

## VERSATILE ARTEFACTS: SOME REMARKS CONCERNING A FEW EARLY BRONZE AGE METAL BLADES FROM THE LOWER DANUBE

Anca-Diana POPESCU<sup>a</sup>, Alin FRÎNCULEASA<sup>b</sup>

<sup>a</sup> "Vasile Pârvan" Institute of Archaeology of the Romanian Academy, Bucharest; email: ancadiana\_popescu@yahoo.com

<sup>b</sup> Prahova County Museum of History and Archaeology; email: alinfranculeasa@yahoo.com

**Keywords:** Early Bronze Age, Lower Danube, dagger, halberd, vessels with asymmetrical handles, cist graves

**Abstract:** Among the Bronze Age metal objects, a few copper and bronze blades stand apart mainly due to their large size and well defined midribs. Most of them were found in Muntenia, in settlement areas or in graves. They are very similar in aspect and size to the West and Central European halberds. Were they really used as halberds or their functionality was different in the Lower Danube area? The main objectives of this study were to examine the contexts where these blades appeared and the items they were associated with, as well as to identify similar pieces from other cultural areas, their dating and possible functions.

**Cuvinte-cheie:** epoca timpurie a bronzului, Dunărea Inferioară, pumnal, halebardă, vase cu torți asimetrice, morminte în cistă

**Rezumat:** Dintre piesele de metal ale epocii bronzului de la Dunărea de Jos se remarcă unele lame de cupru sau bronz, de dimensiuni considerabile, cu nervură mediană pronunțată. Cele mai multe dintre ele au fost descoperite în Muntenia, în zona unor așezări sau în morminte. Ca aspect și dimensiuni, sunt foarte asemănătoare cu halebardele din Europa centrală și de vest. Au fost ele utilizate ca halebarde sau funcționalitatea lor era una diferită la Dunărea de Jos? În studiul de față ne-am propus să examinăm contextele în care apar aceste lame și piesele cu care se asociază, formele similare identificate în alte spații culturale, datarea și posibila lor funcție.

A number of triangular blades with two cutting edges and a length shorter than 35 cm constitute a well represented group of Early and Middle Bronze Age metal finds for the Lower Danube area. Their hafting-plate was rounded, triangular or trapeze shaped, and fixed to a handle made of organic material by rivets. While in most cases such finds were published as daggers, for a few the idea of halberd functionality was advanced. Lower Danube Bronze Age riveted daggers were never the subject of synthesis studies. At a quick appraisal, the same observation as in the case of the tanged daggers imposes itself: most of such Early and Middle Bronze Age finds originated in settlements<sup>1</sup>. Similar to the tanged daggers, the riveted ones were also smaller in size. That, and their predominant occurrence within settlements, might point towards a predominantly domestic function<sup>2</sup>. Nevertheless, among the Bronze Age implements published as riveted daggers, some were larger, had a prominent midrib and occurred in Muntenia, mostly in burials or settlements (Fig. 1). They resemble very well the Western and Central European halberds. The present study will examine their archaeological contexts and the items they were associated with, as well as similarly-shaped implements originating in other cultural areas, their dating and possible functionality.

### THE ARTEFACTS AND THEIR CONTEXTS OF DISCOVERY

Apa Sărată (village nowadays incorporated to Câmpulung city), Argeș County

In 1960, while building a stadium in Apa Sărată (Pescăreasa) village, a cist inhumation burial was discovered<sup>3</sup>. The archaeological excavations conducted by D. V. Rosetti and S. Morintz led to the discovery of a dagger blade associated to that burial (named grave no. 1) and to the identification of a second stone cist burial containing calcined human bones<sup>4</sup> and fragments of two ceramic vessels.

According to the field notes, no other items were present in grave no. 1, other than the dagger. However, after having consulted the entire site documentation, C. Schuster mentioned also a long carinated necked jug with asymmetrical handles. The surface of the vessel was covered by a black burnished slip and its base was missing<sup>5</sup> (Fig. 4/4).

The blade was triangular, with corroded cutting-edges (Fig. 1/3, 7/a-c). The piece had a prominent midrib, rectangular section, and was flattened towards the butt. The hilt-plate had two rivet holes, one of them still holding the rivet; a third rivet hole seems to have been placed slightly

<sup>1</sup> Băjenaru, Popescu 2012, p. 399, 411–412, note 25.

<sup>2</sup> Băjenaru 2010, p. 157; Băjenaru, Popescu 2012, p. 403–407.

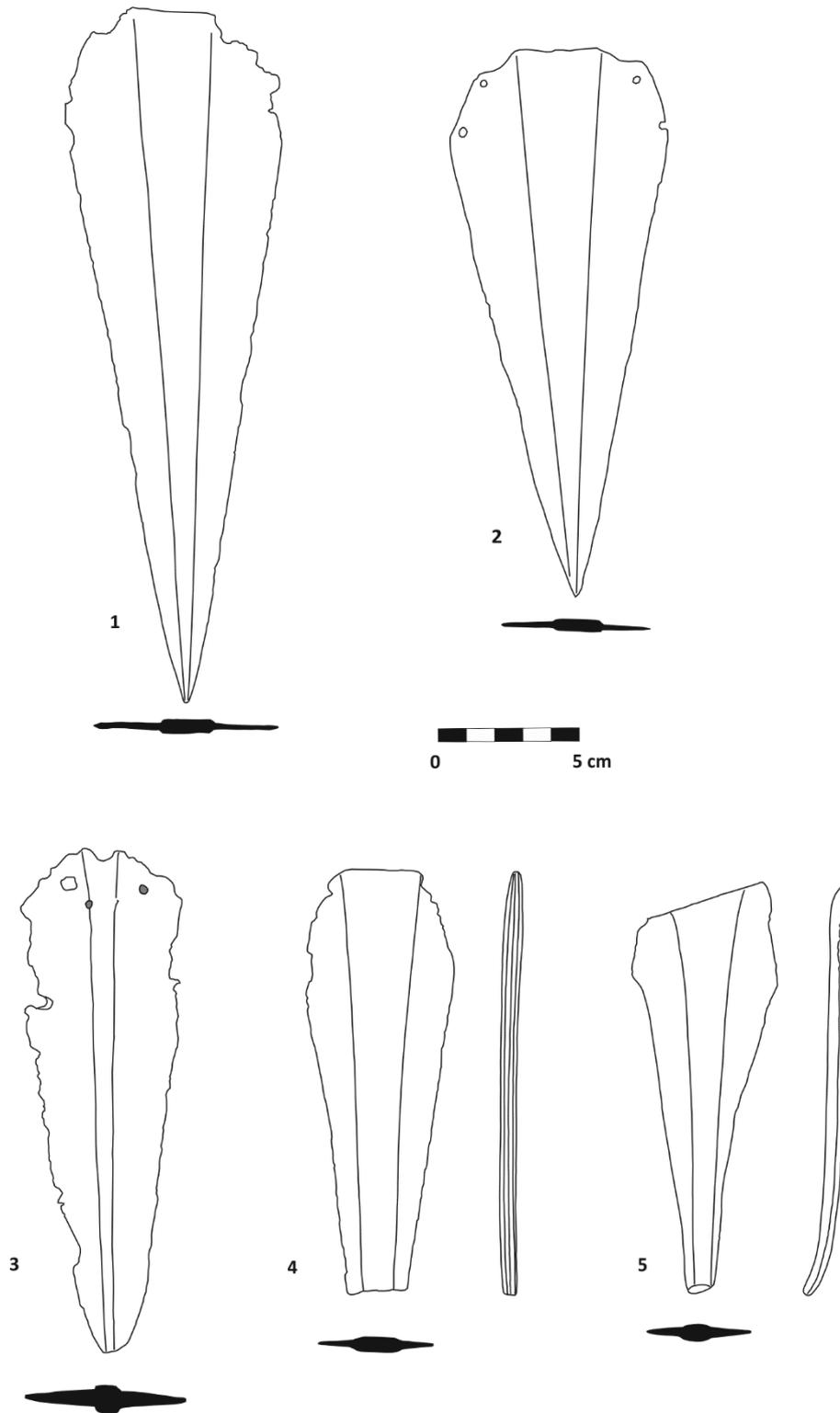
<sup>3</sup> Schuster 1997, p. 126, 169–170, 217–225, with addenda 1 and 2.

<sup>4</sup> The calcined bones were allegedly those of a child, but no further details were given, see Schuster 1997, p. 218.

<sup>5</sup> Schuster 1997, p. 128, fig. 79/1.

above the first two, right at the end of the blade. The surface of the artefact exhibited fine longitudinal striations. Nowadays it is copper-red in colour, with occasional small

greenish spots. The blade has a length of 18.5 cm, a maximum width of 5.8 cm and a weight of 162 g. It is part of the Câmpulung museum collections, inventory no. 50<sup>6</sup>.



**Fig. 1.** Stout blades with pronounced midrib found in Romania: 1. Homorâciu; 2. Crivăț; 3. Apa Sărată; 4. Rusciori; 5. "Unknown provenance" (3. after the drawing of R. Băjenaru; 4–5. after the drawings of the SAM team).

<sup>6</sup> Many thanks to our colleague Radu Băjenaru ("Vasile Pârvan" Institute of Archaeology) for allowing us full access to his documentation

regarding the dagger from Apa Sărată (drawing, photographs, information of size and weight).

**Brezoaia** village, Dâmbovița County

A metal blade was recovered during field surveys on a slightly elevated area of the Dâmbovița meadows, in the interfluvial area of the Ciorogârla, Ilfov and Dâmbovița rivers, where the existence of a Glina pottery settlement had been postulated<sup>7</sup>. The blade (covered by green patina) is robust, with four rivet holes (three rivets still in place); the midrib is also robust, rectangular in section, broader towards the hafting-plate. The item has a length of 23.5 cm, a maximum width of 8.15 cm, and a weight of 268.97 g. A close similarity to the piece found at Crivăț is obvious. It is part of the collections of the National History Museum of Romania.

**Crivăț** village, Budești town, Călărași County

In 1961, during agricultural works at *La islaz*, a location on the northern slope of a promontory, a dagger blade was accidentally found<sup>8</sup>. Two flat axes with raised edges and a shaft-hole axe (the Veselinovo type) were found on the slopes of the same promontory<sup>9</sup>. Subsequent archaeological excavations, taking place in 1965, led to the identification of an archaeological layer of variable thickness (between 0.10 m and 0.60 m), with three observable stratigraphic horizons. The pottery from these levels was assigned to the Glina culture. Several pottery sherds belonging to the Late Bronze Age (the Tei culture, phases IV and V) and Iron Age were found in the topsoil.

The blade is triangular in shape, with a slightly asymmetrical aspect, sharp cutting-edges and a prominent V-shaped midrib (Fig. 1/2; 6/a-b). On the edge of the hafting-plate there are four rivet holes with a diameter of approximately 0.3–0.35 cm. The artefact has a length of 19.8 cm, a maximum width of 7.7 cm, and a weight of 205.248 g. The blade was cleaned of patina several years ago, and the compositional analysis made on its surface indicated copper (98.88%) with a small content of arsenic (0.3%), lead and silver<sup>10</sup>. Nowadays, the piece is part of the collection of the National History Museum of Romania, inventory number 13914.

**Homorâciu** village, Prahova County

At the location known as *Hotarul cu Malul Vânăț*, on the western part of the high terrace of the Teleajen River, at *Cariera de humă*, several cist graves were found<sup>11</sup>. According to the information published by Victor Teodorescu, “a grave contained a bronze dagger with a triangular blade (and a broad midrib), probably hafted as a halberd (judging by its position in the grave, with the point oriented towards the skull of the dead) and a jug of brown

clay, with a long cylindrical neck, a short carinated body; its handle was attached to the shoulder of the pot”<sup>12</sup>.

The data published by Teodorescu are not fully consistent with his own field notes, made a short time after the discovery of the grave containing the dagger/halberd (Figs. 2 and 3).

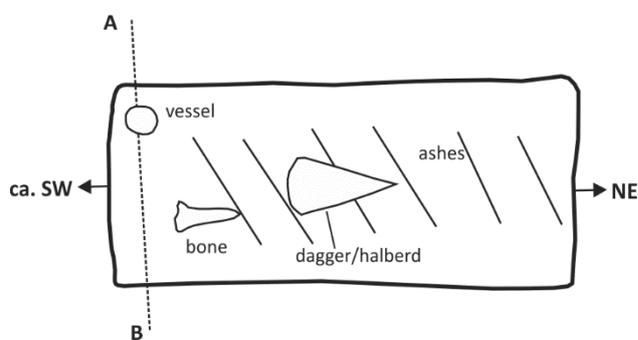


Fig. 2. The sketch of the cist grave from Homorâciu, Prahova County (after the drawing of V. Teodorescu).

According to the data in V. Teodorescu’ *Field survey notes – Notebook C* (kept nowadays in the archives of the Prahova County History and Archaeology Museum), the grave was located approximately 1.5 km east of the Local Council building. “On the 18<sup>th</sup> of April 1963 the bulldozer worker Popa N. Gheorghe excavating at ‘Cariera de humă – Homorâciu’ discovered a cist grave.

The grave was oriented (very) approximately NE-SW, and it consisted of four lateral stone slabs (two long and two short) and a cover one. It was found at a depth of about 1.50–1.60 m from the present day surface. The feature was dug in a layer of yellow sandy soil, at about 0.25 m above the base of the sediment.

According to the discoverer, the pieces were lying inside the grave as follows (see the sketch of the grave in Fig. 2): in the centre of the cist, the dagger, pointing towards the NE; in the southern corner, the jug, upright and empty (with no soil in it) (the underlining belongs to V. T. ); on the base of the feature (? illegible) of the cist there were (towards the centre – along- ...illegible) traces of ashes, like a yellow spot ... (illegible) grey, ca. 2 mm thick; towards the SW part of the cist a bone fragment was discovered, ca. 14–15 cm in length. The fragment was parallel to the length of the cist. The bone was ca. 2 cm in diameter, slightly thicker towards one end. Under the bone the soil had the same colour as the bone.

<sup>7</sup> Schuster 1997, p. 140, 171; Băjenaru 2013, p. 35.

<sup>8</sup> Berciu 1964, p. 269–270; Berciu 1966, p. 529–535; Schuster 1997, p. 190–191.

<sup>9</sup> Berciu 1964, p. 269; Șerbănescu, Trohani 1975, p. 531; Vulpe 1970, p. 35–36; Vulpe 1975, p. 64; Băjenaru 2013, p. 63–64.

<sup>10</sup> Our special thanks go to Ernest Oberländer-Târnoaveanu, director of the National History Museum of Romania, who allowed us to study the

blade from Crivăț. The analysis by the X-ray fluorescence method was performed by Gheorghe Niculescu (National History Museum of Romania), and we want to thank him again.

<sup>11</sup> Teodorescu 1996, p. 240; Frînculeasa 2005, p. 72–76.

<sup>12</sup> Teodorescu 1996, p. 240, in Romanian.

The long lateral stone slabs of the cist were buried ca. 10 cm deeper than the short ones. The mouth of the jug was 15–20 cm below the cover slab (perhaps slightly more), and ca. 10 cm away from the walls of the cist, touching one of the long sides" (translated from Romanian).

Considering the field notes more credible than the published data (since the notes were made shortly after the discovery of the grave, and in accordance to the data provided by the discoverer directly), some conclusions can be drawn. First, the grave was discovered in April 1963 and not in 1967. The published text leaves the impression that several human bones were found in the grave, since it was stated that the triangular dagger/halberd was pointing towards the skull of the dead, a statement probably based only on Teodorescu's assumption regarding the possible position of the skeleton in the grave, postulated on the location of the only existing bone. However, from our point of view, it is not even certain that the burial was an inhumation; the only bone found, with a length of 14–15 cm, could have been an animal bone as no anthropological study is available. Moreover, the field notes talk about traces of ashes

located in the centre of the cist, thus suggesting a possible cremation. Also, we cannot exclude the possibility of bi-ritualism, as the cist might have contained both cremated and inhumed human remains. In conclusion, the burial ritual employed in this case is uncertain, and the only secure information we have regards the presence of a jug and a metal blade (dagger or halberd) in the grave.

The blade is triangular, with sharp cutting-edges and a pronounced V-shaped midrib. The rounded butt is damaged, and if the rivet holes ever existed, they were not preserved (Fig. 1/1; 5/a-e). The artefact is slightly asymmetrical, but this might be only an impression given by the damaging of the hilt-plate. The length of the blade is 25.5 cm, the maximum width is 7.7 cm and the weight is 258 g. The piece was cleaned of patina many years ago and cleaned again recently in order to examine the metal; its present colour is yellowish-red. The XRF analysis indicated bronze with 6.3% tin<sup>13</sup>.

The artefact is nowadays held in the collections of the Prahova County History and Archaeology Museum, inventory number 64–1086.

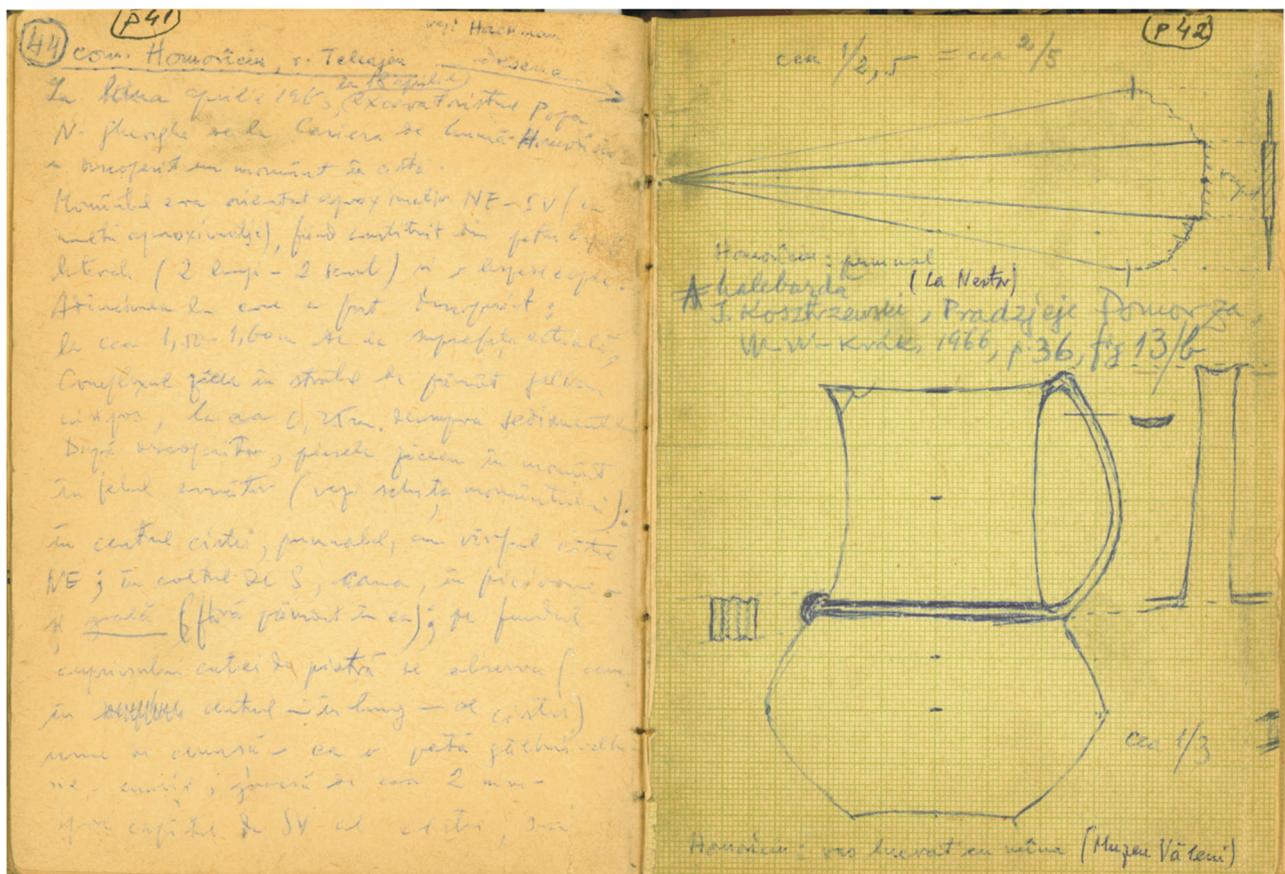
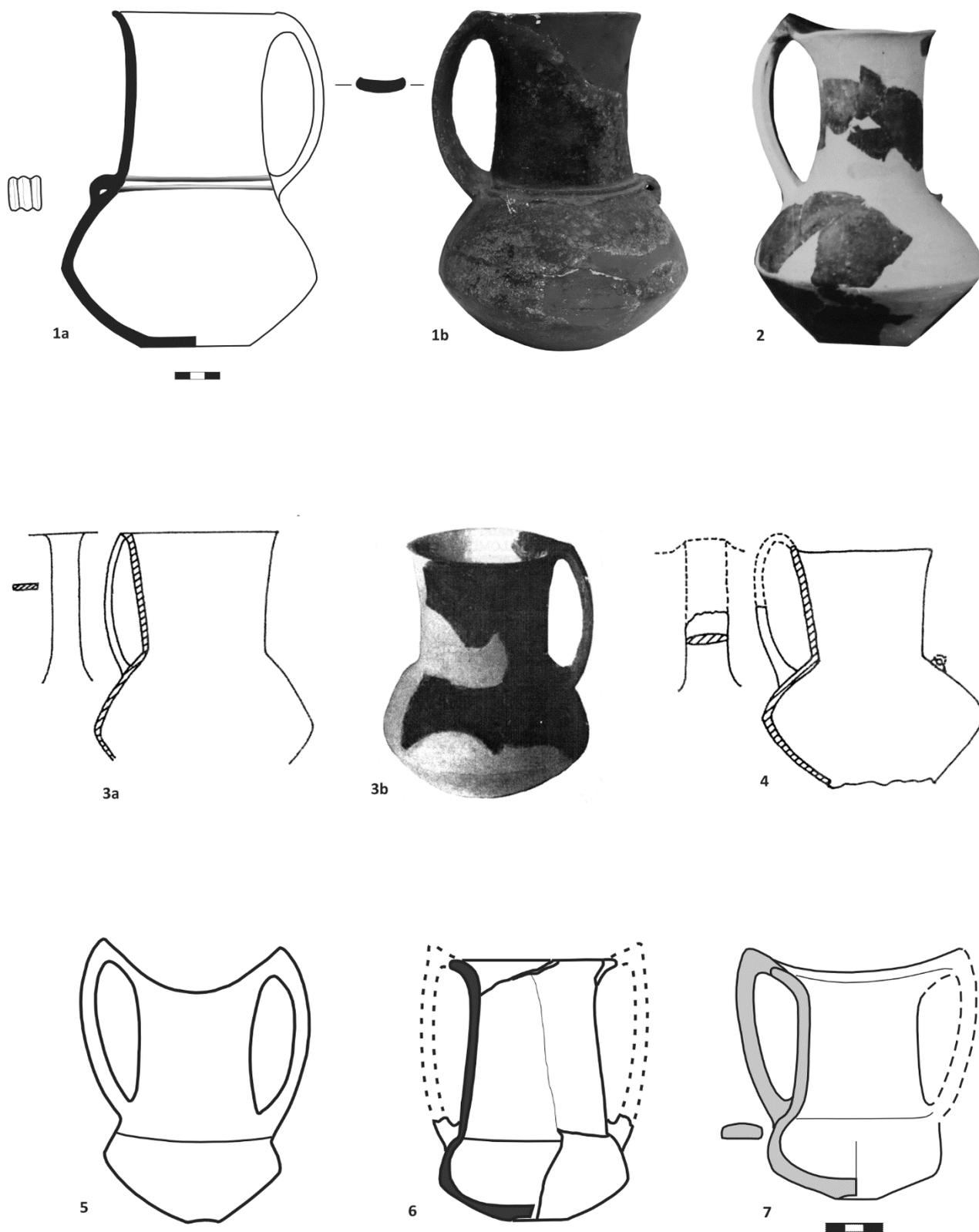


Fig. 3. Records about Homorâciu grave from the field notes of V. Teodorescu.

<sup>13</sup> Compositional analysis was performed by Bogdan Constantinescu from the "Horia Hulubei" Institute of Physics and Nuclear Engineering, whom we thank.



**Fig. 4.** Pots found in cist graves and settlement in northern Muntenia, dated to the second half of the 3<sup>rd</sup> millennium BC: 1. Homorâciu; 2. Vadu Săpat – Budureasca; 3. Malu cu Flori; 4. Apa Sărată; 5. Movila; 6. Sărata Monteoru; 7. Odaia Turcului (3–4. after Schuster 1997; 5–6. after Zaharia 1987; 7. after Băjenaru 2014; 2–6. no scale).



Fig. 5. The stout blade from Homorâciu, with details of the hilt marks (photos: O. Dietrich).

#### Malu cu Flori village, Dâmbovița County

At the location named *La Pârlitură*, in Ionel Blidaru's orchard, a "green dagger" of a triangular shape was found. Nowadays lost, it was considered to be one of the grave goods from a stone cist inhumation burial. According to the information passed to S. Morintz and D. V. Rosetti in 1958 by the villagers, the dagger resembled the one from Apa Sărată. Two ceramic vessels were recovered from the same place (one was a jug with a handle – Fig. 4/3), and together with the above mentioned dagger they seemingly belonged to the cist burial. A fragment of a stone axe, with a rather unclear context was also mentioned<sup>14</sup>.

#### Rusciori village, Sibiu County

There is no information on either the exact location where the blade fragment was found, or its context of discovery. In fact, the only reference to the blade was made by S. Junghans *et alii*<sup>15</sup>. The publication mentions the Rusciori blade as being curated in the Brukenthal Museum, under the inventory number A 4683. However,

S. A. Luca *et alii*<sup>16</sup> made no reference to the dagger, mentioning only some potsherds (of unspecified age) found at the village outskirts, and also a bronze (socketed) axe, information quoted from earlier publications<sup>17</sup>.

The library of the "Vasile Pârvan" Institute of Archaeology in Bucharest (IAB) holds the (presumed) 1:1 scale drawings of the Romanian metal objects analysed during the *Studien zu den Anfängen der Metallurgie* (SAM) project. According to one of the drawings, the Rusciori blade was 15.6 cm in length, and had a maximum width of 5.25 cm. The hilt-plate was damaged, so the piece might have been broader in this area and longer; the rivet holes were not preserved. The tip of the artefact was broken. The prominent midrib was V-shaped, with seemingly sharp cutting-edges (Fig. 1/4). According to the spectral analysis performed during the SAM project, the blade was made of copper, containing 1.15% lead, 0.95% arsenic, 0.3% antimony, 0.18% silver, 0.004% nickel, 0.17% bismuth and traces of gold. The SAM team members considered the piece was a halberd.

<sup>14</sup> Schuster 1997, p. 126, 129, 195, 217–225, with addenda 1 and 2.

<sup>15</sup> Junghans *et alii* 1968, p. 250–251, number of analysis 8924, pl. 31/8924.

<sup>16</sup> Luca *et alii* 2003, cat. no. 195, p. 184.

<sup>17</sup> Martian 1920, 33; Roska 1942, 239, no. 56.

### Unknown location

According to the data in the previously mentioned SAM volume, the Severeanu collection in Bucharest holds a fragmentary blade of unknown provenance<sup>18</sup>. Nowadays, the collection belongs to the Bucharest Municipal Museum, but the fragmented blade analysed and drawn during the SAM project has not yet been identified among the museum items<sup>19</sup>.

In the SAM drawing, the fragmented blade had a length of 15.1 cm, and a maximum width of 5.2 cm (Fig. 1/5). The hafting-plate appeared to have been broken (or cut) at its end, and both cutting-edges were damaged; the tip of the artefact was missing. The V-shaped midrib was well defined. According to the spectral analysis, the piece was made of copper, with 0.04% tin, 0.05% lead, 0.14% arsenic, 0.05% silver, 0.13% nickel, 0.007% bismuth and traces of antimony. The SAM project team members did not exclude the possibility that the piece could have been a halberd.

### ANALOGIES AND DATING: EARLIER AND MORE RECENT INTERPRETATIONS

D. Berciu noted the resemblance between the Crivăț blade and the blades found in the cist graves in northern Muntenia excavated by D. V. Rosetti and S. Morintz. He also suggested that the Crivăț dagger resembles the daggers found in the Aegean (southern Greece, Cyclades) and even in the Anatolian area<sup>20</sup>. The similarities between the Crivăț blade and those found in the cist graves from northern Muntenia were also noted by R. Băjenaru<sup>21</sup>. C. Schuster suggested that the dagger found in the Glina layer at Braneț and the one found in the upper layer at Odaia Turcului resemble the Crivăț dagger despite the smaller sizes of the first two<sup>22</sup>.

According to S. Morintz, the daggers from Apa Sărată and Malu cu Flori “date from the Early Bronze Age, probably from Reinecke A1 phase, but not later than Reinecke A2”<sup>23</sup>. C. Schuster noted that the midribs of Apa Sărată and Malu cu Flori daggers were not as broad as the midrib of the Crivăț one. According to the same author, moulds for such daggers with prominent midribs were found in Transylvania at Leliceni and Fântânele, while the daggers of this type that occur at Early Bronze Age sites in Muntenia represent imports from the inner Carpathian area<sup>24</sup>.

A different opinion concerning the analogies among the daggers from cist graves in Muntenia (i.e., Apa Sărată and Malu cu Flori) was offered by I. Motzoi-Chicideanu and Gh. Olteanu. The two authors considered that the

dagger found in one of the barrow graves in the Late Tripolian cemetery from Usatovo (cemetery no. 1) would be the best analogy<sup>25</sup>.

When studying the funeral practices in the Middle Bronze Age in northern Bulgaria, T. Hristova mentioned the cremation grave discovered many years ago at Byala Slatina. The grave contained a triangular dagger and several pottery sherds<sup>26</sup>. The dagger (19.8 cm long) had a prominent midrib. Hristova observed similarities with the type V of the Minoan daggers (according to K. Branigan), with the piece from Martin Brod in Croatia and several pieces from Hungary (Piliny, Szőny, “Ungarn”, “Komitat Tolna”) and Slovakia (Vyškovce nad Ipľom), seen by T. Kovács as halberds<sup>27</sup>. Hristova also pointed out the resemblances between the blade from Byala Slatina and those from Crivăț, Apa Sărată and Malu cu Flori, with some differences concerning the shape of the midrib, which appeared to be narrower and rounder than the Bulgarian item. The author also considered that the Byala Slatina artefact dated to the Middle Bronze Age<sup>28</sup>. The spectral analysis showed that the dagger was made of bronze, containing also 9% tin, 0.5% lead, 0.5% arsenic, 0.2% nickel, 0.015% bismuth and other minor elements<sup>29</sup>.

As noted before, the midrib of the Apa Sărată dagger is not as broad at the hafting-plate as those from Homorâciu, Crivăț, Brezoaia, Rusciori and the one in the Severeanu collection, but it is equally prominent and with rectangular cross-section. Given the large size of the implements and also the shape of the midrib – elements that distinguish them from the rest of the riveted daggers of the Romanian Bronze Age – we consider that they form a homogenous group, mentioned from here on as the Crivăț group or type<sup>30</sup> (mainly to simplify the references to this category of blades). Moreover, the homogeneity of the group is further suggested by the archaeological contexts of their discovery. The Malu cu Flori item (today lost) probably belonged to the same type, considering its quoted similarity to the Apa Sărată one.

The archaeological literature also makes note of two other finds worth mentioning here, given their possible connection to the present subject. The first one was discovered over 100 years ago, at the end of the 19<sup>th</sup> century, at *Cetățenii din Deal – La Cruce* (nowadays Cetățeni, Argeș County) but it should be regarded cautiously. In an article published in 1975, D. V. Rosetti quoted an old reference to the discovery: “[...] a grave was found, skilfully built out of stone slabs that had been cut and put together like the walls of a coffin. It contained the

<sup>18</sup> Junghans *et alii* 1968, p. 246–247, analysis no. 8786.

<sup>19</sup> Many thanks to Tudor Soroceanu for kindly providing the information.

<sup>20</sup> Berciu 1964, p. 270, 274; Berciu 1966, p. 534. However, as can be seen from the book of Keith Branigan (1974, pl. 6), most of the daggers that could be considered similar to that of Crivăț (because of their larger sizes and pronounced midribs) were in Minoan Crete not in the Cyclades.

<sup>21</sup> Băjenaru 2010, p. 156; Băjenaru 2014, p. 244.

<sup>22</sup> Schuster 1997, p. 142.

<sup>23</sup> See Schuster 1997, p. 221.

<sup>24</sup> Schuster 1997, p. 142–143.

<sup>25</sup> Motzoi-Chicideanu, Olteanu 2000, p. 27.

<sup>26</sup> Hristova 2006, p. 1; Mikov 1933, p. 98.

<sup>27</sup> Hristova 2006, p. 1; Branigan 1974, p. 10, pl. 6; Kovács 1996.

<sup>28</sup> Hristova 2006, p. 1.

<sup>29</sup> Cernyh 1978, p. 234–235, 359, pl. 63/5, analysis no. 9186.

<sup>30</sup> Băjenaru 2014, p. 243.

earthly remains – the bones – of a well-built medieval knight. His horse was found buried nearby”. “The warrior’s tomb also contained a complete sword made of shiny metal...”<sup>31</sup>. We can thus infer that the grave described above belonged to the Bronze Age, and was a cist grave. Close to the deceased were animal remains<sup>32</sup> and, most likely, a metal dagger, probably of significant size as it was considered to be a “sword” by the people who provided the information. Unfortunately, we have no knowledge of what happened to the metal “sword”. It was said that it got to the local authorities, and was then lost. At a later date, also at Cetățenii din Deal, at *La Cruce* and *Cornul Malului* locations, several Bronze Age cist graves were uncovered, but none of them contained daggers as grave goods<sup>33</sup>.

The second discovery took place at *Gura Bărbulețului*, Dâmbovița County. According to the information received in 1973 by I. Motzoi-Chicideanu from the village priest, a cist grave was discovered on his property containing “a spearhead made of red gold and a sort of a pot”. Both artefacts and the cover slab are today lost<sup>34</sup>.

It is thus possible that both discoveries (Cetățenii din Deal and *Gura Bărbulețului*) may be part of the same category as those from Homorâciu, Apa Sărată and Malu cu Flori.

In what the fragmentary mould from Lelicieni<sup>35</sup>, Harghita County, is concerned, we do not exclude the possibility that it was made for casting blades with a prominent midrib, closer in shape to the piece from Rusciori (with a narrower blade when compared to others). However, we should take into consideration the fact that the preserved mould fragment is quite small, therefore any assumption made about this piece may be erroneous. It is nevertheless an important discovery, mainly because it belongs to the Jigodin group, and it is worth keeping it in mind.

We have no information regarding the archaeological context of the blade with a broad midrib found at Rusciori or the one indicated by the SAM team as being part of the Severeanu collection. The Crivăț blade was assigned to the Glina layer, despite the fact it was a chance find from the hill slope and not associated with any Glina pottery. Its dating is thus debatable but a possible attribution to the Glina horizon is suggested through the parallel with the Brezoaia blade, also recovered from a Glina settlement area. The Homorâciu blade was discovered in a cist grave together with a 22.9 cm-tall, long necked jug, having a short carinated body and asymmetrical handles (Fig. 4/1a-b). According to

C. Schuster, a similar pot was found inside the burial cist (grave no. 1) from Apa Sărată, together with a dagger<sup>36</sup> (Fig. 4/4). Fragments of two pots, out of which a vessel similar to the ones at Homorâciu and Apa Sărată, were recovered from the burial cist at Malu cu Flori<sup>37</sup> (Fig. 4/3a-b).

For S. Morintz, the best parallels to the jugs from Apa Sărată and Malu cu Flori were the vessels found in the barrow graves from Verbița (Romania) and Bela Crkva (Serbia). The pottery found in or nearby the cist graves in northern Muntenia could not be assigned “to the *Glina-Schneckenberg* culture, although certain similarities existed”, but, as the same author pointed out, it was almost identical to the pottery found in the Verbița graves<sup>38</sup>.

A different point of view on the subject was expressed by P. Roman, asserting that such groups of cist graves in northern Muntenia could have represented either a final phase of the Glina culture (this being the hypothesis seen as most likely), or the earliest phase of the Monteoru culture<sup>39</sup>. C. Schuster saw the cist burials in northern Muntenia as part of a horizon contemporary to the Odaia Turcului cultural aspect, and dated both discoveries between 2100 and 1900 BC<sup>40</sup>. According to I. Motzoi-Chicideanu and Gh. Olteanu, the pots found in the graves from Apa Sărată and Malu cu Flori resembled the pottery from Monteoru Ic4-1 and Ic4-2 phases. The same authors considered that the cist burials from Dâmbovița-Muscel region should not be seen as a mere cultural horizon, but as the expression of a long-lasting funerary trend, taking place between ca. 3000 and 2200 BC<sup>41</sup>.

At the Lower and Middle Danube, the vessel with asymmetrical handles lasted a long time, from the Eneolithic to the dawn of the Middle Bronze Age<sup>42</sup>. Such vessels were relatively well known during the Early Bronze Age in the Middle Danube valley, mainly in its southern part, but also in the middle Tisza basin<sup>43</sup>. A significant number of these vessels came from inhumation and cremation graves. The jugs with long and narrow necks, carinated bellies and asymmetrical strap handles from the graves at Homorâciu and Apa Sărată have good analogies among the (more slender) vessels with the same types of handles found in archaeological contexts attributed to the Belotić-Bela Crkva, Somogyvár-Vinkovci and Bell Beaker-Csepel groups<sup>44</sup>. A good example is the vessel with asymmetrical handles from the barrow grave at Priboj (Serbia)<sup>45</sup> or the one from grave 17 at Szigetszentmiklós – *Üdülősor* (Hungary)<sup>46</sup>. As it has already been observed, an

<sup>31</sup> Rosetti, 1975, p. 276, in Romanian; Panaitescu 1930, p. 20; Băjan 1930.

<sup>32</sup> It is unlikely that a complete horse was placed in the grave; furthermore, there is no certainty that the bones were indeed horse bones.

<sup>33</sup> Rosetti 1975, p. 275–282; Schuster 1997, p. 126, 187–188, 217–225.

<sup>34</sup> Motzoi-Chicideanu 2011, p. 109, 302, note 476.

<sup>35</sup> Roman *et alii* 1992, p. 158–159, pl. 80/4a–c.

<sup>36</sup> Schuster 1997, p. 128, fig. 79/1.

<sup>37</sup> Schuster 1997, p. 129, 221, 224, fig. 79/2, 144/1.

<sup>38</sup> Schuster 1997, p. 222.

<sup>39</sup> Roman 1986, p. 39.

<sup>40</sup> Schuster 1997, p. 163.

<sup>41</sup> Motzoi-Chicideanu, Olteanu 2000, p. 19, 34, 48; a point of view maintained in Motzoi-Chicideanu 2011, p. 304.

<sup>42</sup> Kalicz-Schreiber 1991; Kulcsár 2009, p. 101–102.

<sup>43</sup> Kalicz-Schreiber 1991, especially fig. 13; Kulcsár 2009, p. 98–102, 337–338 and quoted literature.

<sup>44</sup> Bóna 1965, p. 39–54; Dimitrijević 1982, pl. 4/1, 4, 6/5; Kalicz-Schreiber 1991; Endrődi, Pásztor 2006, p. 16–17, fig. 7/1; Kulcsár 2009, p. 98–102, 337–338.

<sup>45</sup> Garašanin 1958, p. 90, note 485; Bóna 1965, p. 44.

<sup>46</sup> Endrődi 1992, p. 84, 93–94, figs. 15–16.

almost identical profile show some of the pots found in the levels Ic4–1 and Ic4–2 from the Sărata Monteoru settlement, Buzău County<sup>47</sup> (Fig. 4/6) or from the level 4 at Odaia Turcului, Dâmbovița County<sup>48</sup> (Fig. 4/7), with the distinction that the latter has two over-raised symmetrical handles. Only two such items – with symmetrical handles – came from burials: Apa Sărată<sup>49</sup> and Movila<sup>50</sup>, Dâmbovița County (Fig. 4/5). It is worth noting that a jug was also found in the previously mentioned Priboj barrow tomb. The jug had a cylindrical neck, a rounded body and two symmetric strap handles. Other similar vessels had appeared in similar graves excavated in the same area more than a 100 years before<sup>51</sup>. Equally interesting is the fact that many of those cist inhumation burials were covered by a mound of soil<sup>52</sup>. In this context we should remember the six tumuli investigated at Cașolț – *Trei morminți*, Sibiu County, containing both cist inhumations and cremated remains in cists or ceramic urns<sup>53</sup>. Among the grave goods there were two complete or reconstructible vessels (but only one was published)<sup>54</sup> and fragmented pots (still unpublished). The six tumuli were dated to the end of the Bronze Age and the beginning of the Iron Age. The two almost complete vessels with cylindrical necks, rounded bodies and asymmetrical handles were very similar to those from Călățeșeni and Igrița (Bihor County) (seen as part of the Roșia group<sup>55</sup>), and also to the vessel from the urn burial at Hódmezővásárhely – *Gorzsa*, Hungary, dated to the late phase of the Makó culture<sup>56</sup>. All the noted similarities suggest that the two burials with almost complete vessels, if not the entire Cașolț tumuli group, could be assigned to the Early Bronze Age<sup>57</sup>.

A larger variety of pottery forms, in comparison to other cist graves in Muntenia, is represented in the inventory of the barrows with cist graves and stone rings from Vadu Săpat – *Budureasca*, Prahova County, investigated as early as 1967 by V. Teodorescu, but only recently published<sup>58</sup>. Together with the long necked, short bodied jug with only one handle (Fig. 4/2), there was a second one, also with one handle, but with a wide mouth and a narrow base; this type of vessel is also seen in level 4 at Odaia Turcului, levels I–II at Năeni – *Zănoaga* or at Hărman, Brașov County – the last one being related to the Schneckenberg B stage<sup>59</sup>. Similar pots were discovered at

several places south of the Lower Danube, including the north-western part of Bulgaria, in the same area where the cremation grave with a dagger from Byala Slatina was discovered; these vessels were assigned to the final period of the Early Bronze Age – EBA III, meaning more or less the second half of the third millennium BC<sup>60</sup>.

Taking into consideration these similarities between the pottery found on sites between the Carpathians and the Danube, and the pottery from better contextualized archaeological features (description and radiocarbon) from neighbouring or more remote regions, R. Băjenaru concluded that the Glina culture developed between 2650 and 2450 BC<sup>61</sup>. Also, Băjenaru dated level 4 from Odaia Turcului (with pottery contemporary to the one from the levels Ic4–1 and Ic4–2 at Sărata Monteoru and levels IIa and IIb at Năeni – *Zănoaga*) to the end of the Early Bronze Age, more precisely between 2400 and 2100 BC<sup>62</sup>. The dating suggested by this author was confirmed by the results obtained by the Beta laboratory from Florida, the United States of America, on a sample taken from level IIa from Năeni – *Zănoaga*, yielding a range between 2300 and 2000 BC<sup>63</sup>. Therefore, the dating of the above discussed cist graves to the second half of the 3<sup>rd</sup> millennium BC appears probable. Considering that some of the blades were found in the area of Glina pottery settlements – such as the Crivăț and Brezoaia ones, or even those from Homorâciu, Apa Sărată and Malu cu Flori, and taking also in consideration the archaeological context of the Lelicieni mould fragment, we would like to suggest – as a working hypothesis – an earlier dating of such blades, sometime between 2600 and 2200 BC. The isolated dagger discovered at Rusciori and the one of unknown provenance (analysed during SAM project), could be assigned to the same period, given the strong similarity with the blades discovered in the cist graves, especially with the one from Homorâciu.

## DAGGERS OR HALBERDS?

T. Hristova noted the similarities among the blades from Byala Slatina, Crivăț, Malu cu Flori and Apa Sărată, and certain blades discovered in Croatia, Hungary and Slovakia, interpreted by Tibor Kovács as halberds<sup>64</sup>. A triangular blade and a V-shaped midrib were also

<sup>47</sup> Zaharia 1987.

<sup>48</sup> Tudor 1982; Vulpe 1991; Băjenaru 2002.

<sup>49</sup> Schuster 1997, p. 128, fig. 82/2.

<sup>50</sup> Also known in the literature as Nucet or Mircea Vodă: Zaharia 1987, p. 33, note 2, fig. 8/6; Motzoi-Chicideanu 2011, p. 127, 373.

<sup>51</sup> Garašanin 1958, pl. 20/4; Bóna 1965, pl. XVII/17.

<sup>52</sup> Bóna 1965, p. 44–45; Kulcsár 2009, p. 233, 272.

<sup>53</sup> Macrea *et alii* 1959, p. 410–413.

<sup>54</sup> Macrea *et alii* 1959, fig. 13. There is an inconsistency between the text of the paper and the legend of Figure 13 in what the tumulus where the vessel was found is concerned (T.VII according to the text but T.III according to the legend of fig. 13).

<sup>55</sup> Emödi 1985, fig. 5/35, 20/32; Roman, Némethi 1986, fig. 10/3; Molnár, Ghemiș 2003.

<sup>56</sup> Kalicz-Schreiber 1991, p. 12; Kulcsár 2009, p. 89, 192.

<sup>57</sup> See the opinions expressed by Berciu 1961, p. 150; Berciu, Roman 1984, p. 17; Ciugudean 2011, p. 22, note 4.

<sup>58</sup> Frînculeasa 2011, p. 51–71.

<sup>59</sup> Frînculeasa 2011, fig. 3/5, 5/5; Tudor 1982, fig. 5/1, 7/11, 13; Băjenaru 2002, p. 119, 122; Motzoi-Chicideanu, Șandor-Chicideanu 1999, p. 78, fig. 14/9, 16/1–2, 17/4; Prox 1941, pl. XXII/4–5.

<sup>60</sup> Alexandrov 1995, p. 266–268; Alexandrov 1998; Nikolova 1999, p. 71–77; Băjenaru 2002, p. 122–123, 125.

<sup>61</sup> Băjenaru 1998. For recent discussions on the chronology of the Lower and Middle Danube cultural groups based on <sup>14</sup>C dates see Kulcsár 2013; Kulcsár, Szeverényi 2013; Woidich, Szentmiklósi 2013; Frînculeasa *et alii* 2015.

<sup>62</sup> Băjenaru 1998, p. 11; Băjenaru 2002, p. 116–117, 125.

<sup>63</sup> Motzoi-Chicideanu 2011, p. 52, note 34.

<sup>64</sup> Hristova 2006, p. 1; Kovács 1996.

characteristics of daggers found in the graves at Vinodol and Dvory nad Žitavou, both in Slovakia, and in the cairn grave (*Steinpackungsgrab*) at Lednice, the Czech Republic, all three attributed to the Aunjetitz culture<sup>65</sup>. Still, the Crivăț type blades distinguish themselves from the above mentioned ones through their considerable dimensions and a weight greater than 150 g. Taking all these into account, and the clear-cut midrib, they seem to be more similar to the blades designated as halberds, found in a greater number in the North-Western, Western and Central Europe<sup>66</sup>.

A halberd is defined as “a strong metal blade with a stout midrib, riveted at right-angles to the shaft”<sup>67</sup>. The halberd blades have, as a general rule, considerable dimensions, they are sometimes asymmetrical, and on the hafting-plate there usually is a straight trace, line-like, left by the (presumably organic) shaft attached more or less perpendicularly to the blade, in many cases fixed with thick rivets. Nevertheless, it is difficult to distinguish between halberds and daggers, especially when all the previously mentioned elements are missing<sup>68</sup>. Although halberds were found from Scandinavia and Ireland to Italy, and also from Portugal to Hungary<sup>69</sup>, significant concentrations were noticed in Ireland (ca. 190 specimens according to R. O’Flaherty<sup>70</sup>), the south-east of Spain (the El Argar culture), Germany and Poland (Aunjetitz culture). As O’Flaherty noted, the halberd concept was more common over a wide area, with images of halberds depicted on the rock carvings in the Alps (Val Camonica, in the north of Italy or Mont Bego in the south-east of France), the north-west of Spain (Galicia), or, possibly, in the Nucu cave at the bend of the Sub-Carpathians, Buzău County, Romania, thus also in areas where metal halberds were few or completely missing<sup>71</sup>.

Based on their aspect, halberds were classified into types, reflecting both local variants, and forms that circulated most. The place of origin for the halberds is still a controversial subject, although the hypothesis of their early occurrence in Italy, in the first half of the 3<sup>rd</sup> millennium BC or even in the second half of the 4<sup>th</sup> millennium BC (see halberd representations, but also depictions of daggers and pendants associated with them on petroglyphs and anthropomorphic stelae, and the occurrence of similar metal artefacts in archaeological contexts belonging to the

Remedello culture) seems to gain more and more consistency<sup>72</sup>. In fact, it is difficult to establish the chronological limits for the period of their employment, most of them being single finds or occurring associated with other halberds; only a few were associated with other type of artefacts, and also, just a few of the halberds were found in graves<sup>73</sup>. Taking into consideration the dating of the various artefacts found along with the halberds in well documented contexts of deposition, and the existing radiocarbon dates for some of these archaeological features, it was concluded that the interval for their maximum circulation was between 2400 and 1900 BC<sup>74</sup>.

Conflicting points of view also concern the functions of halberds. A great number of the pieces identified as such do not seem to have been used at all, a reason for the items to be considered prestige or ceremonial objects<sup>75</sup>. This hypothesis is sustained by certain images found at various cave sites, for example at Mont Bego, displaying halberds with a very long shaft in comparison with the human body, giving the impression that their role was to be exhibited and seen by all the others<sup>76</sup>. Moreover, on some of the rock carvings, the association between halberds and heads of horned animals was depicted, suggesting that the halberds were used in animal sacrifice rituals, possibly on special occasions<sup>77</sup>. The experiments lead by O’Flaherty, using a Bronze Age replica halberd, showed the efficiency of this kind of blades on the skull bones and soft tissues of sheep, as well as their ability to produce deadly injuries on humans, indicating also the need for a required dexterity in using such weapons<sup>78</sup>. Two recent studies indicated that the visible notches, indentations and blow marks on some of the halberds might have been the consequence of using them as weapons in combat, with the edge damage possibly caused by the impact with other halberds<sup>79</sup>. Thus, the old hypothesis regarding the use of halberds against a similarly armed opponent, either during a ritual or a demonstrative fight, with the purpose of emphasizing the warriors’ skills, is still to be taken into consideration<sup>80</sup>. Nevertheless, it is very likely that halberds were polyvalent objects, performing simultaneous or alternative functions. Their occurrence in various contexts and regions should perhaps be regarded from this perspective also<sup>81</sup>.

<sup>65</sup> Vladár 1974, p. 31–32, no. 59 and 69; Novák 2011, p. 52, no. 175.

<sup>66</sup> Ó Ríordáin 1937; Coles 1969, p. 35–40; Harbison 1969, p. 35–55; Gedl 1976, p. 33–37; Gally 1981, p. 123–130; Lenerz-de Wilde 1991; Bianco Peroni 1994, p. 7–8, 15–16, 30–32, 35–36; Wüstemann 1995, p. 70–91; Kovács 1996; Vandkilde 1996, p. 193–199; O’Flaherty 1998; Schuhmacher 2002; Brandherm 2003, p. 372–418; Brandherm 2004; Klieber 2006; Harding 2007, p. 65–70; Rassmann 2010; Horn 2014.

<sup>67</sup> Harbison 1969, p. 35.

<sup>68</sup> Ó Ríordáin 1937, p. 240–241; Brandherm 2011, p. 27.

<sup>69</sup> According to Horn 2014, p. 223, ca. 710 halberds have been identified in Europe.

<sup>70</sup> O’Flaherty *et alii* 2011, p. 41.

<sup>71</sup> O’Flaherty 1998, p. 74; Anati 1962; de Lumley 2003, p. 335–338; Bradley 1998; Brandherm 2003, p. 449–451, pl. 117–121, 166; Horn 2013, p. 235; Soroceanu, Sîrbu 2012, p. 155–159.

<sup>72</sup> Barfield 1969; Hansen 2002, p. 165–166; Brandherm 2011, p. 23. For an earlier dating of the Remedello culture, see Dolfini 2010a; 2013.

<sup>73</sup> Horn 2011, p. 56.

<sup>74</sup> Lenerz-de Wilde 1991; Schuhmacher 2002; Brandherm 2004; Harding 2007, 65; Rassmann 2010. See also Horn 2014, p. 171–173.

<sup>75</sup> Harbison 1969, p. 35; Lenerz-de Wilde 1991, p. 44–46, 48; Ulreich 1994, p. 310–313; Dolfini 2010b, p. 9–11.

<sup>76</sup> Lenerz-de Wilde 1991, fig. 18.

<sup>77</sup> de Lumley 2003, fig. 178.

<sup>78</sup> O’Flaherty 2007; O’Flaherty *et alii* 2011, p. 51.

<sup>79</sup> Brandherm 2011; O’Flaherty *et alii* 2011.

<sup>80</sup> O’Flaherty 2007, p. 431; Brandherm 2011, p. 34–36.

<sup>81</sup> Lenerz-de Wilde 1991, p. 44; O’Flaherty 2007, p. 431–432. An ample discussion on halberd functionality in Horn 2014, p. 174–222.

As we formerly mentioned, the stout Crivăț blade type resembles very well the Bronze Age halberds found in Western and Central Europe, especially due to the presence of the frequently V-shaped midrib. It can, nevertheless, be noticed that for various halberds the midrib ends long before the base of the blade, in the hafting-plate area, with the rivet-holes being located towards the butt. For the pieces found in Romania, the midrib is prolonged towards the butt, this characteristic being also obvious in some halberds discovered outside this space, such as those from Malé Žernoseky and Jaroměřice nad Rokytnou, in Slovakia, Montemerano and Pianizzoli, in Italy or Helfta, in Germany<sup>82</sup>.

At a careful examination of the hafting-plate of the Homorâciu blade, one notices semicircular marks following the shape of the butt located on both sides, interpreted as the traces left by the hilt (Fig. 5). Despite the damaged blade butt, given the shape of the hilt marks, one may suggest that the piece was used, at least during a certain stage of its existence, as a dagger. The same observations stand for the Brezoaia blade, where the crescent shaped trace left by the hilt is visible on both sides of the implement. On one of the sides of the intact and well finished blade from Crivăț, towards the end of the hafting-plate, a semicircular discoloration may be observed, most likely representing the mark left by the handle (Fig. 6b). The hafting-plate of the Apa Sărată blade offers no clues as to the way it might have been used (Fig. 7). There is no such information regarding the other blades of the Crivăț group either. A second observation concerns the small size of the rivet holes in the case of the Crivăț, Brezoaia and even Apa Sărată blades; such thin rivets were usually employed to haft daggers.



Fig. 6. The stout blade with rivet-holes from Crivăț.

Despite the scarce data we have concerning the hafting of the Crivăț type pieces, it is quite credible that such blades, although bearing resemblances to other Bronze Age hafted halberds found elsewhere in Europe, had been used in the Lower Danube area in a different manner, most likely as dagger, at least during a certain stage of their existence. It is interesting to notice that out of the 14 riveted daggers with secure discovery contexts found in Romania and dated to the Early and Middle Bronze Age, 11 came from settlements, two were isolated finds and only one was discovered in a funerary context. A similar circumstance has been noticed for the tanged daggers belonging also to the Early and Middle Bronze Age<sup>83</sup>. Consequently, the presence of these blades among grave goods (in at least three instances, if not five, including also the discoveries at Cetățenii din Deal and Gura Bărbulețului) is an exceptional one, considering they occurred in a restricted area, limited to the northern Muntenia. Their function as weapons, prestige objects or goods with a remarkable social value in comparison to the rest of the riveted daggers, must be taken into account, the latter ones being generally smaller in size and having a domestic use<sup>84</sup>.

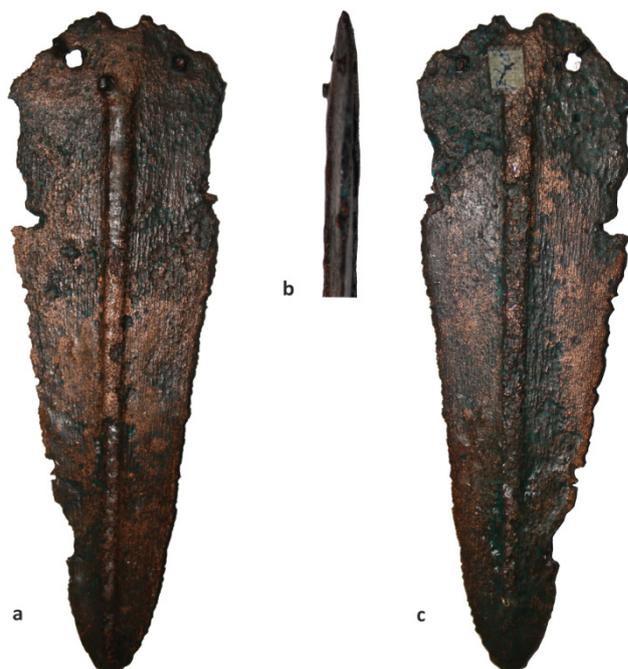


Fig. 7. The stout blade with rivet-holes from Apa Sărată (photos: R. Băjenaru).

Unfortunately we lack information regarding the individuals these blades were buried with. No anthropological studies are available and the human remains are probably lost. The mortuary treatment at Homorâciu is unclear. There is no information regarding the position of the blades in regards to the dead. No

<sup>82</sup> Novák 2011, pl. 41/560, 563; Bianco Peroni 1994, pl. 18/270–272; Wüstemann 1995, pl. 30/174.

<sup>83</sup> Băjenaru, Popescu 2012, p. 399, 411–412, note 25.

<sup>84</sup> Skak-Nielsen 2009; Băjenaru 2010, p. 157; Băjenaru, Popescu 2012, p. 403–407.

technological analysis (tempering, firing, etc.) of the pottery is available, nor any attempt to study the organic residues that might have existed on the inner side of the vessels. But leaving all these aside, what intrigues is the association between the massive metal blade and the long-necked vessel with rounded body and asymmetrical handles. Does it have any special meaning? One might think that the deceased were men with a privileged status whose manhood was stressed by the presence of the robust weapon (dagger) and the drinking vessel<sup>85</sup>. They might have been individuals of important social ranking, acknowledged by the presence in the grave of “exotic” goods received as gifts or through exchanges. On the other hand, the deposition of such items, specific to other cultural areas might suggest that the respective individuals were non-locals, and thus the meaning of the implements was to underline their belonging to a different community. We would like to stress once again that the deposition in burials of metal “weapons” regardless the type (axes, daggers, swords) was not the everyday practice at the Lower Danube during the Bronze Age. It is also worth remembering that the metal composition (with ca. 6% tin) is less frequent during the Early Bronze Age in the area.

But regardless the explanation we chose, it seems very probable that the deceased were recognized a certain social or group identity. On the other hand, the blade from Homorâciu has the end of the hafting plate damaged. Was this the consequence of poor preservation conditions or was it a deliberate act that occurred during the funerary ceremony? In the latter case, the “weapon” would have been placed without a hilt and thus would not have been functional. A similar case was noted for the jugs with a broad vertical strap handle, which are missing important body parts. The damage cannot entirely be blamed on the unfavourable discovery circumstances of the cists graves in Muntenia, although it is quite possible that some items had been intentionally damaged by the people that found them. Incomplete pots were found in systematically excavated burials assigned to close periods in time such as those from Vârtopu<sup>86</sup>, Vadu Săpat – *Budureasca*<sup>87</sup> or Costișa<sup>88</sup>, to quote just a few examples. This practice seems to be a lot more spread during the Early Bronze Age at the Lower Danube<sup>89</sup> and it might be a good subject for future studies. Why destroy an already constructed identity – whichever it may be? Perhaps because the respective individual had disappeared, because it was no longer part of the group, and life-long forged relationships were gone<sup>90</sup>.

Are the Crivăț type blades local artefacts or have they been brought here from somewhere else? The analyses made on the metal of the halberds from the Central and Western Europe proved that they had been made mainly of copper, sometimes having in their composition a significant amount of arsenic (about 4–7%)<sup>91</sup>. Bronze halberds were also found such as the Breaghwy type in Ireland, or the significant number of halberds found in the Central Europe, in the area of the Aunjetitz culture, especially those with a metallic shaft<sup>92</sup>. According to K. Rassmann, bronze halberds appeared later than the copper or copper-arsenic ones and they should be dated around 2100–1900 BC; according to the same author, the halberds in the Carpathian Basin would count among the latest items<sup>93</sup>.

The elemental and spectral analyses on the Crivăț type blades show diversity in the composition of the metal. The piece from Crivăț and the one of the former Severeanu collection are made of copper with a low arsenic percentage and a number of other minor elements. The fragmentary blade from Rusciori contained a high level of lead (1.15%) and 0.95% arsenic, while the stout blade from Homorâciu was made of bronze, with a 6.3% tin content. If the Crivăț type pieces were produced locally, the metal used seems to come from several sources, taking into account their different compositions. Also, an equal number of bivalve moulds must have been used to cast the pieces, as the dimensions of the blades vary. At present, it cannot be ascertained whether the Crivăț type pieces were local imitations or foreign goods. In any case, they occurred at the eastern border of the spreading area of these stout and massive blades.

A special alloy (gold-silver-copper) was used to cast the blades from the hoards discovered at Perșinari, Dâmbovița County and Măcin, Tulcea County<sup>94</sup>. The nearest analogies to the 12 blades from Perșinari and the two from Măcin (in what concerns the rectangular shape of the hafting plate) appear to be the halberd blades of the Glomel type found in France and those of Clonard type in Ireland; these similarities were also noticed by A. Vulpe<sup>95</sup>. A copper halberd with a similar hafting plate was discovered close to our area of interest, in Hungary, nearby Pápa<sup>96</sup>. Also from Hungary, but this time from a secure context (a Bell Beaker burial from Szigetszentmiklós – *Felső Úrge-hegyi dűlő* near Budapest) came a triangular blade with a hafting plate similar to that of the halberd from Pápa, with a wide, V-shaped midrib<sup>97</sup>. The radiocarbon dates indicate for the Bell Beaker group from this site the interval 2500–2200 BC<sup>98</sup>.

<sup>85</sup> Treherne 1995.

<sup>86</sup> Calotoiu 2007, p. 9–41.

<sup>87</sup> Frînculeasa 2011, p. 56.

<sup>88</sup> Popescu, Băjenaru 2007–2008, p. 66, fig. 8/2; Popescu, Băjenaru 2008, p. 25, fig. 5/2.

<sup>89</sup> See, for example, grave no. 21 from Ploiești Triaj – *Barrow 2*; Coșea 1989, p. 184–185, fig. 3.

<sup>90</sup> Brück 2004; Brück, Fontijn 2013, p. 209–210.

<sup>91</sup> Rassmann 2010, p. 812.

<sup>92</sup> Harbison 1969, p. 46–47, 54; O’Flaherty *et alii* 2011, p. 43; Rassmann 2010, p. 809–819.

<sup>93</sup> Rassmann 2010, p. 807–808.

<sup>94</sup> Severeanu 1935; Iliescu 1963; 1996; Vulpe 1995; 1997; Hartmann 1982, p. 150–151, analyses no. 5154–5155, 5199–5200.

<sup>95</sup> Gallay 1981, p. 125–126, pl. 33/505; Harbison 1969, p. 45; Schuhmacher 2002, p. 271; Vulpe 1997, p. 271–272.

<sup>96</sup> Kovács 1996, p. 89, fig. 2/3.

<sup>97</sup> Patay 2013, p. 300, 311, fig. 21/2.

<sup>98</sup> Patay 2013, p. 309.

The considerable dimensions of the golden blades from Perşinari and Măcin, but mainly the significant breadth of their hafting plates are details that determined A. Vulpe to presume that the blades found on both sites would be better hafted as halberds than daggers<sup>99</sup>. It is also possible that the Perşinari and Măcin blades were cast as halberds, but never hafted, except for the solid-hilted sword, that might have been used as a halberd before adding the metallic hilt. In fact, most of the blades from Perşinari were left unfinished. The metal composition is also unusual. Similar alloys (gold-silver-copper) are more frequent in the Caucasus and the Near East. Also, the amount of weapons (daggers, axes, spearheads) made of precious metals during the 4<sup>th</sup>–2<sup>nd</sup> millennia BC is larger for the western Asian area than the European one<sup>100</sup>. In the case of Perşinari and Măcin, the way elements of different origins were combined is very interesting: the shape of the blades was similar to the ones hafted as halberds in Central and Western Europe and the metal composition (precious metal) was frequently employed for weapons in the Near East.

It is also remarkable the deposition manner for the Perşinari items so different from that of the daggers usually in the area of the Lower Danube. The dagger hoards associated or not with other types of artefacts, did not occur in this area during the Early and Middle Bronze Age<sup>101</sup>. This might be used as an argument against the interpretation of the gold Perşinari and Măcin blades as daggers. Instead, the manner in which the respective gold

blades were hoarded is similar to that of the shaft-hole axes. It is very likely that the shaft-hole axes represented in the south-eastern Europe the equivalent of the halberds<sup>102</sup>. Both categories of pieces occur in similar contexts, most of them as single finds or part of hoards, usually together with similar pieces, while the situation in which halberds or shaft-hole axes in graves rarely occurred. As in the case of halberds, the shaft-hole axes probably had multiple functions: weapons, prestige goods or arms for display, tools. It must be highlighted that a great number of the copper or bronze axes found in the Lower Danube area showed no signs of being used<sup>103</sup>. In the context of a parallel between halberds and shaft-hole axes in their social and symbolical value, the discovery at Perşinari constitutes again a good example, containing a potential halberd blade reshaped into a short sword and other 12 blades similar to those used as halberds, all hoarded together with ca. four or five silver shaft-hole axes<sup>104</sup>. Other examples are the Melz II hoard containing halberd blades detached from their metallic shafts, and the shaft-hole axe of the Şanţ-Dragomireşti type, probably fixed on a long haft before deposition<sup>105</sup>. Several intermediate hybrids between halberds and axes were found in the Tiszafüred – *Majoroshalom* cemetery, Hungary (two specimens from Fűzesabony graves), and also a single find came from Przećmino, in Poland<sup>106</sup>. There is also the artefact discovered at Santa Fiora, Italy, practically a combination between a halberd blade and a shaft-hole axe<sup>107</sup>.

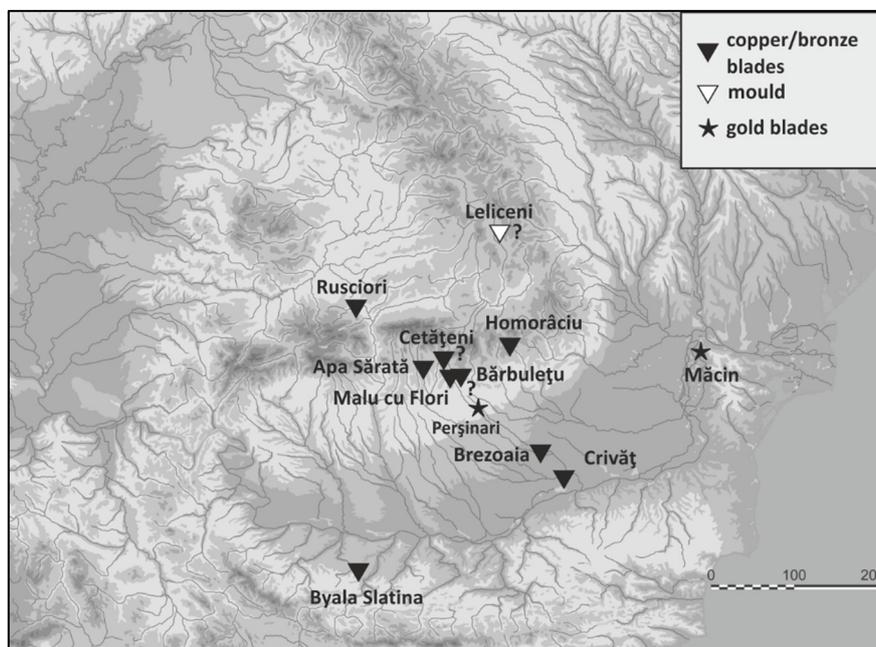


Fig. 8. Distribution of the stout blades with pronounced midrib at the Lower Danube.

<sup>99</sup> Vulpe 1997, p. 271.

<sup>100</sup> Hansen 2001.

<sup>101</sup> Băjenaru, Popescu 2012, p. 399–400.

<sup>102</sup> Vulpe 1997, p. 272.

<sup>103</sup> Băjenaru 2010, p. 157.

<sup>104</sup> Vulpe 1997, p. 269–270. The shaft-hole axes were shattered by the villagers that discovered the hoard.

<sup>105</sup> Rassmann, Schoknecht 1997; Schwenzer 2002.

<sup>106</sup> Kovács 1995, fig. 2/1, 4/2–4; Kovács 1996, p. 92, fig. 6/1, 7/1–2; Szpunar 1987, p. 77, cat. no. 458.

<sup>107</sup> Barfield 1969, p. 67–69, fig. 1/a–b.

## CONCLUSIONS

The circulation in the Lower Danube area of stout blades with a pronounced midrib used in Central, Western and Northern Europe as halberds has been duly observed (Fig. 8). Massive blades in the discussed area have early contexts. They were found in the area of Glina settlements or inside the cist graves together with jugs with asymmetrical handles similar to those at the Middle Danube attributed to the Belotić-Bela Crkva, Somogyvár-Vinkovci and Bell Beaker-Csepel groups and mainly dated between 2500 and 2200 BC. It is possible that the item imprinted on the fragmentary mould from Leliceni and found in Jigodin cultural area might have belonged to the same category with the metal blades coined here as the Crivăț type, thus suggesting a local production for such blades. We cannot cross out the possibility that such blades travelled from the west, with their owners or through exchange, and were later replicated locally. A good example would be the 12 small Perșinari blades and the two from Măcin, with good analogies in Hungary, Ireland and France. The items from Perșinari and Măcin were made of precious metals; making gold and silver “weapons” was a frequent practice in the Aegean area, Anatolia and the Near East during the 4<sup>th</sup>–2<sup>nd</sup> millennia BC, but almost absent in Central and Western Europe.

These robust blades with a stout midrib occur here at the periphery of their spreading area, in a region where the shaft-hole axes have the same functions as the halberds: weapons or insignia of power and rank, and thus their role becomes an ambiguous one. It is possible that they were used in more ways than one. Some of these blades were, for sure, hafted as daggers, at least during a certain stage of their existence, as it is the case of the piece found in the Homorâciu cist grave or the item from Brezoaia. Another example may be the Perșinari long blade, later used as a solid-hilted sword. The other 12 blades from Perșinari and the similar two from Măcin are, in effect, more suited to be hafted as halberds, but there are no traces such hafting. As for the other Crivăț type blades, there are no indications concerning the manner in which they were used. Considering the dating of pottery found in association with them in northern Muntenia, the Crivăț type blades cannot be dated later than the 22<sup>nd</sup> century BC (the most likely date seems to be around 2500–2200 BC). This might be also the period when the Perșinari and Măcin blades were manufactured, but it does not necessarily represent – as suggested by Alexandru Vulpe – the moment when the Perșinari hoard was buried, or the moment when the solid hilt for the large blade in the same hoard was added, as these last two events could have taken place at a much later time.

## Acknowledgements

For Anca-Diana Popescu, the work was carried out through the PN II programme, conducted with support of NEM – Executive Agency for Higher Education, Research, Development and Innovation (UEFISCDI), project no. 339 / 2014.

The authors thank Adina Boroneanț and Bianca Preda for translation and proofing.

## REFERENCES

- Alexandrov 1995 – S. Alexandrov, *The Early Bronze Age in Western Bulgaria: Periodization and Cultural Definition*, in: D. W. Bailey, I. Panayotov, S. Alexandrov (eds.), *Prehistoric Bulgaria*, Madison/Wisconsin, 1995, p. 253–270.
- Alexandrov 1998 – S. Alexandrov, *Pottery from the End of the Early Bronze Age in West Bulgaria*, in: M. Stefanovich, H. Todorova, H. Hauptman (eds.), *In the Steps of James Harvey Gaul*, vol. 1, *James Harvey Gaul. In Memoriam*, Sofia, 1998, p. 223–233.
- Anati 1962 – E. Anati, *The “Corni Freschi”: A New Prehistoric Rock Engraving from Val Camonica*, *Man* 62, 1962, p. 113–114.
- Barfield 1969 – L. Barfield, *Two Italian halberds and the question of the earliest European halberds*, *Origini* 3, 1969, p. 67–83.
- Băjan 1930 – D. I. Băjan, *Mormântul antic din Cetățeni*, *Muscelul Nostru* 2, 9 noiembrie 1930, p. 6–9.
- Băjenaru 1998 – R. Băjenaru, *Discuții privind cronologia absolută a culturii Glina*, *SCIVA* 49, 1, 1998, p. 3–22.
- Băjenaru 2002 – R. Băjenaru, *Date noi privind cronologia bronzului timpuriu în jumătatea sudică a României*, *Apulum* 39, 2002, p. 107–143.
- Băjenaru 2010 – R. Băjenaru, *Between Axe and Dagger: Early Bronze Age Weaponry in the Lower Danube Area*, *Transylvanian Review* 19, 5:1, 2010, p. 151–162.
- Băjenaru 2013 – R. Băjenaru, *Identități culturale, structuri de putere și conflict militar în nordul Peninsulei Balcanice în milenii IV-III a.Chr.*, București, 2013.
- Băjenaru 2014 – R. Băjenaru, *Sfârșitul bronzului timpuriu în regiunea dintre Carpați și Dunăre*, Cluj-Napoca, 2014.
- Băjenaru, Popescu 2012 – R. Băjenaru, A.-D. Popescu, *Pumnalele cu limbă la mâner din bronzul timpuriu și mijlociu din spațiul carpato-dunărean*, in: V. Sîrbu, S. Matei (eds.), *Un monument din Carpații Orientali cu reprezentări din preistorie și Evul Mediu – Nucu – „Fundu Peșterii”, județul Buzău, Brăila – Buzău*, 2012, p. 363–433.
- Berciu 1961 – D. Berciu, *Contribuții la problemele neoliticului în România în lumina noilor cercetări*, București, 1961.
- Berciu 1964 – D. Berciu, *Quelques données préliminaires concernant la civilisation de Cernavoda*, *Slovenská Archeológia* 12, 1, 1964, p. 269–280.
- Berciu 1966 – D. Berciu, *Rezultatele primelor săpături de la Crivăț, 1965 (r. Oltenița)*, *SCIV* 17, 3, 1966, p. 529–535.
- Berciu, Roman 1984 – D. Berciu, P. Roman, *Mormintele tumulare de la Verbița (jud. Dolj)*, *Th-D* 5, 1–2, 1984, p. 15–21.
- Bianco Peroni 1994 – V. Bianco Peroni, *I pugnali nell’Italia Continentale*, PBF VI, 10, Stuttgart, 1994.
- Bóna 1965 – I. Bóna, *The Peoples of Southern Origin of the Early Bronze Age in Hungary I-II*, *Alba Regia* 4–5, 1963–1964 (1965), p. 17–63.
- Bradley 1998 – R. Bradley, *Daggers drawn: depictions of Bronze Age weapons in Atlantic Europe*, in: C. Chippindale, P. S. C. Taçon (eds.), *The Archaeology of Rock-Art*, Cambridge, 1998, p. 130–145.
- Brandherm 2003 – D. Brandherm, *Die Dolche und Stabdolche der Steinkupfer- und der älteren Bronzezeit auf der Iberischen Halbinsel*, PBF VI, 12, Stuttgart, 2003.
- Brandherm 2004 – D. Brandherm, *Porteurs de hallebardes? Überlegungen zur Herkunft, Entwicklung und Funktion der bronzezeitlichen Stabklingen*, in: H.-J. Beier, R. Einicke (eds.), *Varia Neolithica III*, Beiträge zur Ur- und Frühgeschichte Mitteleuropas 37, Langenweissbach, 2004, p. 279–334.
- Brandherm 2011 – D. Brandherm, *Use-wear on Bronze Age halberds: the case of Iberia*, in: M. Uckelmann, M. Mödlinger (eds.), *Bronze Age Warfare: Manufacture and Use of Weaponry*, BARIntSer 2255, Oxford, 2011, p. 23–38.

- Branigan 1974 – K. Branigan, *Aegean metalwork of the Early and Middle Bronze Age*, Oxford, 1974.
- Brück 2004 – J. Brück, *Material metaphors. The relational construction of identity in Early Bronze Age burials in Ireland and Britain*, JSA 4, 3, 2004, p. 307–333.
- Brück, Fontijn 2013 – J. Brück, D. Fontijn, *The myth of the chief: prestige goods, power, and personhood in the European Bronze Age*, in: H. Fokkens, A. Harding (eds.), *The Oxford Handbook of the European Bronze Age*, Oxford, 2013, p. 197–215.
- Calotoiu 2007 – Gh. Calotoiu, *Necropole tumulare din Gorj*, Craiova, 2007.
- Cernyh 1978 – E. N. Cernyh, *Gornoe delo i metallurgija v drevnejšej Bolgarii*, Sofia, 1978.
- Ciugudean 2011 – H. Ciugudean, *Mounds and Mountains: Burial Rituals in Early Bronze Age Transylvania*, in: S. Berecki, R. E. Németh, B. Rezi (eds.), *Bronze Age Rites and Rituals in the Carpathian Basin*, Proceedings of the International Colloquium from Târgu Mureş, 8–10 October 2010, Târgu Mureş, 2011, p. 21–57.
- Coles 1969 – J. M. Coles, *Scottish Early Bronze Age Metalwork*, Proceedings of the Society of Antiquaries of Scotland 101, 1968–1969 (1969), p. 1–110.
- Comşa 1989 – E. Comşa, *Mormintele cu ocru din movila II-1943 de la Ploieşti Triaj*, Thraco-Dacica 10, 1–2, 1989, p. 181–188.
- Dimitrijević 1982 – S. Dimitrijević, *Die frühe Vinkovci-Kultur und ihre Beziehungen zum Vučedoler Substrat im Lichte der Ausgrabungen in Vinkovci (1977/78)*, Opuscula Archaeologica 7, 1982, p. 7–36.
- Dolfini 2010a – A. Dolfini, *The origins of metallurgy in central Italy: new radiometric evidence*, Antiquity 84, 2010, p. 707–723.
- Dolfini 2010b – A. Dolfini, *The function of Chalcolithic metalwork in Italy: an assessment based on use-wear analysis*, JAS 30, 2010, p. 1–13.
- Dolfini 2013 – A. Dolfini, *The Emergence of Metallurgy in the Central Mediterranean Region. A New Model*, EJA 16, 1, 2013, p. 21–62.
- Emödi 1985 – I. Emödi, *Asupra începutului epocii bronzului în Bihor*, Thraco-Dacica 6, 1–2, 1985, p. 123–144.
- Endrődi 1992 – A. Endrődi, *A korabronzkori Harangedény kultúra telepe és temetője Szigetszentmiklós határában*, in: P. Havassy, L. Selmezi (eds.), *Régészeti kutatások az MO autópálya nyomvonalán*, I, Budapest, 1992, p. 83–200.
- Endrődi, Pásztor 2006 – A. Endrődi, E. Pásztor, *Symbolism and traditions in the society of the Bell Beaker-Csepel group*, ArchÉrt 131, 2006, p. 7–25.
- Frînculeasa 2005 – A. Frînculeasa, *Notă asupra unui mormânt din epoca bronzului descoperit în localitatea Homorăciu (jud. Prahova)*, Valachica 18, 2005, p. 72–76.
- Frînculeasa 2011 – A. Frînculeasa, *Descoperiri funerare din epoca bronzului la Budureasca-Vadu Săpat, jud. Prahova*, MCA 7, 2011, p. 51–71.
- Frînculeasa et alii 2015 – A. Frînculeasa, A. Soficar, A. Măgureanu, B. Preda, B. Ciupercă, D. Garvăn, A. Anton, C. Constantin, *Un complex funerar preistoric descoperit la Târgşoru Vechi (jud. Prahova)*, BMJT 7, 2015, p. 133–156.
- Gallay 1981 – G. Gallay, *Die kupfer- und altbronzezeitlichen Dolche und Stabdolche in Frankreich*, PBF VI, 5, München, 1981.
- Garašanin 1958 – M. Garašanin, *Neolithikum und Bronzezeit in Serbien und Makedonien. Überblick über den Stand der Forschung 1958*, BerRGK 39, 1958 (1959), p. 1–130.
- Gedl 1976 – M. Gedl, *Die Dolche und Stabdolche in Polen*, PBF VI, 4, München, 1976.
- Hansen 2001 – S. Hansen, *Waffen aus Gold und Silber während des 3. und frühen 2. Jahrtausends v. Chr. in Europa und Vorderasien*, in: H. Born, S. Hansen, *Helme und Waffen Alteuropas*, Sammlung Axel Guttman 9, Mainz, p. 11–59.
- Hansen 2002 – S. Hansen, *“Überausstattungen” in Gräbern und Horten der Frühbronzezeit*, in: J. Müller (ed.), *Vom Endneolithikum zur Frühbronzezeit: Muster sozialen Wandels?*, UPA 90, Bonn, 2002, p. 151–173.
- Harbison 1969 – P. Harbison, *The Daggers and the Halberds of the Early Bronze Age in Ireland*, PBF VI, 1, München, 1969.
- Harding 2007 – A. Harding, *Warriors and Weapons in Bronze Age Europe*, Budapest, 2007.
- Hartmann 1982 – A. Hartmann, *Prähistorische Goldfunde aus Europa II. Spektralanalytische Untersuchungen und deren Auswertung*, Studien zu den Anfängen der Metallurgie 5, Berlin, 1982.
- Horn 2011 – C. Horn, *Deliberate destruction of halberds*, in: M. Uckelmann, M. Mödlinger (eds.), *Bronze Age Warfare: Manufacture and Use of Weaponry*, BARIntSer 2255, Oxford, 2011, p. 53–65.
- Horn 2013 – C. Horn, *Violence and Virility*, in: S. Bergerbrant, S. Sabatini (eds.), *Counterpoint: Essays in Archaeology and Heritage Studies in Honour of Professor Kristian Kristiansen*, BARIntSer 2508, Oxford, 2013, p. 235–241.
- Horn 2014 – C. Horn, *Studien zu den europäischen Stabdolche*, UPA 246, Bonn, 2014.
- Hristova 2006 – T. Hristova, *Data on the burial rites during the Middle Bronze Age period in today's northern Bulgaria*, Archaeologia Bulgarica 10, 2, 2006, p. 1–8.
- Iliescu 1963 – O. Iliescu, *Tezaurul de obiecte premonetare de aur din epoca bronzului, găsit la Perşinari (raionul Tîrgovişte)*, Caiet selectiv de informare asupra creşterii colecţiilor Bibliotecii Academiei R.P.R. 8, 1963, p. 414–418.
- Iliescu 1996 – O. Iliescu, *Cum arătau banii primitivi. Tezaurul de la Perşinari*, Cercetări Numismatice 7, 1996, p. 7–14.
- Junghans et alii 1968 – S. Junghans, E. Sangmeister, M. Schröder, *Kupfer und Bronze in der frühen Metallzeit Europas*, Studien zu den Anfängen der Metallurgie 2, vol. 1-2, Berlin, 1968.
- Kalicz-Schreiber 1991 – R. Kalicz-Schreiber, *A Somogyvár-Vinkovci kultúra dél-északi irányú közzvetítő szerepe a korabronzkorban*, Budapest Régiségei 28, 1991, p. 9–43.
- Klieber 2006 – J. Klieber, *Die Stabdolche aus Österreich*, Archaeologia Austriaca 90, 2006, p. 139–178.
- Kovács 1995 – T. Kovács, *Auf Mitteleuropa weisende Beziehungen einiger Waffenfunde aus dem östlichen Karpatenbecken*, in: B. Hänsel (ed.), *Handel, Tausch und Verkehr im bronze- und früheisenzeitlichen Südosteuropa*, PAS 11, München-Berlin, 1995, p. 173–185.
- Kovács 1996 – T. Kovács, *Halberds in Hungary and adjacent territories*, in: T. Kovács (ed.), *Studien zur Metallindustrie im Karpatenbecken und den benachbarten Regionen*, Festschrift für Amália Mozsolics zum 85. Geburtstag, Budapest, 1996, p. 89–101.
- Kulcsár 2009 – G. Kulcsár, *The beginning of the Bronze Age in the Carpathian Basin. The Makó-Kosihy-Čaka and the Somogyvár-Vinkovci cultures in Hungary*, Budapest, 2009.
- Kulcsár 2013 – G. Kulcsár, *Glimpses of the Third Millennium BC in the Carpathian Basin*, in: A. Anders, G. Kulcsár (eds.), *Moments in Time*, Papers Presented to Pál Raczy on His 60<sup>th</sup> Birthday, Budapest, 2013, p. 643–659.
- Kulcsár, Szeverényi 2013 – G. Kulcsár, V. Szeverényi, *Transition to the Bronze Age: Issues of Continuity and Discontinuity in the First Half of the Third Millennium BC in the Carpathian Basin*, in: V. Heyd, G. Kulcsár, V. Szeverényi (eds.), *Transitions to the Bronze Age. Interregional Interaction and Socio-Cultural Change in the Third Millennium BC Carpathian Basin and Neighbouring Regions*, Budapest, 2013, p. 67–92.
- Lenerz-de Wilde 1991 – M. Lenerz-de Wilde, *Überlegungen zur Funktion der frühbronzezeitlichen Stabdolche*, Germania 69, 1, 1991, p. 25–48.
- Luca et alii 2003 – S. A. Luca, Z. K. Pinter, A. Georgescu, *Repertoriul arheologic al judeţului Sibiu*, Sibiu, 2003.
- de Lumley 2003 – H. de Lumley, *Gravures protohistoriques et historiques de la région du mont Bego, Tende, Alpes-Maritimes. Tome 5. Secteur des Merveilles. Zone de la cime des Lacs. Zone III, groupes I et II*, Aix-en-Provence, 2003.
- Macrea et alii 1959 – M. Macrea, E. Dobroiu, N. Lupu, *Şantierul arheologic Caşolt-Calbor (r. Sibiu şi Făgăraş, reg. Stalin)*, MCA 5, 1959, p. 403–417.
- Marţian 1920 – I. Marţian, *Repertoriu arheologic pentru Ardeal*, Bistriţa, 1920.
- Mikov 1933 – V. Mikov, *Predistoriceski selišta i nahodki v Bălgarija*, Sofia, 1933.
- Molnár, Ghemiş 2003 – Zs. Molnár, C. Ghemiş, *O descoperire aparţinând perioadei timpurii din peştera Izbuca Topliţei (jud. Bihor). Consideraţii privind grupul Roşia*, EphemNap 13, 2003, p. 41–92.

- Motzoi-Chicideanu 2011 – I. Motzoi-Chicideanu, *Obiceiuri funerare în epoca bronzului la Dunărea Mijlocie și Inferioară*, București, București, 2011.
- Motzoi-Chicideanu, Șandor-Chicideanu 1999 – I. Motzoi-Chicideanu, M. Șandor-Chicideanu, *Cercetările arheologice de la Năeni-Zănoaga (jud. Buzău). Campaniile 1982-1986, 1988-1993 și 1996*, MCA 1, 1999, p. 59–97.
- Motzoi-Chicideanu, Olteanu 2000 – I. Motzoi-Chicideanu, Gh. Olteanu, *Un mormânt în cistă din piatră descoperit la Văleni-Dâmbovița*, SCIVA 51, 1–2, 2000, p. 3–70.
- Nikolova 1999 – L. Nikolova, *The Yunatsite culture. Periodization, chronology and synchronizations*, RPRP 2–3, Sofia, 1999 (2000), p. 33–97.
- Novák 2011 – P. Novák, *Die Dolche in Tschechien*, PBF VI, 13, Stuttgart, 2011.
- O'Flaherty 1998 – R. O'Flaherty, *The Early Bronze Age halberd: a history of research and a brief guide to the sources*, Journal of the Royal Society of the Antiquaries of Ireland 128, 1998, p. 74–94.
- O'Flaherty 2007 – R. O'Flaherty, *A weapon of choice – experiments with a replica Irish Early Bronze Age halberd*, Antiquity 81, 2007, p. 423–434.
- O'Flaherty et alii 2011 – R. O'Flaherty, M. D. Gilchrist, T. Cowie, *Ceremonial or deadly serious? New insight into the function of Irish Early Bronze Age halberds*, in: M. Uckelmann, M. Mödinger (eds.), *Bronze Age Warfare: Manufacture and Use of Weaponry*, BARIntSer 2255, Oxford, 2011, p. 39–52.
- Ó Riordáin 1937 – S. P. Ó Riordáin, *The Halberd in Bronze Age Europe: A Study in Prehistoric Origins, Evolution, Distribution, and Chronology*, Oxford, 1937.
- Panaiteșcu 1930 – I. N. Panaiteșcu, *Mormintele vechi dela Cetățenii din Deal*, Muscelul Nostru 2, 5 august 1930, p. 19–21.
- Patay 2013 – R. Patay, *Bell Beaker Cemetery and Settlement at Szigetszentmiklós: First Result*, in: V. Heyd, G. Kulcsár, V. Szeverényi (eds.), *Transitions to the Bronze Age. Interregional Interaction and Socio-Cultural Change in the Third Millennium BC Carpathian Basin and Neighbouring Regions*, Budapest, 2013, p. 287–317.
- Popescu, Băjenaru 2007–2008 – A.-D. Popescu, R. Băjenaru, *Mormântul colectiv din perioada timpurie a epocii bronzului de la Costișa (jud. Neamț)*, ActaMM 28–29, 2007–2008, p. 63–80.
- Popescu, Băjenaru 2008 – A.-D. Popescu, R. Băjenaru, *Mortuary practices at Costișa (Neamț County)*, Dacia NS 52, 2008 (2009), p. 23–47.
- Prox 1941 – A. Prox, *Die Schneckenbergkultur*, Kronstadt/Brașov, 1941.
- Rassmann 2010 – K. Rassmann, *Die frühbronzezeitlichen Stabdolche Ostmitteleuropas – Anmerkungen zu Chronologie, Typologie, Technik und Archäometallurgie*, in: H. Meller, F. Bertemes (eds.), *Der Griff nach den Sternen. Wie Europas Eliten zu Macht und Reichtum kamen*, Halle, 2010, p. 807–821.
- Rassmann, Schoknecht 1997 – K. Rassmann, U. Schoknecht, *Insignien der Macht – Die Stabdolche aus dem Depot von Melz II*, in: A. Hänsel, B. Hänsel (eds.), *Gaben an die Götter. Schätze der Bronzezeit Europas*, Berlin, 1997, p. 43–47.
- Roman 1986 – P. I. Roman, *Perioada timpurie a epocii bronzului pe teritoriul României*, SCIVA 37, 1, 1986, p. 29–55.
- Roman, Némethi 1986 – P. Roman, I. Némethi, *Descoperiri din perioada timpurie (pre-Otomani) a epocii bronzului în nord-vestul României*, SCIVA 37, 3, 1986, p. 198–232.
- Roman et alii 1992 – P. I. Roman, A. Dodd-Oprîeșcu, P. János, *Beiträge zur Problematik der schnurverzierten Keramik Südosteuropas*, Mainz am Rhein, 1992.
- Rosetti 1975 – D. V. Rosetti, *Cetățeni Argeș. Istoricul cercetărilor arheologice (I)*, CA 1, 1975, p. 261–289.
- Roska 1942 – M. Roska, *Erdély régészeti repertórium I. Öskor / Thesaurus Antiquitatum Transsilvanicarum. Tom I. Praehistorica*, Cluj, 1942.
- Schuhmacher 2002 – T. X. Schuhmacher, *Some remarks on the origin and chronology of halberds in Europe*, OJA 21, 3, 2002, p. 263–288.
- Schuster 1997 – C. Schuster, *Perioada timpurie a epocii bronzului în bazinele Argeșului și Ialomiței superioare*, BiblThrac 20, București, 1997.
- Schwenzer 2002 – S. Schwenzer, *Zur Frage der Datierung der Melzer Stabdolche*, PZ 77, 2002, p. 76–83.
- Severeanu 1935 – G. Severeanu, *Zwei Dolchaxte aus Gold*, Bucureștii 1, 1935, p. 7–10.
- Skak-Nielsen 2009 – N. V. Skak-Nielsen, *Flint and metal daggers in Scandinavia and other parts of Europe. A re-interpretation of their function in the Late Neolithic and Early Copper and Bronze Age*, Antiquity 83, 2009, p. 349–358.
- Soroceanu, Sîrbu 2012 – T. Soroceanu, V. Sîrbu, *Peștera de la Nucul din neolitic până în epoca bronzului / La grotte de Nucul du néolithique à l'âge du Bronze*, in: V. Sîrbu, S. Matei (eds.), *Un monument din Carpații Orientali cu reprezentări din preistorie și evul mediu – Nucul – "Fundu Peșterii", județul Buzău / Un monument des Carpates Orientales avec des représentations de la préhistoire et du Moyen Âge – Nucul – "Fundu Peșterii", département de Buzău, Brăila-Buzău*, 2012, p. 119–335.
- Szpunar 1987 – A. Szpunar, *Die Beile in Polen I*, PBF IX, 16, München, 1987.
- Șerbănescu, Trohani 1975 – D. Șerbănescu, G. Trohani, *Obiecte din cupru și bronz descoperite în județul Ilfov*, SCIVA 26, 4, 1975, p. 529–539.
- Teodorescu 1996 – V. Teodorescu, *Homoricium*, in: EAVR II (D-L), București, 1996, p. 240.
- Treherne 1995 – P. Treherne, *The warrior's beauty: the masculine body and self-identity in Bronze-Age Europe*, JEA 3, 1 1995, p. 105–144.
- Tudor 1982 – E. Tudor, *Neue Angaben zur frühen Bronzezeit in Südromänien*, Dacia NS 26, 1982, p. 59–75.
- Ulreich 1994 – H. Ulreich, *Die zeitliche Ordnung der Stabdolchlingen aus El Argar, El Oficio und Fuente Alamo (Almería, Spanien)*, Mitteilungen der Anthropologischen Gesellschaft in Wien 123–124, 1993–1994 (1994), p. 301–314.
- Vandkilde 1996 – H. Vandkilde, *From stone to bronze. The metalwork of the Late Neolithic and earliest Bronze Age in Denmark*, Aarhus, 1996.
- Vladár 1974 – J. Vladár, *Die Dolche in der Slowakei*, PBF VI, 3, München, 1974.
- Vulpe 1970 – A. Vulpe, *Die Äxte und Beile in Rumänien I*, PBF IX, 2, München, 1970.
- Vulpe 1975 – A. Vulpe, *Die Äxte und Beile in Rumänien II*, PBF IX, 5, München, 1975.
- Vulpe 1991 – A. Vulpe, *Neue Beiträge zur Chronologie und kulturellen Gliederung der Frühbronzezeit im unteren Donaugebiet*, Starinar 40–41, 1989–1990 (1991), p. 105–111.
- Vulpe 1995 – A. Vulpe, *Der Schatz von Perșinari in Südromänien*, in: A. Jockenhövel (ed.), *Festschrift für Hermann Müller-Karpe zum 70. Geburtstag*, Bonn, 1995, p. 43–62.
- Vulpe 1997 – A. Vulpe, *Tezaurul de la Perșinari. O nouă prezentare*, CCDJ 15, 1997, p. 265–301.
- Woidich, Szentmiklósi 2013 – M. Woidich, A. Szentmiklósi, *Uivar and Its Significance for the Beginning of the Early Bronze Age in the Romanian Banat*, in: V. Heyd, G. Kulcsár, V. Szeverényi (eds.), *Transitions to the Bronze Age. Interregional Interaction and Socio-Cultural Change in the Third Millennium BC Carpathian Basin and Neighbouring Regions*, Budapest, 2013, p. 233–244.
- Wüstemann 1995 – H. Wüstemann, *Die Dolche und Stabdolche in Ostdeutschland*, PBF VI, 8, Stuttgart, 1995.
- Zaharia 1987 – E. Zaharia, *La culture Monteoru. L'étape des débuts à la lumière des fouilles de Sărata Monteoru*, Dacia NS 31, 1987, p. 21–49.