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War and Warriors during the Late Bronze Age within the Lower Mureş Valley*

Florin Gogâltan, Victor Sava

To Professor Raczky Pál on his 60th anniversary

Abstract: The article discusses not only the evidence of military conflicts and implicitly warriors within the Lower Mureş Valley during the Late Bronze Age chronological horizon, but it is also a historiographical and theoretical approach of the topic. Fortifications researched in Sântana, Corneşti and Munar are the first indications of conflictive situations. The presence of bronze items showing clear traces of use, such as those discovered in Pecica, Păuliş, Felnac and Sântana is yet another indication. One can also mention the numerous prestige items discovered in the area, indicating a well established social hierarchy. The excavations in Sântana and Corneşti allowed specialists to establish the fact that the fortifications systems were burnt and even the area of a possible attack was identified at Sântana. To such proof one might add the human skull fragment showing traces of violent blows discovered in the defensive ditch in Sântana.

Keywords: Late Bronze Age, Carpathian Basin, strongholds, war, warrior elites.

Today, many of us believe that War, one of the Four Horsemen of the Apocalypse, is one of the most unfortunate human experiences. Throughout history, though, this was not always the case. Ancient literary sources and archaeological finds show that the Bronze Age society had a very strong hierarchic structure, wherein preoccupations of warfare represented a way of living¹. Although people who built fortifications and impressive tombs, or produced weapons and jewellery for the elites at the top of the social pyramid vanished in the mist of history², war heroes and their deeds in combat endured over the centuries within the collective memory³. Not by accident did Homer record, after several hundred years, the epic war between the Greeks and the Trojans and Ulysses' cruel revenge upon his return to Ithaca⁴. Similarly, in the second century A.D., Pausanias mentioned the bronze weapons still preserved in Greek temples as relics of a heroic past⁵.

*

The identification of European Bronze Age warfare and warriors is so often approached by specialists nowadays that a consistent monograph of the topic may be drafted based only on the extensive bibliography⁶. For instance, to mention only recent research, syntheses such as those provided by

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¹ Buchholtz, Wiesner 1977; Buchholtz *et al.* 1980; Gods and Heroes...; Harding 2000, 271–307; Guilaine, Zammit 2005, 1–16, 195–232; Kristiansen, Larsson 2005, 32–64; Vandkilde 2011, 365–380 etc.

² Kristiansen, Larsson 2005, 61.

³ Calligas 1988, 229–234; Hägg 1999.

⁴ van Wess 1992; Vandkilde 2006, 515–528.

⁵ Pausanias, *Description of Greece*, 3.3.8: “I have evidence that in the heroic age weapons were universally of bronze in the verses of Homer about the axe of Peisander and the arrow of Meriones. My statement is likewise confirmed by the spear of Achilles dedicated in the sanctuary of Athena at Phaselis and by the sword of Memnon in the Nicomedian temple of Asclepius. The point and butt-spike of the spear and the whole of the sword are made of bronze. The truth of these statements I can vouch for” (<http://www.perseus.tufts.edu/hopper/text?doc=Perseus:text:1999.01.0160:book=3:chapter=3&highlight=bronze%2Cweapons>).

⁶ Even though a significant part of the content herein rests upon bibliographic sources, we intended to provide only the basic literature available for the subject of warfare and warriors during the European Bronze Age. Thus, it may also be a

Richard Osgood⁷, Antony Harding⁸ or Kristian Kristiansen⁹, a series of collective works¹⁰, an impressive number of studies on various types of offensive¹¹ and defensive weaponry¹², battle chariots¹³, prestige objects¹⁴, fortifications¹⁵, funerary rites and rituals¹⁶, articles debating the theme of violence¹⁷ or even the *Journal of Conflict Archaeology*¹⁸ may be referenced. The warfare approach from a micro-regional viewpoint, as recently proposed by Sussane Weinberger for Weinviertel during the Early Bronze Age¹⁹, or the suggestion of a single archaeological culture²⁰, are not novel either. All of the above are completed through anthropological and archaeological approaches to social systems²¹, the emergence of inequality²², forms of political organisation²³, warfare²⁴.

In Romania, interest in the topic of warfare and warriors in the Bronze Age is sparse. Besides the volumes analysing weaponry in the *PBF* series²⁵ only K. Horedt's previous contributions on hillforts²⁶ and those of M. Rusu on helmets²⁷ and battle chariots²⁸, can be mentioned. Moreover, V. Vasiliev's constant interest for investigating Transylvanian hillforts of the first Iron Age²⁹ should be noted. More recently, following the current academic tendencies, Romanian researchers have also tried to emphasize the importance of the social structure of this period, including that of warriors³⁰.

*

Discussion on the theoretical aspects of warfare and its social implications has been competently carried out by the above mentioned scholars. Identification of the causes that led to the construction of the most complex fortifications in European prehistory, through the retrospective approach of social archaeology within the Lower Mureş valley (Fig. 1), is a theme that has already been broadly

start for Romanian archaeologists, who will have a future detailed approach to the issue. For a previous perspective on Bronze Age warfare see H. Vandkilde 2003, 126–144.

⁷ Osgood 1998; Osgood *et al.* 2000.

⁸ Harding 2000, 271–307; Harding 2007.

⁹ Kristiansen 1998, 63–123; Kristiansen, Larsson 2005, 142–250.

¹⁰ Carman 1997; Laffineur 1999; Carman, Harding 1999; *Eliten in der Bronzezeit*; Müller 2002; *World Archaeology*, 35, 1, 2003; Parker Pearson, Thorpe 2005; Arkush, Allen 2006; Otto *et al.* 2006; Harding *et al.* 2006; Blinjené 2007; Czebreszuk *et al.* 2008; Uckelmann, Mödlinger 2011 etc.

¹¹ Vulpe 1970; Vulpe 1975; Kemenczei 1988; Bader 1991; Eckhardt 1996; Říhovský 1996; Uckelmann, Mödlinger 2011 etc.

¹² Paulík 1968, 41–61; Patay 1968, 241–248; Hencken 1971; Bouzek 1981, 21–38; Hansen 2001, 11–166; Clausing 2003, 149–187; Fokkens *et al.* 2008, 109–140 etc.

¹³ General remarks in Penner 1998; Vosteen 1999; Fansa, Baumeister 2004; Fields 2006; Anthony 2007; Kaiser 2010, 137–158 etc., papers in which the general literature about this subject can also be found. For the characteristic finds of the Bronze Age in Romania see especially Hüttel 1981; David 1998, 247–305; Boroffka 1999, 81–135 etc.

¹⁴ General remarks in Hardt 2003, 415–420. See also Kilian-Dirlmeier 1986, 159–198; Harrison 2004; Harding 2007, 118–123 etc. In our area of interest, exceptional finds are the hoards at Apa (Popescu 1941), Țufalău (Mozsolics 1949, 14–29; Kovács 1999, 48, Abb. 22), or Perşinari (Vulpe 1995, 43–62).

¹⁵ We refer only to a few Late Bronze Age sites see: Jockenhövel 1990, 209–228; Kimming 1992; Hrala *et al.* 2000; Abels 2002; Czebreszuk, Müller 2004; Fields 2004; Hellerschmid 2006; Harding *et al.* 2007; Hänsel *et al.* 2009, 151–180 (with older literature); Gogâltan, Sava 2010; Müller *et al.* 2010 etc.

¹⁶ Treherne 1995, 105–144; Kovács 1996, 113–126; Branigan 1998; Clausing 2005, 319–420; Giannopoulos 2008 etc.

¹⁷ Peter-Röcher 2002, 1–28; Jockenhövel 2006, 101–132; Armit *et al.* 2006, 1–11; Falkenstein 2007, 33–52; Peter-Röcher 2011, 451–463 etc.

¹⁸ Insofar, seven volumes were published (2005–2011).

¹⁹ Weinberger 2008.

²⁰ Härde 2006, 341–384.

²¹ A more recent general presentation in Carneiro 2003. See also the archaeological perspective on the Late Bronze Age of central Europe in Clausing 1999, 319–420.

²² Renfrew, Cherry 1986; Mc Kay 1988; Earle 1997.

²³ Earle 2002.

²⁴ Haas 1990; Reyna, Downs 1994; Keeley 1996; Kelly 2000; Schmidt, Schröder 2001; Thorpe 2003, 145–165; LeBlanc 2003; Castleden 2005, 197–217; Peter-Röcher 2007 etc.

²⁵ Vulpe 1970; Vulpe 1975; Bader 1991. A study focusing upon bronze spearheads written by T. Bader (in *PBF* series) is still under print. For a short state of research regarding such topic see Soroceanu 2011, 229–232.

²⁶ Horedt 1966; Horedt 1974, 205–228; Horedt 1976, 397–405.

²⁷ Rusu 1990, 69–78.

²⁸ Rusu 1997, 529–544.

²⁹ Vasiliev 1995; Vasiliev *et al.* 1991.

³⁰ Gogâltan 1997, 55–65; Creţu 2005, 87–114; Popescu, Băjenaru 2009, 5–22; Schuster 2010, 217–233; Băjenaru 2010, 151–162; Dietrich 2010, 191–206; Soroceanu 2011, 225–270; Lazăr 2011, 7–21 etc.

examined. Additionally, a general overview of circumstances in the Carpathian Basin during the Bronze Age would only provide a presentation with which we are already familiar³¹. Therefore, we shall focus on a single aspect suggested by the archaeological finds: conflict situations during the Late Bronze Age (ca. 1500–1000 B.C.).



Fig. 1. Carpathian Basin map with the location of the Lower Mureș Valley.

The presence of fortifications and the profane or ritual deposition of weaponry are indirect evidence of existent conflict situations³². Moreover, prestige and funerary goods also contribute to the identification of warrior elites³³. Direct evidence supposes burnt and violently destroyed hillforts, weapons with use prints, or warriors wounded or killed on the battle field³⁴. In the Nordic world, representations carved on rock depicting combatants and their war ships are also suggestive for violent acts³⁵. These are completed by other war scenes from Portugal, Spain³⁶, northern Italy, such as those at Val Camonica; or the Mycenaean world, such as the frescoes at Pylos and Thera or the images imprinted on seals³⁷. Their ritual character further proves the special function of the warriors and warfare within the Bronze Age society³⁸.

In the Lower Mureș area, a few fortifications – investigated both in the past and more recently through field walks; archaeological excavations; and topographic, magnetometric, or aerial surveys – are dated to the Late Bronze Age (Fig. 2). They include the stronghold at Cornești, Timiș County³⁹; Sântana⁴⁰; and Munar, Arad County⁴¹. According to archaeological finds and ¹⁴C data, these strongholds most accurately date from the second half of the second millennium B.C.⁴². Their impressive

³¹ An example of such approach is a recently published study on tells' fortifications of the Bronze Age in the Carpathian Basin (Gogâltan 2008, 39–56). For Late Bronze Age see Bader 1982, 47–70; Bándi 1982, 81–90; Furmáněk *et al.* 1982, 159–175; Soroceanu 1982, 363–376; Matuz, Nováki 2002 etc.

³² For a more recent contribution see Čivilytė 2009, 125–146, Soroceanu 2011, 245–260, along with the older literature on the subject.

³³ For the Carpathian Basin see for example Kovács 1996, 113–126; Kovács 1999, 37–62.

³⁴ Gebhard *et al.* 2004, 181–197; Jockenhövel 2006, 108–115; Harding 2007, 33–40; Falkenstein 2007, 34–48; Vandkilde 2011, 366–376 etc.

³⁵ Nordbladt 1989, 323–333; Capelle 2008; Harding 2007, 115–118; Vandkilde 2011, 374–375 etc.

³⁶ Harrison 2004.

³⁷ Jockenhövel 2006, Abb. 2, 4.

³⁸ Kaul 1998; Kaul 2004.

³⁹ Medeleț 1993, 119–150; Micle *et al.* 2006, 283–305; Gogâltan, Sava 2010, 62–69; Szentmiklosi *et al.* 2011, 819–838.

⁴⁰ Rusu *et al.* 1996; Rusu *et al.* 1999, 143–165; Gogâltan, Sava 2010.

⁴¹ Gogâltan, Sava 2010, 57–61.

⁴² Medeleț 1993, 133; Rusu *et al.* 1999, 147–162; Gogâltan, Sava 2010, 41–44; Szentmiklosi *et al.* 2011, 827, fig. 9–10.

size⁴³, the fortification systems composed of ditches and concentric defence ramparts of earth, stone and timber structure; the sophisticated entrance gates; etc., are classic examples of the innovations of this period⁴⁴. Unlike other historical sequences, these fortifications were not meant for refuge during crises, but rather for constant accommodation of a community⁴⁵. In contrast to tells of the Early and Middle Bronze Age (ca. 2500–1500 B.C.), no important satellite settlements⁴⁶ developed near the fortifications. One may speak about a habitation clustering within these fortifications. Recent archaeological rescue excavations have proven that considerably sized, unfortified settlements were also in existence. It is possible that the settlement at Şagu, Arad County, situated only 14 km northeast⁴⁷, might have been part of the *hinterland* of the great stronghold at Corneşti.

Most likely, these strongholds were not the only ones in the Lower Mureş area. Images provided by *Google Earth* software led certain specialists to assume that large earth fortification systems similar in size to those above also existed at: Dumbrăviţa, Timiş County; Semlac “Pusta lui Cucu”; Pecica “Duleul lui Bran”; Turnu “La Prioran”; Bodrogu Nou, “Variaşul Mare”; Vinga; Firiteaz, Arad County⁴⁸; and “Variaşu”, Arad County⁴⁹. The surface research which we performed in the fall of 2009 at Variaşu Mare, Arad County and Şiria, Arad County did not confirm the existence of fortifications provided with earth rampart⁵⁰. However, other earth fortifications were identified at Caporal Alexa, Arad

⁴³ According to the team from Timişoara West University, the stronghold at Corneşti “Iarcuri” had the following dimensions: “Enclosure I: 3140 m perimeter, 72 ha surface, 72 000 m³ estimated volume of wall I. Enclosure II: 5980 m perimeter, 213 ha surface, 144000 m³ estimated volume of wall II (24 m² medium section of the wall). Enclosure III: 8120 m perimeter, 504 ha surface. The volume of the wall cannot be calculated due to the fact that it has not been preserved intact on its entire line; thus any supposition can be considered to be premature. Enclosure IV: 15735 m perimeter, ca. 1722 ha surface, the volume cannot be estimated in this case either, wall IV is the worst preserved of all walls” (Micle *et al.* 2006, 286). Regarding the fortifications at Sântana “Cetatea de pământ”: “We were able to estimate the size of the three enclosures based on measurements performed on the field, information supplied by the aerial photographs, and the data provided by Google Earth software. So the zone we labeled as Enclosure I has a surface area of 14 ha and a perimeter of 1524 m. Enclosure II covers a surface of around 50 ha and a perimeter of 2860 m. Enclosure III, the biggest, has a surface area of 80 ha and a perimeter of 3630 m” (Gogâltan, Sava 2010, 36). At Munar “Wolfsberg-Dealul Lupului” the first fortified enclosure was 0.7 ha in surface; however it belongs to the Middle Bronze Age. The second enclosure covers a surface of 4.76 ha, while the third has a perimeter of 14 ha (Gogâltan, Sava 2010, 60–61).

⁴⁴ For other fortification models existent in the Carpathian Basin see circumstances of the Early and Middle Bronze Age (Gogâltan 2008, 39–56).

⁴⁵ Calculations provided for the number of inhabitants who might have been sheltered in fortification I and II at Corneşti “around 1500–2000 people” (Micle *et al.* 2006, 292) are simply speculative. Subsequent systematic survey research and magnetometer surveys indicated a much more intense habitation (Szentmiklosi *et al.* 2011, 827–834). Future archaeological excavations would establish house sizes, their density and the exact perimeter of the habitation, the only ones that for lack of cemeteries would be suggestive of the number of inhabitants. For a long and intense habitation period of the fortification at Sântana pleads the stratigraphy of up to 3 m mentioned by the team who performed excavations there in 1963 (Rusu *et al.* 1999, 148).

⁴⁶ The picture provided by the team from Timişoara West University on the existence of 13 Bronze Age settlements located within a ca. 20 km perimeter around the hillfort at Corneşti, related to it, should be regarded with proper reserves (Micle *et al.* 2006, 292–294). Mentioned sites do not belong all to the same chronological level. The fact that the settlement within the first enclosure at Corneşti had not been identified at that point hindered any comparison of the finds there with those in these sites. Circumstances improved at Sântana, where potsherds found in excavations could be comparatively analyzed together with those following survey research (Gogâltan, Sava 2010, 39–41, fig. 36). A model for the reconstruction of a micro-region social establishment is that recently provided by the research team from Okolište in Bosnia (Müller *et al.* 2011, 81–106. For the Middle Bronze Age in the Carpathian Basin see also Earle, Kristiansen 2010).

⁴⁷ Rescue excavations performed by V. Sava, G. P. Hurezan and F. Mărginean in 2010. Site A1_1 was identified at approximately 200 meters south and almost at half distance between Şagu and Cruceni, south of the road which connects these two villages. The geographical coordinates of the site are: Latitude N46°03'25.52", Longitude: E21°18'33.99". The absolute altitude of the site varies between 140 and 141 meters. The settlement has a length of about 530 meters and a width of approximately 450 meters thus encompassing an estimated surface of almost 238.500 m², which means 23.85 ha. At the end of the archaeological excavation, 321 archaeological features were unearthed and documented. Out of these, 306 features belonged to the Late Bronze Age I-III (Bronze B₂-C, D, and Ha A₁), 14 features to the 3rd-5th centuries A.D. and one to the modern period. Based on these discoveries it can be now stated that the beginning of this settlement should be placed in the Late Bronze Age I stage (Bronze B2-C) and that its peak should be placed in the chronological Late Bronze Age III stage (Ha A₁). For more information see Sava *et al.* 2011.

⁴⁸ Micle *et al.* 2006, 295–297.

⁴⁹ Szentmiklosi *et al.* 2011, 835 (information I. Olteanu). It is neither specified whether that was Variaşu Mare or Variaşu Mic nor any previous literature was quoted. In fact, traces of a supposed fortification may be noticed on the territory of Variaşu Mare, Arad County, as in fact already mentioned by Micle *et al.* 2006, 296.

⁵⁰ In this survey research, our colleague Florin Mărginean from the Arad County Museum was also involved.

County and Lipova “Valea rea”, Arad County⁵¹, which belonged instead to the first Iron Age. At Vinga, Arad County, we found one fortified tell containing materials specific to the Cornești-Crvenka group of Vatina culture, which may thus chronologically place it in the Middle Bronze Age⁵².

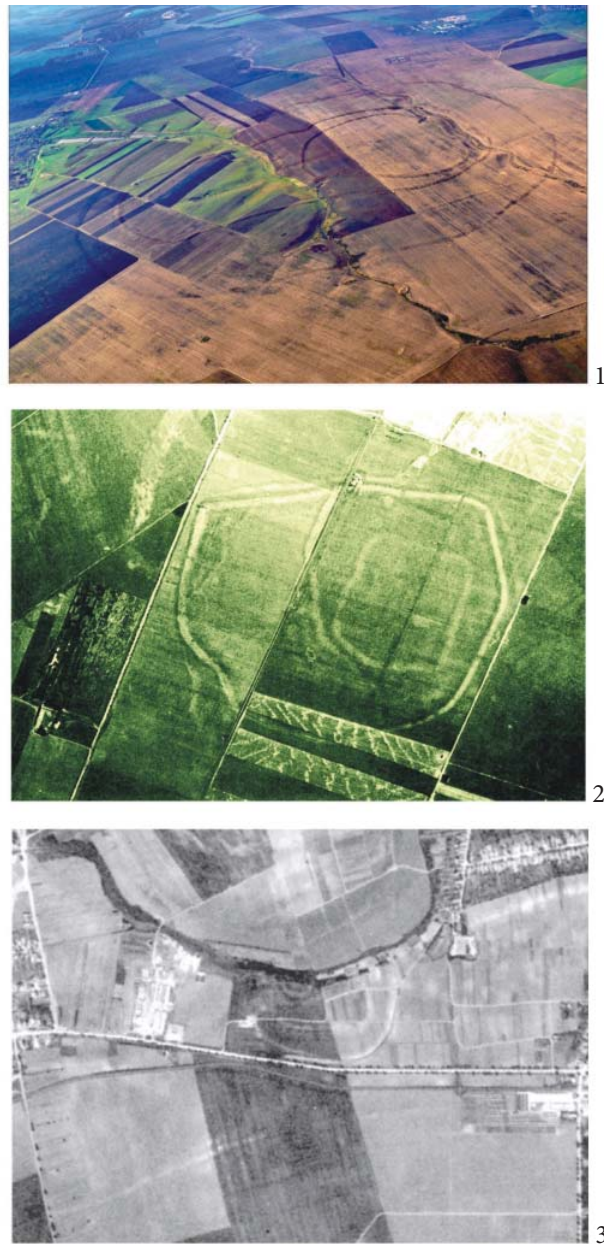


Fig. 2. Earthworks from Cornești (1), Sântana (2) and Munar (3).

Regarding weaponry, many deposits and isolated bronze finds in the area provide a comprehensive picture of the end of the period in the Carpathian Basin⁵³. Swords, daggers, spearheads, battle axes, pieces of armour, etc., were the main symbols and weapons of the warrior elites⁵⁴. The sword part of Hoard III found at Pecica – Arad County (Fig. 3) carries out evident marks indicating a long period of wear⁵⁵, as do the dagger discovered at Felnac – Arad County (Fig. 4), the spearheads documented

⁵¹ This is also mentioned by Pădureanu 1993, 23, no. 6. In 1970 excavations were performed by D. Demşa, but these researches focused only upon the medieval donjon.

⁵² It was assigned by E. D. Pădureanu, alike other Middle Bronze Age sites in the Lower Mureş, to Otomani culture (Pădureanu 1988, 507–528). For the new cultural affiliation see Gogâltan 2004, 79–153.

⁵³ Novotná 1970; Mozsolics 1973; Soroceanu 1982, 363–376; Kemenczei 1984; Mozsolics 1985; Kobal’ 2000; Sicherl 2004 etc.

⁵⁴ Höckmann 1980, 275–319; Kristiansen 1984, 187–208; Deger-Jalkotzy 2006, 711–718; Harding 2011, 194–198 etc.

⁵⁵ Bader 1991, 13/81; 17/150; About the wearing marks identified on the blade of the artefacts see Bridgford 1997, 95–115; Kristiansen 2002, 319–326; Kamphaus 2007, 113–120. A certain uncertainty concerning the efficiency of these bronze

as being part of the hoard at Păuliș (Fig. 5)⁵⁶, the battle axe discovered in Arad County (Fig. 6/1) and some other celts (Fig. 6/2–3)⁵⁷. Besides those listed above, we can infer other weapons (both offensive and defensive) made out of organic material, more or less spectacular, which were also part of the basic military gear of that period⁵⁸. A dagger fragment, several socketed axes, an arrowhead and harness items were discovered in the stronghold at Sântana⁵⁹.

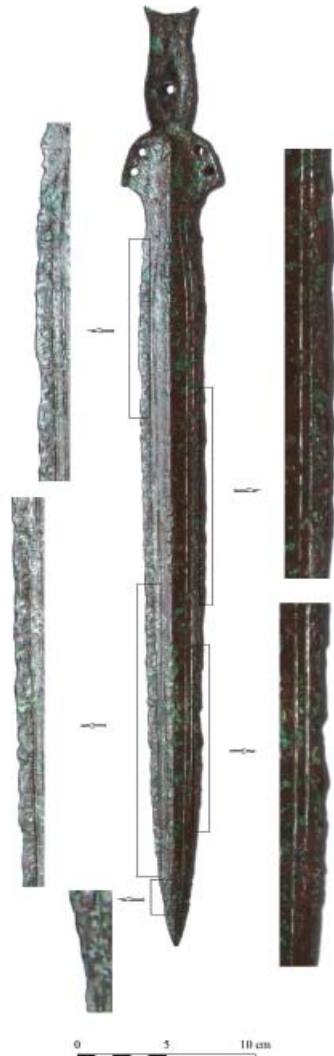


Fig. 3. Sword discovered at Pecica.

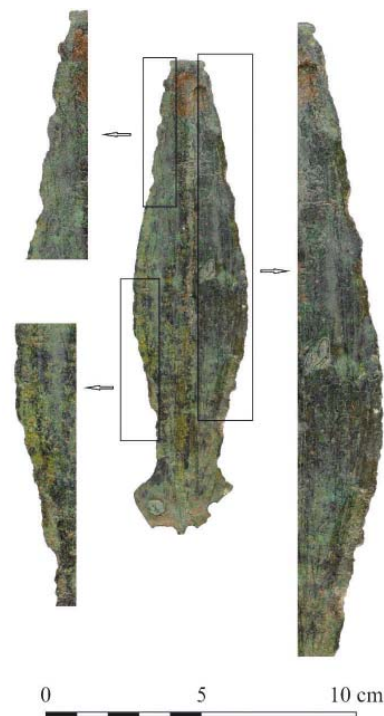


Fig. 4. Dagger discovered at Felnac.

Other prestige objects also belong to the same category of power and wealth symbols. At Sântana, excavations, field walks and isolated finds yielded an impressive number of bronze jewelry items, including belts, bracelets, pendants, buttons, saltaleoni, pins and rings⁶⁰. One particular gilded bronze belt, 87 cm long and 10 cm wide⁶¹, is an exceptional specimen, through its artistic value and complexity of technological production. It is interesting that, following excavations and survey

swords in actual combat was expressed by Harding (Harding 1999, 166). Others have insisted especially upon their ritual rather their functional character (Neustupný 1998, 27–30). An artefact supporting the opinion which implies that such bronze swords were actually used in combat is an identical sword, but made out of wood, interpreted as a weapon used in training activities (Stevenson 1960, 191–193).

⁵⁶ For the fights which implied spears and lances see Schauer 1979, 69–80.

⁵⁷ The celts could be used not only as tools, but also as weapons (Roberts, Ottaway 2003, 119–140).

⁵⁸ Capelle 1982, 265–288.

⁵⁹ Mureșan 2007, 120, n. 8; Gogâltan, Sava 2010, 25, fig. 13–15.

⁶⁰ Mureșan 1987, 313–317; Rusu *et al.* 1999, 158, 161–162, Abb. 15/1–5, 7–9; Gogâltan, Sava 2010, fig. 14, 39, 41, 72. Until now, 53 bronze artefacts have been found: 21 discovered during the excavation and 21 found during field walks, while 5 were stray finds.

⁶¹ Rusu *et al.* 1999, 159, 161, Abb. 15/14.

research at Cornești⁶², covering a much larger area than at Sântana, the number of metal objects found was insignificant. Instead, large amounts of quern fragments⁶³ were identified in the first enclosure. Future research would confirm whether the Sântana stronghold was prosperous due to control over copper and gold ores in the area and metalwork production and distribution, in contrast to that at Cornești which mainly focused on farming and animal breeding, activities for which the landscape was probably more suitable.

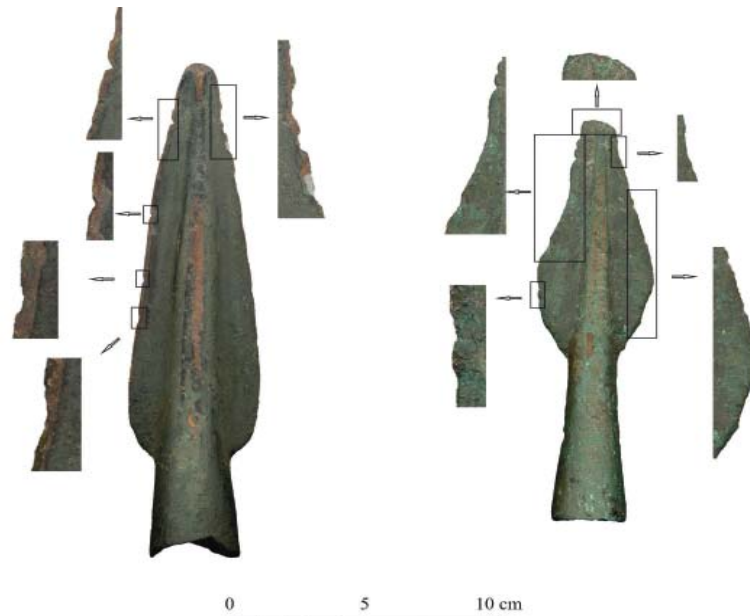


Fig. 5. Spearheads discovered at Păuliș.



Fig. 6. Battle axe and celts discovered in Arad County (1), Pecica (2) and Sântana (3).

A vessel that contained, besides human remains, a hoard composed of 23 golden pieces was discovered at Sântana in 1888 in the ditch in front of the 3rd enclosure rampart⁶⁴. Other golden hoards or isolated jewellery items are known from Alioș, Arad County; Carani; Cerneteaz; possibly Cornești,

⁶² Szentmiklosi *et al.* 2011, 832–834.

⁶³ Fl. Gogâtan's remark during the field research carried out in September 2008.

⁶⁴ Dörner 1960, 471–479; Mozsolics 1973, 208, Taf. 104–105; Gogâtan, Sava 2010, 17, fig. 5.

Timiș County; Fırteaz; and Sacoșu Mare, Arad County⁶⁵, thus placing the Lower Mureș area amongst the Carpathian Basin areas with the most numerous Late Bronze Age gold discoveries⁶⁶. Golden jewellery and bronze swords mirror best what we intend to prove herein: the existence of warrior elites⁶⁷. Only the bravest warriors accepted close confrontations and fearlessly displayed their social status, as we know from the depictions in Pylos or Mycenae⁶⁸.

Unfortunately, the information on funerary rites and rituals of the Late Bronze Age is inconclusive⁶⁹. We assumed that the great earth barrow enclosed in the stronghold at Sântana belonged to one of the community chieftains there⁷⁰. He could have been the heroic ancestor that founded the fortification or maybe one of his heirs⁷¹. For this period, circumstances at Lăpuș, or further south in the region of the Adriatic, where a strong Mycenaean influence can be documented⁷² are known. Future rescue excavations would confirm, from the perspective of burials, that which is recognised as reality of the period.

Archaeological excavations provided clear clues on the burnt earth strongholds at Cornești and Sântana. Thus, the palisade of the 1st enclosure at Cornești was set on fire⁷³. One cannot decide whether this was the result of a direct attack or of destruction during the conquest/abandonment aftermath. At Sântana we were fortunate enough to research the fortification area which was clearly besieged. We found *in situ* that the clay wall and its timber structure, as well as the palisade, were destroyed by clay sling projectiles and that they were torched⁷⁴. One may assume that the area where the attack occurred is approximately 400–500 m in the northern part of the 3rd enclosure, where over time clay sling projectiles were found in impressive numbers⁷⁵ and where at the surface, even today, one may notice chunks of clay and burnt earth from the wall. We presume that the attackers chose this location instead of one of the access gates because there the defence ditch was no longer functional during the confrontations due to clogging⁷⁶. Moreover, according to its present state, the fortification was not as high up as in the gated area. The considerable number of these projectiles and the extremely violent attack of a large sector of the defence system of the 3rd enclosure at Sântana make evident the presence

⁶⁵ Gogâltan, Sava 2010, 80–81.

⁶⁶ Kemenczei 1999, 63–79.

⁶⁷ Sperber 1992, 63–77.

⁶⁸ Gogâltan 1997, 59–61.

⁶⁹ The existence of a necropolis at Felnac (Arad County) belonging to the so called “Tumuli culture” is supposed (Kacsó 1992, 97–98; Bejinariu 2004, 67–71). The necropolis at Bobda (Timis County) which was only mentioned (Horedt 1967, 147–148; Gumă 1993, 155–156; Boroffka 1994, Abb.1), remains unpublished. More recently, A Ursutiu investigated a small cremation cemetery belonging to the Late Bronze Age on the occasion of some rescue excavations undertaken for the construction of the future bypass in Arad (information kindly provided by A. Ursuțiu). As part of the rescue excavations for the future Nădlac-Arad highway, the archaeological department of the Arad County Museum unearthed another Late Bronze Age necropolis. This new discovery is situated 3.5 km NNE from the centre town of Pecica. Inside the perimeter of the future highway 41 tombs were identified, out of which 27 were inhumation burials and 14 cremation burials. The deceased were, in their vast majority, crouched, and they displayed very rich funerary inventories. Small cups and large pots were usually identified around their feet and hips. Cases in which animal parts are found close to the feet of the bodies are quite frequent. Apart from these, a great number of the deceased possessed quite rich funerary inventories consisting of needles, bracelets, appliqués, bronze daggers or axes; amber beads were found in one tomb. Based on the funerary inventory of these graves, we can assert that the inhumation tombs belong to the Late Bronze Age I chronological stage (Bronze B2-C). The urns of the cremation burials contained almost every time artefacts deposited as funerary inventory. This enabled archaeologists to find a large quantity of small bronze artefacts such as simple or plurispirallic rings or bracelets. In some of the urns small cups have been also documented. The fact that some of the urns were actually big pots is worth mentioning, but there are also cases in which the urns consist of small bowls. Based on the funerary inventory and the types of vessels used as cinerary urns we can date the cremation graves in the Late Bronze Age II-III stages (Bronze D – Ha A₁).

⁷⁰ Gogâltan, Sava 2010, 75.

⁷¹ Apart from the well-known placement and significance of the funerary monuments from Mycenae (Mylonas 1982, 75–77, fig. 57) or Āgina (Kilian-Dirlmeier 1997), we would like to mention a recent discovery from Monkodonia as well (Hänsel *et al.* 2009, 151–180).

⁷² Hänsel, Teržan 2000, 161–183.

⁷³ Szentmiklosi *et al.* 2011, 826–827, fig. 7.

⁷⁴ Gogâltan, Sava 2010, 33, fig. 26, 28–30.

⁷⁵ In 1976, close to our excavations, behind the former railway station *Cetatea Veche*, a tractor driver dug out “a kiln” full (ca. 200 pieces!) with clay sling projectiles (balls) (Mureșan 2007, 120, n. 7, 121). Other projectiles were found in 1980 (Mureșan 2007, 120, n. 8).

⁷⁶ Gogâltan, Sava 2010, 33, 36.

of an expeditionary force rather significant in numbers and very well trained militarily (Fig. 7)⁷⁷. Clay sling projectiles were purposely fired at high temperatures for greater endurance and their weight was up to 600–700 g. Their launch was very precise, as proven by the discovery of approximately 80 pieces in the four meters investigated archaeologically within the fortification (Fig. 8)⁷⁸. The projectiles' weight and the distance they needed to be safely shot by the attackers makes us think of the possibility that catapults and not only simple leather slings or other perishable materials were used⁷⁹. The siege tactics should have been the same as those used in the case of the conquest of fortifications in the Mycenaean or Oriental world⁸⁰. The reply of the besieged is suggested by the position *in situ* of a bronze arrow shot from within the fortification to the 3rd enclosure area that had already been conquered at that point (Fig. 9)⁸¹. It is hard to say whether the attack was fatal or not to the entire fortress. Previous excavations identified the prints of large-sized burnt houses and human remains in the last inhabitancy level of the 1st and 2nd enclosures at Sântana⁸².



Fig. 7. Sântana "Cetate Veche". Representation of the alleged attack.

In the area in question, there are no human skeletons with traces of physical violence yet there are many such examples for the prehistory of Europe⁸³. For the Bronze Age, worth mentioning are the finds in the Carpathian Basin as well as those in the graves of Chłopice-Veselé, in Nitra and Aunjetiz cultures from southwest Slovakia⁸⁴, in the settlement at Nižná Myšľa⁸⁵, in grave 122 at Hernádkak⁸⁶, in central Europe at Velim and Blučina⁸⁷, in the Netherlands at Wassenaar⁸⁸, in England at Tormarton⁸⁹

⁷⁷ The military organization and fighting strategy are well known for example from depictions of the battle from Kadeš (Müller-Karpe 1980, Taf. 52/9, 53/6, 54/A, 55/1–2; 56/1–2, 57/1, 58, 59, 60/1–2, 61/1–2), against the so-called "sea people" (Müller-Karpe 1980, 71/1, 72/1, 73/1, 74/1, 75/1) or of other military campaigns (Müller-Karpe 1980, Taf. 57/2, 60/5, 61/3, 67/1, 70/1). In the Nordic Bronze Age there were naval expeditions that could involve up to 125 participants (Pfeiffer-Frohnert 1997, 460–461, Abb. 4).

⁷⁸ Many of them shattered upon impact against the clay wall, thus their exact number is unknown.

⁷⁹ Korfmann 1987, 129–149.

⁸⁰ Karo 1930, 175, Abb. 83–84 – Micene; Müller-Karpe 1980, Taf. 54/D – Debir, 56/2 – Mutir, 56/3 – Dapur, 57/4 – Askalon), 68/2 – Tunip etc.

⁸¹ This is proven by the position where the arrow got stuck in an ancient stream behind the 3rd enclosure (Gogăltan, Sava 2010, 43, fig. 40).

⁸² Rusu *et al.* 1999, 151–152, Abb. 3/a-b; 5.

⁸³ Thorpe 2003, 150–159; Knüsel 2005, 49–65; Peter-Röcher 2007, 194–216 etc.

⁸⁴ Batora 1999, 41–52.

⁸⁵ Jakab *et al.* 1999, 91–127.

⁸⁶ Bóna 1975, 150, Taf. 155/4; Schalk 1992, 142, Abb. 56/1, Taf. 24/1–2, 31/1, 5.

⁸⁷ Recently abstracted by Harding 2007, 86–93.

⁸⁸ Louwe Kooijmans 2011, 1–20.

⁸⁹ Osgood 2006, 331–340.

and those from northern Europe⁹⁰. A new view of the Bronze Age warfare is given by the possible battle fields at Weltzin and Altentreptow in Mecklenburg-Vorpommern German Land⁹¹. It is hard to say whether the skull remains of a male, aged approximately 20–30, found in the filling lens of the fortification ditch at Sântana belonged to an aggressor (Fig. 10)⁹².

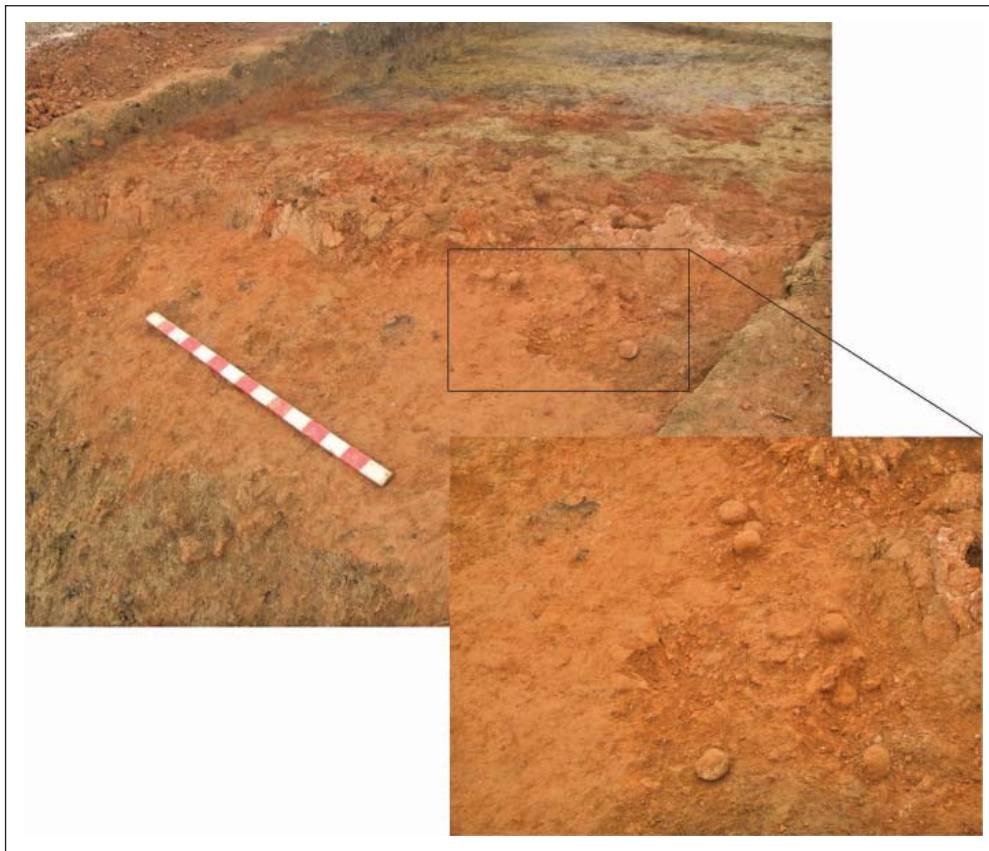


Fig. 8. Sântana “Cetatea Veche”. Clay sling projectiles discovered *in situ*.

As history tells us, the reasons underlying these conflicts may be diverse; however, everything was connected to power, prestige, wealth and their preservation⁹³. Evidently, the 17th-century image in Thomas Hobbes’s *Leviathan* of past societies governed by the motto *Bellum omnium contra omnes* (“the war of all against all”) is far from Bronze Age reality⁹⁴. We believe that Kristian Kristiansen and Thomas Larssen’s more recent inter-contextual approach⁹⁵ is closer to the historical truth. Ruler dynasties, initiation quests of royal successors, dynastic alliances, a warrior aristocracy, betrayal and court intrigue, as reported by ancient literary sources, is the scenario that may also be proposed for the Late Bronze Age by the Lower Mureş. Only charismatic leaders had the power to enforce the construction of earth strongholds like those at Corneşti, Sântana and Munar; they could not be the product of a very well organised social system based upon economic, religious and implicitly hierarchical criteria⁹⁶. It is difficult to imagine the huge effort it must have taken to build these fortifications⁹⁷.

⁹⁰ Fyllingen 2006, 319–330.

⁹¹ Internet information is supplemented by that in Laschinski 2009.

⁹² The skull fragment was discovered in the defense ditch of the 3rd precinct documented at Sântana “Cetatea Veche” together with other human bone fragments (layers 6, 7, 8, 22). On the skull, two clear unhealed blow marks are still visible and we believe they are the cause of a violent death. The anthropologic analysis performed by L. Andreica showed that we are facing an individual with a very good dentition, a sign of a healthy life and alimentation. Gogâltan, Sava 2010, 36.

⁹³ Jockenhövel 2006, 118–120; Peter-Röcher 2011, 455–456.

⁹⁴ Otto *et al.* 2006, 9.

⁹⁵ Kristiansen, Larsson 2005, 142–250.

⁹⁶ Breuer 1990.

⁹⁷ Gogâltan, Sava 2010, 75–79.

Moreover, recurrent repairs of clay walls, as noticed at Sântana⁹⁸ and the cleaning of the defensive ditch were additional duties to daily activities. Their day and night defence would have involved such a large number of warriors that the community, or the entire *hinterland*, could not support. The protection system must have been broader, based on the involvement of all those directly connected to the stronghold and also of the participation of certain allies. In the case of precincts III and IV from Cornești, their huge dimensions and their simplified fortification elements make us think more and more of the possibility that these precincts could have had a symbolic meaning and function – that of marking and protecting the designated space of a community against savage animals or other predators. Their defensive efficiency seems to be much reduced in order for them to face real, wide-scale military conflicts.

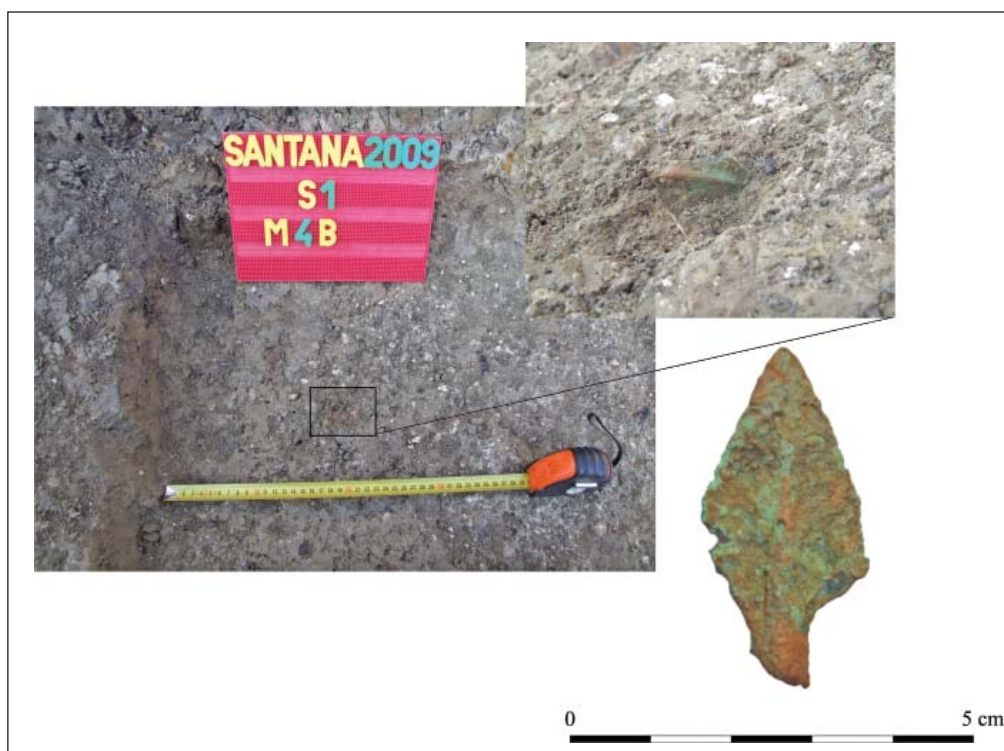


Fig. 9. Sântana "Cetatea Veche". Bronze arrow head discovered *in situ*.

The conclusion to be drawn from the above is that recent archaeological finds in the Lower Mureș area, dated to the Late Bronze Age, confirm what is known or suspected about the society of the period. Furthermore, the image of a world peripheral to the classical Bronze Age civilisations from Greece, the Near East and Egypt gains a new dimension. By their archaeological realities, these earth strongholds perfectly integrate what the most regretted British archaeologist, Andrew Sherratt, defined as the "Bronze-Age world system"⁹⁹.

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⁹⁸ Gogâltan, Sava 2010, 33, 77–78, fig. 30.

⁹⁹ Sherratt 1993, 1–58. See also Frank 1993, 383–405.

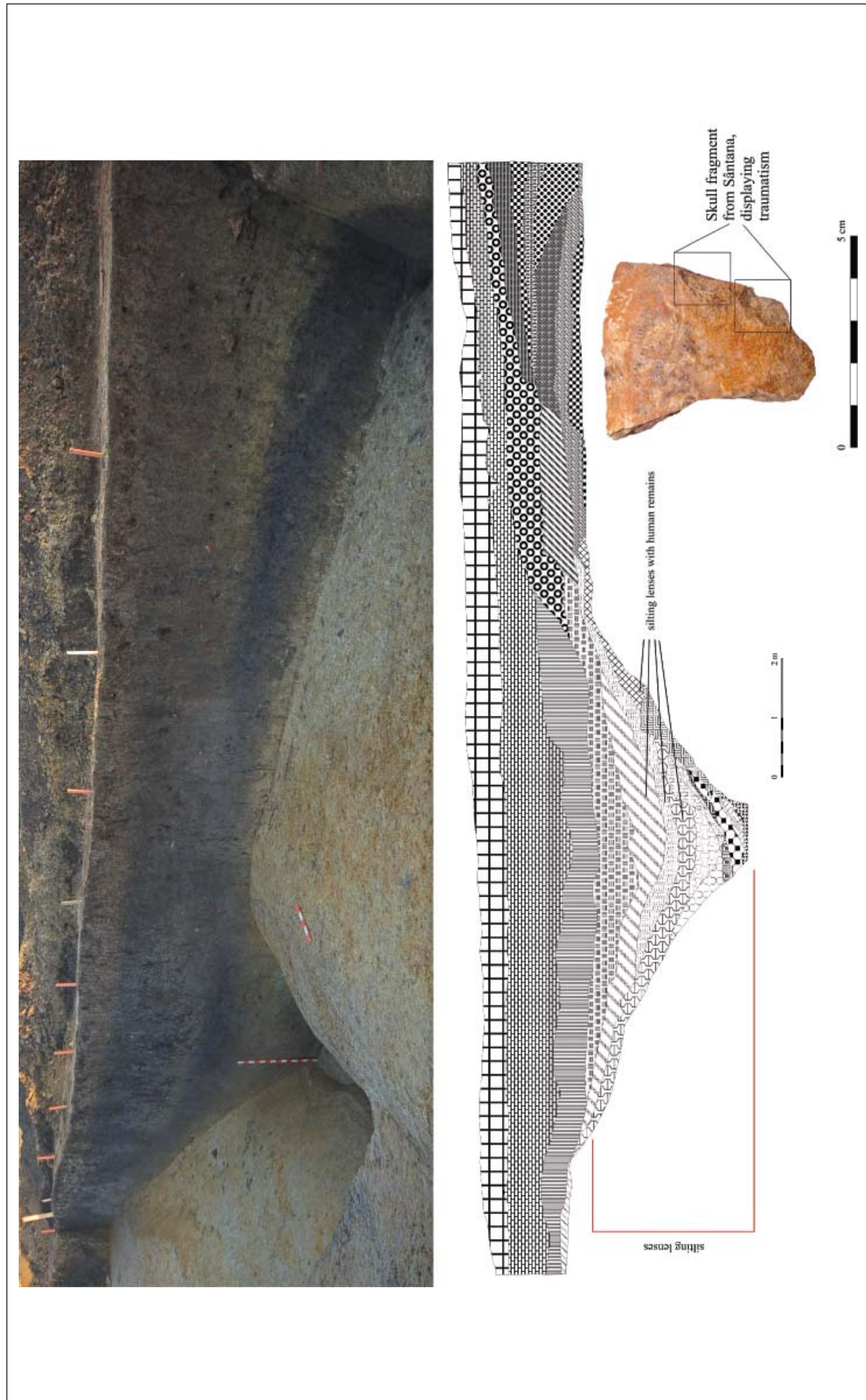


Fig. 10. Sântana "Cetatea Veche". Fragment of a human skull displaying traumatism, discovered in the ditch.

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