

A ROMANO-BYZANTINE SHIELD-BOSS FROM *CAPIDAVA*

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UN UMBO DE SCUT ROMANO-BIZANTIN DE LA *CAPIDAVA*

Articolul de față analizează un *umbo* de scut descoperit la *Capidava*, în campania arheologică 2007, respectiv în zona porții principale –clădirea C1, în camera III. *Umbo*-ul este din fier și are un diametru de 17,50 cm, cu o înălțime de 6,70 cm, dimensiuni standard pentru descoperirile de acest tip. Contextul în care a apărut, alături de numeroase piese ceramice și în apropierea unui tezaur monetar din bronz (51 piese – 46,50 *folles*), datează complexul la începutul anilor 580 p. Chr., când clădirea a fost distrusă într-un violent atac atribuit slavilor. *Umbo*-ul aparținea, cel mai probabil, unui scut de infanterist, iar prezența solitară a acestei piese militare într-un context civil permite, cu titlu de ipoteză, atribuirea sa unui membru al comunității locale de limitanei, fără însă a exclude posibilitatea ca păstrarea acestui obiect în clădirea amintită să fi avut un scop comercial. Articolul aduce în discuție tipologiile cunoscute, aspecte tehnice despre producție, structură și utilizare, analogii și datare privind această categorie de piese.

CUVINTE CHEIE: scuturi romane, cetate romano-bizantină, echipament militar, *limes*-ul Dunării de Jos, provincia *Scythia*

KEYWORDS: Roman shields, Romano-Byzantine fort, Military equipment, Lower Danube *limes*, Province of *Scythia*

INTRODUCTION

This paper is part of a series of similar endeavours by which we intend to publish the archaeological research undertaken between 1993–1996 and 2007–2011 in Building C1¹ from the *Capidava* Roman fort. The shield-boss (*umbo*) in question was discovered in 2007 in the named building and it is part of a larger inventory, both heterogeneous and rich. This paper analyses the discovery of military equipment in the archaeological context of a civil building, in connection with a civilian type of inventory.

Located at an equal distance of 18 Roman miles (27km) from both *Axiopolis* to the south (Cernavodă) and *Carsium* to the north (Hârșova), *Capidava* is one of the most important Roman forts raised during the broad efforts to strengthen the Lower Danube Roman frontier, at the beginning of the 2nd century AD² (Pl. I/1). The fortification went through three phases of reconstruction, but without altering the original plan and constructive dimensions, *i.e.* a rectangle oriented on a NW to SE axis measuring 105m by 127m. Its first reconstruction *a fundamentis* occurred after the Gothic attacks from 248–250 AD. The event was followed by two other major constructive interventions in mid-4th century AD, and again in the late 5th century – beginning of the 6th century AD, following Barbarian attacks. After severe destructions produced in the early 580s, during the powerful raids of the Slavs in the entire Balkan area, the defensive functions were resumed to a certain extent. Subsequently a last fortified enclosure hastily built and of poor quality covered the southern quarter of the “Trajanic fort” until the fort concluded its existence with the falling of the *Danube limes* under the pressure of the Slavs (soon after 612–613)³. The walls of the medieval fortress in the 9th century AD overlap the Late Roman enclosure. In the middle of the 11th century the archaeological sequence records the last occupational level of *Capidava* fort,

¹ Oprîș, Rațiu 2015

² Oprîș 2006

³ Gândilă 2006–2007, 114–115

containing evidence of the total destruction of the settlement after the attack of the Pechenegs and Uzès tribes⁴ (end of the 6th century).

THE ARCHAEOLOGICAL CONTEXT

Building C1 is probably one of the most important Late Roman – Romano-Byzantine civilian edifices from *Capidava*, due to its location adjacent to *via principalis*, next to the main gate and the *horreum* (Pl. I/2). The research in Building C1 commenced in 1993–1994, and then resumed intensively from 2007 to 2011. The archaeological excavation revealed numerous artefacts and historical landmarks for *Capidava*. Building C1 is a medium size building with a rectangular plan of 10m × 11m, divided in three chambers, two smaller ones at the front (Rooms I and II, Pl. II/1), next to *via principalis*, and one large chamber at the rear of the building adjacent to the granary – *horreum* (Room III). Half of the building, the frontal half with the two small chambers, was destroyed by the late 6th – early 7th century *fossa*. The latter was erected along with a stone wall to fortify the southern quarter of *Capidava*, sometime after the great destruction at the end of the 6th century. While the front part of the building was destroyed, the back chamber (Room III) remained protected under the *vallum*.

Inside Room III the excavations uncovered a complete stratigraphic sequence beginning from the 5th century up until the 11th century AD, when an early-medieval sunken dwelling overlapped the chamber. The most prolific layer was the floor, dated in the 6th century, which was still functional at the destruction of the main fort. The collapsed roof preserved the archaeological context intact⁵.

The shield-boss was discovered under the tiles and burnt beams debris from the collapsed roof of the Building C1/1994. The object suffered severe burning visible through its poor preservation state. Although the boss was discovered intact, after air contact its state has begun to decline and ultimately it fissured. At present, after undergoing a long process of restoration, its state of preservation is stable (Pl. II/2). The boss was discovered directly on the 6th century floor, along with several significant artefacts.

The archaeological context of the boss is the same with the last occupational level of the Building C1, the end of the 6th century AD. The dating of the context was done through the analysis of the artefacts discovered. Some of the most important and relevant dating markers are: a hoard consisting of 46.5 *folles*⁶, four Roman lamps of the *Danubian* type⁷ (6th century) and a deposit consisting of Chartage LR 2, LR 3 and LR 4 type of amphorae (Pl. II/1). The archaeological context along with the findings underwent heavy burning.

The *umbo* was forged from strong iron plate varying between 0.45cm and 0.60cm in thickness, and has a conical bowl surrounded by a flange (Pl. II/2). The flange, or the rim, is circular, 2.3cm wide, and has four symmetrical fixing-holes of 0.4cm in diameter, of which none survived due to the intensive process of restoration. The boss is otherwise complete, and measures 17.5cm in diameter, with a bowl of 12.7cm. The latter rises 6.7cm above the plane of the flange and has a bi-conical shape with a flattened top. The flange is slightly concave, with an inclination angle of approximately 5°.

The shield-boss from *Capidava* belongs to a common type found in Late Roman antiquity along the eastern provinces. The most common cited typology for the Late Roman shields is the one based on the discoveries at *Dura Europos*⁸ (Pl. III/5–6). Although these *Dura Europos*

⁴ For further reading on the research at *Capidava* see Florescu *et alii* 1958, 25–72; Florescu 1975, 361–372; Florescu, Covacef 1988–1989, 197–247; Oprîș 2003, 17–33.

⁵ A preliminary study is forthcoming, see Oprîș, Rațiu 2015.

⁶ The coin hoard was published as a whole in Gândilă 2009.

⁷ Oprîș 2003, 164–167

⁸ At *Dura Europos* were found 24 shields, bosses and plank board, making it the most important discovery of this type (James 2010, 159–187).

findings date from the 3rd century, the oval type shield has been used continuously from the 1st century to the 7th century and later⁹ (Pl. VI).

ROMAN SHIELD TYPOLOGIES

Up until the beginning of the 2nd century AD, the legionaries and auxiliaries carried their own type of shields. Legionary shields¹⁰ varied from concave-oval to semi-cylindrical in shape with curved sides. They were constructed out of three layers of plywood, covered in leather. The rim was reinforced with bronze or iron. In the centre was placed a hemispherical bronze or iron shield boss (*umbo*) with a rectangular flange and a handgrip on the inside. The legionary shield evolved from a concave-oval shape in the Republican period to a concave-rectangular shape in the Early Principate¹¹ (Pl. V/1). The main reason for this evolution is the change in the fighting style¹² from the use of the *testudo* to the shield-wall (or the *fulcum*) formations by the Roman legions¹³. Both formations needed a rectangular shield which, when overlapping the others, closed the gapes more efficiently. The difference was that the *testudo* was a more powerful and heavier formation and the shield-wall was a lighter but also more versatile one.

Although made of the same components, the auxiliary shield differed significantly in shape from that of the legions. It had a less pronounced curve, was smaller and most commonly oval in shape¹⁴. The shield bosses were round in flange, some of them with a raised cone, predominating up until the Claudian period. These were gradually replaced by bosses with a hemispherical dome¹⁵. Each type occurs in both iron and bronze; unfortunately there is insufficient information to assign them to either the infantry or cavalry. The oval shield, flat or concave, had the advantage of manoeuvrability and lightness, which made for a more versatile fighting style.

Oval and round shields were predominant at the end of the 2nd century and thereafter¹⁶, when there was no longer possible to distinguish the different military units by the shape of their shields. The shields were covered with leather or even linen and, instead of a metal rim they had a strip of hive around the perimeter of the board. The round bosses still retained their domed shape and were made mainly of thin bronze (copper-alloy). Additionally, characteristic for the 2nd and 3rd centuries, were the richly ornamented examples depicting *au repoussé* zoomorphic and anthropomorphic figures, most probably belonged to parade shields¹⁷. Although oval and round shields remained in use well into the 5th century, the oval shield bosses were replaced at the end of the 3rd century by conical shaped bronze and iron bosses¹⁸.

THE PRODUCTION AND STRUCTURE OF A ROMAN SHIELD

The classical shield was constructed by gluing together several planks of wood, poplar in the case of the *Dura Europos* findings¹⁹, but probably any type of light-but-strong type of wood would have worked. The legionary shields were made out of plywood²⁰, which gave them greater

⁹ Southern, Dixon 1996, 103

¹⁰ Bishop, Coulston 2006, 91–94

¹¹ Bishop, Coulston 2006, 92

¹² Travis, Travis 2014, 128

¹³ For an interesting reading on this subject see Rance 2004.

¹⁴ Goldsworthy 2004, 129–130

¹⁵ Travis, Travis 2014, 127–128

¹⁶ Travis, Travis 2014, 126

¹⁷ For several examples and discussion, see Bishop, Coulston 2006, 91–94, 179–182, fig. 49, 116, pl. 7/b; Southern, Dixon 1996, 100, fig. 20.

¹⁸ Stephenson 2011, 41–42

¹⁹ James 2010, 167

²⁰ The Doncaster shield was made out of layers of plywood (Buckland 1978).

strength but also a greater weight. Pliny the Elder²¹ (1st century AD) actually lists some of the best timbers used in his time for shield making.

In order to form a grip, two holes were cut in the centre of the shield: a semicircular upper hole and a trapezoidal lower one (Pl. V/2). In most cases, after the binding the shield was covered on both sides with animal hide or linen. The outer cover was sometimes painted with religious or military motifs. Some of the shields from *Dura Europos* were more elaborated, with colourful decorations depicting complex patterns and figures²².

The margins of the shield were guttered with hard raw hide to form a strong rim and hold together the shield. Up until the 3rd century oval shields used by cavalry and auxiliary troops, were guttered with a metal edge as was the strong legionary *scutum*, but the change in fighting technique has rendered the heavy metal rim utterly unnecessary²³.

The boss was placed over the central holes in the shield, and fixed on the outside by four or six rivets²⁴. The boss covered the handgrip and was commonly used for striking and smashing. The grip was fixed on the inside of the boss along with two of the rivets which fixed the boss on the shield (Pl. IV/5). Some shields had metal reinforcement bars riveted across the width of the shield. In archaeological record the reinforcement bars were usually attached to the boss²⁵.

Although the size of the shields varies, the bosses are relatively of the same dimensions. Judging by the size of the Valkenburg²⁶ shield-covers, the shields were about 0.90–1.04m long and 0.42–0.54m wide. The sizes of the shields discovered at *Dura Europos* were of approximately 1.05m in length and 0.90m in width²⁷ while their outer-flange diameter varied between 0.19m and 0.16m. Most probably the shield from *Capidava* fitted into the same pattern, judging by the shape and dimensions of the boss only.

The shield-boss from *Capidava* belonged, taking into account the parallels, to a concave-oval shield used most probably by an infantryman. The shield didn't have a reinforcement bar, and the grip was probably made of wood. The boss was fixed on the shield by four rivets, as indicated by the four symmetrical holes in the flange of the boss (Pl. II/2). The organic materials from the shield are now lost due to the burning as well as to natural factors. The visual analyses of the burnt wood found near the boss were inconclusive; they were either remains from the shield or remains of furniture, roof or other internal wood structure of the building.

During the Early Empire, at least, it is highly probable that newly-enlisted soldiers had to purchase their arms and armour²⁸. David J. Breeze has suggested that the sum was paid in the form of a deduction from the *viaticum* and that periodic pay-stoppages for weapons are best seen as irregular sums for replacement of damaged or worn-out equipment²⁹. Thus, a soldier's equipment would have survived his period of service and is presumed that on retirement or death the value of this equipment was ransomed³⁰. On the other hand the scholar admits that it is nowhere documented the fact that the return of weapons to the armoury was in any way compulsory³¹. The presence of weapons and military equipment in graves is another argument in this direction.

During the Early Roman period the shields and their shield-bosses implicitly, were manufactured in great specialized *fabricae*³² (workshops), and also in smaller workshops within the garrison quarters. For the Late Roman period, *Notitia Dignitatum* (end of the 4th – beginning of the 5th century AD) mentions for *Pars Orientis* a number of such *fabricae*³³, controlled by the state³⁴,

²¹ Pliny, *Nat. Hist.*, IV, 16, 77

²² James 2010, 182, fig. 106

²³ Dixon, Southern 1992, 47 after Groenman-van Waateringe 1967, 56–73

²⁴ Dixon, Southern 1992, 45; Stephenson 1999, 16; James 2010, 159–161, 177, fig. 92, 97

²⁵ Buckland 1978, 250, fig. 3

²⁶ Stephenson 1999, 19

²⁷ James 2010, 160

²⁸ Watson 1969, 102–104

²⁹ Breeze *et alii* 1976, 93–95

³⁰ Breeze *et alii* 1976, 94

³¹ Breeze *et alii* 1976, 95

³² For an ample discussion on this subject see Bishop 1985.

³³ *Not.Dig.*, Or. XI, 18–36

³⁴ For a detailed discussion on the Late Roman Empire *fabricae* see James 1988.

specialised in various types of equipment all across the empire (Pl. I/1). For the Lower Danube region the same literary source mentions only one *fabrica scutaria*, at *Horreum Margi*, others are mentioned as *scutaria et armorum* (Pl. I/1). Nevertheless we presume that even during the late years of the Empire many, if not all the units, still had their own armoury workshop³⁵.

USING THE SHIELD

The fighting style of the Late Roman Army required a different type of shield compared to the earlier period. First of all, the shields had to be lighter than the 22 *libra*³⁶ legionary *scutum* of the Imperial period. Secondly, the new soldier had to fight in a phalanx-type formation which required a flattened oval shield. In fact, it was probably the Barbarian shield-wall³⁷ which had inspired the new tactical formation rather than the Greek military “renaissance”. The late Roman army was using mainly three types of shields³⁸, the semi-cylindrical-rectangular type (which was rapidly going out of use), the flat-hexagonal type (never discovered in archaeological record) and the most common type: the oval shield. The latter, has two subtypes, the flat-oval shield and the concave-oval one.

The flat-oval shield type was commonly favoured by cavalry troops³⁹, usually because of the enhanced manoeuvrability. The *umbones* attached on the flat-oval shields, were almost identical in shape excepted for two aspects: the flange was flat, not concave and they were usually forged out of copper alloy instead of iron (which was heavier)⁴⁰.

The concave-oval shield type was commonly used by infantry troops, initially by auxiliary and later by legionary forces. As mentioned the wide spread of the oval type of shield was due to an increased demand of manoeuvrability on the battle field, for both light and heavy infantry. The new shield wall, Barbarian in its origin, was not as effective as the *testudo*, but was more flexible. In addition the lighter shield was more useful in retreat or pursuit tactics, or even in forced march.

PARALLELS AND DATING

Based on its archaeological context, the *Capidava* shield boss dates most probably from the end of the 6th century AD. The analogies for this type of military equipment are dated a few centuries earlier.

In the province of *Scythia* similar *umbones* were discovered at *Aegyssus* (Tulcea)⁴¹, *Beroe* (Piatra Frecăței)⁴² and *Ulmum* (Pantelimonul de Sus)⁴³, which can be dated in the Late Roman – Early Byzantine period. The shield-boss from *Aegyssus* is similar in shape, but has a spiked dome. The *Beroe* and *Ulmum* shields (Pl. III/2, 4) are similar in form and size with the one from *Capidava*, and were found in similar contexts. Recently a new shield boss was discovered by the archaeological excavation at Fântâna Seacă⁴⁴, near *(L)Ibida* (Slava Rusă) in the same province. Although fragmentary, the iron boss resembles in shape and size the one found at *Capidava*.

³⁵ James 1988, 264 and note 86

³⁶ The cited weight is from the reconstructed shield from Kasr el Harit (Goldsworthy 2004, 129). For further reading on the subject of the weight of a Roman shield, based on the description made by Polybios (VI.23.2) see Treloar 1971.

³⁷ In Rance 2004 the author makes a convincing argument against the shield-wall theory of Speidel (see Speidel 2004).

³⁸ Stephenson 1999, 16; James 2010, 159–160. In the interest of a simpler discussion we do not include here the small round shield (*parma*) used only by few Roman troops.

³⁹ Dixon, Southern 1992, 43

⁴⁰ James 2010, 158–159

⁴¹ The *umbo* from *Aegyssus* is unpublished and was only illustrated in a collection catalogue (see Simion 1995). The analogy is only partial; the *Aegyssus umbo* has a slightly different shape.

⁴² Vâlceanu, Barnea 1975, 212, fig. 2/2

⁴³ Pârvan 1915, 283, fig. 16, pl. VI, fig. 3, no. 8

⁴⁴ Many thanks to our colleague Ștefan Honcu, for sharing with us the unpublished information about his discovery.

The parallels from other provinces are purely shape-related, their contexts being dated in earlier periods. From the fortifications on the left bank of the Danube there are three examples, one at *Sucidava*⁴⁵ (Pl. III/3) and other two at *Hinova*⁴⁶, all dated in the 4th century AD. Another close parallels are the three bosses found at *Iatrus* (Krivina⁴⁷), all made of iron and dated in 4th century contexts (Pl. IV/2–4).

Others parallels, but dated to the 3rd century AD, are four copper alloy shield-bosses from *Dura Europolis*⁴⁸ and a shield boss with reinforcement bar from Jerusalem⁴⁹. Earlier examples are the shield bosses found at Comalău⁵⁰, Copăceni⁵¹, Poiana⁵² (in the Lower Danube region) or at Doncaster⁵³, Newton⁵⁴ (Pl. IV/1) and London⁵⁵ (from *Britannia*⁵⁶). These examples, although similar in shape and size, were found in archaeological context dated centuries apart. In such perspective we conclude that even though the typology of Roman shields is complex it doesn't hold any dating value. The only way to date a shield-boss, in the absence of any organic remains of the board, is to record thoroughly the archaeological sequence in which it was found. Thus, the context of the find dates this type of artefact and not the other way around.

CONCLUSION

The shield boss discovered at *Capidava* might be considered common within the range of the military equipment finds, yet important if it's analysed in a regional context. Although there are a few archaeological discoveries, this type of shield-boss is attested for the Late Roman – Early Byzantine period mainly in artistic representations and imagery (Pl. VI).

The find adds to the small collection of *Scythia*' (*Minor*) military equipment published so far. The unique archaeological context of the discovery, along with the strong dating elements found in the same archaeological context, all add to the importance of this artefact. The parallels from an earlier period (1st–3rd century AD), along with a few Romano-Byzantine contemporary finds, allowed a detailed analysis of the shield boss.

The presence of the shield in an otherwise civilian establishment is, at this point of the research, somewhat unclear. It could have been the property of a member of the local *limitanei* community or it was stored within the building for commercial purposes only. In any circumstance the presence of a shield-boss in a civilian archaeological context attests the clear military nature of the Romano-Byzantine *Capidava* fort and of its inhabitants.

⁴⁵ Gherghe, Amon 2012, 7–12

⁴⁶ Davidescu 1989, 7, fig. 19/g

⁴⁷ Gomolka-Fuchs 2007, 272–274, Taf. 13–14, no. 1635, 1636, 1638

⁴⁸ James 2010, 171–172, fig. 94, no. 589–592

⁴⁹ Mazar 2003, 154, Pl. I.27/1

⁵⁰ DAP 2006, 144, no. 115

⁵¹ Vlădescu 1983, 188, fig. 131

⁵² Petculescu, Nicu 2001, 211, fig. 2/14

⁵³ Buckland 1978, 252, fig. 4

⁵⁴ Buckland 1978, 265, fig. 10

⁵⁵ James 1980

⁵⁶ The examples from *Britannia* benefit from a more accessible literature therefore are useful parallels.

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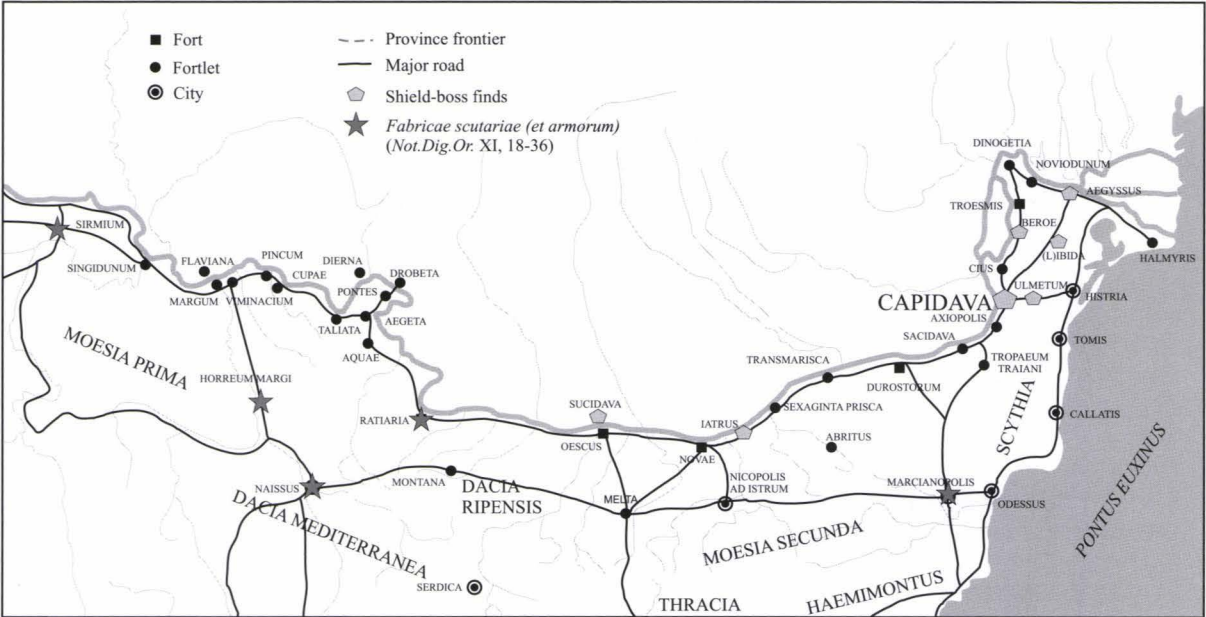
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LIST OF ILLUSTRATIONS

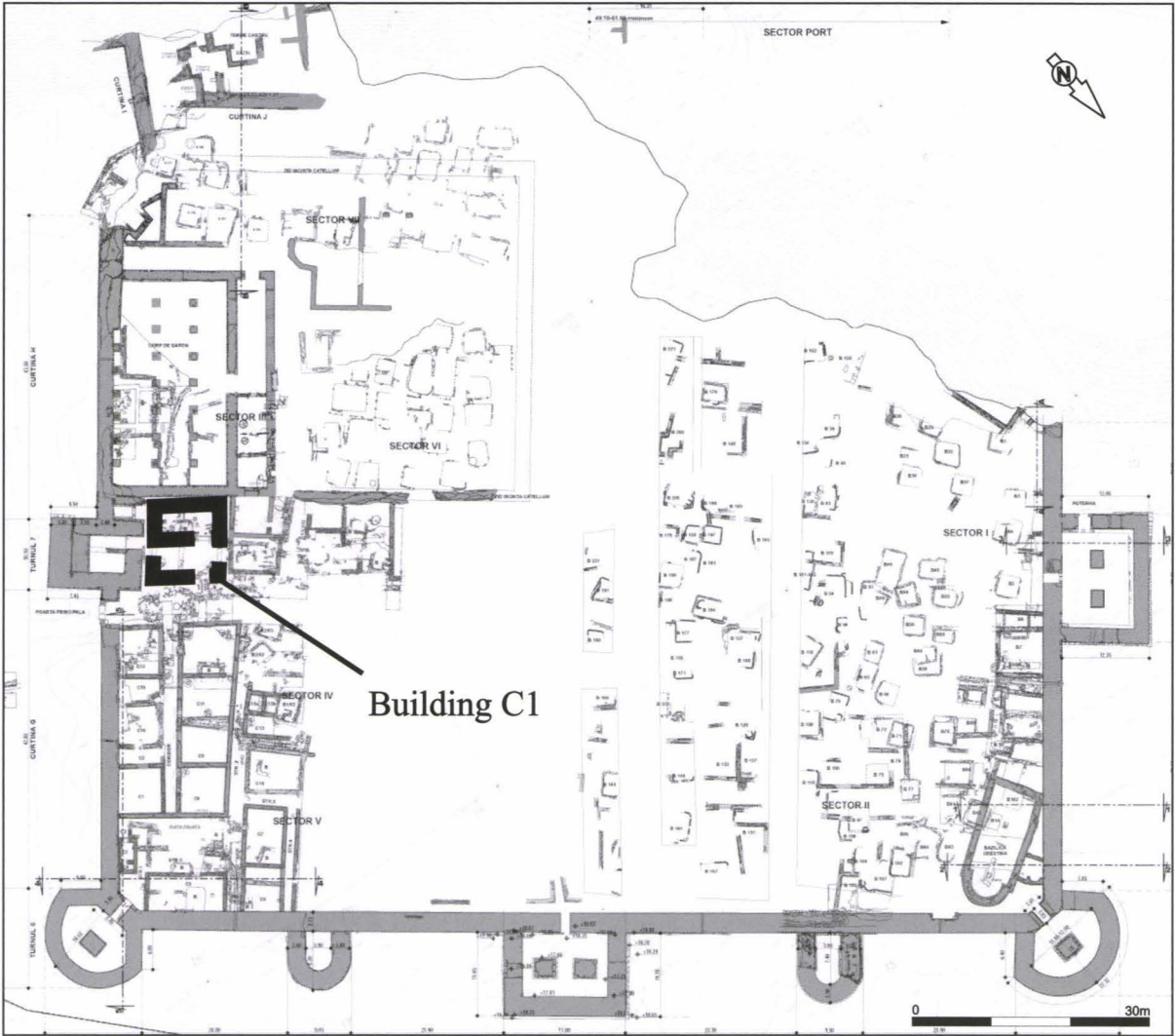
- Pl. I 1.** The Lower Danube and the Late Roman Frontier; **2.** Plan of *Capidava* fort
- Pl. II 1.** Building C1 with the distribution for some of the finds; **2.** The shield-boss from *Capidava*
- Pl. III** Shield-bosses from: **1.** *Capidava*; **2.** *Ulmetum* (redrawn after Pârvan 1915, 283, fig. 16, Pl. VI, fig. 3, no. 8) **3.** *Sucidava* (Gherghe, Amon 2012, 9, fig. 2); **4.** *Beroe* - Piatra Frecăței (Vâlceanu, Barnea 1975, 212, fig. 2/2); **5–6.** *Dura Europos* (James 2010, 172, fig. 94, no. 589–590)
- Pl. IV** Shield-bosses from: **1.** Newton (Buckland 1978, 265, fig. 10); **2–4.** *Iatrus* - Krivina (Gomolka-Fuchs 2007, Taf. 13–14, nos. 1635, 1636, 1638); **5.** Diagram of shield-boss and reinforcing bar-assembly (James 2010, 177, fig. 97)
- Pl. V 1.** Progression of the Roman “legionary” shield shapes from Republican period through the late Empire (Travis, Travis 2014, 14, fig. 1); **2.** Reconstruction of Shield IV from *Dura Europos* (Stephenson 1999, 18, fig. 1)

Pl. VI 1. The Geneva silver *missorium* with the depiction of Emperor Valentinian (4th century AD?) (Bishop, Coulston 2006, 18, fig. 8); **2.** Detail from Piazza Armerina “Great Hunt” mosaic – 4th century AD (Southern, Dixon 1996, 122, fig. 57); **3.** Detail after the mosaic of Emperor Justinian, San Vitale church, Ravenna, Italy (Southern, Dixon 1996, 102, fig. 22); **4.** Shield wall (Moses and the Exodus) depicted on the *Dura Europos* synagogue paintings (Bishop, Coulston 2006, 175, fig. 112)

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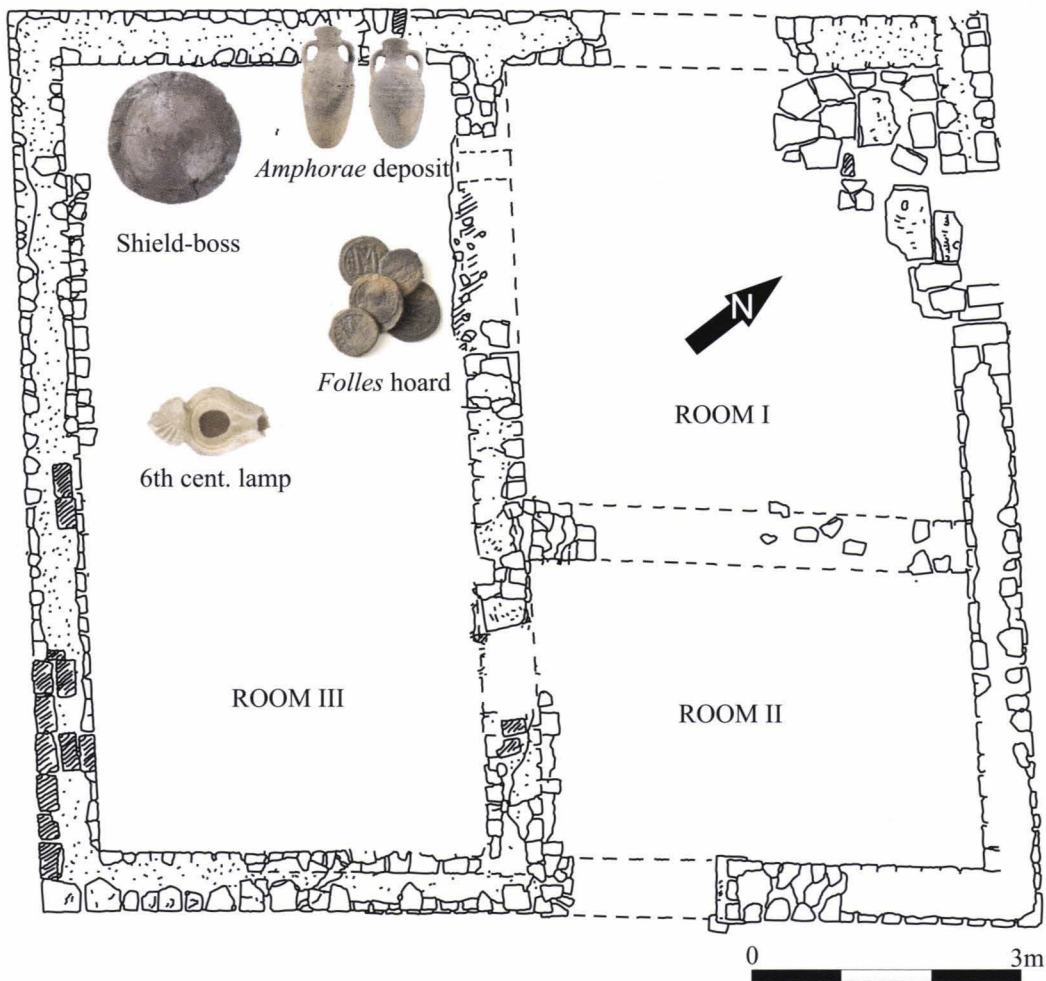


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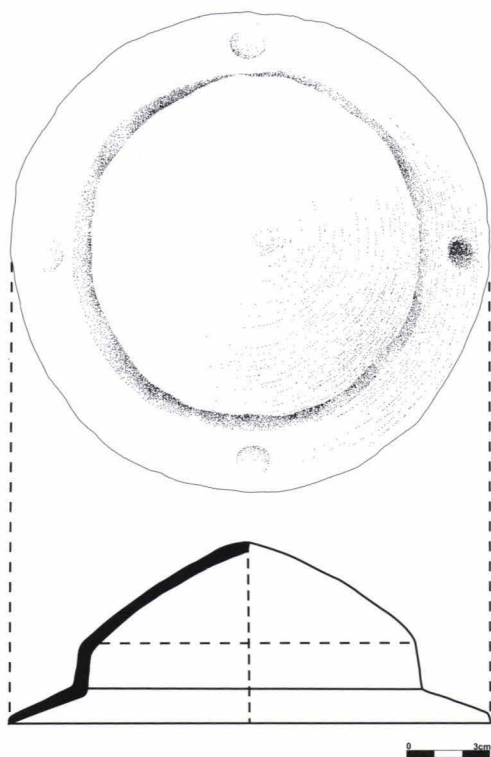


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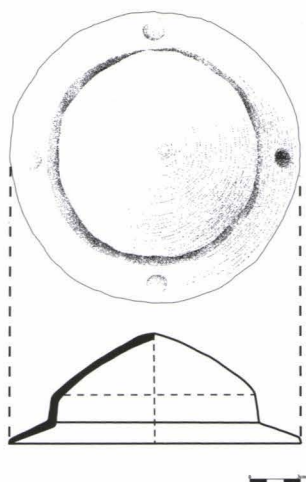
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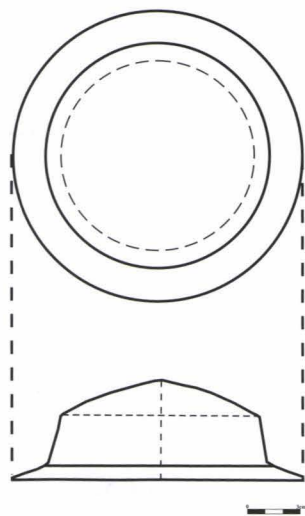
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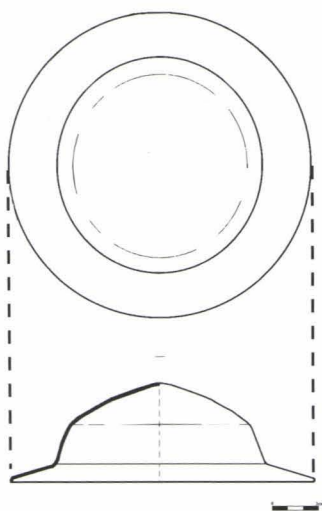
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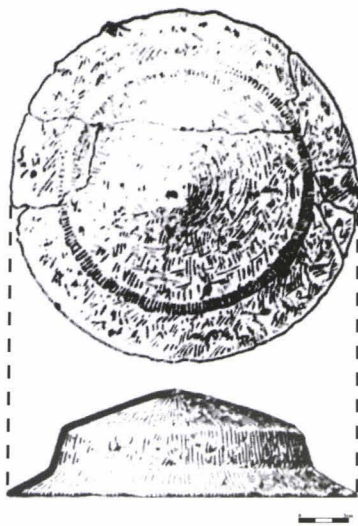
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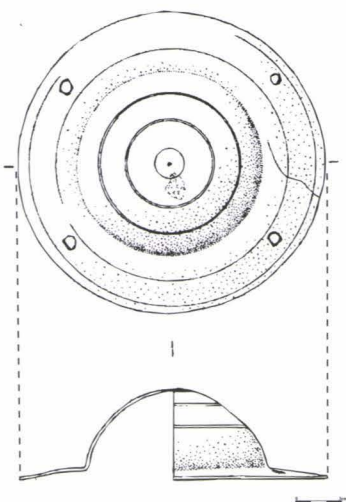
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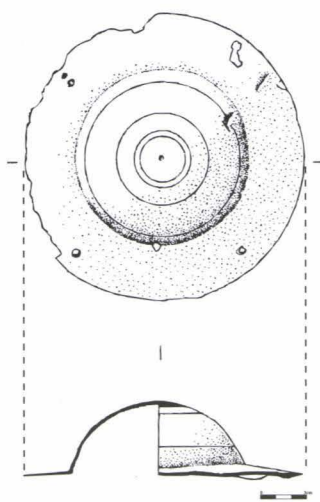
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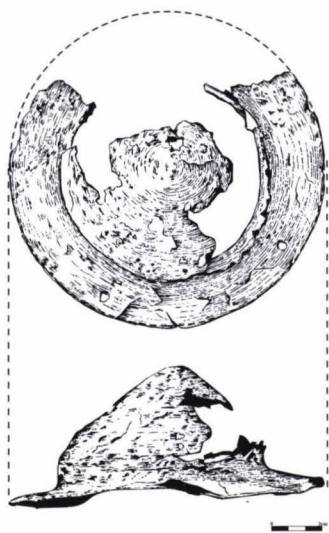


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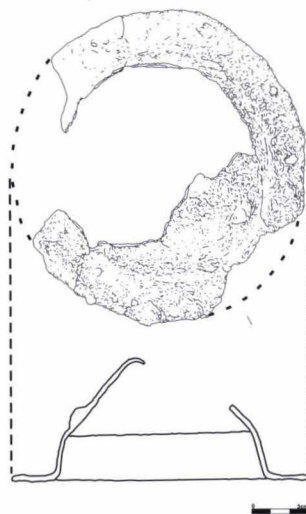


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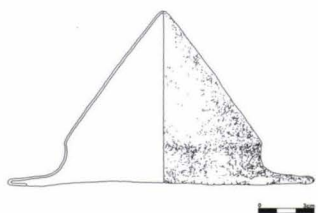
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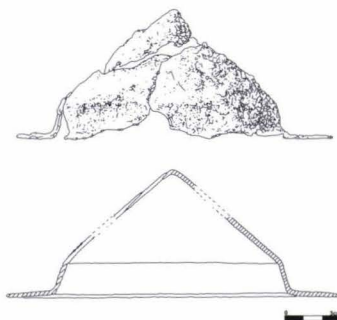
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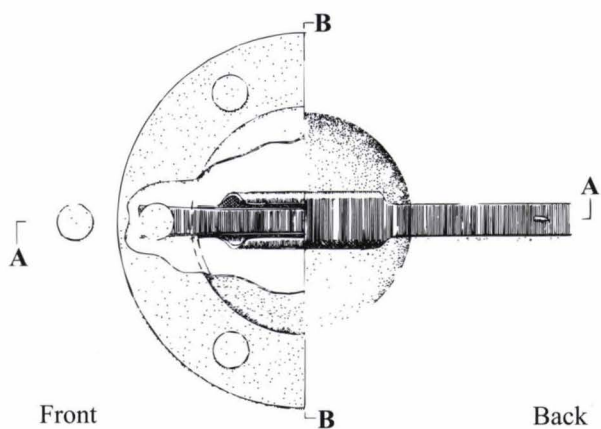
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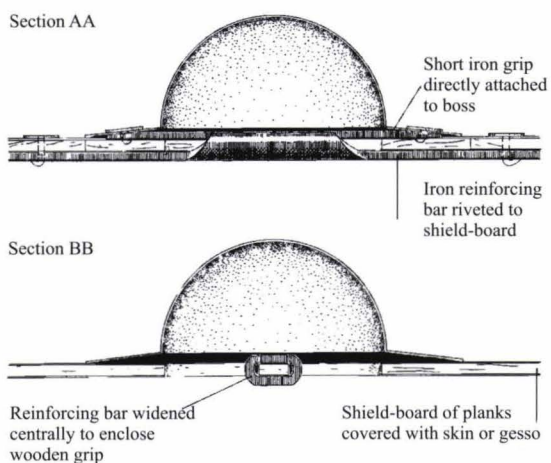
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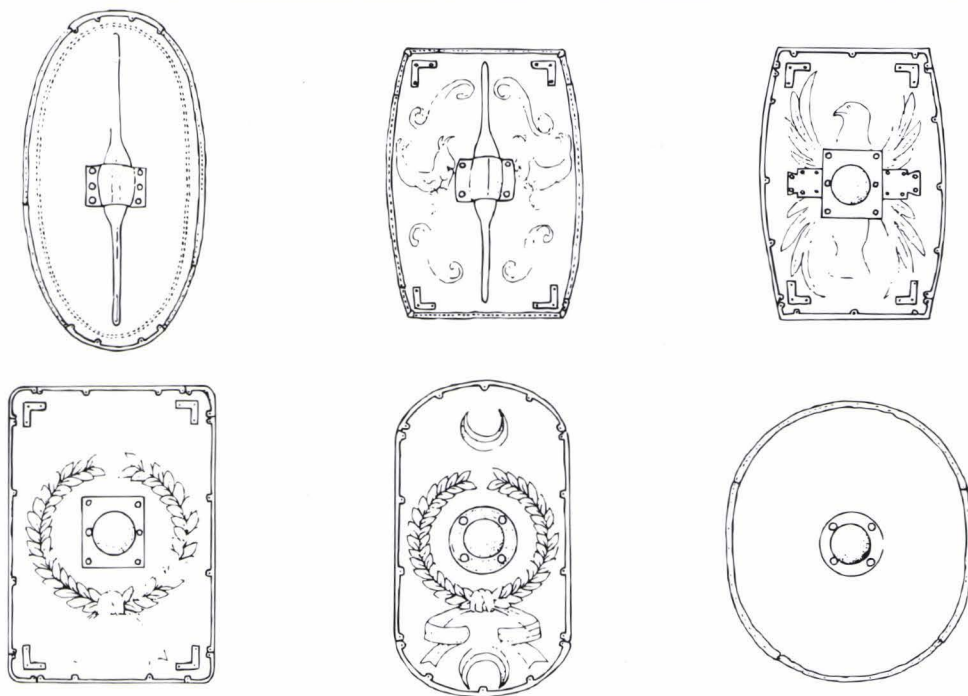
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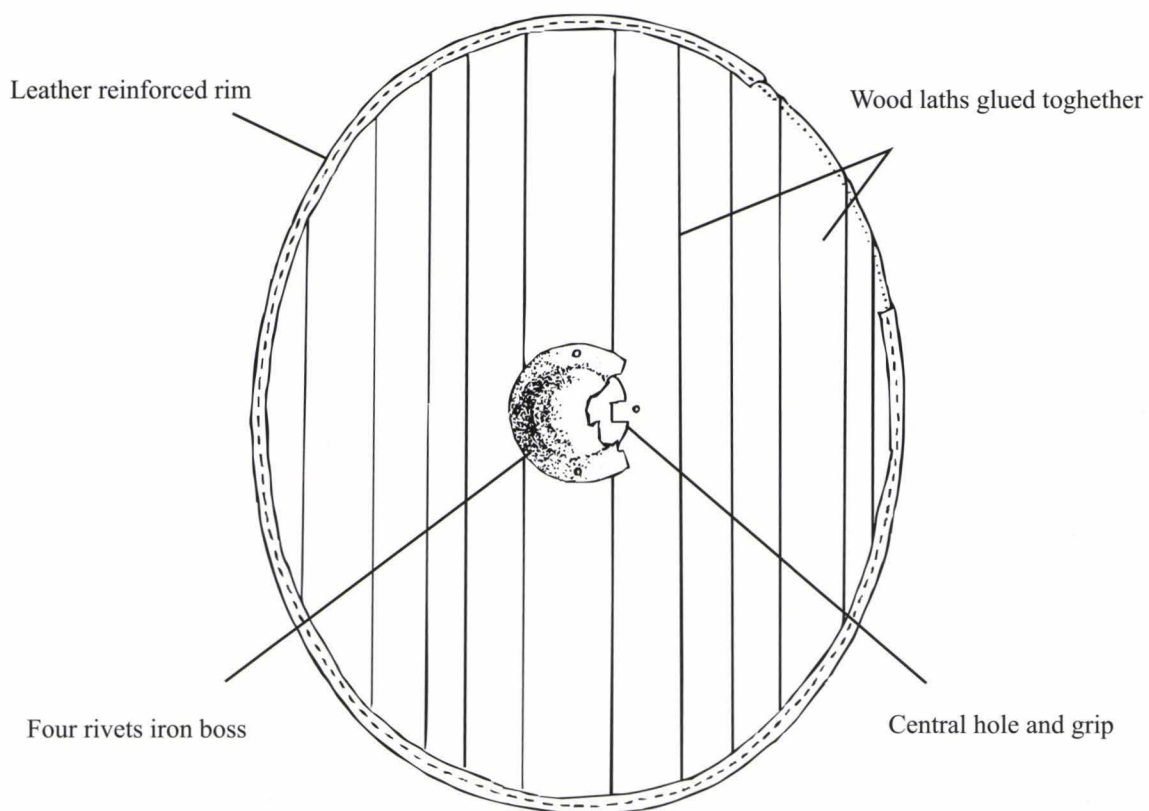
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Shield-bosses from: 1. Newton (Buckland 1978, 265, fig. 10); 2–4. *Iatrus* - Krivina (Gomolka-Fuchs 2007, Taf. 13–14, no. 1635, 1636, 1638); 5. Diagram of shield-boss and reinforcing-bar assembly (James 2010, 177, fig. 97)



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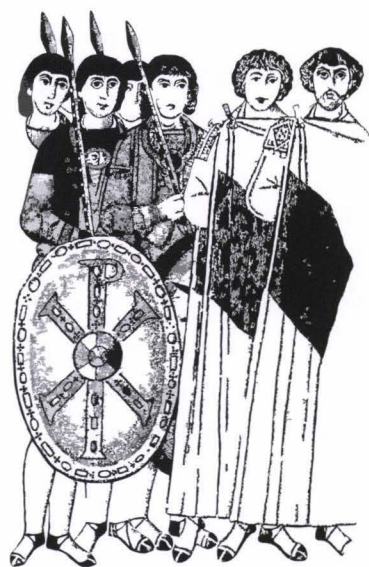
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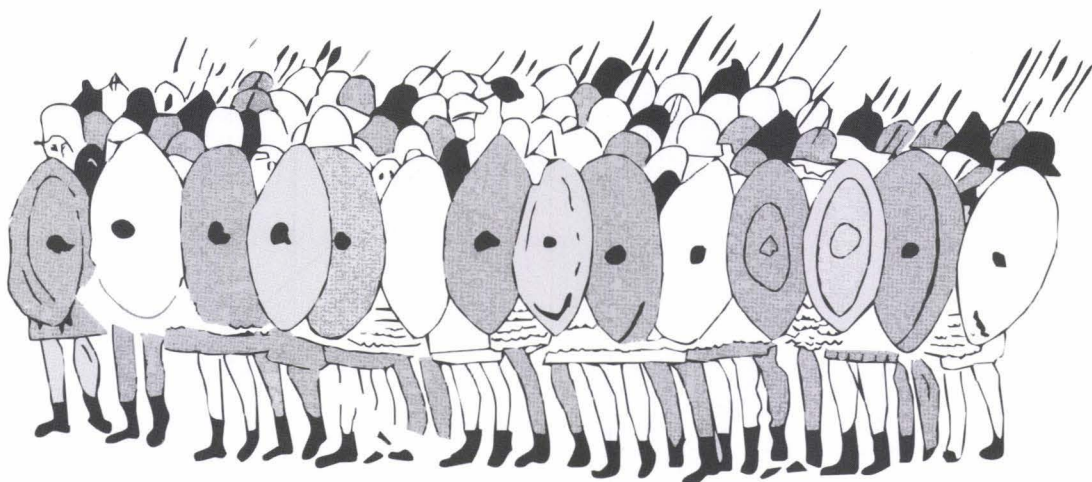
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