CERTAIN DOUBTS AND DOUBTFUL CONCLUSIONS: THE LORICA SEGMENTATA FROM NEWSTEAD AND THE ANTONINE GARRISON

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Few sites can rival the importance of Newstead in the archaeology of the Roman occupation of Scotland in the 2nd century A.D. The fort's strategic role as a centre for the Roman occupation of the Scottish Lowlands and its position on the principal axis of advance north along Dere Street is reflected in its exceptional size (5.9 ha) and in the strength of its Antonine defences. The quantity and variety of the finds have provided a remarkable corpus of material evidence, including armour and equipment of both the Flavian and Antonine occupations, amongst which were fragments of lorica segmentata.[1] The intention of this paper is to review the evidence of these finds for reconstructing the original appearance of this type of armour, to establish its date and to reassess the evidence for the garrison of Newstead during the 2nd century A.D.[2] As the title suggests, this aim has its limitations. Few new conclusions can be claimed. Rather, it will be argued that our knowledge of Antonine Newstead is considerably less well-founded than has generally been supposed.

THE RECONSTRUCTION OF THE LORICA SEGMENTATA

Forty-eight fragments of plate body-armour, including two large portions of iron plates with bronze mountings, were discovered by Curle in a well within the principia at Newstead.[3] The circumstances of discovery were dramaticaly described by the excavator. Within the courtyard of the principia, to the right of the entrance from the via principalis, pit 1 proved to be a well 25ft 6in deep. Excavation yielded a remarkable assortment of finds. Over forty cartloads of small stones, some, presumably from the well-lining, were recovered as well as dressed stones, including two blocks carved with sculptures of a boar (emblem of legio XX Valeria Victrix), a human skeleton, animal bones and, at 12ft, an inscribed altar (RIB 2123), then a coin of Hadrian, pottery, a variety of other small-finds, and, close to the bottom of the pit, at 25ft, fragments of lorica segmentata, a linch-pin and the remains of an oak bucket. Smaller items at the very bottom of the pit included brass scale armour, chain-mail, the umbo of a shield and a coin of Vespasian or Titus.[4] With the possible exception of the bucket, the presence of the metal-work and stone can only be explained as a result of deliberate deposition; the most reasonable explanation being that all the material was thrown into the well-shaft during clearing-up operations prior to the departure of the Roman garrison.[5] That the finds from the well are therefore likely to represent rubbish - or less valuable items which were not worth taking away - is important for our understanding of the armour and the value of the surviving fragments in attempting to reconstruct its original appearance.[6]

An initial attempt to reconstruct the Newstead armour was made by Curle, drawing upon the conclusions reached by von Groller who, only a decade earlier, had been the first to identify actual fragments of

lorica segmentata in his excavations at Carnuntum.[7] Curle recognised fragments of the shoulder and girdle-plates and followed von Groller in presuming that the armour had originally been fixed by rivets to a leather jerkin. Two rectangular metal sheets were identified as portions of breast or back-plates to which the girdle-plates were attached. Both iron plates are c.0.2cm thick, appreciably thicker than the girdle plates which average c.0.1cm. The best preserved plate (hereafter described as plate A), measures 21.5cm by at least 14cm. One of the shorter sides has a sharply everted edge, forming a rim and the opposing edge has two decorative bronze strips, each fixed to the plate by single rivets. Holes, 1cm from the edge, have been punched through the bottom of the bronze strips and through the plate. One of the long sides is complete and has two rectangular slots (c.1.7cm long and c.1cm wide) surrounded by small bronze, rectangular plates, each held in position by four rivets, one at each of the corners. The second plate (plate B) is less-well preserved and survives in two pieces. Instead of two slots, this plate has only one which, like plate A, is on the complete, longer side. This slot is also surrounded by a bronze plate retained by four rivets. Plate B is slightly smaller than plate A and measures 18.5 by at least 12cm. Like plate A, this plate also has a sharp, flanged edge on one of the shorter sides although there is no indiction of a hole or decorative bronze plate on the opposing edge: only a length of 8cm is preserved, leaving sufficient room for a single hole and bronze strip on the section which has been lost which would correspond to the single slot used on the fully preserved and adjacent edge. Although plates A and B are similar in character, they either came from different suits of armour or, more probably, the two types represent portions of the front and back-plates: this would explain the similarity in the type of fittings but allow for the use of two slots for one set of plates and only one for the other. Another piece of iron from the well (here called plate C), a corner with two adjacent straight edges (10.1 x 10.7cm), has a fragment of bronze retained by a rivet at the broken end of the shorter side. This was presumably the fragment which Curle identified as a corner of the plate corresponding to plate B1/B2.[8] However, there is no trace of a slot either in the surviving portion of bronze or the iron plate itself. Since the broken edge is 10.1cm from the end of the plate, it does not correspond with plate A where the lower slot commences only 5.5cm from the corner but neither does it match exactly plate B1/B2 where the bottom of the single slot commences 8.5cm from the corner. Since plate C is broken, the distance of 10.1cm is only the minimum distance between the edge of the plate and a possible slot: the difference of more than 1.6cm would seem to exclude the possibility that plate C and B1/B2 formed an identical pair. Two explanations remain. The least likely is that plate C came from another suit of armour in which a single slot was positioned more than 1.5cm from the edge of the plate. The alternative is to suppose that plate C is part of the opposing plate to plate B1/B2 but that it had no slot. In which case, the bronze plate and rivet on plate C must have had a different function.

Curle assumed that plate A was a right breast-plate, plate B a right back-plate and that the longer sides were positioned horizontally so that the turned edges served to protect the arms from chafing against the metal and the holes surrounded by the decorative bronze strips were used to attach them to corresponding plates on the left side of the body. Curle also interpreted the slots as holes for straps

to attach the breast and back-plates to the girdle-plates.[9]

In 1960, after the discovery in London of a piece of a breast-plate (of Corbridge type), Graham Webster attempted a new reconstruction of the Newstead armour.[10] Although he accepted Curle's positioning of the plates A and B, he also observed that the curved edge could have been to protect the neck and not the arm. He also noted the likely functional difference between the slots and the holes: whereas the holes he took to be for hooks, he considered that the slots were most probably for straps, as Curle had suggested, although he also considered the possibility that they were intended for toggles, an example of which had been published from Carnuntum. The toggle would then be attached to the missing plate and pass through the slot to link the two halves of the plates together.[11]

By 1969, Webster had changed his mind: he had clearly taken into account the recent discovery of loricae segmentatae at Corbridge.[12] In his new reconstruction, the breast and back-plates have now been turned round with the hook-holes at the bottom and the flanged edge of the plates at the top, a position which, from his discussion of the flanged edge, he had previously accepted as a possibility. However, he was still reluctant to abandon von Groller's suggestion that the back-plates were hinged. He also ignored plate B and proposed that the breast-plates comprised two half-plates of type A and that each pair of slots was joined by a strap and buckle.

Robinson's study of the Corbridge hoard also included a reinterpretation of the Newstead armour, basing his argument both on the evidence of the Corbridge finds and a personal inspection of the Newstead fragments.[13] He felt justified in claiming that his reconstruction had produced "a reasonably sound working model for the finds from Newstead".[14] However, there are still problems which the Corbridge armour does not solve: the Newstead armour's slots are not parellelled on the Corbridge finds and the circumstances of the two finds is very different. The Corbridge material would seem to have been buried intentionally with a view to later retrieval and, although from different loricae, has a sufficiently large number of pieces to allow a detailed and reliable reconstruction of the armour's original appearance.[15] However, the Newstead material comprises disguarded fragments which come nowhere near matching the completeness of the Corbridge hoard.

Robinson recognised three surviving sections of the collar unit and, since there was no trace of hinges, he assumed that the sections were fixed together with rivets. This may have been the case although caution is needed in arguing from the apparent absence of bronze hinges: bronze is of much greater value than iron and bronze fittings are less likely to have been thrown away: they could easily have been cut off and later melted down for reuse. One fragment of iron from the well still bears traces of bronze as if it had originally carried such a fitting, perhaps a hinge.[16] Robinson suggested that the shoulder guards consisted of five plates but that, unlike the Corbridge armour, they were attached by rivets to the collar unit and not by hinges as in the examples from Corbridge. Although insufficient portions of the shoulder guards survive to prove this suggestion, it seems plausible enough.[17] The girdle-plates, only fragments of which survive, he

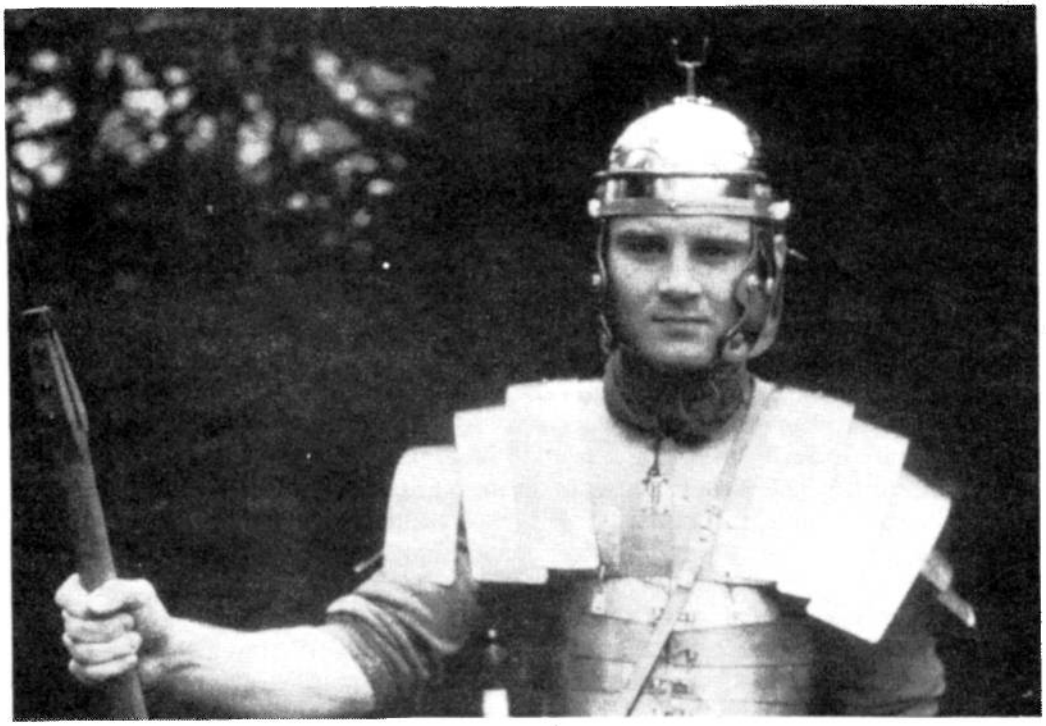
suggests were originally five or six in number, perhaps with a double lower plate to allow the cingulum to be buckled more easily than in the Corbridge armour.[18]

Loop-fasteners for the girdle-plates, as Robinson recognised, were simple and robust, consisting of loops of bronze pushed through a slot in the girdle-plate and pushed back on the inside like paper fasteners.[19] On the authority of the Corbridge loricae, the lobate hinges are no longer required to join the back-plates and these were omitted. At Corbridge, a single leather tie was found attached to one girdle-plate loop. This was taken by Robinson to prove that, in both the Corbridge and Newstead armour, the girdle-plates were tied individually.[20] This seems improbable: individual ties are finicky to join up and are easily lost: lacing as von Groller originally suggested, would seem a more practical method. 21

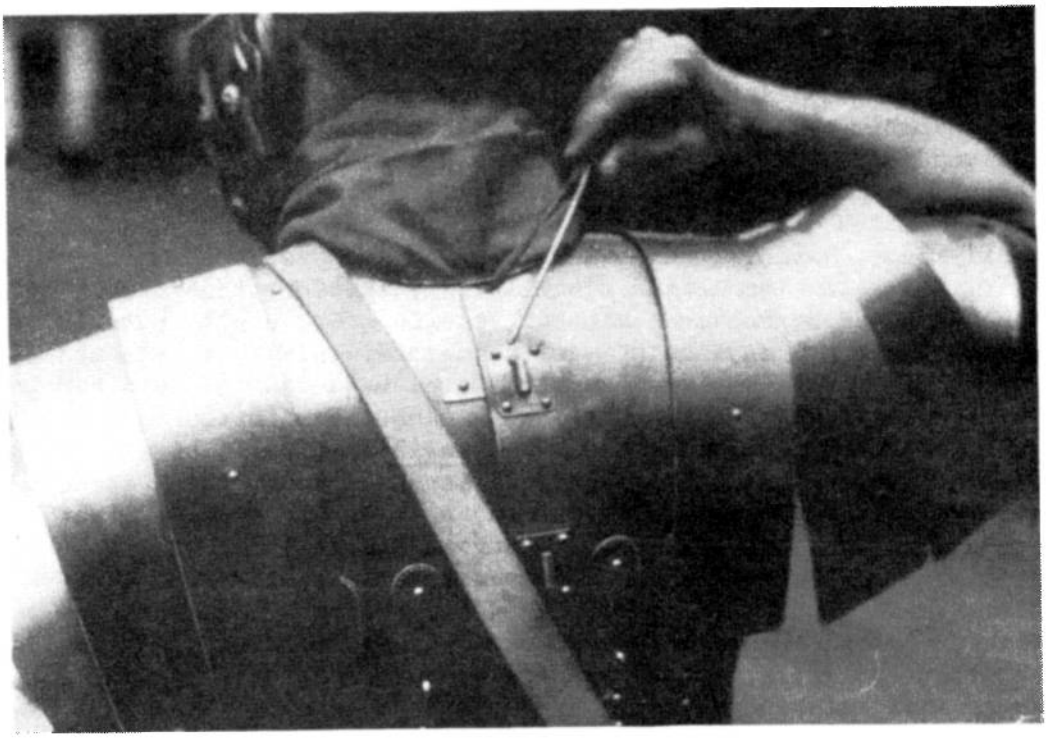
Thus far, the reconstruction proposed by Robinson would seem to work quite well (Plate 1). Although much remains uncertain, the arrangement of girdle and shoulder-plates can not be revised without additional finds. However, the full-scale reconstruction of the Newstead armour by Mr J. Turner, following the model proposed by Robinson, presented a number of problems which suggests that the arrangement of front and back-plates requires revision.[22]

There is no certainty as to which of the two types of plate was a back-plate and which the breast-plate: a problem reflected in the various attempts at reconstructing the armour. Curle and Webster interpreted plate A as part of the breast-plate and Curle had found a use for plate B as a back-plate. Robinson reversed this order, arguing that A was a right back-plate and B a right front-plate. Although Robinson did not explicity state why he reversed the order, he probably did so on the evidence of the Corbridge armour where two pairs of hooks attach the back-plates to the girdle-plates and only one pair are used at the front.[23] Robinson's arrangement would seem plausible not just because it can be paralleled in the Corbridge armour but also because it provides the added support to the back which always took the greatest strain when putting the loricae on and taking them off. The orientation of the plates would also seem to have been settled by the Corbridge finds. The flanged edge must have been the top and the opposing edge with its holes for hooks closely parallels the arrangement used in the Corbridge armour. So far, so good but the armour, as reconstructed, presents two immediate problems.

The top of the breast-plate, though slightly everted, would prove hazardous to the wearer: the sharp edge would have easily cut the neck unlike the rolled top of the Corbridge armour which offered much better protection. Although Robinson hazarded that the girdle-plate under the armpit was rolled to prevent it chafing the arm, it is surprising that he did not recognise the still more serious problem presented by the sharp edge at the top of the breast and back-plates where they would so easily come into contact with the neck - especially when the unfortunate owner attempted to equip himself in a hurry. A hole, just 2mm wide at the top of both plates A and B, was interpreted by Robinson as a means of securing a cord, attached to a pin for joining the two front and back plates.[24] In both cases, the hole had been punched through from the front and left rough on the inside. This would soon



Pl.1: Reconstruction of the Newstead lorica segmentata, upper front view.



Pl.2: Reconstruction of the Newstead lorica segmentata, upper back view.

have chafed and broken a cord, especially a cord thin enough to pass through the hole. It seems much more likely that the hole was intended to retain a rivet. An examination of the top of the plates suggested a function for a rivet in this position. Around both holes, there is clearly visible a small square surface of metal (1.4 x 1.4cm) which has not been affected by corrosion. It seems reasonable to conjecture that the rivet had retained a tongue of bronze immediately below the upper lip of the plate and that this was the end of a bronze strip which was wrapped over the flanged edge. Along the surviving upper parts of both plates there is no sign of additional rivet-holes but none would be necessary until the outer side of the plates which do not survive for either plate A or B. This explanation is supported by a small piece of iron from the well which has just such a bronze edging: on one side, probably the outside of the plate, the bronze overlaps the edge by 1cm but by only 2mm on the reverse side. This reconstruction makes better sense of the small hole in each of the plates and it would also solve the problem of the dangerous upturned edge: the wearer's neck would now be protected by the bronze edging. Consequently, the suggestion that a cord to secure a pin was threaded through the hole can be discounted. This raises the problem of the pin itself: without being able to secure the pin when not in the locking position, it would be easily lost and the owner must have required plenty of spares! There is, however, a still more compelling argument against such a method of joining the plates.

The replica suit of armour as reconstructed by Mr Turner, proved exceedingly difficult to put on. Fixing the two breast-plates together with pins proved quite satisfactory once the lorica was in position but, in order to have sufficient flexibility in the back-plates to get into the armour, the pin joining the back-plates had to be left out while the lorica was being put on. However, once the armour was on, it proved impossible to relocate the pin without assistance (Plate 2). There are additional problems. Manoeuvring to get into the armour put considerable strain on the girdle-plates which, especially if tied individually, easily fell apart. Even when help was offered to insert the pin into the back-plates, the bronze hooks connecting the top girdle-plates to the breast and back-plates were under strain and easily bent, making it even more difficult to get the armour on - or off. This is in marked contrast to the Corbridge armour which, as reconstructed by Robinson himself, can be quite easily put on by the wearer without any help. It is inconceivable that standard issue of loricae segmentatae could ever have required a soldier to seek assistance in getting into his own armour. The difficulties experienced during the surprise night attack on legio IX Hispana by the Caledonians during Agricola's campaign in Scotland would have been exacerbated if each soldier had first to enlist the help of a comrade to put on his armour in the dark before defending the camp! Whatever simplifications and improvements were made to increase the robustness of the Newstead armour, when compared with the Corbridge loricae, such as the possible elimination of the weak lobate hinges, to be effective, it must always have been possible for the soldier to put on his armour unassisted: the Roman soldier in lorica segmentata can in no way be compared to the knight in medieval armour.

In Robinson's reconstruction of the fitting which joined the two halves of the front and back-plates, he suggested that the left front

and back plates had loops of bronze on their edges which then passed through the slots in the opposing plates and were retained in position by the pins. There are two iron fragments from the principia well which have bronze loops attached. One much deformed fragment (FRA 121a), reinterpreted in the museum records as part of the cheekpiece of a helmet, is not obviously part of a lorica and the second piece, a small iron fragment with a bronze loop attached at the edge and held by a rivet is equally difficult to interprete.[25] The bronze loop is 0.6cm in diameter and could have passed through a breast or back-plate slot. However, the iron fragment is only 4 x 3cm and there is no reason to assume that it had originally been part of a plate of lorica segmentata. Since neither of these two pieces can be convincingly interpreted as parts of a breast or back-plate, the lack of flexibility in the armour, as reconstructed, remains a strong argument against the use of such a method for joining the back and presumably also the breast-plates. The simplest method would be the use of straps, attached to hinge-plates fixed to the inner edge of the left-plates by rivets. The straps would then be passed through the slots in the right-hand plates and looped across to a buckle and hinge-plate, set back from the inner edge of the left plate; a similar arrangement to the Corbridge armour. As noted above, plate C can be interpreted as part of the opposing plate to B1/B2 and therefore, following the arrangement accepted above, the bottom right-hand corner of the left breast-plate. It has been observed that the fragment of bronze with a rivet is too far from the bottom edge of the plate to match exactly the position of the slot in the opposing right plate. But a bronze plate in this position, and slightly smaller than the slot and bronze plate of B1/B2, would make sense if it was part of a fitting to retain a strap which then passed directly upwards through the slot in B1/B2, drawing the two halves of the breast-plates together. As with the Corbridge armour, this arrangement would hold the back-plates in position while the armour was put on and, if necessary, the strap could then be tightened at the back by the wearer without assistance. Plates B and C themselves also suggest that the method of attachment did indeed employ straps. Whereas the bronze strips surrounding the holes on the bottom of the breast and back-plates seem purely decorative in function, the bronze plates around the slots were not decorated and the bronze not only surrounded the slots but had been carefully wrapped around their interior edges: they served no decorative purpose and would not have been necessary if a metal loop was used. However, it would be explicable if a strap was intended to pass through the slot since the bronze would protect the leather from the sharp, internal edges of the iron plate. Although never explicity stated, the original suggestion by Curle that these slots were intended for straps was probably based upon this observation. As noted above, much has been made of the absence of bronze fittings from the Newstead hoard.[26] However, the circumstances of deposition do not prove that buckles and straps were not used in the Newstead armour. The excavations produced several examples of strap and buckle fittings from loricae segmentatae. The best example (FRA 597) consists of two plates hinged together. One (24.5mm x 14mm) a double plate joined by two rivets, the other, a single rivetted plate (16.5mm x14mm) with the pin of a buckle attachment. Unfortunately, there is no record of where it was found. Another single brass cuirass hinge-plate (FRA 596) was found in pit 65 which is almost certainly Flavian in date.[27] Two other cuirass hinges (FRA 397 and 598) are in the museum collection although, again, we do not know whereabouts in Newstead they

were found. All these, including the concentric circles around the rivet holes, can be exactly paralleled, for example, by finds from Longthorpe.[28] There is therefore evidence for the use of lorica segmentata at Newstead which did require buckles and hinges. Some may be Antonine although the only example which can be dated with any certainty comes from a Flavian context; too early to be contemporary with the Newstead lorica. Nevetheless, the practical objections to the use of a less flexible method than that provided by the use of straps seems a compelling argument against the use of a bronze loop and pin.

It is evident that, despite the importance of the Corbridge finds, the Newstead armour can not be fully reconstructed with confidence. However, a number of conclusions can be drawn from the Corbridge armour. The use of internal leather straps to join the girdle and shoulder-plates can be accepted for the Newstead armour, finally eliminating the original suggestion by von Groller that the plates were mounted on a leather jerkin. The orientation of the plates, with the flanged edge at the top, seems secure: it allows the holes for hooks at the bottom to link the breast and back-plates to the girdle-plates in the same way as in the Corbridge armour, type C. The identification of plate A as a right back-plate and B as a right front-plate again fits with the evidence from Corbridge and seems the most practical solution. The arrangement and number of shoulder and girdle-plates, as proposed by Robinson, remains reasonable and can hardly be improved upon. To these conclusions can be added a number of new observations. The top edge of the breast and back-plates were not rolled as in the Corbridge examples, but provided with bronze edging which protected the wearer's neck from the sharp top of the plates. The method used to attach the breast and back-plates was probably straps and buckles fixed to the left breast and back-plates. A more complete and certain reconstruction of the Newstead armour must await additional finds from Newstead itself or more informative, comparative material from other sites.[29]

THE DATE OF THE NEWSTEAD LORICA SEGMENTATA

Although Robinson argued that the Newstead armour was a more robust and later type of lorica segmentata than the Corbridge examples, he regarded the well deposit as contemporary with the Corbridge hoard, dating to c. A.D. 98-100.[30] However, a coin of Hadrian came from the well and at a depth of 12ft.[31] Curle, himself, noted that the contents of the pit could all be ascribed to the Antonine period.[32] Moreover, at 22ft, a samian cup (drag.33), stamped PROBVS.F was excavated from the well.[33] Hartley has argued that this vessel could hardly date earlier than A.D.160.[34] Nor is it likely that the pit was filled in soon after this date. The samian evidence from Newstead suggests that, unlike forts on the Antonine wall, occupation continued here later than the death of Antoninus Pius and perhaps as late as the 180's.[35] The well was not covered by the cobbles which seem to represent the refurbishing of the principia during the second Antonine phase and Curle was convinced that the well was in use during the final period of occupation.[36] It would therefore seem certain that the contents of the well were not deposited in the Trajanic period. A date as early as the end of Antonine II in the mid 160's is just possible, but it appears much more likely that the armour dates to the end of the 2nd century and was deposited in the well during clearing-up operations immediately

prior to the final abandonment of the fort.[37] The date of the armour also relates to the problem of Newstead's garrison in the Antonine period.

THE GARRISON OF NEWSTEAD IN THE ANTONINE PERIOD

Following his excavations at Newstead in 1947, Richmond concluded that there were only two Antonine periods of occupation, separated by a brief period of abandonment. He also argued that, during Antonine I, a legionary detachment from legio XX Valeria Victrix was quartered with the ala Augusta Vocontiorum and, in Antonine II, Newstead was probably garrisoned by a milliary ala.[38] Richmond based his argument upon the barrack accommodation, the function of a 'dividing wall' separating the praetentura from the retentura in Antonine I and his interpretation of the inscriptions and the armour, including the fragments of lorica segmentata from the well.

The praetentura contained 12 barrack blocks, suitable for two cohortes quinquenariae.[39] The retentura was partitioned off by a dividing wall and this Richmond believed must have been to segregate two different types of unit: the 12 barracks in the praetentura he assigned to a legionary detachment, the retentura to the ala Augusta Vocontiorum. However, the identity of the units in Antonine I can not be established with any certainty from the arrangement of the barracks: in particular, the first Antonine phase in the retentura has not been excavated and it is only supposition that the space, which is admittedly adequate for an ala, was actually used for barracks or stables at all.[40] The identity of the unit assigned by Richmond to the retentura is founded on a dedication from Newstead which had been erected by a decurion of the ala Vocontiorum (RIB 2121). Although undated, the inscription is crudely cut in a cursive script, unparalleled by the other inscriptions from Newstead: a late Antonine or Severan date would seem more likely.[41] A more convincing argument for an auxiliary unit at Newstead in Antonine I can be made for cohors I Cugernorum: the Ingliston milestone (RIB 2313) records repairs carried out to the road between Cramond and Newstead c.A.D.143/6.[42] Although the milestone appears to have been found closer to Cramond than to Newstead, the reference to the distance from Trimontium (Newstead) may be significant: auxiliary units were often responsible for maintaining roads in the vicinity of their bases, recorded on the milestones they set up.[43] A compelling argument for the presence of a mixed force of auxiliaries and legionaries was considered to be the finds from the well in the principia which were thought to include both auxiliary equipment and legionary armour (the lorica segmentata).[44] However, it has been argued that lorica segmentata in the western provinces may also have been issued to auxiliaries.[45] The conquest of Dacia, represented on Trajan's Column, originally inspired the deduction that segmentata was standard legionary issue, but there is equally a suspicion that auxiliaries in Dacia were being supplied with lorica segmentata during the 2nd century.[46] Moreover, as argued above, the contents of the well are unlikely to have been deposited before the end of Antonine II and could well date to the later 2nd century, possibly c.A.D.180 if this is the date of Newstead's final abandonment.[47] The character of the equipment from the well does not therefore provide a conclusive argument in favour of a mixed auxiliary

and legionary garrison and the date of the material can not be Antonine I and consequently can not be contemporary with the dividing wall which was thought to separate the legionary from the auxiliary detachments: the wall was no longer used during the second period of Antonine occupation.[48] If the evidence for the garrison of Antonine I seems scant to say the least, the garrison in Antonine II is still more difficult to identify. Richmond suggested a milliary ala although, since the only milliary ala known to have been in Britain was the ala Petriana and this is believed to have been based at Stanwix in this period, the argument lacks convinction.[49] Although the 12 barracks of the praetentura appear to have been reused, the size of the garrison remains uncertain: to accommodate a cavalry unit of milliary strength, Richmond supposed that the retentura had been fully occupied by stables but that those in the northern part of the retentura had been destroyed by ploughing. However, Curle maintained that the cobbled surface in the northern half of the retentura was an open yard and had never been used for buildings: either way, the case remains unproven.[50] It would seem that the evidence for a mixed legionary and auxiliary force at Newstead in Antonine I is unconvincing and that no conclusions can be safely drawn about the garrison in Antonine II except that the cross-hall added to the principia may be taken to suggest that the garrison included cavalry.[51]

The argument in favour of a legionary presence in the Antonine period would seem to be supported by the discovery of four dedications by C. Arrius Domitianus, centurion of legio XX Valeria Victrix. Three came from the ditch of the east annexe and are personal dedications; to Diana 'on account of favourable results' (ob prosperos eventus) (RIB 2122), a fragmentary dedication (RIB 2125),[52] and one to Silvanus 'for the welfare of himself and his family' (pro salute sua et suorum) (RIB 2124), suggesting that the centurion's family was with him and that he was probably resident at Newstead and not temporarily assigned to supervise the building of the fort or its rebuilding: the discovery of building stones carved with the boar emblem certainly proves that legio XX Valeria Victrix was resposible for construction work at Newstead.[53] The fourth dedication (RIB 2123), this time to Jupiter Optimus Maximus, was found in the well at a depth of 12 feet. Presumably this altar had stood in the principia and had been purposely deposited in the well prior to the abandonment of the fort. There is no suggestion that any of the inscriptions had been reused as building stones and it would seem reasonable to conclude that, as with the armour, they date to the late Antonine period and could have been erected as late as c.A.D.180. The survival of these inscriptions suggests, as in the case of other Antonine inscriptions from Scotland, that they were carefully buried to avoid desecration after the abandonment of the fort. It has been argued that, since Arrius Domitianus is always described as simply a centurion of legio XX, he must have been in command of a legionary detachment and not acting commander (praepositus) of an auxiliary unit.[54] However, it may be observed that Domitianus does not describe himself as commader of a legionary vexillatio either. Arrius Domitianus is not the only centurion attested at Newstead. A dedication to Apollo (RIB 2120) was erected by L. Maximius Gaetulicus and it, too, had been carefully hidden: it was found in an Antonine pit in the south annexe. No legion is specified. Also, the spacing and cruder lettering for the title of legionary centurion, at the end of the inscription, indicates that this was an afterthought, added to the primary text which simply gave the

centurion's name. It may be presumed that Gaetulicus was also at Newstead during the second period of occupation. He may have preceded or succeeded Arrius Domitianus in his command or he could have been at Newstead in charge of another unit or detachment. Fortunately, we know rather more about Gaetulicus. In A.D. 184, as primus pilus of legio I Italica at Novae in Moesia Inferior, he dedicated a statue for the welfare of the emperor Commodus in fulfilment of a vow he had made while an ordinary soldier (tiro) in legio XX Valeria Victrix.[55] Assuming no error in the inscription, he would seem to have served for the remarkable period of 57 years and to have enlisted in A.D.127. His career would allow him to have served as centurion of legio XX at Newstead either under Antoninus Pius or under M. Aurelius before his transfer to the Lower Danube. Gaetulicus also set up a dedication to Jupiter Dolichenus at Great Chesters (RIB 1725). As at Newstead, no command is mentioned. Conceivably, he was in charge of a legionary detachment but there is no reason to assume that this was so: an auxiliary unit was certainly stationed there in A.D.166/9 (RIB 1737) and it seems more likely that he was acting commander of an auxiliary unit or detachment of auxilia.[56]

Although common in the 1st century A.D. and again in the 3rd, the use of legionary centurions as commanders of auxiliary units was a rarity in the Antonine period and invariably, when it is attested, the command is expressed in such a way as to emphasize its unusual character and temporary nature.[57] However, it is in Antonine Scotland that the use of legionary centurions as temporary commanders of auxiliary units is remarkably well-authenticated. Flavius Betto, centurion of legio XX Valeria Victrix and in charge of cohors VI Nerviorum, erected an altar to Victory at Rough Castle (RIB 2144). Another centurion of legio XX Valeria Victrix, commanding cohors I Tungrorum, set up a dedication to the Mother Goddesses at Cramond (RIB 2135). In both cases, the units can be presumed to have been in garrison at these forts on the Antonine Wall. The wife of Flavius Verecundus, another centurion of legio XX, dedicated an altar with her family at Westerwood.[58] In view of the other two examples, it seems most probable that Verecundus was also in charge of an auxiliary force. Another inscription offers a posssible explanation for the use of legionary centurions as auxiliary commanders in Antonine Scotland: Iulius Candidus, centurion of legio I Italica, and acting commander of cohors I Baetasiorum, set up a dedication to Iupiter Optimus Maximus at Old Kilpatrick although Publicius Maternus was still praefectus cohortis. A plausible deduction would be that the unit was based at Bar Hill (RIB 2169, 2170) and that Iulius Candidus commanded a detachment of the unit at Old Kilpatrick.[59] Three, probably four instances of legionary centurions commanding auxiliary units or auxiliary detachments on the Antonine Wall is unparalled elsewhere in the empire at this time. However, given the large number of forts occupied in Scotland during the Antonine period and the generally small size of the forts on the Antonine Wall which must have contained detachments not full auxiliary units, it would not be surprising if there was a shortage of auxiliary praefecti, and that this deficiency was made up by assigning centurions to temporary commands of auxilia or detachments of auxilary units. In which case, the Antonine arrangement which used centurions as auxiliary commanders can be seen as a novel and flexible response to the problems encounted during the occupation of Scotland. Exceptional as this measure was, in comparison with other provinces, it

can be explained as a result of the character and dispositon of garrisons, peculiar to the the northern frontier of Britain in the Antonine period. This circumstance would also calls into question the position of M. Cocceius Firmus, centurion of legio II Augusta, who, like Arrius Domitianus, is commemorated on a series of dedications to a variety of deities which seem to have been buried for safety in a rubbish pit close to the fort of Auchendavy (RIB 2174 - 2177). On one, the centurion recorded that it was set up to himself and his family (RIB 2176): the presumption being that he was resident at the fort and presumably in command and not temporarily there to supervise the building or reconstruction of the fort. Although detachments of legio II Augusta (RIB 2180, 2186) and legio VI Victrix (RIB 2184-5) were engaged in building on the wall in this sector, there is no certainty that the fort held a legionary detachment.[60] A funerary inscription of a soldier of legio II Augusta (RIB 2181) adds a little to the argument in favour of a permanent legionary presence. However, it is equally possible that Cocceius Firmus was in charge of an auxiliary unit or auxiliary detachment.

Consequently it must be concluded that the presence of two legionary centurions at Newstead does not prove that the fort ever contained a legionary detachment. Indeed, the absence of any reference to a command for Gaetulicus and Domitianus in the Newstead inscriptions suggests that the command was not one which they thought appropriate to mention or convenient to inscribe on an altar: all three of the certain instances where the centurions are attested as commanders of auxilia use different expressions to designate their function and none employs the title praepositus.[61] Since the command of an auxiliary force was not part of the centurion's normal career and would be considered an ad hoc, temporary measure and not a promotion, it is hardly surprising that such a variety of terms was used to describe such a post and that it may have been omitted on the altars at Great Chesters, Auchendavy and Newstead. In the case of Arrius Domitianus, as with Cocceius Firmus, it remains uncertain whether he commanded auxilia or a legionary detachment. Maximius Gaetulicus almost certainly did command an auxiliary force at Great Chesters and it seems not unlikely that he did so again at Newstead. Tentative though such conclusions are, the evidence takes us no further.

CONCLUSION

As noted in the introduction to this paper, few solutions can be offered to any of the problems which surround Newstead and its garrison in the Antonine period. However, it does seem that the reconstruction of the armour as proposed by Robinson must be modified. There was no pin to join the front and back-plates but there was a bronze edging which protected the neck from the sharp top of the plates. The method of conecting the front and back-plates was not a rigid arrangement which locked the plates together but both sets of plates were probably joined by leather straps attached to bronze plates and retained by rivets to the inner edge of the left breast and back-plates and looped through the slots in the opposing plates to reach buckles mounted on the left-hand side plates. The date of the armour, far from being contemporary with the Corbridge hoard, should be assigned to c.A.D. 164 at the earliest, possibly as late as c. A.D. 180. The nature of the

garrison of Newstead in Antonine I remains uncertain: the 'dividing wall' between the praetentura and retentura certainly suggests that the two halves of the fort had separate functions and may indeed have served to separate two units although there is no certainty whether the garrison at this period was legionary or auxiliary - or both. One of the units in garrison at Newstead in Antonine I may have been cohors I Cugernorum. The armour from the well and the legionary dedications can be assigned to the second period of occupation. However, the lorica segmentata can no longer be taken as evidence that legionaries were in garrison at Newstead and the two legionary centurions could as easily have been commanders of auxilia as commanders of legionary vexillations. It is to this period, if not later, that the altar dedicated by the decurion of the ala Augusta Vocontiorum can best be assigned rather than to Antonine I. Given the size of the fort, there would be room for additional forces, but, without any evidence for the function nor even the existence of buildings, especially in the northern retentura, even the size of the garrison remains uncertain. Easy solutions to the problem of a garrisons in Antonine forts can hardly be expected: the variety of arrangements on the Antonine Wall illustrate the flexibility of the military dispositions where units could be brigaded together or subdivided as needs required.[62]

Recent excavations and epigraphic finds have highlighted major difficulties in the interpretation of the Antonine occupation of Scotland. They must also call into question the validity of conclusions made about Newstead at a time when the evidence of the inscriptions and the armour appeared less ambiguous than it does today.[63] Frustrating as it seems to be, the difficulties apparent in understanding the role of forts and their garrisons does at least fully reflect the complexity of the solution which the Roman army employed in attempting to deal with its own problem, the occupation of southern Scotland.

NOTES

1. CURLE, 1911, 156-8.

2. This contribution has been inspired by Mr J. Turner's full-scale replica of the Newstead armour, based upon Robinson's reconstruction. I wish to acknowledge also Mr Turner's expert advice and help in considering alternative explanations for the Newstead material. It is anticipated that Mr Turner will continue experimenting with other reconstructions of the armour and that his results will be fully published when the study is completed.

   This paper could not have been written without the co-operation of the Royal Museum of Scotland and, in particular, I wish to acknowledge the help of Mr M. Spearman who allowed me to examine the unpublished pieces of the Newstead armour housed in the museum's reserve collection and to inspect the museum records. He also diligently answered queries and carried out supplementary measurements, a laborious task without which the following observations would not have been possible.

3. The Royal Museum Catalogue notes 49 pieces of lorica segmentata

under the inventory number FRA 117 although an amendment reinterpretes one fragment (FRA 121A) as part of an iron helmet. The published account notes "some 40 pieces" in addition to the 4 pieces of breast and back-plates; CURLE, 1911, 156-7.

4. CURLE, 1911, 47-49 and 116-117.

5. MANNING, 1972, 243-6.

6. None of the items in pit 1 are of intrinsic value. The inscription may well have been deliberately deposited in the pit to avoid desecration by the enemy but it would be wrong to assume that the fragments of armour were necessarily deposited in the well to prevent them falling into the hands of the enemy: a bronze laminated thigh guard had been simply abandoned in room 7 on the north side of the principia; CURLE, 1911, 51: ROBINSON 1975, 185.

7. VON GROLLER, 1900, 95-113; CURLE, 1911, 156-158.

8. CURLE, 1911, 158.

9. Ibid. note 8.

10. WEBSTER, 1960.

11. WEBSTER, 1960, 194.

12. WEBSTER, 1969, 124-6 and figs. 15 and 16. The Corbridge hoard was excavated in 1964: DANIELS, 1968, 115.

13. ROBINSON, 1972, 33; ibid., 1975, 180-1.

14. ROBINSON, 1976, 180. Robinson also took account of the finds from Zugmantel in Germany, see below, note 29.

15. DANIELS, 1968, 125-6; ROBINSON, 1972, 30-33; ibid., 1975, 174-180.

16. This fragment is not included in the publication of the Newstead armour, cf. CURLE, 1911, Fig.11, 157. It is, however, in the reserve collection in the Royal Museum of Scotland and included in the catalogue under the heading FRA 117. See above, note 3.

17. Near the top of plate B1 there is a small square cut as if a rivet had originally passed through a hole at the broken edge, in a position which would could support Robinson's deduction.

18. Robinson refers to the similarity between the lorica segmentata from Newstead and the fragments of armour from Zugmantel where a double sized bottom girdle-plate provides a reasonable parallel; ROBINSON, 1975, 181, 184. See, however, note 29.

19. ROBINSON, 1975, 181; CURLE, 1911, 158 and Fig.11, 4 and 4a, 157.

20. ROBINSON, 1972, 32; ibid., 1975, 181.

21. VON GROLLER, 1900, Fig. 24.

22. See note 2.

23. ROBINSON, 1972, 34; ibid., 1975, 180.

24. ROBINSON, 1972, 33; ibid., 1975, 180 and Fig.181.

25. CURLE, 1911, Fig. 11 no.10, 157.

26. ROBINSON, 1975, 180; CURLE, 1911, 158.

27. CURLE, 1911, plate LXXXI.9 and plate LXXVI.11, ibid., 112 and 131.

28. FRERE & ST. JOSEPH, 1974, nos.22-30, 48 and Fig.26.

29. The only fragments of lorica segmentata which have been recognised as being similar in character to the Newstead type come from the fort of Zugmantel in Germany. Robinson examined this material (which he incorrectly attributed to Saalburg) and identified part of a left breast-plate with a flanged neck: it also had a bronze plate mounted on the edge with a hole puched through it which he took to be for a turning-pin to pass through a slot in a right breast-plate, fastening the two plates together: a method used to fasten the embossed breast-plates used for parade loricae squamatae; ROBINSON, 1975, 184. The attested use of such a fastening for the parade armour is not a helpful parallel: although it is feasible for a breast-plate, its use in connecting the back-plates would present the same difficulty noted in using a pin in the Newstead armour. In September 1987, with the kind permission of Dr D. Baatz, the fragments of armour from Zugmantel were examined in the stores of the Saalburg Museum. The collection (Z.M. 1425) included one portion of a breast-plate with flanged neck c.9 x 7cm and a smaller, irregular piece of iron, c.6.5 x 6.5cm, which retained a bronze plate, c.3.5 x 3cm, held by two rivets in the top right-hand and bottom right-hand corners. The left and bottom left sides of the bronze plate and that portion of the iron plate to which it was attached, does not survive. Originally, it may well have been a square plate (3.5 x 3.5cm) held in place by a rivet at each of the four corners. A hole had been punched through the centre of the bronze plate and through the iron plate to which it was attached. However, the sides are rough and were clearly not intended to hold a turning-pin. It seems certain that the hole originally held a rivet. If this fragment was indeed part of a breast-plate, the bronze plate could have held a bronze loop, as Robinson suggested for the Newstead armour, or, as argued here for the Newstead armour, a bronze attachment for a strap. It would therefore seem that the Zugmantel armour does not help with the reconstruction of the Newstead lorica. However, the general similarity between the armour from Newstead and Zugmantel is of interest given the argument here that the Newstead armour is likely to be late Antonine in date. It has been suggested that, given the circumstances in which the Zugmantel armour was found, this equipment probably dates to a period of destruction or abandonment of the fort either c.A.D.170 or c.A.D.233-60 (Dr D. Baatz, pers. comm.).

30. That the Newstead armour is later than the Corbridge *loricae* and represents a simplified, if more robust model seems an entirely reasonable deduction; ROBINSON, 1972, 34; ibid., 1975, 182. The Trajanic date for the Newstead armour was, however, accepted; ROBINSON, 1972, 33; ibid., 1975, 175; DANIELS, 1968, 126.

31. CURLE, 1911, 116.

32. CURLE, 1911, 113, 116.

33. CURLE, 1911, 49, 116.

34. HARTLEY, 1972.

35. The presence of decorated Rheinzabern ware and mid- to late Antonine potters' stamps from Newstead strongly suggests that, unlike the forts on the Antonine Wall, Newstead contined to be occupied until c.A.D.180; HARTLEY, 1972, 53-4. Precision is clearly impossible but it would be tempting to associate the abandonment of Newstead with the evidence for serious trouble on the northern frontier c.A.D.180/84. Cf. HANSON and MAXWELL, 1983, 197-9.

36. CURLE, 1911, 47-8, 115.

37. Although there is a suggestion of Severan activity at Newstead it does not seem to amount to a full-scale reoccupation of the site; HARTLEY, 1972, 54.

38. RICHMOND, 1950.

39. RICHMOND, 1950, 21; CURLE, 1911, 74-6.

40. RICHMOND, 1950, 21. Given the use of annexes during the Antonine period at Newstead, presumably for temporary encampments and for quartering animals and supplies in transit, a similar function for the *retentura* in Antonine I can hardly be considered impossible.

41. It seems hardly probable that the quality of the inscriptions at Newstead can reflect the status of the units; both the inscription set up by the decurion and those erected by the centurions were personal dedications. The poor quality of this inscription contrasts with the generally high standard of lettering in inscriptions set up on the Antonine Wall. Although RIB 2167 from Bar Hill is similar, the cursive M and the omission of the horizontal line in the A is more typical of the 3rd century cf. RIB 913, 2238, 2241, 2251.

42. KEPPIE, 1983, no.11, 398.

43. Cf. *cohors II Flavia Brittonum* which was based at Sexaginta Prista (Rusé) in Lower Moesia from the middle of the 2nd century and which was responsible for road-repairs along the Danubian *limes* in the vicinity of its fort; POULTER, 1983, 129-30, 586-7.

44. RICHMOND, 1950, 21.

45. MAXFIELD, 1986.

46. Cf. the case of Buciumi which has produced hooks and hinges from loricae segmentatae; CHIRILA et al., 1972, plate CXIII, nos.38,42,47. The cohors II Nervia Brittonum is attested at Buciumi but there is no reason to assume that the fort ever contained a legionary detachment; ibid., 114-120.

47. Above, note 35.

48. RICHMOND, 1950, 15-19,22.

49. RICHMOND, 1950,21. Against this suggestion cf. DANIELS, 1978, 311.

50. RICHMOND, 1950, 21,24.

51. RICHMOND, 1950, 24.

52. That this is another dedication by C. Arrius seems reasonably certain: KEPPIE, 1983, no.2, 392.

53. CURLE, 1911, 144.

54. RICHMOND, 1950, 19-20.

55. Archaeologia (Warsaw) XXXV (1984), 142-3. (I am grateful to John Mann for drawing my attention to this inscription). The length of service of Gaetulicus can be almost matched by another centurion who served during the reign of Antoninus Pius (ILS 2658): his military career spanned half a century.

56. The fragmentary inscription from Great Chesters attests the presence of an auxiliary cohort in A.D. 166/9, apparently a cohors Raetorum (RIB 1737): identity with cohors Gaesatorum Raetorum, a detachment of which was based at Great Chesters and commanded by a centurion (RIB 1724), seems likely. However, this centurion, Tabellius Victor, was probably praepositus of the unit in the early 3rd century and his command provides no support for the view that that the unit was under a legionary centurion in the Antonine period even if it was at Great Chesters under Antoninus Pius; cf. RIB 1216, 1217, 1235, 2117.

57. BIRLEY, 1976, 91-2. Antonine examples of centurions seconded to take charge of auxiliary units are a rarity outside Britain and those cases attested are clearly exceptional; cf. ILS 9127,9173,2615. For a full discussion of the evidence see BIRLEY, 1983.

58. KEPPIE, 1983, no.11, 401.

59. KEPPIE, 1983, o.14, 401-2; HANSON and MAXWELL, 1983, 157-8. A Severan date for the inscription has been suggested; BIRLEY, 1983 75-7 although this seems improbable cf. KEPPIE op. cit.

60. RIB 2179 appears to be a dedication by soldiers of legio II Augusta and perhaps an ala: an oddity in itself but not helpful in resolving the problem of the garrison since it may well be a building inscription; KEPPIE, 1983, no.5, 395. There is scarcely enough evidence to decide the issue. A legionary detachment is possible; KEPPIE, 1985, 33. Equally, Cocceius Firmus may have commanded an auxiliary force; HANSON and MAXWELL, 1983, 167.

61. Instante (RIB 2135); c(uius) c(uram agit) (RIB 2144); c(uram) a(gente) (KEPPIE, 1983, no.14, 401).

62. cf. BREEZE, 1982, 111-112.

63. The nature and sequence of garrisons at Newstead, as proposed by Richmond has remained largely unchallenged. In particular, Newstead has been cited as an example of a fort which certainly was occupied by a mixed garrison of auxiliary and legionary forces; ROBERTSON, 1979, 35-36; HANSON and MAXWELL, 1983, 70.

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