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R.W. DAVIES

PEACE-TIME ROUTINE
IN THE ROMAN ARMY

VOLUME I

Ph.D. Thesis

1967

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P R E F A C E

This thesis represents the results of two years full time study as a State Research Student in the Department of Archaeology, Durham University, from 1963 to 1965. I also spent as much time as my lecturing commitments would permit in 1965 and 1966 in finishing the draft version. No works published after 1st January, 1967, have been consulted in this study, and I started to type the final version on that date.

All the translations from Latin and Greek in this thesis are my own. I have used the convention ... to show a lacuna in the original source and . . . to indicate where I have omitted part of the document. I have converted dates in the Roman and Egyptian calendars to the equivalent English ones. I have omitted titles of rank, such as vir clarissimus, and also the full nomenclature of Emperors, in my translations, as it is virtually impossible to obtain apt modern equivalents.

The notes will be found at the end of each chapter. Most paragraphs have a number at the end, which refers to the number in the notes. Where a paragraph ends in a quotation in single spacing, the number has been given immediately before the quotation, to avoid confusion. In the notes under any given number, a key word in the text is quoted and the reference given after a dash.

Cross-references are given to the number in the notes, not to the page in the text. I have tended to use standard abbreviations or ones that will be easily recognisable for Latin and Greek texts, epigraphy, papyri, ostraca, and journals. However, for certain works on military and also general topics, to which reference has been frequently made, I have employed my own abbreviations, which are explained below. Where a number is given in brackets after a page reference, it refers to the item on that page with that number.

There now remains the pleasant task of acknowledging the assistance most willingly given by various people. I wish to thank Dr. J.C. Mann and Dr. B. Dobson and other members of the seminars in the Archaeology Department for discussion on various topics put forward in this thesis, which were first propounded to them. I should also like to thank Prof. J.F. Gilliam for discussion on several points, which are now incorporated in this thesis or in articles in the press to which reference is made. To my supervisor Prof. E. Birley go my thanks for all his kind help and advice over the years and for reading the draft version of this thesis. Finally, but by no means least, I am indebted to my wife, Janet, for her help in reading the draft, correcting spelling mistakes, improving the English, and also the onerous task of proof-reading the final version.

Leeds.

R.W.D.

ABBREVIATIONS

1. Military

Cagnat - R. Cagnat, L'Armée romaine d'Afrique (second edition).

Cheesman, Auxilia - G.L. Cheesman, The Auxilia of the Roman Imperial Army.

Domaszewski, Religion - A. von Domaszewski, Die Religion des römischen Heeres.

Forni - Il reclutamento delle legioni da Augusto a Diocleziano.

Lesquier - J. Lesquier, L'Armée romaine d'Egypte d'Auguste à Dioclétien.

Marichal, Occupation - R. Marichal, L'Occupation romaine de la Basse Egypte: le statut des auxilia.

Parker, Legions - H.M.D. Parker, Roman Legions.

Passerini, legio - A. Passerini, article in Diz. epigr. sv legio.

Rangordnung - A. von Domaszewski, Die Rangordnung des römischen Heeres.

RBKA - E. Birley, Roman Britain and the Roman Army.

RIN - C. G. Starr, Roman Imperial Navy.

Richmond, RLC - I.A. Richmond, 'Roman Legionaries at Corbridge, their Supply-base, Temples and Religious Cults' in AA4, XXI. 127-224.

TATC - I.A. Richmond, 'Trajan's Army on Trajan's Column' in Papers of the British School at Rome, XIII. 1-40.

2. General

ABR - J.W.C. Toynbee, Art in Britain under the Romans.

BR - M.G. Jarrett and B. Dobson (editors), Britain and Rome.

Caprino - C. Caprino et al., La colonna di Marco Aurelio.

Cichorius - C. Cichorius, Die Reliefs der Traianssäule.

Curle, Newstead - J. Curle, A Roman Frontier Post and Its People:
The Fort of Newstead in the Parish of Melrose.

DPP - C.B. Welles, R.O. Fink, J.F. Gilliam, The Excavations at Dura-Europos, Final Report V, Part I: The Parchments and Papyri.

Espérandieu, Recueil - E. Espérandieu, Recueil général des bas-reliefs de la Gaule romaine.

FPRB - P. Salway, The Frontier People of Roman Britain.

HB - I.A. Richmond (revising J. Collingwood Bruce), Handbook to the Roman Wall. (twelfth edition).

Limesführer - W. Schleiermacher, Der Limesführer für Autofahrer und Wanderer.

Petrikovits, römische Rheinland - H. von Petrikovits, Das römische Rheinland: Archäologische Forschungen seit 1945.

Pflaum, Carrières - H.-G. Pflaum, Les carrières procuratoriennes équestres sous le haut-empire romain.

Pflaum - Procurateurs - H.-G. Pflaum, Les procurateurs équestres sous le haut-empire romain.

RCAM - Royal Commission on Ancient Monuments.

Report I [etc] - The Excavations at Dura-Europos, Preliminary
Report of the First [etc] Season of Work.

RFW - V.E. Nash-Williams, The Roman Frontier in Wales.

RHW - E. Birley, Research on Hadrian's Wall.

RNNB - I.A. Richmond (editor), Roman and Native in North Britain.

RR - I.A. Richmond, 'The Romans in Redesdale', in Northumberland
County History, XV.

RWS2 - G. MacDonald, The Roman Wall in Scotland (second edition).

N.B.

Several works have been ascribed to Caesar to facilitate reference.

Aristides means the oration ΕΙΣ ΡΩΜΗΝ

To facilitate reference the epitomes of Dio have been ascribed to Dio.

Vegetius refers to the Epitoma Rei Militaris.

Aristides, 72a:

Περὶ δὲ τοῦ πάχιου καὶ τῶν κατὰ στρατειας νυν
καιρος εἰπεῖν, ὅπως αὐτὸν καὶ τοῦτο ἐπενοησάτε καὶ
ἡγετικὰ ταῦτα αὐτῶν ἀπεδοτε.

Josephus, B.J., 3.104, on the results of military discipline:

Ἄντες δὲ τε εἰρηνή καὶ σπονδαί εἰναι.

Aristides, 88, on Roman military organisation.

Πως οὖν ἐπερ πασαν ἀνθρωπινην ταῦτα ἔστιν;

PEACE - TIME ROUTINE
IN THE ROMAN ARMY

CHAPTER I

INTRODUCTION

Many scholars of various nationalities have studied the separate parts of the Roman armed forces and different military aspects and have produced learned books and papers on these topics. Some have studied the organisation and relative seniority of various NCOs and specialists, others the armies of provinces, such as Egypt, Africa, and Germany; others have investigated the background of officers and soldiers, promotion and transfer, the pay, savings, and superannuation, the religious life, recruitment, discharge; some have studied the equipment of the troops, others pictorial representations of the army. However, no one as yet seems to have studied in any detail what the army did when it was not engaged in fighting. There were many times when a soldier must have joined his legion or auxiliary cohort or ala and seen little if any warfare during his quarter of a century in the armed forces; the history of Britain, for example, in the second century is very turbulent, but literature, epigraphy, and archaeology show little evidence for large scale fighting after the Severan reorganisation. This thesis is an attempt to illustrate some of the numerous routine duties that the various units would be engaged upon in time of peace.¹

The units of the Roman army that have been studied in this thesis are the legions and the auxiliary cohortes and alae. The fleets have not been studied because they are an entirely separate arm of the military forces. The numeri and the cunei have been ignored because they appear to have had lower standards of living and to have been an inferior grade of troop to the legionaries and auxiliaries; furthermore, there is very little evidence for them, let alone for their routine. The Praetorian

Guards represent the other extreme in both standards and the amount of evidence available about them. However, they have not been studied either, for several reasons: in the first two centuries their duties and employment are totally different from those of the militia provincialis and hence the intense dislike and jealousy that the legionaries felt for the Italian troops; certainly arresting, guarding, and executing members of the Imperial family or people suspected of attempting to become the new Emperors, attending theatrical performances given by the Emperor, giving special ceremonial demonstrations, attending with the Emperor State functions, acting as waiters, and other tasks were not part of the peace-time routine of the legionaries or auxiliaries; although in time of war the Guards were supposed to be the crack fighting troops, in time of peace they were more often than not badly under-exercised. Thus there is a ring of truth in the alleged sneer of Severus in A.D. 193 that the Praetorian Guard were not warriors but parade-puppets. However, when Severus later that year disbanded the Praetorians and replaced them with men from the legions, and as Italy became more like the provinces, the differences in the third century lessened. Similarly the Urban Cohorts and the Vigiles are not studied because they are not representative of the army as a whole. The Equites Singulares Augusti are in the same category.²

The period under study is basically that of the Principate. The first of the Emperors was Augustus who was responsible for introducing the standing army ($\sigmaτρατιώται$ $\alphaθανάτοι$), making a thorough military reorganisation, establishing fixed rates of pay, bonuses,

length of service, and rewards on discharge, and who also revived discipline. However, as the records and evidence for the army under Augustus are scanty, there is little detailed information about the methods and procedures used at the beginning of the Principate. It has therefore seemed desirable on occasions to provide examples from Caesar; although he was not strictly speaking an Emperor, as Dictator Caesar was nearer to the Principate than to the Republic; moreover, his troops were inherited by Augustus and formed the basis of the standing army. The end of the period studied is not the accession of Diocletian in A.D. 284 but approximately A.D. 250. This date has been chosen for several reasons: in the second half of the third century epigraphic evidence is very scarce, as are military papyri, and there is virtually no reliable literary evidence; during this time it is clear that far-reaching changes in the organisation and methods of the army occur, in particular during the reign of Gallienus and perhaps to a lesser extent under Aurelian, which culminate in the drastic reorganisation by Diocletian into the army of the Later Roman Empire; the detailed records of cohors XX Palmyrenorum end in A.D. 256. For all these reasons it has seemed best to stop at c.A.D. 250 at which date the army seems basically to be using still the earlier methods. The period discussed then is the best part of three centuries; occasionally, however, if some particularly good example of some point of military procedure in peace-time occurs in the literary sources outside that period, it has been used, but only if parallels from the Principate are also known.³

primary ones, literature and papyri. These, like any others, have their uses and, it must be realised, their limitations. Tacitus, Dio, and to a lesser extent, Herodian and Suetonius, provide details of how the Roman army operated in time of war, when they were using procedures that would also be employed in peace-time. However, all these authors do provide information about the army in time of peace but then generally in connection with some other theme, a rebellion, for example, or a breakdown in discipline. Even so, it is possible to deduce the normal conditions and procedures when those described are specifically stated to be non-standard. It should be realised that these authors did not design to describe in detail what these normal arrangements were because, of course, there was no need to do so. An important outside view on the Roman army is provided by Josephus who knew of its effectiveness from experience gained while fighting against it and later on its side. Another outsider, this time a Greek, who could similarly give a point of view other than a Roman one, was Aelius Aristides; in his speech delivered to Rome in A.D. 143 or 144 he provides many details of its role in peace-time. Other authors who shed light on the workings of the army in time of peace are Pliny the Younger, Fronto, Appian, Philo, and Eusebius. The biographies of Emperors from Hadrian onwards allegedly written by six authors known collectively as the Scriptores Historiae Augustae have a mixed value. The lives of the major Emperors for most of the time covered by this thesis seem to be on the whole of basically sound origin and are therefore treated as being of some value; those of the lesser Emperors and pretenders are considerably less reliable and can only be used with caution. Similarly, Aurelius Victor provides a little

information that is not otherwise known.⁴

In addition to these books of history, biography, letters, and oratory, there are several technical works on the Roman army. Those compiled by Arrian are unique and they are the products of actual conditions and circumstances that arose when he was serving as the governor of an important military province: a report on a tour of inspection of the Black Sea which he made in A.D. 131, a copy of the battle dispositions to be made in case of an attack by the Alani, and a manual of cavalry exercises composed in A.D. 136. However, it should be realised that these are not what they appear to be at first sight; the first is stated to have been a private version of the formal Latin report submitted officially, and the second, also in Greek and with Arrian mentioned under the nom de plume of Xenophon, is clearly a polished literary version of the original, also intended for publication. The military manual on cavalry training and exercises (the one he composed on the infantry on the orders of Hadrian is unfortunately lost) may well have been intended for publication to civilians in Greek because that was the language used by many previous strategists. However, as both manuals are stated to have been commissioned by the Emperor, there can be little doubt that there were military versions in Latin too. Of all the books on the Roman army, that of Vegetius is the most valuable and also the most interesting. However, it must be used with a certain amount of caution; his sources range from the mid-Republic to the later second century A.D., and he also adds information about the army of his day. Little attempt is made to separate these sources of different dates, and he seems at

times oblivious of the fact that some changes in tactics and procedure are only to be expected in a period of almost half a millenium; he also lacked sufficient powers of discrimination at times and his mathematics are on occasions poor. However, he still remains the most important single literary source and has been quoted where there is good supporting evidence for his statements or where he can be shown to be writing about the army of the Principate.⁵

There are also several other works of a technical character which are of less importance. The distinguished general Frontinus wrote two works on the Roman army which were used as a source by Vegetius; the one that has survived is devoted to stratagems and is of comparatively little value to this study except that it reveals a few details about training and exercises; the lost work on strategy would have been of far more value but may well be preserved in part in Vegetius. Hyginus composed his volume on castrametation probably in the period A.D. 168-177. The first part is mainly concerned with the size of units, the second with the camp itself; as the temporary camp in war and the permanent fort in time of peace had basically the same arrangements, he is of some use. Onasander's book on the duties of the general was dedicated to the distinguished Roman general Q. Veranius, who was consul ordinarius in A.D. 49; detailed analysis of it shows that it is on the whole heavily indebted to earlier Greek and Hellenistic strategists but some instances are clearly applicable to the Roman army. The collection of stratagems compiled by the schoolmaster Polyaenus to help Marcus and Verus in the Parthian wars is virtually useless for the purposes of this thesis.⁶

Whatever the evidence provided by the primary, secondary, and technical literary sources may be for the procedures of the Roman army, it is the papyri and parchments, especially the military documents, that reveal the actual day to day details of the running of the Roman army in time of peace. However, here again there are limitations which must be stated and recognised. The military papyri come almost exclusively from two provinces, Egypt and Syria. In the former instance there is a wide selection of documents for legions, alae, and cohorts over a considerable period of time. Egypt differed from all the other provinces in the Roman Empire in several ways and these are reflected in the units of the army in garrison there. The military governor, the commanding officer and also the second in command of the legions were all equestrians, although elsewhere they were men of senatorial rank; this, however, had perhaps only a minor effect on the administration and day to day running of the legions. The status of the Egyptians themselves and also of the citizens of Alexandria was unusual and complicated, as is shown in the *'Ιδιος Λογος*, and hence not all the details about the sources of food and supplies provided by the documents of Egypt are necessarily exactly applicable to armies in other provinces, because the system of taxation differed; Egypt was for several decades the only province in which two legions were brigaded together; here the pay seems to have been given in the local currency and not the Roman.⁷

The documents of the army of Syria comprise the archives of cohors XX Palmyrenorum from Dura-Europos. This is of great advantage in that it provides detailed records for a period of half a century for one unit,

enabling far more continuity and depth to be achieved. Thus it can be shown that the process for the supply of horses for the unit remained the same throughout the whole of the period but that differences in the presentation of the morning report, and hence of the arrangements of the morning parade also, developed over a comparatively short time. Again it must be stressed that the papyri too have their limitations and it is all too easy to be tempted to generalise and to come to conclusions that are not necessarily valid. The military papyri from Egypt and from Dura each contain many documents that are not found in the other; it may well be that some of the procedures visible in the day to day running of cohors XX Palmyrenorum were peculiar to that unit and not applicable to all others; certainly the strengths of the centuriae and turmae of the cohort fluctuated widely for reasons that we cannot fully understand and the table of organisation of the unit is completely contrary to what the normal establishment is believed to have been.⁸

Finally it must be realised that we possess the many documents from Egypt because of a fortunate combination of a favourable climate, suitable method of preservation, and widespread and intensive archaeological excavation. The papyri from Dura have survived because in a crisis the commander decided that these documents in the files - but apparently not others - were not indispensable and could therefore be used with other material to make an emergency rampart, which thus preserved them although the town was destroyed. In the end, it should be added, a papyrus is only as good as its reading.⁹

Ostraca are like the papyri in that they reveal the day to day details of life that would not otherwise be known; perhaps the best example of this - and by far the most interesting - is the collection of letters from Wadi Fawâkhîr illustrating the wishes and life of a group of auxiliary soldiers on duty in a remote part of Egypt. Other ostraca provide details of the collection and distribution of various supplies and food for the army. However, the same limitations enumerated above for the papyri apply also to the use of ostraca as evidence.¹⁰

Epigraphy has proved to be of use also. Inscriptions such as those containing the adlocutio of Hadrian to the army of Numidia and to a lesser extent the epitaph of Soranus are almost literature rather than epigraphy. Inscriptions reveal evidence of the ranks and technical grades of the army and thus of the duties on which these personnel were employed. Dedications often reveal evidence of the actual work that troops carried out: buildings that they constructed, mines or quarries where they worked, supervised, or guarded. A special category of epigraphy is tituli picti and graffiti; both, for example, when on amphorae reveal invaluable information about the food the troops ate; the latter also give a good indication of the thoughts and activities of the troops in idle moments. Careers such as that of M. Valerius Maximianus provide valuable insight into the vast range of military duties that an officer might carry out. However, it should be stressed that epigraphy has been used purely as a supplementary source of information, to add further details to the evidence provided by literature and papyri.¹¹

Archaeology has been employed but only in a minor role. It has been regarded as of use as a means of supplying supplementary evidence or confirming other sources. In addition of course to providing such other sources of information as inscriptions, papyri, and sculptures, archaeology reveals the buildings in which the troops lived in peace-time and the many objects that they used: the number of tools found at most forts, for example, shows the wide range of crafts and trades followed by the specialists; the store of nails at Inchtuthil indicates that stockpiling must have been common. The examples of parade helmets found in various forts, particularly at Newstead, confirm Arrian's statements that the Roman cavalry used them and adds that there were more types than those described by him. At times archaeology is of primary importance or even almost the exclusive source of information; the analysis of bones, for example, reveals the details of the military diet, the practice-camps or mock siege works the reality of manoeuvres. Occasionally, as in the discovery of supports for shelves or cupboards in the records offices in principia, it is possible to see how and where the army used to keep its records. In citing archaeological examples preference has been given to British ones, partly out of convenience, partly because some element of choice must be made, but mostly because, as Mommsen realised, British examples are frequently the best or only ones.¹²

The study of sculptures and pictorial representations provides many details about life in the Roman army that would otherwise never be known. The best sources of the latter are the Columns of Trajan and Marcus. Although these are admittedly portraying the Roman army in action, it is

legitimate to draw on them for parallels for the methods of the Roman army in peace. A soldier will have reaped corn in the same way and constructed buildings with the same tools in both cases; both Columns depict pontoon bridges which the troops had constructed to cross rivers into enemy territory but it is known that they constructed these same bridges in time of peace while on manoeuvres, as part of their training, so that they could do the same in war. Most of the sculptures are reliefs on tombstones. Nearly every cavalryman wished to be remembered by posterity as spearing a fierce native while at full gallop; the very fact that this is so standard a portrayal arouses the suspicion that quite a few did not in fact die in this manner, but the relief is of great use for showing how the eques had been trained and exercised in time of peace in these very skills. Many centurions wished to be remembered as resplendent figures in their ceremonial uniform; Calidius was so proud of his that he actually commissioned a picture of it and not of himself, in which he confirms Vegetius's statement about the crest on a centurion's helmet being transverse and adds the information that a centurion had a horse on such ceremonial parades. Other ranks tended to be depicted as munifices; some therefore wore their full battle kit, others working clothes, others undress uniform. All this is of use in providing a picture of the soldier at work in peace-time. Others had themselves depicted doing the tasks that they had done while alive, such as driving carts containing food or supplies or as a speculator being conveyed on a tour of inspection. At Dura several soldiers had portraits of themselves made with the tools of their trade, an actuarius with box, pen, and ink-box, a tesserarius carrying his tessera, an architectus holding a

mason's hammer. Other official reliefs depict the soldiers carrying out various tasks: on the bases of the pillars in the Flavian principia at Mainz, for example, a legionary advances using his scutum to protect himself and with his gladius in the correct position, another carries all his equipment on a route march and seems decidedly unhappy about the whole situation. Other reliefs depict cavalrymen carrying the 'Scythian' standards.¹³

The various topics discussed in this thesis have been divided into separate categories. 'Guard Duties', 'Training and Exercises', and 'Manoeuvres' are all self-explanatory; for guard duty the literary evidence for time of peace is slight and the structure of the system can only be built with difficulty; the papyrological evidence too is surprisingly small. On the other hand, for training and exercises, both sources supply an abundant amount of information and a certain amount of repetition has been unavoidable in dealing with the individual items, because one literary reference may mention several different types of training or exercise. Again, the dividing line between training and exercises and manoeuvres is at times slight, but I have made the division which has seemed best. 'Administration and Paperwork' describes the way in which a legion or auxiliary cavalry regiment or infantry battalion was run, with examples of the documents. 'Parades and Inspections' is concerned with those ceremonies which a soldier would regularly or periodically undergo during his service. 'Supplies' deals with the collection, storage, and distribution of all types of items needed by the army with the exception of food, to which a separate chapter is

devoted. By 'Paramilitary Duties' I mean those which, as the title suggests, are not matters which can be described as one hundred per cent military but which do in fact have a strong quasi-military purpose. 'Other Duties' refers to those which are not strictly military but on which soldiers were employed. In the chapter on individual duties an attempt is made to describe the tasks that several individuals or classes of soldier would be involved in and also tables showing a detailed analysis of duties for all troops are given. 'Off-duty' is a brief outline of some of the ways a soldier could spend his free time. The epilogue poses the question, 'Was life endurable under peace-time routine in the Roman army?'

In this thesis I have attempted to keep as far as possible to the principles enumerated in this introduction. It has, however, been inevitable that I should occasionally depart from those outlined above. Examples have naturally been chosen as far as possible from time of peace, but occasionally I have been compelled by lack of suitable material from peace-time to illustrate a topic from war conditions; thus the pridianum of A.D. 105 is quoted as well as that of A.D. 156 because, as both are incomplete, the former lists very many details that the latter does not. Similarly a few examples have had to be quoted from outside the period under study when they alone are highly informative and in the same way a few examples are drawn from other parts of the armed services. A certain amount of repetition has been inevitable but it has been kept to the minimum amount practicable. It should be stressed that in dealing with each individual item in each chapter the illustrations given are only representative and make no claim to be exhaustive. Throughout

the thesis I have chosen only those examples from my files which have seemed to me to be the most suitable and apt for any given item.

CHAPTER I: INTRODUCTION

NOTES

1:

scholars - cf. the many articles in HE and the bibliography in Parker, Legions, 287ff.

seniority - Rangordnung.

Egypt - Lesquier.

Africa - Cagnat.

Germany - E. Stein, Die kaiserlichen Beamten und Truppenkörper im römischen Deutschland unter dem Prinzipat; Petrikovits, römische Rheinland, passim.

background - RBRA, passim.

promotion - Carnuntum-Jahrbuch, 1957, 3-20, and 1963/4, 21-33.

pay - Marichal, Occupation; R. Marichal, 'La solde des armées romaines d'Auguste à Septime-Sévère d'après les P.Gen.lat.1 et 4 et le P.Berlin 6.868' in Annuaire de l'Institut de Philologie et d'Histoire Orientales et Slaves, XIII.399-421; P.A. Brunt, 'Pay and Superannuation in the Roman Army' in PBSR, XVII.50-71; A. von Domaszewski, 'Der Truppenzold des Kaiserzeit' in Neue Heid. Jahrb., X.218-241; G.R. Watson, 'The Pay of the Roman Army' in Historia, V.332-340 and VIII.372-378.

religious - Domaszewski, Religion; Richmond, RLC; YCS, VII.

recruitment - Forni; K. Kraft, Zur Rekrutierung der alen und cohorten an Rhein und Donau.

discharge - XVI.

equipment - P. Couissin, Les armes romaines; L. Lindenschmit, Tracht und Bewaffnung des römischen Heeres während der Kaiserzeit; E. Sander, 'Die Kleidung des römischen soldaten' in Historia, XII.144-166.

pictorial - Cichorius; Caprino; TATC.

no one - R. MacMullen, Soldier and Civilian in the Later Roman Empire, does at times refer to soldiers in the time studied in this thesis. However, his treatment of the Later Roman Empire is vastly superior to that of the Principate; in the latter he has placed too much emphasis and trust on the Scriptores Historiae Augustae (far more than I would do) and appears to believe that Severus was responsible for many changes in the use and employment of the army. Nevertheless, it is the only published attempt so far that collects the material. On the importance of Severus I am grateful to Professor E. Birley for giving me a copy of an unpublished paper on 'Septimius Severus and the Roman Army'.

2:

legions - Parker, Legions, passim; Passerini, legio, passim.

auxiliary - Cheesman, Auxilia, passim.

fleets - RIN.

numeri - RE sv numerus; YCS, VI.71-108.

Praetorian - A. Passerini, Le coorti praetorie; M. Durry, Les cohortes prætoriennes; RE sv coortes praetoriae cohortes.

2 (cont.):

different - cf. Dio, 61.8.

dislike - Tacitus, A., 1.17; cf. 2.67, H., 4.46.

arresting - Tacitus, A., 2.31.

guarding - Suetonius, Aug., 65; Tib., 22, 53.

executing - Suetonius, Tib., 22; Calig., 23; Tacitus, A., 1.6; 11.37-38; 14.58; 15.67; 16.9, 15.

theatrical - Tacitus, A., 14.15; 16.5; Suetonius, Ner., 21.

ceremonial - Herodian, 2.11.9; Dio, 57.24; 59.2; Suetonius, Ner., 7. waiters - Herodian, 2.2.9; 2.13.2.

other - e.g. Suetonius, Tib., 60, 64, 72; Calig., 40, 55; Tacitus, H., 1.23; A., 13.24.

crack fighting - Herodian, 2.10.6; 2.11.9; Dio, 64.10; 74.16; Tacitus, H., 1.23; 2.19; A., 15.67.

Severus - Herodian, 2.10.2.

replaced - Herodian, 2.13.3ff; Dio, 75.2.

Urban - RE Suppl. X.1125-1140 sv urbanae cohortes; Freis also has a book in the press on this subject.

Vigiles - Baillie Reynolds, The Vigiles of Imperial Rome.

Singulares - M. Speidel, Die Equites Singulares Augusti.

3:

Augustus - Dio, 52.27; 56.40; RE VI, 1604; Klio, 26.360-362.

literary evidence - there is of course no Dio or Herodian and the

Scriptores Historiae Augustae and Aurelius Victor are of little value.

Diocletian - D. van Berchem, L'armée de Dioclétian et la réforme
constantinienne; A.H.M. Jones, Later Roman Empire, passim.

A.D. 256 - DPP, 23.

4:

Tacitus - especially in A. and H. and also Agr.; to a lesser extent in Ger.

Suetonius - the most useful lives are Jul., Aug., Tib., Claud., Vesp., and Dom.

rebellion - e.g. Tacitus, A., 1.16-49.

breakdown - e.g. Tacitus, A., 11.18; 13.35.

Josephus - B.J.; useful information at times in Ant.

Aristides - I have followed the text of and for the most part the interpretation of J.H. Oliver, 'The Ruling Power', in Transactions of American Philosophical Society, 43.871ff.

Pliny - Ep., especially book 10; to a lesser extent Pan.

Scriptores - this is not the place to go into a detailed discussion of the relative merits of each life, but I am indebted to Professor E. Birley for advice and discussion in coming to these conclusions.

Victor - Caes., Epit.

5:

inspection - Peripl.

Alani - Ekt.

manual - T.T.

Latin - Peripl., 6.2; 10.1.

Xenophon - Ekt., 10.

5 (cont.):

cavalry training - the best discussion is by F. Kiechle, 'Die "Taktik" des Flavius Arrianus' in 45 BerRGK., 87-129.

infantry - T.T., 32.3.

sources - Vegetius, 1.8; 2.3. I am unable to agree with the conclusions of D. Schenk (Klio, 22) in his attempt to assign each book of Vegetius to a specific single source.

6:

stratagems - Frontinus, Strat.; there are considerable doubts as to whether book 4 was in fact composed by Frontinus.

strategy - cited in Frontinus, Strat., 1.pr.

Hyginus - M.C.; for date cf. Actes du deuxième congrès international d'épigraphie grecque et latine, 234, and PIR2.H.238. The best edition is that of A. von Domaszewski.

Onasander's - Strat. cf. RBRA, 1-9, especially 9.

Polyaenus - Strat.

7:

exclusively - the only notable exception that springs to mind is CLA 219; this however was taken to Egypt and preserved there. Perhaps also PSI 729.

Egypt - a useful selection is contained in S. Daris, Documenti per la storia dell'esercito romano in Egitto. It must, however, be used with a certain amount of care cf. my review of it in JRS, LVI, 242-243.

differed - cf. A.C. Johnson, Roman Egypt, pref.; AJP, 77.359-375.

status - BGU 1210.

two legions - RBRA, 23-24.

pay - Historia, V.332-340 and VIII.372-378 discuss the point.

8:

cohors XX - DPP, passim.

half a century - ibid., 25-27.

horses - P.Dura 56 and 58; cf. YCS, XI.171-189.

morning report - P.Dura 82 and 89; DPP, 270-278, 281-286.

not found - DPP, 36.

strengths - ibid., 28-31; TAPA, 78.159-170 and 84.210-215.

9:

crisis - DPP, 36.

reading - this is a most important point which is often not noticed sufficiently. The recent work by Marichal in re-editing military papyri in CLA and to a lesser extent the readings in DPP as compared with the first ones, serve to emphasise this caveat.

10:

Wādi Fawākhīr - O.Guéraud; cf. the discussion in the publication, 'Ostraca grecs et latins de l'Wādi Fawākhīr' in Bulletin de l'institut français d'archéologie orientale, XLI.141-196.

other ostraca - O.Tait, passim; WO II.28-46, SB 6953-76; C.Préaux, 'Ostraca de Pselkis de la Bibliothèque Bodléenne' in Chronique d'Egypte, 26.121-155.

11:

Epigraphy - for the use of epigraphy in the study of the Roman army cf. E. Birley, 'The Epigraphy of the Roman Army' in Actes du deuxième congrès international d'épigraphie grecque et latine, 226-238.
adlocutio - VIII 18042 = ILS 2487, ILS 9133-5a.

epitaph - III 3676 = ILS 2558.

ranks and technical - used to great effect in Rangordnung; cf. also Passerini, legio, which is mostly confined to epigraphy.

buildings - cf. Chapter X: Other Duties, n.18ff.

worked - cf. Chapter X: Other Duties, n.29; Chapter VII: Supplies, n.42. supervised cf. Chapter X: Other Duties, n.30.

guarded - cf. Chapter IX: Paramilitary Duties, n.40.

food - cf. Chapter VIII: Food, n.36-38.

thoughts and activities - cf. Chapter V: Administration and Paperwork, n.24; Chapter XII: Off-duty, n.11.

Maximianus - AE 1956 124; Carrières, 476-494 (181bis).

12:

Archaeology - e.g. R.G. Collingwood, Roman Britain.

sculptures - Germania Romana provides a useful selection.

buildings - J. Ward, Romano-British Buildings and Earthworks, passim.

tools - e.g. Curle, Newstead, 277ff.

Inchtuthil - JRS, LI.160.

parade helmets - cf. Chapter VI: Parades and Inspections, n.26-31.

bones - cf. Chapter VIII: Food, n.26.

practice-camps - cf. Chapter III: Training and Exercises, n.85-87; Chapter IV: Manoeuvres, n.17.

siege works - cf. Chapter IV: Manoeuvres, n.18.

shelves or cupboards - cf. Chapter V: Administration and Paperwork, n.23.

British - cf. I.A. Richmond, 'Roman Britain and Roman Military Antiquities' in Proceedings of the British Academy, XLI.297-315.

13:

Trajan - Cichorius; cf. TATC.

Marcus - Caprino.

corn - e.g. Cichorius, taf.CX.

buildings - e.g. Cichorius, taf.XV-XVII, XX, LX, LXV, CVII; Caprino, tav. LII, fig.103.

pontoon bridges - Cichorius, taf.IV-V; Caprino, tav.IV+V, fig.9+10; cf. Chapter IV: Manoeuvres, n.19.

cavalrymen - e.g. from Britain: RIB 108, pl.III; RIB 109, pl.IV; RIB 121, pl.IV; RIB 159, pl.V; RIB 201, pl.V; RIB 1172, pl.XVII; RIB 2139, pl.XVIII (dedication slab but it depicts the trooper in a similar situation); cf. also RIB 2030.

centurions - e.g. RIB 200, pl.V; cf. E.Sander, 'Die Kleidung des römischen soldaten' in Historia, XII.144-166, taf.VIIa.

Calidius - ibid., taf.VIIb.

other ranks - ibid., taf.I and III.

carts - ibid., taf.IVa+b.

speculator - ibid., taf.IVc.

13 (cont.):

actuarius - Report VI, 291-292, pl.XLIV.1.

tesserarius - ibid., 292-293, pl.XLIV.2.

architectus - ibid., 297, pl.XLV.3.

Mainz - Germania Romana, taf.IX.6.

'Scythian' - cf. Chapter VI: Parades and Inspections, n.32.

CHAPTER II

G U A R D D U T I E S

The need for guards and sentries in time of peace and war in any army is obvious and in the case of the Roman army abundantly attested by the ancient authors (more militari vigiliae deducebantur). There were various types of guard duty and accordingly different technical terms. Statio seems to be a general term for guards or a picket; vigiliae and vigiles are used for men posted at night; excubiae, agrariae, and procubitores seem to mean men on guard outside the camp; custodia generally means a guard at a specific post, e.g. a gate; praesidia is another general term. Although each term may originally have had a precise meaning for a definite function, it is quite clear that in the literary sources such precision is often lost; Vegetius, for example, talks of excubitum noctibus faciunt, although Isidore gives the definition excubiae autem diurnae sunt, vigiliae nocturnae. Tacitus couples stationes et vigiliae so frequently that he must mean little more than 'the men on guard duty', although perhaps the former means that they were stationary at a post, the latter that they were mobile.¹

The system of mounting guard on active service in the army of the Republic is described in great detail by Polybius. He states that during the night guards were stationed at the gates and on the ramparts, at key positions inside the camp such as the quarters of the commanding officer and senior officers, the quaestorium, and among the tents of the various parts of the army. The arrangements for stationing the guards during the day were similar; the picket consisted of four men or a multiple of four ($\delta\deltaoac\iota\delta\epsilon\ kai\ \phi\lambdaakeia\ \delta\nu\ -\ \tau\delta\epsilon\ \phi\lambdaakeio\mathfrak{v}\ \hat{\epsilon}\beta\tau\iota\ \hat{\epsilon}\kappa\ TETTarpwv\ \hat{\alpha}\nu\delta\rho\mathfrak{w}\mathfrak{v}$). His description

can be verified and further details added from the accounts of Livy and Caesar. No description with such great detail exists for the guards and sentries of the army of the Imperial era on active service, but descriptions of the army in Tacitus and Josephus suggest that the procedures were not dissimilar. The best description is that given by Vegetius:²

"Then the legionaries and auxiliaries, cavalry and infantry, are assigned sites in the camp to pitch their tents; from each century four cavalrymen and four infantrymen form the guard at night. Since it seemed impossible for all the sentinels to remain awake at their post, the watches were divided by the clock into four, so that it was not necessary for a man to stand for more than three hours in the night. All the watches are mounted by calls on the tuba and relieved by calls on the cornu. Therefore the tribuni choose men who are suitable and very reliable to make the rounds of the watches and to report back anything they found amiss; they were called circumitores and now it is a military post and they are called circitores. Moreover, it should be known that cavalry should form the guard beyond the rampart at night; during the day in a pitched camp different men should form the outposts, some in the morning, others in the afternoon, because of the fatigue to man and horse. Another important duty of the general is to provide for the protection of pastures, the convoy of corn, the provision of water, wood, and fodder; this can only be achieved by posting detachments in suitable positions along the lines of transport."

It should be noticed that by his reference to at least four equites legionis in each century, Vegetius is referring to the reorganised army of the Later Roman Empire. He is also not quite consistent with an earlier statement:

"Whenever the troops are acting as guards or are in outposts, they begin and end each duty at the call of the tuba."

Polybius, Livy, Sallust, and other authors state that in the Republic the third musical instrument, the bucina, was used. Josephus notes:

"The hours for sleep, guard duty, and rising are announced by the sound of the trumpet ($\gamma\alpha\lambda\pi\iota\gamma\zeta$); nothing is done without a word of command."

Several passages from Tacitus suggest that it was the tuba that was used. However, from other evidence it seems clear that on the whole Vegetius's description is correct and applicable to the Imperial army. He refers to three separate types of guard duty: during the day, during the night, and outside the camp.³

Vegetius states that during the night on active service there were four separate watches, and there is ample evidence to support this. Because the Roman method of measuring time differs from the modern, three hours during the night to the Romans meant one quarter of the time between sunset and dawn, which would, of course, be longer or shorter than 180 minutes now, depending on the time of year. An inscription from Rome gives the length of hours of the day and night for each month. It is known that adjustments could be made periodically to the water-clocks to counteract this. Caesar's army had brought a water-clock with them and while measuring the hours for the night watches discovered that the nights in Britain were shorter than on the Continent. A horologium was discovered at the legionary fortress at Neuss and this presumably was the responsibility of the horologiarius, such as M. Ulpius Mucianus of legio XIII Gemina. There are many instances where Caesar uses the various watches to give a time during the night. Hyginus states that two contubernia from each of the centuries formed the vigiliae, that is sixteen men from each of the centuries or slightly under one thousand men per legion. The multiple of the squad of four men should be noted. However, the number of troops on guard duty would depend on how near the enemy were and it is known that they were increased and decreased accordingly.⁴

Guards were also stationed during the day time, and many of the references already given either refer to or are applicable to such duties during the hours of light. Literature provides many examples of sentries and guards mounted at the gates of a fort or camp, outside the quarters of the commanding officer, and in the headquarters building, as well as sentinels on the walls or ramparts and men acting as advance guard. The evidence for the third of Vegetius's categories of guard duty, a detachment outside the camp, to guard lines of communication or for other purposes, is attested and will be dealt with separately.⁵

There is thus abundant evidence that on active service the Roman army had a properly organised system of sentries and mobile guards both inside and outside the camp; passwords were issued and an officer of the watch was responsible for doing the rounds and changing the guard. Clearly guards were also needed in peace-time, but presumably on a smaller scale. However, the literary sources provide only a little information, but this, especially in Tacitus, strikingly confirms the procedures used during times of war. Corbulo is said to have found in A.D. 57 that there were men in the army of Syria who had served their full time, but had never experienced such camp duties as keeping guard (veteranos qui non stationem non vigilias inissent). Similarly, the large forces of Vitellius assembled in Rome in A.D. 69 non servare vigilias; but all discipline in that army had long since vanished, the units were not kept together, and they were quartered in a city with no enemy at hand. Tacitus makes it quite clear that such slovenly discipline was the exception and not the rule, and that all units even in peace-time were

supposed to do guard duty among the munia castrorum. The rebellious legionaries in A.D. 14 in Lower Germany refused to pay any attention to their own senior officers, but themselves supervised the various arrangements of the guards (vigiliis stationes et si qua alia praesens usus indixerat ipsi partiebantur). Similarly, the rebellious legionaries of Pannonia continued to mount guard on the gates and other key positions in the camp (portas stationibus firmant globos armatorum certis castrorum locis opperiri iubent). When the moon was eclipsed, the terrified soldiers immediately sounded the musical instruments in an attempt to make the moon return to normal (igitur aeris sono tubarum cornuumque concentu strepere); it is tempting to assume that they were able to do this immediately, because there were several tubicines and cornicines ready to sound the changes of the watch, as Vegetius notes, and in the same chapter Tacitus states that the rebels were still carrying out guard duties (vigiliis stationibus custodii portarum se inserunt). Again in A.D. 16 before the battle of Idistavaeso Germanicus was able to wander round the streets and tents of the camp disguised in an animal skin; the vigiles did not discover his true identity clearly because there was nothing unusual in a musician making his way round camp at night.⁶

Further detailed information is provided by Philo. A century of Praetorians under their centurion Bassus were sent in late autumn of A.D. 38 to arrest A. Avillius Flaccus, the Prefect of Egypt. They met one of a squad of four men on guard (στρατιωτην δε τινα των εν τοις τετραδιοις φυλακων καθ' οδον) in the outskirts of Alexandria.

They were able to surround the house and arrest Flaccus easily, because he and the praefectus castrorum were dining out at a friend's and had consequently no military escort. Further information about the mounting of the guards is provided by his description of what happened later that night:

"A tumult arose throughout the city and the night watch were running up and down and some of the cavalry were riding at full speed to and from the camp in great haste."

Clearly this is a reference to the equites legionis, and it will be remembered that Vegetius advised that several from each century should be stationed outside the camp at night to act as mobile guards and dispatch riders.⁷

There are several other references in the literary sources that clarify or add further information to the picture of the way in which the Roman army kept its guard system. Corbulo explained to Tiridates that it was normal military procedure in the Roman army for a centurion to report the beginning of each watch to the commanding officer. At the time the army was not campaigning and Tiridates was very impressed by the efficiency of the peace-time methods. The legal responsibility of the commanding officer is mentioned by Aemilius Macer; he lists among the duties of a commanding officer those of keeping the keys of the gates and making periodic inspections of the guards (claves portarum suscipere, vigilias interdum circumire).⁸

It is quite clear that for each watch there was an officer of the watch, whose duty it was to do the rounds. The precise details for the

army of the Republic are given by Polybius; he had to visit all the sentries and guards according to written orders and co-operate with the centurion responsible for seeing that the bucina was sounded at the right time. Josephus mentions that there was an officer of the watch when describing the siege of Jerusalem in A.D. 70; the senior commanding officers take each watch and make rounds in order of seniority:

"Titus took the first watch and went round and made a personal inspection; he entrusted the second watch to Alexander, and the legati legionis drew lots for the third. The sentries had their allotted hours of rest and throughout the night patrolled the intervals between the forts."

Tacitus provides an example of this: in Thrace in A.D. 26 C. Poppaeus Sabinus doubled the guard at night and went round inspecting them. An incident in A.D. 69 suggests that in a legion several centurions normally made the rounds of the guards and were responsible for sounding the tuba and were themselves answerable to the commander of the legion or his deputy, as in this instance. Corbulo in Lower Germany in A.D. 47 had given orders to his men to keep guard and watches and to carry out all associated tasks during the day and the night in full armour; he had inspected them to see that this was so, and the officer of the watch was quite clearly responsible for seeing to this. The epitome of Dio records that Ulpius Marcellus used to have orders sent round the watch at night to keep the officers wide awake and alert. Although the Praetorians might while on guard duty go to sleep resting on their spears or be suffering from the after-effects of too much wine, clearly the legionaries and auxiliaries were not to act likewise.⁹

There is good evidence for the use of passwords and challenges at

night. Polybius states that the password for the night was written on a wooden tablet (*Το ευθύνα - Τούτο δέεται λατελον επιγεγραφένον*) which was issued at sunset by a senior officer to a soldier who was responsible for seeing that it had passed round all the local commanders and then returned to the senior officer before dark. Both Tacitus and Josephus provide many instances when passwords were used by the Roman forces. Further information is provided by Vegetius, who cites various examples of them:

"Vocal signals are so called because they are given by the human voice, and are used in the night guards and in action as an order, e.g. 'victory', 'palm wreath', 'courage', 'God with us', 'the triumph of the Emperor', and any other phrase that the supreme commander may choose to issue. It must be noted, however, that these words must be changed every day to prevent the enemy from learning them, if they are used too frequently, and from making reconnaissance patrols in our lines with impunity."

Other examples of passwords used by the Roman army are known. The tesserarius presumably still performed in Imperial times the duty of carrying the tessera as attested by Polybius and mentioned by Vegetius. At Dura Ulpius Silvanus, a tesserarius of cohors XX Palmyrenorum, had a portrait of himself painted carrying the tessera. It is known that it was the duty of the commanding officer in the army of the Empire to issue a new watchword every day; Appian, writing in the middle of the second century A.D., describes events of 41 B.C.:

"Lucius sent tribunes to receive the watchword for the army from Octavian; they brought him the total of the army. Even in the present day, it is normal procedure for the tribune who asks for the watchword, to give the commanding officer the daily register of the number of men present."

Dio notes that in A.D. 180 a military tribune came and asked for the watchword and Suetonius notes in reference to A.D. 41 that a tribune

signum more militiae petisse. Tertullian states that a Roman soldier on guard duty carried a pilum and received the password from the commander; he also mentions the use of the trumpet to transmit the orders.¹⁰

The papyri provide supplementary evidence that there were guard duties and give the only details about the peace-time arrangements. The duty roster for the first ten days of October, A.D. 87, shows that a guard at a gate (sta(tio) por(tae)) is mentioned no less than ten times; as the document does not specify which gate, it is necessary to suppose either that there was a separate document giving this information or that the seven men detailed for duty at the gates would report to the officer of the watch who would then detail them to the various gates. A guard at the headquarters is mentioned three times (sta(tio) principi(i)s); and a man on watch on the rampart once (stati(o) ad ter(r)enu(m) [aggerem]). There is also a reference to a man on guard at the sacellum where the standards were kept (signa) (it is possible that he was detailed to polish them but unlikely). The text itself provides no evidence for vigiliae, although commentators have invented it in the past. However, it must be assumed that either some of the other centuries were on guard duty at night or some of the men in the other half of the document, which has not survived. A possible interpretation of the word strigis, which means the side streets of the camp and which occurs six times in all, although only one man has this duty, is that M. Arrius Niger was in a patrol that regularly made rounds of the camp to see that all was well; he may perhaps have been the intermediary stage between the edocela of Polybius and the circatores of Vegetius. He would be the equivalent of a 'prowl' patrol

in the modern army and perhaps was with the officer of the watch making rounds. Four men were assigned to the armoury (armamentarium); they may have been on guard duty there but it seems more probable that they were employed in cleaning and maintaining the weapons stored there.¹¹

The finds from Dura give further evidence. There are four definite examples of guard rosters and another four probable ones, mostly dating to the period A.D. 235-240. Although several of these papyri are fragmentary, it is possible to establish the general form and content of the roster. Firstly, a date was given by day and month; secondly, a specific post was designated; thirdly, there appears the name of one or more centuriae or turmae; finally, personal names. The entries for each day were quite extensive and apparently at least 150-200 men, approximately 20-25% of the total strength of the cohort at the time, drawn from every company and troop, were detailed each day to the various guard duties. The duties that can be identified include guard duty at several gates (porta, porta praetoriana, porta aquaria), duty outside the headquarters at the junction of the two main streets (groma), guard at the commanding officer's house (hospitium praepositi), guard at the granary (horreum frumenti), and a guard at a temple (templum). There are as many other posts where the reading is clear but the meaning is not, e.g. seetules; they were probably parts of the city of Dura outside the military zone, where the unit maintained guard posts.¹²

There is also evidence from Egypt to show that the legions as well as the auxiliary units had such guard rosters. A papyrus probably to be

dated to the later part of the reign of Nero is an example of one. All that remains of column i is a few letters at the end of each line, and although at least half of each line of column ii is missing, it is possible to make some sense of it. The first word that can be recognised in column i is bucinal[or] whose task it was to sound the beginning and end of each watch; two consecutive lines contain the word tutius, which suggests that the strength of a guard had been increased; a picket guarding a round building (anulus) seems to be mentioned twice; a guard at at least one gate is also mentioned (ad decumal[an] portam).¹³

Column ii seems to be concerned with the stationing of men to act as guards and sentries, the first part referring to duties outside the camp, the second to guards inside. Mention is made of convalescent troops who were probably being taken to the sea to recuperate (Longino ad litora convalescen[tes]). (it is to be remembered that M. Antonius Crispus, who was also a legionary in Egypt, acted as a stretcher-bearer several decades later). Lepidus took recruits to watch something, perhaps a demonstration of exercises (ct tirones spectatum duxit Lepid[us]). At least two of the primi ordines are mentioned; the hastatus primus and the princeps, the latter perhaps in connection with the market. The various duties inside the camp come next; a centurion Varius mounted the night guard at the eagle and probably the standards too (vigilias deduxit Va[r]ius 7 ad aquila[m]); the next line seems to refer to the replacement of the sentries on the rampart by two detachments (duas in vallo excit singula[.]). Two men were sent to supervise the weights in the market (ad pondera macelli duos ad ca[.]), while a watchword (signum) was given

to someone. It has been suggested by Professor Gilliam that vigiles ad nomem [sic] recognitos [] referred to an inspection and roll call of the night guard. This is highly probable and there is other evidence to support it; if this interpretation of the phrases is correct, it should be noted that some of the other men on guard duty were also inspected (quam et hodie habuistis recog[nitam and et in totum saepius recogn[.]). Another centurion, Bassus, had a detachment of thirty-eight men (Bassus I numero XXXVIII. []). Next occurs a phrase very similar to that used almost two centuries later at Dura by cohors XX Palmyrenorum: excubuerunt ad aqu[il]lam et sig[na]. This is clearly a reference to the guard kept over the eagle and standards. The next two lines mention individual men or NCOs from various centuries; they are presumably the personnel who formed the guard at the sacellum. A signifer was involved somehow with the camp hospital. The centurion Varius was also responsible for further action involving the night guard, probably making the rounds or changing them (vigilias .[...].mu..nt.. Varius []); he must have been the officer of the watch. Finally, there is a reference to men returning from guard duty at a granary in Alexandria (a frumento Neapol[is]). The document is divided up into different paragraphs presumably under different divisions for different types of guard.¹⁴

As the standards of a unit were its most precious possessions and played such an important role in its life and religious activities, it is only to be expected that a guard would be mounted over them. By far the most detailed evidence again comes from Dura; the morning reports list the men, prefixed by their rank, who excubant ad signa

domini nostri. On the three days March 27-29th, A.D. 233, there were eleven or so men on this duty under the command of the officer of the watch, Timinius Paulinus, a decurion; in addition to the decurio, there were an aedituus, signifer, two optiones, two curatores, a librarius, and several equites. Six years later on May 27th and 28th in the reign of Gordian, the procedure was slightly altered; this time the officer of the watch was the ordinatus princeps, the most senior officer below the commanding officer. The guard now numbered nine; in addition to the centurion, there were three signiferi, a bucinator, sacerdos, tesserarius, discens mensorem, and a man of unidentified rank. In none of these documents is the centuria or turma of an individual given; this means that there must have been another set of documents on which this information was given. Tertullian refers to this guard when he asks how a Roman soldier who was a Christian could satisfy his duty and his conscience by being on guard in front of the sacellum where the standards were kept (Et excubabit pro templis quibus renuntiavit?).¹⁵

In A.D. 239 all the NCOs were the same for both days and from other fragments it is known that at least three of them were on the same duty on other days. However, in the earlier example, only the decurio and aedituus were the same every day, and both had been replaced by different ranks in the later report. Presumably there was a periodic change of the officer of the watch and the watch itself; in every case: the officer of the watch:

"Proclaimed the orders which had been sent; we will do what is ordered and at every command will be ready."

This implies a parade and will be dealt with separately. The large variety of NCOs is to be noted; between them they could cope with almost all the routine matters that would arise, both administrative and religious, as well as the transmission of orders. An entry that occurs five times in the great roster of A.D. 219 as ad sacrahim and twice as ad sacrahimag is perhaps a reference to the guard at the standards (ad sacra[s] h}imag(ines)). There is a little more evidence for a guard at the standards. It will be remembered that L. Sextilius Germanus was assigned signis on the 2nd October, A.D. 87. Epigraphy can add a little too; an inscription from Aquincum dated to A.D. 216 refers to the rebuilding of excubitorium ad tutel(am) signor(um) e(t) imagin(um) sacrar(um); this is obviously the post where the guard that is mentioned so often was stationed.¹⁶

Another very fragmentary papyrus from Egypt seems to be part of a morning report; it is dated to the third century, and the handwriting is very similar to that at Dura in the time of Severus Alexander. This document differs from its counterparts at Dura in that it included details of men on various guard duties. Mention is made of Arri. Ammonian[...]c[.] signum st[.], viglii, VII excubare,]tes custodiar[um, custodiarum bal II[, reliqui ad sign[a]. There thus seems to be clear references to a password given by Arrius Ammonianus, who is known to have been a centurion and was probably officer of the watch, night guards, seven or more men acting as guards, a guard post, a post stationed at the baths (?) or artillery platforms (?) consisting of two or more men, and a guard at the standards. Parallels for all of these have already been discussed. On the verso there is a mention of in aedem aquillae.¹⁷

Both Appian and Vegetius state that the commanding officer was responsible for issuing a new password each day, and the papyrus mentioned above shows that they were in fact given. The best information once more comes from Dura; the morning reports show that the commanding officer or acting commanding officer sent a new password each day which was read out at the morning parade by the officer of the day. On 27th May, A.D. 239, the legionary centurion Avitus who was in acting command of the cohort, sent the watchword securitas, which was read out with the orders by Aurelius Germanus ordinatus princeps; on the following day the watchword was Iuppiter Dolichenus sanctus. On 27th March, c.A.D. 233, the tribune Julius Rufianus probably sent the watchword Mercurius sanctus; unfortunately there are lacunas where the watchword for the next three days should be given. On 4th September, A.D. 233, the watchword was Iuppiter[. ¹⁸

Vegetius also gives some advice on how to ensure that the most effective possible watch can be kept:

"For this reason greater watchfulness must be employed, when the enemy have gone away, and sentryboxes must be erected on the walls and towers to shelter the sentries from rain and cold in winter and the sun in summer. Another useful stratagem is to keep really fierce dogs that are keen-scented in the towers, who scent the approach of the enemy and bark the alarm."

It is known that the Roman army did in fact practise the advice given by Vegetius in the first part of this statement; each fort had corner towers and interval turrets in which the sentries could shelter, and the arrangements on Hadrian's Wall are not dissimilar. There is little to support his advice about the dogs and the answer may simply be that

he has found a reference to the geese who gave the alarm when the Gauls were attacking the Capitoline, a story which he goes on to mention. However, handlers of military dogs are attested in the Greek and Hellenistic armies and so it is not impossible that they were also employed by the Romans. Indeed, *κυνηγοι* are attested in graffiti in the Palace of the dux at Dura and they may well have been military dog-handlers. Some of the dogs whose remains have been discovered on Roman forts may have been guard dogs. The skeletons of six mastiffs were found in the ditch at Margidunum and one at High Rochester; at Newstead five Airedales, two terrier puppies, two retrievers, two bull terriers, and one fox terrier were found, at Corbridge several Airedales and a dachshund, a terrier and a sheepdog at Rudchester. The remains of several dogs were found at Vindonissa and Hofheim and four different breeds at Niederbieber; remains were also discovered at Saalburg, Stockstadt, Butzbach, Rödgen, Brecon, Housesteads, Bar Hill, Ribchester, Chesters, and South Shields. However, some of them could well have been hunting dogs, pets, or strays.¹⁹

CHAPTER II: GUARD DUTIES

NOTES

1:

more - Sallust, Jug., 45.
Vegetius - 3.8 discussed below, n.2.
Isidore - Orig., 9.3.42.
Tacitus - I have noted about a score of examples.

2:

night - Polybius, 6.35.1-5.
day - Polybius, 6.33.5-12.
Livy and Caesar - W. Fischer, Das römische Lager insbesondere nach Livius, 168-191.
Vegetius - 3.8.

3:

four - in the Principate there were only 120 equites legionis or two attached to each century; for the army of Vegetius's day cf. Vegetius, 2.6.

"Whenever" - Vegetius, 2.22.

Polybius, Livy, Sallust, and other - Marquardt, Staatsverwaltung, 421, n.1 cites examples.

Josephus - B.J., 3.86.

Tacitus - A., 15.30; H. 2.29.

4:

four - examples quoted in Marquardt, Staatsverwaltung, 420.

Rome - VI 2305 = ILS 8745.

water-clocks - Aeneas Tacticus, Fragments, XLVIII.

Caesar's - B.C., 5.13.

Neuss - H. von Petrikovits, Novaesium: das römische Neuss, 102.

horologarius - ILS 5625.

Caesar - Marquardt, ibid.

Hyginus - H.C., 1.

increased - e.g. Tacitus, A., 4.20.

decreased - e.g. Tacitus, H., 2.93; A., 13.35.

5:

gates - Tacitus, A., 1.35.

commanding officer - A., 2.13; H., 2.80.

headquarters - H., 3.10.

sentinels - A., 1.68; 4.48.

advance - A., 2.13; Josephus, B.J., 5.482.

third - cf. Chapter IX: Paramilitary Duties, pássim.

6:

A.D. 57 - Tacitus, A., 13.35.

A.D. 69 - H., 2.93.

Lower Germany - A., 1.32.

Pannonia - A., 1.25.

musical instruments - A., 1.28.

Vegetius - 3.8; cf. n.2.

6 (cont.):

A.D. 16 - Tacitus, A., 2.13.

7:

Philo - in Flac., 109-115.

ΕΤΡΑΤΙΩΤΗΝ - ibid., 111.

"A tumult - ibid., 120.

Vegetius - 3.8; cf. n.2.

8:

Corbulo - Tacitus, A., 15.30.

Macer - Dig., 49.16.12.2.

9:

Polybius - 6.35.8-12; 6.36.1-9.

Josephus - B.J., 5.510; it is odd that Josephus mentions only three and not four watches, perhaps he meant that the legati legionis drew lots for the remaining third and fourth watches.

A.D. 26 - Tacitus, A., 4.50.

A.D. 69 - H., 2.29, in this instance the praefectus castrorum.

A.D. 47 - A., 11.18.

Marcellus - Dio, 73.8.

Praetorians - Herodian, 2.1.2.

10:

Polybius - 6.34.7-12.

Tacitus - A., 1.65; H., 3.22 and 73; H., 5.22.

Josephus - e.g. B.J., 2.551.

Vegetius - 3.5.

examples - RE IIA 2345-7 sv signa cites some.

Polybius - 6.35.6-7.

Vegetius - 2.7.

Dura - Report VI, 292-293, pl. XLIV.2.

Appian - B.C., 5.46.

A.D. 180 - Dio, 72.21.

A.D. 41 - Suetonius, Calig., 58; cf. Claud., 42 tribuno signum de more poscenti.

Tertullian - Cor., 11.3.

11:

gate - CLA 7V.V.7, VII.1, XX.7, XXI.2, XXIV.4 and 5, XXVII.7, XXXII.6-8. It is possible that this century was assigned to only one gate.

headquarters - CLA 7V.IV.7, XV.2, XXVIII.1.

rampart - CLA 7V.XII.5.

signa - CLA 7V.VII.2.

vigilliae - CLA 7V.IV.5 and Marichal's notes; the men, who happen to number four on this day, were simply employed on various duties in their century. They do not add up to four on any other day.

strigis - CLA 7V.VI.5-10.

armoury - CLA 7V.II.8, III.5-6, XVI.2, XXV.7.

12:

definite - P.Dura 106, 107, 109, 110.
probable - P.Dura 108, 111, 112, 113.
form and content - DPP, 377ff.

13:

papyrus - PSI 1307 as revised by J.F. Gilliam in Classical Philology, XLVII, 29ff. On palaeographic style and absence of cognomina it can be dated to the first century, but the princeps Minicius Iustus is probably to be identified with Minicius Iustus praefectus castrorum legionis septimae mentioned by Tacitus (H., 3.7) referring to the year A.D. 69 when he had been promoted. This suggestion was first made by G.R. Watson in an unpublished M.Litt. thesis 'Roman Military Book-keeping', Durham University Library, in discussing this papyrus.
bucinal tor - PSI 1307.i.4.
tutius - PSI 1307.i.7-8.
anulus - PSI 1307.i.20 and 23.
decuma nam - PSI 1307.i.22.

14:

Longino - PSI 1307.ii.2.
Crispus - CLA 7V.XIV.2.
Lepidus - PSI 1307.ii.3.
primi ordines - PSI 1307.ii.5 and 6.
Varius - PSI 1307.ii.11; cf. ii.17.
rampart - PSI 1307.ii.12.
weights - PSI 1307.ii.13.
watchword - PSI 1307.ii.14.
Gilliam - loc.cit. (n.13) on PSI 1307.ii.15.
quam - PSI 1307.ii.7.
et in - PSI 1307.ii.10.
Bassus - PSI 1307.ii.16.
excubuerunt - PSI 1307.ii.17; cf n.15 below.
individual - PSI 1307.ii.18 and 19.
signifer - PSI 1307.ii.20.
Varius - PSI 1307.ii.21.
granary - PSI 1307.ii.23.

15:

A.D. 233 - P.Dura 82.
Gordian - P.Dura 89.
Tertullian - Cos., 11.3.

16:

parade - cf. Chapter VI: Parades and Inspections, n.3-6.
A.D. 219 - P.Dura 100.
Germanus - CLA 7V.VII.2; cf. n.11 above.
A.D. 216 - III 3526 = ILS 2355.

17:

papyrus - P.Mich. 450+455. Although H.A. Sanders thought that there were two entirely separate papyri, J.F. Gilliam in his review in

17 (cont.):

papyrus (cont.) - AJP, 71.436-437 pointed out that they were both part of the same document. I have adopted his date and revised readings.

Arri - P.Mich. 450 recto, 6.

vigili - P.Mich. 450 recto, 10.

VII - P.Mich. 455a recto, 3.

Ites - P.Mich. 455a recto, 8.

custo]diarum - P.Mich. 455b recto, 3.

reliqui - P.Mich. 455b recto, 4.

in aeden - P.Mich. 455a verso, 14.

18:

Appian - B.C., 5.46, cf. n.10.

Vegetius - 3.5, cf. n.10.

securitas - P.Dura 89.1.7.

Iuppiter Dolichenus - P.Dura 89.1.13.

Mercurius - P.Dura 82.1.3.

Iuppitor - P.Dura 83.10.

19:

Vegetius - 4.26.

handlers - Report IX, Part III, 49-50.

κυρηοι - ibid.

remains - for all references cf. Chapter VIII: Food, n.26.

CHAPTER III

TRAINING AND EXERCISES

The detailed evidence for training and exercises comes from Vegetius, but is supplemented by other writers. Training in the various military techniques would be given to the recruit until he was proficient in them; thereafter the soldier would undergo the various exercises to keep him physically fit and fully trained and prepared for any event.

The information from Vegetius comes mainly in three passages. In Book 1 he gives in great detail a list of the training to be given to the recruits, but notes that in three cases, marching, vaulting, and pack marches, all the troops must be so exercised. In Book 2 he gives a summary of all the exercises he has already elaborated, but states that all the troops, recruits and fully trained soldiers alike, must undergo them. In Book 3 he gives a list of the exercises to be given to all the troops to keep them fully occupied and give them no time for rebellious thoughts. All three lists contain almost the same exercises. There are also a few scattered references among the duties of various officers.¹

The reference in Book 2 mentioned above is as follows:

"Since I have discussed the organisation of the legion, I now return to the exercises (exercitium) from which army (exercitus), as has already been stated, derives its name. The younger soldiers and the recruits went through weapon-exercises of every kind each morning and afternoon, while the older and fully trained soldiers were constantly exercised with weapons once a day. Neither age nor the passing of the years teaches one the military art, and regardless of how many years a man may have served, if he does not undergo exercises, he is not a soldier but a recruit. Not only those under the drill-master but every man without exception learnt by daily practice the arms drill which now is shown only on festive days in the Circus. For, by practice, physical speed and skill in striking an enemy and protecting oneself are acquired, especially in sword fighting

at close quarters. But it is more important that they learn to keep rank and remain with their standard in the great confusion of the preliminary exercise. It is also useful that the troops be exercised with wooden swords at posts, since they learn to thrust and slash at the side, feet, or head. Let them also get accustomed to springing forward to make the blow, to rise with a bound above the shield and again to sink down, now brandishing the weapon to advance with a leap, now to retreat leaping back to the rear. Let them also practise throwing their weapons at the posts from a distance to improve their aim and strengthen their arm In winter they constructed for the cavalry halls of tiles or shingles (if these materials were not available, of reeds, rushes, or thatch), and halls like basilicas for the infantry; in these buildings even in stormy or windy weather the army could be exercised in arms under cover. But even in winter when the rain or snow stopped, the soldiers were compelled to be exercised in the open to prevent a break in their normal exercises from having a bad effect on their minds and bodies. The troops both legionaries and auxiliaries should very frequently be exercised in cutting down trees, carrying burdens, jumping over ditches, swimming in sea or river water, having route marches at the full pace or even running fully armed and with packs, so that the experience gained by daily practice in peace-time will not seem difficult in war."

It is worth noting that the predominant tense used by Vegetius in this passage is the imperfect; this suggests that he is describing a training that was not given in his own day and that he derived his information from written sources of an earlier -- presumably Imperial -- age.²

The list of exercises to be given to the troops to prevent a mutiny is as follows:³

"They must continually practise manoeuvres, have no leaves, be kept busy with roll calls and parades; they are very frequently to be kept occupied for the greater part of the day, until the sweat runs off them, at throwing their weapons, the movements of arms drill, and thrusting and slashing with their imitation swords at the posts; they must also be exercised in running and jumping over ditches; during the summer they must all be compelled to swim in the sea or any river that is near their camp; the troops must be made to cut down trees, to

march through thickets and broken ground, trim timber, dig ditches, and one party in turn should occupy a site and use their shields to prevent the other party from dislodging them. Thus the troops, legionaries, auxiliaries, and cavalry, will be well exercised and skilled in their camps.

It is quite clear that one essential part of the training that a Roman soldier received was to learn the meaning of the various signals given on the tuba and cornu. That this was no easy task can be seen from the fact that a cornu discovered at Pompeii had a range of no less than seventeen notes. Vegetius knew the importance of this:

"All the soldiers must follow and understand all of those signals in the fort, on the march, and in all camp exercises. Continual training in this in time of peace seems necessary in order to maintain order in the confusion of battle."

Similarly, whenever the soldiers went on manoeuvres, tubicines went with them. In the same way Josephus modelled his own army on the Roman army by teaching them in the Roman manner:

"He taught them the transmission of signals, the trumpet-calls for the advance and the retreat, flank attacks, and encircling movements."

Onasander recommended that the commander must teach his troops complicated marching and formations and the various signals for these. Literature provides many examples where the Roman army obeyed these signals in unison, clearly the result of training, when the charge, retreat, recall, or emergency was sounded.⁴

It was the responsibility of each commanding officer to see that the men in his legion, ala, or cohort were fully trained and equipped. This is shown by the fact that the legal writer Aemilius Macer lists

as the second of the duties of a commander that he should see that the men in his unit were regularly exercised (ad exercitationem producere). This responsibility of the commanding officer is shown by the words of Hadrian, who implies that the commander was being inspected as much as his men. The praefectus of an anonymous ala, Cornelianus, received a favourable report:

"Cornelianus, your commanding officer, has carried out his duty satisfactorily."

The praefectus alae I Pannionorum received praise, his men a congiarium:

"Your own commanding officer seems to give careful attention to you. Receive a gratuity."

It was a serious offence if a commander, through his negligence in exercising his men, endangered their lives; Frontinus quotes with approval an incident in A.D. 58:⁵

"When Domitius Corbulo was campaigning in Armenia, Aemilius Rufus, the commanding officer of a cavalry regiment, gave way to the enemy. On learning that Rufus had kept the men in his ala insufficiently exercised in arms, Corbulo ordered him to stand at attention in undress uniform at headquarters until he was cashiered."

Similarly, the governor of a province was responsible for seeing that the various units were regularly trained and exercised. The statement of Macer quoted above also applies to generals (eorum qui exercitui praesunt). Philo was forced to admit that when A. Avillius Flaccus was first appointed Prefect of Egypt in A.D. 32, he behaved as a governor should:

"When he had restored good order in Alexandria and the countryside, he next revived discipline in the military forces; he drilled, trained, and exercised the infantry, cavalry, and light armed troops."

Pliny makes the following comment on the new reign of Trajan:

"Therefore generals are now free from the risks of giving offence or from having to ingratiate themselves, and press on with their duties, are present at the exercises, and get their arms, walls, and men into a state of preparation."

This responsibility of governors (assunt exercitationibus) is made quite clear by the numerous favourable references made by Hadrian about Q. Fabius Catullinus legatus Augusti pro praetore legionis III Augustae in his addresses to the individual units; to an anonymous ala:

"I praise my GOC Catullinus for having employed you on these exercises which have achieved a close resemblance to actual warfare, and for training you so well in these that I ... can praise you."

To ala I Pannonicorum he noted:

"My GOC Catullinus shows that his care for all the forces under his command is equal."

This care and attention had produced noteworthy results in the case of the equites cohortis VI Commagenorum, although precisely what favourable impression was made is lost unfortunately in a lacuna:

"The outstanding care that my GOC Catullinus has spent on you is clear from the fact that such men as you under his command ..."

However, Catullinus had thought it necessary to offer many excuses on behalf of legio IIII Augusta; many factors had combined to prevent the exercise of the legion as a whole:

"... on your behalf. My GOC has personally explained to me on your behalf all the circumstances which should excuse you in my eyes: that a cohort is absent, that every year one is sent in rotation to the service of the proconsul, that two years ago you gave up a cohort and four men from each century as reinforcements for your comrades of the Third Legion, that many scattered posts keep you separated, that within our own recollection you have not only changed camp twice, but have actually built new ones. For these reasons I would regard you as excused, if the legion had ceased its exercises for any length of time, but it does not appear to have done so at all nor is there any reason why I should accept excuses from you."

Fronto states that through the neglect of the governors of the provinces in the East in the middle of the second century, the troops were badly under-exercised; thus Verus, like Hadrian, inspected them on the parade ground (spectandis in campo militibus operam dare).⁶

Commanding officers and other senior officers had to make certain personally that the men under their command were properly instructed. Vegetius states that men who were not sufficiently well drilled, were punished by receiving barley instead of wheat:

"They were not permitted to receive wheat again until in the presence of the legionary commander, tribunes, or senior officers they had given proof that they were fully proficient in all aspects of military skill."

This is confirmed by Hadrian's comments to legio III Augusta:

"The tribunes (?) ... appear to have given careful attention to you. The primi ordines and centurions were as agile and brave as ever."

It is unfortunate that the pili to whom Hadrian made his first speech and on whose behalf Catullinus had made excuses for the possible shortcomings in the exercises of the legion, cannot be identified with any certainty.⁷

Vegetius makes it quite clear that it was the duty of each centurion and decurion to see that the men in his company or troop were fully trained and exercised. The qualities for both men are enumerated by him:

"A centurion is to be chosen for his strength and height. He must be able to throw spears and missiles with skill and strength, and have a sound knowledge in fighting with the sword and handling his shield and have learnt the whole art of arms drill. He

should be vigilant, temperate, and agile, more ready to carry out orders than to talk; he must maintain discipline among his men and see that they undergo exercises with their weapons. He is responsible for ensuring that they are well clothed and shod and that their weapons are polished and shiny. A decurion who is to be chosen to command a troop of cavalry, must first be endowed with physical agility to enable him clad in his breastplate and armed with his weapons to mount his horse, ride most bravely, use his shock-lance skilfully, fire arrows cleverly. He must teach the men in his troop every aspect of cavalry fighting, and compel them to polish and keep in order their own breastplates and the protective armour of their horses as well as their own shock-lances and helmets Both cavalryman and horse must be worked continually; accordingly the decurion is responsible for the health and exercising of both trooper and mount."

This training applies equally to a centurion of a legio or cohors and to a decurion of an ala or cohors equitata.⁸

The recruits were sometimes instructed in their basic training by centurions or veterans often seconded for this very purpose from a legion or the Praetorian Guard. In the case of the newly formed cohors Usiporum stationed in Britain in A.D. 83 Tacitus states that there were:

"A centurion and several soldiers who had been attached as a cadre to teach them discipline and act as an example and as guides."

Dio records that the officers were a tribune and several centurions; if he is using the correct terminology, the unit was a cohors milliaria. A passage from Pliny's panegyric to the Emperor Trajan suggests that the instructors were normally veterans with distinguished service, as might be expected. It was because of his own distinguished record that Maximinus was appointed by Severus Alexander to train and exercise recruits. Later apparently various grades of instructor were introduced, who are attested by Vegetius and epigraphy: the campidoctor

presumably was a drill-instructor, the doctores armorum weapon-instructors, the doctor cohortis the drill-instructor of the battalion; cavalry were exercised by exercitatores and a magister campi.⁹

The training and exercises were given in the open as much as possible. Onasander stresses the need for a general to keep his troops in training in winter:

"In winter-quarters the general must exorcise the troops and train them to be skilled in war and accustomed to hardship. He must not permit them to be idle or lazy; idleness makes the body soft and weak, laziness makes morale without spirit and worthless, as pleasures, enticing the passions by daily habit, corrupt even the most courageous man."

However, Vegetius does mention the need for covered halls in which the soldiers could carry on their training and exercises even in bad weather:

"In winter they constructed for the cavalry halls (porticus) of tiles or shingles (if these materials were not available, of reeds, rushes, or thatch), and halls like basilikas (quaedam velut basilicae) for the infantry. In these buildings even in stormy or windy weather the army could be exercised in arms under cover."

There is archaeological and epigraphic evidence to show that these exercise halls were built. One was constructed in the Agricolan timber legionary fortress at Inchtuthil (140 ft X 70ft) and another can be identified in the stone reconstruction at Chester at the beginning of the second century (250 ft X 80 ft). It seems that a soldier was responsible for the maintenance of the drill-hall in each legionary fortress; C. Lucilius Messor of legio XXII Primigenia describes himself in A.D. 196 as cust(os) basil(icae). At Newstead there was no exercise-hall in the first Antonine fort (A.D. 140-160±), when the garrison was ala Augusta Vocontiorum quingenaria, and the unit had to use an ordinary

parade ground outside the fort; however, when the fort was later reconstructed to house ala Petriana milliaria (A.D. 2180-2197), a riding-school (160 ft X 50 ft) was attached to the principia. Similarly an extension (160 ft X 30 ft) to the Severan headquarters building at Haltonchesters has been interpreted as a riding-school for ala I Pannonicorum Sabiniana; there is also one at Brecon (147 ft X 40 ft) but of an earlier (probably first century) date, perhaps for ala I Hispanorum Vettonum. An inscription from Netherby dated to A.D. 222 commemorates the building of a basilica equestris exercitatoria; clearly the equites of a cohors equitata were to be exercised as well as those of an ala. Exercise-halls for cohortes peditatae are not known in Britain but are attested elsewhere; in Germany there are over a score of examples of covered exercise-halls. In the later second century (or possibly Severan) fort at Ilkley an area between the stables and via principalis received heavy pitching; this clearly was the place where the equites of the cohors quingenaria equitata were exercised, although it was not possible (or perhaps thought necessary) to build a covered hall because of the lack of space.¹⁰

There was a parade ground outside every fort where the recruits would be trained and the rest of the soldiers exercised in marching and other exercises (πεδίον . . . ἐν τα συνηθι γυνασία).

Herodian records in A.D. 235:

"The recruits therefore assembled on the parade ground with all their equipment for their usual exercises."

By the side of each parade ground there was a raised platform (tribune).

from which a commanding officer could review his men, and there might often be a small temple here also. The various structural items of a parade ground are revealed by several inscriptions; a decurio exercitator set one up when camp(um) cum trib(unali) nov[um] fecit at Palmyra in A.D. 183; when there were several units at Dura, the parade ground had to be enlarged, and this was done and a temple and statue (perhaps to the campestres) erected by cohors II Ulpia equitata; the large parade ground onto which the temple faced has been excavated. The parade ground outside a legionary fortress would occupy several acres: at Caerleon it lay to the south-west of the fortress near the amphitheatre and measured at least 875 ft X c530 ft; even when allowance is made for the ditches, it was not less than ten acres in area. It is very tempting to assume that the so called 'auxiliary camp' one mile to the west of the legionary fortress at Lambaesis was in fact the parade ground of legio III Augusta. It was 220 yards square or ten acres exactly and was surrounded by a wall of ashlar masonry with towers and two gates and had rounded corners; the inside was perfectly flat and contained no buildings at all, but in the very middle was the monument on which Hadrian's adlocutio was inscribed. What could be more natural than to erect a testimonial glowing with praise on the actual scene of triumph? The parade ground outside the auxiliary fort of Hardknott Castle is almost as big as the fort itself; it is artificially levelled and the ground cleared measures 540 ft X 300 ft or a little over three acres, and the tribunal composed of stones still stands twenty feet high today. South of Maryport the tribunal of the third century survived as Pudding Pie Hill; it consisted of a cobble foundation some 35 to 40 yards long

by about twelve yards in width, while the mound itself was of boulder clay. The actual parade ground was carefully levelled out of the hillside and measured 285 ft X 279 ft. Of the second century parade ground to the north-east of the fort only the altars have survived. The parade grounds outside the auxiliary forts of Gelligaer, Slack, and Ambleside were paved.¹¹

Arrian gives details of how the parade ground for a cavalry unit should be constructed:

"They choose a site where the exercises are to be held that is level and they work on it in addition. From the whole field they demarcate the area in front of the platform into the shape of a square and dig the middle to an equal depth and break up the clods to obtain softness and springiness."

It was thus a slightly sunken square, rather like a bowling green, with a platform in the middle of one side. At Tomen-y-mûr the parade ground (400 ft X 320 ft) was only half finished and the actual details of the construction, which followed the principles laid down by Arrian, were noted.¹²

Arrian provides further information about the *βῆμα* or tribunal. It was used in many of the exercises as a marker for the riders to take their bearings as they galloped in their various formations. It was also used as a guide when they threw their real weapons and not their practice ones; Arrian states that a target was expected to the left of the platform at which they threw a lance, and the good riders made a second or third ride in which they threw two. The use of one or more targets is well described in the exercise called 'Xunema':

"On being called the men must reply in a loud voice 'Here', and at the same time gallop forward carrying three lances. They must throw the first from the edge of the levelled parade ground at the target, the second from the platform itself and while the horse is still galloping in a straight line. If they follow the instructions of the Emperor, while the horse turns to the right, the rider throws the third lance at a second target erected for this purpose in accordance with the Emperor's orders to receive the third lance. The most difficult of all throws is when it is done before the horse has turned round completely and while it is still actually turning. A throw made in this way is called 'Xunema' in Celtic, and is not easy to accomplish even with javelins not made with iron. Some people, because of their quickness and love of glory, have actually managed to throw four lances at the first target while galloping in a straight line, or three while galloping in a straight line and the fourth while turning, as the Emperor has instructed."

For other weapons a third target was erected:

"After this they practise various methods of throwing either light darts or even missiles, these being fired not from a bow but from a machine, or even stones by hand or from a sling at a target which is erected in the middle of the two I have already described. Then indeed it is good if they smash the target with their shots, but it is not easy to do this."

He also states that spectators stood on top of the *βηρα* to observe the intricate details of the exercises. The *βηρα* at Hardknott, which still stands twenty feet high, has already been mentioned; the only unit attested in garrison there is cohors IV Dalmatarum under Hadrian, which is a cohors quingenaria equitata.¹³

At South Shields at the edge of the parade ground in use in the second century partial excavation revealed three separate cobble-stone platforms; one was clearly associated with altars, and perhaps another with a statue. However, that leaves a third unexplained: six feet away from one that was six feet square and still stood three feet high was a post hole. It seems highly probable that in this was erected the

target alongside the tribunal as Arrian specified. Nearby were found pieces of metal which seemed highly likely to be the heads of weapons, probably practice ones. South Shields was apparently twice garrisoned in the second century by an ala.¹⁴

Outside almost every legionary fortress there was an amphitheatre; these had a large arena and limited seating, generally only for about six thousand men. They were probably taken over from the gladiatorial schools (ludi) and it will be remembered that Rutilius Rufus introduced the legionaries to gladiatorial sword-training techniques. It is known that timber amphitheatres were erected at Chester and Caerleon when these fortresses were first constructed and that that at Chester may have been rebuilt in stone as early as c.A.D. 80; the one at Caerleon was adjacent to the parade ground and was refurbished under Hadrian. An amphitheatre is depicted outside a legionary fortress on Trajan's Column. The legionaries were thus clearly exercised continually in winter even on active service. According to the legionary duty roster from Egypt C. Julius Valens was assigned harena 7 on 1st October, A.D. 87; presumably he spent the day in the training area of the century. There was a small amphitheatre outside the auxiliary fort of Tomen-y-mûr.¹⁵

I shall deal with the supplementary evidence for training and exercises separately, but shall give the detailed passages from Book 1 for the individual items for both afterwards.

From the highly detailed account given by Vegetius in Book 1 about

the various items of training plus other references, it is possible to divide the training a recruit received into various categories. The first consisted of those which could be taught on the parade ground: marching, running, jumping, and formation and foot drill. The second was weapon-training, while the third comprised the skills a soldier would need in the field: route marches, pack marches, and building fortifications. The last category was put into practice when the recruit combined all this training in manoeuvres. In addition there were some exercises in which physical training and military techniques were often combined, but with the emphasis perhaps on the former: swimming, and probably vaulting, throwing heavy stones, felling trees. The training of the cavalry will be dealt with separately.¹⁶

* * * * *

In discussing the ideal age for the recruit, Vegetius goes into great detail about the training they are to receive:

"A recruit must have time to learn everything. For the art of weapons - whether you wish to train a cavalryman, foot-archer, or infantryman - must not seem small or light, to teach them all the whole range of arms drill and movements, not to desert their post, to keep their ranks, to throw their weapons with great force and accuracy, to dig ditches, to plant a palisade with skill, to handle their shield and deflect the oncoming weapons of the enemy by holding it at an angle, to avoid a blow with skill and deliver one with bravery."

Earlier in the same chapter he had talked about:

"Military activity, jumping and running, must be acquired before the body becomes slow with age."

The basic training was to be given each day:

"[After passing the probatio] the recruits receive the military mark and instruction must be given in daily exercises of weapons."

Another passage confirms this and states that the basic training

lasted for a minimum of four months:

"After the recruits have been carefully chosen for their mental and physical qualities and have been trained daily for four or more months, the legion is formed."

Another passage again supports this and gives further information:

"The younger men and the recruits went through exercises of every kind morning and afternoon Not only those under the drill-instructor [i.e. recruits] but every man without exception learnt by daily practice the arms drill."

They too presumably:

". . . . were to be kept occupied for the greater part of the day until the sweat runs off them!"

at their various items of training. Vegetius describes how the Roman soldier overcame apparent physical or mental superiority in his opponent:¹⁷

"To combat all these disadvantages it was in the Romans' interest to choose the recruits with care, to teach them, I might almost say, the power of weapons, to strengthen them by daily exercise, to learn beforehand in manoeuvres in the field everything that might happen in action and at the front, and to take severe measures against the idle."

At times the recruits might be townspeople enervated by the easy life of the city; a more rigorous training designed to toughen them was allocated for this type of recruit:

"From time to time it is necessary to levy townsmen for the army, who, when enlisted, must first learn to toil, to charge, to carry burdens, to endure the sun and dust; their food must be frugal and simple, and they must at times live in the open air and at times under canvas. Only then must they be instructed in the use of their arms."

This preliminary training was still given up to several decades before the time of Vegetius; Ammianus notes that in the year A.D. 354 rumours were started about the popularity of the sons of Constantius:

"They were popular because of their wide knowledge of training in arms and their physical fitness gained in the daily basic training of the army."

However, the same author notes that only two years later Julian did not undergo any military training or exercises until he became Emperor.¹⁸

During the four or more months of basic training the recruits were required to pass proficiency tests and were not incorporated into the unit until they had reached the necessary standard. The language of Vegetius makes it quite clear that this was normal procedure in the army of the Imperial era:

"The Romans of old strictly enforced such a high standard of discipline in training that weapon-instructors received a double allowance, and soldiers who did not make enough progress in their preliminary training were punished by receiving barley instead of wheat; they were not permitted to receive wheat again, until in the presence of the legionary commander, tribunes, or senior officers, they had given proof that they were fully proficient in all aspects of military skill."

This statement of Vegetius seems to fit in well with a reference by Isidore under the heading De Notis Militaribus. He mentions the various notations that were placed alongside a soldier's name in the records to indicate which category he was in:

"Whenever they wished to signify 'lack of skill', they used the letter Lambda."

It has been suggested that Isidore's reference to imperitia means that the recruit had failed a proficiency test, and a note to this effect was made in the records, λ presumably being an abbreviation for $\lambda\epsilon\mu\theta\epsilon\varsigma$.¹⁹

* * * * *

Ad exercitium revertimur unde, sicut iam dictum est, exercitus nomen accepit, says Vegetius, making the etymological connection that both Varro and Cicero before him had drawn. Literature provides abundant examples of the Roman army undergoing its routine exercises, either in a

set programme or separately, and also some instances where, for one reason or another, the exercises were not held, and bad results ensued.²⁰

Polybius gives a set of exercises that were regularly given to the troops by Scipio Africanus in 210 B.C. The almost verbatim translation of this passage in Livy is very similar in style and content to parts of Vegetius, and as all the items of exercise can be paralleled in the army of the Empire, and Scipio was so important a general that many of his innovations were continued, it will be worth quoting the passage:

"He himself remained for some time at New Carthage and constantly exercised his naval forces and gave the tribunes the following programme of exercises for the land forces: he ordered the soldiers on the first day to run under arms for four miles; on the second day they were instructed to examine, put in good order, and polish their equipment in the open, and on the third day to rest and remain at ease; on the next day some were ordered to practise sword-fighting with wooden foils tipped with a leather button and others javelin-throwing using weapons with a button on too. On the fifth day they returned to the beginning of the programme and the running."

Livy transposes the activities of the third and fourth days:²¹

"Scipio himself spent the few days during which he had decided to remain at New Carthage in drilling his naval and land forces. On the first day the legions would run in full equipment for four miles; on the second day they were ordered to polish and keep in good order their weapons in front of their tents; on the third day they engaged in combat with one another with wooden foils after the manner of a real battle and hurled missile weapons that were provided with buttons at the end; on the fourth day they were given a rest; on the fifth day they again ran in full equipment. They maintained this arrangement of work and rest for as long as they remained there."

A description of the daily exercises that Julius Caesar gave his legionaries in 46 B.C. has survived; it clearly shows how a good commander of the Late Republic exercised his men:

"He instructed them in how many feet they were to retreat from the enemy, the manner in which they were to wheel round against the foe, for how little a distance they were to offer resistance, the way in which they were now to charge forward, now retire, now make feint attacks, the position and manner in which they were to throw their weapons."

Augustus and Hadrian both issued general orders that the troops were to go on route marches every ten days, while Avidius Cassius and Maximinus are alleged to have made their men take part in simulated fights on every seventh and fifth day respectively and the latter as Emperor to have exercised them daily.²²

Vegetius believed that regular military exercises in the form of physical training was a good preventive medicine:

"Experts in military matters have always been of the opinion that as far as the health of the troops is concerned, daily military exercises are of greater benefit than medicine. Accordingly, they wished the infantry to be exercised under cover without interruption from rain or snow and on fine days in the open. Similarly, they ordered the cavalry to exercise rider and horse continually in the plains and also on broken ground and difficult terrain pitted with gulleys."

whether or not the troops were exercised in only one different aspect of training each day or a variety, it is impossible to say. because of the lack of evidence. The programme for training recruits has been already described.²³

It seems quite clear that one of the reasons for these continual exercises, besides keeping the soldier fit physically and fully trained and prepared, was to keep him occupied, as Vegetius pointed out. The rebels of Lower Germany felt aggrieved about this in A.D. 14:

"They complained about the hardness of the work and specifically about building ramparts, digging ditches, foraging, collecting

timber and firewood, and all the other camp tasks that are either necessary or invented to keep the men busy."

There is no evidence to suggest that there were large scale camp building projects in progress at the time and so the soldiers presumably were complaining about exercises, fatigues, and 'bull'. The continual exercising that the Roman army underwent in the middle of peace-time and when there was no threat of war was such that it caused two Roman writers to comment on it and cite this as a virtue that should be copied in other fields. Seneca noted:

"In the middle of peace-time a soldier goes on manoeuvres, throws up a rampart against a non-existent enemy, and tires himself out with unnecessary toil, in order to be fit and ready for anything."

Almost two centuries later Tertullian could still say:

"Even in peace-time soldiers still learn to inure themselves to warfare by toil and trouble, by route marches in battle kit, by manoeuvres on the parade ground, by constructing ditches, and by forming the 'tortoise'."

C. Cassius Longinus made his troops undergo such exercises in Syria in A.D. 49, when there was no danger of an enemy attack. However, the future Emperor Galba did order such exercises when he was governor of Upper Germany in A.D. 39, as there was a threat of war.²⁴

It will also be worthwhile to give a few examples where these routine exercises were discontinued for some reason. This should not be taken to mean that there were widespread breaks in routine; it is the exceptional instance that occurs in the pages of Tacitus, or one designed to show the vigour of one character or the negligence of another. He even states in one instance that discipline was normally maintained in

peace-time (severitate disciplinae quam in pace inexorabilem). Corbulo twice found that armies entrusted to him were not well exercised, in Lower Germany in A.D. 47 and in Syria in A.D. 57. Tacitus also mentions that neither Trebellius Maximus nor Vettius Bolanus kept the troops of Britain in full-time training, when there were no military operations in progress. The army of Vitellius is often mentioned by Tacitus, who states that it was not continually trained and exercised. The opportunity for the rebellion in Pannonia in A.D. 14 was caused by the fact that Blaesus, the governor, stopped the solita munera as a mark of respect for Augustus; the legionaries soon preferred this way of life to the former (denique luxum et otium cupere, disciplinam et labore aspernari). Circumstances were similar also in Germany at the same time.²⁵

The Emperor Hadrian is well attested as a great believer in his armies being continually trained and exercised; 'Spartianus' records of him: "Although he desired peace rather than war, he kept the soldiers in training as though war were imminent."

Xiphilinus mentions in the epitome of Dio:

"He drilled the men for every type of battle, honouring some and reproofing others, and he instructed them all in what must be done."

Elsewhere he records:

"Hadrian exercised the armies very vigorously so that they were strong, obedient, and well-disciplined."

Arrian wrote in A.D. 136:

"Such are the usual and ancient exercises of the Roman cavalry, but the Emperor has also devised additional ones; they must

practise foreign exercises To be brief, the Romans practise again and again all the ancient exercises that have survived and all those that the Emperor has now devised."

Fronto, in a description of the military qualities of Hadrian, seems to quote him:

"In all walks of life, but above all in the business of war, inactivity is fatal. It is of the greatest importance that the soldiers should experience the ups and downs of fortune and have strenuous exercises on the parade ground."

The good performances that the troops of the army of Numidia gave in A.D. 128 show that they had been frequently exercised on the orders of Catullinus. Parts of the passages of Vegetius are taken from the original regulations of Hadrian. A century later, according to Dio, the regulations of Hadrian were still being observed:

"In short, both by his example and his precepts he so trained and organised the entire armed forces throughout the whole Empire that even today the regulations introduced by him then are the code of the army. This best explains how for most of his reign he lived at peace with foreign nations; because they saw the Roman state of preparation and were themselves free from interference and furthermore actually received money, they made no new fighting."

Dio gives an actual example of this:

"So well indeed had the army been exercised by him that the cavalry of the Batavians (as they are called) actually swam across the Danube with their arms. On seeing this the barbarians were struck with amazement and turned their attention to their own affairs and employed Hadrian to arbitrate in their differences."

Aurelius Victor, writing in the middle of the fourth century, noted that many of the regulations introduced by Hadrian were still in force.²⁶

Josephus was a fervent admirer of the training and exercises of the Roman army and he saw the effects of them as friend and foe. He may

have influenced Vegetius in this; he says of Vespasian in A.D. 67:

"Therefore he trained his soldiers, like athletes, for the fray."

Vegetius echoes this thought, when he notes that although athletes, gladiators, and charioteers trained hard, soldiers had to train even harder. Avidius Cassius is alleged to have held this point of view also.²⁷

The pages of Josephus are full of references to the training and exercises of the Roman army, but a few examples will suffice: Josephus himself in Galilee in A.D. 66, when he decided to model his own army on Roman lines:

"He realised that the Romans owed their invincible strength above all to discipline and training in weapons He taught them the transmission of signals, the trumpet-calls for the advance and the retreat, flank attacks and encircling movements, how relief must be sent by the victorious part of the army to the hard pressed and aid given to any in distress. He explained all that contributed to physical toughness or mental fortitude. Above all he trained them for war by mentioning in detail the good order maintained by the Romans, and saying that they were going to fight with men who by their physical prowess and unshakable determination were in control of almost the whole world."

The words put into the mouth of Titus as he addressed his troops before Tarichaeae in A.D. 67:

"Is there any need to speak of our skill and discipline? It is for this very purpose that we alone exercise ourselves in arms in peace-time so that in time of war we need not contrast ourselves in number with the opponent. What profit would there be in our continual training otherwise?"

Similarly in his address to the troops three years later at the siege of Jerusalem:

"It would be disgraceful for men who are Romans and soldiers of mine, in time of peace trained for war, in time of war

accustomed to win, to be outdone in strength or morale by Jews, especially when final victory is within our grasp and Heaven is on our side."

His descriptions of the Roman army are almost panegyrics:

"The Romans do not wait for the outbreak of war to give their men their first training in arms, nor do they sit with folded hands in peace-time only to put them in motion in time of need. On the contrary, as though they had been born with the weapons in their hands, they never have a respite from training nor wait for emergencies to arise. Their peace-time manoeuvres are no less strenuous than actual warfare, but each soldier daily exercises with full vigour, as if he were in action. The result is that they bear the fatigue of battle very easily since no confusion can break their customary formations, no panic throws them into disorder, no fatigue exhausts them, and so they invariably overcome their opponents who do not match up to these qualities. One would not be wrong in calling these exercises bloodless battles and their battles bloody exercises."

A little later he states:

"By their exercises in arms the Romans instil into their soldiers bravery not only of body but also of soul Such is their obedience to their officers that in peace-time the troops are an embellishment and in battle the whole army is welded into a single body; so compact are their ranks, so alertly do they wheel, so quick their ears for orders, their eyes for signals, their hands to carry them out."

All this training in time of peace gave them experience and strength, the key to Roman military success (*καὶ ταῦς μὲν μετ' ἑργασίαις*
εὔπειρια παρεκροτεῖ).²⁸

Josephus was impressed by the fighting effectiveness of the Roman army, acquired by long training in time of peace. Aristides, the Greek orator, in his speech delivered to Rome in A.D. 143 or 144, reveals how impressed he was by the performances of the Roman army in actual peace; they were in fact as much a line of defence as the actual frontier-works:

"The ring, much greater and more impressive, utterly and completely impregnable and indestructible, outshines them all. None of those in the history of the world has ever been so firm, for these walls are shielded by men who have not acquired the habit of flight. They have been closely drilled in that systematic training, which Homer mentions of the Myrmidons in the passage cited, when he compares them with a wall, that is, in all the tools of war: a formation of helmets so close to each other that an arrow cannot pass between them; a platform of shields lifted above their heads which would support race tracks in mid air, so much firmer than those built in towns that cavalry can actually gallop on them, and you could then truthfully quote the phrase of Euripides, 'To see a bronze plain'; they take their positions with their breastplates so close to each other that if you actually put a man with light armour in the middle, the shields on either side would come half way and meet to cover him; the javelins fall from the sky, as it were, in a solid mass. Such are the well-organised systems that enclose us, the one the circle of fortifications at individual points, the other the guardians of the whole world."

He considered that because of his continual training and exercises in peace-time the Roman soldier was and always would be invincible:

"Accordingly, when one sees the training and organisation of the army, one will think of this saying of Homer about their opponents, 'Were they ten or twenty times as many', they would quickly be completely routed and overcome in individual combat."

Their perfection *εἰς γέ τακτικῶν λόγον* was amazing:

"Furthermore, in respect of military science you have made all men look like children. You did not set out exercises for the men and their officers to train for victory over the enemy only but first over themselves. The result is that each and every day the soldier lives in discipline and no one ever leaves the post to which he has been assigned, but just as if in some everlasting chorus, he knows and keeps his post. It is for this reason that the subordinate does not envy a man with higher rank, who in turn commands with precision those whose superior he is."

Aristides was greatly impressed by the same point that struck Josephus: the Roman army trained and underwent exercises continually in peace-time and did not wait for a crisis before doing so (*ὅπερ τοις Χρείαις*):

"But you were not so indiscriminate. You did not wait for those who were engaged in other occupations to be turned into soldiers in a crisis nor did you leave it to the enemy to mobilize

you. Your wisdom in this matter too was truly amazing and there was absolutely no precedent at all."

He later states that the Roman authorities in their wisdom had decided that it was not right to levy troops suddenly from a city or to rely on mercenaries:

"But an army was wanted before the hour of crisis. What did you do? You found an army of your own and in this way did not cause the cities any bother."

A standing army always fully trained and ready was of course necessary
(εἰδεις δε στρατιώτων προ της αναγκής).

He makes a not dissimilar point yet again:

"Furthermore, after selecting the most suitable men from every quarter you had this extremely profitable idea: you thought that since those who are specially selected for their excellent innate ability and physical superiority must undergo exercises for the festivals and prize contests, then those who would be contenders in the greatest engagements of real war and victory in as many victories as one might chance to win on behalf of such an Empire, these people, I say, you thought ought not to come together only in a crisis. You thought that these men, selected from the strongest and especially from the most suitable from the whole world, ought to be trained so that they might be superior the moment they took their stand."

Once more he is favourably impressed by the fact that the Roman army did not train only ἐνιαυτού. In contrast to the picture painted by Tacitus where the soldiers disliked not having otium, Aristides says:²⁹

"The result is that they all consider lack of employment to be a disaster and they think that engagements are the occasions for the fulfilment of their prayers; against the enemy they are of one mind, but against one another they are rivals throughout their lives for preference. They are the only people who pray to meet the enemy."

There is further evidence for peace-time training and exercises. Onasander compiled a book in which he claims to describe the arts and practices used by the Romans to establish their empire. However,

he deals mainly with only general principles which would, mutatis mutandis, apply to a commander of any era. Nevertheless, there is one chapter that is worth quoting which, combined with other evidence, is applicable to the Roman army especially. Onasander dedicated his book to the distinguished Roman soldier, Q. Veranius. The heading to the chapter is 'The Necessity of Training the Army in Time of Peace':³⁰

"Therefore it is the duty of a good general to prepare what is useful for war even at a time when no pressing necessity for active operations exists, and he must assign unproductive tasks to keep his army in good condition. Exercises that do not involve the perils of a real battle are a sufficient relaxation to soldiers, however weary they may be. The exercises should be along the following lines.

"The commander should first arm the soldiers and draw them up in military formation that they may become practised in maintaining their formation; that they may become familiar with the names and faces of one another and that each man can learn by whom he stands, where, and after how many, and that the whole army will thus form ranks by one sharp command. He should then train the army in open and close order, turning to the left and right; the interchange, taking distance, and closing up of the files; the passing and repassing of files through files; the division into files; the arrangement and extension of files to form the legion; withdrawing of the files to provide greater depth; battle formation facing in two directions, when the rear guard turns to fight an encircling enemy. He should also instruct them in signals.

"Then he should divide his army into two parts and order them to fight a mock battle using either staves or the shafts of javelins. If there should be any field covered with clods, he should order them to throw clods; if they have any leather straps, the soldiers should use them in the battle. He should point out any ridges, hills, and steep places and order them to charge at the double and occupy such places. At times after arming his men as I have described above, he should station some of them on the hilltops and send the others to dislodge them. He should praise those who stand firm without retreating as well as those who succeed in dislodging their opponents Trained by sweating, puffing and panting, exposed to summer heat and bitter cold under an open sky, the soldiers become accustomed to the future hardships of real fighting.

"Similarly the commander should exercise the cavalry; he should arrange practice battles including pursuits, hand-to-hand struggles, and skirmishes; these manoeuvres should be held on the plains and around the base of the hills as far as possible in broken country, as it is impossible to gallop at full speed either uphill or downhill."

There is other evidence to show that there were military manuals on the training and exercises that the Roman troops were to undergo. The work of Onasander quoted above is an obvious example. Vegetius states that he is quoting from one or more manuals in his sections on these topics. One of his sources was the regulations of the Emperor Hadrian and these in turn are mentioned by Arrian and even described in detail. These quotations occur in his own treatise on tactics in which he prefaces a division with the statement:

"I shall now describe in detail all the equestrian exercises in which the Roman cavalry are trained, just as I have already set forth the exercises that the infantry undergo in the manual I composed for the Emperor himself. This will be the end of my account of tactics."

The manual on the infantry exercises has been lost unfortunately, unless parts of it have survived in Vegetius. The contents of the manual on cavalry exercises described by Arrian are dealt with in detail elsewhere. There was the anonymous person whose instructions did not please Hadrian when they were carried out by the unit under the command of Cornelianus. In addition to the regulations of Hadrian Vegetius made use of those of Augustus and Trajan. The Younger Pliny wrote to a friend about his uncle:

"When he was the commanding officer of a cavalry regiment, he composed a manual in one volume entitled 'Javelin-Throwing from Horseback', a work of equal talent and industry."

Perhaps the Graeculus whom he mentions was present at the military exercises in which Trajan took part, had composed a manual on the subject.³¹

One way in which a good commander could give his men a chance to use their training and also keep them occupied would be in building public works and lines of communication; this would receive the commendation of the emperor (who must often have initiated such projects) in providing such amenities at little cost to the fiscus. The various provinces, particularly Numidia with legio III Augusta, provide abundant evidence for this. This policy is best illustrated in the biography of Probus written by 'Vopiscus'. Although this author is unreliable and outside the period, many other references by other trustworthy writers show that this was standard policy, and a papyrus of the year A.D. 278 proves that this account is true in substance. It is therefore worth quoting as providing some indication of the work done by troops in peace-time on civilian projects to keep them busy:

"Probus never permitted a soldier to be idle; indeed, he built many works by means of their labour and used to say that a soldier must not eat food provided for him unless he had earned it."

In another passage he gives a list of some of these public works carried out by the army for this purpose in Egypt alone:

"He honoured him with a mighty tomb, still standing on a mound of earth two hundred feet high, which was built by the soldiers whom he never permitted to be idle. There are still to be seen in very many parts of the cities of Egypt public works of his which he built by military labour. On the Nile he did so much that his sole efforts helped the tithes of corn. He built bridges, temples, porticos, and basilicas, all by the labour of the soldiers, he dredged many river-mouths, drained a large number of marshes, and converted this into good agricultural land."

Aurelius Victor confirms that Probus was a good general and states that he was a genius at finding ways to exercise the troops (exercitandisque varie militibus ac duranda iuventute):

"In the same way Probus filled the mountainsides of Gaul, the Pannonias, and the Moesias with vineyards Finally, the troops, when he compelled them to dig openings and ditches to drain the land which the winter rains turn into marshes in the vicinity of Sirmium, his native city, became even more provoked and murdered him in the sixth year of his reign."

Elsewhere he states that Probus had vines planted in Gaul and Pannonia and that he used opere militari to plant vines on Mount Alma near Sirmium and on Aureus near Sirmium too.³²

A few examples from Tacitus will also be quoted as more evidence for the Imperial age. In A.D. 47 Corbulo used the troops of Lower Germany (ut tamen miles otium exueret):

"Nevertheless, to keep the troops occupied, Corbulo made them dig a canal twenty-three miles long linking the Meuse with the Rhine."

The epitome of Dio referring to this incident stresses that this was a training exercise in peace-time:

"On being entrusted with the army once more he exercised it no less thoroughly. Since they were at peace, he had his men dig a canal right from the Rhine to the Meuse, a distance of about twenty-three miles, to prevent the rivers from flowing back and causing inundations at the flood-tides of the North Sea."

Curtius Rufus in Upper Germany in the same year A.D. 47 put some of his legionaries to work on a silver mine (cum damno labor):

"The hard work fell on the legionaries, and without any profit, as they dug channels and toiled underground at work that would have been hard enough in the open. The troops were worn out by this labour; they learnt that such work was common in the other provinces also."

The commanders in Lower and Upper Germany also made their troops construct canals in A.D. 55 (ne tamen segnem militem attinerent):

"To keep their troops busy Pompeius Paulinus completed the dam for controlling the Rhine which had been started sixty-three years earlier by Drusus, while L. Vetus prepared to build a canal to join the Moselle and the Saône."

Again at the River Po in A.D. 69 (ne ipsorum miles segne otium teneret):

"In order to keep their troops fully occupied, Caecina and Valens began to build a bridge."

All the above quotations illustrate the policy that the soldiers should have as little otium as possible; it was in fact because they had otium that the legions in Pannonia in A.D. 14 had been able to rebel and similarly the troops in Germany. One of their complaints was that they were often detailed to tasks for the sole purpose of not giving them any otium. According to Velleius Paterculus Augustus believed he must take steps ne res disciplinas inimicissima, otium, corrumperet militem. Vegetius summed up the situation succinctly: exercitus labore proficit, otio consenescit.³³

* * * * *

The first category of training began with marching. Because of the absence of mechanised transport and the impracticability of transporting large numbers of infantry by chariots or wagons, the Roman army was forced to march on foot in order to get from place to place. It is therefore hardly surprising that marching is the first part of the basic training that was given to a recruit:

"The first thing therefore that the recruits must be taught is the military pace, for there is nothing that must be watched more carefully on the march or in the field than the preservation of their marching ranks by all the men. This cannot be attained in any other way than by learning through continual practice to

march rapidly and in equal time. For an army that is split and disorderly is always most seriously imperilled by the enemy. Accordingly, in the summer months at any rate, they must be able to march a distance of twenty Roman miles in five hours at the military pace (militaris gradus). When the full pace (plenus gradus), which is more rapid, is used, a distance of twenty-four Roman miles should be achieved in the same time. If they exceed this pace, they are running but no certain rate can be assigned."

There are also references in the later summary and the list of anti-mutiny measures to marching.³⁴

The Roman mile and hour differed from the English measures of the same name. If fifteen hours is taken as a fair average of the time between sunrise and sunset in summer and eleven milia passuum to be the equivalent of ten English miles, then the military pace is approximately three miles per hour and the full pace three and a half miles per hour. Thus the Roman troops were expected to be able to march just over eighteen miles in six and a quarter hours at the normal pace or slightly under twenty-two miles in the same time at the quicker pace. The very origin of the Roman measurement of a mile shows that there was a regulation pace of a fixed length, although strictly speaking, the passus was a double pace of five Roman feet. The statements of Vegetius show that there were also regulation speeds.³⁵

In his description of the routine life of the Roman army Josephus says of the march:

"Then they advance and all march in silence and in good order, each man keeping his place in the ranks as if in battle."

However, the Columns of Trajan and Marcus both show that even in war-time,

provided that the enemy were not in the immediate vicinity, troops on the march might talk, but that even so, they always kept in good order in the field when they were marching in fighting order and at ease. They were also trained to carry their weapons in various ways depending on how near the enemy were; they carried their spears in their right hand resting on their right shoulder, or advanced at the ready. Comparison of various scenes on both Columns suggests that the Roman soldiers were also trained to break step when marching across a bridge. In the order of march laid down by Arrian, the results of marching exercises frequently held can be clearly seen in the instructions:

"The legionaries are to be drawn up and to march four abreast . . . Centurions especially appointed for this purpose are to march alongside the column to maintain good marching order The commander-in-chief must visit the whole army and inspect the marching; he must make those who are not keeping step do so, and praise those who are marching in order."

Josephus records that the method of marching used by the armies of Vespasian and Titus was exactly the same (except that the legionaries marched six abreast), and that this was the normal practice, while Tacitus makes a similar claim for his father-in-law. Vegetius states that a legionary marching in close order was allocated a space of three feet; as most Roman trunk roads in Britain were twenty-four feet wide, a marching column of men six abreast would appear to be the optimum size. Arrian states that the infantry force must advance to attack 'faster than the marching pace' (*ηποχυπειν θαττον* η *βαδην*); this presumably is a reference to the plenus gradus.³⁶

The ability of the Roman forces to march long distances bears

testimony to the thoroughness of the training given. Legio IX Hispana marched from Pannonia to Rome in A.D. 20 and Vespasian's forces under Antonius Primus made the same journey in A.D. 69; Caesar's forces had marched from Corfinium to Brundisium in seventeen days, journeying an average of seventeen miles per day for the 290 miles. Before Pharsalus Caesar adopted the policy of deliberately forcing Pompey's army to make long marches each day, because his own men were well used to this exercise in contrast to Pompey's (insolitum ad laborem). In A.D. 193 Severus marched for forty-five days at an average of over fifteen miles per day. The network of forts in hostile country was so designed that no station was ever more than a day's march from help if the need should arise. In Wales, for example, the forts were consistently spaced an average distance of fifteen-seventeen miles apart, although along the north coast they were a little further apart. Such distances presumably represent the iter iustum or normal march. In emergencies their training was such that the troops could make a forced march (iter magnum). Six legions in A.D. 69 made a forced march of thirty milia passuum in one day, while Paetus's army in a disorderly retreat marched forty milia passuum.³⁷

According to Ammianus the first item of military training that Julian learnt was to march; to help to obtain the correct rhythm the beat was played on pipes. It seems not unlikely that some such device may have been used in the army of the Empire to teach recruits to march. There are several examples of the marching songs that the troops sang on various occasions: two examples at the Gallic triumph of Caesar in

46 B.C., at the triumph of Lepidus and Plancus in 43 B.C., and when Galba took over the command of Upper Germany in A.D. 39 and put the troops through an intensive period of training. All these examples are in the same metre, trochaic tetrameter catalectic, one that is very easy to march to and which may well have been used in some form or other to train them to march.³⁸

The Emperor Hadrian whose policy it was to keep the troops continually busy and constantly trained, was often accustomed to march fully armed for twenty milia passuum with his men. This may be a reference to regular marching in peace-time as a routine exercise. Julius Caesar would often make his troops follow him on a march when there was no real need and especially on holidays and in wet weather; this would seem to be a marching exercise. Caracalla was accustomed to march with his troops rather than use a chariot or horse while on a tour of inspection. Variations on a normal march were the pack march and the route march, but they will be dealt with separately.³⁹

After learning to march at the military pace and the more rapid full pace, the troops would next be taught to run:

"If they go faster than the full pace, they are running, but no certain rate can be assigned. But the younger men especially must be exercised in running that they may run forward against the enemy with greater force, quickly occupy suitable posts when necessary, or prevent the enemy from doing the same, advance quickly to reconnoitre and withdraw more quickly, and more easily come up in pursuit of the retreating enemy."

This exercise is again given in the summary:

"The troops both legionaries and auxiliaries should very frequently be exercised even in running in full armour."

Running is also given as an anti-mutiny measure.⁴⁰

There are so many instances of Roman legions and cohorts running in battle that it would be superfluous to give examples. The fact that they could run when ordered to for any of the reasons given shows that they must have had training and exercise. Vegetius quotes an instance given by Sallust that Pompey used to exercise with his troops 'cum velocibus cursu'. It should be noted that currere in Vegetius is not the same as 'at the double' in the modern army: Vegetius stresses that there was no fixed rate and also that it was considerably faster than the full pace; in the modern army at the double does in fact have a fixed rate (180 paces of 40 inches per minute), which is only slightly more than twice the standard rate (116 paces of 30 inches per minute).⁴¹

Besides being able to run quickly, the recruit would also have to be able to charge the enemy in any organised formation. This was called decurcio, a word which could also mean either manoeuvres or a parade; it is sometimes difficult to tell precisely which meaning the word has. The ability of the Roman army to make a concerted charge in a given formation is abundantly attested in literary descriptions of battles and therefore they must have been taught how to do so; for example, the legionaries shattered the numerically superior forces of Boudicca in A.D. 60 when they charged forward in a wedge-shaped formation.⁴²

From the context decurrere in the list of exercises in which a

recruit from the town was to be trained, must mean charge. Vegetius mentions that soldiers often had to advance in a line throwing their weapons. Tertullian mentions that in peace-time a soldier was exercised campum decurrente and Seneca that he decurrerit; these may refer to charges but more probably to manoeuvres. Caesar exercised his men in charging. A scene on the Column of Marcus depicts Praetorians and auxiliary infantrymen charging out of a fort in good order with their spears forward at the ready.⁴³

A charge of Roman legionaries was both impressive and effective; a letter of Caesar quoted by Appian provides the details of the training that the army would undergo:

"The blows are delivered with greater force because the weapons are hurled and the soldiers are in higher spirits because they are charging. On the other hand, if the men stand still, they lose heart and because they do not move, they become easy targets for their adversaries as they charge against them."

Appian elsewhere states that the Roman army normally raised a battle cry before charging; perhaps each legion or auxiliary cohort had its own shout, as the alae did. Literature provides many examples where the Romans raised a battle cry and then charged, each man hurling his two pila; clearly the troops would have to be trained and regularly exercised to be able to throw their spears smoothly and effectively. Vegetius also recommends that the troops should raise a battle cry (barritus) at the right moment; Ammianus states that this rose from a comparatively low noise to a crescendo. Arrian gave his army of Cappadocia instructions about their battle cry whenever the Alani should attack:

"The troops are to be drawn up as I have ordered and silence

maintained until the enemy come into range. When they have approached, all forces are to give as loud and blood-curdling a shout as possible."

Similarly Onasander recommends that the troops should enter battle by shouting as they run forward. Severus Alexander is alleged to have said that the campidoctores had trained the soldiers to shout when attacking the enemy.⁴⁴

Another exercise that the troops were to be taught was jumping and leaping:

"The soldiers must also be exercised in jumping, that they may jump across ditches or any other barrier, so that whenever they come across anything of this sort, they can cross without effort. Moreover, in the confusion of actual combat a soldier who advances running and leaping dazzles the eyes of the enemy, terrifies his mind, and delivers the stroke before the enemy can make definite preparations to avoid or resist it."

In the summary Vegetius is a little more definite about the training:

"The troops both legionary and auxiliary should very frequently be exercised at jumping over ditches."

Mention is also made in the anti-mutiny devices:

"They must also be exercised in running and jumping over ditches."

Vegetius cites Pompey as an example of a general who exercised with his troops at jumping (cum alacribus saltu).⁴⁵

As well as being instructed in how to march and arms drill, the soldier was required to learn the various formations that he would have to take part in and also dressing:

"Therefore recruits must always be on the parade ground and drawn up by the roll into line, should dress at first in a

single and extended line but straight, and each soldier must keep an equal and proper distance from the next. Then they must be instructed to double up quickly so that in battle they may keep their customary ranks. Thirdly, they must be instructed to form quickly a line four deep that the line can thus be changed into a triangle, which is called 'the wedge-formation', of very great advantage in battle. They are also ordered to form 'the circle-formation'. If the younger men learn these formations by continual practice, they will keep them more easily in battle."

The need for training of this sort is stressed in the summary:

"But it is more important that they learn to keep rank and remain with their standard in the great confusion of the preliminary exercise."

Foot-drill is not mentioned as such in the list of anti-mutiny measures but is presumably represented in parades and manoeuvres. In discussing the ideal age of the recruit Vegetius says they must be taught not to desert their post and to keep their ranks. ⁴⁶

In a later chapter on the way in which the battle line should be drawn up, Vegetius gives further information about the foot-drill used by the Roman army:

"It is the standard practice that each man in full battle kit should receive a space of three feet between himself and the next man in a straight line, that is in a length of 1,000 paces 1,666 infantrymen can be drawn up in a line. They wished there to be a distance in length between one line and the next of six feet, so that the combatants might have room to advance and retreat; indeed, the men throw their weapons with greater force when they advance leaping and charging."

In the next chapter he goes into this topic in greater detail:

"Having explained the way in which the lines are drawn up, I shall now expound the measurements of the actual dispositions. In 1,000 paces of ground one line will receive 1,666 infantrymen, because each combatant receives a space of three feet. If you wish to draw up six lines in a length of 1,000 paces, 9,996 infantrymen will be needed. If, however, you wish to draw up this number in three lines, it requires a front of

2,000 paces. It is better to increase the number of lines than to make your front too extended. I have stated that there should be a distance of six feet in length between each line, and that the combatants themselves take up one foot of ground. Thus, if you draw up six lines, the army will occupy in space forty-two feet in depth and 1,000 paces in length."

On this last point Vegetius has gone astray once more in his mathematics; six lines drawn up one behind the other with intervals of six feet give a total distance of thirty feet, as there are only five intervals, not six, plus one foot for the actual ground occupied by each line gives a grand width of thirty-six, not forty-two feet. From the other figures that he gives, it is clear that the distance of three feet that he mentions (if he has not misunderstood his source) must include the actual ground that the soldier is standing on; as this is approximately the same length as the distance from a man's left shoulder to the finger tips of his right hand, one can feel confident that the Roman soldier dressed in a straight line in the same way as a modern soldier does. Polybius states that a Roman legionary took up with his arms three feet of ground and that there must be at least three feet between each man in a line and the same distance between each line.⁴⁷

Vegetius's statements can be confirmed and amplified from other sources. Onasander says that a commander must give his men instruction in foot-drill:

"The commander should first arm the soldiers and draw them up in military formation that they may become practised in maintaining their formation; that they may become familiar with the names and faces of one another and that each man can learn by whom he stands, where, and after how many, and that the whole army will thus form ranks by one sharp command. He should then train the army in open and close order, turning to the left and right; the interchange, taking distance, and closing up of

files; the passing and repassing of files through files; the division into files; the arrangement and extension of files to form the legion; withdrawing of the files to provide greater depth; battle formation facing in two directions, when the rear guard turns to fight an encircling enemy. He should also instruct them in signals."

Both Vegetius and Onasander stress that the soldiers must be exercised in the foot-drill while carrying their weapons: this is confirmed by part of the training and exercises that Julius Caesar gave his troops:

"He instructed them in how many feet they were to retreat from the enemy, the manner in which they were to wheel round against the foe, for how little a distance they were to offer resistance, the way in which they were now to charge forward, now retire, now to make feint attacks, the position and manner in which they were to throw their weapons."

The troops of Afranius, who were not drilled and exercised as well as Caesar's, were unable to keep their formations and preserve their ranks when under pressure from him. Caesar's own forces at times had been unable to maintain their formations when under pressure. Finally, Josephus states that he modelled the training he gave to his own army on that of the successful Roman forces:⁴⁸

"He taught them the transmission of signals, the trumpet-calls for the advance and the retreat, flank attacks and encircling movements."

Aristides was astounded at the expertise of the Roman infantry in their foot-drill and the way in which they could operate together very closely; indeed, he uses the same word *synovia* to refer to the training that is systematic and harmonious:⁴⁹

"They have been closely drilled in that systematic training which Homer mentions of the Myrmidons in the passage cited, when he compares them with a wall, that is, in all the tools of war: a formation of helmets so close to each other that an arrow cannot pass between them they take their positions

with their breastplates so close to each other that if you actually put a man with light armour in the middle, the shields on either side would come half way and meet to cover him."

The numerous accounts in literature of battles combined with several descriptions of the order of march plus the *'Εκταφίς κατ' Αλανου* show that in actual warfare the Roman soldier was able to adopt a variety of different formations to suit the terrain, numbers of the enemy etc. It is quite obvious that such knowledge could only be gained by frequent training and practice on the nearby parade ground or, in some cases, in the amphitheatre.⁵⁰

* * * * *

Each recruit would have to be trained carefully to fight with his various weapons; the infantryman in both legion and cohort would have to be instructed in the use of a sword (gladius and spatha respectively) and spear (pilum and hasta). He would have to be taught the various sword strokes and given general training in how to use a sword and shield; he would learn by using special wooden weapons twice the normal weight against a wooden post that represented an adversary; he would also practise with special foils against a live opponent. He would also be trained in how to aim and throw a spear; as an aid in this too he would use a special wooden spear of twice the normal weight; in mock fights with other soldiers he would use a special wooden spear without a point. The cavalryman in an ala or cohors equitata and also the 120 attached to a legion would also have to learn the use of different types of spear and sword. Once the recruit had learnt the basic weapon training, he would have to be exercised continually to keep him proficient. It was as the

direct result of such training and excrcises that Herodian could quote:

"Caracalla stated that the Roman infantry and its fighting at close quarters were invincible."

Indeed, Vegetius stated that it was through armorum exercitio, plus military discipline and training, that the Romans had conquered the world.⁵¹

The accuracy of Vegetius's descriptions of weapon training can be judged by comparing them with exercises that Julius Caesar made an exercitum veteranum victoremque maximis rebus gestis undorgo:⁵²

"He instructed them in how many feet they were to retreat from the enemy, the manner in which they were to wheel round against the foe, for how little a distance they were to offer resistance, the way in which they were now to charge forward, now retire, now make feint attacks, the position and manner in which they were to throw their weapons."

Vegetius describes a special type of sword and shield that were used to train the recruits:

"Recruits in former times, as we find in literature, were exercised as follows: they had round shields woven from osiers, but twice as heavy as those used on real service, and also wooden swords twice as heavy as the normal sword."

The recruit had to be taught the basic strokes and given general training in the use of the sword:

"Moreover, the recruits must learn to thrust, not slash, for the Romans easily defeat those who fight by slashing, and despise them. For a slash-cut, however powerfully delivered, rarely kills because the vitals are protected by the enemy's weapons and bones; on the other hand, a thrust penetrating two inches can be fatal and it is necessary to penetrate the vitals to kill a man. Moreover, when a man is slashing, the right hand and side are left bare; when thrusting, however, the body is covered and the enemy is wounded before he sees the stroke coming. Therefore this was the method principally used by the

Romans, and the reason for giving those swords and shields of double weight was that when the recruit lifted the real but lighter arms, freed as it were from the heavier weight, he would fight with greater security and alacrity."

Further information is given by Vegetius in the summary:

"It is also useful that the troops be exercised with wooden swords at posts, since they learn to thrust and slash at the side, feet, or head. Let them also get accustomed to springing forward to make the blow, to rise with a bound above the shield and again sink down, now brandishing the weapon to advance with a leap, now to retreat."

It also appears as an anti-mutiny device:⁵³

"The troops are to be kept very frequently at the posts thrusting and slashing with their imitation swords."

According to Vegetius in Book 1 the troops must be taught to thrust (punctum) and not to slash (caesum), while in Books 2 and 3 they are to be taught to thrust and slash. This would seem to be a contradiction. Perhaps it would be easiest to assume that either Vegetius did not understand clearly what he was talking about, or had later forgotten what he had previously said. However, there is a more attractive solution: until the third century the legionary was armed with the gladius, a sword specifically designed to thrust with, not to slash; the auxiliary, on the other hand, was provided with the spatha, which was a sword designed to be used to slash. It will be remembered that the references in Books 2 and 3 are for both legionaries and auxiliaries; might not the answer be that the detailed description first given was taken from a manual dealing with the legionary and that the two later references, both mere summaries, are the two types of stroke used individually by the two separate arms of the service with their differently designed swords?

However, there is another possible explanation. Polybius states several times 'the gladius has a point for thrusting and also two cutting edges' and makes it clear that the weapon was normally used for thrusting but could, if needed, be used to cut. This is borne out by Philo's description of the scene when the men sent to execute Flaccus attempted to do so:

"As he clutched hold of the killers and became entangled with them, they were prevented from thrusting with their swords but dealt the blows downwards and sideways; he thus caused himself to suffer more heavily and his hands, feet, chest, and sides were cut and slashed."

So perhaps Vegetius meant that in training the emphasis must be on using the gladius to thrust but that in exercises to cut and thrust. Many of the skulls of the defenders of Maiden Castle had been fractured; this clearly was caused by soldiers slashing and not thrusting.⁵⁴

Vegetius appears to quote from a manual about the stance that a soldier using the gladius would take:

"When it comes to fighting at close quarters with the sword, the soldier must advance the right foot to protect the flank from the enemy, to minimise the risk of being wounded, and to have his right hand nearer to deliver the blow."

However, a relief from the Flavian headquarters at Mainz shows a legionary covered by his scutum and with his arm drawn back ready to thrust forward the gladius but with his left foot forward. A scene from Trajan's Column quite clearly shows an infantryman with a gladius in an identical position and one on Marcus's Column shows a legionary or Praetorian soldier armed with a gladius in the same stance. The actual execution of the stroke is shown by two scenes on the war memorial at Adamclisi:

on one a Roman legionary, his body covered from the neck down by his scutum, has his left foot forward and is about to thrust his gladius forward at a Dacian, the second shows him as actually running him through. A relief from Aubonne shows a gladiator armed with a scutum and gladius in the same stance. Thus several reliefs dating to the first and second centuries depict an infantryman armed with a gladius in a stance that is completely different from that prescribed by Vegetius. A soldier with his right foot forward can neither shelter very well behind his scutum nor use it to fell an enemy nor thrust very far with a short sword, but he can slash quite easily; to do so, he would use the spatha, a weapon designed specifically for that purpose. Another scene from Trajan's Column shows an auxiliary infantryman protecting his side with his shield and holding a spatha over his head ready to bring it down on an enemy, he has his right foot forward. An auxiliary is in an identical stance on Marcus's Column. A possible solution for Vegetius's mistake is that he used the wrong technical term (gladius for spatha) and that he is referring to a time in the third century or later when the legionaries changed to using the latter instead of the former. He elsewhere refers to legionaries armed with scuta gladios maiores quos spathas vocant.⁵⁵

The detailed examples quoted above show that the soldier had to learn to use his shield as well as his sword when fighting. However, the shield could also be used as an offensive weapon as well as a means of protection; Vegetius states in the list of exercises in which a recruit must be trained:

"It is necessary to teach them to handle their shield and deflect the oncoming weapons of the enemy by holding it at an angle, to avoid a blow with skill and deliver one with bravery."

He elsewhere states that one of the qualifications for a centurion is his ability and knowledge of fighting and handling his shield. Julian, who is almost a contemporary and who was renowned for reintroducing the methods of the army of the Imperial era, himself took part in exercises in the use of the shield (quatiens scutum veris motibus exerceretur). The Roman sword-play was deadly in battle and therefore must have been the result of constant practice. Vegetius says that they were taught to aim at the head or face, the flank, the knees and legs. There are several examples from literature where it is almost possible to hear the actual words of the instructors quoted: Germanicus urged his legionaries to use their swords to strike frequent blows and aim for the faces of the enemy and they did in fact aim at the faces and limbs in the battle at Idistavaeso; Suetonius Paulinus in an harangue urged his men to use the bosses of their shields to fell the rebels and their swords to kill them. Caesar urged his men to aim at the face or at the heart of a man, even if he was wearing a breastplate. Perhaps the best description of how this training was put into effect is of the battle of Mons Graupius:

"Agricola ordered the four Batavian and two Tungrian cohorts to close and fight it out at the sword's point; through their long military service they were well exercised in these tactics; . . . accordingly, the Batavians began to rain blow after blow, strike with the bosses of their shields, to stab at the faces of the enemy."

At the first battle at Cremona in A.D. 69 the opposing legionaries used their bosses to strike at one another at close quarters. Acilius, whose sword-arm had been cut off, still managed to fell the enemy by using the boss of his shield.⁵⁶

It is known that many of the techniques and special training weapons were introduced to the Roman army from the gladiatorial ludi in the last years of the second century B.C. Frontinus quotes with approval that Marius preferred troops who had been trained by the following method, although fewer in number, to larger numbers of men who had served under himself or Metellus:

"The soldiers were taught exercises in handling their weapons by the consul P. Rutilius, the colleague of Cn. Mallius. Rutilius sent for instructors from the gladiatorial training establishments of Cn. Aurelius Scaurus, an unprecedented act on the part of the commander-in-chief. He implanted in his legionaries a more accurate technique of avoiding and inflicting blows and so blended courage with skill and likewise skill with courage, that a soldier's skill was made more brave by the vigour of his courage and his courage more cautious through the knowledge of his skill."

Rutilius was responsible for several important changes in tactics and equipment and helped to form the really efficient army that became so effective in the last century B.C.; the training described above was continued into the Empire.⁵⁷

Another exercise in which the legionaries would have to be trained was to lock their shields together to form the testudo; this device is not mentioned by Vegetius and may well not have been employed in his day, when heavy infantry were not much used. The best description is given by Dio:

"The testudo itself and the way in which it is formed is as follows. The baggage-animals, the light-armed troops, and the cavalry are placed in the centre of the army. Those of the heavy-armed troops who use the oblong, curved, and cylindrical shields, are drawn up around the outside in a rectangle and face outwards with their arms at the ready and enclose the rest of the troops. The rest of the heavy infantry who carry flat shields, form a compact body in the middle and lift their shields

over themselves and the others, so that nothing but shields can be seen throughout the whole body of men and all the men are protected from missiles by the density of the formation. Indeed, so very strong is it that men can walk on top and whenever they come across a narrow ravine, even horses and wagons can be driven across it. Such is the form of this formation and for this reason it received the name of testudo because of its strength and shelter. They use it in two ways: when they approach some fort to assault it, and it often enables the men to scale the very walls, or at times when surrounded by archers, they all crouch down - even the horses are trained to kneel or lie down - and in this way cause the enemy to think they are exhausted; when the foe approach near, they suddenly rise up and throw them into confusion.¹

As this particular formation perhaps called for the most skill and co-ordination of all those employed by the Roman army, the legionaries clearly must have been trained and frequently exercised at it; indeed, Tertullian lists testudinem densando as one of the items in the peace-time manoeuvres of the army. It is frequently mentioned in both its uses in literature; the legionaries attempting to dismantle the outer defences of the hill fort where Ceratacus was making his last stand in A.D. 51 came under very heavy fire until facta testudine they easily and quickly broke through. Legionaries attacking forts by this method are depicted on the Columns of Trajan and Marcus; it is interesting to note that on the latter the twenty-four legionaries attacking use the rectangular scutum and not the oval shield which is more often illustrated; clearly even if the latter was superseding the former in the later second century, the legionaries still had to be trained and exercised in the use of the rectangular shield.⁵⁸

The skill and expertise of the Roman legionaries in the use of the testudo filled two Greek authors with amazement; Arrian records:

"From this manoeuvre the Romans form the tortoise; this is mostly square, but on occasions circular or rectangular or whatever shape is most suitable. Some men take up their positions round the square or circle holding their shields in front of themselves to give cover, others stationed behind them hold their shields over their heads, one over another, to provide cover. The whole formation is so closely-knit that it can actually take the weight of javelin-throwers running up it as if it were a roof, and stones large enough to fill a wagon do not break the compactness, but their impetus makes them bounce off and fall onto the ground."

Aristides was impressed by the testudo too; he mentions it when discussing the systematic training that the Roman troops received in working in close harmony:

"A platform of shields lifted above their heads which would support race tracks in mid air, so much firmer than those built in towns that cavalry can actually gallop on them, and you would then truthfully quote the phrase of Euripides, 'To see a bronze plain'."

It is extremely unlikely that Aristides had ever seen Roman legionaries forming this highly skilled formation in action; was it perhaps at tournaments in peace-time that he saw it performed?⁵⁹

The surprise that this formation caused the enemy is well attested by an unusual source. Survivors of the army of Crassus after the battle of Carrhae found themselves as mercenaries of Shan-y Chih-Chih, when he was besieged by the Protector-General of the Chinese Western Frontier Region, Ch'en T'ang, in 36 B.C. in what is now Chinese Turkestan. They were deployed in the testudo formation and a description of a painting in the official report states that 'more than a hundred foot-soldiers lined up either side [of the gate] in a fish-scale formation'. Further comment on the effectiveness of the training of the Roman army is scarcely needed.⁶⁰

In the course of his sword-training the recruit was exercised with his special weapons at a wooden post that represented an adversary:

"They exercised with these weapons of double weight both morning and afternoon at posts. This exercise at the post is of very great benefit to soldiers and gladiators and no one ever proved himself invincible in the arena or field unless he had been carefully exercised and trained at the post. Each recruit fixes a stake six feet high firmly into the ground against which the recruit is exercised, as if it were the real enemy, with the sword and shield mentioned above, as if they were the real sword and shield. He attacks now as at the head or face, now the flank, now the knees and legs; withdraws, comes up from the side, slinks up as though it were a real enemy, and thus assails the post with every type of attack and art of fighting. In this exercise the recruit must be cautioned not to lay himself open while aiming his stroke."

Vegetius mentions this exercise at the post in the later summary in Book 2 and also the list of anti-mutiny measures in Book 3.⁶¹

In the quotation from Book 1 the post is called a palus no less than six times, while the imitation sword is a clava lignea instead of the real gladius; in the second Book the post is still called palus, but the sword is sudes, while in the third the former is called vectis and the swords pro similitudine gladiorum. From what Vegetius says it would appear that this exercise was introduced from the gladiatorial schools; Juvenal mentions a virago who indulged in gladiatorial exercises which included fencing at a post and there are other literary references by other authors. The Emperor Hadrian, who made improvements to the weapons and equipment of the soldiers, may well have made his troops exercise with practice-weapons.⁶²

"The army in the East amused itself under canvas with practice-weapons instead of real swords and shields."

What is perhaps an example of this type of practice-shield described by Vegetius was discovered at Dura-Europos. It was rectangular in shape like a scutum and consisted of round wooden rods held together by thick leather. It measured five feet by two and a half.⁶³

The wooden sword of double weight was used, like the heavier spear, for initial training and target practice. There is some evidence to show that the Roman army also used swords apparently of normal weight which were like a foil; one writer described it as:

"A-wooden gladius with a protective leather button on the tip." These weapons were to be used when the troops fought one another either in their exercises or on manoeuvres:

"It was the custom, once the ceremony of purification was over, to put the army through manoeuvres and to divide it into two separate battle lines and to join combat in a mock battle. So they charged and many wounds were inflicted with the foils and the only thing that was missing to make this look like a real battle was metal weapons."

Onasander also recommends the use of such a weapon in manoeuvres. It seems clear that this type of weapon (rudis) was introduced to the army from the gladiatorial schools.⁶⁴

The training in the use of sword and shield was clearly for fighting at close quarters; it is obvious that there was also a need for the troops to be trained and exercised in fighting at long range. Vegetius mentions this:

"The recruit, in addition to the exercise with the sword at the post, was compelled to throw missiles also of a heavier weight than the real ones at the post as if it were a man. In this exercise the instructor ordered them to throw the weapon with

great strength and to aim it with an agreed shot at or beside the post. This exercise strengthens the arms and gives skill and practice."

He again mentions this exercise in the summary:

"Let them also practise throwing their weapons at the posts from a distance to improve their aim and strengthen their arm."

He also mentions throwing missiles as an exercise to be employed to keep the troops busy. He notes, when discussing the ideal age of a recruit, that they must be taught to throw their weapons with great force and accuracy.⁶⁵

In all the examples quoted above the missile is not defined; in the first example the practice-weapon is called hastile and the real one iacula, in the other two the weapon is just called missibile. However, in all three cases this missile is neither an arrow nor a stone; it can therefore only be the throwing-spear. The throwing-spear of the legionary was the pilum; from the numerous accounts of battles that we possess, it is quite clear that the normal procedure of the legionaries was to advance till they were in range and then throw their two pila and then fight it out with their swords, as happened, for example, against the Helvetii in 58 B.C. and in the battle with the rebels under Boudicca in A.D. 60. During the Principate some, but not all, of the legionaries were equipped with a lancea or lance instead of the pilum; this appears to have been a lighter type of throwing-spear but provided with a sling. It is therefore possible that the training with the weapon described here by Vegetius may have included the lancea as well as the pilum. The systematic training and exercising of the Roman troops was so

efficient that Aristides said that when they all hurled their javelins together, the weapons fell from the sky as if in a solid mass.⁶⁶

Vegetius describes the pilum that was used by the legionaries of a period before him and appears to quote from a manual:

"Moreover, it must be observed that when a soldier throws a pilum, the left foot must be advanced to secure by this posture a greater impetus for the weapon when discharged."

Several scenes on Trajan's Column confirm this. He later describes the effect of the pilum (which was called spiculum in his day):⁶⁷

"The soldiers must be exercised especially in throwing this weapon, because when aimed with skill and strength, it pierces both the shields of infantrymen and the breastplates of cavalrymen."

Although it is not mentioned in Vegetius, there is evidence to show that the Roman army had another type of practice-throwing-spear. It seems to have been the same weight as the normal spear, but had a button on the end or no point at all. The heavier type described by Vegetius was for initial training and target practice against the post, the normal weight practice-spear was designed to avoid accidental wounding or killing in exercises in which soldiers were matched against one another. The parallel in the modern army would be the use of dummy cartridges or blanks instead of real bullets.

The javelin with a leather button (pilum praepilatum) was used by the legionaries in exercises or in simulated battles or by the cavalry to learn how to attack elephants successfully without killing the

animal in the exercise. Quintilian states that it was used in exercises by Roman troops and it seems from a reference by the Elder Pliny that such a weapon was introduced from the gladiatorial schools. Often the Roman soldiers would practise against one another using the shaft of a spear without the head. Onasander recommended that the infantry should practise mock fights either as one of their exercises or on manoeuvres using as missiles clods of earth and 'the shafts of javelins', which was paraphrased by a later writer as 'spears without the cutting edges'. As Vegetius, in describing an item in manoeuvres very similar to that given by Onasander, makes the troops use their shields only, and as he nowhere mentions the standard-weight practice-spear, the logical conclusion is that he does not know of it. In an etymological note Quintilian states that the legionary used both a real and practice-javelin (pilum aut sudem).⁶⁸

The auxiliary infantryman was armed not with the pilum but with the hasta; this was a spear designed for thrusting, not for throwing, and consequently the auxiliary pedes would have to be trained in how to use it. Presumably Vegetius's sources did not include instructions on the use of a pike and by his day the emphasis seems quite clearly to have been on the throwing- and not on the thrusting-spear. It also seems logical that the auxiliary infantryman would be trained and exercised in the use of his hasta, as with his spatha, at a wooden post.⁶⁹

On occasions the legionary would be ordered to use his throwing-spear as a thrusting-spear. This device was often used to counter the

superior cavalry forces of the enemy. Caesar ordered three thousand legionaries to use their pila to thrust at the faces of Pompey's cavalry at Pharsalus; these tactics were so successful that Pompey ordered his legionaries to take up a similar stance to meet the charge of Caesar's legionaries, but, as Caesar himself wrote in his letters, such tactics were not of very great value against other infantrymen. The front line of legionaries of Arrian's battle dispositions were ordered to use their pila to thrust at or strike relentlessly at the horses of the Alanii. A scene on Marcus's Column depicts a Praetorian or legionary thrusting a pilum into an enemy. The butt of the pilum was shod in metal and the purpose of this was probably that the soldiers could use them to form a defensive hedge against cavalry. On active service the pilum murale was used to form a palisade and also as a quarterstaff or as a thrusting-spear on the ramparts; the shank of soft iron made the legionary pilum useless as a missile on a rampart but the auxiliary hasta could be so used, as a scene on Trajan's Column shows. Again one must assume that the legionary must have been trained and exercised in the use of a pilum murale as a thrusting-spear and quarterstaff and of a pilum as a hasta.⁷⁰

The exercises the Roman army underwent were designed to give them experience of what they would have to do in a real battle. The orders issued by Arrian to his army show what methods they were to adopt to deal with the Alanii. It is quite clear that the army of Cappadocia had been frequently exercised in weapon training; his orders to legio XV Apollinaris and a vexillation of legio XII Fulminata, who formed the

front of the battle line, reveal this quite clearly:⁷¹

"They are to be drawn up eight deep and keep in compact formation. The first four rows are to consist of men armed with the pilum and they are to set forward the long metal heads of soft iron. The first row is to hold them in the rest position, to set the point of the pilum against the front of the horses should the enemy approach. The second, third, and fourth rows are to hold their pila in front of them ready to throw at any suitable target, to wound the horses, to kill the rider, to render him useless when the spear sticks in his shield or mail cuirass and bends because of the softness of the iron. The remaining four rows are to take up their positions armed with the lancea."

Vegetius also lists some other weapons which the recruits must be taught to use. A third or a quarter of the younger men were to be trained daily to fire arrows at a post using a special practice-bow and arrows. He quotes for authority for this the military treatise of Cato the Censor (234-149 B.C.), and the examples of Appius Claudius (212 B.C.) and Scipio Aemilianus (134-133 B.C.). The recruits were also to be taught to throw stones by hand, from a sling, and from a sling-staff. The men were also to be taught to use plumbatae or mattiobarbuli, which appear to have been metal darts, five of which were carried in the hollow of the shield. Two legions in Illyria had used these for a long time to such good effect that they were honoured by Diocletian and Maximianus in A.D. 286. Training in all these three exercises is repeated in the summary. In the list of anti-mutiny measures shooting arrows and throwing stones by hand or from a sling are specifically mentioned and the mattiobarbuli may be included in missibilia.⁷²

The question that must be asked here is whether training and exercises in these weapons was regularly given to all troops in the

Principate. It should be noted that the three historical references quoted by Vegetius for the use of the bow and arrow all belong to the mid-Republic and at least two seem to have been noted from the 'Stratagems' of Frontinus. The Balearic Islands provided slingers during the Republic; there are many examples of slingers organised in cohorts under Caesar, but they are rarely mentioned in the Principate, and then not in regular units. The fustibalus is first attested by that term by Vegetius. If the two units mentioned by Vegetius are in fact legio V Iovia and legio VI Herculia of Pannonia Inferior, then they seem to have been created by Diocletian, not honoured as Vegetius states. Therefore they and their own special type of weapon must date to the end of the third century at earliest. It would thus seem that the army of the Principate never used the mattiobarbuli and that they and the two units equipped with them belong to the reforms and reorganisation of the army by Diocletian. Two of Vegetius's statements about the targets used for bows and arrows are directly contradictory.⁷³

Arrian states that the different native cavalry forces used various types of weapons, the Parthians and Armenians bows and arrows, the Sarmatians, Celts, and Alani spears of different types, and this is confirmed by Tacitus. When such peoples were incorporated into the Roman army, they would retain their native weapon, and often the name of the weapon would be in the title of the unit. Thus a relief from Mainz shows Maris, an eques of ala Parthorum et Arabum, armed with a bow and arrows and firing them as he charges. Similarly, the equites in a cohors equitata whose native weapon was a bow, would become mounted-

archers, as Arrian states of the equites cohortis III Ulpiae Petraeorum milliariae equitatae sagittariorum. The equites of ala I Ulpia contariorum would be armed with a contus and similarly the men of ala I Gallorum et Pannonicorum cataphractata were equipped as cataphracts. Some of the cohortes peditatae were armed with their native weapons, for example, cohors I Hamiorum with the composite bow and cohors I Aelia Dacorum with a curved sword. Thus all these units which were not equipped with the standard hasta and spatha of the pedes or throwing-and thrusting-spear of the eques would have to be trained and exercised in the use of their special weapon. The problem is whether a specialist unit would be trained in the use of standard-issue weapons for exercises and real battle, and similarly, whether a unit equipped with standard weapons would be trained in the use of non-standard arms for exercises and warfare.⁷⁴

In the battle dispositions against the Alanī the only mounted-archers are those belonging to an ala sagittariorum or those of a cohors equitata sagittaria. No mention is made of cavalrymen armed with the more standard weapons using bows and arrows and none is mentioned using a gastraphentes or arcuballista or throwing stones by hand or from a machine or a sling or sling-staff. On neither of the Columns is a soldier depicted using any of these unusual weapons. There is no evidence that legionaries ever fired bows and arrows in action; the slight differences in the equipment of troops on Trajan's Column suggests that three cohortes sagittariae are represented. In Arrian's line of battle the foot-archers are the pedites of cohortes sagittariorum.

Although there were cohorts of slingers in the Republic, none is attested in the Principate; when they are attested in literature, they clearly belong to the irregular forces sent by client kings or raised from the natives; finds of lead sling-bullets from sites occupied by the army of the Empire are very rare. There is no evidence of an infantryman of a legion or cohort firing or throwing stones in action. In the orders of Arrian the only troops who were instructed to throw stones were the symmachiarii; the only troops on Trajan's Column depicted throwing stones are clearly not members of a cohors. At the first battle at Cremona in A.D. 69 the only people who threw stones are specifically stated to have been civilians who were brought into the army to swell the numbers (saxis urgeret apta ad iaciendum paganorum manus).⁷⁵

Similarly, Vegetius states that all the troops were to be taught to vault on horseback in full armour with either a sword or a heavy cavalry shock-lance in their hand, when only the cavalry would have to be trained and so exercised. As the contus was a two-handed weapon, it would be very difficult if not impossible to vault onto a wooden horse while holding it. It is worth noting that in the summary he uses the present tense to refer to all the exercises in which the troops must be drilled, except for armatura (which was only used in the arena in holiday festivals), bows and arrows, slings and sling-staffs, and mattiobarbuli. This would suggest that the training and exercising in these weapons was not in his original source, but that he added them either from his reading (Frontinus and Cato) or from the army of his day (the mattiobarbuli, for example). If there is any truth in Vegetius's statements, they are

only applicable to the army of his imagination or of his day (as the great variety of weapons belonging to the Republic, Principate, and Later Roman Empire with which his field army is equipped would suggest) and not to the army of the Principate, when the only troops who would fire arrows in action were equites or pedites of an ala or cohors sagittariorum, and only the symmachiarii and numeri would throw or fire stones.

The way in which a well-drilled army would use its various weapons is best illustrated from the method of attack contained in the orders given by Arrian to the army of Cappadocia to meet the attack of the Alani. This army comprised a legion and a vexillation of a second, alae, cohortes peditatae and equitatae, pedites and equites singulares, two hundred equites legionis, and symmachiarii:⁷⁶

"The troops are to be drawn up as I have ordered and silence maintained until the enemy come into range. When they have approached, all forces are to give as loud and blood-curdling a shout as possible, the artillery are to put down a barrage of missiles and stones, the archers [auxiliaries and symmachiarii] to fire their arrows, and all men armed with the lances including symmachiarii and legionaries [last four rows] are to throw them, the symmachiarii on the higher ground are also to throw stones at the enemy. The fire from all weapons from every quarter is to be as heavy as possible in order to throw the enemy horses into confusion and kill the riders. It is conceivable that the Scyths will be deterred from charging any closer to the legions because of the indescribably heavy fire. Should the enemy approach, the legionaries must lock their shields together, stand firm shoulder to shoulder, receive the attack as steadfastly as possible; the first three rows must engage the enemy as forcibly as possible and keep their ranks as compact as they can; the fourth row are to throw their lances overhead while the first row strike relentlessly with their lance or throw them at man and horse At the same time the Armenian archers are to charge forward, firing as they run, and the light-armed men carrying lances run after them [both symmachiarii] Then the cavalry are to charge and engage

them not only with javelin-fire but also with swords and some with axes."

It has been estimated that the weight of the full armour and equipment of a legionary was about thirty pounds. It was therefore necessary that the recruit should become accustomed to wearing and carrying this weight; Fronto, for example, records that the badly under-exercised troops of the East in the middle of the second century had gradually abandoned their armour and finally were equipped as if they were skirmishers. Vegetius records that the legionaries had ceased to wear breastplates and helmets, with disastrous results; however, in former days steps had been taken to accustom the soldier to the weight of his equipment; as well as shields, swords, and spears of twice the normal weight they had pillei:⁷⁷

"The custom has survived almost up to the present day that all soldiers wear the headgear which was called 'the Pannonian'. The purpose of this was to ensure that in actual battle the helmet might not appear heavy to a soldier who always wore something on his head."

Another exercise with weapons that the recruit must be taught was armatura, which seems to have been arms-drill:

"Moreover, the recruits are to be trained in that form of exercise handed down by the drill-masters and called arms drill, the use of which has survived in part."

He then relates the advantages of such training and states that the doctores armorum received a double allowance and that troops who were not of the required proficiency were punished. He gives further information in the summary:

"Not only those under the drill-master but every man without exception learnt by daily practice the arms drill which now is shown only on festive days in the arena."

Mention of this exercise is also made in the list of anti-mutiny devices:

"The troops are to be kept very frequently at the movements of arms drill."

Another reference is made in the list of exercises to be given to a recruit:⁷⁸

"To teach the troops the whole range of arms drill and all the movements."

The word armatura has a variety of meanings: equipment, a class of soldiers (heavy or light infantry), an instructor in weapons, and the meaning here. In all four instances from Vegetius quoted above armatura is a separate and different form of exercise from using swords to fence with. In the first two instances the word is simply armatura, in the third gestus armaturee, in the last armaturae numeros omnes omnesque gestus. Thus in all four cases armatura is an exercise connected with weapons but not with using them to fight or kill; in two instances movements are concerned and in one it is stated that it is used in the Circus; it was not used by the army in Vegetius's time in action. The logical explanation is that the word here means in a specific sense arms drill as opposed to weapon-training; the former is the equivalent in the modern army of sloping, shouldering, and presenting a rifle as contrasted with taking aim and firing. There are many examples of inscriptions mentioning a soldier with the rank armatura or instructor; Vegetius is talking about an exercise of which he himself is mainly ignorant and in fact uses the word twice in two lines with different

meanings without explaining which meaning he is using in the second line; it is thus not impossible that the armatura (instructor) may have taught weapon training as well as armatura (arms drill) and that the word was also used in a general sense to mean any exercise with weapons.⁷⁹

In connection with armatura the recruit would also have to learn the various military salutes. Although several sources mention salutes, none provides really detailed information. Appian records that two armies saluted each other as they passed, Caesar similarly that two Roman forces salutationem more militari faciunt, Tacitus that the troops of Corbulo could hardly bring themselves to salute those of Paetus. Elsewhere Appian states:

"According to military discipline a soldier does not sit in the presence of the commanding officer."

Clearly he had to stand to attention and probably salute. Tacitus records of the events on 3rd July, A.D. 69:

"As Vespasian was leaving his sleeping quarters, the small guard of honour, paraded in the standard order to salute him as commanding officer, saluted him as commander-in-chief."

Thus it is clear that soldiers normally saluted officers (solito adstantes ordine) and also that there were different ways in which to salute; the method used to greet a legatus was not the same as to greet an imperator. It was only in the presence of the imperator that the bucinatores sounded the clasicum on the cornu; presumably this was a special salute sounded by the musicians just as the soldiers made a special salute. Josephus records a salute of the Roman army whereby the soldiers raised their right arm as they shouted.⁸⁰

Although the Roman soldier was trained and exercised to use his weapons to attack and also to defend himself, there is a record of Roman forces using unarmed combat to overcome an enemy on difficult terrain. In the winter of either A.D. 173/174 or 174/175 the cavalry of the Iazyges charged across the frozen River Danube to attack the Roman forces in the front and flanks simultaneously:

"On seeing this the Romans were not alarmed but formed up in close order facing all their foes at once; most of them laid down their shield and rested one foot on it so that they might not slip so much. In this position they received the enemy attack; some seized the reins, others the shields and spears and pulled the enemy towards them, and thus locked in close combat they knocked down both horse and rider, since because of their momentum the Iazyges could no longer keep from slipping and sliding. The Romans also slipped, but if anyone fell on his back, he would drag his opponent down with him and then with his feet would hurl him backwards, as in a wrestling match, and so get on top of him. If anyone fell face downwards, he would seize his fallen adversary with his teeth. The enemy, who were unused to tactics of this sort and had lighter equipment, were unable to resist, so that few from such a large force escaped."

Xiphilinus makes it quite clear that these legionaries had been trained and exercised beforehand to meet the particular threat of this kind of charge. Once a legionary had hurled his two pila, he had only his sword left with which to fight (it is doubtful if the dagger (pugio) would be of much use) and if he should break or lose it, he would be defenceless. It is therefore logical that all soldiers should be trained in unarmed combat.⁸¹

As the Danube and the Rhine both regularly freeze over in winter, it was obviously desirable that all the troops stationed in provinces bordering these rivers should be exercised in the way described by

Xiphilinus. Indeed, Herodian records that it was normal in winter for all the troops both infantry and cavalry to be trained on the difficult conditions of the frozen rivers:

'The Rhine and the Danube are the greatest of the northern rivers; the former flows through Germany, the latter Pannonia. In summer their depth and breadth make them navigable, but in winter the coldness is so great that they freeze over and one can ride over them like a level plain. So firm and solid does the river become in that season that not only does it support the hooves of horses and the feet of men but also, when the soldiers wish to draw water, they do not bring pitchers and bowls but axes and mattocks to chop the water and carry it without bowls as if it were chunks of rock."

The dramatic date of Herodian's description is the winter of A.D. 237/238. However, it is clear that the troops in these provinces were regularly trained in these conditions, because Severus told his army in Upper Pannonia in A.D. 193 that their regular training had made them used to such difficulties:

"You are accustomed to endure all kinds of toil on your marches, to scorn extremes of heat and cold, to cross frozen rivers, and to drink water that is not drawn from wells but which you have dug up yourselves."

This was a regular part of their winter training (ἀσκήσει τε πολεμικῶν ζηγεγυρνασθε ὑπεις πεν ἀει). It appears that Trajan and his army had also been accustomed to operating on the frozen Danube.⁸²

The third category of training comprises those items which would be needed on campaign. According to Vegetius the recruits are to be taught to build camps with ditches and palisades:

"The recruits must also learn how to fortify a camp, as in warfare there is nothing so salutary or necessary."

He notes that in his time the army no longer built camps despite the

frequent attacks by the cavalry of the enemy. He outlines the advantages of such training, the siting and size and form, the two ways of building depending on whether the enemy are near at hand or not. He describes how the work is divided up among the cohorts and the tools that will be needed:

"After this the ditch is inspected and measured by the centurions; anyone whose work has been too negligent is punished. Therefore the recruit is to be trained in this exercise so that whenever the occasion demands, he can fortify a camp quickly and carefully."

No mention is made of entrenchment training in the summary, but as an anti-mutiny measure the men must be made to dig ditches. However, in both passages they are to be made to leap over ditches and to cut down trees; it is possible that these ditches belong to a practice-camp and the wood obtained was used to build them. In discussing the ideal age for a recruit Vegetius says they must be taught to dig ditches and to plant a palisade with skill.⁸³

The ability of the Romans to build camps was noted with great admiration by several of the ancient writers. Polybius described the camp of the Republican army as 'having arrangements very similar to a city'. Josephus describing the camp as constructed during the Jewish War of A.D. 66-73 states:

"Thus, as it were, a city springs up on the spur of the moment the outer wall and all the buildings inside are constructed more quickly than thought, because their workmen are so skilful and numerous."

Vegetius thought that the camp was like a walled town. Frontinus quoted the following maxim of Corbulo:

"Domitius Corbulo used to say that the pick was the weapon with which to beat the enemy."

This can only be a reference to the proved ability of the Roman army to build camps for itself; it will be remembered that one of the exercises Corbulo compelled the troops of Syria to perform in his drive to restore military fitness was building camps in the mountains near Lake Van in the winter of A.D. 57/58. It also seems certain that the legionaries of Lower Germany in A.D. 14 had been forced to build practice-camps, because they complained about having to build ramparts and dig ditches. Seneca mentions that in the middle of peace-time a soldier was engaged on building ramparts, while Tertullian notes constructing ditches. Caracalla is also said to have dug ditches and built ramparts with his men while on manoeuvres.⁸⁴

Archaeology provides a larger number of instances of practice-camps, particularly in Wales. No less than eighteen practice-camps were noted in 1811 on Llandrindod Common, situated between one and two and a quarter miles south of Castell Collen along the Roman Road, and ten are still visible. At Tomen-y-mûr there are two to the north-west of the fort, another one two-thirds of a mile to the south-east near Braich-ddû just over a mile to the east along the road at Dolddinas. There are four examples on Gelligaer Common some one and a quarter miles to the north of the fort, while near Loughor there are another three, probably built by the garrison of an unidentified fort guarding the river crossing on the road from Neath to Carmarthen, two on Mynydd Carn-Goch and one on Stafford Common. One practice-camp is known outside the fort of Caerau and two outside that at Caer Gai. There are also examples from the frontier zones: there are several on Haltwhistle Common and one has been

identified outside Mumrills. One and a half miles north of the legionary fortress at York two examples have survived at Bootham Stray, although seven or eight were noted there in the eighteenth century. The rhomboidal shaped camp with ditches outside Colchester at Altnaceaalgach appears to be the earliest example of a practice-camp in Britain; pottery found there dates it to the time of Claudius or Nero. These practice-camps were often constructed on open moorland near a Roman road, a mile or so from the fort; they were mostly square with a V-shaped ditch, and occasionally had an internal clavícula or external tumulus.⁸⁵

However, the only examples that have been thoroughly excavated are the two at Cawthorn. In c.A.D. 90 a detachment of one or two cohorts of legio IX Hispana constructed practice-camp A and later dismantled it; they dug a ditch with drainage channel and constructed tutuli, rampart with palisade and rampart walk, two different types of atcensus (staircase at right angles to and sloping ramp parallel to the rampart), three-main gates and a postern, a ballistarum and gun-pit, ovens some of which were actually fired to test them, and water-storage tanks lined with vegetable matter. About a decade later a party of three cohorts started to build a second practice-camp (B); this was abandoned before it was completed, but not before they had dug two sets of ditches plus ravelin; the outer one was a Punic ditch, in places having the vertical face on the outer edge, in others on the inner; the rampart of turf this time was not finished and only three gates were built and the whole project was abandoned incomplete. Before building the practice-camps,

the legionaries had had to build semi-permanent camps in which to live. The earlier (camp C) had thus given them additional and almost accidental practice at constructing ditches, claviculae, ramparts, and gates, the later one (camp B), in addition to those four items, turf screens, tribunal, stone ovens, dug-outs for officers and men, streets, storage-pits, and latrines. There was evidence to suggest that different gangs had been employed.⁸⁶

Examples of practice-camps have also been discovered in Lower Germany. At Veen, two miles to the south-east of Vetera Castra, nine complete examples have been discovered and the remains of another thirteen; they covered an area of one and a half square miles. There are two types of camp: one was small and averaged 230 ft X 260 ft with an entrance on the shorter side, the other was twice as long and again had an entrance on the shorter side. The camps were associated with the second fortress. The so called practice-camps at Fuisdorf near Bonn are now known to be modern.⁸⁷

Archaeology has thus provided abundant evidence that the troops were often engaged in constructing camps. Epigraphy proves that such construction work was performed when the army was holding a field day and was being inspected. Part of Hadrian's adlocutio to the army of Numidia in the summer of A.D. 128 included this description of the work of an auxiliary cohort:

"...Entrenching which others would have spent several days in building you completed in a single day; a wall entailing long labour and of a type which is usually constructed for permanent

winter-quarters, you built in no greater time than it takes to build one of turf which, because it is cut to standard size, is both carried and handled with ease and built up without trouble, as it is naturally soft and level; you built a wall of large, heavy stones of all sizes, which no one can carry, lift, or put in place without the irregularities being clearly visible. You dug a ditch in a straight line in hard coarse gravel and made it smooth and even."

The only part of the address to an anonymous cohort at Zarai, perhaps cohors I Flavia equitata, given on 7th July that has survived, is similar and so presumably it too had been engaged on construction work. However, one of the squads constructing a practice-camp at Dolddinas made a bad job of its ditch, which could not have met the requirements of the centurion and his measuring rod. The literary sources state that great generals on manoeuvres set time-limits for the various tasks including camp-building and timed the work of the troops; the language of Hadrian clearly suggests that he did the same; constructing ramparts and digging ditches was also regarded as a useful way to make a badly-exercised army into a well-drilled one.⁸⁸

Besides ordinary marching the troops were also trained to carry out pack marches. Vegetius states:

"The younger soldiers must very frequently be compelled to carry a pack weighing up to sixty (Roman) pounds and march at the military pace, since on difficult expeditions they may have to carry their provisions as well as their arms."

This exercise is also repeated in the summary:

"The troops both legionaries and auxiliaries should very frequently be exercised in carrying burdens marching at the full pace or even running in full armour and with packs."

It is one of the few exercises that is not mentioned as an anti-mutiny measure. The Roman pound differed from the English measure of the

same name. The libra was equivalent to 0.72 pounds avoirdupois and the pack therefore weighed up to forty-five English pounds. That pack marches were a regular part of military training can be seen from the fact that the irregular forces attached to the army of Arianus were unable to keep up with the Roman army.⁸⁹

On the march through hostile territory each soldier had a heavy pack (sarcina) to carry; besides his weapons he would carry over his left shoulder a stake to which would be fastened (aptata fasciculis) a string-bag for forage, a metal cooking-pot and messtin (patera), a sack containing rations or clothing, and a satchel for the tools he had to carry (saw, axe, sickle, chain, and rope). He could thus be fairly described as impeditus. It is clear that on a campaign a soldier would often have to carry this heavy load and would thus need training to do so in peace-time. One scene on Marcus's Column shows soldiers marching and carrying large packs on their shoulders while escorting a baggage convoy. It also seems probable that pack marches were intended to be an exercise designed to build up their strength and test their endurance and may possibly have been used as a punishment.⁹⁰

There is some evidence to support these assumptions besides the striking similarity with the modern army. In A.D. 14 a voxillation rebelled at Nauportus:

"The principal object of their anger was Aufidienus Rufus, the praefectus castrorum; they dragged him from his carriage, loaded him with baggage, and drove him along at the head of the column and mockingly enquired whether he enjoyed the heavy

burdens and long marches. Rufus had served for a long time in the ranks, then had been promoted centurion, and now praefectus castorum; he was all for reviving strict old-fashioned service conditions. He was long used to work and effort and for that reason all the more harsh because he himself had endured them."

This implies that the troops were frequently forced to carry out pack marches and that these were unpopular and were graded as a punishment.⁹¹

Unlike most other forms of training, route marches were only held every ten days on the average:

"Moreover, the old custom has survived and was confirmed by the regulations of the Divine Augustus and Hadrian that three times each month both cavalry and infantry should go out on route marches, for this is the term (ambulatio) by which they call this type of exercise. The infantry were ordered to march wearing their armour and equipped with all their weapons to and from the camp for ten miles at the military pace, although for part of the march at the full pace. Similarly, the cavalry were also divided into troops, armed, and travelled the same distance, although in the equestrian exercise from time to time they pursued, from time to time retreated and made ready to charge back again. It was not only in the plains but also in hilly and difficult terrain that both arms of the service were compelled to ascend and descend so that they might never experience any chance incident while fighting that they had not as trained soldiers learnt by continual practice."

The need for this type of exercise is repeated in the summary:

"Both legionaries and auxiliaries must very frequently have route marches at the military pace or even run fully armed and with packs."

Part of the training to be given to prevent a mutiny is:⁹²

"They must be compelled to march through thickets and broken ground."

It is worth noting that the first stratagem quoted by Frontinus under the heading 'On Discipline' is:

"He reformed a lax army by making the soldiers return to their

duties and by introducing daily exercises. When he frequently imposed route marches on them, he ordered them to carry rations for several days under such conditions that the soldiers soon became accustomed to enduring the cold and the rain and to fording rivers."

If 'Spartianus' in his two references uses the technical term correctly (ambulare), then Hadrian took part in route marches with his armies. He is stated to have undertaken such marches fully armed for distances of twenty milia passuum. Florus uses the same term for Hadrian's marches in Britain and so did the Emperor in his reply. Periodic route marches in battle kit (in armis deambulando) were noted by Tertullian as part of the exercises a soldier underwent in peace-time. Suetonius mentions that Galba, while governor of Upper Germany, 'ran' for twenty milia passuum while directing manoeuvres in battle kit; this seems physically very unlikely and probably Suetonius has misinterpreted the technical term ambulare and has used currere instead; it will be remembered that various speeds were used on the route marches. It was as the direct result of such exercises that Cicero could remark of Caesar's army bellum ambulando confecerunt.⁹³

* * * * *

Some of the aspects of the training and exercises recommended by Vegetius seem to refer to physical training rather than military training, although it is always hard to say which is which. Vegetius does in fact state this directly:

"From time to time it is necessary to levy townsmen for the army, who, when enlisted, must first learn to toil, to charge, to carry burdens, to endure the sun and dust; their food should be frugal and simple, and they must at times live in the open air and at times under canvas. Only then must they be instructed in the use of their arms."

It is perhaps to this category that swimming, felling trees, vaulting,

and throwing stones should be assigned.⁹⁴

In the summer everyone was to be taught to swim or to be exercised in swimming:

"During the summer months every recruit without exception must learn to swim It is of the greatest advantage that not only the infantry but also the cavalry and even the horses and the soldiers' servants who are called galiarii, should be exercised in swimming, in order that they might not be inexperienced in the case of any necessity."

In the later summary Vegetius also says:

"The troops both legionaries and auxiliaries should very frequently be exercised in swimming in sea or river water."

Swimming is also given as an anti-mutiny measure:

"If there is a sea or river near their camp, during the summer every one must be compelled to swim."

Vegetius lists the reasons for training the men in this exercise. It is worth noting that everybody, legionaries, auxiliaries both cavalry and infantry, even the horses and camp-followers are to be taught to swim. That the latter were made to undergo military exercises with the troops can be seen from Josephus; after enumerating the forces under Vespasian's command in A.D. 67 he states:⁹⁵

"This total excludes the servants who followed in large numbers and who should not be excluded from the category of combatants whose military training they share. In time of peace they continually take part in the exercises of their masters, in war-time in their dangers; the result is that they are second to none except their masters in skill and strength."

There are many examples of this training being put into effect.

In the attack on Anglesey in A.D. 60 the infantry crossed the Menai Straits in boats while the cavalry swam beside their horses. In A.D.

78 Anglesey was invaded a second time; chosen auxiliaries without their packs managed themselves and their arms and horses across the Strait. Legionaries had to swim when attacking the Batavian rebels in A.D. 70. The Batavians themselves were famous for their prowess at swimming and as most of them were organised in cohortes equitatae, the equites of several of these units may have been those who took part in the attack on Anglesey under Agricola. Tacitus says that their cavalrymen could swim rivers while keeping hold of their arms and mounts and keeping in perfect formation. Caesar's legionaries could swim holding their scuta over themselves for protection from weapons hurled by the enemy. The need to teach the soldiers how to swim is obvious; two whole legions were drowned in a disaster in 36 B.C. and in A.D. 105 one member of cohors I Hispanorum was entered on the pridianum as perit in aqua.⁹⁶

It is also probable that exhibitions of swimming were given at reviews. Dio records that Hadrian had the army so well trained that Batavian cavalry swam the Danube in full armour. An epitaph shows that a member of a milliary cohort of Batavians swam the Danube fully armed and also demonstrated his shooting before Hadrian. Probably the date was A.D. 118 and the unit cohors III Batavorum milliaria equitata stationed at Adony. There is thus plenty of evidence to show that as the army was forced to swim on numerous occasions, the troops must have been frequently exercised in the summer in that particular training.⁹⁷

In addition to crossing a river by swimming, Vegetius elsewhere describes how soldiers passed over between horse-lines, by dividing

the stream, or on rafts of various types. There are numerous references to the Roman army throughout the Principate crossing by these methods so that there can be no doubt that they were so exercised. Should a river be not deep enough to swim across, the men would ford it. From what Vegetius says, it is clear that the Roman soldiers would be exercised in this also. Frontinus quotes with approval that Scipio Aemilianus made his army ford streams on their route marches. The Roman army in Britain had to ford a river, probably the upper reaches of the Severn, to capture Caratacus's stronghold, the Menai Straits in parts twice to capture Anglesey, and Caesar's army had to wade ashore under heavy enemy fire. in 55 B.C. and his legionaries and cavalry forded the Thames with the water up to their necks. Legionaries are depicted fording a stream and carrying their clothes in a pile on Trajan's Column. There can thus be little doubt that the army was regularly exercised at fording rivers.⁹⁸

There is no special paragraph on teaching the recruits to cut down trees in Book 1. It is however mentioned in the summary in Book 2:

"The troops both legionary and auxiliary are to be trained very frequently to cut down trees."

It is also listed as one of the anti-mutiny measures but with a fuller description:

"The troops are to be compelled to cut down trees trim timber."

It would therefore seem that exercising the troops to fell trees and to trim timber was regarded more as an exercise to strengthen the soldiers and a device to keep them busy than a training that was vitally necessary.

It is of course true that each camp would require a continuous supply of firewood (lignum), and that a large quantity of timber (materies) for building and repairing the camp would also be needed. The army had specialists (qui silvam infindunt) to cut down the timber it would need for building purposes and they were classed as immunes. Presumably these are the men of legio X Gemina in A.D. 70 who are mentioned under the command of the praefectus castrorum and five primi centuriones, who were felling timber for building.⁹⁹

It is worth noting that one of the complaints of the German legions in A.D. 14 was:

"The collection of food, timber and firewood, and all the other camp tasks that are either necessary or invented to keep the men busy."

One of the exercises that Corbulo set the army of Syria in the winter of A.D. 57/58 to get them into fighting condition was the collection of firewood. Josephus remarks of the daily routine of the Roman camp:

"They perform all their duties with the regularity and safety; each company procures its own wood, food, supplies, and water, as needed."

It would thus seem that normally when timber was needed for building purposes, the specialists would fell and trim the wood. The collection of firewood, however, and chopping down trees would often be given as a task to the troops not only to maintain stocks of wood but also to keep them busy and as a physical exercise designed to keep the men fit.¹⁰⁰

Vegetius states that all Roman troops were trained and exercised to vault onto wooden horses:

"Not only recruits but also soldiers in the service were always strictly required to practise vaulting on horseback, and it is clear that this has survived to the present day, although now it is neglected. Wooden horses were erected under cover in winter and in the open in summer on which the younger soldiers were compelled to mount, at first unarmed to get accustomed to it, then armed. Such was their attention that they learnt to mount and dismount from both sides with their swords, drawn or lances in their hands. This exercise they carried out with continual practice clearly so that those who were so assiduously trained in peace could mount in the turmoil of battle without delay."

Exercise or training in vaulting is not mentioned in either the summary or the list of anti-mutiny measures. The contus seems to have been in general use only by the cavalry of the Later Roman Empire. However, it is possible that legionaries were made to vault on wooden horses as part of their physical exercises and not their military training.¹⁰¹

Vegetius states that all soldiers had to be trained to mount and to vault onto a horse. However, such training would only be put to real use in war by the equites of an ala or cohors equitata and it would appear that Vegetius is making all troops undergo an exercise that was only used by cavalrymen. This view is supported by the fact that the great majority of covered exercise halls discovered in auxiliary forts belong to those with a cavalry or part mounted garrison. Moreover, he states that they were to be trained to mount holding a heavy two-handed shock-lance, not the pilum of the legionary or the hasta of the auxiliary infantryman; the contus seems to have been in general use only by the cavalry of the Later Roman Empire. Indeed, Vegetius's language strongly suggests that he is assigning the weapons of the cavalry of his own time to an exercise which was rarely used in his day

and so incorrectly making all troops be exercised in this. It is not even certain if it would be physically possible to vault onto the horse in the way described; in A.D. 69 and also under Marcus dismounted cataphracts armed as Vegetius describes had found it impossible to remount. However, it is possible that infantry might have been trained to vault onto wooden horses as part of their physical exercises, but there is no other mention in literature of this or the wooden horses.¹⁰²

Vegetius says that all troops were exercised at throwing stones and in one instance specifies that they were to weigh one Roman pound (almost twelve ounces avoirdupois). There is no supporting evidence for the legions in the army of the Principate being exercised in this, but it may well be that it formed part of their physical training, the equivalent of putting the shot.¹⁰³

* * * * *

The training of a cavalryman would be long and difficult (mention is often made of a discens eques but never a pedes). Vegetius provides very little information on the training and exercising of this type of soldier and merely notes that the standards of his day were sufficiently high and he could add nothing of any real advantage from books. One such manual might have been composed by the Elder Pliny; it was entitled De Iaculatione Equestri. However, the manual of Arrian plus other information is sufficient to build up the picture.¹⁰⁴

The cavalry would have to be trained and exercised in the use of their weapons. Josephus gives a description of the cavalry of the ;1

middle of the first century A.D.:

"The cavalry wear a long sword on the right side and carry a long shock-lance in their hand, a shield slanted across the horse's back, and in a quiver slung alongside three or more broad-pointed javelins as long as spears. They wear helmets and breastplates similar to those worn by the infantry."

Arrian describes the equipment of the alae in the closing years of Hadrian's reign:

"Of the Roman cavalry some carry shock-lances and gallop in the manner of the Alani and Sarmatians, others carry lances. They carry a long, broad sword slung from the shoulder, a broad oval shield, and wear an iron helmet, a breastplate of mail, and small greaves. They carry lances for two purposes: to hurl from a distance whenever they need to, and as a hand-held weapon to fight at close quarters, and should it be necessary to close and fight in hand to hand combat, they use their swords. Others carry small double-headed axes."

Arrian's first reference seems to be to troops specially equipped with the two-handed heavy shock-lance. As there were comparatively few of these regiments in his day and even fewer in Josephus's, it seems highly probable that the latter's *κοντός* is not being used in the correct technical sense and means little more than a long spear, perhaps a hand-held one. Among his cavalry forces in his army of Cappadocia Arrian mentions in his orders in case of attack by the Alani that some were equipped with bows, others with lances, others with shock-lances, swords, or axes.¹⁰⁵

There is good evidence to show that the cavalry were regularly exercised in the use of their weapons as an exercise in itself and also as part of a formation. Vegetius shows this when he describes the qualities needed in a decurion:

"Firstly, physical agility to enable him clad in his breastplate

and armed with his weapons to mount his horse, ride most bravely, use his shock-lance skilfully, fire arrows cleverly; he must teach the men in his troop every aspect of cavalry fighting, and compel them to polish and keep in good order their own breastplates and the protective armour of their horses, as well as their shock-lances and helmets Both cavalrymen and horses must be worked continually; accordingly, the decurion is responsible for the health and exercising of both rider and mount."

The equites alares, cohortales, and legionis of the army of Numidia all demonstrated their skill in hurling their various types of spear in July A.D. 128; Hadrian praised ala I Pannoniorum:

"You did everything in order and filled the exercise ground with your gallops. You hurled your weapons quite elegantly, although you were using short spears that were hard to handle, and many of you were equally good at throwing your lances."

The men of this ala thus demonstrated their ability to throw hastae breves et durae as well as the lanceae. The former may well have been those described by Arrian in the 'Cantabrian' gallop:

"These cavalrymen do not use lightweight javelins any more but the shafts of spears; although these weapons are not made of iron, their weight makes them neither easy to handle for the men nor without danger to the men acting as targets."

The equites legionis IIII Augustae received praise also:

"You have done the most difficult of all difficult tasks, hurling your javelins while wearing your breastplates. I praise the elegance and also approve your spirit."

The equites cohortis VI Commagenorum, although they had inferior equipment and fewer javelin throwers and were not as well trained as the men in an ala, had nevertheless done their best at weapon firing (missilibus configeretis). Various of the other fragments show that other unidentified units (the language suggests cavalry) had given a mixed display:

"You did it and were not feeble handed....You did not fire at the signal, when the enemy were already....You must fire with greater rapidity and more vigour...."

Another even smaller fragment mentions men on horseback, quickness, and exercise, yet another inability to throw, a quick hastatus, and exercising. The equites of the army of the East in the middle of the second century were badly under-exercised in their weapon-training:

"Only a few of them could really hurl their spears, the majority tossed them without verve or vigour as if they were lances."

This shows that the hasta was heavier than the lancea.¹⁰⁶

Arrian describes in great detail all the various exercises involving the use of different types of spear that the Roman cavalry underwent. At the end of his military manual he gives the following summary of a set programme of exercises:

"After this they practise various methods of throwing either light darts or even missiles, these being fired not from a bow but from a machine, or even stones by hand or from a sling at a target which is erected in the middle of the two I have already described. Then indeed it is good if they smash the target with their shots, but it is not easy to do this. But not even after these is there an end to their exercises, but they gallop carrying a shock-lance, first forward in the thrusting position, then as if coming up in pursuit of a fleeing enemy. Then, as if to meet another enemy, while the horses are turning, they lift their shield above the head, transfer it to their rear, whirl the shock-lance round above their head, and come up in pursuit as if another enemy were galloping forward. This exercise is called in Celtic 'Tolougeton'. Next they draw their swords and to the best of their ability make one stroke after another, to come up in pursuit of a fleeing enemy, to cut down a fallen one, to perform any stroke on the flank while riding alongside him. Next they jump onto their horse's back using all the various methods there are; the rider mounts his horse in every way and manner. Finally, they demonstrate jumping on in full kit while the horse is actually galloping; this is called by some people 'Hodoeporica'."

The equites cohortis VI Commagenorum fired stones from slings when they

were exercised before Hadrian in A.D. 128. ¹⁰⁷

Arrian states that Hadrian ordered all the Roman cavalry to practise the various movements and weapon exercises used by different cavalry forces armed with different weapons:

"Such are the usual and ancient exercises of the Roman cavalry, but the Emperor has also devised additional ones; they must practise foreign exercises, all those that are used by the mounted-archers of Parthia and Armenia, the quarter turns and half turns of the Sarmatian and Celtic cavalry who carry the shock-lance, when the riders gallop forward in turn, and the manifold and diverse methods of throwing weapons from long range employed therein that are useful in battle."

Tacitus comments that the German cavalrymen did not train their horses to perform all the complicated turns that the Romans employed (sed nec variare gyros in morem nostrum docentur). Arrian also states that the Roman cavalry were exercised, in addition to the javelin ($\alpha\kappa\sigma\tau\iota\sigma\sigma$), spear-shafts ($\delta\sigma\mu\iota$), lances ($\lambda\sigma\gamma\chi\eta$), shock-lance ($\kappa\sigma\tau\iota\sigma\sigma$), plus the sword ($\sigma\pi\alpha\theta\alpha$), in the use of various other weapons:

"After this they practise various methods of throwing either light darts or even missiles, these being fired not from a bow but from a machine, or even stones by hand or from a sling at a target which is erected in the middle of the two which I have already described. Then indeed it is good if they smash the target with their shots, but it is not easy to do this."

The epitaph of Soranus shows that an eques, probably of cohors III Batavorum milliaria equitata, gave a demonstration of swimming the Danube in full armour and using a bow and arrow to such good effect that he managed to hit a first arrow while still in flight with a second. No Batavian cohort is attested as being a cohors sagittariorum. However, Soranus states that it was on manoeuvres conducted before Hadrian that he used the bow and arrow, and this is confirmed by Dio. It is known

that the equites of the army of Numidia used various weapons in the manoeuvres they held before the same Emperor.¹⁰⁸

Arrian states that the cavalry were regularly exercised in missile throwing and that they used one of two special targets (like the posts of the infantry) at which to aim. Arrian's statements are confirmed by a scene on Trajan's Column where a group of equites from North Africa charge forward brandishing their javelin ready to throw them; on the Column of Marcus a scene depicts Roman cavalry charging forward similarly brandishing their javelins preparing to throw them at the wall of an enemy fort in support of a group of legionaries attacking under cover of the testudo. Tombstones provide examples of equites alares, cohortales, and legionis charging and holding a javelin by the tip ready to hurl it down at an enemy, while the Column of Marcus depicts cavalrymen hurling their spear at a prostrate foe.¹⁰⁹

The Roman cavalry were also exercised in the use of the shock-lance (*κοντός*) to thrust at an enemy who was dismounted, had fallen, or was fleeing. Among the numerous exercises recommended by Arrian was:

"But not even after these is there an end to their exercises, but they gallop carrying a shock-lance, first forward in the thrusting position, then as if coming up in pursuit of a fleeing enemy. Then, as if to meet another enemy, while the horses are still turning, they lift their shield above the head, transfer it to their rear, whirl the shock-lance round above their head, and come up in pursuit as if another enemy were galloping forward. This exercise is called in Celtic 'Tolougeton'."

Tolougeton comes from the Celtic ystle meaning 'cover' or 'retreat'.¹¹⁰

Support for Arrian's statement is provided by Trajan's Column; one scene shows a group of Roman cavalry pursuing cataphracts; three equites carry their lances upright, one throws and hits a cataphract, the other two charge with lance extended. Another scene shows seven equites charging with extended lances after the fleeing enemy. A scene from the Column of Marcus shows a cavalryman overtaking an enemy rider from behind and thrusting his lance into the middle of his back. Some tombstones show the deceased charging with his spear extended. That this was a particular mode of attack used by the Roman cavalry even when charging an enemy who stood his ground, can be seen from the action of the cavalry against the rebels in Britain in A.D. 60:

"The cavalry charged also with lances extended and completely smashed all serious resistance."

One of the most inspiring sights was when a Roman cavalryman charged and thrust his lance down at a prostrate foe. From the large number of tombstones depicting the deceased spearing an enemy in this fashion, it would seem that the riders were frequently exercised in this mode of attack; Britain provides several examples of stelae depicting an eques of an ala (Longinus, for example) and of a cohors equitata (Rufus Sita, for example). This method of attack is also depicted on the Bridgeness distance slab to commemorate the subjugation of Scotland and also on the Columns of Trajan and Marcus. As the rider carried his spear in his right hand, he would normally use it to attack on the right hand side of his mount; however, Arrian states that in the 'Toloutegon' formation he would use it on the left hand side. A scene on Trajan's Column shows a mêlée in which an eques has his shield covering his back and turns

round to thrust his lance, as Arrian instructs, at an enemy who threatens him in his rear on his left. There are also several reliefs depicting a rider charging forward and thrusting his spear at a foe on his shield side. The skill of the Roman cavalry in spearing an enemy while galloping at full pace is well seen in the case of a trooper called Longinus at the siege of Jerusalem in A.D. 70; while the two bodies of infantry were hurling their spears at long range, he was the first to come into contact with the enemy:¹¹¹

"Longinus, one of the cavalrymen, sprang forward from the Roman lines and dashed into the middle of the massed Jewish infantry. Breaking their ranks by the force of his charge, he killed two of their bravest men; he pierced the first in the front as he advanced to meet him, then withdrew his spear from the corpse of the first and transfixes the second through the side as the latter was turning to flee. He then galloped unscathed to his own side from the middle of the enemy."

Officers, NCOs, and certain more highly trained troopers were expected to be capable of a high rate of accurate fire:

"On being called the men must reply in a loud voice 'Here', and at the same time gallop forward carrying three lances. They must throw the first from the edge of the levelled parade ground at the target, the second from the platform itself and while the horse is still galloping in a straight line. If they follow the instructions and regulations of the Emperor, while the horse turns to the right, the rider throws the third lance at a second target erected for this purpose in accordance with the Emperor's orders to receive the third lance. The most difficult of all throws is when it is done before the horse has turned round completely and while it is still actually turning. A throw made in this way is called 'Xunema' in Celtic, and is not easy to accomplish even with javelins not made with iron. Some people, because of their quickness and love of glory, have actually managed to throw four lances at the first target while galloping in a straight line, or three while galloping in a straight line and the fourth while turning, as the Emperor has instructed."

Xunema may well have been influenced in its meaning by the Greek 'throwing a javelin' ($\xi\upsilon\upsilon\eta\pi\iota\iota$ and $\xi\mu\alpha$).¹¹²

Most of the weapon exercises described above were designed to make use of the skills of the riders individually. However, it was necessary for each trooper to be able to co-ordinate his abilities with the rest of the riders of his turma or ala to make the effectiveness of the unit as a whole as great as possible. To this end the men were trained and exercised in various formations involving weapon exercises as well as a high degree of equitation; Arrian describes one as the 'tortoise', named after the protective barrier formed by the legionaries with their scuta:¹¹³

"When they have finished galloping and the riders stand in close succession to the left of the platform, they turn the heads of their horses to the rear, and cover the backs of themselves and their mounts with their shields. This manoeuvre, like that whereby the infantry hold their shields together, is called 'tortoise'. Two riders, taking up a position as far from this line as to permit the rest of the riders to ride out, cover the right wing of the tortoise to receive the javelins as they are thrown by the men galloping in a straight line. Half of the riders take up their positions protected in this way by their shields. When the trumpet gives the signal, the other half of the riders gallop forward throwing their javelins in as heavy and continuous a rate of fire as possible; the most skilful man throws first, then the second most, and the rest in similar order. The elegance of this event is when a rider, keeping up as heavy and continuous a rate of fire as possible, while galloping in a straight line, scores the most hits on the shields of the two riders covering the wing of the tortoise. After galloping in a straight line they then turn to the flanks, as when circling. This turn is to their right. In this way nothing hinders their javelin-throwing and the shields cover the men as they throw their javelins at the gallop."

Arrian describes another formation which is a variation on the previous one; it is called 'Petrinos':

"They must carry as many javelins as they can throw throughout the whole move as they ride past. The continuous rate of fire from long range and the incessant din produces an extraordinarily terrifying effect. Between the right wing

of the formation and the covering two riders the cavalrymen charge forward from concealment; they ride forward from their own formation and hurl their javelins at those who ride past. They turn to the left and in this way ride past unprotected. At this point in particular there is need of a first rate horseman to be able simultaneously to fire at the men galloping forward and to protect the right flank with the cover of the shield. As they gallop past, he must fire while turning to the right, as they turn completely, he must use the 'Petrinos' method, so called from the Celtic word, and this is the most difficult of all. For he must turn with all the power of his supple sides to the rear of the horse and must throw his javelin in as straight a line as possible to the rear, and having done so, he must quickly turn again and hold the shield behind his back, as in this manoeuvre he would expose his unprotected part to the enemy, if he turned without cover."

Petrinos seems to come from the Celtic word pedrain meaning the rump of a horse. From the language used by Hadrian it appears quite probable that the equites legionis III Augustae had performed this satisfactorily.¹¹⁴

The skills and elegance of this formation were most apparent when it was carried out from the left instead of the right:¹¹⁵

"When they have finished galloping and those who were formerly galloping are again stationed to the right of the platform, just as the others are to the left of it, and the two riders are positioned the same distance away from the cover of the wing, once again they charge forward between these two men and the whole formation and in the same way fire at the men riding past. At this point they select the best riders for this firing at long range. For the men, starting from the right of the platform, provide nothing more than a continuous rate of fire and incessant din; they do not provide the spectators on the platform with a display of anything, as in such a gallop the right side of the riders is turned away from the spectators. But when they gallop from the left, in this instance the whole method of firing is quite clear; the cover of the shields, the swift transfer of the javelins from the left hand to the right, how the rider, taking hold of them with the right hand and swinging them over his head, like a whirling wheel, in quick succession fires the one he has taken and takes hold of the next, and swinging this over in turn, fires it, and how

his seat on the horse is always kept graceful and upright while firing, all this is far clearer, when they gallop from the left, because the splendour of the equipment, the quickness of the horses, the flexibility of their turns, and how they remain equally spaced as they gallop can be seen. Some of the riders leave large spaces and in this way spoil the continuous rate of fire from long range, others keeping in too close succession impede the precision of the parade by removing the rhythm. For a bad rider, galloping close to a good one, spoils him, and another good one in turn galloping gracefully, lessens the ungainliness in the bad one. It is necessary, if the continuity is to be maintained, to reward the good rider with sure and fitting praise and the bad with merited reproach."

Arrian elaborates on this formation even further and adds a refinement carried out by the quickest of the riders:¹¹⁶

"After the second change of the formations, cover, firing, and turns, when they make the second gallop coming from the left, they do not simply wheel to the right, gallop past the platform, and go away. The quickest of them retain for the task one javelin each and the really skilful two. They approach the platform, ride past, turn in a circle, and while actually turning, fire their javelin at an angle at the edge of the exercise ground. They had to do this at the longest range they could and brandish it as much as possible. Those who retained two javelins, as they gallop, turn the head a little under the shield, turn the right side round as far as possible, and fire the one javelin they now had left to their rear."

Arrian also describes a complicated formation adopted from the Cantabrians which used the shafts of spears:

"Next follows a gallop called 'the Cantabrian', which in my opinion is so called from the Spanish tribe the Cantabrians, as the Romans have taken it over from there for themselves. It is as follows: the protective cover of the cavalrymen, as in the beginning, is positioned to the left of the platform with the exception of the two riders who receive the javelins thrown in a straight line. They gallop forward from the right and, as in the previous exercise, turn to the right; while they gallop forward, the second party gallop forward starting on the left of the platform and turn in a circle. These cavalrymen do not use lightweight javelins any more but the

shafts of spears; although these weapons are not made of iron, their weight makes them neither easy to handle for the men throwing them nor without danger to the men acting as targets. For this reason the men are instructed not to aim at the heads of the men riding past nor to throw the spear-shafts at the horse. But before the rider turns and exposes part of his side or part of his back as he turns, they are ordered to aim at the shield and hurl the spear-shaft with all the force they can. The precision of this exercise is when the rider positioned in this Cantabrian circle approaches as closely as possible the men riding past, throws his spear-shaft with all the force he can at the middle of the shield, and the spear-shaft striking the shield, resounds or even pierces it; next the second man hits the shield of the second man, the third similarly that of the third, and the rest in continuing sequence in a line hit those of the others coming on in order. The din, of course, is clearly terrifying and the counter-riding in this way very graceful; it provides some of the men with exercise to promote a good and strong aim in throwing their weapons, others with exercise to promote steadfastness and defence against oncoming horsemen. Next an exercise and display of firing continuously is performed by the riders, not by all — not all are equal to the quickness — but only by all of those who are skilled in horsemanship. These riders take up their positions, keeping the edge of the platform on the right; then the horse goes gently forward to the edge of the exercise ground. Then the rider must keep up as heavy and continuous a rate of fire as possible and throw his weapon from as great a range as possible at the unlevelled ground outside and at the same time brandish it. A good shot is a man who can throw fifteen javelins before his horse reaches the end of the exercise ground, but one would praise a man with more reason if he could throw twenty. Performances which exceed that number are the result of no longer maintaining precision but of cheating, for the most part by prolonging the time the horse stands still and then throwing two or three weapons before moving, or by overrunning the edge of the levelled ground. I would much rather praise the exercise when carried out according to instructions than when tampered with to terrify the spectators."

The Cantabrian gallop in close formation was one of the formations that the alae of the army of Numidia had performed before Hadrian, as he remarked to the equites cohortales. Arrian states that the precision and beauty of this formation was when the two halves galloped past each other as closely as possible; perhaps the contrari discursus performed by the unit under the command of Cornelianus which did not please

Hadrian, represent a poor display of the Cantabrian gallop. The equites legionis also appear to have performed it.¹¹⁷

After being exercised with lightweight javelins and the shafts of spears, the cavalry were exercised with lances while wearing their full battle equipment:

"Then they arm themselves as if for battle with their iron breastplates, helmets, and heavy shields. First the formations gallop forward quickly, each man carrying a single lance; this he must brandish before approaching the platform and at the same time hold it pointing upwards, and then throw it, aiming at the target which has been erected on the left side of the platform for this purpose. All the good riders gallop for a second and third time, not because they are compelled to, but because they glory in the performance itself and the praise for doing it. They gallop the second time carrying two lances which they must throw as they gallop in a straight line with as good an aim as possible."

Another complicated exercise with lances was the 'Xunema' in which the men in a turma, led by their officer and NCOs, hurled three lances and the most skilful four.¹¹⁸

Although an eques would only use his sword once he had hurled his throwing-spear and his lance, and even then only if he had to, he would still have to be trained and exercised in the various strokes. Arrian again provides evidence that the Roman cavalry were regularly exercised at this:

"Next they draw their swords and to the best of their ability make one stroke after another, to come up in pursuit of a fleeing enemy, to cut down a fallen one, to perform any stroke on the flank while riding alongside him."

A stele from Chester depicts a cavalryman galloping to the right with his hand raised and presumably holding a sword to cut down a fallen

enemy on his right flank. Another from Chesters shows M. Aurelius Victor about to execute a similar sword stroke. A Trajanic relief shows a Roman cavalryman with his sword raised to cut down a fleeing enemy on his right flank. While on a reconnaissance patrol of the defences of Jerusalem in A.D. 70 Titus and a few cavalrymen, who were all without their normal armour, were cut off by large numbers of Jews. Titus decided that the only way out was to charge the enemy in close order:¹¹⁹

"Using his sword he constantly dispersed those on the flanks and prostrated in large numbers those who were withstanding him in the front and rode his horse over the fallen bodies."

The cavalry would also have to be trained and exercised in the various ways and methods of mounting a horse. Vegetius states that they were drilled to mount and dismount from either side at first without arms, then with a sword or spear in their hand; they trained to do this by using a wooden horse. He states that in former days they had continual practice in this. One of the qualifications of a decurio is that he should have the physical ability to mount his horse while in full battle kit. His statements are confirmed by Arrian, who notes in a summary:

"Next, they jump onto their horse's back using all the various methods there are; the rider mounts his horse in every way and manner. Finally, they demonstrate jumping on in full kit while the horse is actually galloping; this is called by some people 'Hodoeporica'."

Arrian believed in making his troops put his recommendations into practice; in the course of his tour of the Black Sea in A.D. 131 he inspected the cavalrymen (probably of an ala) at Sebastopolis:

"I arrived at Sebastopolis to give the troops their pay on the same day, to inspect the horses, the weapons, and the cavalrymen jumping onto their horses."

A clear instance where cavalrymen had not been regularly exercised in mounting their horses was in the army of Syria in the middle of the second century:

"Few of the soldiers could vault cleanly upon their horses, the rest clambered on with difficulty by dint of heel, knee, and thigh."

Close examination of the adlocutio of Hadrian shows that the jumping referred to there is not mounting a horse but leaping over obstacles and ditches.¹²⁰

These authors mention the right and wrong way for a cavalryman in the Roman army to mount his horse; the full details are provided by Xenophon:

"When the rider receives his horse in order to mount it, I shall now state all that the rider is to do, if he is to make the best of himself and his horse in riding. First, he must take hold of the leading-rein, which is fastened to the chin-strap or the nose-band, holding it readily in the left hand, but slackly, so as not to jerk the horse, whether he means to mount by holding onto the mane near the ears or to jump on with the aid of the spear. With his right hand he must take hold of the reins by the withers along with the mane, so that he may not wrench the horse's mouth with the bit as he mounts. In the act of making his spring to mount, he should raise his body with the left hand, while at the same time he stretches out his right to help himself up; this mode of mounting provides a graceful spectacle even from behind. His knee must not touch the horse's back, but he must pass his leg clean over to the off side; when he has brought the foot round, he must plant himself firmly on his seat. To meet the case in which the rider is leading the horse with the left hand and holding his spear in the right, we think it good that he should practise mounting from the right [i.e. off] side also; in fact he has nothing else to learn except to do with his right limbs what he had previously done with the left, and vice versa. The reason why we recommend this method of mounting is that no sooner is the rider mounted than he is fully prepared to join battle with the enemy, should it be needed suddenly."

The need for the cavalry to be exercised frequently in this point is clear, especially as they rode and fought without stirrups or proper saddles.¹²¹

Reference has already been made to the fact that the Roman cavalry in their exercises used special dummy weapons and that the need for a good seat was emphasised. An exercise recommended by Xenophon may well therefore have been used by the Romans:

"Where these conditions are lacking, there is a good method of exercise for two riders working together: one flies on his horse over all sorts of ground, with his spear reversed, while the other pursues, having buttons on his javelins and holding his spear in the same position; when he comes within javelin range, he hurles his blunted javelins at the retreating rider, when he comes within striking distance, he hits the overtaken rider with his spear. It is also a good plan, when coming to close quarters, to pull the enemy towards one, and then to give a sudden push, since that is the way to dismount him. The correct procedure for the man being pulled is to urge his horse forward; by so doing, he is more likely to unseat the other than to be brought to the ground himself."

Arrian called himself the Roman Xenophon and doubtlessly followed the instructions on the best method of throwing the various weapons:¹²²

"We recommend throwing the javelin at the longest range, because this gives the rider more time to turn his horse and grasp the other javelin. We shall briefly state the best way to throw a javelin: if the rider turns his left side forward and his right side back, and rises from the thighs, and throws the lance with the point slightly upwards, he will give the weapon the strongest impetus and the furthest carrying power; the most accurate aim is obtained if, at the moment of discharge, the lance is pointed steadily at the target."

CHAPTER III: TRAINING AND EXERCISES

NOTES

1:

Book 1 - Vegetius, 1.9-27.
Book 2 - Vegetius, 2.23.
Book 3 - Vegetius, 3.4.
officers - e.g. Vegetius, 1.13; 2.14.

2:

Vegetius, 2.23.

3:

Vegetius, 3.4.

4:

Pompeii - information from Dr. Schönberger.
Vegetius - 3.5.
manoeuvres - Vegetius, 2.22.
Josephus - B.J., 2.579.
Onasander - Strat., 10.2.
charge - e.g. Appian, B.C., 2.78.
retreat - e.g. Dio, 76.12.
recall - e.g. Tacitus, H., 3.16.
emergency - Hyginus, M.C., 21.

5:

Macer - Dig., 49.16.12.2.
Cornelianus - VIII 18042 Cb = ILS 2487.
praefectus alae I Pannonicorum - VIII 18042 Aa = ILS 2487.
Frontinus - Strat., 4.1.28.

6:

Macer - Dig., 49.16.12.2; cf.n.5.
Philo - in Flac., 1.5.
Pliny - Pan., 18.
"I praise - VIII 18042 Cb = ILS 2487.
"My GOC - ILS 9134.
"The outstanding - VIII 18042 Aa = ILS 2487.
"...on your - VIII 18042 Ab = ILS 2487.
Fronto - Princ. Hist., 13.

7:

Vegetius - 1.13.
"The tribunes - VIII 18042 Ba = ILS 2487.
pili - ILS 9133; I am grateful to Professor E. Birley and Dr. B. Dobson for help in attempting to identify these men; as there is too little information, the question should be left open.

8:

Vegetius, 2.14.

9:

Tacitus - Agr., 28.

Dio - 66.20.

Pliny's - Pan., 13.

Maximinus - Herodian, 6.8.2. ff.

Vegetius and epigraphy - Vegetius, 1.13; 2.23: 3.6, 8, 26.

II 4083 = ILS 2416, VI 533 = ILS 2088. Vegetius, 1.13, 14, 15;
3. pref. VI 533 = ILS 2088. cf. RE VI. 1588.

10:

Onasander - Strat., 10.2.

Vegetius - 2.23.

Inchtuthil - JRS, L. 213.

Chester - F. H. Thompson, Roman Cheshire, 39-40.

Messor - ILS 2414.

Newstead - RCAM, Roxburgh, 604.

Halton - AA4, XIV. 168-170.

Brecon - F. E. M. Wheeler, The Roman Fort Near Brecon, 43-44; I am grateful to Dr. M. G. Jarret for information about the date of the fort.

Netherby - RIB 978 = ILS 2619.

cohortes pedestatae - Wheeler, ibid.; I am grateful to Dr. Schönberger for further information. I believe that such structures were more probably designed for exercises than as assembly places, although it is not impossible that they were used for the latter purpose at times.

Ilkley - Proceedings of the Leeds Philosophical and Literary Society, XII. 37.

11:

Herodian - 8.1.5.

decurio - AE 1933 214.

cohors II Ulpia - AE 1931 113.

excavated - Report II, 17, 83ff.

Caerleon - information from Mr. G. Boon.

Lambaesis - the idea is my own; for details of the 'camp' cf. Cagnat, 434ff.

Hardknott - CW2, XXVII. 337.

Maryport - CW2, XXIII. 148-149; CWAT, XVI. 13-21.

Gelligaer etc - CW2, XXVII. 337.

12:

Arrian - T.T., 34.1.

Tomen-y-mfr - Arch. Camb., 1938.198.

13:

Arrian - T.T., 36.1; 38.1, 2; 39.2; 40.2, 3, 9; 42.2.

good riders - T.T., 41.2.

"On being called - T.T., 42.2-4.

"After this - T.T., 43.1.

spectators - T.T., 38.2.

Hardknott - cf. n. 11 above; JRS, LV. 222 (7); CW2, LXV. 169-175.

14:

Papers of the South Shields Archaeological and Historical Society
vol.1, no.7, 6-25. I have examined the pieces of metal and Mr.
W. Dodds of the Archaeological Department, Durham University, and I
myself are unable to find anything else that they might more
probably have been.

15:

amphitheatre - cf. Cichorius, taf. XXXIII; TATC., 30-31.
Rufus - Valerius Maximus, 2.3.2.
Chester - F.H. Thompson, Roman Cheshire, 40-42. Was the reason
for the rebuilding so soon because legio II Adiutrix was in
garrison there and it was imperative that it should continue with
its training programme to bring it fully to operational capacity?
Caerleon - Archaeologia, LXXVIII.111-218.
Trajan's - Cichorius, taf. XXXIII.
Valens - CLA 7V.111.1.
Tomen-y-môr - RFW, 37.

16:

An attempt to separate the various parts of training was made by
A. Neumann, 'Römische Rekrutenausbildung im Lichte der Disziplin'
in Classical Philology, 43.157-173. However, it is not a very
critical or satisfactory article.

17:

"A recruit - Vegetius, 1.4.
"Military activity - ibid.
"[After passing - 1.8.
"After the recruits - 2.5.
"The younger - 2.23.
". . . were to be - 3.4.
"To combat - 1.1.

18:

"From time - Vegetius, 1.3.
sons - Ammianus, 14.11.3.
Julian - Ammianus, 16.5.10.

19:

Vegetius - 1.13.
Isidore - Orig., 1.24.1.
suggested - Historia, XI.379-383.
λειφθεῖς - Liddell and Scott, Greek Lexicon, sv λειφθεῖς B.II.3.

20:

Vegetius - 2.23; cf. 2.1.
Varro - L.L., 5.87.
Cicero - Tusc., 2.16.

21:

Polybius - 10.20.

Livy - 26.51.3-5.

Vegetius -

Livy:

in armis decurierunt

arma curare et tergere

sudibus

missilibus

Vegetius:

1.27 armati . . . ire ac redire
curso alacriore.

2.23 currere etiam armatos.

2.14 loricas suas vel catafractas
contos et cassides frequenter tergere
et curare.

2.23 sudibus exerceri.

1.14 dirigat missile.

2.23 missilibus.

3.4 missibilia.

22:

Caesar - B.Afr., 71.

Augustus and Hadrian - Vegetius, 1.27.

Avidius - SHA, Avid., 6.

Maximinus - SHA, Duo Max., 6.

Emperor - ibid., 10.

23:

Vegetius, 3.2.

24:

Vegetius - 3.4.

A.D. 14 - Tacitus, A., 1.35.

no evidence - I am grateful for discussion on this point to Dr. Petrikovits.

Seneca - Ep., 18.6.

Tertullian - ad Mart., 3.

Longinus - Tacitus, A., 12.12.

Galba - Suetonius, Galb., 6.

25:

severitate - Tacitus, H., 1.51.

Corbulo - A., 11.18; 13.35; for the character and ability of Corbulo cf. R. Syme, Tacitus, 492-493, 579.

Trebellius Maximus nor Vettius Bolanus - Agr., 16; for their characters and abilities of hBRA, passim, especially 8, 12, 15, 46.

Vitellius - H., 2.93 neque labore firmari; H., 2.67-68; H., 3.2, 36. For character of Vitellius cf. Tacitus and Suetonius Vit., passim.

Pannonia - A., 1.16.

Germany - A., 1.31.

26:

"Although he - SHA, Hadr., 10.
"He drilled - Dio, 69.9.
"Hadrian exercised - Dio, 69.5.
"Such are - Arrian, T.T., 44.1-2.
"In all - Fronto, Princ. Hist., 11.
Numidia - VIII 18042 = ILS 2487; ILS 9133-9135a.
Vegetius - 1.8, 27.
"In short - Dio, 69.9.
"So well - ibid.; cf. III 3676 = ILS 2558.
Aurelius Victor - Epit., 14.

27:

Josephus - B.J., 4.91.
Vegetius - 2.24.
Avidius - SHA, Avid., 6.

28:

"He realised - Josephus, B.J., 2.577ff.
"Is there - 3.475.
"It would - 6.38.
"The Romans - 3.72-75.
"By their - 3.102ff.
Kai τούς - 5.306.

29:

Aristides - the work of J.H. Oliver, 'The Ruling Power' in Transactions of the American Philosophical Society, 43.871ff should be studied.
"The ring - 84.
"Accordingly - 86.
"Furthermore - 87.
"But you - 71b + 72b.
"But an army - 74.
"Furthermore, after - 77.
"The result - 85.

30:

Veranius - RBRA, 9.
"Therefore - Onasander, Strat., 10.1.
"The commander - ibid., 2.
"Then he - ibid., 4.
"Similarly - ibid., 6.

31:

Vegetius - 1.8, 27.
Arrian - T.T., 42.2; 44.
"I shall now - T.T., 32.3.
elsewhere - see below n.104-122.
anonymous - VIII 18042 Cb = ILS 2487. H. Delbrück and A.R. Neumann have attempted to identify this person with the Emperor Augustus, but without evidence, proof, or conviction (Classical Philology, 31.2.)

31 (cont.):

Augustus - Vegetius, 1.8,27.

Trajan - Vegetius, 1.8.

Pliny - Ep.,3.5.

Graeculus - Pliny, Pan.,13; cf.Juvenal, Sat.,3.78; Sallust, Jug., 85.

32:

building - cf.Chapter X: Other Duties, n.20-29.

papyrus - P.Oxy. 1409 dated to A.D. 278 shows that under Probus plans were made for repairing the dykes and restoring them to their correct height and width and also for cleaning out the canals.

cf. Aegyptus, 1.297 and Geographical Review, XVI.353ff.

"Probus never - SHA, Prob.,20.

"He honoured - ibid., 9.

"In the same - Aurelius Victor, Caes.,37; cf.SHA, Prob.,21.

Elsewhere - Aurelius Victor, Epit.,37; cf.SHA, Prob.,18.

33:

"Nevertheless - Tacitus, A.,11.20.

"On being - Dio, 61.30.

"The hard work - Tacitus, A.,11.20.

"To keep - A.,13.53.

"In order - H.,2.34.

Pannonia - A.,1.16.

Germany - A.,1.31.

otium - A.,1.35.

Paterculus - 2.95.1.

Vegetius - 3.26.

34:

"The first - Vegetius, 1.9.

summary - 2.23.

anti-mutiny - 3.4.

35:

cf. Wm. Smith, Dictionary of Greek and Roman Antiquities (third edition, 1890), vol.I, 970, sv hours, quoting Ideler, Handbuch der Chronologie. cf. also VI 2305 = ILS 8745, an inscription giving the length of hours of day and night for each month; the days in May have $14\frac{1}{2}$ hours, in June 15, in July $14\frac{1}{4}$.

36:

Josephus - B.J.,3.93.

Trajan - Cichorius, taf. VII, LXXIX.

Marcus - Caprino, tav. IV + V.

various ways - Caprino, tav. XLIX.

break step - Caprino, tav. XLIX shows this best, cf.tav.XXI + XXIII with tav. IV + V, Cichorius, taf. LXXVIII-LXXIX with VII-VIII.

Arrian - Ekt.,6,9,10.

36 (cont.):

Josephus - B.J., 3.124; 5.48.
Tacitus - Agr., 20; cf. H., 3.89.
Vegetius - 3.14, 15.

roads - I.D. Margary, Roman Roads in Britain, vol. I, 15.
Arrian - Ekt., 29.

37:

A.D. 20 - Tacitus, A., 3.9.

A.D. 69 - H., 3.1ff.

Caesar's - Cicero, ad Att., 8.14.1.

Pharsalus - Caesar, B.C., 3.85.

A.D. 193 - YCS, VII.n.567; Herodian, 2.11.1ff.

Wales - RFW, 109-110; more forts have been discovered and so the distances should be less; however, as more must remain to be discovered and as it is unlikely that they were all occupied simultaneously even when first constructed, the figures cannot be pressed too far.

thirty - Tacitus, H., 3.21.

forty - A., 15.16.

38:

Ammianus - 16.5.10.

46 B.C. - Suetonius, Jul., 49, 51.

43 B.C. - Velleius Paterculus, 2.67.4.

A.D. 39 - Suetonius, Galb., 6.

metre - cf. Livy, 39.7; Dionysius of Halicarnassus, 7.72.11

39:

Hadrian - SHA, Hadr., 10.

Caesar - Suetonius, Jul., 65.

Caracalla - Herodian, 4.7.6.

pack march - see n.89-91.

route march - see n.92-93.

40:

"If they go - Vegetius, 1.9.

"The troops - 2.23.

anti-mutiny - 3.4.

41:

Vegetius - 1.9, quoting Sallust H., 2.11. cf. Livy, 26.51 and Polybius, 10.20.

modern army - I am indebted to Lt.-Col. D. Bargrave-Weaver for information on this point.

42:

Tacitus, A., 14.37.

43:

decurrere - Vegetius, 1.3.
Vegetius - 3.14.
Tertullian - ad Mart., 3.
Seneca - Ep., 18.6.
Caesar - B.Afr., 71.
Marcus - Caprino, tav. XXXI, fig. 63.

44:

"The blows - Appian, B.C., 2.79.
elsewhere - Appian, B.C., 3.68.
alae - Arrian, T.T., 44.1.
Literature - e.g. Tacitus, H., 2.22, 42; Agr., 26, 34; Caesar, B.Hisp., 31; B.C., 3.46, 92, 93; Herodian, 2.10.6.
Vegetius - 3.18.
Ammianus - 31.7.11; 16.12.43; cf. 21.13.15.
Arrian - Ekt., 25.
Onasander - Strat., 29.1-2.
Alexander - SHA, Alex., 53.

45:

"The soldiers - Vegetius, 1.9.
"The troops - 2.23.
"They must - 3.4.
Pompey - 1.9.

46:

"Therefore - Vegetius, 1.26.
"But it is - 2.23.
anti-mutiny - 3.4.
age - 1.4.

47:

"It is - Vegetius, 3.14.
"Having explained - 3.15.
Polybius - 18.30.

48:

Onasander - Strat., 10.2.
Caesar - B.Afr., 71.
Afranius - Caesar, B.C., 1.71.
Caesar's - B.G., 2.25.
Josephus - B.J., 2.579.

49:

Aristades, 84.

50:

cf. RE VI.1660ff.

51:

gladius and spatha . . . pilum and hasta - Tacitus, A., 12.35; cf. H., 1.38

Herodian - 4.10.3.

Vegetius - 1.1.

52:

B.Afr., 71.

53:

"Recruits - Vegetius, 1.11.

"Moreover - 1.12.

"Itēisraēlo - 2.23.

"The troops - 3.4.

54:

Polybius - 6.23 - cf. 2.30, 33; 3.114; 18.30; frag. 179.

Philo's - In Flac., 189.

Maiden Castle - R.E.M. Wheeler, Maiden Castle Dorset, pl. LIII-LV.

55:

Vegetius - 1.20.

Mainz - Esperandieu, Recueil VII.5822.

Trajan's - Cichorius, taf. LXXII.

Marcus's - Caprino, tav. M = tav. XLVIII, fig. 95.

Adamclisi - V. Barbu, Adamclisi, pl. 25 and 29.

Aubonne - F. Staehelin, Die Schweiz in römische Zeit (third edition), 467, abb. 124.

Trajan's - Cichorius, taf. CXII.

Marcus - Caprino, tav. XVIII, fig. 37.

elsewhere - Vegetius, 2.15.

56:

above - n. 53.

"It is necessary - Vegetius, 1.4.

centurion - 2.14.

Julian - Ammianus, 21.2.1.

Vegetius - 1.11.

Germanicus - Tacitus, A., 2.14, 21.

Suetonius - A. 14.36; cf. H., 2.42.

Caesar - Florus, 2.50; cf. Lucan, 7.498-501; Appian, B.C., 2.76, 78; Frontinus, Strat., 4.7.32.

Mons Graupius - Tacitus, Agr., 36.

Cremona - Tacitus, H., 2.42.

Acilius - Suetonius, Jul., 68.

57:

Frontinus - Strat., 4.2.2.

"The soldiers - Valerius Maximus, 2.3.2.

changes - Historia, XIV. 404-422.

58:

Dio - 49.30.

Tertullian - ad Mart., 3.

literature - RE.V.A. 1062 cites examples.

Caratacus - Tacitus, A., 12.35.

Columns - Cichorius, taf. LXXI; Caprino, tav. XXXIV, fig. 68.

59:

Arrian - T.T., 11.4-6.

Aristides - 84.

60:

AJP, 62.322-330.

61:

"They exercised - Vegetius, 1.11.

summary - 2.23.

anti-mutiny - 3.4.

62:

schools - cf. Caesar, B.Afr., 71.

Juvenal - Sat., 6.247.

literary - e.g. Cicero, Sen., 16, 58; Sallust, H., 2.11; cf. also Seneca, Ep., 2.6.6.

Hadrian - Fronto, Princ.Hist., 10; this is my own suggested emendation of the text which makes no sense as it stands; it reads salibus and I propose to read sal<ic>ibus, basing this principally on the fact that Vegetius specifies that some if not all of the special practice weapons were made of willow (above n.53 and 61). I hope to develop the point further in a separate paper in the near future.

63:

Report I. 16-18, fig.4. However, in the absence of other parallels this is no more than a suggestion; it could, for example, have been a shield used by Eastern light infantry. Mr. Graham Webster was inclined to agree with my suggestion.

64:

"A Wooden - Polybius, 10.20.

exercises - Livy, 26.51.

"It was - Livy, 40.6; cf. 40.9.

Onasander - Strat., 10.4.

schools - Suetonius, Calig., 32; Dio, 72.19.

65:

"The recruit - Vegetius, 1.14.

"Let them - 2.23.

busy - 3.4.

age - 1.4.

66:

58 B.C. - Caesar, B.G., 1.25.
A.D. 60 - A., 14.36-37.
lancea - Parker, Legions, 251-252.
Aristides - 84.

67:

"Moreover, - Vegetius, 1.20.
Trajan's - Cichorius, taf. XXV, LXX.
"The soldiers - Vegetius, 2.15.

68:

exercises - Polybius, 10.20.
simulated - Livy, 26.51.
elephants - Caesar, B.Afr., 72.
Quintilian - 5.12.17.
Pliny - NH, 8.17.
Onasander - Strat., 10.4.
later writer - Leo, Tactica, 7.
Vegetius - 3.4.
Quintilian - 8.2.5.

69:

auxiliary - Cheesman, Auxilia, 129ff; Tacitus, A., 12.35; H., 1.38.
his day - This is well illustrated by the accounts of battles
given by Ammianus.

70:

Caesar - Appian, B.C., 2.76, 78.
Pompey - Appian, B.C., 2.79.
Arrian's - Ekt., 16, 26.
Marcus's - Caprino, tav. M top.
butt - G. Webster, The Roman Army, 26.
pilum murale - Roman Forts at Castleshaw, Interim Report II,
40-44, pl. 23-25; Webster, ibid.
Trajan's - Cichorius, taf. XXXII.

71:

Arrian, Ekt., 15-17.

72:

arrows - Vegetius, 1.15.
stones - 1.16.
plumbatae or mattiobarbuli - 1.17; Lewis and Short, Latin Lexicon,
sv plumbata, where the former is interpreted as 'leaden balls',
is clearly wrong. cf. P. Couissin, Les armes romaines, 484.
summary - Vegetius, 2.23.
anti-mutiny - 3.4.

73:

Frontinus - Strat., 4.1.44; 4.7.27.
slingers - TATC, 17

73 (cont.):

fustibalus - TLL sv fustibalus.
two units - RE.XII.1366, 1572, 1596.

74:

Arrian - T.T., 4; 44.

Tacitus - A., 6.35; H., 1.79.

Maris - AE 1959 188; Germania, XXXVI.72-77, abb.1. For others cf. RE.I.A.1746 sv sagittarius.

Arrian - Ekt., 1.

cohors I Hamiorum - HB, 152; RIB 1914.

75:

Alani - Arrian, Ekt., 21. The units in his force are given in the earlier paragraphs of his work.

differences - TATC, 16.

Republic - TATC, 17; RE.VII.294ff sv funditores, 1377 sv glans.

literature - ibid.

sling-bullets - the only place in Britain where they are found in any number is Burnswark, which is unusual in other ways; cf. chapter IV: Mavoëuvres, n.21. I am grateful to Prof. Schleiermacher and Dr. Schönberger for informing me that very few have been discovered in Germany.

symmachiarii - Arrian, Ekt., 25.

Trajan's - TATC, 17.

Cremona - Tacitus, H., 2.14.

76:

Arrian, Ekt., 25, 26, 29, 31.

77:

weight - Bonner Jahrb., 111-112.15, n.1.

Fronto - Princ. Hist., 12.

Vegetius - 1.20.

78:

"Moreover - Vegetius, 1.13.

"Not only - 2.23.

"The troops - 3.4.

"To teach - 1.4.

79:

cf. TLL sv armatura; Lewis and Short, Latin Lexicon, sv armatura. A.R. Neumann has attempted to identify armatura as hand to hand sword-fighting on the basis of two literary passages: Livy, 49.9 and Dio, 49.30. Neither passage supports his assertions (Classical Philology, 43.164).

80:

Appian - B.C., 3.79.

Caesar - B.Afr., 85.

Tacitus - A., 15.16.

80 (cont.):

"according - Appian, B.C., 2.85.
"As Vespasian - Tacitus, H., 2.80.
classicum - Vegetius, 2.22.
Josephus - B.J., 3.92.

81:

Dio, 72.7.

82:

Danube and the Rhein - RIN cites Ovid, ex Ponto, 4.10.32-34, Florus, 2.28, Ammianus, 19.11.4 (137, n.41); to these add Ito, 68.13, Pliny, Pan., 12, Ovid, Tr., 3.10, Suetonius, Dom., 6.
Herodian - 6.7.6-7.
Severus - Herodian, 2.10.5.
Trajan - Pliny, Pan., 12.

83:

"The recruit - Vegetius, 1.21.
notes - 1.21-25.
"After this - 1.25.
summary - 2.23.
anti-mutiny - 3.4.
age - 1.4.

84:

Polybius - 6.31, 6.31.
Josephus - B.J., 3.83-84.
Vegetius - 1.21.
Frontinus - Strat., 4.7.2.
A.D. 57/58 - Tacitus, A., 13.35.
A.D. 14 - A., 1.35.
Seneca - Ep., 18.6.
Tertullian - ad Mart., 3.
Caracalla - Herodian, 4.7.4.

85:

Castell Collen - Arch.Camb., XCI.69-73; JRS., XLVIII.96-97.
Dolddinas - BBC5, XVIII.397-402.
[other Welsh sites] - Antiquity, XXXV.272-273; JRS., LI.126-127; LV, 86.
Haltwhistle - first suggested by Professor Ernst Fabricius, cf. BerRGK, 19.25; Ordnance Survey Map of Hadrian's Wall.
Numrills - JRS, XLVIII.89.
Bootham Stray - RCAm, Eburacum, 47b.
Altnacealgach - Victoria History of the Counties of England, Essex III.4,92; cf. M.R. Hull, Roman Colchester, 271-273.

86:

Arch.J., LXXXIX.17-78.

87:

Veen - 1. Scollar, Archäologie aus der Luft, taf. 18, 19a, 19b. The excavator, Professor H. Hinz, has kindly provided me with further details. The full report is due to be published in Ronner Jahrb., 1967.

Duisdorf - information from the excavator.

88:

"... Entrenchments - VIII 18042 Bb = ILS 2487.

Zarai - VIII 18042 Cb = ILS 2487 le]varetis et diligenter (?)

Dolddinas - BBGS, XVIII. 399.

literary - Appian, Iber., 86.

badly-exercised - ibid.; Sallust, Jug., 45; Tacitus, A., 13.35.

89:

"The younger - Vegetius, 1.19.

"The troops - 2.23.

anti-mutiny - 3.4.

libra - Wm. Smith, Dictionary of Greek and Roman Antiquities, II. 455, 1005.

irregular - Caesar, B.C., 1.78.

90:

fastened - for literary and archaeological references and commentary on the scene on Trajan's Column cf. TATC, 5ff.

Marcus's - Caprino, tav. LXVI, fig. 131 + 132.

91:

Tacitus, A., 1.20.

92:

"Moreover, - Vegetius, 1.27.

"Both legionaries - 2.23.

"They must - 3.4.

93:

Frontinus - Strat., 4.1.1.

"Spartianus" - SHA, Hadr., 10, 26.

Florus - SHA, Hadr., 16.

Tertullian - ad Mari., 3.

Suetonius - Galb., 6.

Cicero - ad Fam., 8.15.1.

94:

Vegetius, 1.3.

95:

"During the summer - Vegetius, 1.10.

"The troops - 2.23.

"If there - 3.4.

reasons - 1.10

Josephus - B.J., 3.69.

96:

A.D. 60 - Tacitus, A., 14.29.

A.D. 78 - Agr., 18.

A.D. 70 - H., 5.14ff.

Batavians - e.g. A., 2.8 a Batavian cohort under Germanicus in A.D. 16; H., 2.17, 25 Batavians and transrhennani cross the Po in A.D. 69;

Dio, 64.19 cavalry under Antonius Primus swim Tiber in A.D. 69.

Agricola - four Batavian cohorts took part in the battle of Mons Graupius in A.D. 84; cf. Agr., 36.

Tacitus - H., 4.12.

Caesar's - B. Alex., 20.

36 B.C. - Appian, B.C., 5.104.

A.D. 105 - CLA 219.11.9.

97:

Dio - 69.9.

epitaph - III 3676 = ILS 2556; for identification of the unit of RE. IV. 252-253, of the unit and base, Acta Arch. Scient. Hung., 1 210, 225.

98:

Vegetius - 3.7.

references - RE. XXI. 2437-2450 pons2 im Kriegswesen.

Frontinus - Strat., 4.1.1.

Caratacus's - Tacitus, A., 12.35.

Anglesey - A., 14.29; Agr., 18.

Caesar's - B.C., 4.24-26.

Thames - B.C., 5.18.

Trajan's - Cichorius, taf. XXVI.

99:

"The troops - Vegetius 2.23.

anti-mutiny - 3.4.

specialists - Dig., 50.6.7.

A.D. 70 - Tacitus, H., 5.20.

100:

A.D. 14 - Tacitus, A., 1.35.

A.D. 57/58 - A., 13.35.

Josephus - B.J., 3.85.

101:

"Not only - Vegetius, 1.18.

summary - 2.23.

anti-mutiny - 3.4.

contus - cf. n. 105.

102:

exercise halls - see n. 10 above.

A.D. 69 - Tacitus, H., 1.79.

102 (cont.):

Marcus - Dio, 72.7.

infantry - the fact that in 58 B.C. Caesar had put most of legio X on horseback does not prove that legionaries were trained and exercised at vaulting on wooden horses in the Republic or Principate. Caesar put the legionary force on horseback because by the terms of the meeting he could not bring them on foot and at that time he could not trust his Gallic cavalry. He did not intend to use them as cavalry (Caesar, B.G., 1.42).

103:

Vegetius, 1.16; 2.23; 3.4.

104:

discens eques - in a legion, for example, Passerini, legio, 610 (102).

Vegetius - 3.26.

Elder Pliny - [Younger] Pliny, Ep., 3.5.

Arrian - T.T., 32.3-fin. For an interesting and detailed study cf. F. Kiechle, 'Die "Taktik" des Flavius Arrianus' in BerRGK 45. 87-129.

105:

Josephus - B.J., 3.96.

Arrian - T.T., 4.7-9.

Cappadocia - Arrian, Ekt., 21.

106:

"Firstly - Vegetius, 2.14.

"You did - ILS 9134.

"These cavalrymen - Arrian, T.T., 40.4.

"You have done - VIII 18042 Ba = ILS 2487.

missilibrus configeretis - VIII 18042 Aa = ILS 2487.

"You did it - VIII 18042 Care ILS 2487.1).

Another - ILS 9135.

yet another - ILS 9135a.

"Only a few - Fronto, ad Verum Imp., 2.1.19.

107:

Arrian - T.T., 43.

A.D. 128 - VIII 18042 Aa = ILS 2487.

108:

"Such are - Arrian, T.T., 44.1.

Tacitus - Ger., 6.

"After this - Arrian, T.T., 43.1.

Soranus - III 3676 = ILS 2558; cf. n.97.

Dio - 69.9.

Numidia - see n.106 above.

109:

Trajan's - Cichorius, taf. LXIV.

Marcus's - Caprino, tav. XXXIV, fig. 68.

alares - Germania Romana III taf. VII. 3 eques alae Noricorum.

cohortales - ibid., taf. VII?2 eques cohortis IV Thracum.

legionis - ibid., taf. VI. 3 eques legionis I.

Marcus - Caprino, Tav. XXXII, fig. 64; tav. XLV, fig. 89.

110:

Arrian - T.T., 43.2.

ystle - G. Dottin, La langue gauloise, 289.

111:

three - Cichorius, taf. XXXVII.

seven - Cichorius, taf. CXLII.

Marcus - Caprino, tav. LVI, fig. 110.

tombstones - e.g. Germania Romana, III taf. VIII.1 and 3.

A.D. 60 - Tacitus, A., 14.37.

Longinus - ARB, no. 83, pl. 92 = RIB 201, pl. 5.

Sita - ARB, no. 84, pl. 87 = RIB 121, pl. 4. There are other examples from Cirencester, Ribchester, and Hexham.

Bridgeness - ARB, 97, pl. 102 = RIB 2139, pl. 18.

Trajan - Cichorius, taf. XL.

Marcus - Caprino, tav. XVIII, fig. 36; tav. XXVII, fig. 54; tav. XLV, fig. 89; tav. LIX, fig. 118.

'Tolougeton - Arrian, T.T., 43; cf. n. 110.

Trajan's - Cichorius, taf. XXXVIII.

shield side - Cagnat, pl. opposite 297, eques cohortis VI Delmatarum.

Longinus - Josephus, B.J., 5.312-313.

112:

"On being - Arrian, T.T., 42.2-4.

Greek - Dottin, op.cit., 301.

113:

Arrian, T.T., 36.

114:

"They must - Arrian, T.T., 37.

Celtic - Dottin, op.cit., 278.

Hadrian - VIII 18042 Ba = ILS 2487; the suggestion was first made by S. Dehner.

115:

Arrian, T.T., 38.

116:

Arrian, T.T., 39.

117:

"Next follows - Arrian, T.T., 40.

117 (cont.):

Hadrian - VIII 18042 Aa = ILS 2487.
contrari discursus - VIII 18042 Cb = ILS 2487.
equites legionis - VIII 18042 Ba = ILS 2487.

118:

"Then they - Arrian, T.T., 41.
'Xunema' - T.T., 42; cf.n.112 above.

119:

Arrian - T.T., 43.3.
Chester - RIB 550.
Chesters - RIB 1481.
Trajanic - Reinach, RR I.253, fig.1.
Titus - Josephus, B.J., 5.62.

120:

Vegetius - 1.18.
decurio - 2.14.
Arrian - T.T., 43.3-4.
Sebastopolis - Arrian, Peripl., 10.3.
Syria - Fronto, ad Verum Imp., 2.1.19.
Hadrian - cf.chapter IV: Manoeuvres, n.24-5.

121:

Xenophon, R.E., 7.1-4.

122:

"Where these - Xenophon, R.E., 8.10-11.
"We recommend - R.E., 12.13.

CHAPTER IV

M A N O E U V R E S

After the recruit had been taught all the individual exercises, it was only reasonable that he and all the other soldiers should be exercised in them together on manoeuvres. The term by which this was known seems to have been decurcio or campicursio. Combinations of the different types of marching would provide elementary manoeuvres; for example, during a route march, according to Vegetius:

"The infantry were ordered to march wearing their armour and equipped with all their weapons to and from the camp for ten Roman miles at the military pace, although for part of the march at the full pace. Similarly, the cavalry were also divided into troops, armed, and travelled the same distance, although in the equestrian exercise from time to time they pursued, from time to time retreated and made ready to charge back again. It was not only in the plains but also in nilly and difficult terrain that both arms of the service were compelled to ascend and descend so that they might never experience any chance incident while fighting that they had not as trained soldiers learnt by continual practice."

Campicursio is at the head of the list of anti-mutiny measures, while at the end of the list comes the following description of combined manoeuvres held by the legions and the auxiliary infantry and cavalry:

"The troops must be made to cut down trees, to march through thickets and broken ground, trim timber, dig ditches, and one party in turn should occupy a site and use their shields to prevent the other party from dislodging them."

Elsewhere he stresses why it was necessary for the troops omnia in campestri meditatione praenoscere:¹

"It was in their interests to learn beforehand in manoeuvres in the field everything that might happen in action and at the front."

Vegetius also emphasises the need for a general to hold combined manoeuvres with all his forces before starting a campaign in order to test them:

"When the legions and auxiliary cavalry and infantry units are assembled from their various quarters, a good general must have the troops exercised separately by their various units in all methods by officers chosen for their known efforts; afterwards he personally will repeatedly exercise them collectively as if for a general action; he will essay what skill and strength they have, how they harmonize with him, whether they carefully obey the visual and audible signals as well as his own instructions and commands. If they fall short in any of these, they must be exercised and instructed until they are perfect. Once they are fully trained in manoeuvres (campicursio), in shooting arrows and missive weapons, and in forming battle lines"

This is precisely what Severus Alexander did at Antioch before he attacked Parthia in A.D. 232 and three years later before attacking the Germans; Maximinus continued this training. Indeed, when Alexander had appointed Maximinus to train a legion for him, he made the recruits go on manoeuvres once every five days:

"On taking over the legion therefore, he immediately began to exercise it. On every fifth day he gave instructions that they were to go on manoeuvres and to fight mock battles against one another."

Vegetius makes further mention of manoeuvres when he refers to the various musical instruments of the legion:

"Whenever the soldiers go on manoeuvres (decurcio campi), they start and finish at the call of the tuba."

He previously referred to how they obey the calls of the tuba in battle.²

The detailed passage of Vegetius is probably derived from Cato; as the works of Cato were eagerly read by both Hadrian, who was renowned for continually exercising the troops, and Marcus Aurelius, who acquired considerable experience in military matters, and as Cato is alleged to

have been used as a model by Avidius Cassius, who is also claimed to have given the troops under his command regular training in manoeuvres, it is certain that the principles laid down by Cato were observed by the army of the Imperial era:

"Meanwhile, I used to test every troop, maniple, and cohort to gauge its capabilities. I would examine through light battles the calibre of each man; if a man had acted with vigour, I rewarded him generously, so that the rest of the men might have the same intention, and in my address I was profuse with my praise. Meanwhile I made a few encampments here and there, but when the season of the year came round, I set up winter-quarters."

There is plenty of evidence to show that the Roman army held manoeuvres, including building practice-camps, and that they were afterwards addressed by the commander-in-chief and rewarded for a good effort.³

A passage that is very similar to the description of Vegetius comes from Onasander:⁴

"Then the commander should divide his army into two parts and order them to fight a mock battle using either staves or the shafts of javelins. If there should be any field covered with clods, he should order them to throw clods; if they have any leather straps, the soldiers should use them in the battle. He should point out any ridges, hills, and steep places and order them to charge at the double and occupy such places. At times, after arming his men as I have described above, he should station some of them on the hilltops and send the others to dislodge them. He should praise those who stand firm without retreating, as well as those who succeed in dislodging their opponents . . . Trained by sweating, puffing and panting, exposed to summer heat and bitter cold under an open sky, the soldiers become accustomed to the future hardships of real fighting."

Josephus held the Roman military system in high regard; he makes frequent comments full of admiration at the constant exercises of the Roman forces and observes:

"Their peace-time manoeuvres are no less strenuous than actual warfare One would not be far wrong in calling these exercises bloodless battles and their battles bloody exercises."

The frequency with which the Roman troops went on manoeuvres in peace-time also struck two other writers. Seneca noted of the soldiers in media pace:

"In the middle of peace-time a soldier goes on manoeuvres, throws up a rampart against a non-existent foe, and tires himself out with unnecessary toil, in order to be fit and ready for anything."

He thus sums up the whole purpose of manoeuvres as ut sufficere necessario possit. Tertullian too was impressed by the activities of the soldiers etiam in pace:

"Even in peace-time soldiers still learn to inure themselves to warfare by toil and trouble, by route marches in battle kit, by manoeuvres on the parade ground, by constructing ditches, and by forming 'the tortoise'."

Manoeuvres along these lines are alleged to have been held once every seven days by Avidius Cassius and once every five by Maximinus.⁵

The strenuous measures adopted by Scipio Africanus quoted below are similar to these and are quoted with approval by Frontinus and Vegetius. Hadrian took Scipio as his model and as the description provided by 'Spartianus' is very similar to that given by Vegetius, it is tempting to suppose that they are both quoting from the same source, Hadrian:

"Not even so did he venture to wage war until he had exercised the men with many toils. He marched over all the nearby plains and each day built and demolished a new camp, one after another, dug very deep ditches and filled them in, constructed high walls and overthrew them; he himself inspected everything from morning to night. To prevent any of the men from straggling while on the march, he always marched in square formation and

no one was permitted to change the place assigned to him. Moving along the line of march, he frequently visited the rear and had the riders dismount and the sick ride instead, and he distributed the burdens between the mules and the men. When he pitched camp, those who had formed the advance-guards during the day had to take up positions around the fortification and a regiment of cavalry had to patrol. All the other soldiers were divided into parties for various tasks: some were ordered to dig ditches, others to build ramparts, others to pitch the tents. The length of time for these tasks was defined and measured."

The above account was provided by Appian who wrote in the reign of Pius. Metellus also made an army that was under-exercised undergo similar training in 109 B.C. Appian also describes manoeuvres conducted under the supervision of Augustus late in 44 B.C.:⁶

"After making this speech he watched the exercises of the two legions that had deserted from Anthony. They were drawn up against each other and spared no effort in performing all the actions of a real battle except for killing."

We possess several literary references to the Roman army on manoeuvres. Tacitus provides an account of the strenuous manoeuvres that Corbulo forced the army of Syria to undergo near Lake Van in order to bring them up to combat efficiency during the winter A.D. 57/58. They were badly trained and under-exercised:

"The whole army was kept under canvas, although the winter was so severe that the ice had to be removed and the ground dug before the tents could be pitched. Frostbite caused many losses of limbs and some sentries were frozen to death at their posts. It was noted that a soldier carried a bundle of firewood with hands so frozen that they fell off fastened to the load. Corbulo himself, thinly-clad and bare-headed, was for ever moving about among his men at work and on the march, praising the energetic, comforting the sick, and providing an example to all."

These exercises were clearly designed in this instance as an extreme method of toughening an extremely badly-exercised army that had been

enervated by living in a town and not in barracks; they are reminiscent of the list of exercises that Vegetius gives to toughen recruits who had spent an unenergetic life in towns. Avidius Cassius is alleged to have threatened to make his troops spend a winter under canvas, because they were under-exercised.⁷

There are other literary references to manoeuvres; Xiphilinus records in an epitome of Dio:

"Trajan always marched on foot with all his army and attended to the ordering and dispositioning of the troops throughout the entire march; he would lead them sometimes in one order and sometimes in another; he forded all the rivers that they did. On occasions he caused his scouts to give false reports, in order that the soldiers might simultaneously practise military manoeuvres and be fearless and ready for any event."

In his panegyric to Trajan Pliny gives further details of these manoeuvres (in illa meditatione campestri) and shows that the Emperor took part in the spear-throwing and sword-fighting between two halves of the army:

"This was the veneration in which the enemy held you. Yes, but what was the admiration that the soldiers held you in? How did you gain it? Because it was with you that they bore hunger, it was with you that they put up with thirst; because in these manoeuvres in the field you mingled the sweat and dust of the commander-in-chief with that of the common soldiers; you differed from the rest only in strength and superiority in open battle, now hurling your weapons from long range, now receiving them when thrown; you were proud and happy at the courage and skill of the soldiers, whenever a somewhat heavy blow fell on your helmet or shield - you would praise the men who struck the blow and encourage them to be brave, and brave they were - when you, while watching and directing, would match the weapons of the soldiers entering the contest; you would handle the weapons and if any weapon seemed to be too difficult to handle for the man to whom it was given, you would hurl it yourself."

Clearly these were exercises that commilitones were required to perform frequently in the manoeuvres which were held while they were under canvas.

In the last sentence there seems to be a parallel (durius) to Hadrian's comments that some weapons used on manoeuvres were difficult to handle (hast[is usi q]uamquam brevibus et duris).⁸

Another general and a future emperor who kept his troops under regular training and made them go frequently on manoeuvres was Severus. Herodian says that he addressed his army in A.D. 193 and told them how they were better than the Praetorian Guard:

"By your training in military matters, by being stationed opposite barbarians you have been continually exercised; you are accustomed to endure all kinds of toil on your marches, to scorn extremes of heat and cold, to cross frozen rivers, and to drink water that is not drawn from wells but which you have dug up yourselves. It is with eagerness that you have undergone your exercises."

There is evidence to show that governors in other provinces besides Upper Pannonia made their men go on manoeuvres in such bad weather.

The need for such continual training (εκεῖσει τε πολεμικών ἐγγεγυημέθεις εργα περ ἀστ) is clear from the description of Severus's march from Italy to Gaul across the Alps late in A.D. 196:⁹

"He himself set out on the march and gave the troops no breaks for holidays or rest-days and scorned heat and cold alike. On many occasions while crossing the very high and cold mountains he marched bare-headed through falling and drifting snow. In fact he set his troops an example of eagerness and courage so that they not only endured hardships through fear and training but also through keenly imitating the Emperor."

Another emperor who took part with his armies on manoeuvres was Caracalla. Herodian records that in his tour of inspection of the Danubian provinces in A.D. 214: ¹⁰

"Whenever a ditch had to be dug, he was the first man to dig, whenever a river had to be bridged or a high rampart thrown up, it was the same. He was the first man to do every task involving toil of hand or body. For the most part he marched with his men on foot — had rarely used a chariot or horse — and carried his own weapons."

'Spartianus', Xiphilinus (and therefore Dio), Arrian, Fronto, and Vegetius all state that the Emperor Hadrian continually trained and exercised his troops and this evidence has already been discussed in detail. These exercises included manoeuvres, as might be expected. One author records of them apparently:

"The army in the East amused itself under canvas with practice-weapons instead of real swords and shields."

However, it is about the manoeuvres performed by the army of Numidia under the personal inspection of the Emperor in July, A.D. 128 that we have most information. That they were very realistic is clear from Hadrian's own assessment:¹¹

"I praise my GOC Catullinus for having employed you on these exercises which have achieved a close resemblance to actual warfare, and for training you so well in these that I ... can praise you."

Most of the individual items have been discussed in detail already under their various categories and so will now merely be summarised. The equites legionis had thrown their javelins, probably in the Petrinos method. An auxiliary cohort had built a model example of a camp with ditches and stone walls in an incredibly short time. Another unit had probably also been engaged in building, perhaps cohors I Flavia equitata. The unit under Cornelianus had performed some exercises satisfactorily,

but not the Cantabrian gallop nor another one. The ala I Pannonicorum had thrown spears and lances (the former perhaps in the Cantabrian gallop) and had jumped satisfactorily on two successive days. The equites cohortis VI Commagenorum had fired stones from slings, fought with missiles, and been prompt in their jumping. The alae had galloped over the parade ground, thrown javelins, done right wheels in quick succession (in the 'tortoise', Petrinos, Cantabrian, and Xunema formations, for example), and the Cantabrian gallop. Other very fragmentary pieces show that other units were exercised in weapon-firing.

Some of the more fragmentary parts of the speech reveal that the army had been divided up into opposing forces, as the military text-books recommended, and as is known to have happened on manoeuvres. The first line of Hadrian's actual discussion on the manoeuvres, if correctly restored by Dehner, is an example:

"You did everything briskly, when you defended the ramparts..."
The auxiliary cohort which had built the camp, went into action immediately it had completed it:

"When this work had been approved, you went into the camp, quickly took up your rations and arms, and followed the cavalry who had been sent out, and with loud shouts as they retreated, you..."

The equites of Cornelius's unit had been in pursuit of an enemy:

"A cavalryman must gallop from concealment and pursue with caution, as, if he does not see where he is going or is unable to check his horse when he wants to, he is definitely liable to fall into a concealed pit ... if you wish to engage, you must engage at the gallop ... must now be made by the enemy opposite..."

Another fragmentary passage referring to a unit whose firing had not been up to the required standard, had also been involved with an 'enemy' force; mention is apparently made of the enemy not daring perhaps to approach beyond the scamnum of the camp; the unit had been slow to join forces and mention is made of it sallying out. Hadrian mentioned a force that had opposed cohors II Hispanorum and something to do with level ground.¹²

Hadrian's adlocutio to the army of Numidia provides the official assessment of the manoeuvres held there in A.D. 128. A personal assessment of manoeuvres conducted along the Danube is given by the epitaph of Soranus, who gave a display Hadriano iudice of his skills; he was almost certainly an eques of cohors III Batavorum milliaria equitata, which was then stationed at Adony (vetus Salina), and the date was probably A.D. 118:

"I am the man who, once very well known to the banks in Pannonia, brave and foremost among one thousand Batavians, was able with Hadrian as judge, to swim the wide waters of the deep Danube in full battle kit. From my bow I fired an arrow, and while it quivered still in the air and was falling back, with a second arrow I hit and broke it. No Roman or foreigner has ever managed to better this feat, no soldier with a javelin, no Parthian with the bow. Here I lie, here I have immortalised my deeds on an ever-mindful stone, which will see if anyone after me will rival my deeds. I set a precedent for myself in being the first to achieve such feats."

The only other reference to this feat comes in the epitome of Dio and refers to Hadrian's policy of keeping the troops well-trained at all times:

"So well indeed had the army been exercised by him that the cavalry of the Batavians (as they are called) actually swam across the Danube with their arms. On seeing this the barbarians were struck with amazement and turned their attention to their own affairs and employed Hadrian to arbitrate in their differences."

The use by the Roman authorities of military manoeuvres to impress other nations is not without parallel.¹³

The 'German expedition' of the Emperor Caligula in the autumn of A.D. 39 has been satisfactorily explained as manoeuvres conducted by combined Roman forces across the Rhine. Galba, the new legate of Upper Germany, found the soldiers very inefficient because of the harmful effects of the slack discipline maintained by his predecessor, Gaetulicus; he therefore put his army through an intensive course designed to toughen them up and bring them into fighting condition.¹⁴

The actual manoeuvres are described quite accurately by Suetonius in his biography of Galba:

"On the arrival of Caligula, Galba and his army made such a fine impression that out of the large number of troops assembled there from all the provinces, none received greater commendations or richer rewards. Galba particularly distinguished himself because while directing manoeuvres, (campestris decursio), shield in hand, he actually ran for twenty Roman miles beside the Emperor's chariot."

In the life of Caligula a somewhat distorted account appears:

"Presently, since there was no chance of real fighting, he ordered some of his German bodyguard to cross the Rhine and conceal themselves; after lunch he had an announcement made that the enemy were close at hand. Thereupon he rushed with his Staff and part of the Praetorian Cavalry into the nearby woods On another day he took some hostages from a nearby school and sent them on ahead in secret; he then suddenly left a meal and pursued them with the cavalry, as if they were

fugitives, and caught them; they were then brought back in chains. On returning to the meal, a message was brought that the army was assembled; he urged them to take their places fearing their breastplates as they were."

Dio, writing almost two centuries after the event, seems to have misunderstood the situation even more:¹⁵

"On reaching his destination, Caligula did no harm to any of the enemy and as soon as he had proceeded a short distance beyond the Rhine, he withdrew He won no battles nor killed any of the enemy; on one occasion he captured some by a ruse and put them in fetters and employed a large part of the Roman forces."

The 'German expedition' thus resolves itself into combined manoeuvres by Roman forces on a large scale comprising the Praetorian Guard, legions, and auxiliaries; they involved sudden counter-measures by 'Roman' forces against 'enemy' attacks (in fact a second part of the army); the troops had to have their meals in full battle kit and may even have been ordered 'into action' before they had finished eating them. The Emperor took part in these manoeuvres with his senior advisers and commanders (amici and Galba) which included marches of twenty Roman miles. There are close similarities between these manoeuvres conducted before Caligula and those before Hadrian.

Similarly, the accounts of the projected 'invasion of Britain' can best be explained as a distorted picture of the manoeuvres held on the Channel coast in the spring of A.D. 40 to continue the exercises begun the previous autumn in Germany. There are too many political, strategic, and logistical reasons against a real invasion at that time. The troops were engaged in mock fighting, landings, and embargations on the beach,

perhaps with artillery covering fire. A plausible explanation for the order to pick up shells, was that the troops would then throw them at one another to simulate the missile attacks represented on land by clods of earth. The engineers may also have been ordered to construct the lighthouse to practise their skills and perhaps the sappers tested their siege equipment.¹⁶

The literary sources specify the need for the army to go on manoeuvres, the adlocutio of Hadrian shows that they were actually held, but it is archaeology that provides the real details. At least fifty examples of practice-camps have been revealed in this country some of which must have been constructed on manoeuvres. Cawthorn yielded evidence of ditches, tutuli, rampart, palisade, rampart-walk, two types of ascensus and gates, ballistarrium and gun-pit, ovens built and fired to test their construction, and storage tanks. This strikingly confirms the camp building done by the army of Numidia on manoeuvres. Clearly some of these camps were built on manoeuvres, often on open moorland, while in some instances it seems clear that whole areas were given over as training areas, as at Vcen and Llandrindod Common.¹⁷

Excavation has also shown that another feature of manoeuvres was practice-siege works. At Woden Law, the abandoned native hill fort was twice the scene of a mock siege by Roman forces during manoeuvres that were never finished. The fort was completely enclosed as far as the terrain would permit by an earthwork consisting of two banks between

three ditches, situated an even distance of seventy feet from the fort ditches, that is, just beyond the killing range of a hand-thrown missile. The work was laid out in point-to-point sectors and had clearly been constructed by several gangs. The sizes of the ditches and banks were all different; the inner ditch was of the Punic type; next came the first mound composed of the upcast, with large stones excluded, on a foundation of laid turves; the medial ditch was V-shaped; the second mound was also built on a turf-bottoming with kerbs of cut turves at back and front; its core was constructed of broken rocks laid horizontally and deliberately flattened and covered with fine stone brash; at intervals the mound had been expanded in width; the outer ditch was also V-shaped. These two types of ditch, fossa punica and fossa fastigata, are both described and measurements given by Hyginus. This quintuple earthwork was partially surrounded by three separate works, sometimes a Punic ditch with a mound on the outside, sometimes a Punic ditch, then the mound, and a V-shaped ditch on the outer side, and again showed evidence of having been built in short sectors. There was also a traverse in front of a gap in one of the outer works; this and the platforms on the outer mound of the inner work were interpreted as emplacements for ballistae. The troops engaged in these manoeuvres encamped at the foot of the hill at Pennymuir. There is no evidence to suggest a date for either of the two sets of manoeuvres, but they must have been carried out by legionaries; the nearest fort occupied by legionaries is Newstead, where a legionary vexillation formed part of the garrison of the Flavian II and Antonine I forts; it is therefore not unreasonable to suggest that each detachment was engaged once in

exercises here. It is thought that a similar mock siege of a native hill fort may have taken place in Wales at Twyn y Gaer. On one occasion Tacitus noted:

"There is nothing of which the natives are so ignorant as military engines and skill in siege operations, while the Roman armies are very skilled indeed in that branch of military science."

Closely frequent training in peace-time would be necessary to ensure that at nobis ea pars militiae maxime gnara est.¹⁸

The Roman legionaries were also trained to construct pontoon bridges. Suidas refers to the troops of Avidius Cassius building one under enemy fire probably in A.D. 165:

"Rivers are bridged with the greatest of ease by the Romans because the soldiers in their exercises continually practise bridge-building as just one part of their military training. They are exercised in this on the Danube, Rhine, and Euphrates."

The method of construction that he gives is very similar to one given by Vegetius:

"A more useful invention is that the army transports on wagons monoxyli. These are rather broad canoes carved out of a single tree trunk and very buoyant because of the type and lightness of the wood. They also have prepared planks and iron nails. In this way a bridge can frequently be constructed and lashed together with cables and chains, which for a time has the solidity of a bridge of stone."

These monoxyli and this method of construction were used by Corbulo to cross the Euphrates a century before Avidius did. Indeed, the army of Vitellius constructed a similar pontoon bridge with an artillery tower on the river Po in A.D. 69 so that they might be kept in training and well-exercised. A bridge composed of such boats is depicted on the Columns of Trajan and Marcus and the coins of Severus show the crossing

of the Forth and Tay. Among the immunes of a legion were naupegi, who presumably built them; indeed, one scene on Trajan's Column shows two such craftsmen in an artificers' depot busy making monoxyli. All the permanent stone legionary fortresses in Britain were built on tidal rivers and there can be little doubt that the legionaries practised constructing such bridges over the Ouse, Dee, and Usk; indeed, Leon was the only permanent legionary fortress in the Empire in Trajan's reign not on a tidal river. Other sources confirm that Roman troops on manoeuvres used regularly to build bridges: Herodian, for example, mentions that Caracalla was accustomed to do so with his soldiers on manoeuvres.¹⁹

It is obvious that the Roman soldiers would need to have experience in the use of firing the heavy artillery. According to Vegetius in each legion every century was equipped with a carroballista and every cohort with an onager; the crew of each would be one contubernium. In the third century at least, auxiliary units, in certain areas at any rate, were also equipped with heavy artillery. Two inscriptions from High Rochester record the construction of artillery-platforms; one was built in A.D. 220, the other was restored at sometime in the period A.D. 225-235, and a building inscription perhaps came from a ballistarium. Excavations revealed the remains of the artillery-platforms and also the large round stones used as missiles, while further examples of this sort of ammunition were discovered at Risingham. Excavation has shown that when the legionaries built the practice-camps at Cawthron towards the end of the first century, they also built ballistaria; in Camp A

an artillery-platform including a gun-pit was constructed of alternate layers of turf and stones at the south-east corner; in Camp B six examples of smaller platforms of turf along the ramparts were discovered. The siting of the seven platforms was not designed to give the camps most protection - which would hardly be needed in a practice-work - but to enable the troops to fire harmlessly and without endangering anyone. Similarly, the practice-siege works at Woden Law included artillery-platforms and emplacements and there is every likelihood that guns were in fact placed here to fire at the native fort. The combined Roman forces ~~bn~~ manoeuvres on the Channel coast in the spring of A.D. 40 seem to have had practice in operating their heavy artillery and fighting under cover of artillery fire. The duty roster of an Egyptian legion for the first ten days of October, A.D. 87 seems to mention that certain of the troops were training on the artillery range; although ballio was once thought to be an abbreviation for ballistar>io, it now seems far more probable that it is a misspelling for balneo. However, the duty phal occurs four times and is an abbreviation either for phal(is) or for phal(aricis), a type of artillery or the missile fired from it; thus C. Julius Valens and C. Julius F- were engaged on artillery practice on the 2nd of the month, L. Gall- on the 3rd, and L. Sextilius Germanus on the 4th.²⁰

Recent excavations at Burnswark have suggested that here too there may well not have been a siege in actual warfare. The two Roman siege-camps seem to be of the permanent rather than the temporary type that would be required; early reports speak of 'walling, pavement, and

debris, evidently of large and important buildings', which would surely be out of keeping with a siege camp. Moreover, it seems highly unlikely that the Romans would have needed to lay siege to a hill fort as small and ill-defended as this; they had not needed to use artillery to capture the stronghold of Caratacus in A.D. 51, nor siege camps to overrun the vastly larger and strongly fortified forts of Maiden Castle, Stanwick, or Hod Hill. In the north camp the artillery-platform was constructed before the defences were completed or in places started; this surely could not have taken place in a real siege. Moreover, this is the only Roman military area to have produced any quantity of lead sling-bullets in this country; moreover, indeed, they are very rare in Germany also. It is therefore highly tempting to assume that at Burnswark there is an example of a Roman artillery range; from the three ballistaria outside the three gates of the southern camp the guns could fire, each aiming at one of the three gates in the native fort; the artillery-platform in front of the north fort was of a different construction and so presumably was designed for a different type of gun, presumably a more powerful one to aim at the gateway 250 yards away. A score of stone balls of four different sizes were discovered of which half had been broken by impact. Many of the sixty-seven lead sling-bullets were also dented by impact and there were further examples that were regarded as being too small or rough in shape to have been glandes; however, the Roman artillery at times baked small stones in clay and then fired them as 'shrapnel'; it is not impossible that they may have done this with the pieces of lead, most of which were found on the southern slopes of the native fort; on impact the shell would have split and inspection

afterwards would reveal the accuracy of the firing far more easily from pieces of lead than from pebbles and they could thus be removed to be remade and leave the ground clear for the next barrage.²¹

In his manual Arrian is concerned only with the galloping and various methods of using different weapons on the flat. However, he does say in a summary:

"Their horses are exercised in jumping over ditches and leaping over walls."

Vegetius recommends a practice of the army before his day:

"Similarly, they ordered the cavalry to exercise rider and horse continually in the plains and also on broken ground and difficult terrain pitted with gulleys."

Elsewhere he states that the cavalry must be exercised in galloping, jumping over ditches, swimming in any nearby sea or river, and taking part in mock fights against one another, and going on route marches. Onasandor recommends that the cavalry should hold exercises 'as far as possible in broken country'. The most detailed information is given by Xenophon in his book on equitation, which is used by Arrian:

"As we have assumed that the horse to be bought is intended as a war horse, he must be tested in all the particulars that war tests him in, namely leaping over ditches, jumping over walls, rushing up and springing off banks, and also in galloping up and down hills and on a slope."

He later adds further details about the training:

"As there will be occasions on which the horse will have to gallop downhill and uphill and on a slope, others on which he will have to leap over, others to spring onto high ground, and others to spring off it, the rider must train and practise both himself and his horse in all these exercises."

He continues that they should practise first on narrow ditches and then

on wider ones, and explains how the rider can help the horse and when he should apply the spur. It is quite clear that the parade ground described by Arrian and as found outside forts is not suitable for exercises of this sort.²²

That the Roman cavalry were trained and exercised at jumping over obstacles and across ditches is clear from the adlocutio of Hadrian. He noted to ala I Pannonicorum that saluistis et hic agiliter et heri velociter. Clearly the unit had been exercised at galloping on the flat (campum decursionibus complestis), but their display of jumping had been held on two separate days and by implication had been different each day. Was the exercise on the latter day designed along the lines of modern show-jumping, on the former after the manner of steeplechasing? The equites cohortis VI Commagenorum were clearly not expected to perform as well as the men of an ala on the flat (alia spatia campi), but their jumping had been prompt and had presumably been held on one day only (saluistis ubique expedite). He warned other riders that they must be careful in their pursuit, otherwise they would fall into concealed pits (obnoxius caliculis tectis). The great roster of A.D. 219 shows twenty cavalrymen were assigned ambulatio ad mam- and that of A.D. 222 two more than that number. The meaning must be that about a score of cavalrymen (no infantrymen have this duty assigned to them) were away from Dura for some time on a route march to a place called mam-; no town or village of that name is known and it seems that it must refer to a geographical feature.²³

Excavation has shown that the area of the native hill fort at Hod Hill was used as an exercise ground by the seven turmae brigaded with legionaries in garrison in the small Roman fort in one corner. The native fort is roughly rectangular and measures fifty acres; on three sides it has two banks and ditches plus a counterscarp bank, on the west only one bank, while there were extra ones at the gates; there were many pits in the native area and many scoops all the way round the inner rampart; the River Stour was four hundred feet away. When the requirements specified by Xenophon, Onasander, Hadrian, Arrian, and Vegetius are considered, it becomes clear that a disused native hill fort is ideal: the large rectangular inner area is the campus, the ramparts and ditches are the slopes and banks and they also enable the riders to charge e tecto, the pits are the caliculis tectis, the scoops can be jumped over; when firing on the flat, the troopers were often ordered to throw their weapons at the unexcavated ground beyond the levelled parade ground, and the inner rampart would be ideal for this purpose. In this instance the nearby river could be used for swimming practice. It may therefore be suggested that any cavalry unit in the Roman army would make use of any nearby disused native hill fort for this important part of their training. The ala Augusta Vocontiorum, for example, will have used the flat ground to the east of the fort at Newstead as its campus and the hill fort on Eildon for its other training area.²⁴

It is very tempting to suppose that a cavalry training area was

situated at Gloster Hill; an inscription was set up to the campestres here in the third century by a cohors equitata with the numeral I. The two nearest forts occupied in the third century are also the only ones in Northumberland with garrisons that fit the conditions mentioned above, Hisingham and High Rochester; both are considerably too small to house the units attested there in the third century and it seems clear that they were the bases from which highly mobile patrols operated. There are historical references to what can only be native hill forts in the near vicinity and although there are now no traces of these visible either on the ground or from the air, aerial photography has revealed two small camps in the fields immediately adjacent to that in which the inscription was found; they are remarkably similar in size to the smallest at Chew Green. It is therefore tempting to assume that there was a cavalry training area at Gloster Hill in the third century, only a quarter of a mile from the Coquet and the sea, which was used by the equites of one of the two units in Redesdale some twenty-five miles away. The distance could easily be covered in a day by cavalrymen, but they would have to stay away from their base for some days; a similar situation is shown by the Tura rosters and the only suitable Aramaic word for mam- which occurs in the duty ambulatio ad mam-, means a lookout, which surely must be situated on the top of a hill. Tradition has it that there was a road from Gloster Hill inland from the river and this is confirmed apparently by a section of the Ravenna Cosmography. A document at Tura is a list of men who had received or lost a horse. A heading begins Item sal[; if my theory

is tenable, perhaps it is worth speculating that this records men who have received or lost a mount (either by the animal running away or breaking a leg) while at the cavalry training area (Item salientes).²⁵

CHAPTER IV: MANOEUVRES

NOTES

1:

marching - for the march at the military pace and the full pace cf. Vegetius, 1.9; route march cf. 1.27, and 2.23, and also 3.4; pack march cf. 1.19, and also 2.23; see chapter III: Training and Exercises, passim.

"The infantry - Vegetius, 1.27.

"The troops - 3.4.

"It was - 1.1.

2:

"When the legions - Vegetius, 3.9.

Parthia - Herodian, 6.4.3.

Germans - 6.8.1-5.

Maximinus - 7.1.6.

"On taking - SHA, Duo Max., 6.

Vegetius - 2.22.

3:

Vegetius - 3.9.

Hadrian - SHA, Hadr., 16.

Marcus - Fronto, passim, especially ad Verum Imp.,²⁰ cited below.

Avidius - SHA, Avid., 14.

"Meanwhile - quoted in Fronto, ad Verum Imp., 2.1.20.

4:

Onasander, Strat., 10.4.

5:

Josephus - B.J., 3.75.

Seneca - Ep., 18.6.

Tertullian - ad Mart., 3.

Avidius - SHA, Avid., 6.

Maximinus - SHA, Duo Max., 6.

6:

Frontinus - Strat., 4.1.1.

Vegetius - 3.10.

Hadrian - SHA, Hadr., 10.

"Not even - Appian, Ipx., 86.

Metellus - Sallust, Jng., 45.

Augustus - Appian, B.C., 3.48.

7:

Corbulo - Tacitus, A., 13.35.

Vegetius, 1.3.

Avidius - SHA, Avid., 6

8:

Dio - 68.23.

Pliny - Pan., 13.1-2.
hastis - ILS 9134.

9:

A.D. 193 - Herodian, 2.10.5.
other provinces - 6.7.6-7; Dio, 72.7.
A.D. 196 - Herodian, 3.6.10.

10:

Herodian, 4.7.4,6.

11:

Hadrian - see chapter III: Training and Exercises, passim.
"The army - Fronto, Princ. Hist., 10, for my emendation and interpretation, cf. chapter III: Training and Exercises, n.62.
"I praise - VIII 18042 Cb = ILS 2487.

12:

"You did - VIII 18042 Ab = ILS 2487.
"When this - VIII 18042 Bb = ILS 2487.
"A cavalryman - VIII 18042 Cb = ILS 2487.
fragmentary passage - VIII 18042 Ca = ILS 2487.
cohors II Hispanorum - VIII 18042 D = ILS 2487.

13:

Soranus - III 3676 = ILS 2558. For identification of the unit cf. RE.IV.252-253, of the unit and base cf. Acta Arch. Acad. Scient. Hung., 1.210,225.
Dio - 69.9.
impress - see below, n.14-16.

14:

'German expedition' - J.P.V.D. Balsdon, The Emperor Galus, 76-82.
Galba - Suetonius, Galb., 6.

15:

"On the arrival - Suetonius, Galb., 6.
"Presently - Suetonius, Calig., 45.
"On reaching - Dio, 69.21-22.

16:

R.W. Davies, 'The "Abortive Invasion" of Britain by Gaius', in Historia, XV.124-128.

17:

practice-camps - see chapter III: Training and Exercises, n.85-87.
Cawthorn - Arch.J., LXXXIX.17-78; cf. chapter III: Training and Exercises, n.87-88.
Numidia - VIII 18042 Bb = ILS 2487.

18:

Woden Law - RCAM, Roxburgh, vol.I, 308; History of the Berwickshire Naturalists' Club, XXXII.107-116.
Newstead - RCAM, Roxburgh, vol.II, 604.
Twyn y Gaer - Antiquity, XXXV, no.140.266.
Tacitus - A., 12.45.

19:

Suidas - sv Σευπα = Dio, 71.
Vegetius - 3.7; cf.2.25.
Corbulo - Tacitus, A., 15.9.
Vitellius - H., 2.34.
Trajan - Cichorius, taf.IV; TATC, 5-7.
Marcus - Caprino, tav.IV-V, fig.9-10; tav.LII, fig.104; tav.LXIV, fig.127.
Severus - Numismatic Chronicle, 1937, 137-150.
immunes - Dig., 50.6.7.
Trajan's - Cichorius, taf.CXXXIII; TATC, 27-29.
Leon - TATC, 31.
Caracalla - Herodian, 4.7.4.

20:

Vegetius - 2.25.
A.D. 220 - RIB 1280.
A.D. 225-235 - RIB 1281.
building inscription - RIB 1286.
Excavations - RR, 98.
Camp A - Arch.J., LXXXIX.17-78, especially 33, pl.VIII, and reconstruction fig.6.
Camp. B - ibid., especially 57, pl.XIIa, fig.11.
harmlessly - ibid., 58, 76.
Woden Law - see n.18 above.
A.D. 40 - Historia, XV.127.
ballio - CLA 7V.II.9, notes, and passim.
phal - CLA 7V.III.2; VIII.2; XXVI.6; VII.4.

21:

PSAS3, IX.198-249; Transactions of Dumfriesshire and Galloway Natural History and Antiquarian Society, XIII.46-58; Arch.J., XCVI.315-317; RCAM, Dumfries 94-101 (272). The theory that Burnswark may not in fact be the scene of a siege carried out in time of war was suggested to me by Mr. G. Jobey. The idea that it is an artillery range is my own.

22:

Arrian - T.T., 44.2.
Vegetius - 3.2.
Elsewhere - 2.23; 3.4; cf.1.10,27.
Onasander - Strat., 10.5-6.
Xenophon - R.E., 3.7.
later - R.E., 8.1.
parade ground - Arrian, T.T., 34.1; see chapter III: Training and Exercises, n.12.

23:

jumping - if one studies the Tɛχνη Taktikη of Arrian closely, it seems clear that the references in the adlocutio should refer to jumping over various obstacles and not to jumping onto a horse's back, i.e. mounting a horse. In this respect I believe that many modern scholars have been misled by following the inaccurate (or so I think) connection made by Roos in the Teubner edition of Arrian's works or various German scholars cited in the Corpus notes; cf. F. Kiechle, "Die 'Taktik' des Flavius Arrianus", in BerRGK 45, 87-129.

ala I Pannonicorum - ILS 9134.

equites - VIII 18042 Aa - ILS 2487.

other riders - VIII 18042 = ILS 2487.

A.D. 219 - P.Dura 100.

A.D. 222 - P.Dura 101.

meaning - DPP, 41.

24:

Hod Hill - brief reports in JRS, XLIVff. I am indebted to Mr. Brailsford of the British Museum for further information.

Newstead - RCAM, Roxburgh, sv Newstead; Curle, Newstead, passim.

25:

Gloster Hill - RIB 1206.

two nearest forts - cf. RHW, 235-46.

too small - RR, 95-96; RNNB, 97-99.

historical references - Northumberland County History, V.137, 344. Surtees Society, 66.211.

aerial - information from Dr. J.K. St. Joseph, Mr. G. Jobey, and Dr. N. McCord. I suggest that one enclosure may have been used as a paddock for the horses, the other for the tents of the men.

mam- - Professor T.W. Thacker, Professor of Oriental Languages at Durham University, kindly informs me that the only suitable word is 'lookout'. Such a post would obviously be on top of a hill.

Tradition - see above sv 'historical references'.

Ravenna - Archaeologia, XCIII. The road seems to come south along Dere Street to Cappuck or Chew Green and the next place appears to be the Coquet.

Dura - P.Dura 97.18.

training area - this is a résumé of a paper I hope to publish shortly.

CHAPTER V

ADMINISTRATION AND PAPERWORK

Vegetius noted that the paperwork and administration of the Roman military system was more complex than anything in civilian life. It is hardly surprising that so much paperwork was needed; in the middle of the second century Britain, for example, contained about 35,000 auxiliary troops or some 15% of the total of the whole Empire, and about half that number of legionaries or some 10% of the grand total. The various regional commands in the provinces, the governor at provincial headquarters, and the War Office in Rome would all need facts and figures, to say nothing of the information required in the various units themselves and their own subdivisions. A letter from the governor to the commander of cohors XX Palmyrenorum ordered him to submit documents that included pridiana and perhaps diaria. Augustus kept documents with the precise numbers of serving soldiers in each part of the Empire. Details of each auxiliary soldier who received a diploma, were kept in Rome. Generals had to send written reports on their army including the names of men recommended for military honours to Rome. Clearly all this information must have been forwarded from the individual auxiliary commanders through the legionary legates (where necessary) to the governor. All these requirements would have to be put on paper (generally papyrus although occasionally parchment or tablets). Thus an important part of the routine work in peace-time for any unit, legion, ala, or cohort, would be the paperwork carried out by various soldiers seconded for this administrative purpose. This included the day to day running of the unit, details of the past and present service of all ranks and arrangements for the future, lists of all categories of men and equipment.¹

More information is known about the organisation of the administrative system and personnel of the legions than of the auxiliary units. By and large, however, the system of the latter was not basically different from that of the former, just as the numeri, who at first did not have officia of their own but whose administration and paperwork was run by the nearby auxiliary garrison, modelled their officia, when they obtained them, on the auxilia; for example, of about a dozen numerus forts constructed on the Odenwald sector of the German limes under Pius only Neckarburken-Ost had a headquarters building. The various officia were studied in great detail by Domaszewski, but it is doubtful if they were at any one time as complex or complete as he supposed. The legionary officia have also been studied by others and will be discussed first, those of the auxiliaries later.²

The tabularium legionis was, as its name states, the records office of the legion. An inscription cited below shows that at Lambaesis it was situated in a large room towards one end of the suite of offices in the principia. Because of the uniform plan of Roman forts, it is safe to presume that this would be its normal position in most legionary fortresses. The person in charge of the tabularium legionis was the cornicularius or adjutant, whose title seems to have changed temporarily in the third century to canalicarius. He was assisted by an actarius although this man is not attested in the legion before the time of Severus. There were also about a score each of librarii and exacti (clerks and accountants). A papyrus of the third century seems to show that an optio was put in charge of these accountants (οντειων εξακτων κοπρικουλαπλου); if this is so, another may well have been

similarly put in charge of the clerks. It appears to have been at this time that the actuarius became more concerned with civilian than military matters. An inscription from Lambaesis dated to the very end of the second century gives the names of the staff of the tabularium legionis: L. Aemilius Cattianus cornicularius et T. Flavius Surus actarius item librari et exacti leg(ionis) III Aug(ustae) p(iae) v(indicis); the names of twenty-two librarii are given and twenty exacti, of whom the last is a cerarius. An inscription from Alba was set up by Dasimius Firmin(us) corn(icularius) leg(ionis) et Aur(elius) Victorin(us) actar(ius) cum imm(unibus) libr(aris) et exactis; they would seem to be the staff of the tabularium legionis II Parthicae. Almost a century earlier in A.D. 107 when Julius Apollinarius was promoted librarius legionis, he was sent to report to the cornicularius under whom he would now work. The term exactus is used for a finance-clerk or accountant and is probably derived from ex actis. Occasionally a soldier was used to take down notes in shorthand as an exceptor. Whenever a vexillation of a legion was sent from its parent unit to another station either permanently or temporarily, it would require a tabularium legionis on a miniature scale. There was at one time at Dura in the third century a vexillation of legio IV Scythica among whom was a librarius and four adiutores, who signed their names in A.D. 222-223. These five legionary clerks worked in the principia while the clerks of cohors XX Palmyrenorum, the main garrison unit, had to move to the temple of Azzanathkona. Among the vexillation of legionary craftsmen stationed at Corbridge in the third century was a librarius who worked in the tabularium in a headquarters building there. The troops at Masada kept records while stationed there.

The tabularium legionis seems to have survived other changes in the army; part of a field army brigade at Poetovio at sometime in the reign of Gallienus consisted of canaliculari et actariorum et codicarior(um) et librariorum leg(ionum) V M(acedonicae) et XIII G(eminae) Gallienarum; this presumably represents the equivalent of the tabularium legionis of the earlier period as incorporated in the field army after the reforms of Gallienus.³

The tabularium principis was, as its title states, the records office run by the princeps, who was, after the primus pilus, the senior centurion. An inscription from Lambaesis dated to the reign of Severus shows that the tabularium principis was furnished with statues by the five optiones of the first cohort. When the tabularium was rebuilt about the year A.D. 253, the staff who contributed to the cost were the princeps, the five optiones of the first cohort, and two adiutores who were lib(rarii) prindipis). It seems probable that the tabularium principis was stationed in the room corresponding to that used as the tabularium legionis at the other end of the suite of offices in the principia.⁴

A fragmentary inscription from Lambaesis shows that at sometime in the reign of Commodus there was a [tabularium equitum legionis] III Aug(ustae). However, it gives no indication of the composition of the personnel.⁵

The tabularium legionis contained over forty clerks and accountants

plus a cornicularius and at times an actarius; the tabularium principis contained the second most senior centurion, the five most senior optiones, and only one or two clerks. Vegetius defines the duty of the princeps:

"To whom almost everything that has to be arranged in the legion, pertains."

The princeps, with the assistance of the five optiones cohortis I, was responsible for prope omnia quae ordinanda sunt. The purpose therefore of the tabularium principis was to organise the daily running and routine of the legion. The tabularium legionis, with its large staff of clerks and accountants, must have been responsible for the paperwork that followed from the orders and decisions made by the princeps for the running of the unit, the results of which would be returned from the legionary centuries to the tabularium for recording and consolidation. The tabularium equitum was presumably concerned with the records of the 120 equites legionis; they were at one time on the books of the various centuries, but it is impossible to say exactly how their tabularium operated.⁶

The cornicularius legionis is attested for the full period of the Empire and presumably he had an officium throughout that time, although it is not attested as a tabularium before the time of Severus. The tabularium principis is not attested before the reign of Severus either; the evidence does not permit a definite conclusion as to whether or not it represents a Severan innovation. However, as the tabularium equitum is now attested before the time of Severus, it may well be that the other two tabularia also existed before that time.

The tabularia described above quite clearly operated at headquarters level; it is also logical that there was paperwork that had to be done at century level, or, in the equivalent in the British army, at company level. There is good evidence for this in the auxiliary cohorts and a similar system must quite clearly have operated at century level in the legions. A papyrus lists among the number of men opera vacantes in a century of a legion in Egypt in A.D. 87 a librarius and cerarius. This set of papyri shows that extensive files for individual soldiers were kept at century level, presumably by the librarius and cerarius of each century; indeed, as all this group of papyri seem to refer to the one century, it is tempting to assume that they came from the files of this century. The probable place for these clerks to work making the various returns for their centuria to the tabularium legionis was the large centurion's flat at the end of each barrack-block.⁷

There is no evidence to show that records were kept in an officium at legionary cohort level. This is not so surprising as the cohort in a legion seems to have been in the Imperial army a tactical unit, not an administrative one; a legion would be drawn up on parade or in battle by cohorts, but as the cohort had no standard or commanding officer, there could be no officium at cohort level to which the six centuries could make their returns. Vegetius does, however, mention that there was one sack for each cohort to put its deposita and seposita in; this would imply only that it was found convenient to put the money of six centuries together, not that the cohort was an administrative unit.

Legionary vexillations were often either five hundred or one thousand strong; if it was convenient to send one or more cohorts in full for this purpose, it is clear that the officium which such a formation would receive, would be a temporary ad hoc one and would not be a reflection in any way of any permanent feature of legionary organisation.⁸

All senior officers could appoint various soldiers to assist them; their title was beneficiarius because, as Vegetius states:

"Beneficiarii are so called because they are transferred by the favour (beneficio) of the officer."

Elsewhere he states that they were assigned to senior officers and were immunes. They are attested for the legatus legionis, the tribunus laticlavius, and the praefectus castorum. Inscriptions show that from the time of Severus at least, the latter two officers had a small staff in addition to the beneficiarii. At Lambaesis a schola was set up by officiales Aeli Saturnini praef(ecti) leg(ionis) III Aug(ustae) p.v.: [M. Balebius Speratus cornicul(arius) [item librarii]]. Another inscription mentions Speratus in the same post, to which he was probably promoted from the rank of custos armorum which he held in A.D. 200. As the inscription is fragmentary, there may well have been other men in the officium besides the librarii. An undated inscription from Aquincum mentions the cornicularius praef(ecti) leg(ionis) . . . et immunes et discent(es); they are presumably the staff, including men under instruction, of the officium of the praefectus castrorum of legio II Adiutrix. In A.D. 198 (the earliest dated example) at Lambaesis the tribunus laticlavius had a cornicularius and twelve

beneficiarii.⁹

The first cohort seems to have been responsible for assisting in running the administration of the legion; indeed, the reason for this cohort being altered in size to five centuries of double strength may well have been to include in it all the administrative personnel attached to legionary headquarters. Vegetius states that the men in the first cohort had a higher standard of education than those in the others. Hyginus, enumerating the places where the various units of a large field army encamped, states:

"The offices for the first cohorts where the duties of the legions are announced, must be stationed in the area allocated to the legati opposite the eagles."

In another passage he places the first cohort alongside the headquarters. Hyginus thus links the administrative machinery of the legion with the first cohort (ubi munera legionum dicuntur) and associates it closely with the headquarters. When Apollinaris was appointed librarius legionis, he wrote to tell his father that he now had a new address:

"With this assignment, therefore, I went from the consularis to the cornicularius. If you love me, you will straightway take pains to write to me Tell the firm of Aphrodas that they have moved me to the cohort at Bosra, which is eight days' journey from Petra."

Bosra was the station of legio VI Ferrata and was clearly now occupied only by the first cohort, who continued to carry out the normal administrative business of the legion under the cornicularius, while the rest of the legion, as Apollinaris's letters and several milestones show, was busy building and constructing roads. The first cohort seems

to be the equivalent of the headquarters company of a battalion in the British army.¹⁰

There is some literary evidence for the staff who formed the tabularium. Vegetius gives the following definition of a clerk:

"Librarii are so called because they enter in the books the records concerning the soldiers."

The duty of the clerks in the tabularium legionis was in libros referunt rationes ad milites pertinentes. Towards the end of the list of immunes compiled by Tarruntenus Paternus are the following: librarii quoque qui docere possint et horreorum librarii et librarii depositorum et librarii caducorum et adiutores corniculariorum; that is, clerks to instruct, clerks in charge of the paperwork involved with supplies, clerks in charge of the deposits made from a soldier's pay, clerks who saw to the wills and properties of the men, and assistants to the cornicularii. The duty of the men in the first category was probably to instruct new clerks in the procedures and methods employed in the offices rather than that of educational officers to the whole unit; this seems more so because Vegetius stipulates that some of the recruits should be of a certain level of education so that they can later be transferred to the various administrative posts.¹¹

"Since in the legions there are several offices which require educated soldiers, those who examine recruits should look for height, physical strength, and quickness of mind in all recruits, but in certain cases men should be chosen for their ability in shorthand and skill in making estimates and calculations."

There is less information about the administrative organisation and personnel of the auxiliary units. In both the ala and the cohors the officium seems to have been headed by a cornicularius; he was assisted from the middle of the second century at least in the cohort by an actarius; there were also librarii. The commanding officer could in addition appoint beneficiarii. All the staff mentioned above are attested by inscriptions and papyri; however, neither source attests the exactus in an auxiliary unit, and it therefore seems probable that there was no post by that name for the ala or cohors but that the task of accounting was undertaken by librarii also.¹²

The files of cohors XX Palmyrenorum provide most information about the administrative staff of an auxiliary unit. In the great roster for A.D. 219, of the 727 assignments that can definitely be read, thirty men were officio (4%); in the great roster of A.D. 222, eighteen of the 659 definite readings (3%) were again officio. However, as the former number of assignments is only 60% of the estimated total in the cohort at that date and the latter only 63%, one must be prepared to assume that the total number of men assigned to administration and paperwork may have been about double the attested total. It is worth noting that there seems to have been a small separate officium at Beccusfrayn to keep the records of the vexillation stationed there (19% of the definitely attested readings). The figures can be further broken down: in A.D. 219, of the thirty men assigned officio eighteen were pedites with an average length of service of eleven years, and twelve were equites with an average of sixteen years service. Three years later thirteen of the eighteen

milites were pedites with an average of ten years and the other five were equites with an average of nineteen years. In neither year is any dromedarius attested at the officium. The commentators thought that Severus Alexander had deliberately reduced the number of men on clerical work; however, as only slightly more than half of the men estimated to be in the cohort at that time can be given an assignment, that would appear to be not necessarily a valid conclusion.¹³

It is to be noted that in the two great rosters for this unit there is no mention of the title librarius and it occurs only once in all and then in a morning report. The man in charge of the officium was the cornicularius and the same man is attested in both rosters; the earlier entry is as follows:

• • • • ~~cor~~ Aure[li. Alex]nd[ru]s Antonini

These notations are interpreted as meaning that he was a very high ranking official present at Dura. He was an eques and had enlisted in A.D. 203. The actuarius, who is attested in both documents, was Ulpius Severus, a pedes, who had enlisted in the same year.¹⁴

The literary sources provide several accounts of the administration of the Roman army. The best description of the paperwork involved in the day to day running of a unit comes from Vegetius:

"The administrative work of the entire legion, including orders, military duties, and financial matters, is daily entered on the records with greater care than the corn-supply or civil multiple-entry accounts. The soldiers from all the centuries and tent-parties daily undertake in turn even in peace-time the duties of guards, watches, and outposts. To prevent any

unjust excessively heavy allocation or exemption from duties, the names of those who have completed their turn are entered in the records. Whenever a soldier receives a furlough, his name and the duration of the leave are noted in the records."

Vegetius uses the present tense throughout this description and the logical inference must be that this is an account of the procedures that had survived from the Imperial army to his day. As the papyri provide examples for the Imperial army of the various documents mentioned, there can be no doubt that Vegetius's description is also applicable to the Roman army of the first three centuries A.D.¹⁵

In the following chapter, Vegetius describes how compulsory stoppages were made in a soldier's money and were deposited at the standards. This means that records and accounts would be necessary:

"The signiferi, as they are now called, put this money in chests and kept records of it. Therefore men who were chosen as standard-bearers were not only reliable but also educated, so that they would know how to look after this money and give accounts for each individual."

Vegetius thus shows that in a legion all the paperwork involved in financial matters was the concern of the standard-bearers; as there was one standard-bearer to each century, presumably each signifer looked after the accounts of his own century.¹⁶

There are one or two items revealed by archaeology that illustrate what Vegetius says about the signifer. In one of the barracks at Neuss a key was discovered to a money-chest. On one side was inscribed  Bassi·Claudi / Fabi·sig, on the other L·Fabi·sig / ↳ Bas. This surely was the key that the signifer used to lock up the deposita

of the men of his century kept ad signa. The relief on the tombstone of Octatius, a signifer of the ala Afrorum Tungrorum, depicts him carrying the box in which the deposita of the men in his turma were contained.¹⁷

'Lampridius' in his biography of Severus Alexander gives a full description of the paperwork that a general would have in the files of his army. Although 'Lampridius' is not normally a very reliable author, his statements are supported by the evidence of Vegetius and also the papyri; as a large proportion of the papyri from Pura belong to the reign of Severus Alexander, and 'Lampridius' wrote at a time when bureaucracy was well established, this description can confidently be taken to be accurate:

"He always made such a point of knowing his soldiers that in his room he had records containing the numbers of the troops and the length of service of each man; when he was alone, he constantly inspected their accounts, numbers, ranks, and pay, in order to be fully informed about every detail. Finally, whenever any business was to be transacted in the presence of the soldiers, he could actually call many of them by name. He even made notes about the men who were to be promoted and read through all the dossiers and actually noted at the same time both the date and the name of the man on whose recommendation the promotion was made."

Examples exist of almost all these types of document both collectively and individually. Appian records:

"He then had the military tribunes bring before him the men of a seditious nature. In the Roman army the character of each individual soldier is always entered in the records."

These men were punished, but immediately afterwards he chose other men in excellent physical condition and of the highest character for another purpose; clearly he must have drawn on the individual records again.

In late November of A.D. 68 Aulus Vitellius became governor of Lower Germany and immediately held a thorough inspection in the camps of the legions. To curry favour, redditi p[er]risque ordines, remissa ignominia, adlevatae notae; clearly Vitellius had been examining the conduct-sheets and individual files of the legionaries. The military legal writers confirm that individual dossiers were kept and consulted; Arrianus Menander in his second book on military matters quotes a rescript of Hadrian:

"Hadrian ruled that soldiers returning from the enemy are to be restored to their former status, provided that they prove that they had been captured and had escaped and that they had not been deserters. But although the truth of the matter cannot be established beyond all doubt, it must be determined by producing evidence. If previously the character of the soldier was assessed as good, credence must be given to his assertions; if he was a man who overstayed his leave, neglected his duties, was lazy, or interfered in matters outside his military duties, he was not believed."

Clearly the individual record of each soldier was used to show et si bonus miles antea a estimatus fuit. The epitomater of Dio records that Hadrian inspected 'the lives, quarters, and habits of every officer and man in the ranks' (ἀλλὰ καὶ τὰ ἴδια ἔνος ἐκαστοῦ, καὶ τῶν ἐν τῷ τεταγμένῳ στρατευόμενῶν καὶ τῶν ἀπόχοντῶν αὐτῶν, τοὺς βρούς ταὶς οἰκησίς τοὺς τρόπους).

Clearly he must have been checking the individual files. The letters of Pliny provide further evidence that confidential reports were made on officers. Among the documents discovered at Dura were three small oblong labels, each of which contained the name of a soldier; presumably they were the labels from the individual files.¹⁸

Any Roman military unit would require a large number of lists or rolls of the men, which could be used for various purposes and on which annotations could be made. A passage in Isidore confirms this and gives several examples of lists:

"On Military Notations: in the rolls containing the names of the soldiers the ancients had particular notations by which one could ascertain how many troops had survived and how many had been killed in action. The notation T (Tau) was placed at the head of a line to signify 'survivor', the notation Θ (Theta) was inserted by the name of a man who had died When they wished to signify 'lack of skill', they used the letter Lambda There were also particular notations for the distribution of pay."

Isidore thus mentions nominal rolls used to form casualty lists, lists of recruits who failed their proficiency tests, and pay records.

Examples of Θ are very common in military records and the archives of cohors XX Palmyrenorum have produced documents with a wide variety of notations including large and small puncta, lines, designations of rank, place names, and notations with cum, ad, in, and p, and others.¹⁹

Military documents seem to have fallen into two categories, matricula and brevis. From what Vegetius says, it seems that the former was a complete roster of the entire unit, the latter a temporary check list for a wide variety of different purposes. However, the total evidence is too uncertain to state definitely what, if any, specific difference there was.²⁰

The clerks in the various officia were not, of course, provided with printed forms as the modern army is, but had to make their own.

This they did by using rustic capitals to form the headings and cursive script for the rest of the document. There are many examples of such forms. Many documents would be required in duplicate or even triplicate; as the clerks had no ancient equivalent of carbon paper and typewriters or duplicating machines, they would have to make their own copies by hand. This is well illustrated by a letter sent by the Prefect of Egypt to the commanding officer of cohors III Ituracorum:

"Copy.

C. Minicius Italus to Celsianus.

Give instructions that the six recruits approved by me for the cohort under your command be entered on the rolls with effect from 19th February. I have appended their names and distinguishing marks to this letter.

C. Veturius Gemellus, aged 21, no distinguishing mark.

C. Longinus Priscus, aged 22, scar on left eyebrow.

C. Julius Maximus, aged 25, no distinguishing mark.

[.] Julius Secundus, aged 20, no distinguishing mark.

C. Julius Saturninus, aged 23, scar on left hand.

C. Antonius Valens, aged 22, scar on right side of forehead.

Received 24th February, A.D. 103, through Priscus, singularis.

I, Avidius Arrianus, cornicularius of cohors III Ituraeorum, state that the original letter is in the records office of the cohort."

The original letter was presumably entered in the files of correspondence from the Prefect to Italus (authenticam epistulam in tabulario cohortis esse). The copy of the letter ([e]xemplu[m]) was presumably for another file, perhaps on recruits or additions to the strength of the cohort. The adjutant, as the official responsible for the records, certified that this was a copy and that the original was in the office.²¹

A meticulous record of the date on which each document from the governor or procurator was received by the officium of a unit, was kept. Thus accepta followed by a date is sometimes inserted after the

salutation and before the text of a letter, sometimes as a docket at the end of the document. Some letters carry in a separate docket the date they were dispatched. Often the clerks in the officium would paste together in chronological order the various letters received and form a liber epistularum. Perhaps the best example is the correspondence file of Postumius Aurelianus, tribunus cohortis XX Palmyrenorum; it contained over fifty letters in Latin and Greek all dating to the last six months of A.D. 216 and was mainly concerned with personnel; most of the letters were incoming but a few were outgoing and apparently in connection with action taken. Such letters were grouped together either as coming from one source or concerned with one subject: for example, letters from provincial headquarters assigning mounts, a file of circular letters, letters to the commanding officer concerning disciplinary action to be taken against various members of his unit, or to request him to compel minor functionaries to take certain action.²²

Archaeology has provided information about the administrative rooms in the headquarters building. All forts had a range of rooms flanking the sacellum where the standards of the unit and statues of the Imperial Family were kept, while the funds of the unit were often kept in a sunken strongroom. The numerous rooms at Lambaesis have already been mentioned, and they can be paralleled at Neuss, Vetera, Haltern, and Carnuntum. The four administrative rooms at Inchtuthil gave a total area of office accommodation of 3,900 square feet. Most auxiliary forts had a range of five rooms, the central one of which was the sacellum; the two on the left facing the cross-hall formed the tabularium

where the cornicularius and his staff of clerks kept the records and paperwork; the two on the right were the offices of the standard-bearers, who kept there the accounts of the men's pay, voluntary savings, and compulsory stoppages. Each room flanking the sacellum was the actual office and each outer room, often smaller, was used as a filing room. At the legionary fortress of Vetera and the fort of a cohors milliaria at Fendoch and also in the auxiliary fort at Caerhun the remains of cupboard-supports have been found and in the corresponding room of the third century headquarters building at Chesterholm the bronze lid of a document-box (capsa) was found, in which the records of cohors IV Gallorum will have been kept in the archives. In the principia at Niederbieber a corner room contained a dedication to the genius tabularii by a librarius and the remains of cupboards and locks were discovered in a small adjoining room. At Chesterholm also the entrance to the pay office was reduced by a stone screen on which a metal grille was inserted; between the dowels of this the stone counter was heavily worn by the passage of coins in the form of issue of pay or depositing of savings. A similar pay window was found at Risingham with two stone steps leading up to it from the cross-hall.²³

Further information is provided from Dura; here principia of standard military pattern were constructed. However, the six offices and filing rooms were used only by the administrative staff of the legionary vexillation. An inscription dated A.D. 222-223 mentions a librarius and four adiutores of a vexillation of legio IV Scythica

and was found in a room corresponding in position to the one in Lambaesis attested as the tabularium legionis by an inscription. They are clearly a miniature version of the tabularium legionis for the vexillation. The paperwork of the auxiliary unit in garrison at Dura was carried out in the temple of Azzanathkona immediately to the north of the principia. Two rooms were used as offices (W12 and W14) and a third as a filing room (W13); the latter, which contained the actual remains of the archives of cohors XX Palmyrenorum, provided evidence for a long shelf on which the papyri had been stored. The wall of W13 was covered with smudges of ink suggesting that the clerks had wiped their pens and fingers on the plaster when working as they doodled on it when not. The wall of W12 contained a dipinto set up in A.D. 194 by Abri]eus, son of Mochimus, who was actuarius almost certainly of cohors II Ulpia equitata. A private house in which soldiers were billeted contained a painted portrait of a man holding a pen and an ink box in his left hand while to the right of his head his name and rank are given as 'Hλιοδωρος ακτοναρις'.²⁴

Each unit must have needed a vast quantity of writing materials and implements each year. At Newstead, for example, large numbers of styli and also some writing tablets were discovered; clearly there must have been a regular supply of these to each fort. These, of course, could be used many times; however, papyrus and parchment could be re-used only once. Some indication of the amount of paperwork stored in the archives of each unit can be seen from the area of three of the types of document found at Dura. Every day a morning report was made

which by the end of the year would cover an area of about fifty square yards; similarly, at least a square foot of papyrus was used for guard rosters every day, which in a year would amount to not less than forty square yards; probably once each year a great roster was composed, which would cover an area of one and a half square yards.²⁵

* * * * *

Each unit in the Roman army was paraded every morning and a report made of the essential information obtained at this muster. The actual parade is discussed in detail elsewhere and here I am concerned only with the morning report itself. Appian proves that a morning report was regularly made out each day from the time of the Late Republic and that this practice still survived in the middle of the second century A.D. Actual examples of the reports occur at Dura and are dated to the reigns of Severus Alexander and Gordian, while *τα ὅπορηπερα τα παρα τοὺς στρατιώτας γένορενα* recorded by Dio in A.D. 218 twice and once in the previous year seem from the context to have been morning reports. Vegetius quite clearly had them in mind when he wrote: *Totius enim legionis ratio sive obsequiorum sive militarium munerum sive pecuniae cotidie adscribitur actis;* on the basis of this passage the name *acta diurna* or *acta cotidiana* has been given to these morning reports. A letter of c.A.D. 208 perhaps requests the commanding officer of cohors XX Palmyrenorum to submit *dia]ria*.²⁶

The files of cohors XX Palmyrenorum show that the morning report regularly contained four routine items in each day's entry presented in

regular sequence; the order and form ~~do~~ vary slightly, however, probably because the commanding officer, a tribunus, had been killed in action and replaced by a centurio legionarius praepositus cohortis, who perhaps introduced the various slight differences in procedure. The first item consisted of the date, the total strength of the unit and its full title; the second item contained the name of the commanding officer and the watchword of the day; the third item consisted of details of the men who were sent out that day on various assignments or who had returned from them; finally, the fourth item consisted of a formal declaration of orders, an oath, and the names of the men on watch at the signa. An example of a typical day's entry is given in figure 1; the year is probably A.D. 233. ²⁷

The first item consists of the date by day and month; as back files were kept, the year must have been given at the beginning of the roll. Next comes a summary of the unit's strength; the net total (n(umerus) p(urus)) is given, which is then broken down into the categories of pedites, equites, and dromedarii, including their subtotals as well as the number of officers and NCOs. Next comes the title of the unit in full.

The purpose of all the numbers in the first item, apart from giving an accurate statement of the numbers of men on that day, seems to have been that it could thus form the basis of various other types of document. Firstly, every year a pridianum or statement of the number of men on the books of the unit was made with subtotals of the various categories

Figure 1

29th March: net number of enlisted soldiers 914
including centurions 9, duplicarii 8, sesquiplicarius 1,
dromedarii 34 including sesquiplicarius 1,
equites 223 including decurions 5, duplicarii 7, sesquiplicarii 4,
total strength of cohors XX Palmyrenorum Severiana Alexandriana.

Julius Rufianus, commanding officer, sent the watchword [].

Sent out: to procure barley, soldiers [], including eques [].

Sent out: as escort to the barley-collectors, soldiers [], from century
of Marianus [].

Returned: the men previously dispatched to Atha, soldiers 2, from
century of Nigrinus, Julius Zabdibolus [].

Returned: the men previously dispatched to the governor's headquarters
with letters, soldiers [].

N.B.Returned: among the men previously dispatched with them to the governor's
headquarters from cohors II Equestris, soldier 1.

Sent out to procure wood for the baths, soldier 1, from century of
Nigrinus, Zebidas, son of Barneus.

Timinius Paulinus, decurion, proclaimed the orders which had been sent.

We will do what is ordered, and at every command will be ready.

There are standing watch at the standards of our Lord Alexander
Augustus: decurion Timinius Paulinus, aedituus Aurelius Silvanus,
[] III Aurelius Bassus, IIII Aurelius Heliodorus [].

including the number of officers and NCOs. The ways in which these figures are set out in the pridianum and the morning report are so similar that there can be no doubt that the former was compiled by consulting the figures of the latter. Secondly, the morning report lists duplicarii and sesquiplicarii; these NCOs do not occur regularly in auxiliary cohorts under these names but by the rank that they held, for example, signifer, optio, tesserarius; the logical explanation is that these titles designate not tactical commands but pay-grades. Thus it would be a simple mathematical task to calculate from these figures the money required to pay the troops in the unit; the totals of the basic pay-grade in each category were there, to which would be added the extra amount required for the NCOs and specialists receiving one and a half or twice the basic rate, plus that required by the officers.²⁸

It was one of the duties of a commanding officer to give the watchword, which was, according to Vegetius, changed daily. Josephus states that it was normal routine for the commanding officer to issue the watchword along with his orders to be passed on to the troops at the morning parade. Accordingly the watchword and the name and rank of the person ... who authorised it, are entered in the report, presumably to ensure that the same word was not used too often. Sometimes there appears to be another piece of information in this item, but it is not known what it was.²⁹

The third item contains a list of the men who were sent out (missi) on assignments away from the camp or who had returned from one that day.

(reversi). As the movement of men listed as missi or reversi does not seem to affect the net total (numerus purus), the logical conclusion must be that there was a distinction between a temporary duty, as represented here by missus, away from Dura, when the man was still regarded as being on the rolls there, and a permanent or semipermanent service away from the town, when the men would not be included in the net total in hibernis. The soldiers who are sent out or who return, are listed according to the seniority of their centurion or decurion. Included in this category are men who have overstayed their leave, but are not yet classed as deserters (Hemanserunt [sic] mil(ites))).³⁰

The necessity for the commanding officer to know how many men were absent and where they were, is obvious. The details in the missi/reversi lists clearly provide such information, which could also be used to form the basis of other documents. Reference has already been made to the fact that the detailed numbers and subtotals in the morning report would be used as a starting point from which to calculate the amount of money required to pay the unit; there is an example of a document used for that purpose from Dura; it is a strength report and contained the unit's total strength on various consecutive days and the movements and numbers of men leaving for the procurator's office or returning to Dura, who were concerned with the calculating (opinio) or auditing (ratio) of the pay records. The details from the missi/reversi section could also be used to form other documents: they could be collated to make a tabulation; in this papyrus the numbers of men absentes or praesentes on a given

date were tabulated; of the three examples from Dura, two can be dated to the first of the month (Kal.Ianu. and Kal.Octob.) and thus it seems highly probable that a tabulation was made from the morning reports on the first of every month. A more elaborate form of this document is one giving a summary of the dispositions of soldiers; an example from Dura gives the numbers (but not names) of men stationed in various outposts or travelling on camp business. The great rosters that list the entire personnel of the unit and their disposition, must have depended, like the pridianum, on the information in the missi/reversi items of the morning report either directly or indirectly through a tabulation or summary.³¹

The fourth item is complex and difficult; the officer of the day formally proclaimed the orders sent by the commanding officer (admissa pronuntiavit). It was part of the normal routine in the Roman army for the commanding officer's orders to be read out at the morning parade, and the evidence for this is abundant. The actual orders are never quoted in the morning report and must therefore have been kept in another file, if, as seems probable, they were kept. Copies of the actual orders may well have been posted in the principia for the officers and men to consult. However, when a special announcement was made, it was mentioned in the report after the admissa; for example, notice of a supplicatio and immolatio to be held on the following day was given on 28th March, c.A.D. 233; unfortunately the reason for this is lost in a lacuna, but presumably special arrangements were announced. The morning report finally quotes the oath of obedience administered by the

officer of the day and lists the men by name and rank who are on guard duty at the signa that day. As the oath is quoted verbatim each day and no mention is made of any other guard duty in the morning report, the reason for the entry of this routine item in the report is presumably the importance of the signa in the religion and life of the Roman army.³²

The only other example of a morning report is a very fragmentary one from Egypt, which is dated to the third century and perhaps to the reign of Severus Alexander. It is so similar in style and wording to those at Dura, that there can be no doubt that there was a set form for morning reports for all units throughout the Empire. Under different dates (8th, 9th, and 10th August) it gives the unit's strength under various headings (praesentes), the disposition of personnel, additions and losses, men who had overstayed their leave; mention is made of camels suffering from an eye disease and apparently of the removal of a camel-driver; the officer of the watch, who was a centurion, gave the watchword, read out the orders (admittenda pronuntiavit), and an oath was repeated (quod imperatum fuerit faciemus). However, in addition to the officers and men on duty ad signa, it also mentions those employed on other guard duties; in this respect it differs from the documents at Dura and shows that slight variations in format might occur from unit to unit; indeed, cohors XX Palmyrenorum itself at times used slightly different forms.³³

The subject of guard duty in the Roman army is discussed in detail elsewhere, but here I am concerned only with the actual guard roster. Vegetius states that detailed guard rosters were kept:

"The soldiers from all the centuries and tent-parties daily undertake in turn even in peace-time the duties of guards, watches, and outposts. To prevent any unjust excessively heavy allocation or exemption from duties, the names of those who have completed their turn are entered in the records."

Dura again provides the most examples with four definite and four probable rosters. Although none is in a good condition, sufficient remains to establish the general form and content of the document as used at Dura by a milliary cohort in the period A.D. 235-240. ³⁴

The first item, as in all daily documents in the Roman army, was the date by day and month, as is necessary; next came the place that was to be guarded; this was followed by the name of one or more centuries or troops; the last item consisted of personal names. There were also various numerals scattered about the roster. The procedure, therefore, of those responsible for drawing up the roster, was to assign various individual soldiers, both pedites and equites, listed by their company or troop, to guard a specific post on a specific day. It is worth noting that the best preserved guard roster seems to show that the sites to be guarded were listed in the order of their importance: the headquarters (ad signa), the main road junction outside the headquarters (groma), the various gates, the commanding officer's house, and the granary. Various posts outside Dura are also mentioned. ³⁵

Unfortunately there are few parallels from elsewhere for the guard rosters. A papyrus from Egypt seems to be an example of such a roster for a legion late in the reign of Nero. Of the two columns that survive, only odd letters of column 1 remain and over half of column 11

is lost; however, some sense can be made of the latter. The individual items are described in detail elsewhere, but the surviving portion seems to fall into two parts: the first lists guard duties outside the camp, the second inside. However, certain similarities in procedure can be noted; the date must have been in the missing part; the posts to be guarded are named and so are the officers or NCOs responsible; the numbers and names of men with their century who formed the actual guard, are also given.³⁶

The morning report and the guard roster might at some times and in some units overlap. The Dura examples of a morning report list only those men ~~on~~ duty ad signa, and even then they do not give their centuria or turma; consequently these men must also have appeared on the guard roster, and perhaps ad sign[a d. n. Imp] Pn[ili]pi can be read as the first item in the guard roster for 24th May, c.A.D. 240. It is worth noting that the clerks still had to make out a roster for this day, although it was a holiday (birthday of Germanicus). The morning report from Egypt of approximately the same date gives far more information about various guards, but even so, further information would have to be given in a separate guard roster. However, the general similarity in content and style between documents of various units shows that there was a difference of degree, not kind, between the procedures used by a legion in Egypt in the first century A.D. and an auxiliary cohort in Syria two hundred years later.³⁷

The guard roster would overlap, in the case of a legion at any rate, with other documents. Each time a legionary was on a guard duty, this would be entered by his name under the appropriate day in the duty roster of his century. If he was on guard duty for a considerable length of time outside the camp, his name and dates of departure and return would be entered on a separate list of absences from camp. An example of this last type of document comes from Egypt and is given as figure 2 and shows that records were kept of the absences of the soldiers outside the camp on duty both individually and collectively. It records the names of four legionaries, the place to which they were posted or the name of the man under whose command they went, and the dates that they left and returned to camp. The posts include the granaries at Neapolis and Mercurium, as well as the mint, all at Alexandria; it is difficult to say whether Saturninus and Valens did the actual dredging of the harbour and the making of the paper or whether they guarded other people doing this. The range of dates attested covers some seven years, from 4th September/October, A.D. 80 to 19th September, A.D. 87. The extent to which various documents could overlap can be seen from the fact that the phrase exit ad frumentum Neapol occurs three times in these individual files and once in the century duty roster; in the guard roster from Egypt some two decades earlier there are various legionaries on guard duty a frumento Neapol[is].³⁸

A considerable proportion of the paperwork of a unit must have been concerned with the pay and accounts of the soldiers. Literature,

Figure 2

M. PAPIRIUS RUFUS.

Left for granary at Neapolis as shorthand clerk in accordance with instructions from T. Suedius Clemens, praefectus castrorum

Sept-Oct. 80

Returned

21st Jan. 81

[] 81-2

Left for granary at Mercurium

Returned

13th July 82

Left with []

21st Apr. 85

Returned

2-7th May 85

Left for granary at Neapolis

[] 86?

Returned

7th July 86?

T. FLAVIUS SATURNINUS

Left for harbour-dredging

15th Jan. []

Returned

[]

Left with centurion Timinius

[]

Returned

28th Nov. []

Left with Maximus Liberalis

[]

T. FLAVIUS VALENS

Left for manufacture of paper

15th Jan. []

Returned

[]

Left for mint

[]

Returned

17th Jan. []

Left for []

13th Apr? 82?

Returned

[]

Left for granary at Mercurium

[]

Returned

14th July []

Left for country

19th Sept. 87

T. FLAVIUS CELER

Left for granary at Neapolis

11th Feb. []

Returned

[]

Left with river guard

[]

Returned

24th May []

Left for []

[] 81

Returned

20th Feb. 82

Left with frumentarii

15th June 83

Returned

[] 83-4

papyri, and archaeology provide examples of the administration and paperwork involved. Vegetius states that educated soldiers were required in the army 'for their skill in writing and their experience in calculating and reckoning'; among other matters they saw that totius enim legionis ratio pecuniae was daily entered in the records of the legion. Among the military documents that Severus Alexander used to inspect continually were rations and stipendia.³⁹

Vegetius gives a description of compulsory stoppages that were made in the money that was due to a soldier:

"An inspired regulation of the ancients was that half of every bounty (donativum) the soldiers received, was retained at the standards and preserved there for the men themselves, to prevent the other ranks from wasting it through extravagance or the purchase of useless articles This money was kept in ten leather money-bags, one for each cohort. There was also an eleventh bag in which the whole legion placed a small contribution, to ensure a proper funeral; if any other rank died, the cost of burial was met from the money in the eleventh bag. These accounts were kept in chests by the standard-bearers. Therefore men who were chosen as standard-bearers were not only reliable but also educated, so that they would know how to look after these deposits and give accounts for each individual."

As bounties were first given by Augustus, Vegetius must be referring to the army of the Empire. Thus half of every bounty that the legionary received was deducted and put into a savings-bank. These compulsory savings seem to have been called seposita. Pay documents for legionaries show that soldiers had money for the burial club deducted from their pay (ad signa).⁴⁰

There is more evidence for a soldier depositing money at the standards in his camp:

"Domitian prohibited two legions from sharing a camp. He also forbade any soldier to deposit more than one thousand sesterces at headquarters, because L. Antonius had taken to finance the rebellion he was plotting, the large amount of savings in the winter-camp of the two legions. He also added a fourth stipendium of three gold pieces."

Domitian thus increased the pay of a legionary from 225 denarii per annum paid in three instalments of 75 denarii to 300 denarii per annum paid in four instalments of 75 denarii. No soldier was permitted to have more than ten aurei deposited in the camp savings-bank at any one time; this was a little less than a whole year's pay at the increased rate. This shows that the system of banking money at the standards was well established by the second half of the first century A.D. This money is called deposita and seems to have been voluntary deposits; indeed, in the two decades before the rebellion, there were remarkably few donativa and those were small; it would be difficult to amass depositorum summa or even one thousand sesterces with half a donativum of one hundred sesterces. Thus this money that was kept at the standards must have included deposita as well as seposita.⁴¹

There are several interesting documents concerned with the pay and savings of legionaries. Two are firmly dated by a consulship at the top to A.D. 81, a few years before the increase in pay; however, the Egyptian year, not the Roman, is used for the details, and so the three stipendia are September to December of A.D. 80, January to April of A.D. 81, and May to August of A.D. 81 respectively. Traces of another presumably similar document can be seen to the left of these. The record of Q. Julius Proculus is reproduced as figure 3; that of C.

Figure 3

A.D. 81.

Q. JULIUS PROCULUS, OF DAMASCUS.

Received 1st payment in 3rd year of our Lord Titus	248 dr
Deductions:	
Bedding	10 dr
Towards food	80 dr
Boots and straps	12 dr
Annual camp dinner	20 dr
Towards clothing	60 dr
Total deductions	<u>182 dr</u>
Balance deposited	66 dr
Previous balance	<u>136 dr</u>
Total credit	<u>202 dr</u>
Received 2nd payment in same year	248 dr
Deductions:	
Bedding	10 dr
Towards food	80 dr
Boots and straps	12 dr
Burial club	4 dr
Total deductions	<u>106 dr</u>
Balance deposited	142 dr
Previous balance	<u>202 dr</u>
Total credit	<u>344 dr</u>
Received 3rd payment in same year	248 dr
Deductions:	
Bedding	10 dr
Towards food	80 dr
Boots and straps	12 dr
Towards clothing	<u>146 dr</u>
Total deductions	<u>248 dr</u>
Credit	<u>344 dr</u>

Audited by Fennius Innocens.

Valerius Germanus is exactly the same except that he paid 100 drachmas for clothing in the first stipendium, whereas Proculus only spent 60 drachmas. Proculus's full pay for each stipendium should have been 75 denarii; however, the local currency was used instead, and so he was entitled to 75 billion tetradrachms every four months. Of the 75 tetradrachms that were due to him, 62 (i.e. 248 drachmas) were retained in the unit to cover debts for various necessities supplied from official sources, and the balance of this, if any, was added to his credit. The remainder of the stipendium (13 tetradrachms or 52 drachmas) - perhaps less a few drachmas for commission on the exchange - was given to the soldier as pocket-money. This, with the other half of the donativa, would form the peculium of the soldier, as Vegetius called it. The entry of 248 drachmas as stipendium represents only that part of the pay actually retained at the unit.⁴²

It is thus possible to see how the persons responsible for banking the money operated. Each time a stipendium was paid, they would record the amount of money that was standing to an individual's credit in the savings-bank (deposita) after the various official deductions had been made. It is not, as has been claimed, the records of payments made by the paying authorities, as the only money that was actually paid out to the soldier was the peculium of some 50 drachmas, which is not specifically mentioned. The people who made out these documents were the signiferi assisted by the librarii depositorum. Each entry that begins acepit stipendium is in a different hand; this suggests that a different clerk drew up the record at each payment of the stipendium in this year.⁴³

There is also evidence for money for various items being deducted as early as A.D. 14. The rebellious legionaries in Pannonia complained:

"Military service is harsh and unrewarding; body and soul are assessed at ten asses a day, from which on the one hand you have to buy clothes, arms, and tents, and on the other buy off the brutality of the centurions and purchase freedom from fatigues."

There is here a clear distinction between illegal loss of money to bribe a bullying centurion, and the authorised stoppages to pay for equipment. There is also evidence to show that the legionary had to pay for his food as well. As the pay rate was the same in A.D. 14 and 81, this is additional proof that deductions were made for food and equipment from a soldier's pay and that a record of these was kept.⁴⁴

At the end of A.D. 83 Domitian increased the pay of the legionaries by adding a fourth stipendium. A document in the same collection records the pay account of a man called Quadratus and is highly instructive; although those parts of the entries recording the items deducted are either missing or very fragmentary, the numerals are quite clear and the whole can be restored with some confidence. The three stipendia are respectively September-December, January-April, and May-August. The increase in pay was given in this one instance as a congiarium amounting to the equivalent of one stipendium and was attached to the end of the pay record. The document as restored by Marichal is given as figure 4; ⁴⁵ the year is A.D. 83/84. ⁴⁵

The document is basically similar to those of Proculus and Germanus but with some differences. Now the clerks entered the whole amount

Figure 4

QUADRATUS		
Received 1st payment	297	dr
Deductions:		
Bedding	13	dr
Towards food	128	dr
Boots and straps	16	dr
Towards clothing	57	dr 2 $\frac{1}{2}$ ob
Total	214	dr 2 $\frac{1}{2}$ ob
Balance deposited	82	dr 3 $\frac{1}{2}$ ob
Received 2nd payment	297	dr
Deductions:		
Bedding	13	dr
Towards food	100	dr
Boots and straps	16	dr
Burial club	20	dr
Towards clothing	110	dr
Total	259	dr
Balance deposited	38	dr
Received 3rd payment	297	dr 2 ob
Deductions:		
Bedding	13	dr 3 ob
Towards food	100	dr
Boots and straps	16	dr
Towards clothing	34	dr 2 ob
Total	163	dr 5 ob
Withdrawal	46	dr 3 $\frac{1}{2}$ ob
Grand total	210	dr 2 $\frac{1}{2}$ ob
Credit in form of bounty	297	dr

of each stipendium on the document (i.e. 75 denarii valued at 300 drachmas less three obols as commission on the exchange) and not only the 248 drachmas from which the deductions were made. The cost of bedding rose from 10 to 13 drachmas (in one instance (the third payment) to 13 drachmas 3 obols); the contribution towards food rose from 80 to 100 drachmas, except that in the first payment 128 were deducted, presumably including the saturnalicum kastrense, which was not now a separate item and had increased in cost by another 8 drachmas; in all the payments the deductions for boots and straps had increased by 4 drachmas to 16; Quadratus spent different amounts on clothing, as did his colleagues, and apparently paid five times as much towards the burial fund. Except for the last payment Quadratus does not appear to have withdrawn any money for spending and so must either have been very frugal or have had private means or been a lucky gambler. Each of the stipendia accounts was written by a different person and a fourth later corrected the mistakes of the other three.

Another document illustrating the pay record of a legionary has survived in a fragmentary state, but was presumably similar to those of Proculus, Germanus, and Quadratus, although it belongs to the second century. It was the record of M. Junius Crispus and one line read a[c]cep(it) stip(endium) kal(endis) Ianuari[is]. What may perhaps be the remains of another document of the third century concerned with pay seems to be a list of soldiers in which each man's name is followed apparently by acce(pt) pr(imi) sti(pendii) plen(1) dr(achmas).⁴⁶

There are also some papyri that illustrate the procedures used to record the accounts of the pay and savings-bank for the auxiliaries. Here, of course, the pay rate could vary considerably; recent work, however, has shown that the basic annual rate in denarii for the equivalent in the British army of a private was from the time of Domitian to Severus as follows: 200 for an eques alaris, 150 for an eques cohortalis, and 100 for a pedes; a duplicarius and sesquiplicarius would receive twice and one and a half times the basic rate respectively in each class.⁴⁷

A papyrus belonging to an ala and dated to c.A.D. 175 is of great interest. It does not concern the stipendium directly but the accounts of the savings-bank. It consisted of three columns and a few fragments. The first two columns go together and are concerned with withdrawals from money in the bank of the men in one turma, probably for a quarter. Column I is fragmentary at the beginning but it seems quite clear that it records the withdrawal of money from the compulsory savings (seposita); the name of each individual is followed by the detailed amount he had withdrawn, the total of which was 630 denarii 12 obols. Next came the total amount of enlistment bonus (viaticum) amounting to 27 denarii 12 $\frac{1}{2}$ obols, followed by the names of two equites and the amount that each had withdrawn. After this there was a heading debitores with the total of 416 denarii 16 $\frac{2}{3}$ obols, followed by the names of eight equites and the amount that each of them had to their debit. At the foot of the column came the grand total of the withdrawals of the turma (¶ sunt recessa) amounting to 1,074 denarii 13 $\frac{1}{6}$ obols. Column II was similar

in style; the first heading was withdrawal of voluntary savings (recessa depositorum), followed by one name, Dionusius, and the amount. Next came the heading item debitores and the total followed by fourteen names and amounts. Then came a one line entry written by a second clerk concerning the arms of Dionusius and the amount. At the foot of the column appeared the grand total of the withdrawals in the second column amounting to 2,229 denarii 15 obols; of this sum Dionusius, who was retiring from the army, withdrew 1,459 denarii of his voluntary savings and 103 denarii for his weapons (he had also withdrawn 5 denarii 14 $\frac{1}{2}$ obols seposita).⁴⁸

Apollinarius withdrew money from seposita and deposita, Pasion from viaticum and deposita. Since the names of Pasion and Serenus occur three times in succession under the same heading, it seems highly probable that the clerk copied out the more detailed and dated entries in a day-book. The former withdrew money twice from viaticum, the latter twice from deposita.

Column III records the amount of money to the credit (summa depositorum) of each man in the turma of Longinus; after the name of each of the twenty-three equites (plus one man transferred and one who had died) the amount of money was entered that each man had (habet depositos). The last four lines contain a summary:

Total voluntary savings	11,129 <u>denarii</u> 10 $\frac{1}{2}$ obols
Total compulsory savings	3,626 <u>denarii</u> 3 obols
Total enlistment bonuses	1,416 <u>denarii</u> 21 obols
Grand total	16,172 <u>denarii</u> 6 $\frac{1}{2}$ obols

It seems clear that Column III must have been the second half of the accounts of one turma matched by the withdrawals which would be similar to those entered in Columns I and II, and similarly the accounts of the former turma must have been followed by one or more columns containing the credits of the men.

One of the fragments contains a list of eight names in the same sequence as those in the first turma and presumably represents the withdrawals from the bank made in another quarter. This seems highly probable, especially as one of the very fragmentary pieces reads l^{II}° stip(endio) Ka[l(endis) I^{an}(uariis) and at least one other fragment appears to have mentioned stipendum. The roll was very extensive and probably contained the debits and credits of the savings-bank for the ala or part of it for a year. The mathematics of the entries are correct wherever they can be checked and support Vegetius's statement that men skilled in accountancy should be enlisted. To the left of each name is a small punctum showing that the entries had been checked.⁴⁹

The procedures used by the authorities can thus be seen quite easily. The first two columns are concerned with withdrawals and form the debit half of the account. Withdrawals in the ala could be made from both voluntary deposits and the enlistment bonus, while no less than twenty-two equites were overdrawn. The third column shows the credit side of the account with a detailed figure of the amount of money standing to the man's credit. The fact that separate totals for deposita, seposita, and viaticia are given shows that separate ledgers must have

been kept for these three types of deposit. The fact that men could draw from both deposita and seposita, or be overdrawn, plus the detailed amounts in each case, shows that individual statements of account must have been kept for each man.

Details for the pay and savings-bank system for an unidentified auxiliary cohort in Egypt are provided by a papyrus dated A.D. 192-196. This consists of a series of accounts in tabular form arranged according to the year of enlistment. The individual accounts are strikingly similar and the best preserved shows the method used:⁵⁰

"ENLISTED A.D. 180.

Stationed at Rinocura:

PATHERMUTHIS, SON OF PTOLEMAEUS, OF HELIOPOLIS.

In the account: savings 100 d, enlistment bonus 75 d.

Stipendium received 84 d 15 $\frac{3}{4}$ ob

Contribution deducted 4 d 22 $\frac{3}{4}$ ob

Balance withdrawn 79 d 21 $\frac{1}{4}$ ob

Credit: savings 100 d, enlistment bonus 75 d."

The pedes was entitled to 100 denarii each year for pay. He was given 84 denarii 15 $\frac{3}{4}$ obols - less a small contribution, probably for the burial club - for spending, while the residue of 15 denarii 12 $\frac{1}{4}$ obols (i.e. 100 denarii less 84 denarii 15 $\frac{3}{4}$ obols) was kept to cover debts from official sources such as clothing and equipment. The reason why these pedites drew all they could from their stipendium was that they were not stationed in camp, but dispersed in various detachments throughout Lower Egypt, Pathermuthis at Rinocura, for example. This means that their expenses for food would be relatively high. These pedites were thus forced to spend as much of each stipendium, which was

not very large anyway, as possible. Of more than a score of men mentioned, all that most of them, with three exceptions, have to their credit is their 75 d in viatico and 100 d in deposito; this latter suggests half of a donativum, perhaps granted by Severus in A.D. 193. Both sources of savings seem to have been banked compulsorily; if this is so, their deposita were really seposita except for the three men mentioned above.⁵¹

This inability to save any money from the stipendium is underlined by the fact that at least six men were in debt; the best-preserved account in this category is of a man who had enlisted two years earlier than Pathermuthis, in A.D. 178:

"]MAXIMUS, FROM CAMP.
In the account: savings 100 d, enlistment bonus 75 d.
Debit from previous account 18 d 24½ ob
Plus contribution of second stipendium 4 d 22½ ob
Total debit 23 d 19 ob
Credit: savings 100 d, enlistment bonus 75 d.
Debit: 23 d 19 ob."

It is worth noting that these debtors are not given any of their stipendium nor is the debt subtracted from the money stored from the compulsory stoppages.⁵²

It is quite clear that detailed records were kept concerning both the pay and the money in the savings-bank of each unit. The soldier would receive a stipendium four times a year from the time of Domitian to Severus and three times a year both before and after that period. It is clear that in the files of a legion a record was kept for every

legionary, recording the items for which money was deducted from his pay and the amount of money left to his credit in the bank; this record covered a year and the fresh details would be added when each stipendium was due. The smallness of the balance for all three legionaries suggests that yet another record was kept of the compulsory stoppages credited to them (seposita and viatica). The accounts of the auxiliaries show that individual records were also kept for each pedes and eques. The documents of the cohors that survive show that such a record - like those of the legio - contained an account of the money received as a stipendium, deductions, and credit in the savings-bank of voluntary deposits and compulsory stoppages. These records are the consolidated ones for the whole year and must have been compiled from those made every three months. Although no example has survived, clearly individual accounts must have been kept in the ala; the evidence also shows that there must have been separate ledgers for the deposita, seposita, and viatica. The document that has survived is the accounts of the savings-bank listing debits and credits. In all these documents, records would be carried over from one account to the next.

There are other documents showing the amounts of money that men had to their credit. On 3rd September, A.D. 117 the signifer of each century of cohors I Lusitanorum in turn issued a receipt to the centurion Longinus Tituleius for the total amount of money to the credit of the recruits (who had been brought from Asia to Egypt by Longinus) distributed in his own century. Clearly this represents what was left of the viaticum which was given to each recruit in Asia and which was

now to be put in the bank of the unit. It is probably significant that the standard of the literacy of the signiferi decreased in turn.⁵³

Further proof of the documents that would be kept to record the money to the credit of a soldier or deducted from his pay can be seen in a legal document concerning an auxiliary infantryman in Egypt in the second century. Ammonius had died while serving as a private in the century of Claudius in cohors II Thracum. His mother, who was the principal beneficiary under his will, received from the optio of his century, the money in the regimental funds that had been deducted to cover various items ($\tau\alpha\ \sigma u\lambda\epsilon y\epsilon v\tau\alpha\ \epsilon k\ \tau\omega v\ \pi\pi v\kappa\pi\pi\omega v$): this consisted of deposita of 100 denarii, 21 denarii $27\frac{1}{2}$ obols for weapons ($\tau\iota\ \alpha\pi\iota\jmath$), 20 denarii for a tent or a share in it ($\pi\pi\pi\lambda\iota\omega v\oslash$) and 93 denarii 15 obols for a fourth item. She received all of the total of 235 denarii $14\frac{1}{2}$ obols except for two small legacies of 10 and 15 denarii. The document was drawn up in duplicate by Marcus, a librarius in the fort, and is dated to 28th December, A.D. 144. Clearly there must have been at least one set of documents probably individually and collectively for each of the four items. Julius Silvanus, the optio, has the function of $\epsilon\pi\iota\tau\pi\pi\pi\jmath\ k\atilde{a}ta\ \delta\iota\alpha\theta\pi\pi\pi\jmath\pi\pi\pi\jmath$. At some time in the first half of the third century another mother was less fortunate; the son of Isidora had died while serving and she wrote to her daughter Sarapias:

"You know that I am despondent on account of your brother. I have not received his deposita, because I have been ill; they have days for receiving them."

It is interesting to hear that the Roman army had fixed days for such items ($\eta\mu\epsilon\pi\alpha\varsigma$ $\epsilon\chi\omega\varsigma\iota\lambda\alpha\mu\pi\alpha\iota\varsigma$ (sic)).⁵⁴

Many auxiliary soldiers seem to have had only 100 drachmas in deposito. A papyrus from Egypt belonging to the early second century contains the receipts from at least six soldiers for legacies received from comrades who had died. In five instances the legatee received 95 drachmas, that is 100 drachmas that the deceased had in deposito less the vicesima hereditatum. L. Egnatius had received more.⁵⁵

All these documents were kept in the headquarters of each unit and were a record of the money paid out to the soldier, stopped from his pay, or paid into the savings-bank by the soldier. However, estimates and accounts must have passed between the camp and the procurator's office so that the correct amount of money could be sent to pay the troops. Reference has already been made to the fact that the morning report that was compiled every day, formed an excellent basis to calculate the pay required by the officers, NCOs, and men of a unit. The papyri from Dura show that men were sent with the estimates of the pay (ad opationem stipendi) to the procurator's office. The great roster of A.D. 222 suggests that about thirty men were sent on this task under the command of a centurion or a decurion; once the estimates had been approved, the men could escort the money back to Dura. A fragmentary letter forwarded from the procurator's office seems to give special instructions about the distribution of pay. Once the stipendium had been issued, the accounts would be sent to be audited (ad rationem stipendi Kal Sept)

and would be taken by only a handful of men (a strength report gives a total of seven). There is evidence that accounts of the type mentioned above were kept and audited in the first century; Pliny writing about the time when he was tribunus militum in Syria c.A.D. 82 says:

"I was ordered by the governor to audit the accounts of the auxiliary regiments and battalions. In some cases I discovered a great deal of disgraceful rapacity and deliberate inaccuracy; these were in complete contrast with the accounts of Claudius Pollio, which had been kept with scrupulous care and honesty."

Pollio was in command of an ala milliaria and such units presumably had a higher standard of standard-bearer and accountant than the alae quingenariae and cohortes, to keep the accounts, and also a better commander to enforce accuracy.⁵⁶

The orderly room of any unit would contain lists for a wide variety of purposes; sometimes these lists would accompany a letter, sometimes they would be a statement of the condition of men, sometimes they would form a working list on which notes could be made. The papyri provide examples of lists compiled for many purposes. Whenever new men joined a unit either as recruits or transferred from another unit, a list with their names would be needed. A copy of a letter from the Prefect of Egypt to the commanding officer of cohors III Ituraeorum, dated A.D. 103, concerning six recruits who were to join the unit, contained their names, age, and description in a list attached to the original letter. When the recruits reached their unit, the list would be kept and the details noted in the morning report of the day they were entered on the books of the unit. A record of men who joined cohors

XX Palmyrenorum by transfer is preserved and one item will be quoted:

"A.D. 241: Entered on the records in accordance with a letter from Attius Rufinus, governor, Aurelius Macrinus, enlisted A.D. 225, transferred from numerus laurorum to the century of Heliocorus."

Unfortunately the day and month of the transfer are partly missing.

Another papyrus from Dura of A.D. 233-235 gives a list of names by centuries with the date of enlistment; other dates by day and month are probably the occasion on which each man was transferred or upgraded.

Another papyrus from Dura of c.A.D. 241-242 lists men by centuries who all joined the cohort in the same year; this would seem to be a summary of the recruits who were entered on the books of cohors XX Palmyrenorum in one year. A list of legionaries giving their nomen, filiation, and origo but not their cognomen (hence probably dating to the reign of Augustus or Tiberius) seems to be a list of men who enlisted in the one year. Vegetius gives supporting evidence that lists containing the names of recruits were kept; in talking of the need for foot drill, he says:

"Recruits must at all times be on the parade ground and drawn up by their order on the roll."

It would be on such lists that the annotations would be added to show if the recruit had failed his proficiency test. Another papyrus of the third century records accessions to the unit in the form of both recruits and men transferred from other units. The pridianum of cohors I Lusitanorum recorded the precise date by day and month of accessions to the unit; they included a man with a direct commission as a centurion, and another returning to his old unit to a commission as a decurion,

nine volunteer recruits, including one eques and one dromedarius, all joining on different days, two men drafted from a legion, and three transferred from other cohorts. Clearly a separate list with the names and dates of men joining the cohort was kept (perhaps even one for transfers and one for recruits) which would be used to compile the pridianum. A papyrus from Egypt dated to A.D. 90 gives a list of legionaries with full nomenclature; it has been suggested that this is a list of the men who were honourably discharged in that year. A fragmentary document dated to the opening years of the second century, probably to A.D. 105, and almost certainly belonging to cohors I Hispanorum veterana, seems to contain the names, origo, and date of enlistment of five men who were honourably discharged. Clearly in peace-time the commander of each ala and cohors would have to submit once a year to the legatus legionis who was the regional commander, a list with details of all the men who would be discharged that year, so that it could be forwarded via the governor to the War Office in Rome, where ab epistulis could make the arrangements for the diploma to be sent to the retiring soldier.⁵⁷

Vegetius mentions lists of the various grades of soldiers in a legion:

"I shall now describe the names and ranks according to the present rolls of the soldiers."

The papyri give examples of such rolls listing principalium militum et principiorum; although Vegetius claims to be using the correct terminology (ut proprio verbo utar), it is difficult to see what

distinction he is drawing, but the ranks he enumerates suggest the difference between principales and immunes. For a legion there is an example, probably belonging to legio II Traiana, and dated A.D. 222-236: it is a list with a heading CORNICULARII followed by four names with centuries and date of enlistment; all this was preceded by another fifteen names, presumably of centurions. For an auxiliary cohort there is a fragmentary papyrus from Dura which lists four men of unidentified rank followed by the heading DUPPLICARI. Another papyrus from Dura dated A.D. 236 seems to be a list of principales arranged by century and troop, another a group of subordinate officers, who are listed by rank.⁵⁸

Severus Alexander is said to have paid special attention to lists of men who were to be promoted:

"He even made notes about all the men who were to be promoted and read through all the dossiers and actually noted at the same time both the date and the name of the man on whose recommendation the promotion was to be made."

Several documents, some of which are almost contemporary with the Emperor, show that the procedure described above is correct. One dated A.D. 238-242 belonged to an unidentified ala; it contains a list of five men with turma and date of enlistment and the letters pnt; then came the heading SESQUIPLICARI, followed by another five names with turma and date of enlistment also; the first group of men are therefore presumably duplicari. This seems to be a list recording the tribune's recommendation on the possible promotion of a duplicarius to decurio; pnt is expanded, on the basis of 'Lampridius' s statement, to p(romovendus) n(ominante)

t(ribuno). Another papyrus dated to approximately the same time is a record of the exact date of the promotion of various men of different ranks to the post of decurio in the ala Gallica Gordiana and to commissions in cohors III Ituraeorum; a typical entry reads:⁵⁹

"ANTONIUS AMMONIANUS: enlisted A.D. 234, promoted decurio from sesquiplicarius in ala Gallica Gordiana by Basileus, Prefect of Egypt, 16th October, A.D. 242."

Whenever a pedes in a cohors equitata was upgraded to an eques cohortalis, records of this would be kept in the files of the unit. The pridianum of cohors I Lusitanorum records the names of at least two pedites who were upgraded to equites cohortales, the turma they were transferred to, and the date. A summary of dispositions of soldiers dated to c.A.D. 240 at Dura records that several pedites were promoted to equites in cohors XX Palmyrenorum.⁶⁰

What was once a very large and impressive document but is now rather fragmentary, connects several of the types of document described above and also the statement of 'Lampridius'. It is a list of auxiliary infantrymen, arranged under their date of enlistment, who were to be transferred to different alae; it belongs to sometime in the period A.D. 163-170. Following the name of each man ab and the name of the centurion who was recommending the transfer, and promotion were given. Before the date of enlistment of the infantryman was the name in adjectival form of the Prefect of Egypt in office at the time when the soldier had enlisted. This was to enable a check to be made easily

on the character of the individual; all recruits in Egypt had to be approved by the Prefect, as the almost contemporary pridianum of cohors I Lusitanorum shows, and in other provinces by the governor. Alongside the name of the individual the present Prefect wrote iusi [sic] to signify that he was granting permission to the proposed transfer. The entries for one ala are:

"PROPOSED TRANSFERS TO ALA I THRACUM MAURETANA:

File of Proculus. Date of enlistment: A.D. 145.

Nepheros, son of [], recommended by Fortis, centurion.

File of Petronius. Date of enlistment: A.D. 148.

Onnopher, son of Nilus, recommended also by Fortis, centurion.

File of Munatius. Date of enlistment: A.D. 150.

Apollos, son of Serenus, recommended by Tiberinus, centurion.

Date of enlistment: A.D. 153.

Arrius, son of Sarapion, recommended by Victor, centurion."

The Prefect granted permission for the transfer of all four men. The varying abilities of the different men can be seen from the fact that their date of enlistment ranges from A.D. 145 to A.D. 153; this shows that the recommendation for transfer could come after a long or short period of service as an infantryman.⁶¹

In addition to those lists described above, Dura provides examples of other types of list for purposes unknown: a list of cavalrymen, a list of men and mounts, lists of names arranged by centuries and also by troops and centuries, as well as lists containing nothing but names. There are finds of lists from other units: one contained a list of men with their origo and date of enlistment, which ran in chronological order from A.D. 173 to A.D. 189, another belonging to approximately the

same time contained the names of men under their date of enlistment.⁶²

The most impressive of all the documents from Dura are the general rosters. These contain the names of every man in the cohort, and a record of what he was doing. The pedites are listed first, followed by the equites, and finally the dromedarii; each centuria and turma is headed by its official designation, the date of the centurion's or decurion's enlistment, followed by his full name and rank. This is followed by the dates of enlistment, titles, and names of the duplicarii and sesquiplicarii, and then, in order of their seniority, the names of the privates and remaining NCOs. The dromedarii are listed by centuries in the same way. To the left of each man's name throughout the roster there is an annotation; this indicates the post or task to which he has been assigned, or that he is free for assignment. In some of the rosters a total is given at the end of each century and a number double the actual total for each turma. A typical entry for the first dozen men in the second most junior turma in A.D. 219 is given as figure 5.⁶³

One man was stationed at a specific post (Becchufrayn) and another had been sent on a specific duty (approving horses); any man who was not assigned to any such task but was present and available for duty had a horizontal bar placed against his name; if he were a principalis and available for duty, another line was attached to the right end of the horizontal bar sloping downwards to the left and the rank was inserted in the angle in between. The entry for the sesquiplicarius was erased and it is thought that m.e. was inserted to show that he had

Figure 5

Troop of Octavius, enlisted A.D. 201.

ee	decurion	Aurelius Lucius Octavius
ee	duo carius	Aurelius Salmanes Zebidas, enlisted A.D. 192.
[[hd sesquiplicarius	Aurelius Romanus Allaer, enlisted A.D. 193.]]
•	_____	Aurelius Amaeus Iadibeli,
	approving horse	Aurelius Saedus Magdae,
•	<u>Chafer Avira</u>	Aurelius Malchus Nisamsi, all enlisted A.D. 194.
	Becchufrayn	Aurelius Julius Julianus, enlisted A.D. 195.
ee	flag bearer	Aurelius Bassus Salman,
•	_____	Aurelius Julius Romanus,
•	_____	Aurelius Ie[
•	<u>route march</u>	Aurelius Malchus Abgari,
ee	<u>route march</u>	Aurelius Hia.

been honourably discharged (m(issus) e(meritus)) after twenty-six years service. Puncta both large and small were attached to the entries of principales and officers who were available for assignment; these puncta were check-marks used in going over the list.⁶⁴

It is not known how often a general roster was compiled. However, the one dated A.D. 219 was re-used to make another one in A.D. 222. Obviously there must have been at least one other roster compiled during those three years, as it would be too laborious for the clerk to copy the new roster on the reverse of the present edition. Moreover, a fragmentary papyrus appears to be part of another roster dated to c.A.D. 218 and another to A.D. 222-224. It would thus appear that a general roster was compiled at least once a year. Another fragmentary roster but of the same pattern dates to c.A.D. 251. The rosters were very large, one and a half square yards in area, on which a single clerk wrote the 1,210 names in A.D. 219 and two clerks the 1,040 names in the later roster, although several different clerks were responsible for the annotation of both. It is quite obvious that this document was closely connected with many others: morning reports, tabulations, summaries of dispositions, individual files of men absent from camp, duty rosters, guard rosters all either contributed the information in the general roster or were summaries of it.⁶⁵

There are also examples, although fragmentary, of rosters from Egypt. One contained at least two columns of names of men in an

auxiliary unit listed with a total under the name of their subofficer; puncta were often attached as check-marks to the names of the men; the document belongs to the first or second century. Another is dated to c.A.D. 215 and contained in part the pedites in the century of Aurelius Theopropus; to the left of the names of the men were signs denoting the duty to which that soldier had been assigned: to various places, for example, such as Antaeopolis, or to clerical work in the of[fi]cium (um), or a horizontal line was used to denote that the man was available for duty.⁶⁶

It was normal Roman military practice for each unit to submit once a year to provincial headquarters a complete record of its strength with details of the accessions and losses from its establishment for that year. This was called a pridianum and was compiled on the last day of each year; hence its title, as 31st December, the pridie Kalendas Ianuarias, was the most important eve of the whole year. Of the two definite examples of pridiana that have survived, neither unfortunately is complete; one, originally published by Mommsen, is known as the 'Berlin pridianum', the other was published by A.S. Hunt and is known as the 'London pridianum'. Both are given as figures 6 and 7 respectively.⁶⁷

The former belongs to cohors I Augusta Praetoria Lusitanorum quingenaria equitata and was compiled on 31st August, A.D. 156, when the unit was stationed at Contmopolitanopolis Major in the Thebaid in Egypt, the latter belongs to cohors I Hispanorum Veterana quingenaria

Figure 6

PRIDIARIUM OF COHORS I AUGUSTA PRAETORIA LUSITANORUM EQUITATA FOR THE MONTH OF AUGUST, A.D. 156, IN WINTER QUARTERS AT CONTRAPOLLOMONOPOLIS MAJOR IN THE THRAID WEF 8th JULY, A.D. 131, UNDER THE COMMAND OF MARCUS JULIUS SILVANUS, SON OF MARCUS, OF THE TRIBE QUIRINA, FROM THUBURSICA, WEF 23rd APRIL, A.D. 154, IN SUCCESSION TO ALLIUS PUDENTILLIUS.

31st AUGUST:

NET NUMBER OF SOLDIERS ON 31st DECEMBER
INCLUDING CENTURIONS 6, DECURIONS 3, TROOPERS 114,
CAMEL-RIDERS 19, INFANTRY 363.

505

ACCESSIONS SINCE 1st JANUARY:

DIRECT COMMISSION

CENTURION 1

FROM SEMPRONIUS LIBERALIS, PREFECT OF EGYPT:-

Sextus Sempronius Candidus, enlisted A.D. 156, wef 27th April.

TRANSFERRED BACK FROM ALA I THRAECUM MAURETANA

DECURION 1

TO COMMISSION IN COHORT:-

Aulus Flavius Vespasianus, enlisted A.D. 134, wef 2nd March.

VOLUNTEER RECRUITS APPROVED BY SEMPRONIUS LIBERALIS, PREFECT OF EGYPT 9

INCLUDING TROOPER 1, CAMEL-DRIVER 1:-

in century of Herculanius, Philon Isiegnis, enlisted A.D. 156, wef 5th May,

Apollos Jaminus, enlisted A.D. 156, wef 15th May;

in century of Marcus, Anubas Ammon, enlisted A.D. 156, wef 5th May;

in century of Gaius, Gaius Sigillius Valens, enlisted A.D. 156, wef [];

in century of Sempronianus, Ammonianus, enlisted A.D. 156, wef [];

in century of Gaius, Gaius Julius, enlisted A.D. 155, wef [] January, 156,

Heracliammon, enlisted A.D. 155, wef [];

in troop of Artemidorus, trooper Hermcisapyn, enlisted A.D. 156, wef [] April;

in troop of Salvianus, camel-driver Cronius Barbasatis, enlisted A.D. 156, wef 16th April.

RECEIVED FROM LEGIO II TRAIANA PORTUS FROM THE SAME PREFECT OF EGYPT:-

in century of Lappus, Valerius Tertius, enlisted A.D. 151, wef 25th March;

in century of Candidus, Horatius Herennianus, enlisted A.D. 148,

wef 10th November.

TRANSFERRED FROM COHORS I FLAVIA CILICUM:-

in century of Candidus, Maevius Margellus, enlisted A.D. 136, wef [].

ALSO TRANSFERRED FROM []:-

in century of Lappus, Gaius Longinus Apollo, enlisted A.D. 141, wef 13th February;

in century of Sempronianus, Eros, enlisted A.D. 154, wef [].

ALSO APPOINTED TROOPERS:-

in troop of Artemidorus, Ision Petsiree, enlisted A.D. 141, wef [];

in troop of Salvianus, [], enlisted A.D. 152, wef [].

equitata stationed at Stobi in Macedonia but operating in Lower Moesia, and is dated to 16th September, A.D. 105. Neither was compiled, as was standard procedure, on 31st December for two different reasons. The Egyptian year ended on 29th August and all military units in that province alone submitted two pridiana annually, one for the Egyptian year (of which the former quoted above is an example) and one for the Roman. The latter is an emergency pridianum compiled after several months fighting during the Second Dacian War, when it would be imperative for the High Command to have details of the effective strength of the unit as quickly as possible; thus the commanding officer, Arruntianus, had this pridianum compiled on 16th September instead of 31st December. It should be noted that both pridiana list their accessions from 1st January and thus show that normally in peace-time the pridiana were compiled on 31st December.⁶⁸

Both pridiana follow the same basic pattern: the document is described as a pridianum; next follows the full title of the unit, its station, and the name of the commanding officer; the date of the record is also given. Next comes the net number of soldiers in the unit on 31st December of the previous year; this total is further broken down into the number of pedites and equites (and dromedarii in the Egyptian unit) and the number of centurions, decurions, duplicarii, and sesquiplicarii in each class.

This is followed by details of the accessions of the cohort from 1st January of the present year. In the Moesian pridianum the actual

details are recorded in six lines, while the Egyptian one takes at least sixty-one. The reason for this discrepancy is that in war-time the War Office was not so interested in the original source of accessions to the unit as their present disposition and the effectiveness of the unit as a fighting body; in peace-time there were greater opportunities for giving more detailed information. The Egyptian record gives the name, rank, arm of service, date of enlistment, and previous unit of each man joining the cohort, and the date on which he was entered on the records of his new unit, as well as the name of the centurion or decurion under whom he now served. It also gives some transfers and upgradings inside the unit itself. The Moesian pridianum only gives the general information that is contained in the headings of the other, namely the number and category of the accessions and the governor responsible for sending them to the unit.

The Egyptian pridianum is incomplete and ends there. The Moesian one then gives, after the gross total of men in the unit on 31st December plus all subsequent accessions, the losses from the strength of the unit in great detail; this is done under three headings, Permanent Losses (E[X] EIS DECEDUNT), Temporary Losses outside the Province (EX EIS APSENTES), and Temporary Losses inside the Province (INTRA PROVINCIAM). Under each heading the various items that compose it are given, followed by the total number of men in that category including officers and NCOs. The first category included deaths and transfers, the second, men getting supplies and equipment from outside Lower Moesia, the third, men in

garrisons, patrols, or guard duty inside the province. At the end of that part of the papyrus that is preserved, comes the effective total - excluding the sick - of officers, NCOs, and other ranks present and ready for action.

Both pridiana were compiled by one clerk, although a second made a few alterations and additions to that of cohors I Hispanorum. The sources on which he drew to compose this report would obviously include, morning reports, tabulations, summary of dispositions, and various lists. If a general roster were composed once a year, as seems highly probable, then it would be logical to suppose that it and the pridianum were compiled together, the former as a record of the precise disposition of every individual, the latter as a report in consolidated form of the former. It is not known how many copies were made; presumably one was kept in the unit's files, one at provincial headquarters, perhaps one was sent to the legatus legionis in command of the region, and perhaps one to Rome. A letter from the governor in a file at Dura dated to c.A.D. 208, orders the commanding officer to submit pridiana as well as other documents.⁶⁹

Even in time of peace an ala or cohors equitata would require horses to replace mounts that were no longer serviceable. The files of cohors XX Palmyrenorum provide good evidence for the detailed and various paperwork that was required. There was clearly a standard procedure that had to be observed, as is shown by the phrase in acta ut mos refer,

which occurs several times. Part of this procedure is shown by three letters from the governor of Syria Coele to the commander of the cohort, of which the first will be quoted:

"Marius Maximus to Valentinus.

Received 16th March, A.D. 208.

Enter in the records according to the regular procedure a horse, four years old, reddish, masked, unbranded, approved by me; assign it to Julius Bassus, trooper of cohors XX Palmyrenorum under your command, at 125 denarii, and make note wef 29th May (?), A.D. 208."

The clerks inserted in a docket the date each letter arrived, and then pasted them together to form a liber epistularum, which was then filed. Indeed, a label (titulus) that was attached to a file of letters on this subject or a similar one, was found; it reads epistulae equorum e.[. Another letter dated some thirty to forty years later still uses the same language and shows that the procedure was the same.⁷⁰

The language of the letters shows quite clearly that this was only part of the procedure. Obviously the commander must have sent applications to the governor for new horses, giving the name of the eques concerned and presumably the reason for a replacement; this is proved by the fact that the governor orders the horse to be assigned to a particular man, not to anyone at the commander's own discretion. This is further supported by another document from Dura dated A.D. 251. It consists of items of two categories, men who have lost their horses, and men who have been assigned a new one. The former simply gives the name of the man and the date he lost his mount:

"Malchas, son of Goras: lost his horse on [date]."

The letter gave the name of the man, a detailed description of the

horse, the name and rank of the person who had approved it, and often the price:

"Barathes, son of Maesum: a mare, with smooth teeth, [], without brand, approved by the then prefects, 21st September, A.D. 249."

This is obviously an example of an entry in the records of the unit made, as was standard procedure, on the governor's instructions, and it is a précis of the covering letter that came with the horse. This is clear from the content and also because the age of the horse is still reckoned by the date of the original letter and not by the date of the compilation of the present document; in the example of the entry quoted above, there is a difference of two years. Similarly, the losses of horses were recorded and then details were submitted to the governor.⁷¹

An example of a letter on this subject from the commanding officer comes from the correspondence file of Postumius Aurelian. This letter is in a highly fragmentary state, but sufficient remains to make the reading clear; it was sent to a higher authority and states that a cavalryman needed a new mount; this is probably the copy kept in the file:

"I have sent to you on 2nd (?) December, A.D. 216, one trooper who needs for himself a new horse, which has to be approved."

A fragmentary papyrus dated to A.D. 232 from Dura seems to give a list of men by their centuries who had been promoted from pedites to equites in the cohort, and who thus now needed and received a horse (equos acceper[]).⁷²

CHAPTER V: ADMINISTRATION AND PAPERWORK

NOTES

1:

Vegetius - 2.19.

Britain - figures from Professor E. Birley's files.

regional commands - Arch. Camb., CII.9-19, especially 17-19; PT
BR, 27ff.

cohors XX Palmyrenorum - P. Dura 600.

Augustus - Suetonius, Aug., 101.

diploma - as the diplomas themselves record; cf. XVI, passim.

Generals - e.g. Suetonius, Tib., 32.

2:

numeri - I owe this information to Professor E. Birley; I do not think that the point has been made in print.

Neckarburken-Ost - Germania, VI.36, n.17; Limesführer, 135-136, 221-224.

Domaszewski - Rangordnung, 38-41, 55-56, 58-59, 61.

doubtful - cf. Parker, Legions, 206.

others - e.g. Passerini, legio, 605 (21-30) officium legati; 606 (31-34) officium tribuni laticlavi; 606 (35-38) officium praefecti castrorum; 606 (39-44) officium tribuni angusticlavii. An unpublished M.Litt. thesis (Durham University) by G.R. Watson called 'Roman Military Book-keeping' also studies the legionary and auxiliary officia. It has been studied throughout this chapter.

3:

Lambaesis - R.Cagnat, Les deux camps de la légion de Lambèse, 36-37. canalicarius - Oesterreichisches Archäologisches Institut, 1925, 179ff.

actarius - cf. RE sv actarius,

optio - this is my own restoration of PSI 465.6-7; cf. JRS, LVI.243. I wish to thank Professor E. Birley, Professor J.F. Gilliam, and Dr. B. Dobson for comments on the feasibility of this proposal when put to them.

staff - VIII 2560 = ILS 9100. The title p(ia) v(index) shows that the inscription must be not earlier than A.D. 194 but before A.D. 200, as C. Julius Crescentianus, listed here as an exactus, had been promoted to armorum custos by that date (ILS 9097).

cerarius - cf. ILS 2425 and 2426 for the same man attested as a cerarius and later as a librarius.

Alba - XIV 2255 = ILS 2398.

A.D. 107 - P. Mich. 466.29-32.

exactus - as deduced by Mommsen. I owe this and the following point to Mr. G.R. Watson.

exceptor - cf. Scholiast on Aristophanes, Nubes: υραγγάτευς δὲ υραφών τα ἀγυρένα ἐν ταῖς δικαιis δὲ νῦν καλούμενος ἐκεκεντόρα.

Dura - AE 1934 279; DPP, 25.

Corbridge - RIB 1134; AA4.XXI.154-155.

Masada - mentioned in 'The Observer' Masada Exhibition catalogue.

3 (cont.):

Poetovio - AE 1936 56.

4:

Lambaesis - VIII 2555 = ILS 2446; for date of repair ILS 531 shows M. Aurelius Licinius in the same post as here (optio hastati posterioris) on 22nd October, A.D. 253, but with a different optio principis. ILS 2444 gives a libr(arius) principis at Strasbourg in A.D. 201.

room - R. Cagnat, Les deux camps de la légion de Lambèse, 36-37.

5:

AE 1957 85.

6:

Vegetius, 2.8.

7:

papyrus - CLA 7IV.b.10.

each century - such is the view of Mr G.R. Watson, which I have followed after a long discussion on the point with him. I was inclined to the view that these two men did not operate in their own century but elsewhere; otherwise one would have to postulate that there was a wagon-maker, for example, to each century.

flat - as suggested to me by Professor Birley.

8:

tactical - this view was first expounded, I believe, by Professor Birley.

parade - e.g. Tacitus, A., 1.34.

battle - e.g. Vegetius, 2.15.

Vegetius - 2.20.

9:

Vegetius - 2.7; cf. Festus, p.27.

Elsewhere - Vegetius, 2.19.

legatus legionis - Passerini, legio, 605 (22).

tribunus - ibid., 606 (32).

praefectus - ibid., 606 (36).

Lambaesis - ILS 9099.

Speratus - ILS 2399 and 9097.

Aquincum - III 3565 = ILS 2393.

A.D. 198 - VIII 2551 = ILS 2397.

10:

Vegetius - 2.12.

Hyginus - M.C., 20.

headquarters - ibid., 3, 4.

Apollinarious - P.Mich. 266, 30-34 and 47-48.

constructing - P.Mich. 465.14-17; 466.19-23.

British - information from Professor Birley.

11:

Vegetius - 2.7.

Paternus - Dig., 50.6.7.

education - Vegetius, 2.19.

12:

Rangordnung, 55-59.

13:

files - DPP, 39-45.

A.D. 219 - P.Dura 100.

A.D. 222 - P.Dura 101.

Becchufrayn - P.Dura 100.xxxvii.3. In A.D. 219 12%, in A.D. 222 6%.

commentators - DPP, 39-45.

14:

morning report - P.Dura 82.i.17.

cornicularius - P.Dura 100.xxi.29; cf. 101.xxi.10.

notations - DPP, 39-40.

actuarius - P.Dura 100.xvii.3; 101.xxi.13.

15:

Vegetius, 2.19.

16:

Vegetius, 2.20.

17:

key - seen by the present writer in the museum at Mainz. I am indebted to Professor Klumbach for supplying the reference of Bonner Jahrb., 111/112.405, Abb.20-21, taf.33.52, and to Dr. D. Baatz for supplying the text, which is not in the Corpus or BerRGK. Octatius - AE 1924 21. I owe the reference to this to Dr. Petrikovits; the point was originally made by Oxé.

18:

'Lampridius' - SHA, Alex., 21.

Appian - B.C., 3.43.

afterwards - ibid., 45.

Vitellius - Tacitus, H., 1.52.

Menander - Dig., 49.16.5.6.

Dio - 69.9.

Pliny - Ep., 10.86B, 87.

Dura - P.Dura 130B, C, D.

19:

Isidore - Orig., 1.24; cf. Rufinus, Apol. in Hieron. 2.392.

proficiency tests - Iatromus, XLIV.408-415, Historia, XI.379-383.

θ - JRS, XLII.56-62.

cohors - DPP, 39-44

20:

DPP, 45-46.

21:

examples - a by no means exhaustive list is given in Historia, V. 355, n.3.

cohors III Ituraeorum - CLA 215; on balance, it seems probable that the missing praenomen was Calus.

22:

before - e.g. P.Dura 56A, 63, 64, 65.

end - e.g. P.Dura 66.

separate - e.g. P.Dura 56B, 56C, 58.

Postumius - P.Dura 66.

mounts - P.Dura 56.

circular - P.Dura 60.

disciplinary - P.Dura 63.

functionaries - P.Dura 64.

23:

headquarters - the evidence in general is discussed in Report V. 201-237, and IX part II, 83ff; R. Fellmann, Das Zentralgebäude der römischen Legionslager und Kastelle, passim.

Lambaesis - R. Cagnat, Les deux camps de la légion de Lambèse, passim; Cagnat, 441ff.

Neuss [etc] - Germania Romana I, taf. IV-VII.

Inchtuthil - JRS, XLIV.84-86.

Vetera - cited in PSAS, LXXXIII.125

Fendoch - ibid.

Caerhun - Bailie Reynolds, Kanovium, 75.

Chesterholm - AA4, XII.221-225.

Niederbieber - information from Dr. D. Baatz; cf. Curle, Newstead, 56.

Chesterholm also - AA4, XIII.221-5.

Risingham - RR, 110-112.

24:

Dura - Report V.214-216.

inscription - AE 1934 279.

temple - Report V.151-152, 166.

dipinto - AE 1934 280.

portrait - Report VI.291-292, pl.XLIV.1.

25:

Newstead - Curle, Newstead, 307-308.

Dura - figures based on P.Dura 82, 106ff, and 100 respectively.

26:

elsewhere - cf. Chapter VI: Parades and Inspections, n.3-6.
Appian - B.C., 5.46.
Dura - P.Dura 82-89.
A.D. 218 - Dio, 80.2.1 and 3.
previous - Dio, 79.16.4.
Vegetius - 2.19.
name - Münchener Beiträge zur Papyrusforschung und antiken Rechtsgeschichte, XIX.367.
c.A.D. 208 - P.Dura 60C.3.

27:

cohors XX Palmyrenorum - P.Dura 82-89; DPP, 270-286.
praefectus - DPP, 283.
figure 1 - P.Dura 82.11.1-13.

28:

DPP, 272.

29:

Vegetius - 3.5.
Josephus - B.J., 3.87-88.
watchword - P.Dura 82.11.3; 82.11.16; 89.1.7; 89.1.13; DPP, 272, 283.
information - DPP; loc.cit.

30:

net total - DPP, 272-273, 281-283; P.Dura 89.1.5 and 11.
Hemanserunt - P.Dura 82.11.18-19.

31:

already - see n.28 above.
strength report - P.Dura 95.
pay records - I develop this theory more fully in Historia, XVI, Heft I (January, 1967).
tabulation - P.Dura 90-92.
summary of dispositions - P.Dura 94.
great rosters - P.Dura 100 and 101.

32:

evidence - cf. Chapter VI: Parades and Inspections, n.3-4 for references, quotations, and discussions; to these add:
admissa in P.Dura 82.1.6 and 16; 11.11; 89.1.1 and 8; 11.1; 89 frag.a; ad missa in Commodianus, Carmen Apologeticum, 77; admittenda in P.Mich.455a, recto, 2 and 14.
posted - cf. Chapter VI: Parades and Inspections, n.4 for references.
28th March - P.Dura 82.1.16.
religion - Richmond, RLC, 162-165; DPP, 273, n.18.

33:

Egypt - P.Mich. 450 + 455. J.F. Gilliam first showed that they were not two separate papyri but parts of the same one, and gave improved readings (which I have adopted) in his review and discussion in AJP, LXXI.436-7.

guard duties - for a fuller discussion of the guard duties see Chapter II: Guard Duties, n.17.

variations - see above, n.27.

34:

elsewhere - Chapter II: Guard Duties, passim.

Vegetius - 2.19.

definite - P.Dura 106, 107, 109, 110.

probable - P.Dura 108, 111, 112, 113.

35:

procedure - DPP, 377ff.

best - P.Dura 107.

36:

PSI 1307; cf. Chapter II: Guard Duties, n.13-14.

37:

c.A.D. 240 - P.Dura 107.11.7.

holiday - P.Dura 54.11.12.

Egypt - P.Mich. 450 + 455.

similarity - cf. PSI 1307.11.17 (as revised by Gilliam):

excubuerunt ad aquilam et signa; P.Dura 82.1.1 and 8:

excubant ad signa d.n. Imp.; P.Mich. 455a, recto, 3:]VII excubare[;

P.Mich. 455b, recto, 4:]reliqui ad signa[.

38:

duty roster - CLA 7V.

absences from camp - CLA 7III.

individual files - CLA 7III.A.2 and 8; D.2

duty roster - CLA 7V.XXX.3-7.

guard roster - PSI 1307.11.23.

39:

Vegetius - 2.19.

Alexander - SHA, Alex., 21.

40:

Vegetius - 2.20.

Augustus - RE sv donativum cites and discusses the evidence.

seposita - Marichal, Occupation, passim, discusses the terms.

(ad signa) - CLA 7I.A.19; B.19; cf. CLA 9.17. For some auxiliaries the deduction may have been called collatio, cf. n.51 below.

41:

Domitian - Suetonius, Dom., 7.

deposita - cf. Marichal, Occupation, passim.

two decades - Tacitus, H., 2.82.

42:

Proculus - CLA 71.A.

Germanus - CLA 71.B.

full pay - G.R. Watson, 'The Pay of the Roman Army' in Historia V. 332-340 discusses and solves the problem.

Rennius - I myself am not convinced fully that this is the correct solution to the name occurring here; it might be that the clerk had started to right another account here but then changed his mind.

43:

how - Watson, loc.cit.

claimed - e.g. by Parker, Legions, 217f.

signiferi - Vegetius, 2.20.

librarii - Dig., 50.6.7.

hand - cf. Marichal's notes on the text.

44:

A.D. 14 - Tacitus, A., 1.17. For the Republic cf. Historia, VII. 118-120.

food - Tacitus, A., 15.72; cf. Parker, Legions, 216.

45:

Domitian - Suetonius, Dom., 7; cf. n.41.

Quadratus - CLA 9. I have followed Marichal's interpretation rather than Watson's (loc.cit., n.42), although the latter's account should be studied.

46:

second century - P.Ryl. 273a.

third century - CLA 212.

47:

G.R. Watson, 'The Pay of the Roman Army: The Auxiliary Forces' in Historia, VIII. 272-278; I follow Watson's interpretation throughout.

48:

CLA 208. I have followed the readings and interpretation of Marichal in CLA which revises in part his views in Occupation on P.Fay. 105.

49:

MI^o - CLA 208 frag. 11.2.

stipendium - CLA 208 frag. 9.3.

50:

papyrus - P.Berlin 6866A + B; P.Aberd. 133; Marichal, Occupation, 9-22.

"IN THE CONSULSHIP - P.Berlin 6866A.61-67. I have translated loricititis as 'in the account'; the word is odd but this seems to be the general sense. If the money was kept in a strong-room (sacellum), it is protected by the statues of the Emperors loricati, either in the sacellum or standing on the plinths in the cross-hall. Professor J.F. Gilliam kindly provided this tentative suggestion which I have taken over and expanded, on the analogy of the procuratorial bureau, a loricata, where valuables were stored near a statue of Julius Caesar in a breastplate.

51:

Watson, loc.cit.(n.47).

52:

six - cited by Marichal, Occupation, 34.

]MAXIMUS - P.Berlin 6866A.54-60.

53:

PSI 1063. I owe the point about the literacy to Professor E. Birley. On the historical setting of the document cf. J.F. Gilliam, 'An Egyptian Cohort in A.D. 117' in Historia Augusta Colloquium 1964/65, 91-98.

54:

Ammonius - the document is as yet unpublished. I am indebted to Professor J.F. Gilliam for a copy of it, which he will publish shortly. Its provisional reference is P.Col.inv.325.

Isidora - P.Mich. 514.

55:

P.Mich. 435 + 440. I have followed the revised readings and interpretation of R.O. Fink in Bulletin of the American Society of Papyrologists, I.39-46.

56:

estimates and accounts - for interpretation of ratio and opinio see DPP, 291. I disagree with Gilliam about the possibility of giving an accurate meaning to both words. The opinio comes before the ratio and estimates come before audits; the basic difference in meaning between opinor and reor is between conjecture and fact. One would hardly need 30 men to guard against the possibility of the loss of audits, but if they took the estimates to the procurator, they could escort the actual cash back to camp. Moreover, the phrase debit ex priore ratione of P.Berlin 6866, followed by different detailed figures, must be audits, not estimates. The theory expounded in this paragraph will be discussed in greater detail in a paper to be published in Historia, XVI, Heft I ('Ratio and Opinio in Roman Military Documents').

56 (cont.):

morning report - see n.28 above.

ad opinionem - P.Dura 94.4-6; 95.b.1.29-11.2; 100, passim; 101, passim.

A.D. 222 - P.Dura 101; twenty men are attested out of an estimated 63% of the real total; for the centurion cf. P.Dura 100.xxi.2, for the decurion cf. 101.xli.2.

letter - P.Dura 60D,

ad rationem - P.Dura 95.b.11.3-6.

Pliny - A.N. Sherwin-White, The Letters of Pliny, 73; F. Syme, Tacitus, 75; Pliny, Ep., 7.31; ILS 1418.

57:

A.D. 103 - CLA 215.

morning report - P.Dura 89.1.14-15.

"A.D. 241 - P.Dura 121.

A.D. 233-235 - P.Dura 120.

c.A.D. 241-242 - P.Dura 122.

list of legionaries - BGU 1083.

Vegetius - 1.26.

proficiency - see n.19 above.

accessions - P.Mich. 454.

pridianum - BGU 696; cf. AJP, LXIII.61-71.

A.D. 90 - CLA 7III. Villefosse restored the first line as M H M, i.e. m(issi) h(onesta) m(issione); this is, as Marichal points out, as probable an explanation as any.

A.D. 105 - CLA 219.1.1-24; for a summary of the discussion on this part of the text, see Marichal's introduction and notes.

regional commander - see n.1.

58:

Vegetius - 2.7.

CORNICULARII - P.Princ.G.D. 7532; TAPA, LXXVI.271-278.

DUPLICARI - P.Dura 93.

principales - P.Dura 116.

subordinate officers - P.Dura 96.

59:

Alexander - SHA, Alex., 21.

A.D. 238-242 - P.Oslo 122; TAPA, loc.cit.; Fink expands p as p(romotus); I prefer to follow the interpretation of G.R. Watson, who expands it as p(romovendus) in his treatment of the papyrus in an unpublished M.Litt thesis 'Roman Military Book-keeping' (Durham University Library).

"ANTONIUS - P.Mich. 164.7-9.

60:

Lusitanorum - BGU 696.11.32ff.

Palmyrenorum - P.Dura 94.7.

61:

CLA 218. I have followed Marichal's interpretation against that of Fink and Dunlap of these very difficult papyri (P.Lond. 2723 + P.Mich. 447). The part quoted is P.Lond. 2723.11.1-9 as read by Marichal in CLA 218.

62:

cavalrymen - P.Dura 103.

men and mounts - P.Dura 97.

centuries - P.Dura 117.

troops and centuries - P.Dura 115.

names - P.Dura 99, 104, 114, 118, 119, 123, 124.

list of men - P.Mich. 162.

another - P.Mich. 163.

63:

P.Dura 160. xxxviii.11-27; Latin words have not been underlined to avoid confusion and filiation has been left as in the document; the p and other notations to the left have been ignored.

64:

DPP, 39-44.

65:

A.D. 219 - P.Dura 100.

A.D. 222 - P.Dura 101.

A.D. 218 - P.Dura 98.

A.D. 222-224 - P.Dura 102.

A.D. 251 - P.Dura 105.

one and a half - see n.25 above.

66:

first or second - "Österreichische Nationalbibliothek L 99, recto; cf. R.O. Fink's study in La parola del passato, 55.298-311.

cA.D. 215 - Österreichische Nationalbibliothek L 100, recto; Fink, loc.cit.

67:

Berlin - BGU 696, as re-edited by R.O. Fink in AJP, LXIII.61-71. In i.12 I follow a reading by G.R. Watson, (unpublished M.Litt. thesis, Durham University Library, 'Roman Military Book-keeping', 164-166); Fink: SUMMA MIL(ITUM) [PE]RF(ECTA) KAL;

Mommsen: SUMMA A[D PR]^X KAL;

Watson: SUMMA MIL(ITUM) P[R(IDIE)]^X KAL, who interprets X as a check-mark; cf. CLA 219.1.28 p(ridie) M(alendas) Ianua[r]ias.

N.B. Fink, op.cit., 67 says: "col.11.4: The repetition of the names of the consuls instead of eodem cos as in col.1.37 and 42 and 11.10 shows that the entry in col.11.1-3 is to be dated to the preceding year, before the Kalends of January." It should be

67 (cont.):

noted that the date of enlistment is to be dated A.D. 155 but the date when he was entered on the records was in A.D. 156 (1.20) and therefore one must read [ex...id] or [ex...non], not [ex...Kal] as Fink.

London - P.Lond. 2851.1.23-11.44. Revised by R.O. Fink in JRS, XLVIII.102-116. I have adopted the text of Marichal in CLA 219; the papers of R. Syme (JRS, XLIX.26-33) and J.F. Gilliam (Latomus, LVIII.747-756) should be noted and I have adopted one or two of their suggestions. I have made the following emendations myself, which I have followed in the text:

11.30 restore def[c.I], from comparison of 11.25, 29, 33 with 11.39.
11.43 restore ses[q.IIIII (not IV, cf. 11.25) from comparison of 11.16 and 11.40.

11.4, 7, 8, 9, 10, 13, add [I], because the endings are singular.

68:

Egyptian - Fink, op.cit.; Gilliam, op.cit.

Second Dacian War - see Marichal's introduction. I had come to roughly the same conclusion independently of Marichal.

accessions - BGU 696.1.19; CLA 219.1.31.

69:

P.Dura 60C.

70:

files - YCS, XI.171-209.

in acta - P.Dura 56A.7-8; C.6; 58.4; cf. 56B.6.

three - P.Dura 56A, B, C.

"Marius - P.Dura 56A.

titulus - P.Dura 130A.

letter - P.Dura 58.

71:

A.D. 251 - P.Dura 97.

"Malchas - P.Dura 97.3.

"Barathes - P.Dura 97.19.

72:

Postumianus - P.Dura 66PP.11-13.

A.D. 232 - P.Dura 115.a.1.1.

CHAPTER VI

PARADES AND INSPECTIONS

The Roman army, like most others, held parades with all due pomp and ceremony. They would give the army a chance to impress foreigners by their splendour, as in the case of Tiridates in A.D. 63 and the Jews in A.D. 70, as well as to instil discipline and self-confidence in the soldiers themselves. The technical term was decurcio or ad signa observare. Vegetius gives roll calls and parades a high priority on his list of anti-mutiny measures.¹

There were, of course, different types of parade, some of which were regularly held each day or periodically throughout the year, while others would be held for special ad hoc purposes. An example of the latter is a victory parade complete with the making of speeches and granting of awards. Parades that would be held regularly each day include morning parade, parade of the guard, and probably sick, requests, punishment, and fatigues parade, as well as drill parades. The pay parade would be held three (or later four, and even later, three) times a year.³ Parades would be held to honour the arrival of some high ranking dignitary whether Roman or not, Germanicus, for example, and Tiridates. A parade would often be held that involved a second purpose: examples are an inspection by the commanding officer, governor, or emperor, a kit inspection by any officer from a company commander up to the emperor himself, manoeuvres held on the parade ground as a demonstration or parade of the skill and discipline of the troops; this last item is dealt with separately in greater detail elsewhere.²

Perhaps the most important of all parades was the muster or morning

parade and roll call. On active service a parade was held every morning without fail:

"At dawn the other ranks report to their centurions who in turn go to salute the tribunes; they and all the senior officers then report to the commander-in-chief. He, in accordance with routine, gives them the password and all the orders to be passed on to the rest of the army."

This procedure is remarkably similar to that used by the army of the Republic at least two centuries earlier; then the under-officers (cavalry commanders and centurions) reported at dawn each day to the officers (tribunes), who in turn reported to the general (consul); his orders were then relayed back down the chain of command to the other ranks. In A.D. 69 legio III Gallica, after an address by Antonius at the second battle at Bedriacum, saluted the rising sun, an act which Tacitus notes was usual in Syria, and now was misinterpreted; it was believed that they were greeting reinforcements. The only way in which a Roman legion could salute the rising sun (even if they had adopted a purely local cult) would be at a morning parade; Tacitus states that there was nothing unusual in the Third Legion doing it in war-time and they did it habitually; therefore they must have also done this as part of their regular routine at morning parades in peace-time.³

There is further evidence for written orders from the commanding officer being transmitted to the troops. Tiberius as commander-in-chief of the Roman forces operating beyond the Rhine in A.D. 10:

"Used to compile all his Orders of the Day in writing the previous night, as well as Emergency Orders. He added an injunction that if any officer was uncertain about any order, he was to consult Tiberius personally at any hour of the day or night."

The day after Galba took over as governor of Upper Germany, he issued written orders containing his instructions about tightening up discipline. Dispatches from the emperor ordering troop movements were regularly read out at the parade at the standards. Written orders from a new governor, putting a nearby town out of bounds with warnings of the punishment if anyone disobeyed, were read out at a morning parade. The Christian author Commodianus, writing in the first quarter of the third century to milites Christi, refers to the procedures of the Roman army at a morning parade:

"That you may be ready before your commanding officer every day, be punctilious, be at the standards early every morning."

Elsewhere Commodianus talks of a soldier apparently on such a parade waiting for orders (stat miles ad missa). Presumably this was the parade that the army of Vitellius, which was dispersed throughout Rome in A.D. 69 and which no longer maintained proper military discipline, no longer held (non principia noscere). In a legion the actual orders may well have been read out by a herald (praeco). Avidius Cassius is alleged to have given instructions that his written orders were to be read out at the morning parade (ad signa edici) and then posted on the walls (programma in parietibus fixit). Similarly, a copy of a letter from Hadrian giving an important new ruling was posted in the headquarters of the winter camp of the two Egyptian legions in A.D. 119 (προε[τεθ], . . . ἐν πρινκε[η]ιοι[ς]).⁴

Appian, describing some events in the Civil Wars in 41 B.C., states:

"Lucius sent tribunes to receive the watchword for the army from Octavian; they brought him the total of the army; even in the present day, it is normal procéduré for the tribune who asks for the watchword, to give the commanding officer the daily register of the number of men present."

Appian wrote some two hundred years after the events he was describing. The only way in which these numbers could be calculated each day would be at a morning parade; the papyri give actual examples of these daily registers. A roll call was held at the morning parade, quite obviously to obtain the figures; from the language of the papyri, it is possible to infer that someone would report, 'All present and correct, Sah!'; for example, after giving details of the numbers of officers, NCOs, and men of the Pedites, dromedarii, and equites, one morning report says omnes permanerunt.⁵

At the morning parade a report would be made out. This regularly included the date, the strength of the unit, the name of the commanding officer, and the watchword; it then recorded the number of men dispatched on or returned from various assignments outside the camp or in any other category; it concluded with the formal declaration of orders, the oath, and the names of the men on watch at the standards. An example of such a document is quoted elsewhere.⁶

It is quite obvious that the details learnt on the parade were then put on paper to form this morning report; it is thus possible to learn more about the morning parade itself from the information in the papyri to supplement the literary evidence. The precise details and numbers of officers, NCOs, and other ranks show that the cohort must have been

drawn up by centuries and troops, a roll call taken, and then each company commander have given his numbers to the officer of the day. The latter announced the watchword (signum) that the commanding officer had issued. Precise details were also given about the men who were to be sent out that day on assignments or had returned; perhaps the former and possibly the latter too had a separate parade and roll call; any man not covered in the above categories because he was not on parade, was noted in the records, deserters, for example, men overdue from leave, missing, or transferred. After the officer of the day, who was probably also the officer of the watch at the standards, had made the formal pronouncement of the commanding officer's orders of the day, plus details of any other items such as a special parade the following day, he led the others in taking the oath of obedience, and named the men on guard at the standards, and the parade was over.

In the morning reports and parades the only guard that is mentioned is that at the signa. In the guard rosters, however, there seems to be a reference to a separate parade involving a roll call and inspection of the night guard (vigiles ad nomem [sic] recognitos []). The same document also seems to refer to an inspection that had already been held that day (quam ot hodie habuistis recog[nitam]) and to another that must be held more often (et in totum saepius recogn[]). It is thus implied that at least three separate groups of men on guard duty were paraded and inspected on a single day. It will be remembered that Corbulo made his men who were keeping guard and watch duty, do so in full armour, and he

was always making inspections. Literature provides numerous examples of the officer of the watch going the rounds of the sentries; he presumably must have paraded them, held a roll call, and inspected them beforehand as well. The roster mentioned above suggests that some of the guards had not spent sufficient time preparing their equipment for the parade and consequently were made to attend more parades. Vegetius stated that troops who were not proficient in arms drill (which would be used a great deal by men on parades or guard duty) were paraded and exercised until they were proficient, that is, they were put on a punishment parade.⁷

Presumably smaller parades would be held after the morning parade for such purposes as requests, sickness, fatigues, or punishment. Probably all these took place in the headquarters building, perhaps with the exception of the sick parade. Among the duties of a commanding officer as listed by Macer, who is quoting Paternus, are:

"To punish offences within the limits of their competence, to be present frequently at the headquarters, to hear the complaints of the soldiers, and to inspect the sick."

This implies, as might be expected, that such parades were held at the headquarters. A parade of men who have been detailed to do extra drill because they were not up to the necessary standard and who were to be inspected by the commanding officer, has already been mentioned. There are several literary references to men on a charge being brought before the commanding officer or another senior officer for judgement; one states that it was standard practice for the tribuni legionis to

dispense justice to the soldiers in the principia. C. Caetronius, legatus legionis I Germanicae, supervised the judgement on the ringleaders of the mutiny at the tribunal in the headquarters of the legion at Bonn in A.D. 14. Soldiers were often punished by being made to stand at attention in the headquarters building in undress uniform; from this it might be inferred that that was where they had been marched in the equivalent of 'caps off' and tried. The duty roster from Egypt lists men who were on various fatigues and it can be presumed that they were paraded and then detailed to their different tasks. Requests for leave, transfer, etc, could only be granted by the commanding officer. It is worth noting that C. Domitius Celer was on leave by permission of the commanding officer on the 9th and 10th October, A.D. 97; this surely must have been as a result of a request. Apollinarius wrote home to his father about a partly successful request for a transfer; he had quite clearly been on a request parade before C. Claudius Severus, legatus legionis VI Ferratae and also governor of Arabia Petraea:

"I asked Claudius Severus the governor to appoint me as a clerk on the governor's staff (librarius legati); he replied, 'There is no vacancy in that post at the moment, but in the meantime I shall appoint you legionary clerk with hope of advancement (librarius legionis).'
With this appointment, then, I went from the commander of the legion to the cornicularius."

Apollinarius also promised his father that as soon as the commander started to give leave, he would go and ask for some to visit him. There is no literary reference to a sick parade unless valetudinarios inspicere means 'to inspect those who report sick' and not 'to inspect the invalids in the hospital'. However, the Romans were so very keen

on hygiene and physical fitness and the number of men sick often occurs in their paperwork, that such parades must have been held.⁸

Vegetius makes it quite clear that all the soldiers in the Roman army were required to attend a drill parade every morning, when they would be exercised and put through their paces. The recruit also had to attend a drill parade in the morning and afternoon to be instructed in his basic training:

"The younger men and the recruits went through exercises of every kind every morning and afternoon, while the older and fully trained soldiers were constantly exercised once every day."

It was these daily drill parades that trained and disciplined an army; Appian remarks of Pompey, who was in command of a large force composed of legions and auxiliary cavalry and infantry at Dyrrachium in the winter of 49 B.C.:

"He drilled his army and took part in the exercises of both the infantry and cavalry, and was foremost in everything despite his age. In this way he gained the good-will of the troops, and all the people flocked to see Pompey's military drills as to a spectacle."

There was thus an easy transition from *τα γυμνασία* to *Θεα*. The latter could take any form from military displays at Rome, often led by the emperor, given by the Praetorians, to the various ceremonial parades held throughout the year by the legions and auxiliaries.⁹

Periodically throughout the year there were various events of a religious nature that the Roman army celebrated. An incomplete list is given in Latin in the feriale Duranum. This was a standard list

for all the units of the Roman army containing an inventory of the Roman festivals with dates and regulating the type of ceremony to be performed and specifying the number and type of sacrifices. The papyrus belongs to the reign of Severus Alexander and is perhaps to be dated to the years A.D. 225-227; it is a redaction of a military feriale whose origin must belong to the reforms of Augustus. The festivals fall into three main categories: the feriae publicae and the rites of the gods, for example, 1st January; the cult of the divi and the reigning emperor, for example, the annual renewal of the oath of allegiance on 3rd January; the military festivals, for example, the day of honesta missio and the first stipendium on 7th January. Altars and sculptures discovered at many Roman forts and especially Corbridge confirm the many gods and deities that the Roman army officially worshipped.¹⁰

Other sources provide additional information about the first three festivals of the year. The existence of the date and item in the feriale for 1st January is virtually certain, although the line itself is missing in the papyrus. New Year's Day had been a very important day for civil business and the appointment of the new consules ordinarii in the Republic and continued so in the Imperial era. It was regarded as a festival and holiday from normal routine even in war-time in 40 B.C. During the first century A.D., the troops renewed their oath of allegiance on this day, as Tacitus states in the case of the legions of Lower and Upper Germany in A.D. 69; however, this ceremony was later transferred to the 3rd of the month, probably by one of the Flavian emperors. Other sources make it clear that some sort of ceremony was

held on this day. Mention has already been made of the feriale; although the oath was no longer renewed on the 1st, the parade that attended it seems to have continued, as the antiquarian Lydus recorded:

"On the 1st of January, for the sake of the omen, the magistrates ascend the rostra, and all the armies are assembled on parade with their standards."

Herodian records that the Praetorian Guard and the civilian magistrates were assembled together on 1st January, A.D. 193, for this very ceremony. Similarly, the ceremony was held as usual on 1st January, A.D. 138, despite the death of Aelius in the early hours of that morning. It was also a common date for dedications by soldiers. On 1st January, A.D. 241 cohors II Tunerorum at Castlesteads set up an altar to I O M]
et Numi[ni Aug..¹¹

On 3rd January the votorum nuncupatio was held by the army as well as the civilians; on this day a ceremony was held to commemorate the fulfilment of the vota sollemnia on behalf of the emperor for the previous year and their renewal for the next twelve months. The entry in the feriale for iii Nonas Ianuarias is, with some restoration, as follows:

"3rd January: because vows are fulfilled and renewed for the safety of our Lord Marcus Aurelius Severus Alexander Augustus and the eternity of the Empire of the Roman People, to Jupiter Optimus Maximus an ox, to Juno Regina a cow, to Minerva a cow, to Jupiter Victor an ox, to Juno Sospes a cow, to Salus a cow, to Mars Pater a bull, to Mars Victor a bull, to Victoria a cow..."

Pliny in his Panegyric stresses that it was standard procedure for the governor to report to the emperor immediately after this ceremony that

the troops had renewed these vows. There are also two examples for consecutive years of this formal report and reply. Pliny in a letter to be dated to 3rd January, A.D. 112, reported:

"We have renewed, Sir, our annual vows for your safety and thereby that of the state, and discharged our vows for the past year. We have prayed to the gods that they may always be thus discharged and confirmed."

On the same day the following year his report ran:¹²

"We have discharged the vows, Sir, that we renewed last year, amidst general enthusiasm and rejoicing; the soldiers and provincials vied with one another in their demonstrations of loyalty. We have prayed to the gods to preserve you and the State in prosperity and safety, and to show you the favour you merit for your many virtues, but above all, for your sanctity, reverence, and piety."

Further details of the parade and ceremony that were held on 3rd January to renew the oath of allegiance can be obtained from the ~~enth~~ description by Tacitus of the events of the year A.D. 69. (Note that the date in this instance is the 1st, but it was transferred in the next few decades to the 3rd, perhaps because of these very events):

"On 1st January the legions of Lower Germany took the annual oath of allegiance to Galba, but with considerable hesitation; only a few of the primi ordines repeated the words, the rest of the men kept silent The men of the First and Fifth Legions were so mutinous that some of them threw stones at the statues of Galba, while those in the Fifteenth and Sixteenth resorted to nothing more than shouts and threats. In Upper Germany on the same day the Fourth and Twenty-second Legions, who were brigaded together in winter-quarters, smashed the statues of Galba."

The Christian writer Tertullian provides further information about the annua votorum nuncupatio at a military ceremony that he had apparently observed himself:

"See what the form of the annual renewal of the vows is! First in the headquarters, then on the Capitoline. In addition to the places, listen to the formula also: 'Then do we vow, Jupiter, that you shall have an ox with gilded horns.'

A parade was held on 3rd January, A.D. 193, to renew the oaths of allegiance that had been made to Pertinax on his accession two days earlier. A sacrificial pit was discovered in the courtyard of the principia at Inchtuthil, in which were discovered many pieces of bone, perhaps from animals sacrificed at such a ceremony. Two butcher's knives were found in the principia at Newstead. The remains of the ox with pieces of leather and gold studs discovered at Ribchester, were probably from such a sacrifice.¹³

Archaeology and epigraphy provide information about this parade and ceremony. It has been deduced from finds at Maryport that each year a new altar stone was dedicated and that the unweathered altar for the previous year was very carefully buried in a pit at the edge of the parade ground. The formula used was virtually the same: a dedication to Jupiter Optimus Maximus, the names of the unit and the commander. Fifteen such altars to I O M were recovered that had been set up by the Trajanic-Hadrianic garrison. In the second half of the second century it appears that the worship of Mars Militaris and Victoria Augusta was added at such ceremonies; two commanders set up altars on behalf of cohors I Baetasiorum c R, T. Attius Tutor and Ulpius Titianus, the former one to each of the three deities, the latter one to each of the two new ones. Both Mars and Victory are mentioned in the list of deities to whom sacrifices are to be made on this day in the feriale Duranum, but

not Mars with the title Militaris nor Mars together with Victoria.

Bones of animals and wood ash were found at Pudding Pie Hill; these are presumably the remains of the sacrifices held at the parade ground at such ceremonies. At South Shields, at the edge of the parade ground, there was a tribunal of large cobbles set in puddled clay on which was set in the centre a moulded altar-base of high quality workmanship; this was flanked by two other smaller plinths which were of inferior workmanship but less weathered; they did not stand on the tribunal. All three bases had recesses and were clearly designed to hold replaceable altars; indeed, an altar was found only several feet away that fitted one of the smaller bases exactly, and fragments of a larger altar were also discovered, which presumably belonged to the central base. Presumably the central base was intended for altars to I_O_M and the other two bases for altars to Mars and Victory were added at a later date when these deities were associated with the ceremonies. A thin layer of charcoal and ashes lay around the area of the altars, which might be the residue of the sacrificial offerings made on the focus. Nearby was another platform associated with the head and torso of a statue of a Celtic god who may well have been the equivalent of any of the three deities. Over a score of altars dedicated to I_O_M by the third century garrison of Birdoswald, cohors I Aelia Dacorum, are known, two at least of which were set up by the same commander, Marcius Gallicus; there is a suggestion that the parade ground here lay to the east of the fort.¹⁴

The example chosen for the third category of ceremony has been

restored in places and that restoration questioned by several scholars. However, whether or not Fink has restored the entry completely accurately, there must have been a ceremonial parade for both the honesta missio and the payment of the stipendium at this time, and there is other evidence to show that such parades were in fact held. Therefore, I accept Fink's restoration as being correct and additional proof for such parades; even if it were incorrectly restored, that would not invalidate the necessity for or the other proof of such parades. The entry runs:

"7th January: because honourable discharge with the enjoyment of customary privileges is granted to men who have served their time, or pay is given to the soldiers and a year's service recorded, to Jupiter Optimus Maximus an ox, to Juno a cow, to Salus a cow, to Mars Pater a bull..."

After the middle of the first century A.D., there was a tendency for the date of honesta missio to take place during the period 4th-9th January, and by the third century this had been regularised and the date chosen was the 7th. An example of such a passing out parade comes from Suetonius's description of a review of the troops of Germany by Caligula in A.D. 39: ¹⁵

"When he reviewed the troops, he discharged on the grounds of age and incapacity most of the primi ordines; they were well on in years and in some cases had only a few days of their service to run. He rebuked the rest of the men who had served their time, for their greed, and reduced their discharge bonus to sixty gold pieces each."

One of the most important of all the parades that a legion, ala, or cohort would celebrate in any year would be the birthday of the unit. Precisely what form the ceremony would take, is a matter of conjecture, but clearly an important parade and a dedication were involved. Most

of the evidence comes from inscriptions, particularly from Spain. On 10th June, A.D. 163, a vexillation of legio VII Gemina under the centurion Licius Paternus set up a dedication ob natale aqu[il]ae, a similar one was set up in another year when they were under the command of Junius Victor, and another in A.D. 184. On 15th October, A.D. 167 a vexillation of cohors I Celtiberorum set up a dedication ob natale signor(um). No less than four separate dedications for different years have survived which were set up by cohors I Gallica ob natale aprunculorum. In a legion one of the main duties of the primus pilus seems to have been to look after the aquila of the legion, especially for ceremonial occasions; it appears that a primus pilus on completing his term of one year deposited his vitis on the birthday of the unit aput aquilam, as Sattonius Jucundus of legio III Augusta did in A.D. 253. Two inscriptions from Caerleon refer to such ceremonies: on 23rd September, A.D. 244, the birthday of Augustus, the primus pilus of legio II Augusta set up a dedication to the Deities of the Emperors, the genius of the legion, and in honorem [aquilae]; another dedication was set up ten years earlier to the day; both were discovered on or near the site of the principia. Other dedications set up by units to their genius and signa were perhaps dedicated on the birthday of the unit.¹⁶

Josephus gives a description of a pay parade held in the summer of A.D. 70. Although he states that the reason why Titus held it was to impress the besieged in Jerusalem, his account makes it abundantly clear that this type of parade was held each time the stipendium was issued,

that is three times per annum in the Empire up to the reign of Domitian and thereafter four times until the increase of the amount of the stipendium by Severus and the reduction in the number to three. His description is as follows:

"When the appointed day arrived for the distribution of the soldiers' pay, he ordered his officers to parade the troops in full view of the enemy and then count out the money to each man. So the troops, in accordance with standard practice, removed from their armour the protective coverings and advanced in full armour. The cavalrymen led their mounts which were richly caparisoned. The area in front of the city gleamed far and wide with gold and silver, and nothing was more gratifying to the Romans or more terrifying to the enemy than that spectacle Even the boldest of the enemy were seized by utter dismay, when they saw the entire army assembled for this purpose, the splendour of the armour, and the perfect discipline of the men."

Tertullian, writing in the first quarter of the third century, states that the Roman soldiers on a pay parade wore special ceremonial uniforms.¹⁷

It was quite easy for Titus to distribute pay to an army that was brigaded together in one place, although it took four days to pay three legions. Arrian provides what may well be a far truer picture of the procedure in peace-time, when the various units would be distributed throughout a province and the money would have to be conveyed from the procurator's office in the capital to the various forts. Even so, a pay parade was still held; Arrian states in his 'Tour of the Black Sea', which is dated to A.D. 131:

"I arrived at Apsarus, where the five cohorts are stationed. I gave the army its pay and inspected their weapons."

Several days later he had travelled further along the coast and reached

the next fort at Sebastopolis:¹⁸

"I arrived at Sebastopolis to give the troops their pay on the same day and to inspect the horses and weapons."

The Roman soldier was paid by and was thus loyal to the Emperor; therefore, when he received his pay at such a parade, it was considered right that he should renew his oath of allegiance to the Emperor, as Arrian elsewhere states:

"You also ought to have sworn the sort of oath to this god that the soldiers swear to the Emperor; when they receive their pay, the soldiers swear to put the safety of the Emperor above everything else."

The soldiers also took such an oath when they were rewarded with a donativum, although they would only receive half of this bounty. There is evidence for a similar procedure at a pay parade in the Republic, and in view of the fact that most military procedures changed so little, through the centuries and that the papyri show that such detailed accounts were kept, the following description is also certainly applicable with its additional details to the Imperial army:¹⁹

"The tribunes called the men forward by name; the soldiers took the oath of loyalty and each man was given his pay when his name was called out."

In the Later Roman Empire the Emperor Julian was called 'the Apostate', because of his attempts to reintroduce the systems of the Imperial era; a description of a parade held by Julian to give the soldiers their pay or a donativum and the religious ceremonial at such a parade therefore should reflect the practices of the army of the

Imperial times. It is very reminiscent of them and several sources state that the manner in which the parade was held followed the procedures of former days. Gregory Nazianzen, describing a parade at which either pay or a donativum was issued, states that it was ut imperatoriae largitionis hic mos esse videretur Antiquioris utique praestantioris:

"The soldiers had to be present in military order so that each man might receive his pay according to his rank and status The money was set out, as was the incense; there was an altar fire nearby to lend to this method of giving the Imperial money a greater air of antiquity and impressiveness. What happened next? They had to burn incense and in this way receive their money from the Emperor."

It will be remembered that Josephus stressed that Titus planned to use the splendour of the parade uniforms and the ceremonial to impress the Jews. Cassiodorus describes a similar parade of Julian secundum antiquam Romanorum solemnitatem to issue pay or donativa.²⁰

Exactly what part the mass of the troops played in celebrating all these various festivals is not clear. In the three examples from the feriale already quoted, it is obvious that the whole unit was on parade and that they all took an active part in the ceremonies; but they were major events in the year. Of the other ceremonies directly connected with the ruling emperor, there is evidence to show that on the date of his accession, that is, the day on which he was appointed emperor by the senate and/or acclaimed imperator by the troops for the first time (dies imperii), all the soldiers were paraded to renew their oath, together with the civilians, in a ceremony very similar to that of the votorum

nuncupatio of 3rd January. It is also certain that some sort of parade was held, attended by all the troops and civilians, for the birthday of the Emperor (dies natalis), and probably too for the anniversaries of the day he was named Augustus, pater patriae, and pontifex maximus, was appointed Caesar, and received the toga virilis, and was designated consul for the first time. The fact that for some events an immolatio was held and for others only a supplicatio, implies a difference in procedure. Probably the mass of the other ranks took little if any part in the minor festivals such as a supplicatio to a diva, and it would be only the commander and senior officers who would perform the actual sacrifice, as is suggested by the 'tribune fresco'; at an immolatio to a divus the whole unit was probably on parade while the actual sacrifice was made. The Elder Pliny notes that on festive days the eagles and standards were anointed; however, this does not prove a parade attended by the whole unit for every dies festus. Whether or not a decursio funebris was given by the entire unit for every divus and diva in the feriale is not known; Suetonius records that the troops performed such a ceremony round the monument erected to the memory of Drusus, the father of Claudius, on a fixed day each year; the monument stills stands on the outskirts of Mainz. The impression that Suetonius gives is that, apart perhaps from the anniversary of the death of the immediate predecessors of the reigning Emperor, it would be performed only in such exceptional circumstances as this. There are several pictorial examples of the immolatio or supplicatio, but none of them can be assigned to a particular routine

ceremony. However, a mosaic dating to the reign of Hadrian from a barrack-block of the Vigiles at Ostia appears to show the culminating scenes of an unspecified routine immolatio to the Emperor.²¹

In times of active warfare, the observance of many of these festivals would have to be abandoned. This would not, of course, be necessary in peace-time; however, the papyri prove that essential activities were continued even on festival days: the probatio of recruits took place on the day of the rosaliae signorum; a guard roster lists 150-200 men, or approximately 20-25% of the unit, assigned to posts in and around the camp on the natalis Germanici; letters were written and dispatched on the day of the circenses Martiales; a routine morning report was made on the natalis divi Iuli, and although the papyrus is too fragmentary to make complete sense, it included the entry vel feriatae[. The legal obligation to carry out essential duties on festive occasions is mentioned in the Digest; a rescript from the Emperor Trajan is quoted:

"Matters concerning military discipline must be fully carried out even on festival days; guard duty is included in this category."

This view is echoed in a definition given by Varro:

"Concerning military matters it makes not the slightest difference whether the day is a dies fastus or a dies nefastus."

Julius Caesar had compelled his men to turn out and make unnecessary marches on festive days, although it is clear that such behaviour was thought unusual in his time. Galba, as the newly appointed governor

of Upper Germany, considered that discipline had become too slack at a festival and promptly issued orders to reimpose it at such events. However, some of the less essential duties could be abandoned for the day; it was presumably at the parades that the arms drill was displayed, the use of which Vegetius records had only survived in his time on festive days in the arena. The soldier presumably had the rest of the day off.²²

In the British army the Household-Cavalry and Guards wear a resplendent uniform for special ceremonial and State purposes and normal khaki for routine or war-time duty. The Roman army too had a full-dress uniform worn only on special parades. Herodian frequently states that on special occasions the Praetorians did not wear their ordinary kit or carry weapons, but wore a special ceremonial uniform and had weapons inlaid with gold and silver; a relief from Rome of the second century depicts a group of Praetorians with differently decorated shields. Although the legionaries and auxiliaries did not take part in as many ceremonial events as the Praetorians or have elephants to take part in them, they still had their own ceremonial uniform. There are several references to the special uniform of the legionaries and auxiliaries; at the pay parade described by Josephus it is stated:

"So the troops, in accordance with standard procedure, removed from their armour the protective covering and advanced in full armour. The cavalrymen led their mounts which were richly caparisoned. The area in front of the city gleamed far and wide with gold and silver."

As the troops by now had been fighting for several years, it is clear that he must be referring to a special ceremonial set of equipment that had hitherto been kept in its protective coverings, because it was not normally used in active warfare. Appian, in describing the funeral of Sulla in 78 B.C., notes that special standards and uniform were still used in the middle of the second century A.D.:

"The whole army that had served under him followed in order. They performed the decursio funebris with eagerness, each man hastening to join in the ceremony. They carried gilded standards and special silver-plated arms, which are still used at the present time for parades."

Vegetius, in describing arms drill (which in his day was only used in the arena on festive days), mentions uniforms and equipment glittering with gold, silver, and precious stones. Perhaps the different dignata on the shields that each legionary cohort had, were carried only at parades. Tacitus notes that the rebels in Pannonia in A.D. 14 did not carry out the normal procedure because of their disorder:

"As Drusus approached, the legions met him in a sort of guard of honour, but there were none of the customary demonstrations of joy or glitter of decorations."

The soldiers would wear their military decorations, in addition to any special equipment, only on such parades; Tacitus, describing a ceremonial parade of a large army in A.D. 69, writes:

"Before the eagles marched the praefecti castrorum, tribunes, and leading centurions in splendid uniform; the rest of the centurions, glittering with their armour and military decorations, marched alongside their centuries; the medallions and collars of the other ranks flashed. The appearance as a whole was magnificent."

The troops of Severus entered Rome in A.D. 193 similarly attired.

Tacitus states that the equipment of the troops in Germany was ad usum

et ad decus; the former is clearly standard-issue equipment for normal use in peace and war, the latter for ceremonial occasions and is later defined as equipment decorated with silver including sword-belts and medals.²³

Many of the tombstones of centurions, NCOs, and other ranks show the deceased in what must be his full-dress uniform. One of the finest examples is the tombstone of Q. Sertorius Festus, a centurion of legio XI Claudia pia fidelis. He wears a breastplate of scale armour, kilt, ornate greaves, shoes, and cloak; he also wears his medals, nine medallions on a harness over his breastplate, two torques around his neck, and the corona civica on his head; he holds the hilt of his sword in his left hand and carries in the other his swagger stick (vitis), which was his badge of office. Calidius, on the other hand, a centurion of legio XV Apollinaris, who died at Carnuntum, preferred to depict his parade uniform on his tombstone rather than himself; this consisted of a breastplate of scale armour, a helmet with a long transverse crest (as Vegetius states), a pair of greaves; he also had a horse for such ceremonial occasions. No centurion is ever shown in any of the battle scenes on Trajan's Column wearing medals or greaves, and so it is reasonable to infer, taking into account the rest of the evidence, that these belong to the full-dress uniform of the centurions, not their service or undress uniform. C. Aemilius Valens was detailed to clean the parade uniform of the centurion Helius according to the duty roster of A.D. 87 (ornatus Heli). On the base of the Column of Antoninus Pius in Rome there is carved a relief showing infantry and cavalry

performing the decurcio funebris; the former wear non-standard-issue uniform and the centurion a moulded cuirass; it would appear that this is a depiction of the men in parade uniform.²⁴

From Trajan's Column it is quite clear that the only time the Roman soldier wore plumes on his helmet was at parades; the only example on the whole of the Column where the legionaries wear them, is at a special parade where the Emperor made an address to his men. The standard issue of the legionary helmet had one, two, or three plume-holders at the top or sides, thus indicating that some variety in the arrangement of the plume could be made. From Dura came a multi-coloured painted shield with highly intricate geometrical patterns and a heraldic group of an eagle flanked by two victories at the top and the legion's emblem, the lion at the bottom. It was the same shape and roughly the same size as the standard-issue scutum. However, such detailed craftsmanship as this could never stand the strain and stress of actual warfare, and the obvious conclusion must be that this is an example of a special ceremonial shield. Several highly engraved bosses from scuta have been found; one of bronze was discovered in the River Tyne and dated to the reign of Hadrian; it belonged to Junius Dubitatus, in the century of Julius Magnus (his name and century were inscribed on it in accordance with standard military procedure) and contained figures of the four seasons, Mars, an eagle, two standards, and the legionary emblem, a bull. Another from Kirkham contained pictures of Mars, eagles, shield-trophies, and human figures. There are other examples from abroad of similar work. Such high quality engraving would soon become scratched and

marked if used in war or even for every day use in peace-time. Again, one must conclude that they can be best explained as parts of parade equipment. Perhaps the sword from South Shields with its fine enamelled belt-mountings was a ceremonial sword belonging to an officer. In addition to the accidental decorative effect caused by the pattern-welding (the only example of its kind), there was an inlay of golden bronze on either side of the blade, one of Mars in full-dress (helmet with plume, breastplate, greaves, and kilt) and one of an eagle flanked by two standards. Again this would seem more fitting as a ceremonial sword to be used on special occasions than as a weapon designed merely for more normal uses.²⁵

The cavalry had its own special parade equipment and uniform; it also performed highly complex exercises as demonstrations at ceremonial occasions, as the mounted police do even today. Arrian provides a detailed account of both the equipment and the exercises. He says of the equipment:²⁶

"Those of them who are distinguished by virtue of their reputation or horsemanship, are equipped with helmets of either iron or bronze and gilded to rivet on themselves the attention of the spectators by this decoration. Unlike the helmets manufactured for actual warfare, which protect only the head and cheeks, these helmets are made to correspond in every detail with the faces of the horsemen and are provided with eye openings sufficiently large so as not to restrict vision but at the same time still to provide protection. They have yellow plumes attached to them, not to serve any practical purpose, but rather for elegance; when the horses gallop, if there is even the slightest breath of wind, the plumes make a fine show as they stream in the breeze. The horsemen also carry shields, not the type used in battle, but lighter in weight - the purpose of the exercise being quickness and elegance - and brightly coloured to please the eye. Instead of wearing breastplates, they wear Cimmerian tunics, that are just like real breastplates,

in vivid colours of scarlet or purple or multicoloured. They also wear trousers, not the baggy type as worn by the Parthians or Armenians, but closely fitting. The horses are protected carefully by frontlets but not by side armour, as the javelins they use in the exercise are not made of iron; even so, they might injure the eyes of the horses, but the flanks are for the most part protected, especially by the saddle-cloth, and the missiles fall harmlessly."

" Confirmation of the variety of colours of the trappings can be seen from the tombstones of several equites alares, where traces of the original painting still survive. Silius, a trooper of the ala Picentiana, led his horse, which was caparisoned with a yellow saddle and a green saddle-cloth with red streamers and bands. Similarly many details of the horses' trappings for parades can be seen on the mounts of M. Sacrilus and T. Flavius Bassus, both of the ala Noricorum. Many examples of such trappings were found at Newstead.²⁷

Archaeology has provided examples of the various types of parade uniform used for these special demonstrations, as described by Arrian. Some seventy examples of the helmets with face-masks have been discovered, of which a dozen have been found in Britain, including three splendid examples of the type described by Arrian from Newstead. One was of iron - a great metallurgical feat - with traces of silver plating still adhering to it, and consisted of both bonnet and face-mask; the bonnet had a metal ring on the top above the brow and also two tubular attachments, one on top in front of the ring, one at the left side of the head, to hold the plumes of horsehair or feathers. Part of a woollen lining was still in place on both the bonnet and the mask,

which was similar to an example found at Vize in Thrace. The second was of brass and consisted of the bonnet only, but nicks and analogy with other examples clearly show that a face-mask had been attached to it; it is very similar to a gilt-bronze one found at Nicopolis in Moesia. The bonnet has the remains of a punched inscription, presumably the name of the owner, and part of a leather lining. Both the iron and brass examples were highly decorated. The third one was of bronze and consisted of the face-mask only, but here too there were attachments showing that it had belonged to a helmet. From Ribchester has come the most impressive complete example from Britain; it is a bonnet and face-mask in very thin bronze with scenes of infantrymen and cavalrymen fighting on the bonnet, and other subjects. There were two rings, one on the crown, one at the back. There were two punched inscriptions giving the name of the owner as Caravus. From Brecon part of a face-mask in bronze was discovered. All five examples are dated to the late first century.²⁸

Archaeology has revealed that there were in fact more than the one variety of helmet and face-mask as represented by the examples from Newstead, Ribchester, and Brecon. The other varieties date from the second half of the second and the third century and were presumably introduced by the Roman cavalry after the time of Arrian. A second type is well illustrated by two examples from England from Guisborough and Worthing. The shape of both differed from the first type and they did not have face-masks but detachable cheek-pieces; both were made of very thin brass (gilding metal or brass with a low zinc content). The

Guisborough example has snakes and divine personages depicted on it, and is very similar to one found at Chalon, which had a ring-attachment; the Worthing example, which still contains traces of gilding, has repoussé decorations, snakes, and sea-dragons, and a crest ending in an eagle's head. The Worthing helmet has XII scratched on it giving the turma to which it belonged.²⁹

Another type of helmet had a face-mask that was not complete, but was designed to cover only the forehead, cheeks, and chin, as a fine bronze example from Frankfurt-Heddernheim shows; however, there are other examples from Germany where there was both an inner and an outer face-mask, from Pfrondorf, for example. An outer face-mask of this second type was discovered in the river Wensum near Worthing, but did not fit the helmet already described, nor was the inner mask found; it is very similar to one found at Rodez. Probably another fragmentary example of this type of outer face-mask was discovered at Ilkley.³⁰

Yet another type of parade helmet, differently shaped, has a large anther on the crown to hold a plume and also had cheek-pieces; a fine example of this type has again come from Frankfurt-Heddernheim and is made of iron with elaborate bronze mountings and silver-plating in parts; there are other examples of this type from Holland. Several examples of cheek-pieces have been found in England which must belong either to the Guisborough-Worthing or the Heddernheim-Dutch type of helmet, although it is not possible to say which; there are three examples of

the left-hand cheek-piece, one of silvered bronze from Stanwix, one of bronze from Corbridge including part of an imitation ear, and another in bronze from the Tyne at South Shields, while from Brough (Crococalana) comes a left-hand piece, again in bronze, with an imitation ear.³¹

During some parades that the Roman cavalry held they used 'Scythian' standards. Arrian states:

"Drawn up by their standards into separate formations, they gallop forward; they use not only the Roman standards but also the Scythian; the purpose of this is to make the charge more colourful and also more terrifying. The Scythian standards are 'dragons' hanging symmetrically suspended from poles. They are made by stitching together strips of dyed material and are fashioned in the most terrifying way possible like the head and body of a serpent as far as the tail. When the horses are still, you see these devices as nothing more than a coloured rag hanging down, but when the horses gallop, the standards are filled by the wind and swell out and become remarkably life-like and hiss at any excessive movement, if a strong wind blows through them."

In the Later Roman Empire these dragon-standards were used in battle as normal standards, but from Arrian's statement it is quite clear that they were used only for ceremonial purposes in Imperial times. A broken tombstone from Chester seems to show a cavalryman carrying one of these dragons and wearing a face-mask. A relief from Sucidava depicts two cavalrymen, their tunics streaming in the wind, of whom one carries a draco; associated finds were of the first half of the third century.³²

Arrian states that the Roman cavalry also carried shields that were brightly coloured. Examples of oval shields used by auxiliaries have come from Dura. Five shields of a broad oval shape and mostly highly

painted were discovered; they were made of twelve to fifteen planks of very thin poplar (0.008-0.012 metres thick). The detailed painting and the thinness support the explicit statement of Arrian that the parade uniform was not intended to be used for real warfare and this is proved by the fact that these shields were deliberately discarded c.A.D. 256 as being of no potential use whatsoever against the attack by the Persians.³³

One of the shields has been called 'the Homeric shield' from the painting on it; this depicted at the bottom the Trojan horse in front of a gate with Trojans standing nearby and at the top the sack of the city with six Greek soldiers killing the Trojans at a banquet. What is most interesting is the fact that the six Greek soldiers are all depicted very much alike in Roman uniform. They wear white helmets with high feather plumes in blue-grey and the paludamentum is the same colour; they wear long breastplates of light yellow or brown with darker belts; their kilts are short and brown with a blue-grey fringe and they have high white boots; in one hand they carry a small brown shield and in the other wield a sword. A second shield, called 'the 'Amazon shield', depicts five groups of mounted Amazons firing arrows at Greek warriors and Achilles (his name is put beside him to identify him), who is about to kill Penthesilea. The helmets and scabbards of the warriors are Hellenistic, but the rest of the uniform, apparently including a moulded cuirass, is Roman. A third shield depicts a warrior god in Roman uniform with spear and shield. A fourth shield was unpainted and a fifth had only its undercoat; a sixth shield was also found, but it was made of ply-wood like the scutum.³⁴

Further evidence for the special parade uniforms of the cavalry can be seen on the funeral stelae; although Arrian specifically says that the parade equipment was not designed to be used in real warfare, the deceased is often incorrectly shown wearing his parade uniform in battle. Sextus Valerius Genialis, an eques of the ala Thracum, is depicted wearing a helmet with an upturned peak and a face-mask similar to the brass helmet found at Newstead; his shield is of a peculiar shape and might well be a parade one also. Flavinus, signifer of the ala Petriana, who was probably stationed at Corbridge, is also depicted wearing a parade helmet and plumes. Both are dated to the first century, the former probably to the Julio-Claudian period. A tombstone from Chester of Aurelius Lucius, probably an eques legionis, depicts him reclining; behind him hangs a parade helmet (probably of the Heddernheim-Dutch pattern); as he is wearing trousers, it is tempting to suppose that these are the ones mentioned by Arrian and his 'corslet of scale armour' (which is very weathered) may in fact be a Cimmerian tunic. A relief from the headquarters building at Chesters depicts a cavalryman wearing a helmet with a plume in the centre and plume-holders on either side; the date is A.D. 221-222. ³⁵

The finest single collection of cavalry parade equipment undoubtedly came from Straubing and belonged to the first half of the third century. It consisted of several examples of two different types of helmets with face-masks and also greaves and knee-guards for the riders, as well as eight chamfrons for the horses; they were all made of brass with

intricate repoussé figures. Open-work eye-guards found at Ribchester, Chesters, and Corbridge may perhaps be examples of this type of equipment. Examples of the equipment used on the actual horses are rare, but two pieces of red leather-work with decorations of bronze studs found at Newstead are probably examples of chamfrons; Newstead has also produced many items of harness mountings beautifully coloured and presumably of parade equipment. However, the many examples, from complete sets to isolated fragments, of different types of parade uniform that have been discovered on Roman military sites of all periods, confirm the evidence of Arrian and the reliefs that ceremonial parades and demonstration (and the necessary rehearsals for them) were very frequent among the cavalry of the Imperial era.³⁶

It is known that the legionaries and auxiliary infantrymen also gave military displays on ceremonial occasions and parades throughout the Principate. However, the only detailed account of such an event refers to one that took place on 1st January, A.D. 404; nevertheless, it is worth quoting as it must have been very similar to the normal ceremonial parades and especially those held on New Year's Day in the Principate.³⁷

"This arena is also the scene of the military drills. Here we often see armed companies who march forward and then retreat according to a fixed plan, and then charge forward again in perfect order, and we watch the fine appearance of their skill in counter-marching and the pleasing military display they give. When the instructor gives the signal, all the men execute their new movements with precision, now clasping their shields to the side, now brandishing them aloft. Deeply sound the clashing shields, sharply ring the engaging swords, and, to the rhythm of the shield-bosses as they are struck, the echoing harmony of the blades is punctuated by the clash of sword on sword. The whole force salutes in unison and all their helmets, Emperor,

make the gesture of respect to you. Then, the companies separate, and, in disciplined order, wheel and counter-wheel in various formations, following a course more tortuous than the Cretan labyrinth of the Minotaur or the frequently winding path of the River Meander. The troops then separate, march apart, and reform in circles, and Janus, imprisoning war behind his doors that are for ever shut, bestows on peace the innocuous rewards after the joyful imitation of warfare."

The various parades would be held in different places. Those that involved marching or running would be held on the parade ground outside every fort. The cavalry had a special type of parade ground for which Arrian gives instructions. There was also a saluting-base at one side of the ground where the commanding officer or a high-ranking dignitary could review the troops. It was here that drill parades were held and also the large scale reviews, ceremonies, and parades, as the Emperor Hadrian noted in his address to the army of Numidia, and the altars at Maryport prove. Parades that involved little, if any, marching to and fro, and those for smaller numbers of men, were held in the headquarters building (principia). The presence of altars and saluting-bases in the courtyard shows that such parades and ceremonies took place there. Most of the unit could be paraded standing shoulder-to-shoulder in the cross-hall to hear a speech from their commanding officer or some high ranking official; sometimes they stood here shoulder-to-shoulder, as for an address by Drusus, sometimes they were even drawn up by centuries and cohorts, as for one by Germanicus. As the principia contained the standards of the unit, it is reasonable to suppose that the morning parades were held here, especially as the commanding officer's orders of the day were read out ad signa. It also seems probable that

the guard was paraded there and that that was where punishment, sick, and request parades took place. Parades involving weapon-training and exercises were held in the nearby amphitheatre if there was one. In bad weather many parades would take place in the covered exercise-halls or riding-schools.³⁸

In many items the difference between a parade and an inspection was slight, but the connection was often what is termed 'spit and polish'. One method of using up any spare time the troops might have was in cleaning and polishing their kit and equipment and sometimes a whole day might be given over to this activity. Vegetius mentions the advantages this would bring when he discusses arms drill and refers to the glitter of a uniform and kit adorned with gold, silver, and jewels. He also states that it was the duty of almost every officer to compel his men to use spit and polish. The duties of a centurion included:

"He is responsible for seeing that they are well clothed and shod and that their weapons are polished and shiny."

Similarly, the decurion:

"He must compel them to polish and keep in good order their own breastplates and those of their horses, as well as their shock-lances and helmets."

The tribune had the same responsibility also:

"The attention and effort on the part of the tribune earn praise when his soldiers' uniforms are clean, their arms bright and in good order."

The legatus legionis was also responsible for seeing that the arms and uniform of his men were in good order.³⁹

There are three obvious reasons why the army should have felt that it was highly desirable that the troops should use spit and polish: first, it was the equivalent of 'bull' in that it used up spare time and kept the soldiers attentive to their officers; secondly, it inspired self-confidence in a soldier and pride in his equipment; thirdly, it provided a vivid spectacle either on the parade ground or on the battlefield. Vegetius remarks:

"The splendour of arms has a very considerable effect in striking terror into the enemy. Who could believe a soldier to be martial, if his weapons are, through negligence, dirty and rusty?"

Julius Caesar took steps to improve the appearance of his troops for two reasons:

"He made them so elegant, furnishing them with arms inlaid with gold and silver, both to improve their appearance and to make them hold on to them the more in battle."

Onasander refers to this subject also under the title 'The General Must Draw up his Army Resplendent through Attention':⁴⁰

"The general must make a point of drawing up his army resplendent in its arms; this attention is not difficult if he orders them to sharpen their swords and clean their helmets and breastplates. The advancing companies appear more dangerous because of the gleam of their weapons and the sight inflicts great fear and confusion in the hearts of the enemy."

There are many references to the splendour and glitter of the Roman army in battle, but these, of course, are confined to the eagles and standards and the equipment of the soldier; Calgacus mocked the empty glitter of the Roman army, yet it had encouraged the hard-pressed men of legio IX Hispana in the previous year. It would be only at parades

that the Roman soldier would wear his medals and military decorations and these, of course, would be polished, as well as his normal equipment. An army in disgrace or defeat would not have a glittering appearance and this is noticed several times by Roman authors.⁴¹

The troops would on occasions be subject to inspections from the emperor in his capacity of commander-in-chief. Augustus often visited the armies for this purpose and Tiberius was always saying that he was about to. Reference has already been made to the inspections of the troops carried out by Caligula, Trajan, and Caracalla, when many aspects of military skills and techniques were examined. Fronto says that Verus also held similar inspections including the men on the parade ground, the soldiers' quarters, and the sick; however, other less biased sources suggest that Verus did not do this personally but left the task to men like Pontius Laelianus, one of the comites Augusti. An unknown but eminent senator presumably held a similar post under Trajan, when he took part in a tour of inspection of the troops on the Danube with the newly appointed Emperor at a time when no campaigns seem to have been held in that quarter (dum exercitus suos circumit).⁴²

However, the troops would be inspected more often by the governor of the province. This is implied in the statement of Pliny on the new reign of Trajan, when there is good evidence for believing that the troops were inspected:

"Therefore generals are now free from the risks of giving offence or from having to ingratiate themselves, and press on with their duties, are present at the exercises, and get their arms, walls, and men into a state of preparation."

Full scale inspections of the troops were held by Flaccus when Prefect of Egypt in A.D. 32, by Galba when governor of Upper Germany in A.D. 39, by Corbulo as governor of Lower Germany in A.D. 47 and of Syria in A.D. 57, and by Vitellius in Lower Germany in A.D. 68. All these inspections by the new governor were carried out when he first came to the province, and this can also be seen in the case of Agricola in Britain in the winter of A.D. 78/79. This therefore suggests, as might well have been expected, that it was standard procedure for a new governor to carry out a tour of inspection on taking up his post. Indeed, Tacitus specifically states that it was normal procedure for a governor on entering his province to make ceremonial inspections (quod tempus alii per ostentationem et officiorum ambitum transigunt). The purpose of this is presumably the same as that described in the letter from Valacius to Abinnaeus informing him of the arrival of his successor to the command of his ala; everything had to be inspected to make sure that it was as it should be. However, it was considered improper for the wife of the governor to inspect the troops, as Plancina, the wife of Cn. Calpurnius Piso, the governor of Syria, did in A.D. 18. ⁴³

The most detailed information that we possess about military inspection is about the those conducted by Hadrian. The epitomater of Dio records:

"He personally inspected and reviewed absolutely everything, not only the usual items in a camp, such as weapons, engines, trenches, ramparts, and palisades, but also the lives, quarters, and habits of every officer and man in the ranks. In many

cases he reformed and corrected the practices and arrangements for living, which had become too luxurious."

'Spartianus' also records how Hadrian used to inspect the troops, including visiting the sick. The main dedication on the monument set up by legio III Augusta to Hadrian after his visit to Numidia in A.D. 128 stated that it was erected after his favourable inspection

(AD] PROB[ATIS ILLA ET EXE]RCITU or AD] PROB[(ATIS) CASTRIS ET EXE]RCITU).

The introduction to his address to the legion stated that it was made exercitationibus inspectis. The whole tone of the adlocutio shows how detailed the inspection was. The epitaph of Soranus shows that cohors III Batavorum milliaria equitata was inspected probably in A.D. 118 Hadriano iudice. The details of these inspections in Numidia and on the Danube are given elsewhere. The Periplous of Arrian provides the details of a tour of inspection by one of Hadrian's governors.

Even so, Hadrian preferred an on the spot report if he could:⁴⁴

"Hadrian travelled through one province after another and visited the countryside and the cities. He inspected all the forts and walls, some of which he moved to more suitable sites, others he closed down, others he established."

The most detailed account of a tour of inspection of the various units in a province made by a governor concerns that conducted by Arrian in Cappadocia in A.D. 131. The formal report in Latin to the Emperor as commander-in-chief is lost, but an informal literary version written in Greek to Hadrian as a personal friend has survived:

"Our first port of call was the harbour at Hyssus and I exercised the infantry stationed there. The garrison, as you know, consists of infantry and has twenty cavalrymen for service. I also made the latter throw their lances."

A more thorough inspection was made at the next station:

"I arrived at Apsarus where the five cohorts are stationed. I gave the army its pay, inspected their weapons, the wall, the ditch, the sick, and the collection of corn. My conclusions on the inspection are contained in my Latin report."

The most detailed examination of garrison and fort took place at Phasis:

"The fort itself, which is garrisoned by four hundred picked soldiers, I thought was very strong for the type of terrain and very necessary for the safety of vessels sailing there. The wall is surrounded by two broad ditches; formerly the wall was of earth, with wooden towers, but now both wall and towers are made of brick; its foundations are quite safe and it is provided with military engines. To sum up, every provision has been made to prevent an approach by the enemy and to minimise the dangers of a siege for the garrison. As it was necessary to provide for the safety both of the anchorage and of the inhabitants of the settlement outside the fort, which consists partly of army veterans, partly of traders, I decided to run another ditch from the outer one that surrounds the fort wall to the river to encircle the anchorage and the extra-mural buildings."

His inspection at Sebastopolis was similar to that at Apsarus:⁴⁵

"I arrived at Sebastopolis to give the troops their pay on the same day, to inspect the horses, the weapons, and the cavalrymen jumping onto their horses, to inspect the sick and the corn supply, and to make a tour of the wall and ditch."

Perhaps these various garrisons were a unit of natives, five auxiliary cohorts, a vexillation, and an ala. It is worth noting that the stipendium was given only to the two garrisons that were definitely Roman units; presumably the pay of the men at Phasis was kept at their main base, while those at Hyssus may not have received regular payments at all, or possibly the money was sent to them later. In view of the details given in the adlocutio of Hadrian to the army of Numidia in

very similar circumstances, it is tempting to wonder if *τοὺς καρυοταγ* might have not its normal meaning of 'the Sick', but 'the men busy on manoeuvres'.⁴⁶

Kit-inspections are not specifically mentioned by Vegetius but there are good reasons for believing that they played a normal part in the routine of the Roman army. First, it is reasonable to assume that any well-drilled army would have its equipment inspected regularly; secondly, the frequent references to the need for spit and polish to be used by the troops and for them to have all their equipment in perfect condition; thirdly, Vegetius states that all officers, legati Augusti pro praetore, legati legionis, tribuni, centuriones, and decuriones are to supervise the men under their command and make certain that all their kit and equipment is polished and clean. Thus Vegetius provides indirect evidence that the Roman army had kit-inspections.

There are other literary references to kit-inspections. Two are from the more unreliable parts of the *Scriptores Historiae Augustae* referring to Avidius Cassius and Maximinus; there is other evidence that both were strict disciplinarians and so there may well be some truth in the statements:

"Regularly once a week Avidius Cassius used to inspect the arms, clothes, even the shoes and greaves of the soldiers."

"Maximinus used to inspect daily the swords, breastplates, helmets, shields, tunics, and all the arms of the soldiers."

Pontius Laelianus, who was comes Augusti at about the same time as Avidius

Cassius was governor of Syria, held kit-inspections and personally supervised the removal and destruction of all non-standard-issue equipment:

"Indeed, the men were better clothed than armed, so much so that Pontius Laelianus, a stern individual and a disciplinarian of the old school, in some cases ripped open their breastplates with his finger tips; on discovering horses saddled with cushions, he issued orders that the trappings were to be cut off and the feathers removed from the saddles."

Suetonius provides another reference to kit-inspections; he relates the methods of Tiberius in Germany in A.D. 10 before crossing the Rhine:

"When on the point of crossing the Rhine, he reduced all the luggage to a prescribed limit; he would not cross until he had inspected all the loads of the wagons on the river bank."

The numerous references to kit-inspections held by Hadrian and Arrian have been mentioned above.⁴⁷

A scene on Trajan's Column has been interpreted as a legion marching forward to a kit-inspection. Besides the normal armour and weapons, neckerchief, breastplate, kilted tunic, sword-belt, sporran, and boots which they were wearing, they carry fastened to a stake their equipment; this consisted of a string bag, metal cooking-pot, mess tin, sack, and satchel. This inspection was conducted by the Emperor himself and must have been very similar to the many carried out by commanding officers and governors in peace-time.⁴⁸

CHAPTER VI: PARADES AND INSPECTIONS

NOTES

1:

foreigners - cf. in the Republic Livy, 29.22; 40.47.
Tiridates - Tacitus, A., 15.29.
Jews - Josephus, B.J., 5.348ff.
Vegetius - 3.4.

2:

victory - e.g. Tacitus, A., 12.36 to celebrate the defeat and capture of Caratacus held in Rome in A.D. 51; Josephus, B.J., 7.5ff Titus after the capture of Jerusalem in A.D. 70; Tacitus, H., 2.89 Vitellius's entry into Rome in A.D. 69; Caesar, B.Afr., 86. Germanicus - Tacitus, A., 1.24.
Tiridates - A., 15.29.
manoeuvres - cf. Chapter IV: Manoeuvres, passim.

3:

"At dawn - Josephus, B.J., 3.87-88.
Republic - Polybius, 6.34.
A.D. 69 - Tacitus, H., 3.24-25; cf. Dio, 64.14.

4:

Tiberius - Suetonius, Tib., 18.
Galba - Galb., 6.
troop movements - SHA, Pesc., 4.
out of bounds - Avid., 6.
Commodianus - Instruct., ii.12.8-9.
Elsewhere - Commodianus, Carmen Apol., 77; cf. DPP, 273, n.15 for discussion.
Vitellius - Tacitus, H., 2.93.

5:

Appian - B.C., 5.46.
morning report - P.Dura 89.1.6, 12.

6:

Chapter V: Administration and Paperwork, n.26-33, especially n.27.

7:

vigiles - PSI 1307.ii.11; cf. Chapter II: Guard Duties, n.13-14.
quam - PSI 1307.ii.7.
et in - PSI 1307.ii.10.
Corbulo - Tacitus, A., 11.18; cf. Chapter II: Guard Duties, n.9.
Literature - cf. Chapter II: Guard Duties, n.8-9.
Vegetius - 1.13.

8:

Macer - Dig., 49.16.12.2.

extra drill - Vegetius, 1.13; cf.n.7 above.

tribuni legionis - Livy, 28.24, who may, from his language, be referring to his own day.

Caetronius - Tacitus, A., 1.44.

undress uniform - Valerius Maximus, 2.7.9; Suetonius, Aug., 24; Otho, 1; Frontinus, Strat., 4.1.26-28.

duty roster - CLA 7V, passim.

Celer - CLA 7V. I.9-10.

"I asked - P. Mich. 466.25-32.

leave - P. Mich. 466.38-40.

9:

Vegetius - 2.23.

Appian - B.C., 2.49.

Rome - e.g. Dio, 57.24; 59.2.

legions and auxiliaries - see n.10if below.

10:

feriale Duranum - P. Dura 54; DPP, 191-212; YCS, VII, The Feriale Duranum, hereafter cited as Fink, Feriale; J.F. Gilliam, 'The Roman Military Feriale' in Harvard Theological Review, XLVII. 183-196.

Corbridge - Richmond, RIC, 127ff; Domaszewski, Religion, passim.

11:

missing - PPP, 202, quoting Fink, Feriale, 50ff, n.111, 113-114. cf. A.N. Sherwin-White, The Letters of Pliny, 611-612.

Republic - Fink, ibid.

40 B.C. - Appian, B.C., 5.34.

A.D. 69 - Tacitus, H., 1.55; for discussion see below.

3rd - Fink, Feriale, 65ff; Sherwin-White, op.cit., considers Trajan was responsible for the change.

Lydus - de Mensibus, 4.4.

Herodian - 2.2.9.

A.D. 138 - SHA, Hadr., 23; Ael., 4.

dedications - Fink, Feriale, 51, n.14.

A.D. 241 - RIB 1983.

12:

*3rd January - P. Dura 54.i.2-6.

Pliny - Pan., 68.2-4.

"We have renewed - Pliny, Ep., 10.35; the reply is 10.36.

"We have discharged - Ep., 10.100; the reply is 10.101. Sherwin-White, op.cit., in his notes to these letters is hesitant about the year, but I prefer to follow Hardy.

13:

Tacitus - H., 1.55; cf. Suetonius, Gelb., 16.

Tertullian - Cor., 12.3.

Pertinax - SHA, Pert., 6.

13 (cont.):

Inchtuthil - JRS, XLIV.84-85; Dr. J.K. St. Joseph kindly provided me with further information.

Newstead - Curle, Newstead, 281.

Ribchester - cf. Chapter VIII: Food, n.7.

14:

Maryport - CW2, XXXIX.19-30; BR, 27-40.

Giftoen - RIB 815-829; for later ones cf. RIB 830-835.

Tutor - RIB 832, 837, 842.

Tatianus - RIB 838, 843.

feriale - P. Dura 54.

Pudding Pie Hill - CWAT, XVI.15.

South Shields - Papers of the South Shields Archaeological and Historical Society, vol. I, no. 7, 6-25; cf. JES, L.215 and 237 (8); RHW, 155-156.

Birdoswald - RIB 1674-1896 plus AE 1962 263. Only three altars were discovered in situ: RIB 1883 = ILS 2553, RIB 1886, AE 1962 263, all to the east of the fort and between the Wall and Irthing Gorge. cf. HB 169 suggesting that the reason for building the stone wall on a different line from the Turi Wall was to gain room for a parade ground.

Gallicius - RIB 1883 = ILS 2553, RIB 1882.

15:

restoration - DPP, 202-205 lists and discusses the doubts.

"7th January - P. Dura 54.1.7-9.

4th-9th - evidence cited and discussed by Fink, Feriale, on this passage; DPP, 202-206.

"When he - Suetonius, Calig., 44.

16:

A.D. 163 - II 2552 = ILS 9125.

Victor - II 6183 = ILS 2293.

A.D. 184 - II 2554 = ILS 9126.

A.D. 167 - II 2553 = ILS 9127.

cohors I Gallica - ILS 9128-9131.

primus pilus - this is the conclusion of Dr. B. Dobson in his thesis (to be published shortly) on the primipilares.

A.D. 253 - VIII 2364 = ILS 2296.

A.D. 244 - RIB 327; cf. Domaszewski, Religion, 77
ten years - RIB 328.

other dedications - cited and discussed in Richmond, RIC, 160ff; cf. also ILS 2289ff, 9082

17:

Josephus - B.J., 5.348ff.

stipendium - Suetonius, Dom., 7.3; Dio, 67.3; Historia, V.332ff.

Tertullian - Cor., 1.

18:

Apsarus - Arrian, Peripl., 6.1.
Sebastopolis - Peripl., 10.3.

19:

"You also - in the collection of sayings of Epictetus that Arrian compiled (I.xiv.15).
"The tribunes - Livy, 28.29; they swore their oath of loyalty to P. Scipio, their commander-in-chief; under the Empire the Emperor, of course, was the commander-in-chief (imperator) of all Roman forces.

20:

Gregory Nazianzen - Oratio IV - contra Julianum, 1. LXXXII-LXXXVIII.
Cassiodorus - Hist. Trip., VI.30.

21:

dies imperii - Severus Alexander: P. Dura 54.i.23-26 (13th March);
Trajan: Pliny, Ep., 10.52 (reply in 10.53) (28th January), and 10.102 (reply in 10.103) for the following year. cf. E.G. Hardy, Pliny's Correspondence with Trajan, 154-155 (who dates the years to A.D. 112 and 113). The two occasions did not always fall on the same day; Vespasian, for example, was hailed imperator by the troops on 1st July, A.D. 69 (Suetonius, Vesp., 6; Tacitus, H., 2.79), but did not receive the trib. pot. until 20th December (Suetonius, Vesp., 12).

dies natalis - Severus Alexander: in the missing portion of P. Dura 54.iii.9-10: (1st October); Wilken, Chrest., 41.

Trajan: P. Dura 54.iii.4-5; Pliny, Ep., 10.17A (18th September, A.D. 111); Ep., 10.88 (reply in 10.89, of the following year); Dio, 56.25; cf. Hardy, op. cit., 109.

Augustus [etc] - P. Dura 54.i.27 (14th March).

Caesar [etc] - P. Dura 54.ii.16-17. (26th June).

consul - P. Dura 54.ii.18 (1st July).

'tribune fresco' - Fink, Feriale, - 193ff, 201ff.

Elder Pliny - N. H., 13.23.

decurcio funebris - for a description: Suetonius, Jul., 84; Dio, 56.42; Tacitus, A., 2.7; 3.2; Vergil, Aen., 11.188; Lucan, 8.735; Statius, Theb., 6.213ff; Livy, 25.17; Appian, B.C., 1.109. Suetonius - Claud., 1.

Mainz - seen by the writer in the local park.

pictorial examples - quoted by Fink, Feriale, 192-202.

Ostia - ibid., 192-193.

22:

warfare - Appian, B.C., 5.34; Frontinus, Strat., 4.7.30; Herodian, 3.6.10; Tacitus, H., 3.78.

rosaliae signorum - P. Dura 89.i.14.

natalis Germanici - P. Dura 107.ii.7ff.

circenses Martiales - P. Dura 56B.

22 (cont.):

natalis divi Iuli - P.Nich.455a, verso; cf. AJP, LXXI.437
Trajan - Dig., 11.12.9.
Varro - quoted by Macrobius, 1.16.27.
Caesar - Suetonius, Jul., 65.
Galba - Suetonius, Galb., 6.
Vegetius - 2.23.

23:

ordinary kit or carry weapons - Herodian, 2.2.9; 2.13.2.
ceremonial uniform - Herodian, 2.13.3,10; 7.11.7; cf. Dio, 62.4.
Rome - it is now in the Louvre; Catalogue sommaire des marbres
antiques (1922), no.1079.
ceremonial events - Herodian, 2.10.2.
elephants - 2.11.9. cf. the elephants that Claudius brought to
Britain with him, which were presumably some of the Praetorian
parade animals.
Josephus - B.J., 5.350-351.
Appian - B.C., 1.106.
Vegetius - 1.13.
dignata - 2.18; for discussion cf. Report VI.465.
Tacitus - A., 1.24.
A.D. 69 - H., 3.89.
A.D. 193 - Dio, 75.1.
Tacitus - H., 1.51,57.

24:

Festus - Historia, XII.taf.VIIa.
Calidius - Historia, XII.taf.VIIb; P. Couissin, Les armes romaines,
437, fig.157. cf. Chapter I: Introduction, n.13.
Valens - CLA 7V.II.1-4.
Flus - D.E. Strong, Roman Imperial Sculpture, pl.92. For
discussion, Couissin, op.cit., 356, 392-394, 441,456.

25:

plumes - Cichorius, taf.CIV; TATC, 11, n.4.
legionary helmet - Guide to the Antiquities of Roman Britain, 67,
no.5, pl.XXVI no.5.
Dura - Report VI.456-466, pl.I.
Tyne - VII 495; Guide to the Antiquities of Roman Britain, 67,
no.8, fig.35; for the date cf. RBRA, 29, citing X 5829 = ILS 2726.
name and century - Vegetius, 2,18.
Kirkgate - Guide to the Antiquities of Roman Britain, 67, no.7,
fig.34.
abroad - Lindenschmit, Die Alterthümer unsere heidnischen Vorzeit
I, ffsic.5, tab.5.
South Shields - I.A. Richmond, Guide to South Shields, 13-14.

26:

Arrian, T.T., 34.2-8.

27:

Curle, Newstead, 295-305 for all references.

28:

Archaeology - for references, plates, descriptions, etc., cf. the citations in ABR.

iron - ABR, 291.

brass - ABR, 292.

bronze - ABR, 292.

Ribchester - ABR, 292-293.

Brecon - ABR, 296.

29:

ABR, 293-295.

30:

Frankfurt-Heddernheim - ABR, 295.

Pfendorf - ABR, 295.

Worthing - ABR, 295-296.

Ilkley - ABR, 296.

31:

Frankfurt-Heddernheim - ABR, 296.

England - ABR, 297. Mr. R. Hogg kindly informs me that the find spot proves that the one stated by Professor Toynbee to come from Carlisle in fact came from the Roman fort at Stanwix.

32:

Arrian - T.T., 35.2-4.

Chester - R.P. Wright, Catalogue of the Roman Inscribed and Sculptured Stones in the Grosvenor Museum, Chester, no. 137.

I accept Professor E. Birley's view (quoted there); Dr. S. Bartle points out to me that the helmet is in fact not the pointed conical helmet of the cataphract, as stated, nor does the horse appear to be barded, as a cataphract's horse was, nor does the mount seem to be big enough for a cataphract.

Sucidava - Collection Latomus, 44.739-744, pl. LII.

33:

Arrian - T.T., 34.5.

Dura - Report VII-VIII. 326ff.

Arrian - T.T., 34.3, 5; 41.1.

34:

Homeric - Report VII-VIII. 331-349, pl. XLI, and in colour pl. XLII.

Amazon - Report VII-VIII. 349-363, pl. XLIV, and in colour pl. XLV.

third - Report VII-VIII. 363-367, pl. XVI.

fourth - Report VII-VIII. 327-328.

fifth - ibid.

sixth - ibid.

35:

Genialis - ABR, 191; RIB 109, pl. IV. Professor Toynbee in a letter confirms the possibility of my suggestion that it is a parade shield.

Flavinus - ABR, 192; RIB 1172, pl. XVII.

Lucius - RIB 522; I am grateful to Professor Toynbee for confirming the type of helmet and for saying that my idea of the Cimmerian tunic is possible.

Chesters - RIB 1466; Professor Toynbee suggests H. Pallottino, Il grande fregio di Traiano, fig. 13 and pl. 1 as a parallel. She thinks the Chesters example is more probably a parade rather than a sports helmet.

36:

Straubing - J. Keim and H. Klumbach, Der römische Schatzfund von Straubing.

eye-guards - ABR, 298; however, they might be the equipment of cataphracts.

Newstead - Curle, Newstead, 153-155, pl. XXI.

items of harness - ibid.

37:

Claudian, de Sexto Consulatu Honori Augusti, 621-639.

38:

different - G. Webster, The Roman Army, 40-44.

Arrian - T.T., 34.1.

Hadrian - VIII 18042 Aa (bis), D = ILS 2497 ; ILS 9134.

Maryport - cf. n. 14 above.

courtyard - Webster, loc. cit.

Drusus - Tacitus, A., 1.25-27.

Germanicus - A., 1.34.

amphitheatre - see Chapter III: Training and Exercises, n. 15.

covered - see Chapter III: Training and Exercises, n. 10.

39:

whole day - Polybius, 10.20; Livy, 26.51; cf. Chapter III: Training and Exercises, n. 21.

arms drill - Vegetius, 1.13.

centurion - 2.14.

decurion - ibid.

tribune - 2.12.

legatus legionis - 2.9.

40:

Vegetius - 2.14.

Caesar - Suetonius, Jul., 67.

Onasander, - Strat., 28.

41:

Calgacus - Tacitus, Agr., 32; cf. Agr., 26.

medals and military decorations - cf. n. 23-24 above.

disgrace or defeat - e.g. Tacitus, A., 1.24, 29 the Pannonian rebels, A., 15.16 the defeated army of Paetus.

42:

Augustus - Tacitus, A., 1.3.

Tiberius - Suetonius, Tib., 38; cf. Tacitus, A., 4.4.

Caligula - cf. Chapter IV: Manoeuvres, n. 14-16.

Trajan - ibid., n. 8

Caracalla - ibid., n. 10.

Verus - Fronto, Princ. Hist., 13.

sources - SHA, Mar., 8; Ver. 6-7; cf. A.R. Birley, Marcus Aurelius, 173, 215-216.

Laelianus - ILS 1094 + 1100; Fronto, ad Verum Imp., 2.1.14.

senator - ILS 1019; cf. R. Syme, Tacitus, 17.

43:

Trajan - Pliny, Pan., 18.

A.D. 32 - Philo, in Flac., 1.5.

A.D. 39 - Suetonius, Galb., 6.

A.D. 47 - Tacitus, A., 11.18.

A.D. 57 - A., 13.35.

A.D. 68 - H., 1.52.

A.D. 78/79 - Agr., 19.

quod - Agr., 18.

Abinnacus - P. Abin, 2.

Plancina - Tacitus, A., 2.55; 3.33.

44:

Dio - 69.9.

'Spartianus' - SHA, Hadr., 10.

dedication - L. Leschi, Etudes d'Epigraphie d'Archeologie et d'Histoire Africaines, 196ff, revising AE 1900 33.

introduction - ILS 9133.

élocutio mlVIII 18042 = ILS 2487; ILS 9134.

Soranus - III 3676 = ILS 2558.

elsewhere - Chapter IV: Manoeuvres, n. 11-13.

Periplous - see n. 45.

"Hadrian - Dio, 69.9.

45:

Latin - Arrian, Peripl., 6.2; 10.1.

Hyssus - Peripl., 3.1.

Apsarus - Peripl., 6.1-2.

Phasis - Peripl., 9.3-5.

Sebastopolis - Peripl., 10.3.

46:

garrisons - the garrison at Hyssus is a Ταξις not a επειρα or ειλη; the twenty cavalrymen would not form a turma on loan from an ala or cohors equitata. The fact that Arrian states that the garrison was unusual and that its precise nature was known to the Emperor (presumably through the Latin report) might be taken to imply that it was native. There is no need to suppose that it was the cohors Apuleia c R attested in the Notitia, which is otherwise unattested (unless it is the Ἀριθμοι περι of Ικτ. 7 and 14, who were later formed into a cohort). It seems best to suppose that it was composed of some of the native troops mentioned in Ικτ. 14, perhaps in part the Πιριανοι λογοφοροι and Τρανσιευτιών γυρηνητες from the nearby city. However, an unpublished inscription of C. Fabricius Tuscus attests cohorts Apulae at Alexandria Troas in the time of Augustus. For the five cohorts at Apsarus cf. X 1202 = ILS 2660 of Hadrian's reign, giving the career of Plaetorius Celer, who was at one time praeposit(us) numeror(um) tendentium in Ponto Absaro. The four hundred picked men (επιτιμωται επιλεκτοι) at Phasis might be equated with the equites singulares mentioned in Ικτ. 4 or the pedites singulares; but one would expect such units to be stationed with the governor at CHQ and it is not certain that they were four hundred strong. Perhaps a vexillation is a better explanation; in view of the military engines and a thriving settlement, perhaps five centuries of a legion or several men from or even a contubernium from each century. The unit at Sebastopolis is quite clearly an ala; as no mention is made of pedites, it cannot be a cohors equitata.

Τους καρυοντας - cf. Liddell and Scott, Greek Lexicon, sv καρυων.

47:

Avidius - SHA, Avid., 6; cf. Fronto, ad Amic. 1.6; ad Verum Imp., 2.3.

Maximinus - SHA, Iuo Max., 6; cf. Herodian, passim, on his character.

Laelianus - Fronto, ad Verum Imp., 2.1.9; cf. ILS 1094 + 1100.

Tiberius - Suetonius, Tib., 18.

Hadrian - see above, n.44.

Arrian - see above, n.45.

48:

TATC, 5ff.