A fort at the edge of the Empire. Observations enabled by the discovery of two curved weapons at the Dacian fortress of Divici

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Abstract: A fort at the edge of the Empire. Observations enabled by the discovery of two curved weapons at the Dacian fortress of Divici. Among the specific embodiments of the military phenomena, weapons occupy a leading role, as they are the most obvious physical representations. The arrival of Roman power on the lower Danube during 1st century A.D. generated a series of skirmishes in the region, with both the Dacian kingdom, as well as with various tribal factions, more or less under the influence of the said kingdom, on both sides of the great river. In our view, a special interest zone for understanding said phenomena is the Danube Gorge, where, for over a century, the armies of Rome and those of the Dacian kings were in direct and permanent contact, separated only by the great European river. The usage of modern methods of investigation, to the extent that it can be done, combining them with field research and excavations in well-defined micro zones, can provide new insights into the analysis of issues such as the spatial distribution of sites in an area and thus, the issue of relations between these archaeological sites. In this picture, curved weapons discovered in the ruins of the Dacian fortress Divici, an important fort, throws an important light on the importance of this border point. It is likely that the garrison stationed here, obviously related to the power center from the Șureanu Mountains, was composed of elite soldiers, as the weapons, the type of fortification and the geographical position converge together towards this hypothesis. Located at the meeting point of two distinct worlds, the Dacian warriors on the Danube Gorge built solid fortifications, integrated into a coherent system, which aimed at controlling access to key crossing points across the river. Consolidating their power through trade, but also through plunder, these warriors found themselves at the forefront of the advance of Roman armies towards the Danube, managing to resist until the era of the large Dacian-Roman confrontations.

Key words: Dacian curved weapons, Ancient Dacian Warriors, GIS, Danube Gorge, Divici Fortification

Introduction

Among the specific embodiments of the military phenomena, weapons occupy a leading role, as they are the most obvious physical representations. Carriers of social and ideological messages, weapons were regarded as having real identity markers, as a weapons type and characteristics were associated with the warriors that owned them. That is the case of the curved weapons with the blade on the concave side, invariably associated by ancient artists and authors with the warrior populations of the northern Balkans, Thracians, but especially Geto-Dacians.

The construction of the Dacian kingdom in the centuries 1st B.C. – 1st A.D., done through the more or less peaceful integration of preexistent sociopolitical entities, could not have been achieved without a solid political-military infrastructure. This infrastructure was
characterized, among other things, by the existence of numerous core groups of professional warriors with a well-defined identity, as they were the builders and masters of impressive fortifications, securing and projecting the power and authority of the Dacian kings of Sarmizegetusa throughout the territories.

The arrival of Roman power on the lower Danube at the end of the 1st century B.C., generated a series of violent clashes and skirmishes in the region, with both the Dacian kingdom, as well as with the various tribal factions, more or less under the influence of the said kingdom, battles taking place on both sides of the river. These clashes along a Danubian frontier that spanned more than 1000 km, have been well documented by contemporary sources. The need for an efficient response to the new military and political challenges brought on by the situation on the Danube, had determined the consolidation of existing fortifications, as well as the creation of a veritable defensive systems meant to protect the, up until then fluctuating borders of the Dacian kingdom. In our view, a special interest zone for understanding said phenomena is the Danube Gorge, where, for over a century, the armies of Rome and those of the Dacian kings were in direct and permanent contact, separated only by the great European river.

In the present study, we have set out to discuss the issues of the defensive system of the area, at the same time attempting a journey into the world of the Dacian warriors at the boundaries of the Roman Empire. Therefore we will present two curved weapons, unpublished, discovered in one of the keeps located inside the powerful Dacian fortress of Divici – „Grad” (town of Pojejena, Caraș- Severin County).

Means and methods

Our discussions focus on the Danube Gorge, the area defined conventionally as being between the modern localities of Baziș (town of Socol, Caraș-Severin county) to the west, and Ieșenița (town, Mehedinți county) to the east. To the south, the limit is the waters of the Danube, and to the north the waters of the Nera river (fig. 1). Our analysis includes almost the whole of the Almăjului Mountains – even though their peaks rarely go over 1000 meters, the large degree of relief fragmentation and the considerable terrain differences make this area, even today, one of the least populated and remote areas of Romania (L. Măruia, 2004-2005).

Caution must be used when using the results of analyzing discoveries mentioned in the relevant bibliography for the purpose of obtaining an image concerning the intensity of habitation. Therefore, with the exception of fortifications, random discoveries are usually very generously dated, thus their inclusion in our timeframe of interest, 1st century B.C. – 1st century A.D., is often questionable.

The same uncertainty regarding dating is also found in the case of hoards and numismatic discoveries, the case of monetary circulation in pre-roman Dacia, the period of use and preservation of certain coins, all these are issues that lack sufficient clarification. For the purpose of this article, we have selected 46 distinct archeological discoveries (fig. 2; tab. 1), consisting of 5 fortifications, 8 open settlements 6 cave dwellings, 1 funerary find, 10 coin hoards and 15 isolated coin finds (tab. 1).

To better understand the functionality of defensive ensembles and their spacial relationship with neighboring settlements, we believe we must first start with a good awareness of the local terrain, while modern analysis methods (GIS software), are in our opinion, indispensable. It is not in the purpose of this paper to criticize some approaches in contemporary Romanian archaeology of the Late Iron Age– but we find indeed curious how certain authors (for example, P. Pupeză, 2013) can discuss at length the archaeological theory of view shed in relation to Dacian forts without providing in their papers any sort of GIS analysis, not to mention any sort of maps at all....

To calculate visibility ranges, we have used a DEM (Digital Elevation Model) with a 30 m resolution, the processing of results being done with the Global Mapper 13.00 program. We have also consulted ortophotograms, on a scale of 1:5000, available online on the site of the ANCPI. Information regarding the precise locations (in GPS and in Stereo70 format coordinates) of a majority of analyzed points was gracefully provided by Liviu Măruia and Alina Gheorghe.

Using a single reference point to calculate visibility and control ranges of fortifications situated in rough terrain can usually cause errors.
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Fig. 1- Map of ancient Dacia and surroundings areas with the location of the area in question.

Fig. 2- Map of analyzed area and archeological discoveries in question.
<table>
<thead>
<tr>
<th>Number</th>
<th>Place</th>
<th>Placename</th>
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<th>Bibliography</th>
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<tr>
<td>16</td>
<td>Dalboșeț</td>
<td>Grădiște</td>
<td>Fortress</td>
<td>O. Boz et al., 2004.</td>
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<td>43</td>
<td>Dubova</td>
<td>Cuina Turcului</td>
<td>Cave</td>
<td>S. A. Luca, 2006.</td>
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Tab. 1 - Archeological finds in the area in question and their number of order on Fig. 2.

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It is well known that perspectives can differ from one side to another on a mountain; however our intention was to offer a global perspective of the existing visibility range. Therefore, for each site we have used multiple reference points, that form a polygonal mesh overlapped with what we have termed (mostly in a conventional sense) the „limits” of said location, the plans we provided showing the cumulative results for analysis done for each of the mentioned reference points.

Given that surveillance in forts was certainly done from towers or specially built observatories, we have taken into consideration a height of 10 m above ground (still, identical results were achieved with the analysis for this area where we calculated visibility ranges from ground level for each).

The artifacts and their context of discovery

The Divici - “Grad” fort is situated on the Danube Gorge, between kilometers 1065 and 1066 of the river, on the last peaks of the Almăjului Mountains, occupying a triangular plateau, with an area of 7000 square meters, that dominates with around 100 m the river’s flow (fig. 3). Surrounded on three sides by steep slopes, it is only accessible from a narrow path on the northern side, which in ancient times was barred by two defense ditches, with an opening of 6 and 10 m respectively, separated by what seems to have been an earth wall. In the immediate vicinity of the fort, on a series of anthropic terraces located on the eastern slopes of the promontory, numerous signs of habitation have been observed – at the base, on the banks of the Danube a contemporary civilian settlement existed, currently submerged due to the building of the Iron Gates dam (M. Gumă et.al., 1987; M. Gumă et.al., 1995; M. Gumă et al., 1997; I. Glodariu, 2004; A. Rustoiu, 2005; A. Rustoiu, 2006-2007).

A series of fortification works, consisting of three successive earth walls, were observed on the peak north-west of the site (M. Gumă et.al., 1995). Liviu Mâruia pointed out the existence of major linear fortifications meant to bar access to the west of the Almăjului Mountains, which are believed to be from the Dacian period due to similarities existing to those found in the Șureanului Mountains (D. Oltean, 2012; E. S. Teodor et.al., 2013) – therefore, we believe that future systematic field researches should be started throughout the whole region.

Archeological digs at „Grad” location during 1985-1998, have identified three separate phases of said fortifications, which seem to be linked to three phases of habitation. Our description will focus particularly on the military aspects of the discussed site. During the first of these phases, less known (dated between the late II
d century BC - the first half of the I
d century BC), the plateau was defended by a simple earth wall with palisade. The second phase, much better substantiated by findings, is dated in general during the I
d century AD when the fort suffers significant damage. During this period, the slopes of the early earth wall were removed by the addition of large amounts of compacted clay, thus achieving a terracing that had a stone wall built on top. This stone wall presents partly shaped facings made of stone bound with clay, the wall filling being made of crushed stone and clay, apparently also having, on the outside, a series of support beams stuck down, with perhaps a supporting role. This phase corresponds, apparently, to the T2 keep, that has a stone base and a story probably made of brick (M. Gumă et.al., 1995).

The last phase lasts throughout the I

Following significant damage sustained at the end of Phase II, the stone wall above is restored, at which time the T1 keep was built in the northwest plateau, which, considering its position, acted as a curtain wall tower (Fig. 4). Between the restored wall and the edge of the keep is a gap of a few meters - judging by the published excavation plans, it is possible that there may have been the location of the fort gateway. A 3.60 m thick stone wall runs from the north-eastern side of T1, built using the same opus incertum technique. As with the Phase II wall, the strengthening of the structure was also made on the outside by a series of beams, vertical panels supported on a structure of transverse beams or boards, according to the authors of the excavation (M. Gumă et.al., 1995, M. Gumă et.al., 1997). It seems hard to explain why this wooden structure was built on the outside wall,
as it was constantly exposed to danger of fire during an eventual siege - but it is likely that engineering reasons (risk of the wall slipping toward the outside) might have prevailed over military considerations.

The T1 keep has a rectangular shape, each of its sides measuring approx. 9, 50 m on the outside (fig. 4). Its solid walls, with a thickness of 2.15 to 2.20 m, were kept in elevation over 1.50 to 1.60 m from ground level. The building was erected on a foundation 0.80 m deep, dug into the well compacted clay layer of a previous terracing. The foundation was made out of large pieces of local rough stones, stuck together with clay (M. Gumă et al., 1995). The walls of the tower have a complex structure, being made with the same "opus incertum" technique, but in a slightly different manner from that of settlement walls. Thus, both the interior and exterior wall facings were solid, made of large blocks of various shaped rocks, with a summarily shaped external side, the binder used being clay. Between the facings, the filling was made out of small pieces of stone bound in clay, the whole building being enhanced by several rows of wooden cross-beams with "dovetail" shaped heads (see fig. 4) that left spacing’s in the wall. These rows of spacing’s, located approx. 1 m away from each other, could be seen mostly on the side of SW, NW and NE of the tower, better preserved (M. Gumă et al., 1995). The upper floor of the keep was made of brick, judging by the presence of whole and fragmented bricks, some of them badly burned, found in the debris. Three distinct types could be distinguished: rectangle shaped, size 30x40 cm or 22x13 cm, and square shaped, with dimensions of 19x18 cm, thickness of all types ranging from 7 to 8 cm. Note that some of the rectangular pieces present traces of plaster, approx. 1 cm thick. Numerous traces of charred wood, and nails, discovered in debris, resulted from the destruction by fire of the wood infrastructure and superstructure of the keep (M. Gumă et alii 1987, M. Gumă et al., 1995, Gumă et al., 1997).

Inside the tower, in the middle is a round earthen hearth. A rich archaeological material, consisting of numerous pottery fragments, made both by hand and wheel, some of them painted, where found around it and in its chamber. We should also note the presence of fragments from large storage vessels. Also found were metal pieces, among which a jeweler's anvil demands notice. In this same area, captured in Section I (fig. 4), were also found the two curved arms that are the object of our study.

Beyond the obvious set of spiritual and cultural values with which Dacians have penetrated the consciousness of antiquity, history was more easily impressed by the warrior ethos and military virtues which they exercised during their tumultuous existence. The Dacian-Roman wars of 101-102 and 105-106 A.D., revealed not only martial qualities unveiled by written sources, but also a local adaptation of a species of curved sword known in antiquity as the falx, whose archaeological remains are slowly revealed. Curved blade weapons had a long evolution in the Thracian and then Dacian environments. The ancient written sources, archaeological findings and artistic representations show this long process (A. Rustoiu, 2007).

P. Papinius Statius, Latin poet and protégée of Emperor Domitian (therefore we assume that he knew the Dacians well) remarks the sinister fame of their weapons, with which they are associated: *Quo Paene arma rotatu, quo Macetae sua gaessa citent, quo turbine contum Sauromates falce mque Geites arcunque Gelenus tenderet et flexae Balearicus actor habeneae [...]* (Statius, Achilleis, II, verses 131-134 of the II part).

M. Cornelius Fronto, important rhetor and Roman lawyer, also speaks of this terrible sword, which the Dacians used to oppose Roman expansion: *[...] in bellum profectus est cum cognitis militibus hostem Parthum contemnentibus, saggitarum ictus post ingentia Dacorum falci bus inlata volnera despicatur* (Fronto, Principia Historiae). This is how he starts to describe the valiant efforts of the emperor L. Verus in in his war against the Parthians, in an effort to mask his former student’s poor performance in said conflict. This fragment, quoted extensively in the literature, is very important for the fact that it brings into question, more than half a century after Dacian-Roman wars, not only generalized use of the Dacian curved swords, but their forms as well. Naming sickles in general, the author shows that he speaks of curved weapons, the term *Dacorum falci bus* including said sickles, scythes, spades, knives, daggers and curved swords used during
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Fig. 3 - Divici – Grad Fort. Ortophotogram.

Fig. 4 - Reenactment of technique used in the construction of T1 keep’s walls and the general plan of the excavations in the area of the T1 keep (A. Rustoiu, 2006-2007).
the Dacian kingdom’s period.

Despite the reputation, exemplifying with artifacts suffers a number of shortcomings, due in part to the rarity of these objects in archaeological contexts, and on the other hand, because of their relative standardization. Although present on architectural monuments, monetary issues or votive pieces, artistic ambiguities do not always show the actual characteristics of these swords (C. Borangic, 2006), almost invariably the authors seem content to convey the idea of *falx* and rarely the objective picture of it.

As we said, *falx dacica* findings are rare in relation to their fame at the time, so far a relatively small number of such curved swords have been found, subsumed, with few exceptions, in a single type of sword called "Sarmisegetusa" (C. Borangic, 2006), considering those which we are confident are authentic and have kept almost the entirety of their characteristics. The term *falx dacica*, obtained by associating two Latin terms, allows accurate identification of the weapon, in various historical and archaeological contexts (Cf. C. Borangic, 2006). This type of sword, "Sarmisegetusa", was for a long time the only model without any doubt regarding its authenticity. The other types were assumed to be possible because even though artistic illustrations were not accompanied by specific findings, it was possible that they appear in the future, for manual techniques that were used in their production leave room for their existence at the time, even in a limited number (C. Borangic, 2006), and their consistent presence in Roman art seemed more than a simple artistic canon.

The assumption proved itself correct, because, as we have temporarily admitted, as digs done in the Divici fort have archeologically confirmed the existence of this other type of curved sword, named ,,curved gladius”, type III, registered as A2B3 – sword with medium sized blade, with only a bent - (C. Borangic, 2006) in Dacian environments. The combination of terms is only apparently contradictory, for it has circulated in antiquity, at least as poetic license. We encounter it, for example, under the term *falcatus ensis* – *ensis* being a synonym for gladius (C. Darenberg, M. Saglio, 1926) and in two poems of Ovid’s *Metamorphoses* (part I, verses 717-718: *Nec mora, falcato nutantem vulnerat ense, qua collo est confine caput [...]; part IV, verse 727: Desinit inispem *falcato vulnerat ense* [...] and part V, verse 80).

Previous inferences were then supported only by illustration of such weapons in Roman art, lacking until now, the archaeological proofs confirming the existence of such a type of curved sword, whose morphology would permit its use in a disciplined way, in compact groups fighting after the Roman model. Changes where brought to the dominant model of curved sword "Sarmisegetusa", which seems to have been the favorite weapon of a distinct category of Dacian warriors, because of the new tactical considerations needed when facing the Roman legions and their absence in previous chronological horizons, allowing the assumption that this type of weapon was a strange symbiosis between *falx dacica* and gladius, in fact a later, hybridized version of the feared curved sword. This curved sword has a short blade, bent only at the tip and was probably a single handed weapon.

Thus, on Trajan's Column, a monument with a visible message of imperial propaganda, the fight scenes depict Comati warriors wielding invariably short curved sword and shield (fig. 5). Note that *Sarmisegetusa* type curved swords, usually have a two-handed grip, which eliminates the possibility of using it simultaneously with a shield. This allows the assumption that those wielding the *Sarmisegetusa* type sword opened the battle, creating gaps and those with short swords, including the *curved gladius* type, form the bulk of the warriors that engaged in melee.

A more explicit rendering can be found in the Adamclisi triumph monument’s weapon frieze. (fig. 6/1), where the curved swords is comparable in size with gladius next to it. Completely different from other weapons represented on the monument, this one has a straight blade to near the top, which is short and with a sharp bend and handle, slightly oversized, is separated from the blade by a guard sleeve visible only on the underside of the blade (F. Bobu-Florescu, 1960).

The bravery and skill of the Dacian military art was not exploited in arenas just for the fun of the plebe when the warriors were taken as gladiators after the end of the Daco-Roman wars, for the Roman imperial administration, whose pragmatism was practically a state policy, skillfully used these qualities of the new subjects
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Fig. 5 - Capillati warriors pictured on Trajan's Column, wielding short curved swords. Photos of copies of scenes located at MNIR.

Fig. 6 - Dacian curved weapons sculpted on roman monuments.
and incorporated a large number of soldiers coming from Dacia into the Roman auxiliary units (C. C. Petolescu, 2002). Among these units, deployed far from their native lands, is also the *Cohors I Aelia Dacorum*, stationed at (C) Amblogana, in Britannia, today Birdoswald (Great Britain), mentioned in a series of epigraphic sources (C. C. Petolescu, 2002). First in chronological order, dating from between 198-209 A.D., is a rock "uncovered" when soldiers of said Dacian cohort and those of *Cohors I Thracum civium Romanorum* were building a horeum, whose inscription (Fig. 6/2) is flanked on the left by a sword with a bent tip and to the right by a palm branch, a symbol of victory (I. I. Russu, 1980).

Another statement, made on a block of stone found in 1852, embedded in the wall of another granary, by soldiers under the leadership of tribune Marcus Claudius Menander, the commander of *Cohors I Thracum civium Romanorum*, dated around 219 AD. On the monument relief, preserved at the Carlisle Museum, the inscription's text is flanked to the right by a palm branch, and to the left by a curved sword whose blade is straight right up near the top (Fig. 6/3), where a bend ends with a sharp tip (I. I. Russu, 1980; C. C. Petolescu, 1980). Both carved arms certify the origin of the units stationed here, at least that of the first contingent of soldiers and even if, very likely, it does not reflect the use of curved arms by the unit, but nevertheless, they remain as true symbols associated with Dacian ethnos.

A similar association one can found on a honorific altar (Fig. 6/4) erected in honour of a Roman officer, Sextus Vibius Gallus, *prefectus castrorum legiones XIII Geminae*, found at Amastris (nowadays Amasra, Turkey), showing the titular of the monument on horseback, fighting against two barbarians. One of them, probably injured, throws from his hands a long curved sword, while the other has in its turn a curved sword, but of smaller size. It is improbable that the freedman commanding and paying for the monument could have actually known the curved swords of the Dacians that he would have wanted to eternalize them in the memory of his patron's bravery - excepting the case that he entered in his service as a Dacian prisoner - but it is certain that the ethnicity of the officer's enemies is put in connection with the curved sword. It is important to notice that on the monument are two such weapons, having totally different dimensions. If large swords appear only on the Adamclisi monument - offering maybe a clue in regard to the battle where Sextus Gallus might have fought? The short sword can be connected with other such representations from the Roman art. Initially, the dating of this monument was related to the invasion of Roman Dacia by barbarian populations during the Marcomannic Wars, in the years 166-169 A.D., against whom the Legio XIII Geminae located at Apulum fought a series of battles (I. I. Russu, 1971). More recent scholarship (V. Maxfield, 1981; B. Dobson, 1978), date the military career of the officer during the reigns of emperors Domitian and Trajan.

The historical record of this type of curved sword would have remained in the field of assumptions, had it not been for the recent discovery of an intact, well preserved specimen in an undeniable archeological context.

It is a short curved sword, obtained by hot forging, strongly curved at the tip, like a spout and edge on the concave side (fig. 7). The handle does not show signs of visible rivets, its fastening was probably ensured by fixing the end spine in a timber tail. The handle would have been solid enough to ensure a proper balance for the weapon and increased mobility during combat.

**Falx dacica**

Place of discovery, placename: Divici – „Grad”.

Type of piece: *falx dacica*.

Type of research: systematic research.

Archeological context: interior of T1 keep.

Storage site: Mountain Banat Museum, Reșița.

Repository inventory: no. 8664.

Description: good conservation status.

Size: L = 39 cm; Exterior L. = 47 cm; Interior L. = 42 cm; handle L. = 8,5 cm; w. = 3,2 - 2, 6 cm; Thick= 0,5 - 0,2 cm

Dating: 1** century A.D.

Technical execution: hot tapping.

References: novel

The weapon belonged, most likely, to an infantryman, the relatively average length being an impediment to a rider, therefore it was used in close combat – the pronounced curvature and tip

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shape giving it the advantage of high penetration power, very likely, able to penetrate light armor. Due to the specific shape, the whole force of penetration is concentrated in the tip, thus not suitable to stabbing, the maximum effectiveness achieved just in the case by slashing and shearing. This makes it especially dangerous, even if the enemy was protected by armor, shield and helmet. Potential injuries (penetrating blows, cuts, splits) depended largely on striking power, the experience of the weapon wielder, the angle of incidence as well as the portion of the body affected. In the case high amplitude hits, the experience of the weapon wielder, the angle of incidence as well as the portion of the body affected. In the case high amplitude hits, also involved was the inertia force conferred by the weight of the weapon and arm (C. Borangic, 2007-2008), aggravated by the action of tearing.

We would be tempted to say that beyond the remarkable features of this type of sword, she was in general use in Decebal’s army, but we would fall into obvious historiographical clichés. The historical landscape of the Dacian kingdom’s last period of existence revealed the existence of a professional corps (Z. Petre, 2004), in turn with a hierarchy and curved swords were typically used only by a distinct category of warriors.

The upper echelon of this hierarchy was composed of so-called *tarabostes*. Well-armed, equipped with an efficient and heterogeneous arsenal which included spears, Celtic type swords, *sica* type curved daggers, shields, bows, chain mail armor and helmets, riding selected and trained horses, possessing exceptional mental state, these nobles were the core of the Geto-Dacian military organization that provides both military commanders, as well as special units composed of their relatives, clients, personal guards, with probable addition of mercenaries.

For long considered as actually the mass of common people, another group of soldiers were the *kometaii*, long-haired warriors, in fact warriors of the king, coming from the lower, less noble strata of society, and binder core of a compact and disciplined royal army. This

Fig. 7 - *Falx dacica* from Divici (drawing made by I. Iova and M. Gyömbér).
hypothesis implies the existence of free land owners, who were called to periodically join the warrior aristocracy (see also N. Ursulescu, M. Vasilescu, 1991). Endemic conflicts led to their permanent presence in the local military phenomenon. In a society where the tradition of death on the battlefield, as the initiatory rite of immortality, show - along with the existence of parade panoply and of lavish grave inventories - a complex imagine of the warrior function would be inconceivable that the original symbolic meaning of these capillati tresses has been overturned, transforming the hair, from an element of social distinction and superiority into a stigma of inferiority, as this social category has hitherto been interpreted. In contrast to the pilophorii, aristocracy tie to function sacred sovereignty, kometai appear to have originally represented the noble warrior caste, representatives of the two Indo-European features, a highly specialized military elite, whose main occupation was war.

The existence of these elites is supported by the combative qualities of this type of sword that could not be handled by anyone, requiring weapons professionals specially trained to fight using this kind of weapon. Sword effectiveness in facing opponents with defensive equipment, particularly Roman legionaries, seems to be due not only to the qualities of the falx type swords, but the human element in this equation as well. Written sources mention the great psychological impact of Dacian curved arms, the artistic and numismatic confirm their widespread use, while archaeological finds are extremely rare, limited to a few specimens. The explanation stems from the fact that these swords were coveted trophies, their presence in most artistic ensembles is a clear message and the fact that these elite units are only a part, not the largest, of an army, and a third possibility would be the low social status of these warriors, whose funeral rites are not yet known.

That this was not an aristocratic elite but very likely only a specialized class of warriors, capillati mentioned by ancient sources, free born men with military obligations and are in a relationship of subordination to pilileati, is demonstrated also by the absence of curved sword from funerary contexts, with no cases of found grave inventory with falx dacica in its composition. The only falx dacica sword discovered in a funerary context is the one from Viscri (Brașov County), but it is a rather problematic find. the contrary, all certified archaeological contexts, falx dacica appears to be a weapon hidden to avoid it’s confiscation or, more likely, not give away ownership status (C. Borangic, 2009, with bibliography).

The effectiveness of these fighters was the result of combining two cleverly associated elements. One of them lies in the special shape of the sword, which was capable of causing serious injury, even if the opponent was protected by armor. The second element that led to the successful man-weapon combo was the special mental training of the falx handler. Using this type of sword requires, in addition to rigorous training, a degree of heroism which, combined with the exceptional features of the weapon, can justify the almost exclusive association of Dacians - and on coins Dacia as well - with terrible Dacian falx. The attachment of these warriors for such a weapon must be linked to the Geto-Dacian lack of thanatophobia and, very likely with the magic and religious meanings that these curved weapons had in all cultures, the association between them and death being a cultural constant seen to this today (C. Borangic, 2009). The sickle, the primary source of inspiration for curved arms, was in the primordial myths associated with time, but also with change and rebirth, later becoming an attribute of Death (C. Bogdan Dobre, 2003).

Another curved weapon must be seen in the same register and, a solid pruning knife, found in a similar context with the sword (Fig. 9/1). The piece is made of iron, hot forged, strongly curved at the tip, like a beak, with the edge on the inside. Presents gloving tube and rivet hole. It was mounted on quite massive a wooden tail, judging by sleeve size. Given the specific shape it can be assumed that those who wielded them acted as support troops in other units.

**Pruning knife**

Place of discovery, placename: Divici - "Grad".

Type of piece: pruning knife.

Type of research: systematic research.

Archaeological context: interior of T1 keep.

Storage site: Mountain Banat Museum, Resita.

Repository inventory: no. 8666.

Description: good conservation status.
A fort at the edge of the Empire. Observations enabled by the discovery of two curved weapons at the Dacian fortress of Divici

Size: L = 29, 5 cm = 43 cm exterior L., interior L. = 32 cm, blade w. = 5.2 to 0.8 cm, gloving tube L. = 7 cm, gloving tube w. = 2.6 cm, Ø rivet hole: 0.4 cm.

Dating: 1st century A.D.

Technical execution: hot forging.

References: novel.

The position of these parts among tools or weapons was an often discussed and disputed topic in the literature (C. Borangic, 2010), belonging to one of the categories was often determined in general, the process lacking a functional analysis. Which is why, while appearing in ancient representations (fig.8/1-2), they were treated peripherally by archaeologists.

No less effective than actual swords, these pruning knifes were a tactical solution resorted to by both professional warriors, and especially ordinary fighters. Acting as a reenactor, within thematic associations, I participated by means of experimental archeology in the making of such weapons and have tested their effectiveness in specific situations, simulating battles with groups of Roman legionaries (fig. 9/2-3). Attached to a tail made of strong wood, whose optimal length is between 1 and 1.5 m, these weapons could produce disarmament, serious head injuries, by direct hits or fatal cuts to the legs or neck area. The long tail allowed a fight at a safe distance from the short swords of legionnaires and applying two-handed strikes with the sickle, turned this ordinary tool in a terrible, extremely efficient weapon. No less effective were shorter tailed war hooks handled in tandem with a shield (fig. 9/3). Relatively inexpensive, the cost of performing such a war hook estimated at approx. 3 hours of work, pruning knives must have been highly prized and their number high enough for them to become visible in Roman art and now in archaeological finds.

Not unimportant is the presence of such weapons on Trajan's Column, where a character of noble rank, judging from the specific pileus, uses it against the Romans (fig. 8/1). Attached to a tail that is double, the blade length, the pruning knife is short and very curved, similar to some pieces from archaeological contexts. The fact that such a weapon was wielded by a tarabostes may suggest its effectiveness, enough to make him prefer it to other weapons that his rank and status would have allowed. The spread and frequent findings of pruning knifes, dated especially in the 1st century B.C. – 1st century A.D. across the entire area Dacian influence and their use, even occasionally, as weapons, allows the inclusion of this category of artifacts among those Dacorum falcibus mentioned by Cornelius Fronto (C. Borangic, 2010).

Discussions

Analyses of visibility ranges for fortifications in the area have provided some very interesting results. Situated on the last western peaks of the Almăjului Mountains, the fortification of Socol - "Palanački Breg" had a very good viewshed to the west and south, allowing it to control the approach into the Danube Gorge (fig. 10). It has no direct line of sight with Divici - "Grad", but it is very possible that they were part of a complex defensive system located in the area of the Almăjului Mountains (see discussions above). Its closeness to the Banat Plain, as well as the lower course of the Nera provides abundant farmlands – the lack of major excavations do not allow us to say to what extent the point was ascribed to trade routes of the time - but the presence of stone architecture (M. Gumă et al., 1997) and monetary findings inside it’s control zone as well as the surrounding areas (see fig. 2) constitute evidence of the strength and prosperity of the inhabitants of this fortification during the Dacian Kingdoms period.

Divici - "Grad" has the most extensive visibility range of all analyzed fortifications, controlling access to the Danube for a distance of approx. 25 km. It has a good view of plains that climb the slopes of the Almăjului Mountains, but also of the right bank of the river. The area where it was located is an area of expansion of the canyon (fig. 11/A), where the Danube waters could be crossed in relative safety - more than that, during winter there is a tendency for ice bridges to appear in this area (information provided by L. Mărui). Merchant caravans and roaming bands of warriors, once on the south bank, could head to the wide valley of the river Pek, from where they could easily reach one of the most important trade and military routes of its time – the Morava Valley. To the east, wide valleys offered sufficient farmland, the proximity of the mountains also offered plentiful wood and stone, which have actually been used to build the fortification in its second and third phase of existence, and fishing or hunting could become at

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Fig. 8 - Pruning knife appear in Roman art and craft reconstruction of such weapons. We thank our colleague Marius Barbu, reenactor and archaeologist, who kindly provided us with information and pictures about the reconstitution and combat use of pruning knifes.

Fig. 9 – 1. Pruning knife discovered at Divici (drawing by I. Iova and M. Gyöember). 2-3. – Pruning knife tested during reenactment
any time additional sources of food (G. El Susi, 1996).

Monumental stone architecture, keeps with stories made of plastered brick, present in two overlapping chronological phases of fortification, corresponding to 1st century B.C. – 1st century A.D., the hierarchy of habitat in a “fortified acropolis” and a number of adjacent civilian settlements and not least, the ability to change the natural environment by massive terracing, is evidence of an ideology of design and expression of power that is found in the same shapes in the area of Dacian fortresses in Transylvania (see also . The analogies do not stop there: the presence of painted pottery, imported parts (acquired by robbery or trade), some true luxury items (M. Gumă et. al., 1995, M. Gumă et.al., 1997; A. Rustoiu, 2001, A. Rustoiu, 2006-2007;

![Fig. 10 - Viewshed analysis of the Dacian fortifications from the Danube Gorge](image)

Drăgan A., 2012 a) and last but not least, the presence of curved weapons attest undoubtedly a level and a way of living comparable to that of the area of the capital of Dacian kingdom. The myriad of houards and stray finds from the area Divici - Moldova Noua - Coronini, is further evidence of the prosperity of the area (fig. 2).

Besides the warrior nobles, with their related bands, the fortress, permanently inhabited, certainly housed skilled craftsmen, judging by specific items discovered: cast pewter spoon, file, jeweler chisel and anvil, pattern for cast rings etc. (M. Gumă et.al., 1995, M. Gumă et.al., 1997). Other findings, such as clay spindlewhorls, bronze mirrors and various household objects reveal an interesting fresco on the lives of those who were the wives, the daughters or the mothers of the settlements residents.

Less known, stirred up by building a medieval stone fortress, the fortification of Coroninî/Pescari - „La Culă” has a special strategic position, being located right at the

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beginning of one of the narrow areas of the Danube Gorge (fig.11/B, C). It provides excellent visibility to the north-east, with the fortification of Divici - "Grad" in its line of sight, but does not have a good angle of view to the east. Its role seems to have been similar to that of Divici – one of the fords used for crossing the Danube was located in this area during Middle Ages, probably used and known in Antiquity as well (A. Rustoiu, 2005, A. Rustoiu, 2006-2007). Lacking, as far as we know, elements of stone architecture (A. Rustoiu, 2006-2007), it is likely to have played a secondary role to the much more powerful fortress of Divici.

Located in an area of widening (fig. 11/D), the fortification of the Stenca Liubcova has an area of restricted visibility (fig. 10), which is reduced to only the areas immediately adjacent, having no other fortified point in its line of sight. Very likely, the main role of this fortification was to control access from the south bank of the river, in an area predisposed to the formation of ice bridges (information provided by L. Mâruia). The findings of the fortification (M. Gumă, 1977, M. Gumă, 1983) revealed a fairly prosperous center, defended, during the second Dacian Phase, by a wall with a stone and earth filling.

Downstream along the Danube Ieșenița (eastern boundary of the area to analyzed by us), despite monetary discoveries and signs of cave dwelling, Dacian fortifications are missing - it is likely that this lack indicates merely a stage of research, but the analysis of geomorphological features can provide other explanations: here, the valley narrows very much, with very large height differences (fig. 11/E) - before the construction of the dam, navigation in this area, as is well known, was highly problematic, crossing the river with large armies being out of the question.

Although not located on the Danube Gorge, the fort of Dalboșeț - "Grădiște", discovered during some field research (O. Bozu, C. Săcărin, 1979), controls access to Nera valley, as well as the roads crossing from the Almăjului Mountains to the Danube Gorge. The issue of Dacian habitation of the Nera Valley also requires in depth research in the future, in the light of new discoveries: thus, after some field research conducted at Borlovenii Old - "Leul" (Prigor town, Caras-Severin county) by L. Mâruia have led to the rescue of pottery fragments dating from I B.C. - I A.D., suggesting the existence of Dacian level that overlaps the prehistoric habitation previously reported here (O. Bozu, C. Săcărin, 1979).

Lack of line of sight between fortifications cannot be considered as evidence for the lack of a system, the problem can be solved by observation towers, which are archaeologically barely visible. Any new research in the area could provide information and clarification in this regard.

No doubt part of a single system, termed "Limes dacicus" by A. Rustoiu (A. Rustoiu, 2005, A. Rustoiu, 2006-2007; A. S. Ștefan, 2005), the fortifications around the Gorge know relatively similar chronological phases, linked to, in our opinion, a number of well-documented historical events. As stated in the introductory part of the study, the turn of the I\textsuperscript{st} century B.C. and I\textsuperscript{st} A.D. is characterized by a series of violent confrontations between Dacians and Romans throughout the Danube region, becoming more pronounced. Historical sources of the period mention the armies of the Dacian king Cotiso that come down from the mountains, crossing the frozen Danube raiding south of the river - the only area where the mountain borders on the great river is the one we are talking about. Faced with these challenges, Augustus responds promptly, sending Lentulus in the area, which brought peace to the region, driving out the Dacians and placing several Roman garrisons on the southern bank of the river. We tie the destruction that happened at the beginning of the I\textsuperscript{st} century A.D. to all fortifications on the Gorge, to this historical event.

Enthusiastic following this successful military action, the poet Horace speaks of the destruction of Cotiso’s army - more realistic, the Roman historian Aennus L. Florus says that the Dacians “have not been defeated, but repulsed and scattered” (H. Daicoviciu, 1965), which is fully confirmed by archaeological findings showing a restoration of fortifications in the area (tab. 2). The very rugged topography, clearly favoring defenders, and the closeness to the powerful Transylvanian nucleus of the Dacian kingdom – it is less than a three day trip on the mountain trail roads that start at the mouths of the Cerna river across the Țarcu-Godeanu massif – would have caused serious logistical and military problems for the Romans if they had wanted to start pacification and resettlement operations like those conducted against the tribal factions of the
Fig. 11 - Altimetric profiles across the Danube Gorge: A. Divici – „Grad” – Topolovnik (N-S); B. Coronini/Pescari – „La Culă” – Radosevac (E-V); C. Coronini/Pescari – „La Culă” – Jerinin Grad (N-S); D. Stenca Liubcovei – Dobra (N-S); E. Profile across Danube at Dubova (E-V).
Wallachian Plain. Thus we think that this might explain why this area has fared distinctly from other areas along the Danube, the decisive confrontation between the Dacians and Romans in the sector being postponed until the time of the great wars during the reigns of emperors Domitian and Trajan. Whether these fortifications were neutralized during the wars in the time of Domitian or during the first Dacian war, they seem to have ended in a violent way, being stormed by the Roman legions. Archaeological evidence for the fortification of Divici - "Grad" are quite eloquent, fully illustrating the dramatic confrontations. The

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<th>First half of I&lt;sup&gt;st&lt;/sup&gt; century B.C</th>
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northwest side of the fortification wall was destroyed, and arrowheads and roman catapult projectiles were discovered in the debris and burned layer behind the defense. Fragments of l<em>orica squamata</em> were discovered in the same place (M. Gumă et.al., 1997; A. Rustoiu, 2006-2007). Regarding the arms we presented, it seems natural to believe that they were lost by defenders who took refuge in the tower, trying, perhaps, a last resistance. Regarding the final moments of the fortification of Divici, A. Rustoiu launches an interesting hypothesis, naming the Romans as the builders of the two grooves that cut the access path to the plateau of the city, being constructed during the siege so as to cut off the defenders. In our case, however, we express serious reservations about it for several reasons: the difference in height of 15-20 meters between the path and plateau would put attackers who would like to occupy advanced positions in an obvious disadvantage; moreover, being in the immediate vicinity of the fort, they would have been exposed, during rampart construction operations, to projectiles launched by the defenders. If they wanted to isolate the city and its defenders before the final assault, the Roman army, so experienced in siege operations, could find more feasible solutions.

The coin from Trajan’s time, dated between AD 112-117, discovered in the topsoil during archaeological excavations (M. Gumă et.al., 1997), is no longer bound to the existence of the fort - its presence may indicate, however, a discreet surveillance of this point by the Romans, during a time when the kingdom and the old centers of authority were still alive in the consciousness of the locals.

**Conclusions**

Use of modern methods of investigation, to the extent that it can be done, combining them with field research and excavations in microzones well defined, may provide new insights into the analysis of issues such as the spatial distribution of sites in an area and thus, the issue of relations between these archaeological sites.

In this picture, curved weapons discovered in
A fort at the edge of the Empire.
Observations enabled by the discovery of two curved weapons at the Dacian fortress of Divici

the ruins of the Dacian fortress Divici, an important border fort, throws a bright light on the importance of this border point. It is likely that the garrison stationed here, obviously related to the power center from Șureanu Mountains, was composed of elite soldiers, as weapons, type of fortification tower itself, the geographical position converge towards this hypothesis.

Located at the meeting point of two worlds, Dacian warriors on the Danube Gorge built solid fortifications, integrated into a coherent system, which aimed at controlling access to key crossing points across the Danube. Consolidating its power through trade, but also through plunder, they found themselves at the forefront of the advance of Roman armies towards the Danube, managing to successfully resist until the era of the large Dacian-Roman confrontation.

The similarities to the situations encountered in the Transylvanian area, especially in the nucleus around Sarmizegetusa Regia, raise many questions. The existence of influences amid political, military and economic interdependence is indisputable, but their meaning is hard to pin down precisely. Problems of chronology, but also those related to the current state of research requires extreme caution, but even so, we wonder if the warriors of the Gorge, indisputably involved in the broader phenomenon Padea Panaghieruskij Kolonij (Drăgan A., 2012 b), will have brought, on their way to Transylvania, the model layout of these settlements....

This study is dedicated in the memory of Liviu Mârula, university lecturer at the West University of Timișoara, PhD. and expert archaeologist, researcher of the Dacians in Banat, and also a very close friend.

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A fort at the edge of the Empire.
Observations enabled by the discovery of two curved weapons at the Dacian fortress of Divici