

A REVIEW OF THE EQUIPMENT OF THE ROMAN ARMY OF DACIA

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The received view is that Romanian archaeology is inaccessible, politically influenced and inadequately published. The predominant theme in Western publications, where Roman military equipment from Dacia has been studied, has been to attempt to test the accuracy of representation on Trajan's Column and the Adamklissi monuments. Interest in these has spawned attempts to identify army units¹ and regiments, as well as campaign routes, the Imperial retinue, Dacian aristocrats and structural typologies.² Much of this regarding military equipment has been speculative and anecdotal because of a failure to examine the results of Romanian excavations. Rossi for instance, when considering 'Arms, Armour and Equipment' illustrates no Romanian artefacts.³

If the practical problems of access to information were not enough some English language publications have confused the situation further - MacKendrick, in The Dacian Stones Speak⁴ dealt with the two provinces of Dacia and Moesia Inferior as one across modern Romania! Moesia Inferior is in fact Romanian Dobruja and NE Bulgaria; whilst Dacia occupied the Banat, Oltenia and Transylvania. Dacia only briefly included Wallachia until the withdrawal by Hadrian, and is now generally referred to as Dacia Libra. This may cause confusion - the area names cited above are both antiquated and colloquial.⁵ Modern counties (judet) are now used for locating sites. Older publications contain a plethora of historical names for individual sites - Clausenburg, the Austro-Hungarian name, for Cluj Napoca, Gradista for Sarmizegetusa - are the best known. Where possible attention will be drawn to such anomalies, if the Roman name is used, or an historically familiar one, the modern location will follow in brackets.

Romanian authors in translation have not, generally, helped generate an over view of the archaeology and history of Dacia, although Condurachai and Daicoviciu did present a now outdated framework.⁶ Latterly MacKenzie⁷ has not helped clarity with his work entitled 'Archaeology in Romania. The Mystery of the Roman Occupation!' The most useful historiographical study in translation is the summary by Condurachai.⁸

In Romania the study of Roman military equipment is falling in with the general trend to take military studies of the Roman period beyond epigraphy, regimental organisation and campaign movements, although there are constraints to progress. The modern state includes the province of Dacia and part of Lower Moesia, but there is only a small archaeological establishment so excavations and research are limited. Publication has flourished since the 1950s although full excavation reports have been wanting. Despite this there is an increasing amount dealing with the problems of Roman military equipment and artefacts - helmets, armour, belt fittings, strap ends, scabbard fittings, shield bosses, swords and daggers appearing in regional journals, usually as individual items in excavation assemblages, but occasionally in articles of synthesis. Potentially these draw upon

several advantages specific to Dacia.

Firstly Dacia, the province, was created by Trajan after two brief wars in AD106 at a time when probably more is known about Roman military equipment, generally, from sculpture, archaeology and literature, than any other. In addition the conditions of those wars, not only the destructiveness but the intense building activity of the army as it developed lines of supply, established garrisons, bridging points and forts, suggests that Romanian archaeology has a near unparalleled potential for precise and accurate dating of artefact assemblages. In the period after the Dacian wars other advantages accrue for instance the abundance of easily worked limestone has left the province rich in inscriptions. Postwar there was a rise in the level of trade archaeologically this is manifest in a large repertoire of externally dated small finds. Lastly, in AD 271, Dacia was formally abandoned by Aurelian: unlike the western provinces, it was not lost in a drawn out war of attrition; apart from the maintenance of Dacia Riparensis on the banks of the Danube, it was never reoccupied. Thus there is a near absolute terminus for military equipment in the province.

Contemporary conditions have played their part too, although protective legislation is not as comprehensive as in some countries, many sites remain undeveloped or within archaeological reserves like those at Sarmizegetusa and Tibiscum (Jupa).

Latterly only one major work, that by Macrea, has summarised the archaeology and history of Dacia in Romanian.⁹ Dacica, the first of a series edited by Daicoviciu approached aspects of provincial history.¹⁰ Unfortunately Tudor's Oltenia Romana, which is an extensive and comprehensive work, only described the history and archaeology of Roman southern central Romania.¹¹

Christescu¹² was the first modern commentator to summarise the military history and archaeology of Dacia. He identified several phases of development forming a framework. This became fundamentally important for subsequent work because the phases, or periodisation, he identified are seen to embody archaeologically definable military, political and organisational change. To paraphrase Christescu the first period is that of Trajan's Dacian wars, including the military build up from AD 99-107; the second, the consolidation and initial exploitation of the province's resources; the third, AD 118-138, continued development and reorganisation initiated by Hadrian in the aftermath of a revolt; the fourth, the period of barbarian raids and subsequent restructuring of the latter half of the second century. The fifth encompasses the Severan reforms and civil war of the last decade of the second and early third centuries whilst the last, the sixth, spans the period from the accession of Phillip the Arab to the withdrawal in the AD 270s.

Within this framework Gudea has developed a scheme for the defensive system of Dacia,¹³ whilst Cataniciu has enlarged upon this and generally improved it without essentially changing it.¹⁴ She summarised the evidence for all the Roman fortifications in the province, but this was heavily criticised by Gudea.¹⁵

Both these surveys illustrate why Christescu's framework is so

important for Roman military equipment and dominate the dating of military sites. Essentially the hypothesis has come to lead the evidence. Thus the two recent commentaries by Gudea, in particular, and Cataniciu, to a lesser extent, are describing a static model. Neither author attempts to define the changing role of forts and little detail, particularly dating, has been quoted for the expansion or contraction of sites, the development of civilian areas and so on. In this context the value of Cataniciu's work is not only that it illustrates the quality of evidence from a Romanian perspective, but that she embodies the current attitude to fort dating.

Thus the three elements of the development of Romanian military equipment studies are brought together; the dominance of the political and historical framework first elucidated by Christescu and heavily reliant on epigraphy and literary sources, the role this has played in the development of dating military sites and subsequently the lack of incentive it has provided for the development of on-site methodology that would, in due course, help question the assumptions inherent in Christescu's framework.

The periods that have received the most attention are those of Trajan's wars and consolidation of the province. In the first period the early forts along the southern routes through the Vilcan and Mehadhia passes and from the west should provide the primary source of military equipment. In the Vilcan Pass two forts, Virtop¹⁶ and Bumbesti¹⁷ are without any convincing early evidence, though the former, now destroyed by modern development could, on tile stamp evidence, have been occupied by a vexillation of V Macedonica. This, however, is not sufficiently understood to be certain of occupation in the third century or early second centuries. This raises the general question of the origin of these tiles and the value of identifying the presence of troops by them. Bumbesti has been excavated by trenching and the pre-stone phases are unpublished. In both cases the argument for early forts rests upon undemonstrable a priori reasoning: the forts are early because they guard a strategically important pass. The finds are not published.

Further north the forts at Jigoru, Comarnicel, Muncelul and the Patru Peak, are thought to be early because they guard valleys in the Orestia mountains but they are unexcavated. Eastern routes are identified with forts at Castra Traiana, Izlaz, Slaveni and Acidava in the Olt defile, but as Gudea points out there is no unambiguous evidence yet for the early construction of these forts - excepting a wooden phase at Acidava. A route further east - that of the conjectured late limes Transalutanus - with Flaminda as a possible vexillation headquarters, is proposed with Jidava (Cimpulung Muscel) and Risnov as auxiliary forts and two fortlets at Drumul Carului and Ruccar. Risnov¹⁸ (Fig.2), a trenched fort, is the most extensively published of these but whilst the coin series runs from Galba to Severus Alexander there is no published means to relate artefacts to their context. The military items illustrated (Taf.LVIIa) are recorded on page 37, as 'Beschlage und andere Bronze-gegenstande'. The assemblage (Fig.2,1-3) includes openwork mounts, a possible fragment of scale armour and a strap end. There is one small iron spearhead and an arrowhead (Taf.LIVa, 25.22).

One of the nodal points of Trajan's campaign was the fort guarding Apollodoros' bridge over the Danube but as Cataniciu points out 'despite the fact that Drobeta is one of the most intensively excavated forts in Dacia no scientific monograph has yet dealt with the overall results of the archaeological survey of its site'.¹⁹

A second possible important site in Trajan's strategy is the later city of Ulpia Traiana Sarmizegetusa, sited astride the Iron Gates pass it blocks one access to the Dacian heartland. Alicu²⁰ sees the colonia founded upon an earlier legionary fortress, similar say to Colchester and this is embodied in the paper by Ilies²¹ discussing the military equipment from the site. Sections through the city walls have revealed a 'military' turf wall phase on the north, east, and south sides; the dimensions of these estimated as 504m x 415m enclose 22.36 hectares comparable to York, Emona, Lambaesis and Lauriacum; the so called Augustalium is similar in plan to a principia; large granaries occupy the eastern area of the town and there is unstratified military equipment from the site. Given the deducta of the colonia is probably celebrated on a sestertius dated AD 103-11, the best context for the military occupancy of the site is the interwar period and immediately after AD 106. As for the garrison this is less secure - tiles of the IIII Flavia Felix have been discovered in the Augustalium and equipment²² found after Ilies' paper was written - buckle hinge (Fig.10,7); a belt plate (Fig.10,2), possibly of Pannonian origin, could be of either legionary or auxiliary type even though one damaged fragment is probably the remains of a lorica segmentata hinge (Fig.10,16).²³ Of all the sites possibly occupied during the interwar years only the colonia, Ulpia Traiana deducta, latterly Sarmizegetusa, had published evidence of early damage - a fire adjacent to the Augustalium suggests a slight change of orientation within the fortress when rebuilding took place.²⁴

Ilies²⁵ examined the military equipment available in 1981 and developed a limited typology from 40 pieces; spears, arrowheads and belt pendants. He does not attempt to date, specifically, any of the pieces, explaining 'Este dificil, in stadiul actual al cercetarilor sa prezentam cronologie formele de lanci provenite de la Ulpia Traiana. Ele pot fi datate, larg, u secolele II-III' - ('It is difficult, at this stage of research to present a chronology for the lance types found in Ulpia Traiana. They date in general from the 2nd to the 3rd centuries AD' - p.416). Although this refers specifically to lances, spears are treated similarly (p.417). Thus three types of spearhead are defined: 1. lancelolat (long thin bladed), 2. rombic (in section), 3. filiform alungit; and four types of lances: 1. Pyramidal (in section), 2. Round socketed and rombic, 3. Conical, 4. Square. Arrowheads are: 1. Triangular, 2. Pyramidal, and 3. Syrian; and belt pendants are: 1. terminating in a stud, and 2. in a point, but all are assigned to the 2nd or 3rd century. Nor does Ilies list the contexts from which his material comes, all the catalogue numbers quoted are those of the site inventory and accession register for the museum at Cluj-Napoca. He did not cite dating parallels even though, for instance, the pottery had been published from the Templul Mars, as well as an extensive catalogue of lamps and figured sculpture.²⁶ Interim reports by Alicu and Daicoviciu show by the periodisation that even this site relies heavily upon the orthodoxy of the Christescu framework, as well as being limited by excavation methodology.²⁷

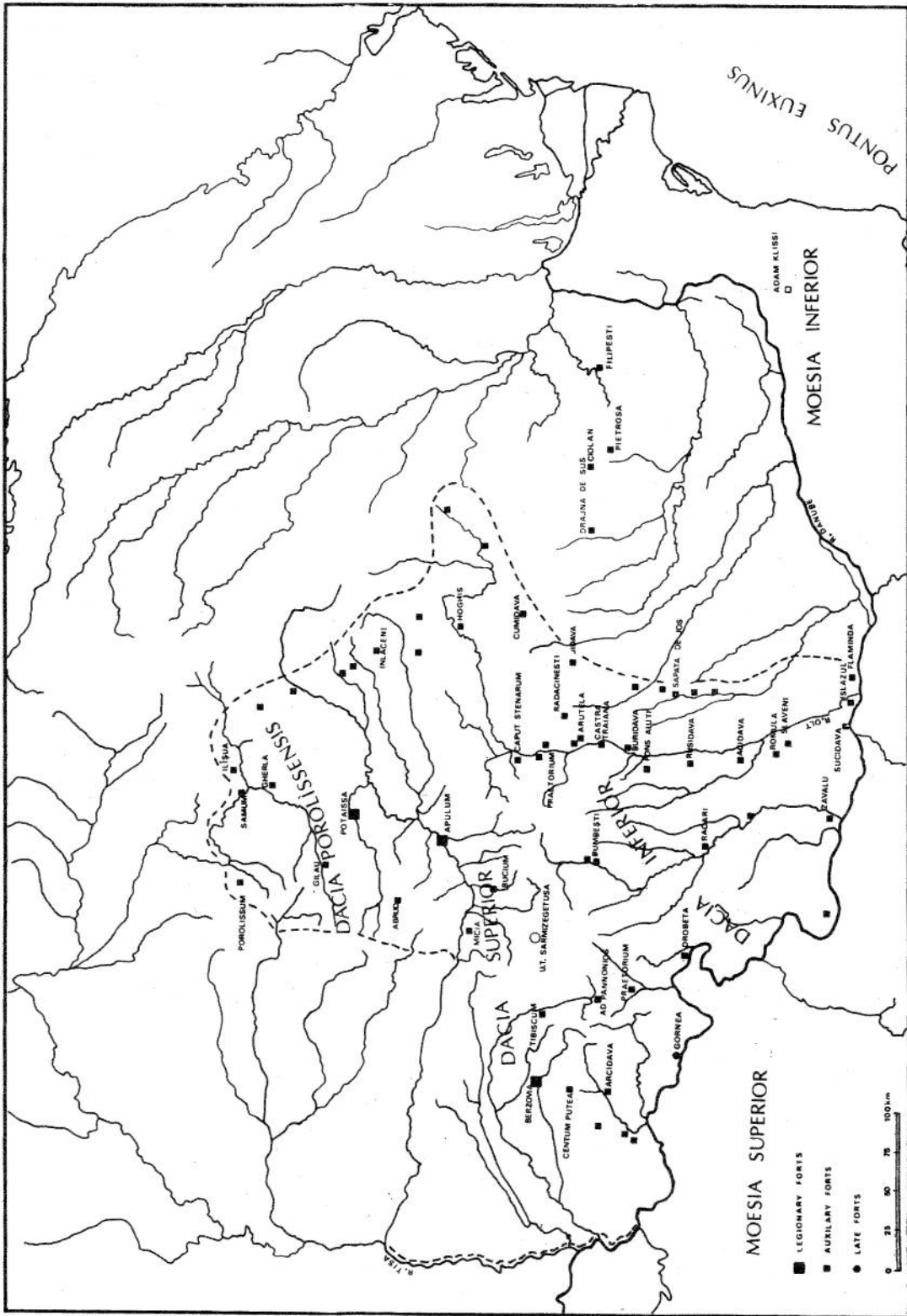


Fig 1 Location of places mentioned in the text

As for the rest of the provincial garrison, excavation has yet to show clear evidence of early occupation, Hinova, Insula Banului, Desa, Zavalu, Sucidava, Islazul, Flaminda Jidava-Cimpulung, Buridava (Biresti) and Risnov are clear possibilities because their positions suggest an early concern with the security of the Danube and supply routes north, these sites though should not be confused with the Tetrarchic foundations and refurbishing after withdrawal from the province.

Despite, then, the major possibilities offered by this early period no securely dated military equipment has been published and until the problem of dating the construction of forts of the first two wars is reconciled no coherent attempt can be made to test, except in the most general sense, those representations of armour, principally on Trajan's Column, but elsewhere too.²⁸

After the victory at the end of the second war, a period of long term consolidation began. The military concern of the period was the dual role of the army: firstly occupation, neutralising Dacian resistance, developing, safeguarding and building the new provincial infrastructure. Secondly, its initially passive function as bulwark against incursions from the tribes of central eastern Europe. From this period the first collections of military equipment seem to appear. This is not necessarily because either the artefacts or the forts are specifically dated to the years after AD 106 but because of the general acceptance that, a priori, in the absence of good dated contexts, forts with stone defences have their origins in the early 2nd century, and where wood or turf phases are not demonstrable these origins must be post AD 106 and probably Hadrianic. Cataniciu²⁹ applies this reasoning to Brincovinești, Calagureni, and Sarateni. It is a situation which is archaeologically imprecise, but which reflects the more generalised historical approach.

Beyond the province the major thrust of activity for the army changed with Trajan's pursuit of campaigns in the East probably stretching resources. It may have been this which was partially responsible for the revolt that occurred at the accession of Hadrian and implicit in this emperor's apparent desire to abandon the province.³⁰

Despite Trajan's withdrawal of troops, a large garrison remained. A series of auxiliary forts were positioned on the frontiers and along major routes of the province. During the principate of Trajan the area of southern Moldavia and Wallachia had been occupied as part of Moesia Inferior and the forts of Drajna de Sus, Ciolan, Pietrosa and Filipati guarded the east extension of the road which ran from Aquincum to the Black Sea. This is a period that has received some detailed structural analysis and this should be reflected in the finds repertoire. One of the earliest closely dated, as well as extensively dug, forts was Drajna de Sus.³¹ Excavated in 1939/40, the praetorium, the north gate, the via sagularis and part of the civilian settlement were revealed. The fort enclosed 4ha and the excavator found parallels for the wall structure at Urspring and Mainz both of late first century date; tiles of the V Macedonica and I Italica were discovered and the coin series runs from Domitian to Trajan. It was a stone built fort - suggesting

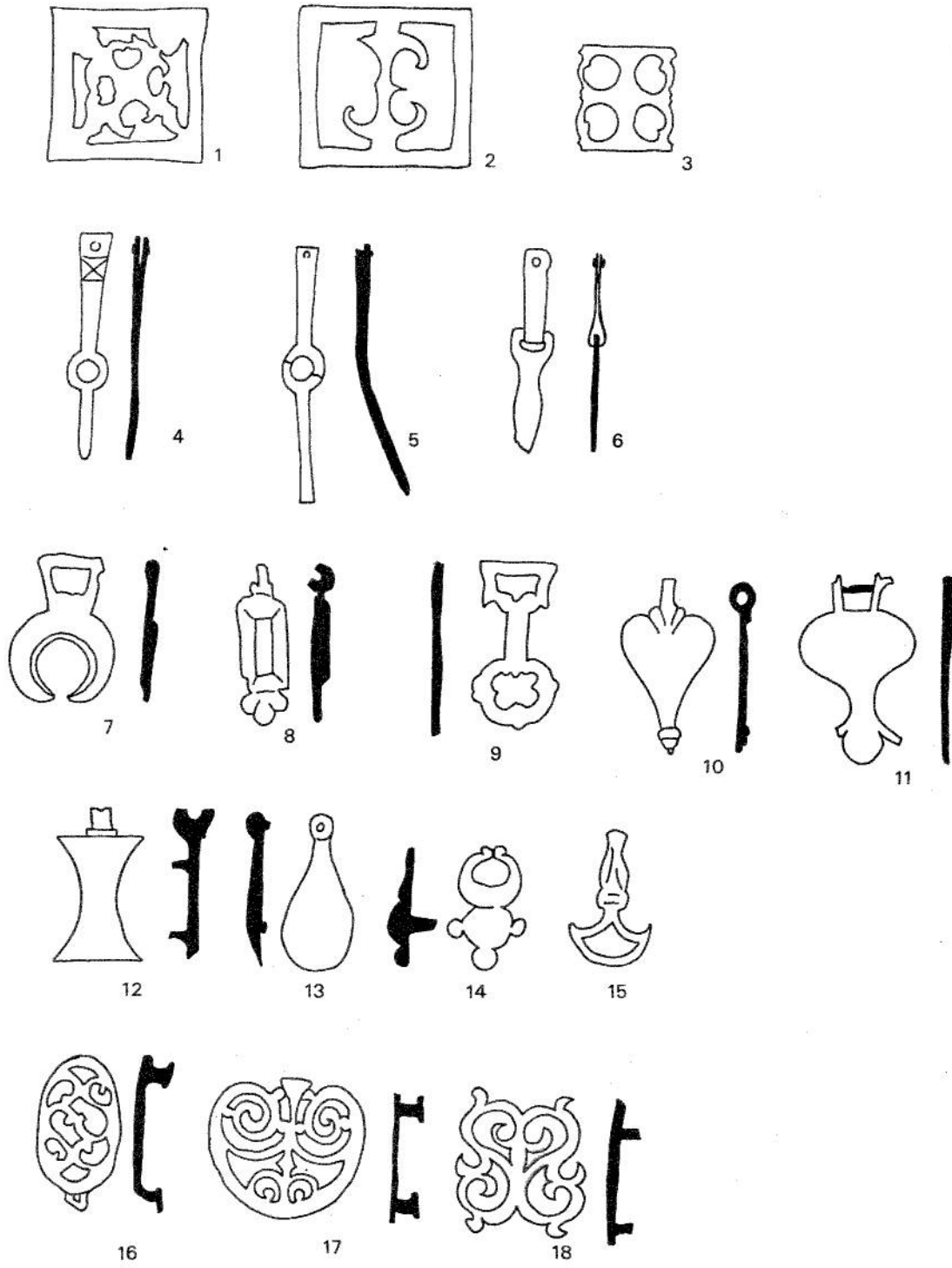


Fig 2 Appliques and pendants 1:2

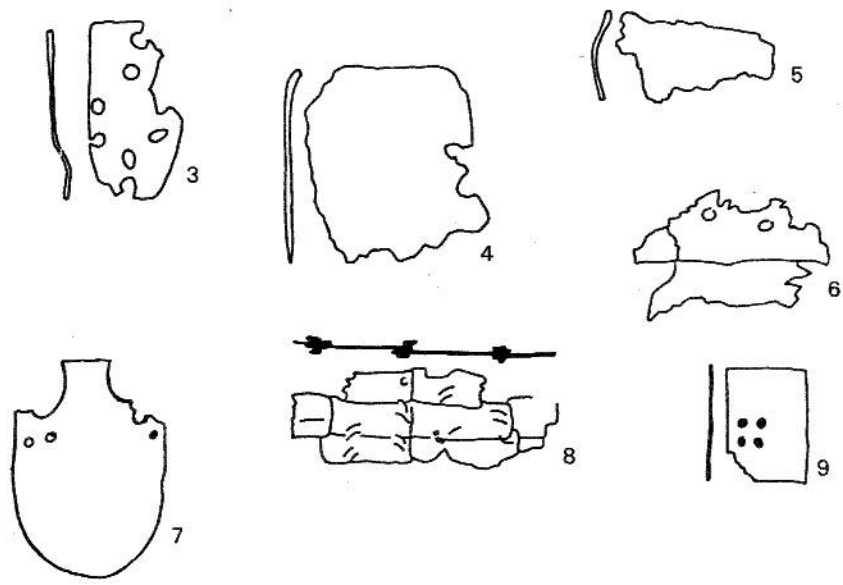
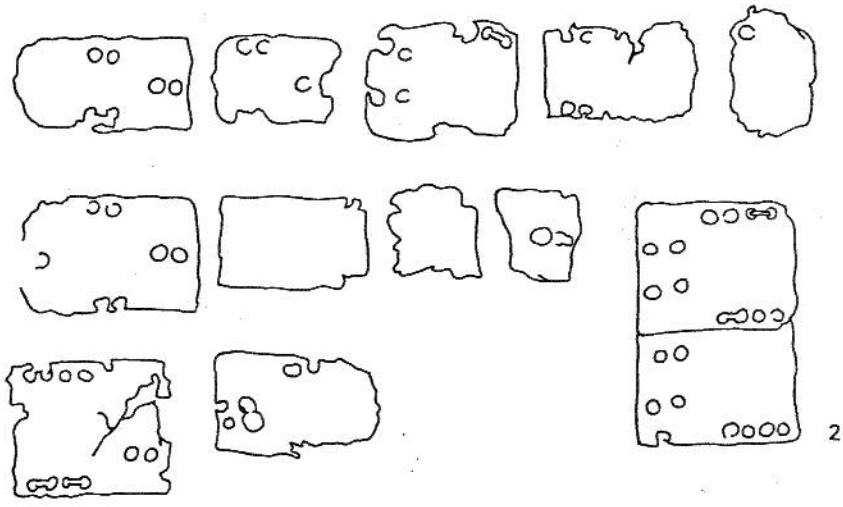
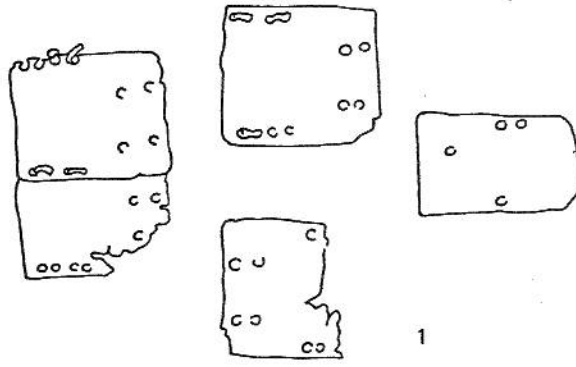


Fig 3 Scale armour 1:2

that this was practised before the reign of Hadrian. Occupation of the fort ceased after it had been destroyed by fire, which may have been part of a deliberate abandonment process, as almost no finds remain. Military equipment from the site was confined to one spearhead and a shield boss.

There are two legionary fortresses at this time, that of the IIII Flavia Felix at Berzobia³² until the regiment's withdrawal south of the Danube in AD 113/4, and that of the XIII Gemina at Apulum.³³ At Berzobia, apart from the tile stamp evidence and the helmet which Robinson described as Imperial Italic G³⁴ there is little surviving evidence for the fortress and no complete plan of the fort, which lies beneath the modern town, has yet been recovered.

The legionary equipment is equally sparse from Apulum. It is beneath a military headquarters built in the first half of the 18th century when most archaeological material was discovered. Later, in the 1860s, more finds were made in the Portos quarter, to the south, when the railway was built. Like Drobeta, many of the finds from Apulum remain in the collection of the local museum, in this case Alba Iulia, and are not yet published.³⁵

As well as the posting of legionary vexillations from the provincial garrison, like those of the IIII Flavia Felix from Berzobia, which Benea³⁶ argues (from the occurrence of tile stamps) were active at over twenty forts including Tibiscum, Pojejana, Drobeta, and Arcidava, legions from other provinces were involved in building the military infrastructure. Thus, again from the occurrence of stamped tiles, elements of the I Adiutrix were at Apulum in AD 107 although not apparently responsible for any of the building works; I Italica, VII Claudia and IIII Flavia Felix had detachments at Drobeta, probably originally defending and building the bridge and probably not later than AD 107/8; troops of the V Macedonica helped build Slaveni, Bumbesti, Racari and Sucidava whilst detachments of I Italica and XI Claudia were attested at Buridava, as were X Gemina at Sucidava, lastly a stamp of XI Claudia apparently of early date was found at Romula.

Despite this extensive legionary presence in the province, albeit for a short period, there are surprisingly few distinctive artefacts. This, of course is reflected in the current debate concerning the difficulties of identifying hard and fast differences between the equipment of the two types of unit, but other factors are influential. The largely unpublished antiquarian collection of Alba Iulia and the genuine paucity of material from Berzobia (and later from Potaissa) distorts comparisons with auxiliary equipment. The use of stamped tile to identify outposted vexillations is fraught with difficulties and there remains the persistent possibility that tiles identify the manufacturer but not the location of that regiment.

Enough examples have by now been adduced to demonstrate that as a consequence of a methodological failure to keep pace, artefact studies have come to rely on external parallels or an inadequate politico-historical model for dating. Many have sought refuge, like Ilies, in art historical or typological descriptions.

Perhaps surprisingly there are more than 623 artefacts recovered

and published from Dacia covering all aspects of military equipment, many of the forms are familiar from assemblages in western literature, although, however, whether it is valid to draw more than functional parallels from these is not clear. The sequences defined from those provinces are derived from material and sculpture which may not only be spatially distant but upon which the influences of suppliers, taste and organisations may be inappropriate to Dacia. It is inescapable but largely irrelevant that the works of Oldenstein³⁷ and Russell Robinson³⁸ owe much to Trajan's Column. Quite apart from these reservations any analogies are fraught with the problems of residuality and obsolescence. Lastly, as the metopes from Adamklissi³⁹ have been used to illustrate, the eastern troops⁴⁰ that were employed by Trajan may have had a different equipment regime - scale armour and lighter fittings.⁴¹ Nonetheless it follows that all these factors should be reflected in the equipment repertoire.

The most striking feature is that the recovery of plate armour and scale does not reflect the expected proportions. There is no reason to doubt the extensive legionary presence in the province, even if in detail arguments for vexillation secondment seem inflated, but there is almost no published lorica segmentata. To confound the problem, of that which is published, a hinge is from Sarmizegetusa,⁴² an unconfirmed legionary source; a possible angular hinge of lorica segmentata, Corbridge type, comes from Drobeta;⁴³ and a lobate hinge comes from Buciumi,⁴⁴ an auxiliary fort.

In contrast to the paucity of 'legionary' material 'auxiliary' equipment is well represented. In both the initial and later period of consolidation probably some 134 forts were occupied by auxiliary troops. Scale armour has been found at several of these,⁴⁵ as well as at Ulpia Traiana (although none of the occurrences are dated - Fig.3).

Dacia Inferior is where the most work has been done on the equipment from forts. Latterly Vladescu has prepared an extended list of troops, forts and weaponry, concentrating on the equipment from twelve forts but it is largely an uncritical work and his analysis of the weaponry is simply typographic. Significantly his catalogue contains almost no bronzework, except the strap ends from Copaceni and Arutela (Fig.4).⁴⁶ This is because although his material is drawn from a variety of sites, he does not discuss all the published artefacts from them (see Risnov above). And secondly he does not draw upon the major, albeit unpublished, museum collections. From a province that includes the Limes Alutanus and the Limes Transalutanus Vladescu's survey gives an inadequate sample. This is the only summary which discusses equipment from the south, for Tudor,⁴⁷ the major commentator, in 'Dacia Oltenia' only uses it illustratively.

The other provinces created by the Hadrianic reform contain long stretches of frontier - Dacia Porolissensis the northern forts and limes, including Porolissum, Dacia Superior the western margins and the nodal fort of Micia; from neither of these provinces has the equipment been reviewed.

From Dacia Porolissensis the major published assemblages come from Buciumi,⁴⁸ Porolissum⁴⁹ and Gilau (Figs.2, and 4-7).⁵⁰

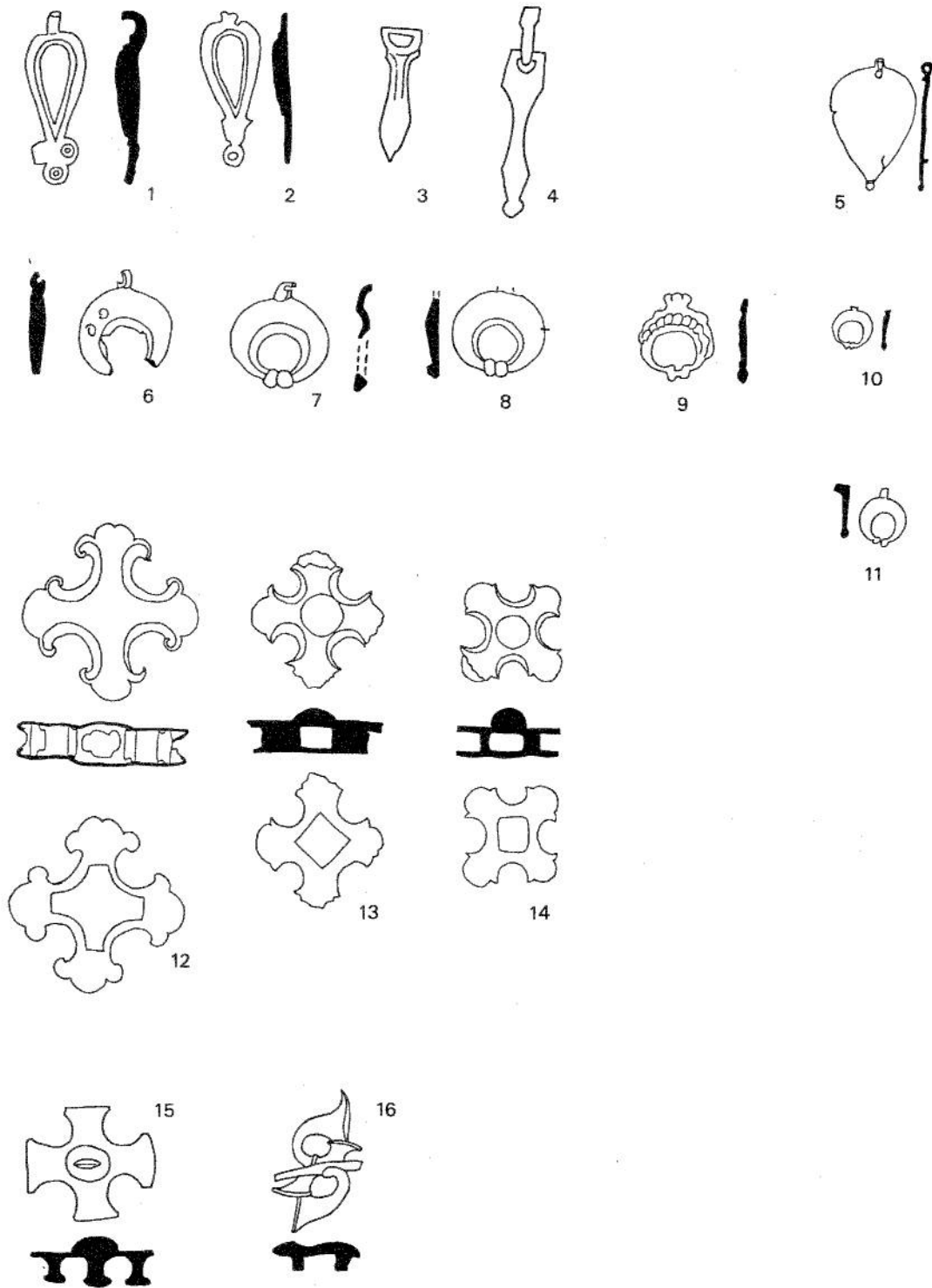


Fig 4 Pendants and appliques 1:2

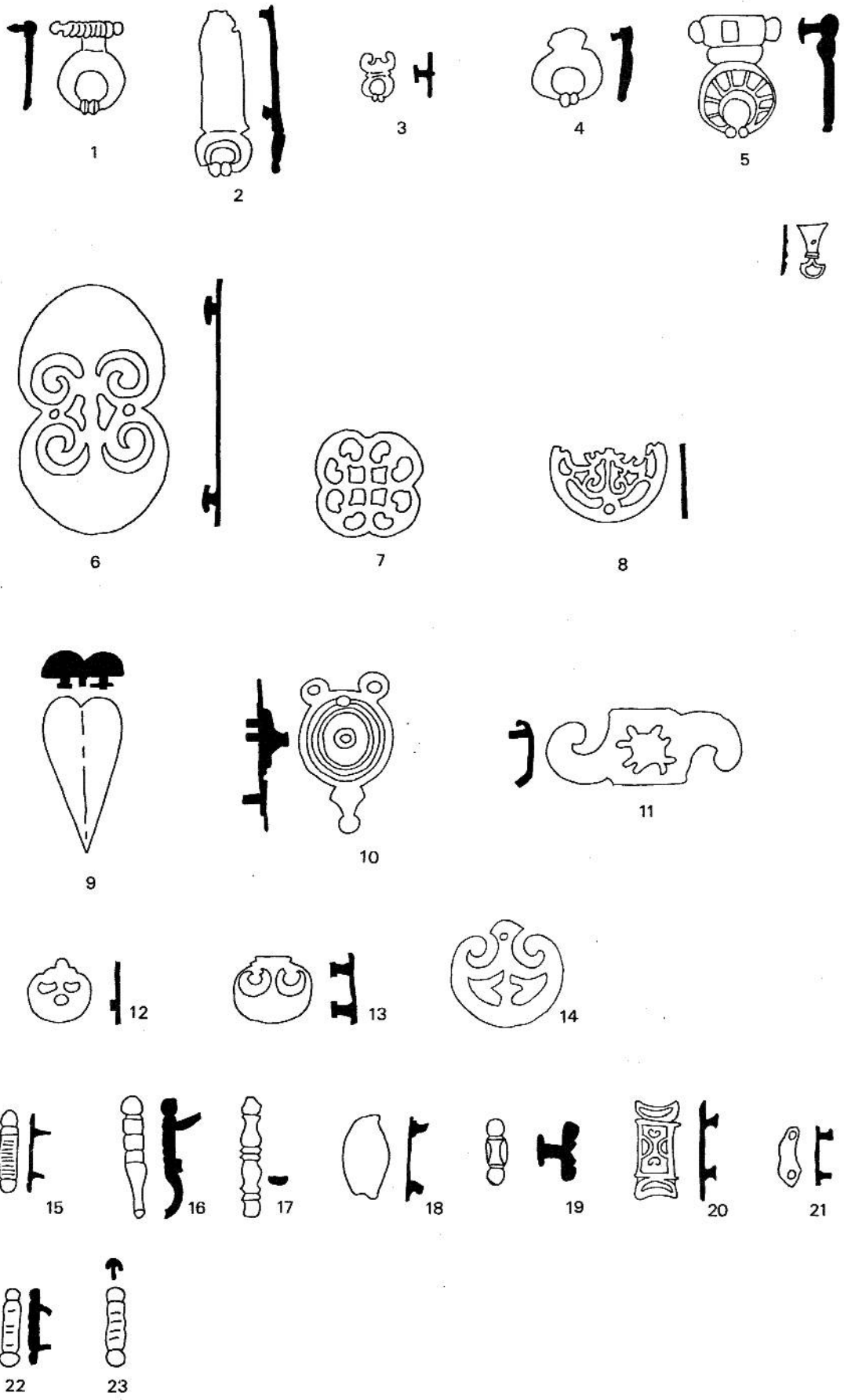


Fig 5 Appliques 1:2

Buciumi was dug from 1963 to 1970 using a combination of trenches and area excavations,⁵¹ but the dating evidence for individual items was ambiguous, the coin series runs from Tiberius to Philip I. The equipment from the fort includes horse gear (Fig.6), pendants (Fig.4), a wide variety of buckles including openwork mounts,⁵² but the illustrated material exhibits the problem of uncritical presentation as a rowel spur is shown alongside ostensibly Roman artefacts. This raises the spectre of residuality and later contamination which is a real problem for poorly provenanced assemblages.

The major research in the province has been conducted by Gudea⁵³ in the area of Porolissum but although interim reports have appeared the only military equipment so far illustrated is that from the extensive guide to the site⁵⁴ (Figs.2 and 7: openwork mounts, buckles and pendants). Gilau, an auxiliary fort west of Napoca (Cluj Napoca), was the seat of the procurator of Dacia Porolissensis, and has been continuously excavated over summer seasons since 1976.⁵⁵ In 1987 the bronzework, including pendants (Fig.4.5), harness clips (Fig.6) and openwork mounts, was published and for the first time precise contextual detail and dating analogies were quoted.⁵⁶

No large assemblages have been published from the territory of Dacia Superior, except the artefacts from Ulpia Traiana Sarmizegetusa, and many are awaiting publication in museum collections.⁵⁷

In addition to the assemblages, individual artefacts of high profile have been studied, for the most part by Liviu Petculescu. He has concentrated on the earlier material including the Berzobis helmet, scabbard fittings, helmet cheekpieces, belt plates of the Utere Felix type,⁵⁸ the Bumbesti helmet,⁵⁹ and the balteus (below).⁶⁰

Protase and Petculescu⁶¹ presented the Berzovia helmet; it was extensively described and came from the former's section through the fortress, in a demolition layer of burnt timber and tile. Identified with the Weisenau type (it was published just prior to Russell Robinson's survey) of Klumbach, it was dated to AD 106-18, when the IIII Flavia Felix occupied Berzovia, before transferring to Singidunum (Belgrade) in AD 118/9.

Petculescu⁶² has discussed the decoration on pieces of Roman armour from Porolissum (found 1913), Buciumi (barrack no.5) and one fragment from Oltenia. The items are without precise context beyond their findspot. Petculescu's principle concern is the identity of the depictions, Mars or Mercury, the possibility of identifying the unit concerned and the date of the pieces (in the 3rd century AD) which is derived from Klumbach.⁶³

The Bumbesti helmet, discovered by Nicolaescu in 1937, has parallels at Dakovo (Bosnia) and Briastovets (Burgas, Bulgaria) and was identified with Russell Robinson's Auxiliary Infantry type D, and the unstratified helmet assigned to the cohors IV Cypria civium Romanorum, thus dated to AD 106-80 suggesting that this may have been made in the camp fabrica.

Two articles appeared in 1983 - scabbard fittings and Utere Felix belt plates. In the former Petculescu followed Raddatz in seeing a

Celtic origin for the type and finding parallels for the pieces in Germania, Raetia and Germania libera. Because the fittings are found on both legionary and auxiliary sites - Porolissum, Buciumi, Potaissa, Gilau, Racari, Copaceni, Romula, Micia, Tibiscum and Drobeta - Petculescu advances the argument that this particular type of equipment reflects the use of similar items by both legionaries and auxiliaries. All the pieces are dated to the late 2nd and 3rd centuries on the basis of two indicators: the period of occupation of Potaissa is from AD 169 on, and the artefacts from Micia come from, (unpublished) post Marcomannic revolt, destruction levels - c.AD 170.

But it was in 1982 that Petculescu produced his most detailed work, taking the analysis of military equipment, cheekpieces in this instance as far as possible whilst clearly illustrating the shortcomings of only generally provenanced material.

Prior to 1982 four helmets had been published from Dacia, the cavalry parade type from Lunca Muresului; the 'Weisenau' type from Berzovia; the Oriental type from Bumbesti; and the Romula mask.⁶⁴ Petculescu made the point that there were more fragments of helmets unpublished, and he identified four cheekpieces, from Gradistea Muncelui (with a repoussé eagle representation of Jupiter); Micia (a Weisenau type, with parallels at Bryastovets, Burgas, Bulgaria); Tibiscum (another Weisenau type, of 1st century date) and Buciumi. Petculescu felt the principle problem to be addressed was that of typology and chronology. Thus the Gradistea helmet was identified with the IIII F.F., as the unit was active in the area around Sarmizegetusa Regia, the Tibiscum piece with the cohors I Vindelicorum milliaria; the Buciumi with the cohors II Nervia Brittonum milliaria and Micia with the cohors II Flavia Commagenorum equitata sagittariorum - all were dated to the 2nd and 3rd centuries. But there is a fundamental weakness here for it is not enough to identify units with equipment types without clarifying either temporal or spatial relationships as this does not allow for later perhaps more detailed or probing research.

Because there are very few works of synthesis and a lack of detailed evidence it is premature to advance detailed findings from the early equipment repertoire, but there are clearly general trends emerging. Belt fittings, the most common item in the bronze repertoire (Fig.7), in fact display a wide variety comparable with Oldenstein's German and Raetian collections, but containing Pannonian and Moesian forms,⁶⁵ and no doubt reflect the cosmopolitan character of the early Dacian garrison. Generally the equipment repertoire could reflect the first century orthodoxy of auxiliaries in scale armour or less, and legions in lorica segmentata (as indeed Trajan's Column may show) but in the continued absence of accurate dating and in the knowledge that a very large body of bronze artefacts lies unpublished in museum collections there can be no confidence in this. Given the widespread use of the legions and the absence of plate armour so prolific on the Column it may not be premature to suggest that the distinction between legionaries and auxiliaries was even in the first decades of the 2nd century being eroded as both increasingly turned to the use of lorica squamata.

The later 2nd century is a time of great military turmoil. Belt appliquéés (Fig.5.15) and a strap end found in post fire levels,

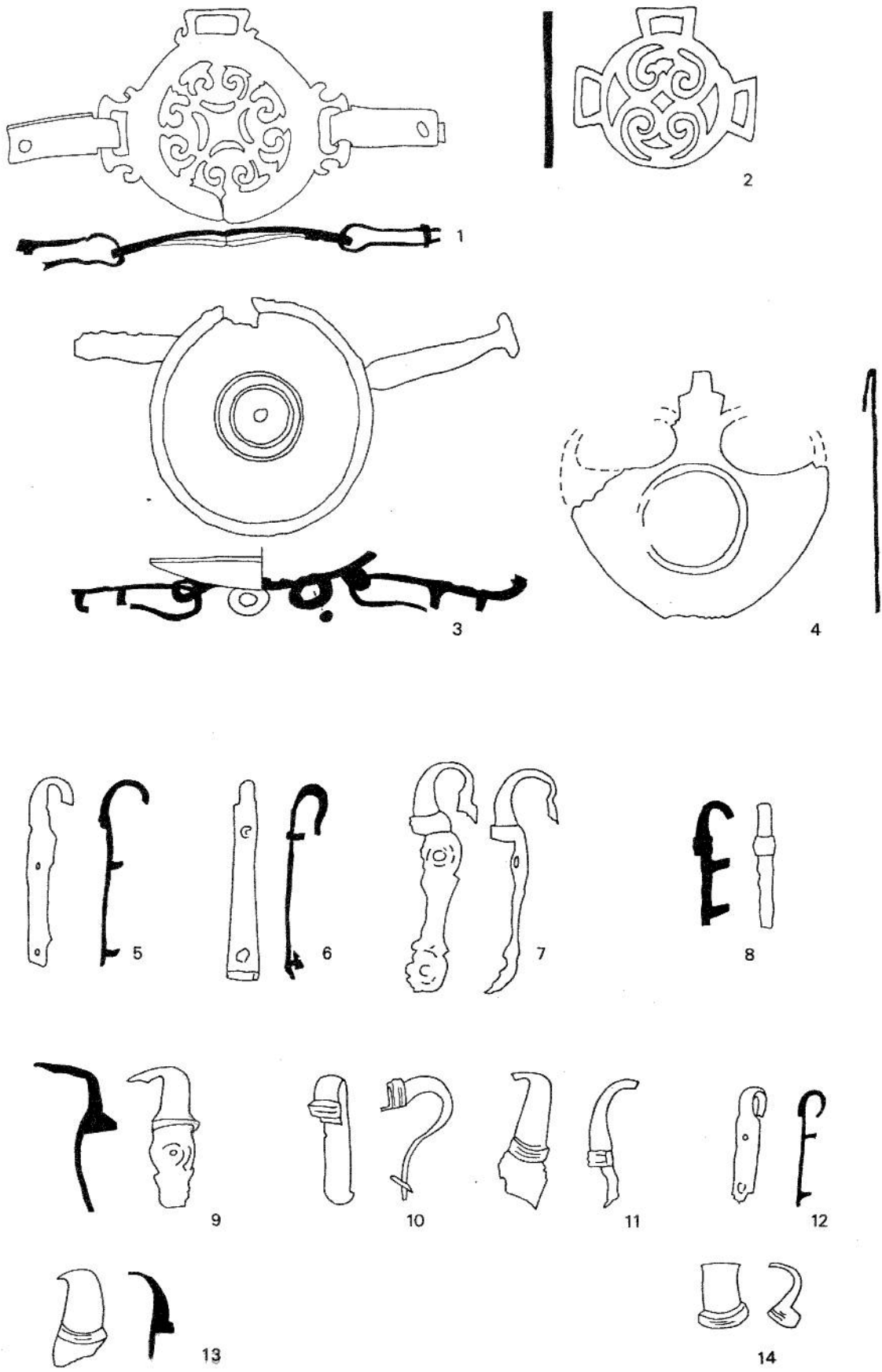


Fig 6 Harness fittings 1:2

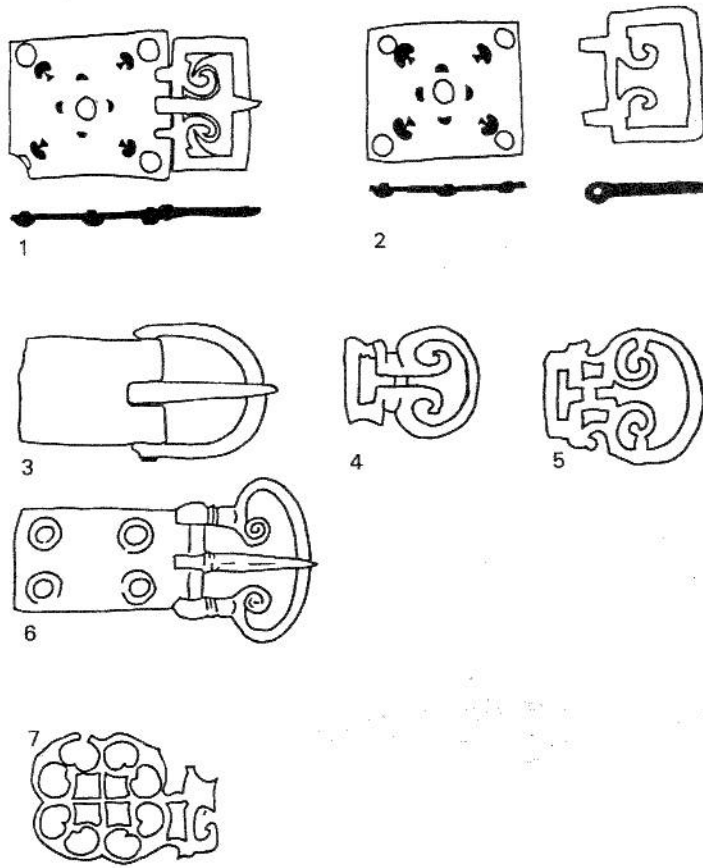


Fig 7 Buckles 1:2

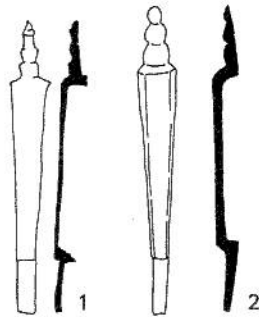


Fig 8 Scabbard fittings 1:2

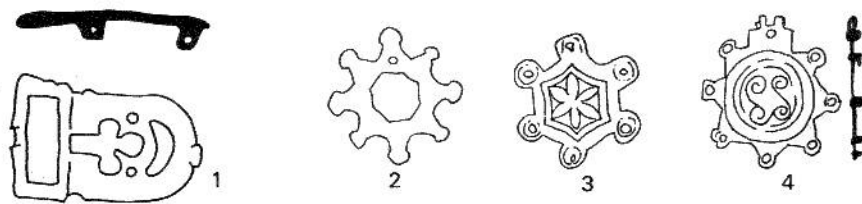


Figure 9 1:2

provisionally dated to the period of raiding during the Marcomannic wars, at Sarmizegetusa, may suggest troops at civilian sites.⁶⁶

Of crucial, but largely unexplored importance, as Petculescu has illustrated, is the arrival of the V Macedonica in AD 169 on a new site at Potaissa (Turda) providing a precise terminus post quem for equipment. Major excavations, though, have only taken place in the 1980s and to date only one belt fitting and four scabbard fittings (Fig.8), the coinage and a provisional plan have been published by Mitrofan.⁶⁷ The pieces from Potaissa were dated to AD 168-271, the same period as the fortress was occupied and thus still betraying a lack of detailed contextual or comparative data. The fittings from Petculescu's own excavations at Micia and the remaining artefacts were assigned a date range of 2nd to 3rd century. Petculescu used these items to argue that most auxiliary equipment is indistinguishable from legionary forms.

Scabbard fittings have received the same treatment by Petculescu⁶⁸ (see above). Neither of his papers do deal with the problem of residuality, particularly relevant at Potaissa and in neither have contextual analogies such as pottery assemblages or other datable artefacts been employed.

Of similar importance to the arrival of the V Macedonica at Potaissa as a dating terminus is the creation of the 'Limes Transalutanus'.⁶⁹ Tudor has argued that after the reduction of Moesia Inferior by Hadrian the Eastern frontier of Dacia became established along the river Olt. It remained there, with minor changes, until the turn of the 2nd century. On the basis of a coin hoard from Sapata de Jos, dated to the AD 240s, deposited beneath the floor of a burnt out barrack at the destruction of the block (and thus the limes),⁷⁰ the arguments runs that it could only have been Severus who had had the resources to advance the line of the frontier some 20/30 kilometres east of the river Olt. Here had been constructed a limes of fortlets, watch towers, a wooden palisade, and some 14 forts which survived only a short time before the troops were withdrawn once more to the Olt. Notwithstanding the coin hoard, the evidence is slim. A second coin hoard⁷¹ at Ionestii Goroni (Pons Aluti on the limes Alutanus!), from the destroyed fort, is not complementary and evidence of a break in occupation at Jidava⁷² and Cumidava (Risnov)⁷³ is not relevant to the limes further south.

Whether or not one accepts the validity of the Limes Transalutanus, and it has been suggested that it is a Hadrianic phenomenon, Dacia has a significant role to play in the military anarchy of the 3rd century AD, not least in clarifying the types of equipment used at this time.

There were probably two major centres for the eastern limes, Romula⁷⁴ and Sucidava,⁷⁵ both are cities which became 3rd century AD fortresses, neither have a clearly understood topography or history but Romula has been proposed as the headquarters of the eastern frontier. No work on the finds from Tudor's excavations⁷⁶ has yet been published (although Cataniciu observed there is a large corpus of military equipment from the site) and it is still the cavalry parade mask, now in the Kunsthistorisches Museum (inv. IV 446), Vienna, that

characterises this important site. Sucidava, unlike all the sites so far discussed is identified with later Roman equipment⁷⁷ and this is where their potential lies (Fig.9).

At the end of the 3rd century a near complete change of orientation of the Roman defences takes place shortly after the withdrawal from the province; whilst the reasons for this are a matter of history, the effect upon the army is discernible in the equipment repertoire.

In AD 235-6 Maximinus Thrax (235-8) having wintered at Sirmium moved against hostile tribes later assuming the title of 'Sarmaticus Maximus' and 'Dacicus Maximus'. In AD 238 there were raids, into Lower Moesia, by the Carpi of Dacia and other tribes, including the Goths, and by the 240s Philip I was building new walls at Romula, Drobeta and Sucidava. Perhaps this was the forerunner to the conjectured withdrawal from the Limes Transalutanus in the mid-240s. Claudius II defeated the Goths at Naissus (Nis) in AD 270. Despite all the apparent upheaval, military equipment from the forts on the Eastern borders of Dacia, like Jidava, do not show any tangible changes and this seems typical of the material from forts all over Dacia. Thus the changes apparently visible in equipment from the reforms of the Tetrarchy onwards are not preempted by a gradual evolution, and this must render the changes themselves, for troops once stationed in Dacia, all the more substantial. Thus what seems to be emerging is that despite the effects the 3rd century apparently had upon the Roman army elsewhere,⁷⁸ in Dacia the equipment regime at least remains unchanged until the major reorganisations of Constantine. This view is also ironically reinforced by the publication standards of much of the Romanian material - finds presented without a precise context and from trenches which criss-cross fort sites are near, although not necessarily, random samples. Therefore as assemblages they do reflect the scope and range of equipment available throughout the 2nd and 3rd centuries, and may be contrasted with assemblages recovered from the new foundations of the late 3rd and early 4th centuries.

The lack of perceived change should, though, be seen in the light of the fact that many modern excavations like that at the important eastern fort of Jidava⁷⁹ have not yet been published in full and the military equipment used by Vladescu is from early excavations.

The real contrast lies in those new foundations on the north bank of the Danube in Dacia Ripensis. There are two aspects to this, those forts which were refurbished⁸⁰ Palanka, Pojejena, Moldava, and the new fortresses (quadroburgium) of Gornea⁸¹ and Insula Banului.⁸² Gudea⁸³ summarises the most fundamental changes:

'The found weapons differ much from the weapons of the previous period. There are no more long heavy spears, they are light ones. These belong to the types called "barbed iron spearhead" and "arrow romboidal head" of great importance is the discovery of three elements from three manuballistae'. (The latter led to the discussion of the occurrence of these weapons by Gudea and Baatz⁸⁴).

Yet the question of uniform is not raised although a buckle⁸⁵ is similar to the Simpson's Type II⁸⁶ and illustrates another aspect of a

regime changed since AD 271.

Thus the Dacias north of the Danube ceased to be part of the empire in AD 271, Jordanes describing the lines of covered wagons driving south as the Goths returned to the Danube. As for the military equipment regime that had survived largely unchanged over 200 years, this was reorganised within a generation.

There is no doubt that Roman military equipment was distributed extensively around and within the province of Dacia with over 93 known auxiliary regiments, three complete legions and detachments from possibly six others operating from over 134 forts and fortresses. In spite of this the published military material is slight, and even for the major excavation reports like those of Buciumi,⁸⁷ Inlaceni,⁸⁸ and Drajna de Sus,⁸⁹ Risnov,⁹⁰ Copaceni,⁹¹ none of the artefacts illustrated or catalogued are discussed or given their precise context and hence any discussion particularly in articles of synthesis like those of Petculescu and Diaconescu are heavily reliant on foreign works; it would be impossible to produce the type of discursive article that Bishop⁹² presented to the limeskongress in Aalen. Similarly difficult is the derivation of realistic date ranges - for the majority of artefacts discovered in Romania without external parallels or epigraphic leads the usual formula is 'of the second and third centuries'. It is quite inadequate and can clearly only be improved by attention to contextual analogies and aspects like pottery dating - although this field too is somewhat neglected. Only one major work of synthesis has been written, that by Popilian⁹³ for Oltenia and no publication conventions that allow correlations between contexts and sites have yet appeared.

Just as fundamentally important is the methodology employed in site excavation, the common use of long narrow trenches is not conducive either to the discovery of artefacts or to the precise definition of their contexts. Moreover such methods often destroy, distort or mislead and the more rigorous methodology of contemporary practice needs careful consideration in Romania. Unfortunately until the quality of published evidence improves, current research in western Europe becomes more accessible and dialogue improves between our countries then the usefulness of military equipment despite what I hope has been an optimistic review, will remain severely limited.

NOTES

1. ROSSI, 1971b; BARKER, 1981.
2. RICHMOND, 1982.
3. ROSSI op. cit., 83-5.
4. MACKENDRICK, 1975.
5. KALEDAROV, 1977.
6. CONDURACHI & DAICOVICIU, 1971.

7. MACKENZIE, 1986.
8. CONDURACHI, 1964.
9. MACREA, 1969.
10. DAICOVICIU, 1969.
11. TUDOR, 1976, OR4.
12. CHRISTESCU, 1937.
13. GUDEA, 1977a; GUDEA, 1979.
14. CATANICIU, 1981.
15. GUDEA, 1986a.
16. PETOLESCU, 1980.
17. CATANICIU, 1981, 6 and refs.
18. GUDEA & POP, 1971.
19. CATANICIU, 1981, 11.
20. ALICU, 1980.
21. ILLIES, 1981.
22. DAICOVICIU et al., 1983.
23. Cf. the Carnuntum group which Bishop drew attention to in DAWSON, 1987. RLO II, Taf.XVII, 258.
24. DAICOVICIU & ALICU, 1984, Fig.6; ALICU, 1980, 16.
25. ILLIES, 1981.
26. SORACEANU, 1979 (pottery, Templul Mare); ALICU et al., 1979 (figured monuments); ALICU & NEMES, 1978 (lamps).
27. DAICOVICIU & ALICU, 1984. The latest summary of the excavations was that of Daicoviciu and Alicu, written just before the former's death, but it has no bibliography and does not detail the debt owed to the epigraphic work of Piso upon whose dating much of the site rests (the history of the site pp.12-61).
28. The question of sculptural evidence has been touched upon by COULSTON, 1987, 146, and although he suggests an increase in 3rd century figural tombstones, few are published. The general works are those of FLORESCU, 1942 and MARINESCU, 1982.
29. CATANICIU, 1981, 23.
30. SYME, 1968. Although a collection of papers produced over several

decades The Danubian Papers publication is the most accessible format for considerations of the early garrison in English; otherwise the two works of MOGA, 1985 and BENEÀ, 1983 are the principle syntheses of legionary studies for the province.

31. STEFAN, 1945-7.
32. BENEÀ, 1983, 153-7.
33. MOGA, 1985, 22.
34. ROBINSON, 1975.
35. TUDOR, 1968, 144-72.
36. BENEÀ, 1983, 153-6.
37. OLDENSTEIN, 1976.
38. ROBINSON, 1975.
39. SAMPETRU, 1984; FLOREA et al., 1965.
40. ROSSI, 1971, fig.V.
41. RICHMOND, 1982.
42. ILIES, 1981, fig.16.8.
43. TUDOR, 1976, pl.X.8.
44. GUDEA & POP, 1979, pl.LXIII (published at the wrong scale, 1:1 instead of 1:2).
45. Slaveni, VLADESCU, 1983, fig.127; Inlaceni, GUDEA, 1979, pl.XVIII; Drobeta, TUDOR, 1976, pl.XIII.3; Tibiscum, AMN, 1983, XX pl.XI.16, 17; Buciumi, GUDEA, 1972, pl.LXVIII, CXIV; Gilau, DAICONESCU & OPREAN, 1987b, fig.4.32.
46. VLADESCU, 1983. Vladescu used armour and equipment from 13 forts but was unable to use the assemblage from Praetorium I (Copaceni) which was in the course of publication by TUDOR (1982, fig.2.3, 6-10).
47. TUDOR, 1976.
48. GUDEA, 1972.
49. GUDEA, 1987.
50. DAICONESCU & OPREAN, 1987.
51. GUDEA, 1972, fig.3.
52. OLDENSTEIN, 1976, cf. pendants Taf.36, openwork Taf.62.

53. GUDEA, 1980.
54. GUDEA, 1987.
55. Excavations at Porolissum have been published by Gudea in the three latest volumes of AMP 1984,5,6.
56. DAICONESCU & OPREAN, 1987a.
57. DAICONESCU & OPREAN in DAWSON, 1987, 157, there are perhaps 1000 items awaiting publication in Cluj.
58. PETCULESCU, 1983.
59. PETCULESCU & GHEORGHE, 1979.
60. PETCULESCU, 1980, including two from Potaissa.
61. PROTASE & PETCULESCU, 1975.
62. PETCULESCU, 1975.
63. KLUMBACH, 1962, 188.
64. ROBINSON, 1975, 124-5; GARBSCH, 1979, 70; VLADESCU, 1983, 195-203.
65. Veliko Tarnovo Museum.
66. DAWSON, forthcoming. The site referred to is an extra mural structure (EM 23) some 50m from the walls of U.T. Sarmizegetusa. A brief description of the site appeared in Popular Archaeology (March 1985) and interim reports have been produced annually for the Muzeul de Istorie al Transilvaniei, Cluj-Napoca.
67. MITROFAN, 1969; see also PETCULESCU, 1980. As this goes to press, M. Barbulescu has published Legionea V Macedonica si castrul de la Potaissa, (Cluj 1987).
68. PETCULESCU, 1983.
69. TUDOR, 1972.
70. Istros. Revue roumaine d'archeologie et de histoire ancienne. I, 1975, quoted in full in CATANICIU, 1981, note 291.
71. PETRE-GOVORA, 1986. MITEA, 1968.
72. TUDOR, 1936; POPESCU & POPESCU, 1970.
73. GUDEA & POP, 1971.
74. TUDOR, 1968.
75. TUDOR, 1968, 202-11.
76. There is an extensive bibliography for the site of Romula - many of

the commentaries are concerned with the identification of the colonia Malvensis with this city (and therefore the area of the province of Dacia Malvensis). The extensive, but largely trench excavations of Tudor have not been published in full, but were summarised in 1968 (TUDOR, 1968), the latest paper by PETOLESCU (1987) summarises the evidence for colonia Malvensis.

77. TUDOR, 1968, 455, fig.140 shows the 4th and 5th century material from Sucidava; BULLINGER, 1969.
78. JONES, 1986, 607-8, summarises the orthodox position, that the reforms of the military were largely the responsibility of Constantine, but TOMLIN, 1987, in WACHER, 1987, sees an evolution from the reign of Aurelius.
79. VLADESCU, 1983, fig.99.8; TOCILESCU, 1944.
80. GUDEA, 1982, fig.5.
81. GUDEA, 1987.
82. DAVIDESCU, 1980.
83. GUDEA, 1977, 93.
84. GUDEA & BAATZ, 1974.
85. GUDEA, 1977, fig.50.4.
86. SIMPSON, 1976, 195-6.
87. GUDEA, 1972.
88. GUDEA, 1979.
89. STEFAN, 1945-7.
90. GUDEA & POP, 1971.
91. TUDOR, 1982.
92. BISHOP, 1986.
93. POPILLIAN, 1976.

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APPENDIX: FIGURE CAPTIONS AND THEIR SOURCES

Fig.1: Map of sites mentioned in the text.

Fig.2: Openwork mounts and pendants.

- 1 Risnov (GUDEA & POP, 1971, Taf.LVIIa,7)
- 2 " (ibid., Taf.LVIIa,5)
- 3 " (ibid., Taf.LVIIa,1)
- 4 Drobeta (TUDOR, 1976, pl.IX,6)
- 5 " (ibid., pl.IX,9)
- 6 " (ibid., pl.IX,13)
- 7 Porolissum (GUDEA, 1986, fig.XIX)
- 8 " (ibid., fig.XIX)
- 9 " (ibid., fig.XIX) There is a near identical harness(?)
mount from Tibiscum (BONA, 1982,
pl.VIII)
10. " (ibid., fig.XIX) As 9 above, cf pl.VIII
11. " (ibid., fig.XIX)
12. " (ibid., fig.XVIII)
13. " (ibid., fig.XVIII)
14. " (ibid., fig.XVIII)
15. " (ibid., fig.XVIII)
16. " (ibid., fig.XVIII)
17. " (ibid., fig.XVIII)
18. " (ibid., fig.XVIII)

Fig.3: Scale armour.

- 1 Slaveni (after VLADESCU, 1983, fig.126)
- 2 " (ibid., fig.127)
- 3 U.T. Sarmizegetusa (DAICONESCU et al., 1981, fig.10.18)
- 4 Inlaceni (GUDEA, 1979, pl.XVIII)
- 5 " (ibid., pl.XVIII)
- 6 " (ibid., pl.XVIII)
- 7 Drobeta (TUDOR, 1976, pl.XIII)
- 8 Tibiscum (AMN, 1983)
- 9 Tibiscum (ibid.)

Fig.4: Pendants.

- 1 Buciumi (GUDEA, 1972, pl.CXVII.1)
- 2 " (ibid., pl.CXVII.2)
- 3 Arutela (after VLADESCU, 1983, fig.130)
- 4 Copaceni (ibid., fig.129)
- 5 Buciumi (GUDEA, 1972, pl.LXXI.39) described as 'limba de
catarama' probably horsegear
pendant.
- 6 Gilau (DAICONESCU & OPREAN, 1987, fig.8.59a)
- 7 " (ibid., fig.8.59b)
- 8 " (ibid., fig.8.59c)
- 9 Buciumi (GUDEA, 1972, pl.CXVII.5)
- 10 " (ibid., pl.LXXI.28)
- 11 " (ibid., pl.CXVIII.3)
- 12 " (ibid., pl.LXXII.1a/b)
- 13 " (ibid., pl.LXXV.2a/b)
- 14 " (ibid., pl.LXXV.1a/b)
- 15 " (ibid., pl.LXXII.20)
- 16 " (ibid., pl.LXXV.3)

Fig.5: Riveted appliqués, openwork mounts, belt mounts.

- 1 Buciumi (GUDEA, 1972, pl.CXVII.9)
- 2 Gilau (DIACONESCU & OPREAN, 1987, pl.5.59d)
- 3 " (ibid., pl.5.59e)
- 4 " (ibid., pl.5.59f)
- 5 Porolissum (GUDEA, 1987, fig.XVIII)
- 6 Buciumi (GUDEA, 1972, pl.LXXI.27)
- 7 " (ibid., pl.LXXVII)
- 8 Praetorium I (TUDOR, 1982, p.53.2)
- 9 Buciumi (GUDEA, 1972, pl.LXXIII)
- 10 " (ibid., pl.LXXV)
- 11 " (ibid., pl.LXXIV)
- 12 " (ibid., pl.LXXII)
- 13 " (ibid., pl.LXXV.5)
- 14 " (ibid., pl.LXXV.4)
- 15 U.T. Sarmizegetusa, EM23, lay 100, post AD 172 floor surface.
- 16 Gherla (GUDEA & CHIFOR, 1978, pl.IV.20)
- 17 Buciumi (GUDEA, 1972, pl.CXVIII.13)
- 18 " (ibid., pl.CXVIII.14)
- 19 " (ibid., pl.LXXIII)
- 20 Dierne (BODOR & WINKLER, 1979, fig.8.14)
- 21 U.T. Sarmizegetusa (DAICOVICIU, 1983, fig.10.3)
- 22 Buciumi (GUDEA, 1972, pl.CXIII.31)

Fig.6: Horsegear.

- 1 Buciumi (GUDEA, 1972, pl.LXXIX)
- 2 " (ibid., pl.LXXVI)
- 3 " (ibid., pl.LXXX)
- 4 Tibiscum (AMN, 1983, pl.X.5)
- 5 Gilau (DIACONESCU & OPREAN, 1987, fig.6.48h)
- 6 " (ibid., fig.6.48i)
- 7 " (ibid., fig.6.47)
- 8 " (ibid., fig.5.48g)
- 9 " (ibid., fig.5.48a)
- 10 " (ibid., fig.5.48d)
- 11 " (ibid., fig.5.48e)
- 12 " (ibid., fig.5.48f)
- 13 " (ibid., fig.5.48a)
- 14 " (ibid., fig.5.48b)

Fig.7: Belt plates and buckles.

- 1 Drobeta (TUDOR, 1976, pl.III.1)
- 2 " (ibid., pl.VII.1)
- 3 Porolissum (GUDEA, 1987, fig.XVI, p.68)
- 4 " (ibid., fig.XVI, p.68)
- 5 " (ibid., fig.XVI, p.68)
- 6 " (ibid., fig.XVI, p.68)
- 7 Risnov (GUDEA & POP, 1971, Taf.LVIIa)

Fig.8: Scabbard mounts.

- 1 Potaissa (PETCULESCU, 1983, fig.1.2)
- 2 " (ibid., fig.1.6)

Fig.9: Late Roman.

- 1 Drobeta (TUDOR, 1976, pl.VII) 3rd & 4th century AD

- 2 Praetorium I (TUDOR, 1982, p.53.12)
- 3 Sucidava (TUDOR, 1968, fig.140)
- 4 " (ibid., fig.140)