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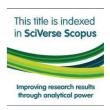
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Acquiring significance. Constructing warrior's identity at the Lower Mures Valley

Victor Sava*, Ana Ignat**

Abstract. Acquiring significance. Constructing warrior's identity at the Lower Mureş Valley. The main purpose of the present discussion is the identification of the evidences that bring into light the theme of war in the chronological context of the disappearance of Bronze Age tells and the emergence of large fortified settlements on the Lower Mureş Valley. Recent researches carried out in this area (for instance the settlement from Şagu "Sit A1_1" and the Bronze Age cemetery from Pecica "Sit 14" allowed us to find out more things about the social identity of the warrior, than the usual norms established by researchers. Moreover, the identity of the individual as a warrior during lifetime could be demonstrated by a series of enthesopathies, identified at the level of the upper limbs muscles. The individual activity of the deceased as a warrior could be also suggested by a closer analysis of the combinations in which the object parts of its funerary inventory appear. In most of the cases the funerary inventory could give us proofs related with the transformations that took place in the field of warfare. A closer look given at the weapons discovered on the Lower Mureş Valley, allows some observations to be made. For instance, we observed that a very small number of weapons are dating from Early Bronze Age, the majority of them are random discoveries and only one weapon is part of a funerary inventory. The situation radically changed together with the emergence of tellsettlements. In this particular timeframe, most of the weapons discovered belong to funerary inventories. In the Middle Bronze Age the number of the discovered weapons is increasing towards the end of the period. The deposits from Satu Mare and Păuliş are an example for this chronological sequence. The end of the Bronze Age brings within a significant number and variety of the discovered weapons. Specific for the chronological sequence discussed in the present article, Bz. B2-C is a continuity of the Middle Bronze Age traditions. Moreover, most of the weapons belong to a funerary context. In the same time, one could observe that a certain type of weapon (generally daggers and axes, commonly used in close range combat) provides the perfect accompaniment for the deceased.

Keywords: Late Bronze Age, Lower Mureş Valley, warriors, weapons, enthesopathies, social identity

Introduction

The main focus of our study is on four graves (Cx. 067, Cx. 075, Cx. 092 and Cx. 098) discovered in the Late Bronze Age cemetery from Pecica "Sit 14". The reason of choosing them for a discussion is the presence of weapons in their

funerary inventory. Moreover, the anthropological analyses shows the fact that three of these skeletons presented several enthesopathies at the level of the upper limbs. Unlike some other burials identified in the necropolis from Pecica "Site 14", the weapons discovered in three burials appear in

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extremely interesting funerary assemblages and in a single case not accompanied by other goods (Cx. 075).

The infrastructural development, mainly the investments in transport, water, energy resources and administrative systems that were carried out in the last years in the area of Lower Mureş, created a proper background for acquiring information on the Late Bronze Age society. In this context, due to these investments, sites as the fortification from Sântana "Cetatea Veche" (F. Gogâltan, V. Sava, 2010), the enclosure delimited by ditches from Csanádpalota (P. Czukor et al., 2013) or the rich settlement from Şagu "Sit A1_1" (V. Sava et al., 2011; V. Sava et al., 2012) were carefully investigated.

The necropolis from Pecica "Sit 14" identified on the section of the motorway Arad- Nădlac, is part of the archaeological objectives that we discussed above. The multilayered site is situated at 3.5 km NNE from the centre of Pecica Town (Fig. 1). The field surveys conducted in the area of the site, together with the maps dating from the middle of the XIXth century and the aerial photography show us clearly that the site is situated on the inferior part of a terrace. The research of 7762 m² lead to the identification of 37 burials, 23 of them were inhumation burials and the rest of 14 graves had been cremated (Fig. 2) (V. Sava, L. Andreica, 2013).

In most of the inhumation burials, the deceased was placed in crouched position. Some of the bu-

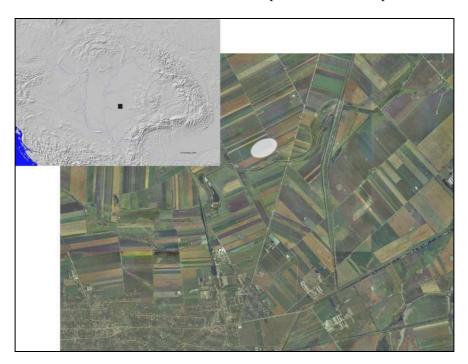


Fig. 1 - Aerial image of the northern area of Pecica, with the location of the cemetery

rials were disturbed by subsequent habitations and therefore in some cases the original position of the deceased could not be exactly determined. The funerary inventory is formed mainly from bronze objects as pins, bracelets, daggers and plaques as well as from a series of ceramic vessels that were placed around the legs and hips area. In the same time, in a couple of graves, around the lower limbs area, there were found animal bones, parts of the same funerary inventory. According to the typological characteristics of the funerary

inventory, there could be established two periods marking the chronological evolution of the graveyard. The inhumation burials as well as some incineration ones (those which have a funerary inventory similar to the first ones), belong to the chronologic sequence Bz. B2-C. The majority of the incineration burials contained different objects as funerary inventory, mainly small bronze objects, as multi-spiraled rings, loops and bracelets. The rest of the incineration burials could be included in Bz D/Ha A1chronological sequence.

We can state almost certainly that the biritual cemeteries, in which the inhumation burials prevail, are a characteristic of the Lower Mureş area. An example of this could be the necropolis from Tápé (O. Trogmayer, 1975), the funerary

discoveries from Felnac (V. Sava, L. Andreica, 2013, p. 63, note 51), Sântana "Cetatea Veche" (F. Gogâltan, V. Sava, 2010; V. Sava, L. Andreica, 2013, p. 68) and Pecica "Sit 14" (V. Sava, L. Andreica, 2013).

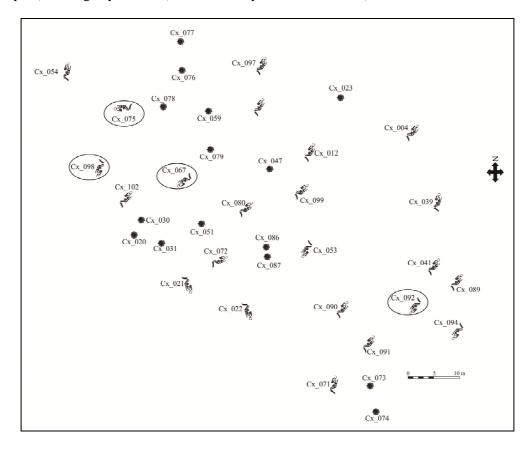


Fig. 2 - Plan of the Late Bronze Age cemetery

Besides de Bronze Age cemetery the site also includes an Early Bronze Age settlement, and another one that belongs to the IIIrd and IVth centuries A.D. There were also discovered traces from of a XXth century habitation. The successive settlements were demonstrated through the identification of 61 archaeological features, most of them pits, but also hearths or ditches. During the archaeological investigation we identified a depositional layer which goes from 0,4 m to 0,6 m, pendant of the three settlements. In this way, we could observe that the graves were placed in the Early Bronze Age layer. Several graves were disturbed by the IIIrd and IVth centuries A.D. settlement as well as by the XXth century one.

One of the main traits of the Lower Mureş area is the presence of the sites that begin their existence in Bz B2-C and continue during later periods as Bz D/Ha A1 (V. Sava, L. Andreica, 2013, p. 63). For instance, one of the best example we could give is the necropolis from Pecica, the one from Felnac "Complexul Zootehnic" (V. Sava, L. Andreica, 2013, p. 63) and the settlements from Şagu "Sit A1_1" (V. Sava et al., 2011), Tápé-Kemeneshát (V. Szabó, 2004b, p. 152; G. Sánta, 2010, p. 521), Tápé-Szőlőföldek (V. Szabó, 2004b, p. 152; G. Sánta, 2010, p. 521).

Description of the graves

Cx. 067; Fig. 3. The deceased was deposed in

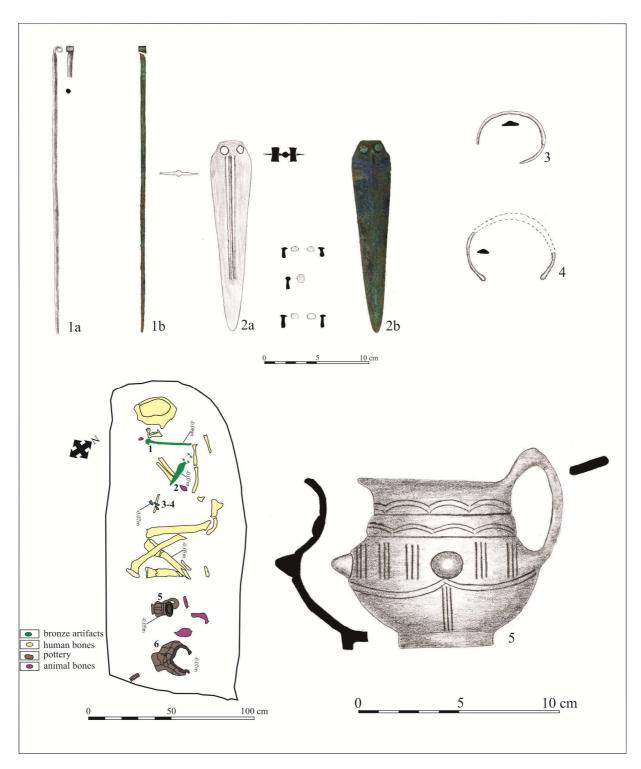


Fig. 3 - The funerary inventory of grave Cx. 067

crouched position, having the inferior limbs flexed towards his right side and the upper limbs brought towards the thoracic cavity. The orientation is S-N. At a first view it can be noticed that from the upper limbs the left humerus is missing. On the other side, the skull and the inferior limbs are very well preserved. The funerary inventory consists in several bronze artifacts placed together with two ceramic vessels. In the forearm area (probably the right one) a bronze dagger with two rivets, horizontally disposed was identified. In the soil around it there were found five more bronze rivets which are probably part of the same dagger. At the left wrist there were also identified two bronze bracelets. Moreover on some bones there have been identified traces of oxidation. Between the left humerus and a mandible there was found another bronze object, a pin. In the lower limbs area there was found a ceramic vessel, sitting horizontally,

having the rim towards West. Right in front of the rim, there were found three fragments of animal bones. Also in the northern part of the pit, at approximate 20 cm from the cup, there was found another large vessel. During the anthropological analyses there were identified a series of enthesopathies at the level of *Pectoralis major*, *Deltoid* and *Latissimus dorsi* muscles (humerus area). In the same time the bicipital tuberosity of the radius is very well-developed. At the level of the supinator muscle (ulna area) was identified another enthesopathy; adult male skeleton belonging to the 40-50 years age group (L. Andreica, 2014).

1. Roll-headed bronze pin (Rollenkopfnadeln) (Fig. 3/1a-1b); the artifact is covered in a dark green patina, corroded in patches; length: 26.4 cm, head width: 0.7 cm, head thickness: 0.65, maximum thickness: 0.45 cm, weight: 25 gr.

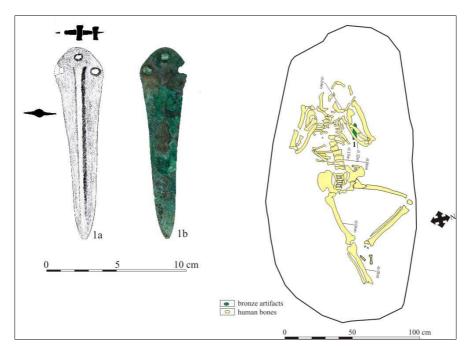


Fig. 4 - The funerary inventory of grave Cx 075

2. Dagger (Fig. 3/2a-2b); trapezoidal plate, has a central midrib and two deep notches, the tip is thinned and slightly rounded. It has two rivets (the maximum diameter of the rivets is of 0,75 cm). The artifact is very well preserved in a very good shape, it has a dark green patina, and is slightly corroded

in patches; width of the plate: 3.08 cm; length: 17.4 cm, blade width: 3.07 cm; thickness: 0.6 cm, weight: 90 gr.

- *bronze rivet*, it has randomly a dark green patina and is strongly corroded. The diameter of the head 0.65 cm, length: 1.1 cm, thickness 0.25



Fig. 5 - The funerary inventory of grave Cx. 092

cm, weight 0.2 gr.

- *bronze rivet*, it has a dark green patina in patches and is strongly corroded. The head is rectangular with rounded edges, head length 0.7 cm, head width 0.5 cm; length 1.2 cm, thickness 0.3 cm, weight 0.2 gr.
- *bronze rivet*, it has a dark green patina in pitches and is strongly corroded. The head is rectangular with rounded edges, head length 0.65 cm, head width 0.5 cm; length 0.9 cm, thickness 0.35 cm, weight 0.2 gr.
- bronze rivet, the artifact is strongly corroded and there can be observed a dark green patina. The head is rectangular with rounded edges, head length 0.7 cm, head width 0.5 cm; length 0.85 cm, thickness 0.35 cm, weight 0.2 gr.
- *bronze rivet*, the artifact is slightly corroded towards the base and there can be observed a dark green patina. The head is rectangular with rounded edges, head length 0.8 cm, head width 0.65 cm; length 1.2 cm, width 0.35 cm, weight 0.2 gr.
- 3. Bracelet (Fig. 3/3); (fragmentary) made from a triangular bar, with slightly rounded edges and open endings. The casting traces are not visible; it has a dark green patina preserved on a small proportion of the body, while the rest of the bracelet is covered in light green oxide; length: 11.2 cm, width: 1.5 cm, thickness: 0.4 cm, weight: 13 gr.
- 4. Bracelet (Fig. 3/4); (fragments) made from a slightly triangular bar, with rounded edges and open endings. Only one of the endings is well preserved. This is thickened and it has a triangular shape in section. The casting traces are not visible; there could not be observed casting traces, the object being very well smoothed; the dark green patina is preserved only on one part of the body, the rest of it being covered in a light green oxide; length: 5.55 cm, width: 0.9 cm, thickness: 0.25 cm, weight: 4 gr.
- 5. Biconical cup (Fig. 3/5); with slightly high handle; everted rim, globular body, annular base decorated with three circular prominences slightly sharpened, dragged from the body, disposed on the maximum diameter of the pot; The decoration consists in several registers: on the neck, one could distinguish two rows of fine incisions disposed in arcades; up to the maximum diameter we could identify ten rows of three fine incisions disposed vertically on the vessel body; these rows of

incisions are delimitated on the lower part by two rows of incisions disposed in garlands. Right under the maximum diameter of each prominence and under the handle the pot is decorated with a vertically row of three incisions; reducing combustion, black color, paste mixed with sand; smoothed surface; rim diameter 8.2 cm; maximum diameter of the pot 9.4 cm; thickness 0.6 cm; height 10.6 cm; base diameter 5×4.9 cm.

6. *Ceramic vessel*; due to the soil conditions and the high degree of fragmentation the restoration is impossible.

Cx 075; Fig. 4. The deceased was deposed in the dorsal decubitus position. Orientation of the grave is W-E. The deceased has his upper limbs flexed, the hands placed towards the chest, and the left leg stretched, while the right one is flexed with the knee towards the left side. At the level of the left forearm there was found a very well preserved bronze dagger. We couldn't observe any enthesopathies; adult male skeleton belonging to the 35-45 years age group (L. Andreica, 2014).

1. Dagger (Fig. 4/1a-1b); semi-circular plate and central midrib; straight blade and three rivets from which only two are preserved; the tip is thinned and slightly rounded. The artifact is very well preserved. It has a dark-green patina and is corroded in patches; length: 14.5 cm, width of the supporting plate: 3.06 cm, thickness: 0.4 cm, weight: 32 gr.

Cx. 092; Fig. 5. The deceased was deposed in the dorsal decubitus position. Orientation of the grave is S-N; the upper limbs were flexed, the hands were put on the thoracic cavity, and the inferior limbs were flexed with the knees towards the right side. The funerary inventory consists in several artifacts as: right next to the left scapula there was identified a bronze axe (it was probably held in the right hand as the left forearm passes over the lumbar vertebrae but the right forearm even thought passes over the lumbar vertebrae is much more flexed); in the area of the clamping tube of the axe there were identified wood traces. Also, parallel with the maxillary there was discovered a pin, having the head towards the right humerus, and the tip towards the axe. In the inferior limbs area there was discovered a big quantity of animal bones.

At approximately 20 cm from the skull there were discovered several potsherds belonging to a

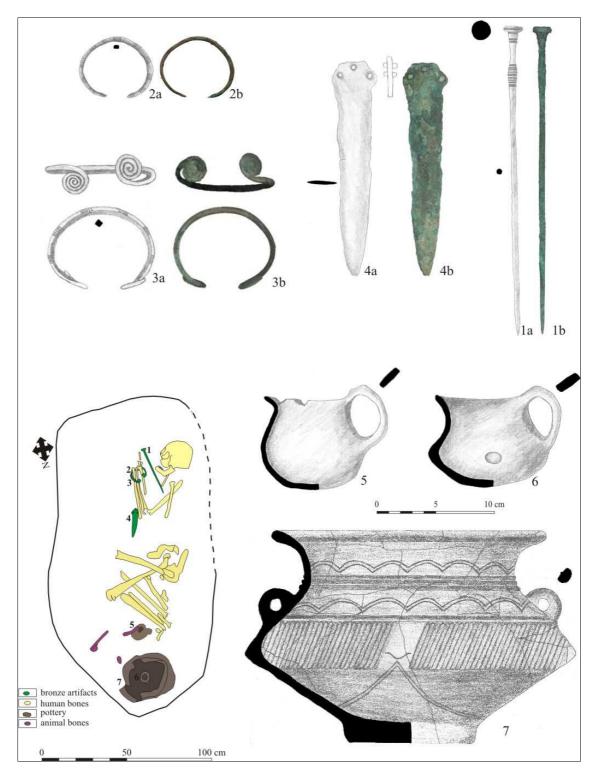


Fig. 6 - The funerary inventory of grave Cx. 098

cup and a goblet. The anthropologic analyses lead to the conclusion that we are dealing with a male skeleton belonging to the 40-44 years age group.

There were also identified a series of enthesopathies at the level of *Pectoralis major* and *Deltoid muscles*. The bicipital tuberosity of the radius is extremely pronounced. In the spine area there were observed Schmorl nodes, both on the inferior and superior surfaces of the lumbar vertebrae. On the posterior surface of the femurs diaphysis there could be also observed a rough line, strongly marked (L. Andreica, 2014).

- 1. Discand spin headed axe (Nackenscheibenäxte) (Fig. 5/1a-1b); the artifact is very well preserved, including the spin. On its surface there are visible a few casting traces. Almost the entire surface is covered in a dark green patina but in some places it has light green oxidation marks. The spin has conical shape, height: 0.35 cm, the diameter of the disk: 4.95×5 cm. thickness 0.35 cm. The section of the bar between the disk and the clamping tube is rectangular, length 1.4 cm; The blade has two ribs on each side, in section it has a rectangular shape, the maximum width is 3.5 cm. The clamping tube is thicker towards the edges; its maximum diameter is 1.8 cm. The total length of the axe is 18.3 cm; the weight: 279 gr.
- 2. Pin with perforated neck (Trompetenkopfnadeln) (Fig. 5/2a-2b); thickness 0,3 cm. the upper part of the body is made from a circular bar, 0,75 cm thick. The bronze pin has a small perforation of approximately 0,1 cm in diameter. The rest of the pin is made of a rectangular bar, being thinner and sharper towards the tip; the artifact is covered in a dark green patina, corroded in patches; length: 19.9 cm; head diameter: 1.8×1.6 cm; weight: 33 gr.
- 3. *Cup* (Fig. 5/3); (possible with slightly high handle). The cup has everted rim and globular body, decorated with circular prominences disposed on the maximum diameter of the body, intercalated by groups of three vertically disposed grooves; reducing combustion, black color, paste mixed with sand; smoothed surface; height: 7.5 cm; maximum diameter of the belly: 7.5 cm; base diameter: 2.7 cm; thickness: 0.44 cm.
- 4. *Biconical goblet* (Fig. 5/4); globular body and everted rim, having the handle disposed on the neck. In between handles, the vessel is decorated with two horizontally incised lines from which start

incised triangles with the tip directed down, the rest of the body is decorated with two circular prominences placed between incisions disposed in triangular shape; reducing combustion, black color, paste mixed with sand, the exterior surface polished; approximate height: 30 cm; approximate rim diameter: 25 cm; approximate belly diameter: 29 cm; base diameter: 9 cm; thickness: 0.9 cm. Cx. 098 (Fig. 6). The skeleton was identified in a crouched position, having the head towards South, facing East and the inferior part towards North. Right after the identification we have noticed that the deceased has a rich funerary inventory, several bronze artifacts being discovered. For instance, under the mandible there was discovered a bronze pin, on the upper limbs there were found two bracelets; moreover, a dagger was placed under the arms; in the lower limbs area we have identified several animal bones; a cup was diagonally disposed under the tibia and next to the phalanges there was placed a biconical vessel which had another small cup inside; the north-western part of the burial pit is cut by Cx. 038 (pit from IIIrd-IVth centuries A.D.). The skeleton belongs to a male of 35-39 years old. As a result of the anthropological analysis there were identified a series of enthesopathies. At the level of the upper limbs there could be observed some transformations, which look like bone ridges and a bone erosion in the insertion site of tendons of Deltoid, Pectoralis major and Latissimus dorsi muscles. The general image of this individual's skeleton indicates a strong man. On the posterior surface of femoral diaphysis, there can be -observed a rough line strongly marked. In the area of the spine there were observed the Schmorl nodes both on the inferior and superior surfaces of the lumbar vertebrae (V. Sava, L. Andreica, 2013).

- 1. Seal headed pin (Petschaftkopfnadel) (Fig. 6/1a-1b); the superior part of the body is decorated with two rib rows, on the edge of the head there can be seen a circular rib; the artifact is covered in a dark green patina, corroded in patches; length: 27.7 cm, head diameter: 1.8×1.7 cm, maximum thickness: 0.74 cm, weight: 55 gr.
- 2. Bracelet (Fig. 6/2a-2b); made of a rectangular bar with rounded edges, narrow, with thin and open endings, the body of the bracelet is decorated with 12 groups of five-six symmetrically disposed ridges; there are no casting traces, the artifact was finely finished; it is covered in a light green patina

almost on the entire surface, while the rest is covered in a light green oxide; length: 16.9 cm, interior diameter: 5.8×4.92 cm, exterior diameter: 6.5×5.38 cm, width: 0.48 cm, thickness: 0.4 cm, weight: 30 gr.

- 3. Bracelet (Fig. 6/3a-3b); made of a rhombic bar with spiraled endings (made from a round bar); the artifact is decorated with six groups of seveneight ridges; the bracelet is finely finished; a dark green patina is preserved almost on the entire body, one of the endings is strongly corroded; length of the bar : 22 cm; interior diameter: 5.7×4.5 cm; exterior diameter: 6.42×4.8 cm; thickness: 0.4 cm; weight: 14 gr.
- 4. *Dagger* (Fig. 6/4a-4b); trapezoidal hafting plate, flat blade, with three rivets; the artifact is strongly corroded; dimensions of the hafting plate: 4.1 cm; length: 19 cm, blade width: 3.08 cm, thickness: 0.28 cm, weight: 61 gr.
- 5. Biconical cup with slightly high handle (Fig. 6/5); everted rim and globular body; reducing combustion, black and reddish color, paste mixed with sand, smooth surface; rim diameter: 7.6×7.3 cm; maximum diameter of the belly: 8.2×7.9 cm; thickness: 0.4 cm.
- 6. Biconical cup with slightly high handle (Fig. 6/6); everted rim and globular body, decorated with three circular prominences disposed on the maximum diameter of the belly; reducing combustion, black color, paste mixed with sand, the exterior surface polished; rim diameter: 7.6×7 cm; maximum diameter of the belly: 8.7×8.6 cm; thickness: 0.5 cm (discovered inside the biconical vessel with everted rim).
- 7. Biconical vessel with everted rim (Fig. 6/7); short neck, two handles and foot; the inferior part is decorated with an incised four angled star motif, the maximum diameter of the body is decorated with narrow cannels diagonally disposed and with four prominences, the neck has two registers, decorated with incised arcades, separated through ribs, the handles have a midrib, reducing combustion, light-reddish color both on the interior and exterior, the middle is black, paste mixed with sand, smoothed; rim diameter: 24.2×25 cm; belly diameter: 31×30.2 cm; base diameter: 10.7×10.5 cm; thickness: 0.9 cm.

Archaeo-zoological analysis (Fig 7)

The animal bones discovered in the inferior limbs area, part of the funerary inventory of Cx.

067 could be attributed to at least two different species. A molar fragment which presents strong traces of deterioration belongs to *Equus*. Other two bone fragments, from a scapula and a humerus are characteristic to *Sus domesticus*. The bone fragments attributed to this species belong to an adult more than 1 year old. The *humerus* there have been identified the traces left by some rodents, which probably appeared after deposition. There are two bones are extremely fragmentary therefore it is almost impossible to identify the specie they belong to. On one of the fragments there were identified cutting traces.

The animal bone fragments discovered in the area of the inferior limbs of the deceased in Cx. 098, belong to *Sus domesticus*. The two bones represent a radius and an ulna. Both of them belong to the right side of a specimen that was maximum 42 months old. There is a big probability the two bones to be part of the same individual because they have the same morphologic traits. In the same context there was found a fragmented femur which probably to a big animal.

In both burials, Cx. 067 and Cx. 098, the food deposition is characterized by the presence of *Sus domesticus*. Another common trait is the fact that in both cases there were selected anatomical parts from the right side. The four *Sus domesticus* bones belong to individuals between 1 year and 42 months old.

The Chronological Setting

The final stage of Bronze Age in the Lower Mureş area, begins in the moment when the first signs of the Tumulus Culture spread over wide areas (Bz. B2-C), and continues during later phases Bz D, Ha A1 (M. Gumă, 1993, p. 150; M. Gumă, 1997, p. 53; F. Gogâltan, 1993; F. Gogâltan, 1996; F. Gogâltan, 1998, 184), probably until the Ha B1 period (V. Szabó, 2004a). The time frame corresponding to the inhumation burials from Pecica "Sit 14" (Bz. B2-C) is contemporary with the disappearance of bronze age tells (Periam "Movila Şanţului", Pecica "Şanţul Mare", Sântana "Tell Nordic") and the emergence of large fortified settlements (Sântana "Cetatea Veche", Munar "Wolfsberg", Corneşti "Iarcuri").

Most of the bronze objects, found in these burials represent very good chronological indicators. Among the artifacts that are part of the funerary inventory of the burial Cx. 067, there is a rolled-headed bronze pin (Fig. 3/1a-1b)

(Rollenkopfnadeln), which has a wide geographical and chronological spreading, but they were also found in the contemporary burials from Tápé (O. Trogmayer, 1975, taf. 11/130.2; 27/306.1; 33/375; 43/495), Szentes "Nagyhegy" (M. Nagy, 2005, kép. 2/12) and Kiskundorozsma (I. Foltiny, 1957 taf. X/1). In the same burial there were also found two bracelets with triangular bar in section (Fig. 3/3-4), which have good analogies in the so-called "hoard Pecica I" (M. Petrescu-Dâmboviţa, 1998, taf. 112/1515-1517) but also in the necropolis from Kiskundorozsma (I. Foltiny, 1957, taf. X/10a-10b, 14a-14b) and Szentes "Nagyhegy" (M. Nagy,

2005, kép. 1/12). The clearest chronological framing is given by the spin and disc-headed axe (*Nackenscheibenäxte*), type B1, variant Ighiel (Fig. 5/1a-1b-1c), which was discovered in burial Cx. 092. In this area there were discovered axes of the same type at Cruceni in burial no. 55, together with a seal-headed pin (*Petschaftkopfnadeln*) (Al. Vulpe, 1970, p. 75; M. Gumă, 1997, Pl. LXXXI/E.1-3). Other examples of similar burials can be found at the site of Sombor (W. David, 2002, Taf. 340/12-13), Senta (W. David, 2002, taf. 342/5) and Kiskunmajsa (A. Mozsolics, 1973, taf. 5/1).

Grave	Body parts	Position	Equus sp. (horse)	Sus domesticus (pig)	unknown sp.	Big s. mammals	Butchery marks	Age
67	Molar		1					
67	Scapula	Right		1				> 1
								year
67	Humerus	Right		1				< 42
								months
67	Rib					1		
98	Ulna	Right		1			cutmarks	< 42 months
98	Radius	Right		1				< 42 months
98	Femur		1					
67	Long bone				1			
NISP			2	4				
MNI			2	2				

Fig. 7 - Archaeozoological primary analysis

In this context there can be also mentioned the two spin and disc-headed axes from the so-called "hoard Pecica I"; as we mentioned with several occasions (V. Sava, L. Andreica ,2013, 57-58), through the content of discovery and the type of materials, it can be stated that the bronze artifacts from "hoard Pecica I" reflect the funerary inventory of some burials. From a chronologic point of view, the seal-headed pins can be found in the middle and late part of the tumular-like discoveries (M. Novotná, 1980, p. 73; F. Innerhofer, 2000, p. 144-145). This is the reason why the bronze pin discovered in burial Cx. 098 (Fig. 6/1a-1b) represents a good chronological indicator. The bracelet made of a rectangular bar with rounded endings (Fig. 6/2a-2b), discovered in the same burial, Cx. 098, has a wide spreading during the Late Bronze Age (M. Nagy, 2005, p. 14), but such artifacts are also present in the tumular discoveries (T. Kovács 1975, p. 45); the

bracelet with spiral endings (Fig. 6/3a-3b) is a good indicator for Bz B2-C, as well as the three daggers (Fig. 3/2a-2b; 4/1a-1b; 6/4a-4b) (T. Kovács, 1975, p. 45).

Regarding the ceramics, the biconical vessel (Fig. 6/7) found in burial Cx. 098 has some special features in comparison with the ones discovered in the necropolis from Pecica and those from the Lower Mureş. Its closest analogies in shape can be encountered in the central-northern part of Hungaria, in the Piliny culture (T. Kemenczei, 1984, taf. I/22; VII/26; XI/5). Other alike vessels were found in the incineration necropolis from Kozárd, Litke and Jászberény "Cseröhalom"; the median area of the pot decorated with prominences and cannels could be a characteristic of Piliny culture, while the incised arcades from the neck area have good analogies in the Lower Mureş area and the North Banat area (Giroc "Mescal" (Al. Szentmiklosi, 2009, pl. LXVII/1-2, 6, 8; LXVIII/69; LXXIII/4; LXXIV/10), Sântana "Cetatea Veche" (F. Gogâltan, V. Sava, 2010, fig. 37), Şagu "Sit A1_1" (V. Sava et al., 2011, fig. 147; 178; 180) or Felnac "Complexul Zootehnic". The decoration made of arcades disposed in different registers appears in the Lower Mureş area begins in the Middle Bronze Age, being specific to the ceramics in Vatina/Corneşti-Crvenka culture. This specific decoration could be also found at Socodor (F. Gogâltan, 1999a), Satu Mare (F. Gogâltan, 2004), Macea (V. Sava, 2009), or Sântana "Tell nordic" (this decoration which is specific to Vatina ceramics can be found in time until the final period of Bronze Age). In burial Cx. 067 there was discovered a cup decorated with arcades under the

rim (Fig. 3/5); the most relevant analogies can be found in burial 85 from Cruceni (M. Gumă, 1997, pl. LXXXII/9) and in the settlement from Şagu "Sit A1_1" (V. Sava et al. 2011, fig. 101, Cx_93; fig. 180/Cx_93). Other cups, still unpublished, decorated in the same manner, were discovered at Felnac "Complexul Zootehnic" and at Zimand. The globular goblet (Fig. 5/4) from Cx 092 has approximate analogies in burial 82 at Cruceni (O. Radu, 1971, fig. 2; M. Gumă, 1997, pl. LXXXII/1) and in the necropolis at Szeged "Bogárzó" (I. Foltiny, 1957, taf. I/5); regarding the cup (Fig. 5/3) from the same burial, there can be mentioned a similar one discovered at the end of the XIXth century at Zimand.

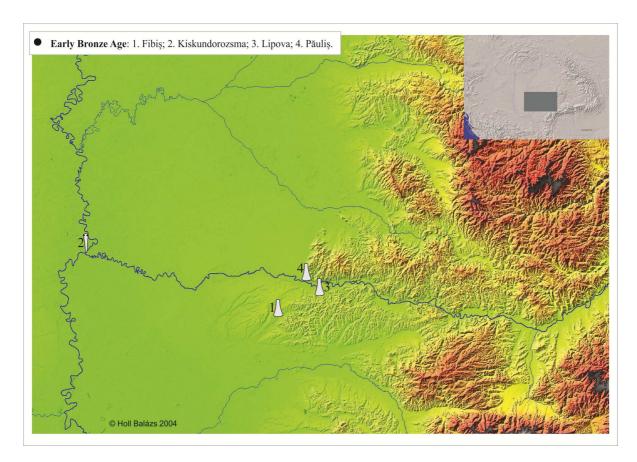


Fig. 8 - Early Bronze Age. Weapon distribution at the Lower Mureş Valley

The stratigraphical context and the typological traits of the artifacts, part of the funerary inventory of these four graves we are discussing on, are straightening our dating of Pecica "Site 14" in the chronological sequence Bz. B2-C.

Discussion

A recent study regarding the traces left by war and warriors at the end of Bronze Age on the Lower Mureş Valley (F. Gogâltan, V. Sava, 2012) was also concerned with mentioning the most

relevant inquiries on the subject. Hence, we are not going to resume that discussion in the current paper. Still, we would like to stress once again that the topic on the war in the Bronze Age Societies has been widely debated by a high number of researchers (K. Kristiansen, 1998, p. 63-123; R. Osgood, 1998; A. Harding, 2000, p. 271-307; K. Kristiansen, T. B. Larsson, 2005, p. 142-250; A. Harding, 2007).

From a theoretical viewpoint, most scholars agree that the evidences of warfare inside a society are given by the presence of fortified settlements,

the diversity of weapons (axes, spear heads, daggers, swords etc.), as well as by some skeletal evidences for trauma. Iconographic representations, such as menhirs, frescoes, rock art etc., are also taken into account as relevant evidences for war related activities.

In this regard we will mention below the main evidences of Bronze Age warfare on the Lower Mureş and outline some specific features of the area. A research upon the weapons that were discovered in the Lower Mureş area was thought to offer important evidences about the intensity of

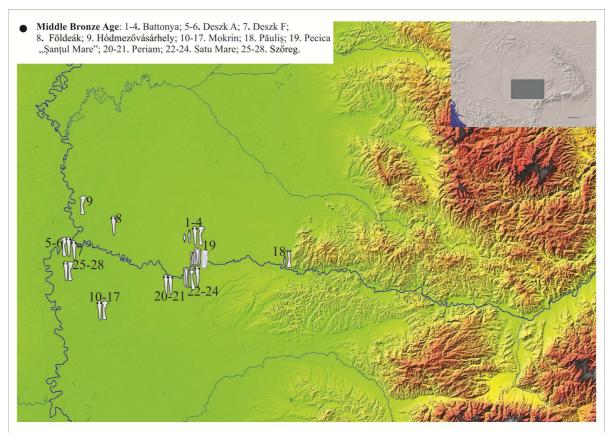


Fig. 9 - Middle Bronze Age. Weapon distribution at the Lower Mureş Valley

warfare during this period. For this purpose, we also thought necessary to elaborate of a small catalogue, comprising the Bronze Age weapons discovered in this area that will continue the effort of presenting the funerary discoveries specific to Bz. B2-C from the necropolis at Pecica "Sit 14". However, we decided to exclude those weapons that present doubts in what concerns their utility, such as flat axes, the stop-ridge axes (*Absatzbeile*) and the socketed axes. We also added to our

catalogue and statistics the moulds used at casting the weapons. Since no studies concerning the usage traces were provided, we cannot state at this point which of the 114 weapons, discovered on the Lower Mures, were actually used in combat.

In what concerns the distribution of these types of weapons up to this sequence Br. B2-C (Fig. 8-10) we would like to point to the fact that only a few discoveries are representative to the Early Bronze Age (Fig. 8) in comparison to other time

periods (Fig. 11), respectively three axes and a dagger (Fig. 12). Among these, only the dagger from Kiskundorozsma was identified in a funerary context, while the axes were random discoveries (Fig. 13, 14).

There can be noticed a strong connection between the emergence of tell-settlements (Semlac, Pecica, Periam, Klárafalva etc.) and large cemeteries (Mokrin, Battonya, Deszk, Szőreg etc.) on the one hand and the increasing number of weapons (Fig. 11), on the other hand. The vast majority of these weapons were identified in funerary contexts. Towards the end of the Middle

Bronze Age weapons occur also in hoards, such as those from Satu Mare and Păulis (Fig. 13, 15).

Taking into account the fact that most of the weapon moulds were discovered at Pecica "Şanţul Mare" we can certainly state that this tell settlement represented an important metallurgical centre at the time, being most likely specialized in producing weapons (daggers, spearheads, Hajdúsámson- type axes). Another mold fragment for casting daggers was unearthed in a settlement from Satu Mare.

Both axes and daggers have a wide spreading during this timeframe (Fig. 9), but there are

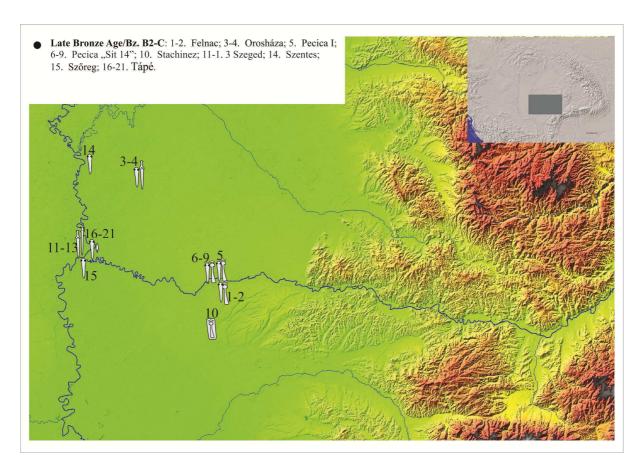


Fig. 10 - Late Bronze Age/Bz. B2-C. Weapon distribution at the Lower Mures Valley

differences in what concerns the way the society relates to each of these two types of artifacts. The majority of the axes represent singular discoveries, while few of them were found in funerary contexts. On the other hand, most of the daggers were revealed in funerary contexts. These two tendencies can be traced up to the Early Bronze Age. Thus, daggers are mostly found in funerary contexts, while axes are part of singular discoveries. Alongside these weapon discoveries, we also note four spearheads, out of which, three are part of the so-called "hoard from Păuliș".

Withal, a bone arrowhead was discovered in burial 35 at Battonya.

During the end of Bronze Age, the number of weapons increases and their types diversify (Fig. 16-18). Despite the fact that during this period one can notice a wide spreading of spearheads and arrowheads, daggers maintain their prevalence among weapon discoveries. At this point rapiers and swords make their appearance alongside the already mentioned weapon types. In order to understand better Late Bronze Age, the discussion should be divided in several well defined chronological sequences (Bz B2-C, Bz D-Ha A1, Ha A2-Ha B). Hence, for the Bz B2-C period the daggers keep being the most frequent finds, followed by arrow heads and axes; the vast majority of them were discovered in funerary

contexts (Fig. 10). For the same sequence, we can only mention one rapier discovered in the Tisa river bed (T. Kemenczei, 1988, no. 159, taf. 14/159). According to the way in which the society relates in Bz B2-C to the weapon deposition, a lot of similarities can be found with the previous periods. Instead, for Bz D-Ha A1 and Ha A2-Ha B, since most of artifacts were found in singular depositions, one can assume a major change in the weapon deposition phenomenon. Several weapon discoveries, dated in the first of these two periods, namely Bz D-Ha A1, were made in the fortified settlement at Sântana "Cetatea Veche". We can summarize that swords and spearheads prevail in this chronological sequence, although we can also mention four daggers and two arrowheads.

The emergence of fortifications represents an

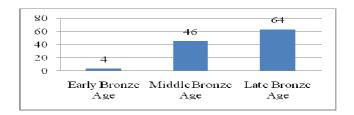


Fig. 11 - Weapon distribution according to the period

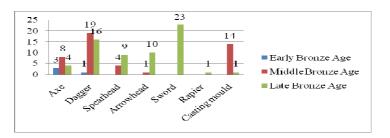


Fig. 12 - Weapon distribution according to the weapon type and period

indirect proof of the state of conflict in a certain society. For the Bronze Age period, the first fortified settlement, according to archaeological data obtained so far, is the tell-settlement at Semlac "Livada lui Onea". The recent field investigations showed that the settlement was probably enclosed by a ditch of large dimensions. From a chronological viewpoint, the tell functioned during the phases IIb-III of the Early Bronze Age (F. Gogâltan, 1999, p. 203). Several excavations were also led at the tell-settlement from Pecica "Şanţul Mare" (E. Dörner, 1978), but unfortunately none of them had as a purpose the investigation of the

fortification system. Taking into account the fact that the Bronze Age tell was overlapped by a dacian settlement the dating of the defensive ditch becomes problematic (O'Shea *et al.*, 2005). A recent survey conducted on the Middle Bronze Age tells from Periam "Movila Şanţului" and Munar "Wolfsberg" let to the identification of ditches surrounding the settlements. Given that none of these mentioned tells ditches were investigated by excavations we can not venture to draw further conclusions about their purpose. Most likely the end of the tell- settlements in the mentioned area occurs around 1600 BC, at least for Pecica

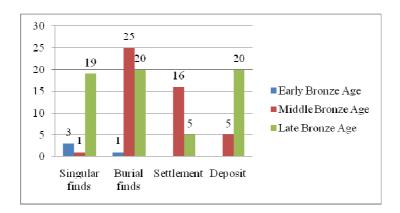


Fig. 13 - Weapon distribution according to the type of discovery and period

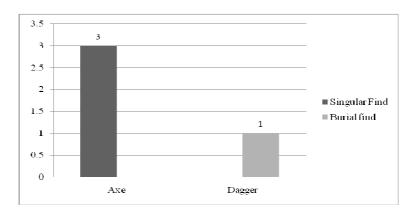


Fig. 14 - Early Bronze Age. Weapon distribution according to the type of discovery

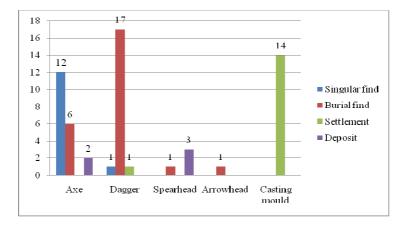


Fig. 15 - Middle Bronze Age. Weapon distribution according to the type of discovery

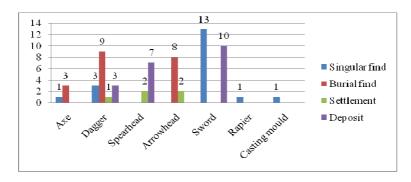


Fig. 16 - Late Bronze Age. Weapon distribution according to the type of discovery

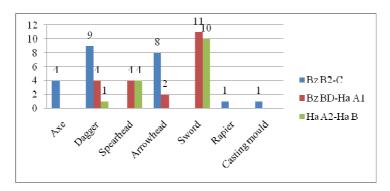


Fig. 17 - Late Bronze Age. Weapon distribution according to the type of discovery and chronological sequence

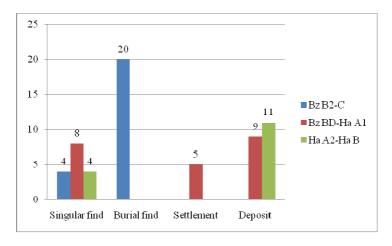


Fig. 18 - Late Bronze Age. Weapon distribution according to the type of discovery and chronological sequence

"Şanţul Mare" (J. O'Shea et al., 2011). The following time frame, Bz B2-C, to which the cemetery from Pecica "Site 14" (V. Sava, L. Andreica, 2013), Tápé (O. Trogmayaer, 1975) and the settlements from Şagu "Sit A1_1" or Păuliş "Dealul Bătrân" belong to, are characterized by the lack of fortification elements.

Things change radically in Bz D-Ha A1 period, when there were build impressive fortifications that surrounded hundreds of hectares. In the summer of 1939, J. Banner excavated a small trench in the fortification from Orosháza "Nagytatársánc" (J. Banner 1939), which surrounds more than 100 hectares. Banner considered that the earth vallum was of 1.55 m height and the maximum depth of the defensive ditch was of 2.06 m. During the same year, 1939, M. Moga excavates a test trench in the fortification from Cornești "Iarcuri" (F. Medeleț, 1993). Later, in 2007, multi-purposed researches have been carried out (A. Szentmiklosi et al., 2011). According to the result of the archaeological researches, the fortification has four enclosures. Only two of them being surrounded by an earth vallum, ditch and palisade; the first enclosure covers a 72 ha surface, while the second one 213 ha (D. Micle et al., 2006; D. Micle et al., 2008). The other two enclosures where not been researched by excavations and most likely the third and the fourth enclosures are just ditches, like the ones from Csanádpalota.

Another very important fortification is Santana "Cetatea Veche"; here the archaeological excavations began in 1963 as a consequence of the field researches carried out by E. Dörner and M. Rusu (M. Rusu et al., 1996; M. Rusu et al., 1999). The main purpose of the newest research carried out in 2009 was the excavation of the fortification system of the third enclosure (F. Gogâltan, V. Sava, 2010). In this area, the defensive ditch had a maximum opening of 10 m and 2.86 m depth; the width of the earth vallum is of 26.82 m and the height of 2.44 m; in the area where there was supposed to be the palisade, was identified a massive structure, of approximately 1 m width, with a preserved height of 0.40 m. The excavation of the IIIrd enclosure, lead to the identification of an area that may have been the subject of an attack (F. Gogâltan, V. Sava, 2012, p. 68-69, fig. 7). Both from the excavation and from several field surveys, we could observe that the northern part of the IIIrd

fortification system was affected by a strong fire. During the unveiling of the fortification elements we have discovered a series of sling projectiles, made of clay and disposed close to the wall. Moreover behind the earth *vallum* we discovered a bronze arrowhead. All these elements indicate a massive attack upon the fortification from Sântana "Cetatea Veche", which lead to the fire that swept at least its northern part.

Another fortification of this kind, smaller than Sântana "Cetatea Veche", is the Munar "Wolfsberg". This one encloses over 15 ha (F. Gogâltan, V. Sava, 2010, p. 57-61). Recently, archaeological researches were carried out at the fortification from Csanádpalota. The earth vallum from Csanádpalota surrounds approximately 8-9 ha (P. Czukor et al., 2013; A. Priskin et al., 2013). The excavations from 2013 lead to the discovery of a defensive system made from an earth vallum (destroyed by modern agriculture) and also from a palisade, in front of which there were built two ditches of approximately 3 m depth. Around this fortified enclosure there were noticed a series of ditches which surround a surface of approximately 400 ha.

Another important evidence in order to trace warfare is the identification of skeletal trauma. Evidences of this kind were found in the Middle Bronze Age cemetery from Battonya. For instance in grave no. 92, belonging to an adult male deposed in the crouched position, holding an axe in his right hand and a dagger in the left one, on the skull there was identified a healed lesion (F. Szalai, 1999, abb. 5/2). Taking into account the fact that the male was buried with weapons, we could interpret, whit caution, the injury as the result of a violent conflict he took part at.

Other traces of warfare can be encountered among the burials from Tápé. For example, from grave no. 26 (female skeleton) were recovered two arrowheads; one of them was found between the left *humerus* and the rib cage, while the other one was found near the right wrist. Another example is grave no. 307 (male skeleton); in the 3rd and 11th vertebrae there were identified two bronze arrowheads. Another possible case of violence could be spotted at the individual nr. 508, in the grave of which there were identified three arrowheads, one of them being found under the left mastoid. It is very difficult to identify the nature of

the injuries suffered by the deceased individuals found in the cemetery from Tápé, mostly because O. Trogmayer, hasn't made the necessary observations in these cases.

A skull fragment and some other human bones have been discovered in the defensive ditch of the IIIrd enclosure of the fortification from Sântana "Cetatea Veche". The anthropological analysis made by L. Andreica confirms that the skull fragment, belonging to a male of 20-30 years old, has two unhealed lesions, which occurred through striking (F. Gogâltan, V. Sava, 2010, p. 36; V. Gogâltan, V. Sava, 2012, p. 70, fig. 10).

According to the evidences from Early Bronze Age, there are few traces of warfare. The small number of weapons identified, the absence of fortification systems, and the lack of the paleopathologic evidences sustain this theory. Towards the end of this period and the beginning of Middle Bronze Age, together with the appearance of tell-settlements and cemeteries, the number of the discovered weapons grows considerably. In the same time, there are several tell-settlement enclosed by ditches. As an observation worth mentioning, most of the weapons were discovered in a funerary context (the majority of them being daggers). Among the graves which presented in their funerary assemblages weapons, 14 of them contain only one dagger and four of them (Battonya no. 122, Mokrin no. 208, no. 211 and Szőreg no. 190) contain axes. Grave no. 92 from Battonya and grave no. 2 from Deszk contain both an axe and a dagger. An interesting burial pattern displays grave no. 35 from Battonya. In this particular case the funerary assemblage are pointing to an interesting combination of weapons: a dagger, a spearhead and an arrowhead. As for the age and sex of the individuals that were buried with weapons we can see that most of them are adults and mature men. There are though certain exceptions, in grave no. 122 from Battonya a male belonging to the senilis age group, was buried with an axe; at Mokrin grave no. 91 belongs to another senilis male, having a dagger among his funerary inventory; also at Mokrin, grave no. 211, male skeleton, belonging to the maturus-senilis age group, was deposed together with an axe. If we are to discuss gender, a single female burial which displayed weapons in her funerary assemblage was discovered at Battonya (grave no. 116); the dagger was discovered in the proximity of the skull; it has

to be mentioned that this burial was disturbed, this is the reason why the dagger deposition is not certain.

A more detailed analysis of the weapons identified in burials together with the combination they appear in, reveal information that would support the recomposition of the warriors panoply and their manner of fighting as well. According to the information we have, one could observe that the majority of weapons discovered in graves were daggers or axes and just few with both types of weapons. If we take into account these observations, we could distinguish a tactic that can be described as close range combat. It is very likely that small-scale battles in this period were fought by champions, probably the same individuals found in the graves we have discussed above.

In order to understand better the cultural changes that took place at the end of the Bronze Age, the discussion should be divided in several well defined chronological sequences. During Bz B2-C, there are no identified fortification elements, but there is an obvious persistence in Middle Bronze Age traditions, through the presence of the weapons in burials, generally daggers and axes. This tradition of the close range combat disappears starting with Bz D-Ha A1. The beginning of Bz D-Ha A1 marks a changing in tactics, the daggers, axes and rapiers were replaced by swords and spears. If before, the rapier or dagger obliged the warrior to "stab" its opponent, by using the sword the warrior has a larger movement liberty as he can both slash and thrust his opponent (R. Osgood, 1998, p. 13-14). On the Lower Mureş were discovered a large number of swords and spearheads (Fig. 19). The changing in the tactics is also reflected in the arrival of impressive fortifications with several enclosures. archaeological excavations carried out at Sântana and Cornesti revealed that both fortifications were burned. Moreover at Sântana, we have identified an area where we have evidences about a possible attack upon the fortification.

The increasing number of weapons, arrival of large fortifications, the wealth (reflected in bronze depositions and gold hoards) and the rising population density (reflected in the growing num ber of settlements), represent possible causes that determined the transformations of the type of conflicts. If previously, the conflicts took place at a smaller scale with a smaller number of participants,

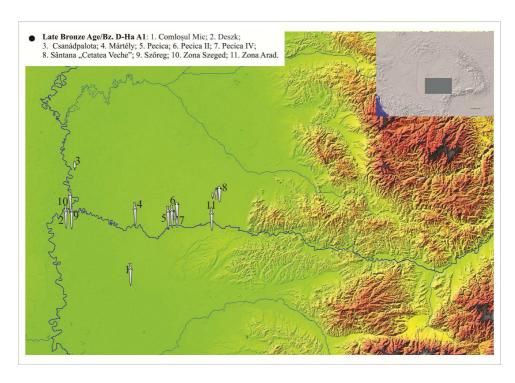


Fig. 19 - Late Bronze Age/Bz. D-Ha A1. Weapon distribution at the Lower Mureş Valley

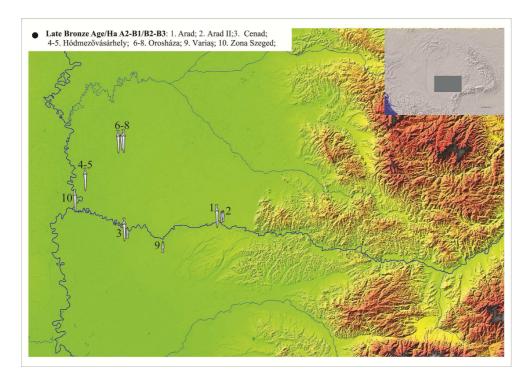


Fig. 20 - Late Bronze Age/Ha A2-B1/B2-B3. Weapon distribution at the Lower Mureș Valley

now, in the Bz D-Ha A1 period, we are dealing with warrior groups, capable of following rigorous tactics which had as purpose the defense or conquest of certain fortifications as well as organize expeditions in the neighboring regions.

This major transformation in Bronze Age society is also reflected in the way in which individuals relate themselves to weapons. Until the Bz B2-C period, most of the weapons are deposed in burials, closely related with their owners. Furthermore, starting with the Bz D-Ha A1 period, weapons are found in hoards or are singular findings as we could also observe in Ha A2-B1/B2-B3 (Fig. 20).

This situation encountered in the Lower Mureş area might also reflect the individual's attitude towards his identity as a warrior. An obvious connection can be noticed between, on one side, the occurrence of weapons in burials and small-scale conflicts carried out by champions, and on the other side, between the deposition of weapons in hoards or singular discoveries and larger-scale conflicts lead by groups of warriors.

*

If up until this point we have searched for evidences in order to identify the traces of warfare, we will try further to answer to the following question: which is the modality of identifying warriors, those who effectively took part in combat? For a proper answer it is important to take into account A. Harding's opinion: A discussion of warfare, however, needs to be able to identify people, or groups of people, who might have taken part in fighting, and this is usually taken to mean people buried with weapons. At the start, we should consider this question: how do we define warriors in the archaeological record? The short answer to this question is: by the weapons that people were buried with, or, on occasion, that they are depicted with. A warrior is someone who fights; a fighter normally needs implements with which to carry out his or her aggressive activity; so those implements become known as "weapons", which by definition are items for fighting others with (A. Harding, 2007, p. 57).

Anthropological analysis carried out upon the human remains found in the Middle Bronze Age cemeteries at Toppo Daguzzo and Madonna di Loreto (Italia) revealed the fact that only the persons buried with weapons presented traces of great muscular stress proved by pathological alterations called enthesopathies, that occur at the insertion of muscle tendons and ligaments (A. Canci, 1998).

Taking into account the conclusions presented by A. Canci by studying enthesopathies, we have tried, together with the anthropologist L. Andreica to follow possible pathological alterations that might appear on the human remains discovered in the cemetery from Pecica "Site 14" (V. Sava, L. Andreica, 2013; L. Andreica, 2014). In order to perform this study there have been examined 23 individuals. It could be determined the fact that three of them display traces of a great muscular stress (Cx. 067; Cx. 092; Cx. 098), reflected in enthesopathies occurred at the insertion of tendons of Pectoralis major, Deltoid and Latissimus dorsi muscles. Moreover, besides these alterations, there could be observed, at least in the case of the skeletons found in Cx. 092 and Cx. 098, the presence of the Schmorl nodes on the inferior and superior surfaces of the lumbar vertebrae. In all three individuals already mentioned (Cx. 067; Cx. 092; Cx. 098), there could also be noticed a rough line strongly marked on the posterior surface of the femoral diaphysis. A general view upon these skeletons indicates the presence of strong individuals.

The skeletons of the three individuals from Pecica present traces of alterations (enthesopathies) at the level of the upper limbs and shoulders, the same as in the case of the ones at Daguzzo and Madonna di Loreto, but also some pathologies at the level of the spine. According to the information presented, the location and dimensions of these enthesopaties might offer us certain evidences regarding daily activities that imply using certain categories of muscles (C. Larsen, 1997, p. 188). For example, *Pectoralis major* muscle develops through rotation and abduction movements, by bending the arm; the development of deltoid tuberosity is explained as an answer of the bone to constant exercise, which consists in circular and abduction movements of arms above the head.

These transformations suffered at the level of the *Deltoid* muscle represent not only the result of a repeated launching movement, but they also can occur as a result of using an instrument that can be utilized in close range combat. (E. Gonzaléz, M. Concepción, 2004, p. 189-190).

All these transformations that occur at the shoulder level could be explained by the repeated usage of the spear, and the hypertrophy of the pectorals and back muscles, together with several pathologies of the spine, can be a result of repeated usage of arms and hips in close range combat (A. Canci, 1998, p. 285).

According to these case studies presented by A. Canci and by us, we could assert that in order to identify individuals that took part in combats we have to search for burials in which there were deposed weapons and the skeletons present traces of great muscular stress, reflected through enthesopathies. This is why we can state that the individuals from Cx. 067, Cx. 092, Cx. 098, probably, participated during their lifetime in combat and had a proper training, in order to use the weapons they had at their disposal.

The pathological alterations identified on these three individuals confirm the fact that they had long term physical activities in which they used certain parts of the body. For instance, the enthesopathies identified at the radius level appeared as a consequence of certain activities which imply a flexed elbow. The position is similar with the one determined by the usage of the bow. On the other hand, the overdevelopment of the spinal ridge (enthesopathy at the ulna level) reflects an intense activity through the usage of certain weapons as the spear.

Regarding the individual from Cx. 075, even if he was buried together with a bronze dagger, he did not show any enthesopathies, as the other three did. Together with the lack of proofs of a great muscular stress, this individual was buried without other grave offerings. According to the arguments exposed above, we could state that the deceased from Cx. 075 did not have the same social status as the rest of them.

Even if the Bz B2-C period on Lower Mureş is not intensively researched, older studies, random finds and recent discoveries might offer certain answers on the sphere of warfare and on the identification of possible warriors. Besides the burials from Pecica "Site 14" there can be mentioned several other burials that also had weapon depositions. For instance in burial no. 92 from Cruceni together with two urns, there was discovered a bronze dagger (O. Radu, 1973, pl. 4/6; M. Gumă, 1997, pl. LXXXII/D. 13-15), while in previous excavations led by M. Moga, there were

discovered three spin and disc headed axes of B1 type (Al. Vulpe, 1970, taf. 22/321; 23/330; O. Radu, 1973, p. 506-507; M. Gumă, 1997, pl. LXXXI/E.1-3). Phase I of the incineration necropolis from Cruceni, on the basis of disc headed axes together with other artifacts, can taken as contemporary with the first phase of the necropolis from Pecica "Site 14".

The cemetery from partially Tápé, contemporary with the ones from Cruceni and Pecica, registered several graves in which there were discovered weapons. Among the burials with weapons we are mentioning no. 283 and no. 534, each of them containing a dagger (O. Trogmayer, 1975, p. 65-66, taf. 25/293/2; O. Trogmayer, 1975, p. 119, taf. 48/534/2). Together with these, we are mentioning four more burials from the same necropolis, in which there were found arrowheads, no. 26 (O. Trogmayer, 1975, p. 15-16, taf. 4/26/3-4), no. 307 (O. Trogmayer, 1975, p. 71, taf. 27/307/1-2), no. 357 (O. Trogmayer, 1975, p. 80, taf. 33/357), no. 508 (O. Trogmayer, 1975, p. 112, taf. 45/508/4-5). The interesting side of this is that the arrowheads found in these burials do not seem to be part of their funerary inventory, but they might indicate traces of violence.

The construction of a livestock farm from Felnac in 1971, led to the discovery of a series of important artifacts. The majority of them were donated to the Arad Museum by S. Cociuba; the other artifacts were donated to the museums of Oradea, Baia Mare and Zalău. Several artifacts were donated to the Arad Museum, among which a bronze dagger (M. Petrescu-Dîmboviţa, 1977, p. 93, pl. 142/9). Generally speaking, the artifacts discovered here seem to be part of several burial assemblages, as C. Kacsó stated (C. Kacsó, 1992, p. 97), and not part of a hoard.

During the construction of Arad-Cenad railway, in 1882, there were discovered several bronze artifacts; two spin and disc headed axes, type B1, Bikács-Borleşti (Al. Vulpe, 1970, taf 23/327; M. Petrescu-Dâmboviţa, 1977, pl. 6/1), respectively Senta (Al. Vulpe, 1970, taf. 23/331; A. Mozsolics, 1973, taf. 4/5; M. Petrescu-Dâmboviţa, 1977, pl. 6/2), a dagger (A. Mozsolics, 1973, taf. 4/4; M. Petrescu-Dâmboviţa, 1977, pl. 6/3), three bracelets (A. Mozsolics, 1973, taf. 4/3; M. Petrescu-Dâmboviţa, 1977, pl. 6/9-11), a seal headed pin (M. Petrescu-Dâmboviţa, 1977, pl. 6/8), two spirals with round bar in section (M. Petrescu-Dâmboviţa,

1977, pl. 6/6-7) and two "decorated hair gold rings, made from three boat-like blades" (A. Mozsolics, 1973, taf. 4/1-2; M. Petrescu-Dâmboviţa, 1977, pl. 6/4-5). The majority of the publications that into discussion these discoveries considered that the artifacts discovered in 1882 were part of a hoard (Al. Vulpe, 1970, p. 74; M. 1977, p. Petrescu-Dâmboviţa, 41-42). researcher A. Mozsolics had certain objections to the composition of the "hoard" and she considers that the objects could be part of the funerary inventory of two burials (A. Mozsolics, 1973, p. 168); we also recently presented a similar opinion regarding this discovery (V. Sava, L. Andreica, 2013, p. 57-58). As we have mentioned before, the artifacts were accidentally discovered, at the end of XIX-th century, without having informations about the context of discovery. This is why we agree that the suppositions according to which this discoveries are part of a hoard is not the right one. If we are to take into account the objects discovered and their types, we can suppose that "hoard Pecica I" has in its composition objects belonging to a funerary inventory.

the funerary Together with discoveries mentioned above, there can be also added several burials in which there were found weapons, placed in the proximity of the Mures Valley. Among these, it has to be mentioned the cemetery from Sombor, where there were discovered a sword and two axes of B1 type (W. David, 2002, taf. 340), a grave from Kiskunmajsa that had among other objects as funerary inventory a disc headed axe, B1 type and two arrowheads (W. David, 2002, taf. 343/1-6). At Senta there was discovered a burial that had contained among other objects, a sword and an axe of B1 type (W. David, 2002, taf. 342).

If we are to look further than the typological and chronological observations, which both contribute to the framing of the funerary discoveries at Pecica "Sit 14", in the wider context of the Bronze Age, there can be imposed a series of observations of social order. The overcrossing of scientifically borders, allow us to draw certain assumptions concerning the identity of the individual and the position that he gains in the group that he is part of. The associations of artifacts that appear as funerary inventory in the burials we discussed above, show a specific configuration of the warrior's image during lifetime. The very close relationship of the

individual as a member of the group and his identity as a warrior is proved in a funerary context by a series of artifacts that can offer a visual expression of the natural order, revealing us information related to gender, age, the social position, the status during the time of death and sometimes information related to the death itself.

Bronze Age weapon repertory of the Lower Mures Area

The repertory of discoveries is organized in six main fields. This succinct way of presenting and organizing the existing information corresponds to the necessity of studying and presenting the Bronze Age weapon discoveries in Lower Mures area. 1. Place of discovery; 2. Conditions of discovery; 3. Type of discovery; 4. Bibliography; 5. Dating; 6. Observations.

Early Bronze Age (Fig. 8)

- **1.** 1. **Fibiş**, Timiş county, Romania; 2. Isolated discovery; 3. Axe; 4. F. Gogâltan 1999b, 94, no. 16, Fig. 15/3, 47/5; 5. EBA; 6. –
- **2.** 1. **Kiskundorozsma**, Hungary; 2. Funerary discovery, m. 66; 3. Dagger; 4. L. Bende, G. Lőrinczy 2002, 80, kép 8/3; 5. EBA; 6. Adult male, buried in crouched position, holding a dagger in the right hand.
- **3.** 1. **Lipova**, Arad county, Romania; 2. Isolated discovery; 3. Axe; 4. F. Gogâltan 1999b, 94-95, no. 17, Fig. 14/4; 5. EBA; 6. –
- **4.** 1. **Păuliș**, Arad county, Romania; 2. Isolated discovery; 3. Axe; 4. F. Gogâltan 1999b, 99, no. 29, Fig. 15/1; 5. EBA; 6. –

Middle Bronze Age (Fig. 9)

- **1.** 1. **Battonya**, Békés county, Hungary; 2. Funerary discovery, m. 35; 3. Dagger, spearhead, bone arrowhead; 4. Szabó 1999, Abb. 14/2, 4, 6; 5. MBA; 6. Adult male; disturbed inhumation burial.
- **2.** 1. **Battonya**, Békés county, Hungary; 2. Funerary discovery, m. 92; 3. Axe and dagger; 4. J. Szabó 1999, Abb. 32/2, 4-5; 5. MBA; 6. Mature male, deposed in crouched position, with an axe in the right hand and a dagger in the left one; on the frontal there could be observed a healed wound (F. Szalai 1999, Abb. 5/2).
- **3.** 1. **Battonya**, Békés county, Hungary; 2. Funerary discovery, m. 116; 3. Dagger; 4. J. Szabó 1999, Abb. 45/4; 5. MBA; 6. Disturbed burial of a woman.

- **4.** 1. **Battonya**, Békés county, Hunagary; 2. Funerary discovery, m. 122 3. Axe; 4. J. Szabó 1999, Abb. 49/1; 5. MBA; 6. Mature-senile male, deposed in crouched position, holding an axe in the right hand.
- **5**. 1. **Deszk A**, Csongrád county, Hungary; 2. Funerary discovery, m. 2; 3. Axe and dagger; 4. I. Bóna 1975, Taf. 92/10, 12; 5. MBA; 6. Inhumation burial.
- **6.** 1. **Deszk A**, Csongrád county, Hungary; 2. Funerary discovery, m. 34; 3. Dagger; 4. I. Bóna 1975, Taf. 89/18; 5. MBA; 6. Inhumation burial.
- **7.**1. **Deszk F**, Csongrád county, Hungary; 2. Funerary discovery, m. 52; 3. Dagger; 4. I. Bóna 1975, Taf. 84/8; 5. MBA; 6. Inhumation burial.
- **8.** 1. **Földeák**, Csongrád county, Hungary; 2. Isolated discovery; 3. Dagger; 4. F. Gogâltan 1999b, 94, no. 15, Fig. 20/5; 5. MBA; 6. The object has the tip broken.
- **9.** 1. **Hódmezővásárhely**, Csongrád county, Hungary; 2. Isolated discovery 3. Axe; 4. W. David 2002, Taf. 51/3; 5. MBA; 6. –
- **10.** 1. **Mokrin**, North Banat District, Serbia; 2. Funerary discovery, m. 21; 3. Dagger; 4. M. Girić 1971, 51-52, T. X, GR. 21/3; 5. MBA; 6. Adult male, buried in crouched position, holding a dagger in the right hand.
- **11.** 1. **Mokrin**, North Banat District, Serbia; 2. Funerary discovery, m. 40; 3. Dagger; 4. M. Girić 1971, 59-60, T. XIV, GR. 40/1; 5. MBA; 6. Adult male, buried in crouched position.
- **12.** 1. **Mokrin**, North Banat District, Serbia; 2. Funerary discovery, m. 91; 3. Dagger; 4. M. Girić 1971, 64-65, T. XXVIII, GR. 91/2; 5. MBA; 6. Senile male, buried in crouched position.
- **13.** 1. **Mokrin**, North Banat District, Serbia; 2. Funerary discovery, m. 125; 3. Dagger; 4. M. Girić 1971, 101-102, T. XXXVIII, GR. 125/3; 5. MBA; 6. Adult male, buried in crouched position, holding a dagger in the right hand.
- **14.** 1. **Mokrin**, North Banat District, Serbia; 2. Funerary discovery, m. 168; 3. Dagger 4. M. Girić 1971, 119-120, T. XLVIII, GR. 168/3; 5. MBA; 6. Mature male, buried in crouched position.
- **15**. 1. **Mokrin**, North Banat District, Serbia; 2. Funerary discovery, m. 187; 3. Dagger; 4. M. Girić 1971, 128-129, T. LI, GR. 187/2; 5. MBA; 6. Adult male, disturbed burial.
- **16.** 1. **Mokrin**, North Banat District, Serbia; 2. Funerary discovery, m. 208; 3. Axe 4. M. Girić

- 1971, 136-137, T. LVI, GR. 208/2; 5. MBA; 6. Adult male, buried in crouched position.
- **17.** 1. **Mokrin**, North Banat District, Serbia; 2. Funerary discovery, m. 211; 3. Axe; 4. M. Girić 1971, 138, T. LVII, GR. 211/1; 5. MBA; 6. Mature-senile male, buried in crouched position, holding a dagger in the right hand.
- **18**. 1. **Păuliș**, Arad county, Romania; 2. Hoard?; 3. Disc headed axe and three spearheads; 4. M. Petrescu-Dâmbovița 1977, 49-50, Pl. 19/7-10; 20;/1; 5. MBA; 6. The discovery conditions are unknown and this is why the provenience of these artifacts can be doubted.
- 19. 1. Pecica "Şanţul Mare", Arad county, Romania; 2. Settlement; 3. Two dagger casting moulds; two spearhead casting moulds; six casting moulds for Hajdúsámson-type axes; a mould for multiple casting, for at least three Hajdúsámson-type axes; two casting moulds, one side used for casting flat axes, and the other used for casting Hajdúsámson-type axes; 4. F. Gogâltan 1999b, 100, no. 31, Fig. 11/3; 16/1-4, 17/1-4; 18/1-6; 20/4; 22/4; 5. MBA; 6. –
- **20** 1. **Periam**, Timiş county, Romania; 2. Settlement 3. Dagger; 4. F. Gogâltan 1999b, 101-102, no. 33; Fig. 20/1; 5. MBA; 6. Only the tip of the artifact is preserved.
- **21**. 1. **Periam**, Timiş county, Romania; 2. Funerary discovery; 3. Dagger; 4. F. Gogâltan 1999b, 102, no. 34; 5. MBA; 6. The burial was discovered between the localities Periam and Satu Mare.
- **22.** 1. **Satu Mare**, Arad county, Romania; 2. Settlement; 3. A casting mould fragment for daggers; 4. F. Gogâltan 1999b, 106-107, no. 42, Fig. 20/6; 5. MBA; 6. –
- **23.** 1. **Satu Mare**, Arad county, Romania; 2. Funerary discovery; 3. Dagger; 4. F. Gogâltan 1999b, 106, no. 41, Fig. 20/3; 5. MBA; 6. Although the information concerning this discovery is few, the dagger was probably part of a funerary inventory. The chronological framing of the artifact raises certain problems, as it can also be included in Early Bronze Age.
- **24.** 1. **Satu Mare**, Arad county, Romania; 2. Hoard; 3. Disc headed axe; 4. M. Petrescu-Dâmboviţa 1977, 43-44, Pl. 4/14; 5. MBA; 6. –
- **25.** 1. **Szőreg**, Csongrád county, Hungary; 2. Funerary discovery, m. 40; 3. Dagger; 4. I. Bóna 1975, Taf. 121/5; 5. MBA; 6. Inhumation burial.
- **26.** 1. **Szőreg**, Csongrád county, Hungary;

- 2. Funerary discovery, m. 67; 3. Dagger; 4. I. Bóna 1975, Taf. 125/13; 5. MBA; 6. Inhumation burial.
- **27.** 1. **Szőreg**, Csongrád county, Hungary; 2. Funerary discovery, m. 137; 3. Dagger; 4. I. Bóna 1975, Taf. 125/6; 5. MBA; 6. Inhumation burial.
- **28**. 1. **Szőreg**, Csongrád county, Hungary; 2. Funerary discovery, m. 190; 3. Axe; 4. I. Bóna 1975, Taf. 127/1; 5. MBA; 6. Inhumation burial.

Late Bronze Age /Bz. B2-C (Fig. 10)

- **1.** 1. **Felnac**, Arad county, Romania; 2. Funerary discovery; 3. Dagger; 4. M. Petrescu-Dâmboviţa 1977, 93, Pl. 142/9; 5. LBA/ Bz B2-C/Bz. D-Ha A1; 6. The artifacts that are part of the so-called "Felnac hoard", are in fact the funerary inventory of several burials.
- **2.** 1. **Felnac**, Arad county, Romania; 2. Isolated discovery Descoperire; 3. Disc headed axe; 4. Unpublished; 5. LBA/Bz B2-C? 6. –
- **3.** 1. **Orosháza**, Békés county, Hungary; 2. Isolated discovery; 3. Sword fragment; 4. T. Kemenczei 1991, no. 435, Taf. 70/435; 5. LBA/; 6. There is preserved only a blade fragment.
- **4.** 1. **Orosháza**, Békés county, Hungary; 2. Isolated discovery; 3. Dagger; 4. T. Kemenczei 1988, no. 117, Taf. 10/117; 5. LBA/Bz B2-C; 6. **5.** 1. **Pecica I**, Arad county, Romania; 2. Funerary discovery; 3. Two disc headed axes and a dagger; 4. M. Petrescu-Dâmboviţa 1977, 41-42, Pl. 6; 5. LBA/Bz B2; 6. The artifacts that are part of the so-called "Pecica I hoard", are in fact the funerary inventory of several burials.
- **6**. 1. **Pecica "Sit 14"**, Arad county, Romania 2. Funerary discovery, m. 067; 3. Dagger; 4. Unpublished; 5. LBA/ Bz B2-C; 6. Mature male, deposed in crouched position with the dagger around the area of the right hand.
- **7.** 1. **Pecica "Sit 14"**, Arad county, Romania 2. Funerary discovery, m. 075; 3. Dagger; 4. Unpublished; 5. LBA/Bz B2-C; 6. Mature male, deposed in dorsal decubitus position, with the dagger around the area of the left forearm.
- **8.** 1. **Pecica "Sit 14"**, Arad county, Romania 2. Funerary discovery, m. 092; 3. Axe; 4. Unpublished; 5. LBA/ Bz B2-C; 6. Mature male, deposed in dorsal decubitus position, holding the dagger in the right arm.
- 9. 1. Pecica "Sit 14", Arad county, Romania 2. Funerary discovery, m. 098; 3. Dagger; 4. V. Sava, L. Andreica 2013, 54, Fig. 6/4a-4b; 5. LBA/ Bz

- B2-C; 6. Adult male, deposed in crouched position, holding the dagger in the left hand.
- **10.** 1. **Satchinez**, Timiş county, Romania; 2. Isolated discovery; 3. Casting mould for spin and disc headed axe; 4. F. Gogâltan 1999b, 103, no. 37, Fig. 19/3; 47/3; 5. LBA; 6. –
- **11.** 1. **Szeged**, Csongrád county, Hungary; 2. Isolated discovery; 3. Sword fragment; 4. T. Kemenczei 1991, no. 442, Taf. 70/442; 5. LBA; 6. There is preserved only a small blade fragment.
- **12.** 1. **Szeged**, Csongrád county, Hungary; 2. Isolated discovery; 3. Rapier; 4. T. Kemenczei 1988, no. 159, Taf. 14/159; 5. LBA/B2-C; 6. It was discovered in the bed of Tisa.
- **13**. 1. **Szeged**, Csongrád county, Hungary; 2. Isolated discovery; 3. Sword fragment; 4. T. Kemenczei 1988, no. 199, Taf. 19/199; 5. LBA/B2-C/Bz. D-Ha A1; 6. It is preserved only a fragment from the hafting-plate and a fragment of the blade.
- **14.** 1. **Szentes**, Csongrád county, Hungary; 2. Funerary discovery?; 3. Two daggers; 4. M. Nagy 2005, kép 3/1-2; 5. LBA/B2-C; 6. The two randomly discovered daggers are probably from a necropolis.
- **15.** 1. **Szőreg**, Csongrád county, Hungary; 2. Isolated discovery; 3. Dagger; 4. Kemenczei 1988, no. 89, Taf. 8/89; 5. LBA/B2 C/Bz. D-Ha A1; 6.
- **16.** 1. **Tápé,** Csongrád county, Hungary; 2. Funerary discovery, m. 26; 3. Two arrowheads; 4. O. Trogmayer 1975, 15-16, Taf. 4/26/3-4; 5. LBA/B2-C; 6. Woman deposed in crouched position. An arrowhead was recovered from between the left humerus and thoracic cavity, and the other one was found near the left hand wrist.
- **17.** 1. **Tápé,** Csongrád county, Hungary; 2. Funerary discovery, m. 283; 3. Dagger; 4. O. Trogmayer 1975, 65-66, Taf. 25/283/2; 5. LBA/B2-C 6. Male deposed in crouched position; the dagger was found around the hips area.
- **18.** 1. **Tápé**, Csongrád county, Hungary; 2. Funerary discovery, m. 307; 3. Two arrowheads; 4. O. Trogmayer 1975, 71, Taf. 27/307/1-2; 5. LBA/B2-C; 6. Male deposed in crouched position. In the 3^{-rd} and 11^{-th} vertebrae were identified one bronze arrowhead in each.
- **19.** 1. **Tápé,** Csongrád county, Hungary; 2. Funerary discovery, m. 357; 3. Arrowhead; 4. O. Trogmayer 1975, 80, Taf. 33/357; 5. LBA/B2-C; 6. Male deposed in crouched position. In the southern

- part of the pit there was discovered a bronze arrowhead.
- **20.** 1. **Tápé,** Csongrád county, Hungary; 2. Funerary discovery, m. 508; 3. Three arrowheads; 4. Trogmayer 1975, 112, Taf. 45/508/4-5; 5. LBA/B2-C; 6. A bone arrowhead was discovered in the filling of the pit; another bronze arrowhead was found between the skull and the edge of the pit; the third arrowhead was found under the left mastoid.
- **21.** 1. **Tápé,** Csongrád county, Hungary; 2. Funerary discovery, m. 534; 3. Dagger; 4. O. Trogmayer 1975, 119, Taf. 48/534/2; 5. LBA/B2-C; 6. Male, deposed in dorsal decubitus position with a dagger under the right wrist.

Late Bronze Age /Bz. D-Ha A1 (Fig. 19)

- **1.** 1. **Comloşu Mic,** Timiş county, Romania; 2. Isolated discovery; 3. Sword; 4. T. Bader 1991, no. 99, Taf. 14/99; 5. LBA/ Bz D-Ha A1; 6. It lacks a small fragment from the hafting-plate.
- **2.** 1. **Deszk,** Csongrád county, Hungary; 2. Isolated discovery; 3. Sword fragment; 4. T. Kemenczei 1988, no. 204, Taf. 20/204; 5. LBA/Bz D-Ha A1; 6. It is preserved the hilt and a blade fragment.
- **3.** 1. **Csanádpalota**, Csongrád county, Hungary; 2. Settlement; 3. Arrowhead; 4. P. Cuzkor *et al.* 2013, 14; 5. LBA/ Bz D-Ha A1; 6. The artifact was discovered in a pit together with other bronze objects.
- **4.** 1. **Martely,** Csongrád county, Hungary; 2. Isolated discovery; 3. Sword fragment; 4. T. Kemenczei 1988, no. 341, Taf. 38/341; 5. LBA/Bz. D; 6. It is preserved only the inferior part of the blade.
- **5.** 1. **Pecica**, Arad county, Romania; 2. Isolated discovery; 3. Sword; 4. T. Bader 1991, no. 81, Taf. 13/81; 5. LBA/Bz. D-Ha A1; 6. According to the inventory registry it is not part of Pecica IV hoard.
- **6.** 1. **Pecica II,** Arad county, Romania; 2. Hoard; 3. Three swords, two spearheads, two daggers; 4. T. Kemenczei 1991a, Abb. 3/2, 5; 4/1 (swords); 3/4 (spearhead) 3/4; 6/32 (daggers); 4/3; 6/33 (spearhead); 5. LBA/Ha A1; 6. One of the swords is complete, the other one is fragmentary and from a third one it was preserved only a fragment from the hilts hafting-plate of the hilt; from a spearhead is preserved only the superior part, and from the other the inferior one; one of the daggers has a broken hafting-plate, while from the other there is preserved only the hafting-plate.

- **7.** 1. **Pecica IV,** Arad county, Romania; 2. Hoard; 3. Dagger and spearhead; 4. M. Petrescu-Dâmboviţa 1977, 102, Pl. 177/1-2 5. LBA/Ha A1; 6. The dagger lacks the tip and a small fragment from the hafting-plate.
- **8.** 1. **Sântana "Cetatea Veche",** Arad county, Romania; 2. Settlement; 3. Two spearheads, a dagger and an arrowhead; 4. F. Gogâltan *et al.* 2013, no. 14, Pl. 1/13a-13d; no. 15, Pl. 1/14a-14d; no. 25, Pl. 5/8a-8b; no. 65, Pl. 10/3a-3b, 4; 5. LBA/Bz. D-Ha A1; 6. One of the spearheads was discovered on the platform of a house, while the arrowhead was found behind the fortification of the III^{-rd} enclosure. The other two artifacts were discovered during field researches.
- **9.** 1. **Szőreg**, jud. Csongrád county, Hungary; 2. Isolated discovery; 3. Sword; 4. T. Kemenczei 1988, no. 365, 40/365; 5. LBA/Bz. D-Ha A1; 6. It lacks a small part of the hafting-plate.
- **10**. 1. **Zona Szeged**, Csongrád county, Hungary; 2. Isolated discovery; 3. Sword; 4. T. Kemenczei 1988, no. 229, Taf. 23/229; 5. LBA/Bz. D-Ha A1; 6. The tip is broken.
- **11.** 1. **Zona Arad,** Arad county, Romania; 2. Isolated discovery; 3. Sword; 4. T. Bader 1991, no. 150, Taf. 17/150; 5. LBA/Bz. D-Ha A1; 6. –

Late Bronze Age/Ha A2-B1/B2-B3

- 1. 1. Arad, Arad county, Romania; 2. Hoard?; 3. Sword; 4. T. Bader 1991, no. 277, Taf. 28/277; 5. LBA/Ha B1; 6. It was probably discovered together with the hoard from Arad II; it lacks the tip and a fragment from the hafting-plate of the hilt.
- **2.** 1. **Arad II,** Arad county, Romania; 2. Hoard; 3. Two spearheads; 4. M. Petrescu-Dâmboviţa 1977, 125, Pl. 297/5-6; 5. LBA/Ha B1; 6. –
- **3.** 1. **Cenad,** Timiş county, Romania; 2. Hoard; 3. Three sword fragments and a spearhead; 4. T. Bader 1991, no. 106, Taf. 15/106; no. 202, Taf. 21/202; no. 203, Taf. 22/203; M. Petrescu-Dâmboviţa 1977, 121-122; 5. LBA/Ha A2; 6. One of the swords lacks the tip and the hilt; from the other two swords there are preserved only one fragment of blade from each.
- **4.** 1. **Hódmezővásárhely**, Csongrád county, Hungary; 2. Isolated discovery; 3. Sword; 4. T. Kemenczei 1988, no. 355, Taf. 37/335; 5. LBA/Ha A2-Ha B1; 6. It lacks the hafting-plate of the hilt.
- **5.** 1. **Hódmezővásárhely**, Csongrád county, Hungary; 2. Hoard; 3. Sword; 4. T. Kemenczei 1988, no. 394, Taf. 45/394; 5. LBA/Ha B; 6. –

- **6.** 1. **Orosháza**, Békés county, Hungary; 2. Hoard; 3. Two swords; 4. T. Kemenczei 1991, no. 102, Taf. 23/102; 24/1-2, no. 143, Taf. 35/103; 5. LBA/Ha A2-Ha B1; 6. –
- **7.** 1. **Orosháza**, Békés county, Hungary; 2. Isolated discovery; 3. Sword; 4. T. Kemenczei 1991, no. 205, Taf. 46/205; 5. LBA/Ha A2-Ha B1; 6. –
- **8.** 1. **Orosháza**, Békés county, Hungary; 2. Isolated discovery; 3. Dagger; 4. T. Kemenczei 1988, no. 129, Taf. 10/129; 5. LBA/Ha A2-Ha B1; 6. –
- **9.** 1. **Variaș**, Arad county, Romania; 2. Hoard; 3. Spearhead; 4. M. Petrescu-Dâmbovița 1977, 124-125; Pl. 293/10; 5. LBA/Ha A2-Ha B1; 6. –
- **10.** 1. **Zona Szeged**, Csongrád county, Hungary; 2. Isolated discovery; 3. Sword; 4. T. Kemenczei 1991, no. 224, Taf.; 5. LBA/Ha B2-Ha B3; 6. It lacks a blade fragment.

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BIBLIOGRAPHY

Andreica L., 2014, Musculoskeletal markers as evidence of physical activity and social differentiation in the Lower Mureş Valley, during the Late Bronze Age, Ziridava Studia Archaeologica, 28 (in press).

Bader T., 1991, *Die Schwerter in Rumänien*, Prähistorische Bronzefunde, IV, 8.

Banner J., 1939, *A hódmezővásárhelyi Nagytatársánc*. Dolgozatok a Szegedi Tudományegyetem Régiségtudományi Intézetéből, XV, p. 93-114.

Bende L., Lőrinczy G., 2002, *Kora bronzkori temető és település a kiskundorozsmai Hosszúháthalmon*, A Móra Ferenc Múzeum Évkönyve. Studia Archaeologica, Szeged, VIII, p. 77-107.

Bona I., 1975, *Die Mittlere Bronzezeit Ungarns und ihre Südöstlichen Beziehungen*, Budapest 1975, ISBN

Canci A., 1998, *The Emergence of Warriors Elites in Bronze Age Societies: The Osteoarchaeological Evidence*. Atti del XIII congress dell' Unione Internazionale dale scienze preistoriche e protostoriche, 4, Forli, sett. 1996. Forli 1998, p. 283-288.

Cuzkor P., Priskin A., Szalontai C., Szeverényi V., 2013, Zárt terek, nyitott határok Késő bronzkori földvárrendszer s Dél-Alföldön, Várak. Kastélyok, Templomok, 1, p. 12-15.

David W., 2002, Studien zu Ornamentik und Datierung der bronzezeitlichen Depotfundgruppe Hajdúsámson-Apa-Ighiel-Zajta, Teil 1-2, Bibliotheca Mvsei Apvlensis, XVIII, Alba-Iulia.E. Dörner E., 1978, Istoricul cercetărilor, in I. H. Crişan [ed], Ziridava. Săpăturile de la "Şanţul Mare" din anii 1960, 1961, 1962, 1964, Arad, p. 16-30.

Driesch A. von den., 1976, *A guide to the measurement of animal bones from archaeological sites*, Peabody Museum Bulletin 1, Peabody Museum of Archaeology and Ethnology, Harvard University.

Foltiny I., 1957, *A Halomsíros és Lausitzi kultúra nyomai Szeged Környékén*, Régészeti Füzetek 4, Budapest.

Girić M., 1971, [ed.], *Mokrin. Nekropola ranog bronzanog doba*, Vol. I-II. Disertationes et Monographie XI. Washington-Kikinda-Beograd.

Gogâltan F., 1993, *Materiale arheologice* aparţinând culturii Cruceni-Belegiš, Tibiscum, VIII, p. 63-73.

Gogâltan F., 1996, The Bronze Age cemetery from Livezile (Tolvădia), commune Banloc, Timiș district, in P. Roman [ed.], The Thracian International Congress of Thracology, May 20-26, 1996, Constanța-Mangalia-Tulcea, România, Reports and Summaries, Bucharest, p. 282-284

Gogâltan F., 1998, The Cruceni-Belegiš Cemetery of Livezile (Tovădia), Commune Banloc, District Timiş (Romania) in P. Roman [ed.], The Thracian World at the Crossroads of Civilizations, Bucharest 1998, 181-205.

Gogâltan F., 1999a, *The southern border of the Otomani Culture*, A Móra Ferenc Múzeum Évkönyve. Studia Archaeologica, Szeged, V, p. 51-76.

Gogâltan F., 1999b, Bronzul timpuriu şi mijlociu în Banatul Românesc şi pe cursul inferior al Mureşului, Timişoara.

Gogâltan F., 2004, Bronzul mijlociu în Banat. Opinii privind grupul Cornești-Crvenka, in V. Cedică, P. Rogozea [eds.], Festschrift für Florin Medeleţ. Zum 60. Geburstag. Timișoara, p. 79-153.

Gogâltan F., Sava V., 2010, Sântana "Cetatea Veche". O fortificație de pământ a epocii bronzului la Mureșul de jos/A Late Bronze Age Earthwork on the Lowe Mureș, Arad.

Gogâltan F., Sava V., 2012, War and Warriors during the Late Bronze Age within the Lower Mureş Valley, Ziridava Studia Archaeologica 26.1, p. 61-81.

Gogâltan F., Sava V., Mercea L., 2013, *Sântana* "*Cetatea Veche*". *Metal and power*, Ziridava. Studia Archaeologica, 27, p. 21-72.

González E., Concepción M., 2004, *Marcadores de estrés y actividad en la población guanche de Tenerife*, Tenerife.

Gumă M., 1993, *Civilizația primei epoci a fierului în sud-vestul României*, Bibliotheca Thracologica IV, București.

Gumă M., 1997, *Epoca Bronzului în Banat. Orizonturi cronologice și manifestări culturale*, Bibliotheca Historica et Archaeologica Banatica, Timișoara.

Harding A. F., 2000, *European Societies in the Bronze Age*, Cambridge.

Harding A. F., 2007, *Warriors and Weapons in Bronze Age Europe*, Budapest.

Innerhofer F., 2000, Die mittelbronzezeitlichen Nadeln zwischen Vogesen und Karpaten. Studien zur Chronologie, Typologie und regionalen Gliederung der Hügelgräberkultur, Universitätsforschungen zur prähistorischen Archäologie, 71. Bonn.

Kacsó C., 1992, Descoperirile din epoca bronzului de la Felnac. Contribuții la cunoașterea culturii tumulare în Banat, Symposia Thracologica 9, p. 97-98.

Kemenczei T., 1984 , *Die Spätbronzezeit in Nordostungarn*, Budapest.

Kemenczei T., 1988, *Die Schwerter in Ungarn I (Griffplatten-, Griffangel- und Griffzungenschwerter*, Prähistorische Bronzefunde IV. 6. München.

Kemenczei T., 1991, *Die Schwerter in Ungarn II (Vollgriffschwerter*), Prähistorische Bronzefunde IV. 9. Stuttgart.

Kristiansen K., 1998, *Europe before history*, Cambridge.

Kristiansen K., Larsson Th. B., 2005, *The Rise of Bronze Age Society. Travels, Transmissions and Transformation*, Cambridge.

Kovács T., 1975, *Tumulus Culture Cemeteries* of *Tiszafüred*, Budapest.

Larsen C. S., 1997, *Bioarchaeology. Interpreting behavior from the human skeleton*, Cambridge.

Medeleţ F., 1993, În legătură cu fortificaţia de pământ de la Corneşti (comuna Orţişoara, judeţul Timiş), Analele Banatului II, p. 119-150.

Micle D., Măruia L., Dorogostaisky L., 2006, The earth works from Corneşti – "Iarcuri" (Orțișoara village, Timiș county) in the light of recent field research, Analele Banatului XIV, 1, p. 283-305.

Micle D., Török-Oance M., Măruia L., 2008, The morpho-topographic and cartographic analysis using GIS and Remote Sensing techniques of the archaeological site Cornesti "Iarcuri", Timis County, Romania, Advances on Remote Sensing for Archaeology and Cultural Heritage Management, Roma, p. 387-393.

Mozsolics A., 1973, Bronze- und Goldfunde des Karpatenbeckens. Depotfundhorizonte von Forró und Ópályi, Budapest. Nagy M., 2005, *A halomsíros kultúra leletei Szentes környékén*, A Móra Ferenc Múzeum Évkönyve. Studia Archaeologica, Szeged XI, p. 7-36.

Novotná M., 1980, *Die Nadeln in der Slowakei*, Prähistorische Bronzefunde, XIII, 6. München.

Osgood R., 1998, *Warfare in the Late Bronze Age of North Europe*, British Archaeological Reports, International Series, 694. Oxford.

O'Shea J. M., Barker A. W., Sherwood S., Szentmiklosi A., 2005, *New Archaeological Investigations at Pecica-Santu Mare*. Analele Banatului N. S. XII-XIII, 2004-2005, p.81-109.

O'Shea J., Barker A., Motta I., Szentmiklosi A., 20011, *Archaeological investigations at Pecica* "Şanţul Mare" 2006-2009. Analele Banatului N. S. XIX, p. 67-78.

Paștea E., Coţofan V., Chiţescu Ş., 1985, Anatomia comparată a animalelor domestice, Editura Didactică și Pedagogică, Vol. I.

Petrescu-Dîmbovița M., 1977, *Depozitele de bronzuri din România*, București.

Petrescu-Dîmboviţa M., 1998, *Der Arm- und Beinschmuck in Rumänien*, Prähistorische Bronzefunde X. 4. Stuttgart.

Priskin A., Czukor P., Szalontai C., Szeverényi V.,2013, Research Into the Structure of the Late Bronze Age Settlements in the Southern Great Hungarian Olain: "Enclosed Space – Open Borders" Project, Hungarian Archaeology, autum 2013.

Radu O., 1971, Asupra unui mormânt de incinerare de la Cruceni, Tibiscus I, p. 19-23.

Radu O., 1973, *Cu privire la necropola de la Crucen (jud. Timiş)*, Studii și Cercetări de Istorie Veche și Arheologie, 24, 3, p. 503-520.

Rusu M., Dörner E., Ordentlich I., 1996, Fortificația de pământ de la Sântana – Arad în contextual arheologic contemporan, Ziridava, XIX-XX,p. 15-44.

Rusu M., Dörner E., Ordentlich I., 1999, Die Erdburg von Sântana-Arad in dem zeitgleichen archäologischen Kontext, in N. Boroffka, T. Soroceanu [eds.], Transsilvanica. Archäologische Untersuchungen zur älteren Geschichte des südöstlichen Mitteleuropa. Gedenkschrift für Kurt Horedt, Rahden/Westf. p. 143-165.

Sava V., 2009, Descoperiri Neolitice și din Epoca Bronzului de la Macea "Topila" (județul Arad), Crisia, XXXIX, p. 17-40.

Sava V., Andreica L., 2013, Social Identity in the Lower Mureş Valley During the Late Bronze Age: Two Seal-Headed Pins from Pecica "Site 14" Cemetery, in I. V. Ferencz, N. C. Rişcuţa, O.T. Bărbat [eds.], Archaeological Small Finds and Their Significance. Proceedings of the Symposion: Costume as an Identity Expression, Cluj-Napoca, p. 49-76.

Sava V., Hurezan G. P., Mărginean F., 2011, Şagu "Sit A1_1" o așezare a epocii finale a bronzului la Mureșul de jos/A Late Bronzea Age Settlement on the Lower Mureș, Cluj-Napoca.

Sava V., Hurezan G. P., Mărginean F., 2012, Late Bronze Age Metal Artifacts Discovered in Şagu, Site "A1_1", Arad – Timişoara Highway (km 0+19.900 —0+20.620), Ziridava, Studia Arheologica, 26/1, p. 83-107.

Sánta G. 2010, *The settlements of Tumulus Culture in Hungary*, Antaeus 31-32, p. 513-528.

Szabó V. G., 2004a, *A Tiszacsegei edénydepó.* Újabb adatok a Tisza-Vidéki késö bronzkori edénydeponálás Szokásához, A Móra Ferenc Múzeum Évkönyve. Studia Archaeologica, Szeged X, p. 81-113.

Szabó V. G., 2004b, Ház, település és kézö bronzkori (Rei. Bz. D, HA, HB periódus) Tiszavidéke, $M\Omega MO\Sigma$ II. Őskoros Kutatók II. Összejövetelének konferenciakötete Debrecen, 2000. november 6-8., Debrecen, p. 137-170.

Szabó J.J., 1999, *Früh- und Mittelbronzezeitliche Gräberfelder von Battonya*, Inventaria Praehistorica Hvungariae VII, Budapest.

Szentmiklosi A., 2009, *Aşezările culturii Cruceni-Belegiš în Banat*, Alba Iulia, teză de doctorat.

Szentmiklosi A., Heeb B. S., Heeb J., Harding A., Krause R., Becker H., 2011, *Corneşti-Iarcuri* — *a Bronze Age town in the Romanian Banat?*, Antiquity 85, p. 819–838.

Trogmayer O., 1975, *Das Bronzezeitliche Gräberfeld bei Tápé*, Budapest.

Vulpe A., 1970, *Die Äxte und Beile in Rumänien I*. Prähistorische Bronzefunde, IX.2. München.

Szalai F., 1999, Anthropologische Untersuchung der Skelette und der Reste von Leichenbränden aus den früh- und mittelbronzezeitlichen Gräberfeldern von Battonya, in J. J.

Szabó, *Früh- und Mittelbronzezeitliche Gräberfelder von Battonya*, Budapest, p.125-163.