³ Popușoi, 1987-1989, 18.

¹⁸⁴ Mares, 2002, 107.

¹⁸⁵ Diaconu, Ciubotaru 2015, 157-158.

¹⁸⁶ Popușoi, 1987-1989, 16.

¹⁸⁷ Vulpe, 1997b, 273.

¹⁸⁸ Hansen, 2010, 304.

¹⁸⁹ Popescu, 2006, 446.

¹⁹⁰ Szeverényi, 2013, 666; Băjenaru, Popescu 2012, 369; Motzoi-Chicideanu, Olteanu 2000, 28; Băjenaru, Frînculeasa 2014, 14-15; Popescu, 2010, 172.

millennium BC being completely integrated within the circumpontic metallurgical province through the existence of production centres¹⁹¹, which had a major rol in spreading metallurgy to the west¹⁹². It was during this time period that local items were produced in south-eastern Europe, such as more developed types of shaft-hole axes or tanged daggers, as indicated by the existence of casting moulds¹⁹³.

However, at the end of the IVth millenium BC the area north of the Lower Danube was only adopting new technology, as a consequence of the mobility and exchange relations covering wide areas that characterised this time frame. Some of these objects were not just adopted along with their original meaning, but given a new one, being involved in other social practices as could be seen from their different discovery context. This was the case of shaft-hole axes, which in their origin area in northern Caucasus were generally used during burial rituals to create martial identities of the deceased, while in Central and Southeastern Europe most of the axes were placed in the ground as single items or more rarely in hoards¹⁹⁴, probably during ceremonies. Many of the interpretations regarding this type of practice had as a starting point the idea that metal items represented prestige goods, their foreign provenance and novelty giving them a special status and relating them to power¹⁹⁵. Either belonging to one individual or to a group, as it was supposed for hoards containing a large number of pieces, the deposition of metal items during special events was a different manner of obtaining, maintaining and expressing personal prestige and social status within the community¹⁹⁶, not connected with the display of these goods during burial rituals, a practice well known in the eastern area.

As regards tanged daggers, often associated with shaft-hole axes in burials in the northern Caucasus, they occur in the Carpathian-Danube area in various contexts, more often in settlements, only sometimes in burials or as isolated items, not associated with other types of artefacts that can be found in depositions¹⁹⁷. This variability of the discovery contexts of tanged dagger was seen as a consequence of the multiple

¹⁹¹ Chernych, 2008, 79.

¹⁹² Dani, 2013, 210.

¹⁹³ Băjenaru 2010b, 152; Băjenaru, Popescu 2012, 190.

¹⁹⁴ Băjenaru, 2010b, 154; Hansen, 2010, 305; Hansen, 2011, 143; Szeverenyi, 2013, 664, 667; Băjenaru, Frînculeasa, 2014, 14;.

¹⁹⁵ Fontijn, 2008a, 87; Szeverenyi, 2013, 667.

¹⁹⁶ Popescu, 2006, 445; Gori, 2014, 277, 282.

¹⁹⁷ Băjenaru, 2010, 156; Băjenaru, Popescu 2012, 399.

ways in which they were used, maybe changing their function along time¹⁹⁸.

When metal weapons did occur in barrow burials north of the Lower Danube they were not Baniabic or other type of shaft-hole axes attributed to the Early Bronze Age, but flanged axes (Gr. 4/Ploiești-Triaj I), or hammer-axes with cylindrical butt (Gr. 1/Fălciu), only in one case a tanged dagger in Mihai Viteazu. Unfortunately, all of these findings came from destroyed burials, thus our current knowledge regarding the presence of weapons in Yamnaya burials in this area, which are rare, as already noticed¹⁹⁹, is even more scarce due to lack of information regarding the stratigraphic positions of burials in mounds or the funerary ritual. Given the significant presence of burials equipped with weapons in Bulgaria and Hungary, it is possible that future research will provide a slightly different picture.

Ornaments such as copper torques, spectacle-shaped pendants, but mostly hair rings appeared în burials, and even though anthropological data are very scarce, they seem to be associated mainly with male individuals as was the case of the copper torque found in the main burial (Gr. 5) from Aricești IV, placed at the neck of an adult male aged between 35,2 and 38,4 years old along with a silver hair ring²⁰⁰, or the cases of hair rings from Aricești I, Plenița, Rahman I and Vânători, as shown in Table 1. The spactacle-shaped pendant from Ploiești-Triaj I/Gr.3 was placed in the grave of a child, thus no information regarding the sex of the deceased is available. These metal items were very rare during this time frame, the copper torque and spectacle-shaped pendant are unique discoveries up to this moment, while silver hair rings, although more common, occur only in approximately 5% of the total number of investigated burials and were considered among the earliest silver object that reached the Lower Danube area²⁰¹. It seems these were prestige items, destined only for a small number of individuals, probably part of a specific costume and way of looking portrayed by mourners in order to create a certain identity of the deceased²⁰².

These observations regarding the burial ritual might be refined along with a better understanding of the chronology of Yamnaya burials in this area, meaning that once identified certain stages in the

¹⁹⁸ Harding, 2006, 506; Băjenaru, 2010, 157.

¹⁹⁹ Motzoi-Chicideanu, 2011, 277.

²⁰⁰ Frînculeasa *et alii* 2014, 196.

²⁰¹ Popescu, 2010, 165-166.

²⁰² Fontijn, 2008a, 90.

development of this phenomenon that covered almost a millennium, this could lead scholars to distinguish certain peculiarities of these different phases. However, the absolute chronology of mound burials in Romania is the subject of very recent concerns²⁰³, which renders impossible a more detailed analysis for the moment.

Finally, to answer the questios that were the starting point of this analysis, in the area north of the Lower Danube starting from the last third of the IVth millenium BC up to the second half of the IIIrd millenium BC, the image reflected in burials is quite different from the one pictured in metal depositions, there seemed to exist a pattern of selecting or excluding certain objects for and from different practices. Ornaments appearedin graves as a part of the deceased's costume, while shaft-hole axes were deposited mainly as single item hoards, clearly avoiding funerary contexts. This is even more intriguing if we take into account that shaft-hole axes, but made of stone are to be found in several mounds, of which Grave 2 from Ploieşti III²⁰⁴ and Grave 32 from mound 2 investigated in Ciulniţa are only two examples²⁰⁵.

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²⁰³ Frînculeasa *et alii* 2013; Frînculeasa *et alii* 2014; Ailincăi *et alii* 2014; Frînculeasa *et alii* 2015a.

²⁰⁴ Frînculeasa et alii 2015a, 234.

²⁰⁵ Marinescu-Bâlcu *et alii* 199521-23.

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Annexes

ANNEX 1 - List of the hair rings found in Romania:

- A. Copper
- 1. Glăvăneștii-Vechi
- a. mound I/1949 Gr.10, one spiral hair ring (Comşa 1987, 372, fig. 11/2, 12/3)
- b.mound I/1949 Gr.12, one hair ring with distanced ends (Comşa 1987, 374, fig. 11/1)
- c. mound II/1949 Gr.3, 2 spiral hair rings (Comșa 1989a, 93, fig. 8/1-2);
 - 2. Gurbănești
- a. mound I Gr.2, one round hair ring with distanced ends (Rosetti 1959, 793, fig. 15/3)
- b. movila II Gr.7, one spiral hair ring, the material is not mentioned (Rosetti 1959, 798, fig. 15/1)
 - c. movila II Gr.9, one spiral hair ring (Rosetti 1959, 800)
 - d. movila II Gr.12, one spiral hair ring (Rosetti 1959, 801, 15/2);
- 3. Năeni 1 hair ring of the Zimnicea type (Vulpe, Drâmbocianu 1981, 2, 176, fig. 6, 8/4)
 - 4. Sultana
- a. Movila Mare Gr.1, 2 spiral hair rings (Şerbănescu, Comșa 2012, 24)
- b. Movila Mare Gr.5, 2 spiral hair rings (Şerbănescu, Comșa 2012, 25)
 - B. Silver
 - 1. Aricești I
 - a. Gr.1 1 spiral hair ring (Frînculeasa 2007, 185, pl. 3/1)
- b. Gr.3 2 Zimnicea type hair rings (Frînculeasa 2007, 185, pl. 3/3, pl. 4/4,5)
 - 2. Aricești IV
- a. Gr.4A 5 spiral hair rings (Frînculeasa $\it et~alii,~2014,~192,~pl.~6/4)$
- b. Gr.5B -1 spiral hair ring (Frînculeasa *et alii*, 2014, 192, pl. 9/3, pl 10/3)
 - 3. Broșteni 1 spiral hair ring (Zaharia, 1959, 113, fig. 4/1,)
 - 4. Celei 2 spiral hair rings (Nica, 1982, 24, fig. 6/1-4)

- 5. Chilia Veche Mound I/Gr.89 one spiral hair ring (Vasiliu, 1995a, 54, pl. IV/4, Pl. VI/3)
- 6. Enisala Mound 4/Movila săpată, 2 circular hair rings (Vasiliu, 2003-2004, 124)
- 7. Mihai Bravu Mound 1/Gr.3, one spiral hair ring (Vasiliu 1995b, 142, pl. VI/4)
 - 8. Perişor one spiral hair ring (Nestor, 1933, 67)
 - 9. Plenita
- a. Măgura Mare Gr.1 one spiral hair ring (Nicolăescu-Plopșor, 1923, 84)
- b. Măgura din via lui Ion Bârțan one spiral hair ring (Nicolăescu-Plopșor, 1923, 85)
 - c. Mound 2 Gr.1, 2 hair rings (Berciu, 1952, 164-165, fig 21)
 - 10. Ploiești-Triaj
 - a. Ploiești-Triaj I Gr.3, one spiral hair ring (Nestor, 1944, p. 30)
- b. Ploiești-Triaj II Gr.15 one spiral hair ring (Comșa, 1989b, p. 183)
- c. Ploiești-Triaj II Gr.20 one spiral hair ring (Comșa, 1989b, p. 185)
- 10. Rahman I Gr.2 one spiral hair ring (Ailincai *et alii*, 2014, 143, fig. 5)
 - 11. Rahman II Gr.3, 2 spiral hair rings (Micu *et alii*, 2014, 188)
- 10. Stelnica one Zimnicea type hair ring (Motzoi-Chicideanu, Olteanu 2000,56, nr. 23)
- 11. Silvașu de Sus one hair ring in a mound (Luca *et alii*, 2011, 122)
- 11. Văleni-Dâmbovița one spiral hair ring (Motzoi-Chicideanu, Olteanu 2000, 57, nr. 29)
 - 12. Vânători one spiral hair ring (Brudiu, 1985, 239, fig. 3/2)
- 13. Verbița Gr.1, one round hair ring (Berciu, Roman, 1984, 15-16, fig. 1/3)
- 14. Zebil two Zimnicea type hair rings (Vasiliu, 2007, 123, fig. 4/4-5)
 - 15. Zimnicea
 - a. Gr.4 one spiral hair ring (Alexandrescu, 1974, pl. 8/6)
- b. Gr.9 five Zimnicea type hair rings (Alexandrescu, 1974, pl. 8/10-14)
 - c. Gr.11 two spiral hair rings (Alexandrescu, 1974, pl. 9/1-2)
 - d. Gr.16 two spiral hair rings (Alexandrescu, 1974, pl. 8/3,4)
 - e. Gr.20 two spiral hair rings (Alexandrescu, 1974, pl. 8/1,2)

- f. Gr.24 two spiral hair rings (Alexandrescu, 1974, pl. 8/5,7) C. Gold
- 1. Aricești I Gr.1, one spiral hair ring with gold sheet (Frînculeasa, 2007, 185, pl. 3/1)
- 2. Ampoiţa Mound 3/Gr. 1, two Leukas type hair ring (Ciugudean, 1996, 33, fig. 31/12)
 - 3. Braşov one spiral hair ring (Zaharia, 1959, p. 114, fig. 12/9)
- 4. Jurilovca one Leukas type hair ring without archaeological context (Vasiliu, 2007, 122-123, fig. 4/2)
- 5. Vlădești Mound 343/Gr.2, one spiral hair ring (Brudiu, 2003, 69, fig 32/4)

ANNEX 2 -List of the Baniabic axes from România:

- 1. Cheile Turului (Vulpe 1970, 27, nr. 34, Taf. 3.34)
- 2. Coltești (Vulpe 1970, 27, no. 37, Taf. 3.37)
- 3. Cubleşul Someşan (Vulpe 1970, 27,no. 35, Taf. 3.35)
- 4. Dănceu (Crăciunescu 1998, 146)
- 5. Izbucul Topliței (Halasi, Emodi, 1985, 232, Fig. 5a)
- 6. Izvoarele (Irimia 1998, 37, 39, fig. 2-3)
- 7. Mahmudia (Vasiliu 1996, 27-30, Irimia 1998, 39)
- 8. Ploiești (Băjenaru, Frînculeasa 2014, 16, fig. 1)
- 9. Rădeni (Dumitroaia 1985, 465-466, fig. 4a, Burtănescu 2002b, 172, Pl. 1.1)
 - 10. Rotunda (Burtănescu 2002b, 172, pl. 1.2)
 - 11. Sebeş (Vulpe 1970, 27, nr. 36)
 - 12. Toplița (Vulpe 1970, 27,nr. 33, taf. 3.33)
- 13. Vâlcele/Baniabic (Roska 1933, Vulpe 1970, 27, nr. 1-32, taf. 1, taf 2, taf 3. 25-32)

ANNEX 3- List of the Dumbrăvioara axes from România:

- 1. Blănoi (Petre-Govora 1983, 288-289, Fig. 2. 1)
- 2. Bolboşi (Vulpe 1970, p. 31, nr. 55, taf 4. 55)
- 3. Brădetu (Vulpe 1988, p. 210, fig. 1. 4)
- 4. Căprioara (Vulpe 1970, p. 31, nr. 49, taf. 4. 49)
- 5. Cornești (Vulpe 1970,p. 31, nr. 50, taf. 4. 50)
- 6. Crețeni (Vulpe 1970, p. 31, nr. 56, taf. 4. 56)
- 7. Dobriceni (Vulpe 1970, p. 31, nr. 48, taf. 4. 48)
- 8. Dumbrăvioara (Vulpe 1970, p. 31, nr. 48, taf. 4. 48)

- 9. Găujani, Boișoara-Vâlcea (Petre 1976, 262-264, fig. 1. 2)
- 10. Jimbor (Vulpe 1970, p. 31, nr. 53, taf 4, 53)
- 11. Leliceni (Roman et alii 1992, taf. 78, taf. 79. 2, 5-8)
- 12. Mura Mare (Vulpe 1970, p. 31, nr. 54, taf. 4. 54)
- 13. Ojdula (Vulpe 1970, p. 31, nr. 51, taf. 4. 51)
- 14. Pietreni (Vulpe 1970, p. 31, nr. 58, taf. 4. 58)
- 15. Ploiești (Vulpe 1988, p. 210, fig. 1. 5)
- 16. Sfântu Gheorghe (Vulpe 1970, p. 31, nr. 52, taf. 4. 52)
- 17. Sîntimbru (Aldea, Ciugudean 1989, 71, pl. I. 2)
- 18. Răcătău (Burtănescu 2002b, 187-188, Pl. II. 7)

ANNEX 4 - List of the tanged daggers from Romania:

- 1. Băile Herculane (Roman 1976, 17, pl. 8/26)
- 2. Cernavoda (Berciu 1965, 64, fig 11/4)
- 3. Crăciunel (Székely 1955, 860, fig. 9/4, Székely 1997, 67, pl.

91/7)

- 4. Glăvăneștii Vechi (Junghanset alii 1968, 238)
- 5. Glina (Nestor 1960, 91, fig. 17/5)
- 6. Grădiștea (Culică 1975, 521, fig. 2/1)
- 7. Mihai Viteazu (Irimia 1981, 347, fig 2/2)
- 8. Odaia Turcului (Băjenaru 2006, 133, fig1/1)
- 9. Pecica (Mareş 2002, 276, pl. 55/5)
- 10. Sfântu Gheorghe (Székely 1970, 205, fig. 2/1)
- 11. Târpești (Marinescu-Bâlcu 1981, 104, fig. 215/6)
- 12. Vărăști (Băjenaru, Popescu 2012, 379 cu bibliografia)