

THREE LEGIONARIES AT CROY HILL (STRATHCLYDE)

J.C. Coulston

The subject of this paper is the buff sandstone relief of three armed men found around the year 1802 at Croy Hill (Strathclyde), a fort on the Antonine Wall.¹ Dating probably to the reign of Pius, it very likely belonged to a funerary stela and it has lost an inscription since it was first discovered.² Three men stand frontally, side-by-side, two younger flanking an older, bearded man (Fig.1-2). It is possible that the latter represents the deceased with two sons, friends or beneficiaries. The upper third of the front surface is badly flaked away but otherwise the figures are well preserved, despite some chipping.³ Cleaning of the stone in 1980 revealed some hitherto unnoticed details surviving in the flaked area (Fig.4).⁴ The loss of the inscription means that the identification of the three men as either legionaries or auxiliaries depends on whether or not certain forms of military equipment were specifically carried by certain types of troops.

*

The man on the left has a thin, youngish face with a downturned mouth (Fig.1-4). He has a full head of hair but is clean shaven. He wears a short-sleeved tunic with folds on the sleeves but the skirt has horizontally chiselled lines in addition to long, vertical pleats. The visible torso is smoothed off. Over this is worn a cloak depicted as hanging down the front of the body in a 'V' shape. The unobscured leg appears to be bare. The man's left hand rests on the upper edge of a waist-height curved, rectangular shield which has a circular umbo surrounded by a rectangular plate. The lower edge is concavely curved exposing, or resting on, the man's left foot. Over the front of the shield above the boss hangs a helmet seen from the top, with plain bowl, narrow frontal peak and neck flange. In his right hand he holds vertically a shafted weapon, the shaft of which has a triangular expansion three-quarters of the way up it, at the man's eye level, and is topped by a small, triangular head.

The central figure is similarly dressed with a tunic but only vertical pleats are chiselled on the skirt. The smooth torso area extends downwards to the hips. Folds on the sleeve cross onto the shoulder. This man is bearded and taller than the other two. His fully visible right leg has delineated musculature and is bare, but there is some indication of footwear. There may perhaps be a sword pommel between his arm and body. His stance, shield and shafted weapon details are similar to the left-hand man except that the weapon is longer, commensurate with his greater stature. A V-shaped cloak extends down the front of his body to the tunic hem but at its point it seems to divide, forming a 'W' profile. His helmet is larger than the first example, has a slightly pointed peak and a wider neck flange.

The right-hand figure wears a tunic largely obscured by a V-shaped cloak reaching down to the hem level. The one surviving leg is bare. He is thin-faced and beardless, and stands with a shafted weapon held



Fig.1: Sculpture from Croy Hill. General view. Photo: National Museum of Scotland, Edinburgh.



Fig.2: Sculpture from Croy Hill. Drawing: Mrs A Gibson Ankers.



Fig.3: Sculpture from Croy Hill. View of the lower part of the figures. Photo: the author.



Fig.4: Sculpture from Croy Hill. View of the cleaned upper area. Photo: the author.

awkwardly by one end in his right hand. Only the lower shaft and small, triangular point of the weapon survive, the latter visible in the differing colour of the stone after cleaning. His shield is carried on his left side and does not rest on the ground like the other two boards. It has the same round umbo and rectangular boss plate, but it is seen from an angle and so has a trapezoidal shape designed to render its curve in perspective. A helmet with narrow, pointed peak and wide neck flange hangs on his lower torso over the cloak. The shaft is shown over the neck flange so the helmet obscures none of its length.

*

The interpretation of the men's dress is a problem. Both the left and central men have carefully smoothed torsos and pleated skirts (Fig.3). The man on the left has horizontal lines on the skirt which are deliberately sculpted and not the result of accidental damage. These details are most like an overlapping series of lappets (pteruges) designed to protect the wearer's thighs without inhibiting movement.⁵ The central man's skirt could represent long pteruges or just heavily depicted tunic folds. The difficulty is that the torsos of both men are so smooth yet the sleeves have lines which may represent arm pteruges or fabric drapery. The low line of the central man's torso may be a tunic over-fold, obscuring a waist belt, or the lower limit of armour. Mail or scale details could have been painted onto the smooth surface,⁶ but the plates of a 'lorica segmentata' have not been incised and a muscled plate cuirass is quite inappropriate here for men below the rank of centurion.⁷ Conceivably the men may wear only 'arming tunics' to which pteruges were attached, and which could be worn under all forms of armour.⁸ The possibilities are, therefore, that the men wear tunics and the left hand pteruges are a mistake; they wear arming tunics with pteruges; they wear mail or scale over pteruges. It is a pity that swords are not clearly represented because the side of the body on which they were worn in this period would be informative. During the 1st century they usually appear on the wearer's right side; in the 3rd century on his left.

The V-shaped folds of the cloaks clearly identify them as paenulae, circular garments fastened down the front.⁹ Folding the sides of the cloak up onto the shoulders parted the front below the fastenings to give the characteristic 'W' profile.¹⁰ Sculptors sometimes simplified this into a 'V', as on the left-hand Croy soldier, but the garment is still clearly distinct from the rectangular sagum which was fastened on one shoulder. Representations of soldiers on 1st century tombstones show both types of cloaks worn by legionaries and auxiliaries.¹¹ A fragmentary gravestone from Shirva (Strathclyde), associated with forts at Bar Hill or Auchendavy, and a building inscription from Balmuildy (Strathclyde) represent both the 'W' and 'V' profiles of paenulae.¹² With the Croy Hill sculpture these are important, dateable provincial occurrences of the cloak, independent of metropolitan stylistic influences. With far fewer 2nd century representations of soldiers and more static troop dispositions not helping close dating there is a case for suggesting that these Antonine Wall stones are perhaps the latest provincial depictions of paenulae.

In the sculpture of the capital paenulae frequently appear worn by unarmoured praetorians.¹³ On Trajan's Column they are confined

principally to unarmoured citizen troops in Trajan's journey between the two Dacian Wars (Fig.5).¹⁴ Saga are worn for the most part by officers, auxiliaries and Dacians. Significantly, the sagum fell open naturally to expose the torso whilst the paenula always obscured it and body-armour was used on the column specifically to identify figure types visually. Thus the paenula is confined to one military context with an unarmoured figure type and lacks reference to overall contemporary usage. On the Marcus Column only saga are depicted and this has led to some confusion regarding the types of cloaks in use under Marcus.¹⁵ However, this was again probably a stylistic decision resulting from the necessary definition of figure types. The Arch of Septimius Severus (Forum Romanum) has paenulae worn on one siege panel and on its pedestal reliefs.¹⁶ Likewise the Severan Arcus Argentariorum has unarmoured soldiers wearing paenulae¹⁷ but both these monuments have reliefs which are extremely conservative in equipment and style. The Severan arches represent a continuous development from the earlier two columns with little input of contemporary equipment details. When stelae with military figures were widely revived as a funerary practice in the 3rd century saga, but never paenulae, are worn.¹⁸

The shields on the Croy Hill relief are seen either face-on as a curving rectangle or obliquely as a curving trapezium (Fig.3). It is reasonable to assume that the same type of shield is intended in all three cases and this nicely illustrates the problems experienced by Roman artists in perspective rendition. An obliquely viewed curved, rectangular shield should in fact be more of a parallelogram shape but the trapezium form was perhaps adopted to suggest a curve whilst avoiding a more awkward shape and obscuring less of the porter's body. These perspective difficulties were solved in a variety of ways. Trapezoidal shields appear on the Flavian Mainz pedestal reliefs¹⁹ and on the Domitianic stela of C. Valerius Crispus of legio VIII Augusta from Wiesbaden.²⁰ Shields on the Adamklissi metopes have curved or angled vertical edges²¹ or are depicted as long, narrow rectangular boards carried by unarmoured marching soldiers.²² The latter form may also be seen on reliefs from St.Rémy (France) and Parma (Italy).²³ On Trajan's Column most of the shields have trapezoidal profiles with a few true rectangular shapes seen frontally or, less frequently, obliquely.²⁴ A Domitianic or later period altar to the Matrones from Bonn has a figure carrying a rectangular shield with a naturalistically curving top seen from an oblique angle.²⁵ On the other hand, two stelae from Bonn depict curving, rectangular shields seen from the side with the nearer edge shorter than the parallel farther edge, reversing perspective reality.²⁶

These examples graphically demonstrate the dangers of relying upon sculpture as a detailed source for shield shapes. General information on the currency of rectangular or sub-oval forms is all that may be deduced, depending upon the sculptural context and the sculptor's motives. This being understood, it may be observed that the uniform picture of citizen troops carrying solely rectangular shields as propagated by Trajan's Column is something of an identificational device masking a greater variety of shield forms in use. A Mainz principia pedestal relief shows a figure with a curved, oval shield.²⁷ Likewise stelae of P. Flavoleius Cordus from Mainz (pre A.D.43)²⁸ and C. Castricius Victor from Aquincum (late Domitianic)²⁹ both show oval shields. A praetorian stela at Aquileia also depicts this form.³⁰

Curved, oval shields commonly appear on sculptures depicting unarmoured praetorians, as on Cancellaria Relief A, the Claudian Louvre relief³¹ and the Trajanic Pozzuoli reliefs.³² Trajan's Column has an identical figure type with curved, oval shields in just three scenes (Fig.5).³³ On much firmer ground the artifactual evidence supports this diversity of forms. One complete curved, truly rectangular scutum, and fragments of three others were found at Dura-Europos (Syria), dating to around the mid 3rd century.³⁴ Only Vindonissa (Switzerland) has produced leather covers for rectangular shields, deposited c.A.D.101, and these are identifiable as legionary by their context and by appliqué legionary titlature (XI Claudia).³⁵ A 1st century leather piece from Caerleon (Gwent) belongs to the upper part of a large, straight-sided, sub-oval shield, similar to the sub-oval variant from Valkenburg (Holland).³⁶ Fragments from Bonn (W. Germany), dating to the A.D.130s, belong to covers of oval and sub-oval shields with legio I Minervia appliqués.³⁷

Taken together, the pictorial and artifactual evidence for shields suggests neither a uniformity at any one time in the 1st to 2nd centuries, nor a logical evolution of shapes over time. A very large, curved oval shield was current during the Republican period from an early date. It is represented on the Aemilius Paullus monument (Delphi),³⁸ the Domitius Ahenobarbus altar³⁹ and the Esquiline frescoes (Rome),⁴⁰ and corroborated by the Fayūm shield.⁴¹ The form may have progressed with the horizontal cutting off of top and bottom, perhaps to increase visibility and manoeuvrability. The earliest datable example (c.20-10 B.C.) of curved sub-oval or rectangular shields are those depicted on the Mausoleum of Munatius Plancus at Gaeta (Italy).⁴² Thereafter they appear on the Tiberian arch at Orange⁴³ and on Julio-Claudian adlocutio coin issues.⁴⁴ The oval shapes clearly continued through in contemporaneous use alongside sub-oval and rectangular forms.⁴⁵ The rectangular shields on the Croy Hill relief must be viewed in this light but they are important because they are perhaps the latest datable clear depiction of this form.⁴⁶ The pedestal reliefs of the Column of Pius show the oval praetorian type,⁴⁷ whilst shields on the Marcus Column are even more stylised and drastically scaled down than those on Trajan's Column. They are flat, sub-ovals with straight tops and bottoms, except in a testudo scene, copied from the earlier column, where rectangular boards appear.⁴⁸ On the arches of Severus in the Forum Romanum and at Lepcis Magna only oval shields are depicted, again with the exception of testudo formation on the latter plagiarised from earlier monuments.⁴⁹ Rectangular shields are not represented on the numerous 3rd century stelae, these having concave oval boards paralleled again by finds from Dura-Europos.⁵⁰ That the rectangular form did continue into the 3rd century is, however, demonstrated by the Dura finds cited above.⁵¹

The umbones on the Croy Hill shields with domed boss and rectangular plate (Fig.3) correspond closely with bronze and iron finds from Carnuntum (Austria), Aquincum (Hungary), Dura-Europos (Syria), Vindonissa (Switzerland), and the River Tyne (England).⁵² The last two both probably belonged to legio VIII Augusta, and all either have legionary inscriptions or come from legionary bases. This type was designed to fit a shield which curved on one plane like the Dura rectangular scutum and like the others discussed above, and was quite unsuitable for flat shields or boards curving on two planes. That the

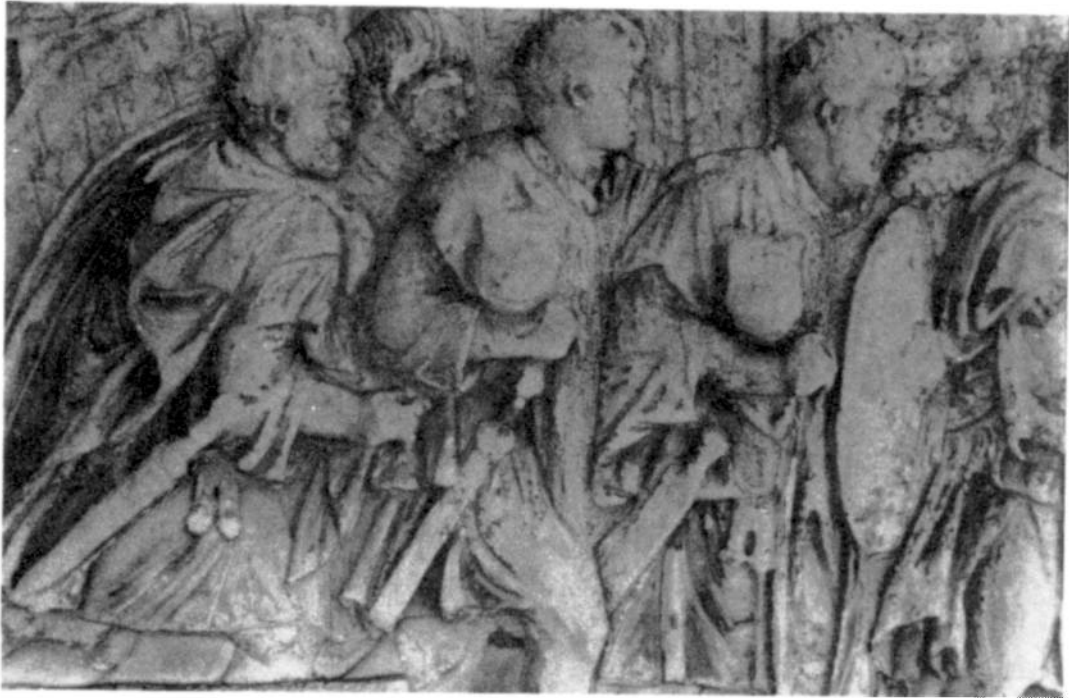


Fig.5: Trajan's Column. Detail of Scene LXXXVI. Marching, unarmoured soldiers. Photo: the author.



Fig.6: Trajan's Column. Detail of Scene LXIX. Stacked shields and slung helmets. Photo: the author.



Fig.7: Flavian pedestal reliefs from Mainz. Photo: the author.

flange did not, however, necessarily dictate or reflect the overall shape of the shield is demonstrated by the rectangular boss plate on the oval shield of Gnaeus Musius' stela from Mainz.⁵³ Moreover, it is impossible to determine from a leather shield cover whether the shield involved was flat or curving.⁵⁴

The helmets on the Croy relief are plausible in having peaks and neck flanges (Fig.3) but in comparison with extant helmets the latter are scaled down in size. The absence of cheek-pieces is explicable by their being tucked up beneath the helmet bowls but the small features of cross-bars and ear-flanges that might be expected on 2nd century helmets were probably beyond the level of detail the sculptor was prepared to apply.⁵⁵ The suspension of the helmet on the front of the right-hand figure's body is directly paralleled by one Mainz principia pedestal relief which shows a helmet on one soldier's right chest (Fig.7).⁵⁶ On Trajan's Column armoured marching soldiers carry their helmets in this manner, as do unarmoured men in transit between the wars (Fig.5).⁵⁷ 'Carrying handles' attached to the neck-flanges of so many extant helmets clearly fulfilled this suspension function with a leather strap,⁵⁸ yet none of the reliefs make it clear whether the helmets were slung round the neck or attached somehow over the shoulder. In the first column scene both possibilities were in the sculptor's mind to judge from the narrow straps which cross the neck flange and go over the shoulder, and in one case pass diagonally across the chest. The suspension of helmets over the fronts of shields depicted on the Croy relief is again seen on the column, where shields are stood on end (so logically must be true rectangles) by troops engaged in construction work (Fig.6).⁵⁹ They may have been tied by straps to the shield's hand-grip or to a putative carrying-strap attachment on the back, somewhere above the boss.⁶⁰

The Croy Hill shafted weapons are readily identifiable by their triangular sections and small triangular heads as pila (Fig.4). The origins of the pilum are obscure but it was a short-range, high-impact projectile, not a *melée* weapon, and was used to considerable effect against infantry adversaries by Republican legionary troops, particularly in the Macedonian, Punic and Gallic Wars.⁶¹ Perhaps the earliest depiction of a weapon which matches the literary descriptions and finds from some Republican military sites is a relief on a Late Republican or Augustan exedral monument from Rome (Braccio Nuovo, Palazzo dei Conservatori).⁶² This shows a long, narrow shank and a small triangular head. On the Mausoleum of St.Rémy (France),⁶³ Mainz principia pedestal reliefs (Fig.7)⁶⁴ and 1st century A.D. stelae, including that of C. Valerius Crispus,⁶⁵ a weapon appears consisting of a narrow shank, topped by a small triangular head, on a wider shaft. Shank and shaft are spliced together in a wide rectangular or triangular section. Finds from 1st century A.D. military sites of iron shanks, heads, splice sections and collars explain the exact method of attachment and corroborate the sculptural details.⁶⁶

A modified form of pilum is first seen on Cancellaria Relief A (late Domitianic)⁶⁷ and on the stela of C. Castricius Victor (late Domitianic, or later)⁶⁸ and this has an additional spherical, ball-like protrusion below the splice. This was presumably a weighting device and all the pila carried by legionaries on the Adamklissi metopes exhibit it.⁶⁹ In this respect troops in the capital seem to have been equipped

identically to the legions. Pila lacking the weights are represented on praetorian stelae at Aquileia⁷⁰ and l'Aquila,⁷¹ and on an urban cohort funerary altar at Verona (Italy).⁷² The Cancellaria pila have weights decorated with eagles and decorated weights also appear on weapons carried by praetorians on the Great Trajanic Frieze and the Villa Borghese fragments.⁷³ Weights are depicted on praetorian and urban cohort stelae in Rome⁷⁴ and on a cohors urbana gravestone at Reggio Emilia (Italy)⁷⁵ but they have not so far survived in the artifactual record.

Forms of shafted weapons other than pila were certainly used by citizen troops in the 1st to 2nd centuries. A praetorian on a Pozzuoli arch relief holds a hasta⁷⁶ and one on Cancellaria Relief A has a spear with a broad blade of a type generally associated with beneficarii, speculatores and frumentarii.⁷⁷ Spear-shafts appear above the heads of figures, presumably representing praetorians, on a number of metropolitan sculptures.⁷⁸ Moreover, both Josephus and Arrian, writing in the Flavian and Hadrianic periods respectively, suggest that on the march legionary standards and commanders were escorted by bodies of men armed differently from the majority, probably with hasta or lanceae.⁷⁹ In drawing up his legionary centre to face the Alani, Arrian specified that the ranks would have been differentially armed, probably with pila and hasta.⁸⁰

The Croy Hill pila are interesting because they appear to be unweighted, a form of the weapon which seems on the evidence reviewed above to have gone out of use by the reign of Trajan.⁸¹ However, considering the many variations of other equipment in contemporaneous use it should come as no surprise that perhaps one type of pilum did not hold sway at any given time or over the whole empire. Much less were pila the only form of shafted weapon used by citizen troops. The Croy pila are also important because after the Trajanic sculpture there are virtually no pilum representations for the 2nd century. On the Antonine panels of the Arch of Constantine and on the Marcus Column all the citizen troops carry hasta with no pila occurring at all.⁸² However, this form of missile-weapon did not go out of use. It appears on the Arch of Severus (Forum Romanum)⁸³ and heavily weighted pila are very clearly depicted on a series of 3rd century praetorian stelae from Rome.⁸⁴ Moreover, the 3rd century gravestone of Aurelius Iustinus of legio II Italica from Celje (Yugoslavia) has a damaged pilum,⁸⁵ and a later 2nd or 3rd century tondo relief from Flavia Solva (Austria) has a pilum clearly of the weighted variety.⁸⁶ Vegetius confirms that some form of pilum-like throwing weapon continued to be used by some troops into the 4th century.⁸⁷

*

The Corpus Signorum entry for the Croy Hill sculpture comments on the soldiers that 'from their equipment it may be concluded that all three were legionaries', presumably with reference to the curved, rectangular shields and pila.⁸⁸ However, recent discussions of the identification of fort garrisons from the artifactual record have denied the existence of any distinction between legionary and auxiliary equipment.⁸⁹ This is based on the frequent finds of 'lorica segmentata' fittings in 1st century 'auxiliary' forts or in 'vexillation fortresses'. These sites were in provinces where there was apparently

no permanent legionary presence, or were involved in fluid campaign situations when legions would supposedly not have been split up in the face of an enemy. Thus it is concluded that auxiliaries were as likely to have worn the 'lorica segmentata' as legionaries and a similar finds pattern of pilum fittings and ballista bolt heads suggests no distinction in weaponry either. This is a very seductive line of reasoning which must be examined with regard to the identity of the Croy soldiers. Yet if artifacts traditionally ascribed to legionary use are found on military sites smaller than legionary fortresses there should, logically, be two possibilities which must be given equal attention. Either all troops could have had all forms of equipment without specificity, or some modern views of legionary garrisoning policies are too inflexible.

On the first count it must be asked whether certain types of equipment were best suited to specific battlefield roles and whether legionaries and auxiliaries had different tactical functions in the 1st to 2nd centuries. In major battles the legiones in fact continued to fulfill their Republican function as close-order line infantry taking the brunt of the fighting. For example, in battles against Caratacus and Boudica legionaries drew up in close order and in the Civil War legion fought legion. Auxiliary troops provided missile support, and screening and flanking forces.⁹⁰ The latter, especially cavalry, did act offensively, notably in pursuing repulsed opponents. Tacitus specifically contrasts the close and open formations of legionaries and auxiliaries drawn up before Placentia.⁹¹ The respective battlefield functions are most graphically illustrated in Arrian's order of battle against the Alans where the enemy impetus was to be disrupted by auxiliary missiles, repulsed by the legionary centre and cautiously pursued by auxiliary infantry and cavalry.⁹² There were of course exceptions to this pattern such as in the battle of Mons Graupius where the auxiliaries alone were sufficient to scatter the Caledonian army,⁹³ and in the Civil War when Batavian rebel auxiliaries seem to have fought in close order.⁹⁴ The first case was the result of the tactical situation and Agricola's cool refusal to commit his legionary forces was emphasised as part of Tacitus' panegyric purpose. The victory won without loss of Roman blood was an achievement paralleled contemporaneously to Tacitus' writing by the legionary non-involvement in battles on Trajan's Column. This may have born little relation to reality. Civilis' Batavians in close order were veteran troops fighting legionaries in an extraordinary situation perhaps not to be expected for armies centred around legionary forces.

The equipment traditionally identified as legionary comprises the 'lorica segmentata', the curved rectangular shield and the pilum. The lorica only protected the wearer from the waist upwards leaving the legs exposed. However, a large, curved shield and a close troop formation would have compensated for this and allowed full advantage to be taken of the superior protective properties of plate armour over other forms. The 'lorica segmentata' was unsuited to open order, skirmishing formations. Likewise, curved shields would have been less manoeuvrable for light troops and a flat board would have covered a wider front, an advantage in defence against missiles. On horseback both the 'lorica segmentata' and the curved shield would have been totally impractical.⁹⁵ Pila were short-range, heavy weapons, unsuited to the long range exchange of missiles between skirmishers. Lighter

javelins and spears were employed for this purpose but pila belonged to the legionary melée function for which they were developed.

It is very likely that Trajan's Column used equipment specifically to differentiate between its citizen and auxiliary figure types with resultant simplification and omission, yet even on the Adamklissi metopes, and always on funerary stelae, legionaries are readily distinguishable from auxiliaries. Tacitus evidently thought that there was a difference between legionary and auxiliary equipment, twice contrasting their armour and weaponry.⁹⁶ It must be emphasised that nowhere in the pictorial or literary sources are curved shields or pila ever associated with non-citizen troops. However, the legionary specificity of some equipment on practical considerations did not necessarily mean that other equipment was unsuitable for close-order formations. This was of course not the case because legionaries on the Adamklissi metopes and funerary stelae wear mail or scale with pteruges and the Croy sculpture may agree with this.⁹⁷ Alternative types of shafted weapons have been discussed above.

By this token auxiliaries were not prevented by their body armour, flat shields and weapons from fulfilling a variety of battlefield functions, even drawing up in close-order formations. However, for practical reasons it cannot be concluded that because legionaries at times manifestly carried non-legionary-specific equipment then auxiliary troops could use close-order, specialised items whilst retaining their support role. This may seem a nice distinction but it is the crux of the question if it is accepted that legionaries and auxiliaries were expected to fulfill different battlefield functions. Of course in frontier defence contexts where troops seldom fought major battles a different situation may have pertained and many of the artifacts which seem to conflict with the other classes of evidence come from frontier installations. Perhaps in regions with few legionary troops on hand, some auxiliaries were trained to fight primarily in close-order formations and were equipped accordingly. It is generally accepted that legionary and auxiliary troops grew closer together in function as a long term result of static frontier defence.⁹⁸ However, as the effects of this worked through to equipment it was precisely the close-order forms of body-armour and shields that largely disappeared, so that by the 3rd century legionary and auxiliary equipment was virtually indistinguishable. Therefore, it is perhaps unlikely that restrictive equipment forms were commonly introduced into auxiliary use, especially as early as the 1st century.

One reason for the central place of the 'lorica segmentata' in this discussion is that it has an artificially high profile in the archaeological record in comparison with other armour types.⁹⁹ Mail was self-cleaning and robust, needing little attention and shirts probably survived in use for decades at least. It was difficult to mislay such substantial items and large pieces of mail usually only occur in such contexts as site abandonment, siege warfare and funerary or ritual deposition.¹⁰⁰ The 'lorica segmentata' in contrast was difficult to maintain because of its perishable leather straps. The many copper alloy fittings were made of thin sheet which the Corbridge Hoard demonstrates were continually damaged, repaired and replaced.¹⁰¹ These fittings are readily recognisable site finds and they survive in large numbers because of their material. Mail usually had only the

chest-bridge made of copper alloy, if that.¹⁰² In preserving much 'lorica segmentata' evidence and little for the use of mail, the archaeological record probably reflects the reverse of the reality of equipment practices.

Contrary to popular belief, mail had a comparatively cheap and simple method of production involving wire-drawing and bending to form butted or riveted rings and punching for closed rings. In contrast the 'lorica segmentata' needed forging, cutting and bending of mild steel plate, leather working for internal and external straps, copper alloy sheet production and cutting for the fittings, then overall assembly. Both forms of armour production would have been divided up into separate processes for mass production in a fabrica¹⁰³ but the plate had to be made to fit a specific wearer, whereas mail did not. In creating the 'lorica segmentata' the army sacrificed durability and ease of upkeep in exchange for superior protection on the most vulnerable parts of the body. Thus it was not necessarily a cheap and easy armour form to produce in large numbers for general use, quite apart from the restrictive functional considerations of its use on the battlefield.

In various contexts the occurrence of legionary-specific equipment on military sites other than legionary fortresses could in part be explained simply by a wide use of legionary vexillationes. The decision whether or not legionary battle groups were kept intact presumably depended upon the problems posed by the enemy's strategy and tactics. Without involving vexillationes it is difficult to explain the so-called 'vexillation fortresses' of sub-legionary size in Claudio-Neronian Britain.¹⁰⁴ Legionary garrisons have been postulated in small forts in Dorset during the invasion period and there is no suggestion that Vespasian was faced by any sizeable Celtic field army. In a campaign of numerous small battles and sieges there would be little danger and good advantage in establishing small, well-defended legionary garrisons.¹⁰⁵ Mixed legionary and auxiliary garrisons were also planted by Vespasian in Judaea where another enemy seldom stood to fight pitched battles and held many strongholds.¹⁰⁶ Moreover, at this early period especially, any finds of ballista bolt heads are the strongest possible indication of the presence of legionary troops. There is no evidence for artillery specialists in auxiliary units of the 1st to 2nd century and little for direct auxiliary artillery use before the 3rd century.¹⁰⁷ In a later campaign context it is interesting to note a vexillatio of legio II Adiutrix, 855 strong, at Trenčín (Czechoslovakia), deep in Transdanubian barbaricum.¹⁰⁸

The smaller permanent forts are usually assumed to have had auxiliary garrisons, but, even with these units, attempts to identify garrisons by using barrack-blocks and barrack sub-divisions have been singularly unsuccessful in most cases. This is partly because whatever theoretical unit strengths and organisations have been deduced by modern scholars from the evidence, the Romans very inconveniently did not follow them.¹⁰⁹ Yet even if a fort had an indubitably auxiliary garrison there are a number of mechanisms by which legionary-specific finds could have been deposited. In Raetia, for example, all the forts would have required legionary troops for their construction, at least in the 1st century. The evidence for auxiliary building activities is equivocal because stone materials and thus stone building records date

largely from the early 2nd century onwards. Auxiliaries may have engaged widely in unrecorded construction work in the 1st century but this is unlikely considering that their records are the exception rather than the rule up until the reign of Pius. Moreover, there is little evidence for architectural specialists within auxiliary units so this expertise may generally have been provided by the legions.¹¹⁰ The widespread activities of legio VIII Augusta in Germany, for example, may be seen in this light.¹¹¹ The skillful demolition of forts to conserve building materials with the characteristic deposition of scrap metal and other materials in the process may also have involved legionary troops.¹¹² How long a legionary vexillatio might have occupied a site after the completion of construction work would have varied, but may conceivably have involved a wait of days or months before the intended garrison moved in. The longer the stay the greater the chance of effects on the artifactual record. Raetia has been cited as a province without legionary troops in which 'lorica segmentata' fittings have been found. However, it has been suggested that Raetia came under the control of the army of Germania which supplied at least work-vexillationes. A helmet with a legionary punctum inscription (legio XVI) was found by the fortlet at Burlafingen (W. Germany) a site for which the excavator has posited a mixed legionary-auxiliary garrison on the basis of this and other small-finds. There is also the question of legionary involvement in equipment production and supply to auxiliary units which raises the possibility that even provinces with an entirely auxiliary exercitus may not have been closed to legionary personnel.¹¹³

The outright garrisoning of small forts by legionary vexillationes is seldom seriously considered in Britain, but reference need only be made to the widely scattered activities of legio III Augusta in Numidia to see what could be done with legionary troops.¹¹⁴ Inscriptions of direct relevance to the Croy Hill sculpture attest the presence of legionary personnel at forts on both Hadrian's Wall and the Antonine Wall. Legionary building inscriptions may perhaps be ignored as having little clear relevance to long-term garrisoning and some legionary centurions on both walls made it clear that they had been promoted to the command of auxiliary units.¹¹⁵ Other dedications by legionary centurions might be grouped with the latter but their unlikely failure to mention these higher commands could equally indicate that they were with vexillationes.¹¹⁶ Longer presence of legionaries beyond just transient building activities may be denoted by major religious dedications, even involving shrine-building.¹¹⁷ Stone funerary monuments may also indicate long stay rather than temporary presence and this obviously bears upon the Croy Hill sculpture.¹¹⁸ On Hadrian's Wall the evidence for legionary vexillationes has been interpreted as the maintenance of installations by 'caretaker garrisons' whilst the Antonine Wall was occupied.¹¹⁹ Legionaries were present at Chesters under Pius¹²⁰ but this need not determine the dates of the other inscriptions. At Housesteads an undated legionary garrison styled itself agentes in praesidio,¹²¹ yet the idea of 'caretakers' does not really bear close examination for a linear frontier system which was not only superceded and abandoned but physically breached. It would denote a serious lack of confidence in imperial policy amongst provincial governors. An inscription from Corbridge (Northumberland), also undated, has the same legionary formula¹²² and an extension of the 'caretaker' explanation away from the frontier is even more

unreasonable. This epigraphic evidence might be explained away as building party presence or as legionary command of auxiliary units on one frontier and 'caretaker garrisons' on the other, but the possibility of legionary garrisons per se is worthy of at least equal consideration.

*

A full examination of either Roman battlefield practices or garrisoning policies is far beyond the scope or intent of this paper. However, the opportunity has been taken to discuss some of the conflicting evidence which prevents the formation of comfortable conclusions. There is good evidence of specificity in military equipment for close-order troops, especially in the 1st century. If auxiliary units were widely and consistently employed exclusively in this manner then they may commonly have worn the 'lorica segmentata' but this was not in fact necessary because their other equipment in no way precluded a close-order function. In any case the 'lorica segmentata' was only partially used even by legionary troops. The occurrence of lorica fittings on small forts may have been the result of deposition by auxiliaries armed with this armour form, or by legionary construction or demolition parties, or by long or short-term garrisons of legionaries. It is difficult to see the widespread supply of auxiliary troops with the 'lorica segmentata' as a practical explanation if these troops were to have maintained their battlefield support functions. In particular ballista bolt heads should indicate a legionary presence of some form on sites where they are found.

The three soldiers from Croy Hill may aesthetically be rather crudely depicted but details of helmet suspension, shield bosses and pila denote a good knowledge of equipment on the part of the sculptor who was quite likely to have been a soldier himself.¹²³ The men are shown wearing some of the latest reliable representations of military paenulae. They certainly carry the latest datable and dependable depictions of curved, rectangular scuta and unweighted pila. Their identification as legionaries may be maintained, whether the men were present at Croy Hill as builders, or as part of a garrison, or as both.

NOTES

1. The writer is very grateful for help received in the study of this relief from Dr J. Close-Brooks, Mr T. Cowie and Mr I. Scott of the National Museum of Antiquities, Edinburgh, where the stone now resides. Dr M.C. Bishop, Mr C.M. Daniels, Dr H. Dodge and Dr D.J. Mattingly have very kindly read the manuscript but responsibility for opinions and any mistakes lies with the writer alone. Mrs A. Gibson Ankers kindly drew the stone for publication. Fig.1 is reproduced by kind permission of the National Museum, Edinburgh.
2. Height 37cm; width 36cm; depth 13cm. For a full bibliography see KEPPIE & ARNOLD, 1984, No.90. The figures are comparatively small for a provincial funerary stela (cf. MENDEL, 1912-14, No.914). The writer is grateful to Dr L.J.F. Keppie for providing material at an early stage from the then unpublished Scottish CSIR in

- connection with this stone.
3. The lower edge is chipped away as are the left-hand man's right foot and the right-hand man's left leg. The left and middle helmet bowls, the left umbo, the middle man's beard and hair and all three shafted weapons have sustained minor damage.
 4. KEPPIE & ARNOLD, 1984, xv-xvi.
 5. ROBINSON, 1975, 149.
 6. Ibid., 169.
 7. No insignia of rank are shown on the stone. Muscled cuirasses are usually associated with senior officers but at least one centurion is represented with this form of plate armour (HOFMANN, 1905, Fig.29; SCHOBBER, 1920, No.337).
 8. ROBINSON, 1975, 149. The stela of the aguilifer Gnaeus Musius appears to depict something of this sort (ÉSPÉRANDIEU, 1907-66, No.5790).
 9. KOLB, 1973, especially 110-14.
 10. For clear depictions of fastenings see ÉSPÉRANDIEU, 1907-66, No.5495; BISHOP, 1983, 33-7; Brit. XV, 1984, Pl.XXIV; KOEPPPEL, 1985, No.10, Fig.3.
 11. Paenulae: ÉSPÉRANDIEU, 1907-66, No.5495, 5797-8, 5816, 5822, 6252 (legionaries); 473, 5861, 6207, 6575; ÉSPÉRANDIEU, 1931, No.9, 16 (auxiliaries). Saga: ÉSPÉRANDIEU, 1907-66, No.5835 (legionary); 6125, 6136, 6137 (auxiliaries).
 12. KEPPIE & ARNOLD, 1984, No.111, 135e.
 13. KOEPPPEL, 1984, No.7, Fig.14-16 (Cancellaria); 1985, No.10, Fig.3 (Chatsworth); KÄHLER, 1951, Pl.28-9 (Pozzuoli); TORELLI, 1982, Pl.IV,9, 16 (Anaglypha Traiani); GJODESEN, 1976, Fig.2-4 (Arch of Titus?); HASSEL, 1966, Pl.18, 20-1 (Arch of Benevento).
 14. Scenes LXXXV-VIII. All Trajan's Column scene numbers follow CICHORIUS, 1896-1900.
 15. WILSON, 1929, confusedly following Scriptores Historiae Augustae, Marcus Aurelius Antoninus 27.
 16. BRILLIANT, 1967, Pl.49-59 (pedestals), 64 (man in city).
 17. Ibid., Fig.61.
 18. COULSTON, 1987, 141.
 19. ÉSPÉRANDIEU, 1907-66, No.5816, 5822; BÜSING, 1982, Pl.39.1, 5, 6.
 20. ÉSPÉRANDIEU, 1931, No.11. For the dating of this stela see OLDENSTEIN-PFERDEHIRT, 1984, 404.

21. Inv.No.12, 13, 16-21, 28, 31, 35. These numbers follow G. Tocilescu's inventory (FLORESCU, 1965, Fig.51). The Latin numerals assigned to metopes by Florescu refer to supposed positions on the tropaeum and these change with successive rethinks on the metope order.
22. Inv.No.22, 38, 43. See also Inv.No.22, 29.
23. ÉSPÉRANDIEU, 1907-66, No.130; Deutsche Archäologische Institut, Rome, Negative No.33.434.
24. Frontal rectangular shields in Scenes XX, LXIX, LXXIII, CXXVII, CXXVIII. Rectangular profile shields in Scenes LXVI, LXXI, LXXII, LXXIII, XCVIII, CII, CIV, CVI, CVIII, CXIV, CXV.
25. ÉSPÉRANDIEU, 1907-66, No.7763.
26. BAUCHHENS, 1978, No.2, 3.
27. BÜSING, 1982, Pl.39.2.
28. ÉSPÉRANDIEU, 1907-66, No.5835. Dated by legionary movement to Britain.
29. HOFMANN, 1905, Fig.47; SCHÖBER, 1920, No.1621.
30. HOFMANN, 1905, 6; WAURICK, 1983, Pl.49.1.
31. KOEPEL, 1983, Pl.43.1; 1984, No.7, Fig.15-16.
32. KÄHLER, 1951, Pl.28.
33. Scenes LXXXVI-VIII.
34. ROSTOVITZ *et al.*, 1936, 456-66.
35. GANSSER-BURCKHARDT, 1942, 74-81.
36. See the paper by Dr C. van Driel-Murray in this volume.
37. VAN DRIEL-MURRAY & GECHTER, 1983, 30-8, Pl.6-7.
38. KÄHLER, 1965, Pl.6, 14, 18-19.
39. ROBINSON, 1975, Pl.463-66; TORELLI, 1982, Pl.I.4.
40. LEHMANN-HARTLEBEN, 1926, Fig.12.
41. KIMMIG, 1940. See Polybius VI,23 and CONNOLLY, 1981, 131-2.
42. FELLMANN, 1957, 31, 48. The rectangular shield on the Palestrina Nilotic mosaic is problematic because a date of c.100 B.C. is currently ascribed to the work but in the past dates ranging from the first century B.C. to the 2nd century A.D. have been entertained (WHITEHOUSE, 1976, 4-5, Fig.13b). The writer is very

grateful to Dr H. Whitehouse for discussing this matter.

43. AMY et al., 1962, Pl.9-11, 48.
44. For example RIC, Caligula, 23-5.
45. Crude curved, oval shields appear on the Augustan arch at Susa (ÉSPÉRANDIEU, 1907-66, No.16).
46. Rectangular shields also appear on a Trajanic ivory from Ephesus in Turkey (ÖNEN, 1983, 119) and on a 2nd century sports helmet from Nawa in Syria (ABDUL-HAK, 1954-5, Pl.VII).
47. VOGEL, 1973, Fig.28-9.
48. Scene LIV. Marcus Column scene numbering follows PETERSEN et al., 1896.
49. BRILLIANT, 1967, Fig.98.
50. COULSTON, 1987, 148. Two possible exceptions are shields on one third century stela from Carrawburgh, Northumberland (COULSTON & PHILLIPS, forthcoming, No.193) and on another in the British Museum (SMITH, 1904, No.2271). Rectangular shields occur on the Arch of Galerius at Salonika but they appear to be carried by highly stylised barbarian adversaries, not Romans (LAUBSCHER, 1975, Pl.15.1).
51. See note 34, above.
52. VON GROLLER, 1901, 118-9, Pl.XX (Carnuntum); HOFFILLER, 1912, Fig.24 (Aquincum); Mr Simon James, pers. comm. (Dura); THOMAS, 1971, 36, Pl.LIV (Vindonissa); ALLASON-JONES & MIKET, 1984, Inv.3.724, Pl.VII (Tyne).
53. ÉSPÉRANDIEU, 1907-66, No.5790.
54. The writer is very grateful to Dr C. van Driel-Murray for elucidating this point.
55. There are few 2nd century infantry helmets but several datable by context or the addition of bowl cross-bars come from Hebron, Palestine (ROBINSON, 1975, 70-3); Berzobis, Romania (PETCULESCU & PROTASE, 1975); Florence, Italy (ROBINSON, 1975, 84-5). Increasingly static frontiers and perhaps a decline in ritual deposition contributed to the paucity of surviving examples compared with numerous extant 1st century helmets. A helmet from Niedermörmter, W. Germany (ibid., 72-4) without bars, may date to the late 2nd century whilst helmets from Buch (BECK & PLANCK, 1980, Fig.11) and Theilenhofen, W. Germany (ULBERT & FISCHER, 1983, Fig.10) may belong to the 3rd century.
56. ÉSPÉRANDIEU, 1907-66, No.5822; BÜSING, 1982, Pl.39.6.
57. Scenes IV, XXXIII, XLVIII, XLIX, LXXXVI, LXXXVIII, XCVIII, CI, CII.

58. ROBINSON, 1975, 47-51, 63.
59. Scenes XII, LVI, LXIX, CXXVII, CXXVIII. It should be noted that in Scene XX the poles topped by helmets are in the background and do not have the shields resting against them.
60. The writer is very grateful to Dr M.C. Bishop for this suggestion.
61. COUISSIN, 1926, 20-5, 129-38, 181-213, 278-94; HARMAND, 1967, 61-5; CONNOLLY, 1981, 99, 131; KEPPIE, 1984, 235.
62. HELBIG, 1966, No.1608; WAURICK, 1983, Pl.52.1. Likewise on the Louvre praetorians relief and the Pozzuoli relief only the shank and hand are visible (KOEPPPEL, 1983, Pl.43.1; KÄHLER, 1951, Pl.28).
63. ÉSPÉRANDIEU, 1907-66, No.94, 114.
64. Ibid., No.5822; BÜSING, 1982, Pl.39.6.
65. ÉSPÉRANDIEU, 1931, No.11. See also ÉSPÉRANDIEU, 1907-66, No.5835, 6252-3, 7747.
66. VON GROLLER, 1901, 126-7; ULBERT, 1968, 12-13; DENSEM, 1980; CONNOLLY, 1981, 232-3; MANNING, 1985, 159-60.
67. MAGI, 1945, Fig.26-7; KOEPPPEL, 1984, No.7, Fig.15-16.
68. See note 29. A stylised, weighted pilum appears on a stone in the Archaeological Museum, Split (pers. obs.).
69. Inv.No.12, 13, 28, 31, 38, 43. Close inspection of No.31 makes it clear that a broken pilum is used whilst on No.35 the pilum shank may be thrust into the kneeling barbarian. In neither case may a hasta be identified.
70. See note 30.
71. CIL IX, 4397.
72. Pers. obs., now located under the Roman theatre at Verona.
73. KOEPPPEL, 1985, No.9, Fig.54-5, 61; No.10, Fig.5,8; No.11, Fig.5,9.
74. C. Monnenius Secundus, Galleria Congiunzione, Musei Capitolini (pers. obs.); Q. Flavius Crito, Museo Gregoriano Profano (BENNDORF & SCHÖNE, 1867, No.151); Museo Epigrafico, Vatican (pers. obs.); L. Titius, American Academy in Rome (OHL, 1931, No.29).
75. CIL XI, 958.
76. KÄHLER, 1951, Pl.29 (if this is not a modern restoration).
77. MAGI, 1945, Fig.28; KOEPPPEL, 1984, No.7, Fig.14. See ALFÖLDI, 1969, 11-12 for the pictorial and epigraphic evidence supporting

- the identification. Pila on the Great Trajanic Frieze (note 73) have been mistaken for these spears.
78. TORELLI, 1982, Pl.IV.5 (Anaglypha Traiani); KOEPPPEL, 1985, No.9, Fig.1, 2, 4, 7, 10, 12 (Great Trajanic Frieze).
 79. Josephus, Bellum Iudaicum III,95, 120; V,47; Arrian, Ektaxis kat Alanon 5.
 80. Ibid., 16-17. There is a problem with his terminology and the description is confused.
 81. A 3rd century stela at Bologna has a pilum represented with a rectangular splice section and a ball at the point (SUSINI & PINCELLI, 1960, Pl.XIX).
 82. The use of hastae for citizen troops on the Marcus Column is not necessarily significant because, unlike on Trajan's Column, the shafted weapons were depicted throughout in stone and pila would probably have been too fine for the sculptural style in this medium. Moreover, the hastae were often employed for patterning artistic effect (XXXVIII, L, LXI, LXVII, LXVIII, CVIII). On Trajan's Column one shafted weapon rendered in stone instead of being provided by a bronze insert is slim enough to be a pilum shank (CXIV), but its comparability with equally slim auxiliary spears (LXVI, CXIII) makes this identification unsure.
 83. BRILLIANT, 1967, Pl.62a. In comparison with the Marcus Column this pilum may represent almost the only contemporary (A.D.203) input of military equipment detail in the arch's sculptures.
 84. VON BIENKOWSKI, 1919-20, Fig.117; ROCCHETTI, 1967-8, Fig.1-2, 4.
 85. HOFMANN, 1905, Fig.41; SCHÖBER, 1920, No.199.
 86. Ibid., No.341. See also No.351.
 87. Vegetius, de Re Militari 20. Pilum heads from Caerleon (Gwent) in legionary use date to the 3rd century (NASH-WILLIAMS, 1932, 70-1).
 88. KEPPIE & ARNOLD, 1984, No.90.
 89. ULBERT, 1968, 12-15; 1970, 12; CONNOLLY, 1981, 233; HASSALL, 1983, 128; MAXFIELD, 1986, 66-72.
 90. Tacitus, Annales II,52; XII,35; XIII,38; XIV,34, 36-7; Historiae III,21-3; See also BJ II,512; Vegetius II,17; III,14-17.
 91. Tac., Hist II,22: densum legionum agmen, sparsa auxiliorum. See also Vegetius III,15.
 92. Arrian, Ek. 25-31.
 93. Tac., Agricola 35-7.
 94. Tac., Hist. IV,20.

95. Cf. FRERE & ST.JOSEPH, 1974, 40.
96. Tac., Ann. XII,35; Hist. I,38. Whatever the realities of battlefield functions there was a major difference in legionary and auxiliary status in the 1st to 2nd centuries which may have been reflected in equipment for visual identification (see BISHOP, 1986, 719-21).
97. Inv.No.12-13, 15, 17-22, 29, 31, 33, 35 (Adamklissi); HOFMANN, 1905, Fig.47; ÉSPÉRANDIEU, 1907-66, No.5816, 7763; 1931, No.11 (stelae). See also ABDUL-HAK, 1954-5, Pl.V, VII (Nawa helmet). The armour worn by legionary standard-bearers, musicians and centurions is irrelevant in this connection.
98. LUTTWAK, 1979, 117-25.
99. The writer is again grateful to Dr M.C. Bishop for discussing this point.
100. NASH-WILLIAMS, 1932, 68 (abandonment); ROSTOVTZEFF et al., 1936, 192-7 (seige); WAURICK, 1980, 318-32 (funerary deposit).
101. ROBINSON, 1975, 177-82; BISHOP, 1986, 717; ALLASON-JONES & BISHOP, forthcoming. For a different typological approach to the copper alloy fittings see BISHOP, 1987, 120-2.
102. ROBINSON, 1975, Pl.480.
103. BISHOP, 1985, 10-11. The 1st to 3rd centuries A.D. perhaps represent the greatest numerical and widest social use of mail in the history of body armour, and probably the greatest use of metallic body armour in Europe before the later 15th century Burgundian and Italian wars.
104. FRERE & ST.JOSEPH, 1974, 6-7.
105. See Suetonius, Divus Vespasianus 4; RICHMOND, 1968, 121-2; WEBSTER, 1980, 107-10; PEDDIE, 1987, 146-54. Analysis of Caesar's campaigns in Gaul suggest that he was not averse to splitting his forces down to legion-size groups or, on occasion, to even smaller detachments in response to the need for provisions as much as to the strategic situation (BG V,24, 47; especially III,1). The writer is very grateful to Mr P.W.M. Freeman for discussing these campaigns and for supplying references. It may even be suggested that the distribution of forts in the imperial period, for example in Wales and the Hadrian's Wall hinterland, was dictated by supply resource management rather than the need to 'hold down' territory.
106. Jos., BJ IV,486.
107. See BAATZ, 1966; MARSDEN, 1969, 191. The question has recently been re-examined and the usual auxiliary lack of artillery has been reaffirmed by CAMPBELL, 1986.
108. CIL III, 13439. See SAXER, 1967, No.68-9; BÄHME, 1975, 210-11. A

- copper alloy chest-piece from a lorica squamata, inscribed LEG X, from Mušov (Czechoslovakia) may have belonged to a member of a legionary vexillatio similar to the one on the Trenčín inscription (KOLNIK, 1986, 356). There is no reason why this class of artifact should have been solely 'parade' equipment or restricted to cavalry use. For another very similar legionary piece see GARBSCH, 1978, Cat.P7.
109. For the conventional approach see JOHNSON, 1983, 20-5, 166-76; HASSALL, 1983, and for a very useful examination of the inadequacies of the evidence see MAXFIELD, 1986, 59-65.
 110. JONES, 1975, 26, 37-8; JOHNSON, 1983, 43-4; LANDER, 1984, 43. It may be significant that oriental units are prominent amongst the earliest records of auxiliary construction work in stone (ibid., 43, 66). For legionary specialists see Digest 50,6,7; VON DOMASZEWSKI, 1967, xv, 25, 46. One auxiliary mentor is recorded (CIL XIII,6538) and Hadrian's Lambaesis adlocutio speech mentions auxiliary work in wall construction (CIL VIII,18042).
 111. OLDENSTEIN-PFERDEHIRT, 1984, Fig.11, 14-15.
 112. BISHOP, 1985, 7-8; 1986, 721-2.
 113. MAXFIELD, 1986, 68-9, 71; MACKENSEN, 1987, 125, n.314-7. This is not, of course, to suggest that equipment was exclusively produced by large legionary fabricae, or that auxiliary troops did not carry out at least small-scale work (BISHOP, 1985, 17; MAXFIELD, 1986, 70).
 114. SAXER, 1967, No.299-306, 308, 313-23 (Africa Proconsularis and Numidia); 333 (Mauretania Caesariensis); MATTINGLY, 1984, Table 6: C (Tripolitania). These are mainly 3rd century inscriptions, but the Flavian 'East Fort' at Lambaesis (Numidia) was built by legionaries (AE 1954, No.137) and the presence of a legionary vexillatio is attested at Chemtou (Africa Proconsularis) in the 1st century (CIL VIII, 14603). The writer is indebted to Dr D.J. Mattingly who kindly discussed this legion's fragmentation. During the war against Tacfarinas the legion was split to form single cohort garrisons and to pass the winter (Tac. Ann. III,20-1, 74). Elsewhere, Arrian may record a legionary vexillatio in garrison at Phasis in Turkey (Periplus Euxenou Pontou 9; CAMPBELL, 1986, 125-6) and Trabzon was occupied by legionary troops (CIL III,6745, 6747). The Bosphorus was held at various times by legionary vexillationes from Moesia (see, for example, Jos., BJ II,367). The writer is grateful to Mr C.M. Daniels for discussing this area.
 115. RIB 1299, 1733?, 1880, 2135, 2144.
 116. RIB 1305, 1330, 1684, 2120, 2122-4, 2174-7.
 117. RIB 2146, 2148, 2160, 2166. See also 1577, 1582, 1956, 1961, 2024.
 118. RIB 1826, 2181.
 119. SIMPSON, 1966, 90-4; HOLDER, 1982, 42; HANSON & MAXWELL, 1983,

153-6.

120. RIB 1460-1. See also 1330.

121. RIB 1583. Given the possibility that legionaries formed part of the garrison of at least one of the Corbridge forts (BISHOP & DORE, forthcoming) there is no necessity to attribute the 'loricae segmentatae' in the Corbridge Hoard to auxiliaries (ALLASON-JONES & BISHOP, forthcoming).

122. RIB 1130. The remoteness of legionary fortresses from the Hadrianic and Antonine frontiers may have necessitated a semi-permanent legionary presence on the walls for the provision of technical expertise and manpower. In comparison, the positioning of fortresses on the riverine frontiers and the fragmentation of legions elsewhere is understandable.

123. KEPPIE & ARNOLD, 1984, xvii-xviii; COULSTON & PHILLIPS, forthcoming, introduction. See Digest 50,6,7; Veg. II,11.

BIBLIOGRAPHY

ABDUL-HAK 1955: S. Abdul-Hak, 'Rapport préliminaire sur des objets provenant de la nécropole romaine située a proximité de Nawa (Hauran)', Les Annales Archéologiques de Syrie, 4-5, 1954-5, 163-88

ALFÖLDI 1959: A. Alföldi, 'Hasta summa imperii. The spear as embodiment of sovereignty in Rome', American Journal of Archaeology, 63, 1959, 1-27

ALLASON-JONES & BISHOP forthcoming: L. Allason-Jones & M.C. Bishop, The Corbridge Hoard (HBMCE Archaeological Reports), (London forthcoming)

ALLASON-JONES & MIKET 1984: L. Allason-Jones & R. Miket, The Catalogue of Small Finds from South Shields Roman Fort, (Newcastle upon Tyne 1984)

AMY et al. 1962: R. Amy, G.-Ch. Picard, J.-J. Hatt, P.-M. Duval, Ch. Picard, & A. Piganiol, 'L'arc d'Orange', Gallia, Suppl.15, 1962

BAATZ 1966: D. Baatz, 'Zur Geschützbewaffnung römischer Auxiliartruppen in der frühen und mittleren Kaiserzeit', BJ, 166, 1966, 194-207

BAUCHHENSS 1978: G. Bauchhenss, CSIR Deutschland, III,1, Germania Inferior, Bonn und Umgebung militärische Grabdenkmäler, (Bonn 1978)

BECK & PLANCK 1980: W. Beck & D. Planck, Der Limes in Südwestdeutschland, (Stuttgart 1980)

BENNDORF & SCHÖNE 1867: O. Benndorf & R. Schöne, Die antiken Bildwerke des lateransischen Museums, (Leipzig 1867)

VON BIENKOWSKI 1919-20: P. von Bienkowski, 'Zur Tracht des römischen Heeres in der spätrömischen Kaiserzeit', Jahreshefte des

österreichischen Archäologischen Institutes in Wien, XIX-XX, 1919-20, 260-79

- BISHOP 1983: M.C. Bishop, 'The Camomile Street soldier reconsidered', Transactions of the London and Middlesex Archaeological Society, 34, 1983 (1985), 31-48
- BISHOP 1985: M.C. Bishop, 'The military fabrica and the production of arms in the early principate', in M.C. Bishop (ed.), Production and Distribution of Roman Military Equipment. Proceedings of the Second Roman Military Equipment Research Seminar, (BAR International Series 275), (Oxford 1985), 1-42
- BISHOP 1986: M.C. Bishop, 'The distribution of military equipment within Roman forts of the first century A.D.', in Studien zu den Militärgrenzen Roms III. 13. International Limeskongreß Aalen 1983 Vorträge, (Stuttgart 1986), 717-23
- BISHOP 1987: M.C. Bishop, '"The evolution of certain features"', in DAWSON, 1987, 109-39
- BISHOP & DORE forthcoming: M.C. Bishop & J.N. Dore, Corbridge Excavations 1947-80. Archaeological Investigations on the Roman Forts and Town at Corbridge, Northumberland (HBMCE Archaeological Reports), (London forthcoming)
- BÖHME 1975: H.W. Böhme, 'Archäologische Zeugnisse zur Geschichte der Markomannenkriege', Jahrbuch der Römisch-Germanischen Zentralmuseums Mainz, 22, 1975, 153-217
- BRILLIANT 1967: R. Brilliant, The Arch of Septimius Severus in the Roman Forum (MAAR XXIX), (Rome 1967)
- BÜSING 1982: H. Büsing, Römische Militärarchitektur in Mainz (Römisch-Germanische Forschungen 40), (Mainz 1982)
- CAMPBELL 1986: D.B. Campbell, 'Auxiliary artillery revisited', BJ, 186, 1986, 117-32
- CICHORIUS 1896-1900: C. Cichorius, Die Reliefs der Traianssäule, (Berlin 1896-1900)
- CONNOLLY 1981: P. Connolly, Greece and Rome at War, (London 1981)
- COUISSIN 1926: P. Couissin, Les armes romaines, (Paris 1926)
- COULSTON 1987: J.C. Coulston, 'Roman military equipment on 3rd century A.D. tombstones', in DAWSON, 1987, 141-56
- COULSTON & PHILLIPS forthcoming: J.C. Coulston & E.J. Phillips, CSIR Great Britain, I,6, Hadrian's Wall West of the River North Tyne, and Carlisle, (Oxford forthcoming)
- DAWSON 1987: M. Dawson (ed.), Roman Military Equipment: The Accoutrements of War. Proceedings of the Third Roman Military Equipment Research Seminar (BAR International Series 336), (Oxford

- 1987)
- DENSEM 1980: R. Densem, 'Pilum-heads from Roman Britain', Exercitus, I,3, 1980, 27-33
- VON DOMASZEWSKI 1967: A. von Domaszewski, Die Rangordnung der römischen Heeres, (Köln 1967)
- VAN DRIEL-MURRAY & GECHTER 1984: C. van-Driel Murray & M. Gechter, 'Funde aus der Fabrika der legio I Minervia aus Bonner Berg', Rheinische Ausgrabungen 23 (Beiträge zur Archäologie es römischen Rheinlands IV), (Köln 1984), 1-83
- ÉSPÉRANDIEU 1907-66: E. Éspérandieu, Recueil général des bas-reliefs, statues et bustes de la Gaule romaine, (Paris 1907-66)
- ÉSPÉRANDIEU 1931: E. Éspérandieu, Recueil général des bas-reliefs, statues et bustes de la Germanie romaine, (Paris 1931)
- FELLMANN 1957: R. Fellmann, Das Grab des L. Munatius Plancus bei Gaeta, (Basel 1957)
- FLORESCU 1965: F.B. Florescu, Das Siegesdenkmal von Adamklissi, (Bonn 1965)
- FRERE & ST.JOSEPH 1974: S.S. Frere & J.K.S. St.Joseph, 'The Roman fortress at Longthorpe', Brit, V, 1-129
- GANSSER-BURCKHARDT 1942: A. Gansser-Burckhardt, Das Leder und seine Verarbeitung im römischen Legionslager Vindonissa (Veröffentlichungen der Gesellschaft Pro Vindonissa 1), (Basel 1942)
- GARBSCH 1978: J. Garbsch, Römische Paradeausrüstungen, (Munich 1978)
- GJODESEN 1976: M. Gjodesen, 'A fragment of the Arch of Titus', in K. Ascani, T. Fischer-Hansen, F. Johansen, S.S. Jensen, & J.E. Skydsgaard (eds.), Studia Romana In Honorem Petri Krarup Septuagentarii, (Odense 1976), 72-86
- VON GROLLER 1901: M. von Groller, 'Römische Waffen', Der römische Limes in Österreich, II, (Vienna 1901), 84-131
- HANSON & MAXWELL 1983: W.S. Hanson & G.S. Maxwell, Rome's North-West Frontier. The Antonine Wall, (Edinburgh 1983)
- HARMAND 1967: J. Harmand, L'armée et le soldat à Rome de 107 à 50 avant notre ère, (Paris 1967)
- HASSALL 1983: M. Hassall, 'The internal planning of Roman auxiliary forts', in B.R. Hartley & J. Wachter (eds.), Rome and her Northern Provinces, (Gloucester 1983), 96-131
- HASSEL 1966: F.J. Hassel, Der Triumphbogen in Benevent: ein Bauwerk des römischen Senates, (Mainz 1966)

- HELBIG 1966: W. Helbig, Führer durch die öffentlichen Sammlungen klassischer Altertümer in Rom, II, (Tübingen 1966)
- HOFFILLER 1912: V. Hoffiller, 'Oprema rimskoga vojnika ũ prvo doba carstva', Vjesnik Hrvatskoga Arheološkoga Društva (Zagreb), N.S. 12, 1912, 16-123
- HOFMANN 1905: A. Hofmann, Römische Militärgrabsteine der Donauländer (Sonderschriften des österreichischen archäologischen Institut in Wien V), (Vienna 1905)
- JOHNSON 1983: A. Johnson, Roman Forts of the 1st and 2nd Centuries A.D. in Britain and the German Provinces, (London 1983)
- JONES 1975: M.J. Jones, Roman Fort Defences to A.D.117 (BAR British Series 21), (Oxford 1975)
- KÄHLER 1951: H. Kähler, 'Der Trajansbogen in Puteoli', in G.E. Mylonas (ed.), Studies Presented to David Moore Robinson on his Seventieth Birthday, I, (St.Louis 1951), 430-9
- KÄHLER 1965: H. Kähler, Der Fries von Reiterdenkmal des Aemilius Paulus in Delphi (Monumenta Artis Romanae V), (Berlin 1965)
- KEPPIE 1984: L.J.F. Keppie, The Making of the Roman Army from Republic to Empire, (London 1984)
- KEPPIE & ARNOLD 1984: L.J.F. Keppie & B.J. Arnold, CSIR Great Britain, I,4, Scotland, (Oxford 1984)
- KIMMIG 1940: W. Kimmig, 'Ein Keltenschild aus Ägypten', Germania, XXIV, 1940, 106-11
- KOEPPEL 1983: G.M. Koepfel, 'Two reliefs from the Arch of Claudius in Rome', RM, 90, 1983, 103-9
- KOEPPEL 1984: G.M. Koepfel, 'Die historischen Reliefs der römischen Kaiserzeit II, stadtrömisches Denkmäler unbekannter Bauzugehörigkeit aus flavischer Zeit', BJ, 184, 1984, 1-65
- KOEPPEL 1985: G.M. Koepfel, 'Die historischen Reliefs der römischen Kaiserzeit III, stadtrömisches Denkmäler unbekannter Bauzugehörigkeit aus trajanischer Zeit', BJ, 185, 1985, 143-213
- KOLB 1973: F. Kolb, 'Römische Mäntel: paenula, lacerna, μανδύη', RM, 80, 1973, 67-167
- KOLNIK 1986: T. Kolnik, 'Neue Ergebnisse der Limesforschungen in C.S.S.R.', in PLANCK & UNZ, 1986, 355-61
- LANDER 1984: J. Lander, Roman Stone Fortifications. Variations and Change from the First Century A.D. to the Fourth (BAR International Series 206), (Oxford 1984)
- LAUBSCHER 1975: H.P. Laubscher, Der Reliefschmuck des Galerius-Bogens in Thessaloniki, (Berlin 1975)

- LEHMANN-HARTLEBEN 1926: K. Lehmann-Hartleben, Die Traianssäule. Ein römisches Kunstwerk zu Beginn der Spätantike, (Berlin 1926)
- LUTTWAK 1979: E.N. Luttwak, The Grand Strategy of the Roman Empire from the First Century A.D. to the Third, (Baltimore 1979)
- MACKENSEN 1987: M. Mackensen, Frühkaiserzeitliche Kleinkastelle bei Nersingen und Burlafingen an der oberen Donau, (Munich 1987)
- MAGI 1945: F. Magi, I Rilievi flavi del Palazzo Cancellaria (Monumenti Vaticani di archeologia e d'arte 6), (Rome 1945)
- MANNING 1985: W.H. Manning, Catalogue of the Romano-British Iron Tools, Fittings and Weapons in the British Museum, (London 1985)
- MARSDEN 1969: E.W. Marsden, Greek and Roman Artillery. Historical Developments, (Oxford 1969)
- MAXFIELD 1986: V.A. Maxfield, 'Pre-Flavian forts and their garrisons', Brit, XVII, 1986, 59-72
- MENDEL 1912-14: G. Mendel, Catalogue des sculptures grecques, romaines et byzantines, musées impériaux ottomans, (Istanbul 1912-14)
- NASH-WILLIAMS 1932: V.E. Nash-Williams, 'The Roman legionary fortress at Caerleon, II', Archaeologia Cambrensis, 87, 1932, 48-104
- OHL 1931: R.T. Ohl, 'The inscriptions at the American Academy in Rome', MAAR, IX, 1931, 89-133
- OLDENSTEIN-PFERDEHIRT 1984: B. Oldenstein-Pferdehirt, 'Die Geschichte der legio VIII Augusta', JRGZM, 31, 1984, 397-433
- ÖNEN 1983: Ü. Önen, Ephesus, (Izmir 1983)
- PEDDIE 1987: J. Peddie, Invasion. The Roman Invasion of Britain in the Year A.D.43 and the Events Leading to their Occupation of the West Country, (Gloucester 1987)
- PETCULESCU & PROTASE 1975: L. Petculescu & D. Protase, 'Coiful Roman de la Berzovia', Banatica, 3, 1975, 85-9
- PETERSEN et al. 1896: E. Petersen, A. von Domaszewski, & G. Calderini, Die Marcus-Säule auf der Piazza Colonna in Rom, (Monaco 1896)
- PLANCK & UNZ 1986: D. Planck & C. Unz (eds.), Studien zu den Militärgrenzen Roms III. Vorträge des 13. internationalen Limeskongresses, Aalen 1983, (Stuttgart 1986)
- RICHMOND 1968: I.A. Richmond, Hod Hill 2: Excavations Carried Out Between 1951 and 1958 for the Trustees of the British Museum, (London 1968)
- ROBINSON 1975: H.R. Robinson, The Armour of Imperial Rome, (London 1975)

- ROCCHETTI 1967-8: L. Rocchetti, 'Su una stela del periodo Tetrarchico', Annuario della Scuda Archeologica di Atene e delle missioni Italiane in oriente, 45-6, 1967-68, 487-98
- ROSTOVITZEFF et al. 1936: M.J. Rostovtzeff, A.R. Bellinger, C. Hopkins, & C.B. Welles, The Excavations at Dura Europos; Preliminary Report of the 6th Season of Work, Oct.1932 - Mar.1933, (New Haven 1936)
- RYBERG 1967: I.S. Ryberg, Panel Reliefs of Marcus Aurelius, (New York 1967)
- SAXER 1967: R. Saxer, Untersuchungen zu den Vexillationen des römischen Kaiserheeres von Augustus bis Diokletian (Epigraphische Studien I), (Köln 1967)
- SCHOBER 1923: A. Schober, Die römischen Grabsteine von Noricum und Pannonien (Sonderschriften des österreichischen archäologischen Instituts in Wien X), (Vienna 1923)
- SIMPSON 1966: G. Simpson, Britons and the Roman Army, (Farnborough 1966)
- SMITH 1904: A.H. Smith, A Catalogue of Sculpture in the Department of Greek and Roman Antiquities, British Museum, III, (London 1904)
- SUSINI & PINCELLI 1960: G. Susini & R. Pincelli, Le collezioni del Museo Civico di Bologna. Il lapidario, (Bologna 1960)
- THOMAS 1971: E.B. Thomas, Helme, Schilde, Dolche. Studien über römische-pannonische Waffenkunde, (Budapest 1971)
- TORELLI 1982: M. Torelli, Typology and Structure of Roman Historical Reliefs, (Ann Arbor 1982)
- ULBERT 1968: G. Ulbert, Römische Waffen des 1. Jahrhunderts n. Chr. (Kleine Schriften zur Kenntnis der römischen Besetzungsgeschichte Südwestdeutschlands 4), (Stuttgart 1968)
- ULBERT 1970: G. Ulbert, Das römische Donau-Kastell Ribtissen, Teil 1: die Funde aus Metall, Horn und Knochen (Urkunden zur Vor- und Frühgeschichte aus Südwürttemberg-Hohenzollern Heft 4), (Stuttgart 1970)
- ULBERT & FISCHER 1983: G. Ulbert & T. Fischer, Der Limes in Bayern von Dinkesbühl bis Eining, (Stuttgart 1983)
- VOGEL 1973: L. Vogel, The Column of Antoninus Pius, (Harvard 1973)
- WAURICK 1980: G. Waurick, 'Die Schutzwaffen im numidischen Grab von Es Soumāa', in H.G. Horn & C.B. Rüter (eds.), Die Numider: Reiter und Könige, (Bonn 1980), 305-32
- WAURICK 1983: G. Waurick, 'Untersuchungen zur historisierenden Rüstung in der römischen Kunst', JRGZM, 30, 1983, 265-301

WEBSTER 1980: G. Webster, The Roman Invasion of Britain, (London 1980)

WHITEHOUSE 1976: H. Whitehouse, The Dal Pozzo Copies of the Palestrina Mosaic (BAR International Series 12), (Oxford 1976)

WILSON 1929: L.M. Wilson, 'Sculptural evidence of an army order issued by Marcus Aurelius', MAAR, VII, 1929, 169-72