Gerhard Horsmann, Untersuchungen zur militärischen Ausbildung im republikanischen und kaiserzeitlichen Rom. Wehrwissenschaftliche Forschungen. Abteilung militärgeschichtliche Studien, Band 35. Harald Boldt Verlag, Boppard am Rhein 1991. 260 Seiten.

This doctoral dissertation of the University of Mainz has a most interesting theme for military historians and archaeologists. The training of the Roman army was investigated by the late Roy Davies in several seminal articles, which are acknowledged and discussed by H., but the wider theme of a comparison between the approaches to training, which were imposed by the different military systems of the Republic and the principate, raises problems and invites questions of greater significance.

As H. points out, with an essentially militia style army, training would always be a problem especially in times of great emergency. The beginning of the Punic Wars brought challenges such as Rome had not hitherto encountered; it is perhaps a truism to say that these were the conflicts which created the need for improvements in army training and tactics. If the Roman generals had not responded to those challenges, Rome might now be considered as just another ancient city which had succumbed to a superior force. H.'s investigation begins at the end of the third century BC with the exigencies of the Second Punic War when the ancient authors begin to provide details of measures taken to train an army often composed of a mixture of recruits and partly or fully trained men. For this period H. has had to rely largely upon Livy, Polybius and Appian, but one important question is the determination of how far Vegetius' chapters on training were applicable in this early period. The answer appears to be that, although there can be no proof, the results of successful campaigns imply that at least some of the measures described by Vegetius were applied. With carefully chosen examples H. demonstrates that those generals were successful who, like Scipio Africanus Major, were for one reason or another supplied with a largely untrained army, but who took time off to train that army, as Scipio did in Sicily (205/4 BC). Conversely, those generals who failed to break in their tirones prior to an engagement, like P. Rutilius Lupus during the Social War, were often severely defeated. From such instances H. concludes (p. 41): "Der Zusammenhang beispielsweise, der zwischen Ausbildungssteigerung und dadurch zwangsläufig notwendig werdenden längeren Dienstzeiten besteht, ist ein Aspekt der allmählichen Auflösung des Milizsystems, der m. E. bislang nur wenig Beachtung gefunden hat".

Wisely, H. avoids a discussion of whether the reforms of Marius created the conditions which made it possible for rival generals to create private armies and use them in ways which brought about the downfall of the Republican system, but his comments show that he appreciates that Marius was not the first to enrol the *capite censi*. An emphasis on training almost inevitably led to professionalisation of the army. From the latter part of the Republican period H. takes illustrations of the effects of pitching a trained army against an untrained one. For example, he traces Pompey's decision to abandon Italy to his appreciation of the difference between the battle hardened troops of Caesar and his own relatively inexperienced men. He follows Schmitthenner, Aigner and Wilkes (p. 45 n. 198) in suggesting that Octavian's campaign in Illyrium (35–33 BC) was part of a farsighted plan of preparation for the final conflict with Antonius designed partly to battle train his troops, and also to gain personal prestige and rapport with his army.

Who was responsible for training? Ultimately, of course the general, but the detailed work was done by subordinates. The sources are scanty but H. reasons that the tribunes, who exercised general supervision, and the centurions, recorded by Polybius as actually superintending the setting up of camp (6, 34, 1 f.), would also be in charge of training in these areas. For the competence of the latter in general training he cites the fact that three centurions were sent to assist king Syphax, in 213 BC, one of whom remained with him and is recorded as having created a formidable infantry force out of the untrained Numidians. The use of *lanistae* to train in swordsmanship is recorded once in the Republic, but H. accepts that, although the idea that this was a frequent practice is alluring, it cannot be proven. However, he returns to the theme of the similarity of military training methods to those of gladiatorial schools on several occasions in his discussion of the army of the principate (Section 2).

With the creation of the professional long-serving provincial armies of the principate, the records of epigraphy and archaeology may be called upon to supplement the literary sources. It is a sad fact that very little has been possible in the recording of marching camps and forts from the air in the Middle East, since the work of Sir Aurel Stein in Iraq and A. Poidebard in Syria, between the two world wars, and that of Colonel Baradez in North Africa, after the second world war. What is known suggests that the armies of these areas had to learn different techniques. Hadrian's *adlocutio* at Lambaesis refers to the difference between building turf ramparts and using irregular blocks of stone for a practice camp. The nature of the climate also resulted in differences in permanent fort building. Troops newly allocated to these areas may have had to undergo retraining.

However, H. makes good use of the large amount of material available in the west, depending largely upon evidence from Britain and Germany. Under separate headings he deals with training in camp and in its immediate neighbourhood, training for sieges, special training areas for cavalry, and practice camps. He concludes that every fortress and fort must have had a *campus* nearby, and that legionary fortresses were provided normally with amphitheatres, the latter perhaps being used for training in single and group com-

bats, although we lack the precise evidence in many instances. The Vegetian description of training with weighted wooden swords (and other weapons) against wooden posts in *campi* is supported by the discovery of a post-hole near the *tribunal* of a *campus* at South Shields, with possible heads of practice weapons nearby, and was cited by Davies. To this H. adds the evidence of a wooden sword from Oberaden. Dendrochronological dating suggests that a wooden *sica* from Hollstein may have belonged to the German campaigns of the elder Drusus (p. 134 n. 103).

There may, however, have been variations within the Vegetian pattern. In a valuable article on Roman Archery Equipment in the Proceedings of the Second Roman Military Equipment Research Seminar (BAR Internat. Ser. 275 [1985] 220-366), J. C. COULSTON suggested that ox-skulls discovered at Corbridge and Chesterholm, which were perforated with many neat punched holes, may have been mounted and used for target practice. Coulston's article also draws together evidence which suggests that Vegetius (1,15) was not exaggerating in his claim that archery played a part in general training, although not every soldier would have been expected to acquire this skill. This supports the general results of H.'s examination of the chapters of the first book of Vegetius under separate headings, where he concludes that these are reliable indicators of training methods used in the principate. There is space to comment only on a few details. The use of a wooden 'horse' for training recruits in riding may have had an ancillary purpose. There is good evidence that, at least as far as auxiliary alae were concerned, recruits were frequently drawn from 'horsey' peoples and joined the army well versed in handling horses. Recent work on the Roman saddle suggests that it was constructed with firm horns which gripped the rider and enabled him to use his spear and sword without danger of being easily unseated. Training leaping into this saddle in the way that Vegetius suggests could have been practised on a stationary 'horse' even by skilled riders (P. CONNOLLY/C. VAN DRIEL-MUR-RAY, Britannia 22, 1991, 33-50; A. HYLAND, Equus. The Horse in the Roman World [1990]). If J. F. GIL-LIAM's contention is accepted, that soldiers in cohortes equitatae served some years as infantrymen before promotion to the cavalry component of the unit (Historia 14, 1965, 74-78), H.'s argument that even infantry were taught the rudiments of riding has some support, for it would surely be more difficult to train novice riders well once they approached thirty years of age. Hyland's chapter on "Rider Training" is worth looking at in this respect.

In an important section on the epigraphic evidence for training instructors in the principate, H. observes that the stationing of units at discrete sites would lead naturally to the development of special training instructors, in contrast to the less structured system of the Republic (2.2). Nevertheless, while acknowledging his debt to Domaszewski's Rangordnung and M. P. Speidel's work on the equites singulares Augusti, he admits that the evidence outside the latter elite unit is still difficult to interpret, since it relates often to single inscriptions, and titles of specific instructors may have changed in time. His setting out of the evidence is well worth reading, especially with regard to his conclusion that exercitatores were training officers mainly of the rank of centurion or decurion. In a separate section on armatura, he decides that this term covers that of instructor in swordmanship.

H. devotes a section to military cults, especially those of disciplina and the campestres (2.3). He concludes that emphasis on disciplina militaris in the principate was concomitant with the lesser importance placed on disciplina domestica than in the Republican period, and that the cavalry connection of the campestres was due perhaps to a linking of Epona with the matres; cf. ILS 2417. Possibly here, and in the final section on training and military discipline, more attention could have been given to the role of the standards, both in everyday life and in battle, for discipline and training. The legionary Eagle is well known as a focus of the power and cohesion of the legions after its adoption as a symbol of military might by Marius; in a similar way the standards were also reverenced and elevated into cult symbols (see for example ILS 9125–9131). This is also a reflection of their importance to discipline in battle and recruits will have had rigorous training in watching standards and also obeying the calls of the tubicines and cornicines.

In a section devoted to training marches (3.1.1) some attempt is made to evaluate the performance of the Roman army in this basic skill. As H. admits, however, recorded marches are subject to so many variations that comparisons are difficult to make. He praises Caesar's celeritas in the march from Corfinium to Brundisium, where he estimates the speed of the march at 27 km per day (p. 121 and n. 42). This was indeed remarkable when the size of Caesar's army is considered, since large bodies of men clearly take longer to move out from overnight stops. But comparisons with training marches, or distances between the archaeological remains of marching camps can have little value; difficult or easy terrain, climate, day or night

marching, forced marching as against physical training marches, are all factors that must be taken into account. A spokesman from the British War Office confirms that the weight of packs carried on training in a modern army has probably changed little from that of the Romans (ca. 45 lbs was cited). In normal cross country marching 8–10 miles per hour in two hours would be a reasonable target for the modern soldier on a training march, but the same spokesman emphasized the meaninglessness of this figure. It could take the same time to cover one mile in rough country. Incidentally, for purposes of comparison this section would have benefited from the use of one standard measure (either km or m. p.).

Nevertheless the Roman army was not unchanged and unchanging throughout the principate, even if the more obvious differences in structure and tactics emerged in the third century and the dominate. Tiny signs of the need for retraining may be glimpsed when a change in armour, particularly in the size of the neckguard of the helmet, suggests the adoption of a different stance, and thus perhaps a different fighting technique in specific circumstances (cf. P. Connolly in: Roman Frontier Studies 1989, edd. V. A. Max-FIELD/M. J. Dobson [1991] 358–363). Instructors had themselves to be versatile in order to respond to new ideas, developed perhaps as a result of encounters with differently equipped foes. – Two minor geographical corrections: Neither Chester le Street (p. 62) nor Netherby (p. 63) are "am Hadrianswall". One is south, the other north of that structure.

Overall, in the section (3, with subdivisions) on the basic components of Roman military training, with its detailed analysis of the acquisition of individual skills, such as running and jumping, swimming (would the hardy Roman soldier really be deterred from swimming for entertainment in the unheated pool at Caerleon?), weapon training, cavalry basic training, entrenching and camp building etc., this book fills an important gap and, like all pieces of thorough research, opens up ideas and questions that are still incapable of complete resolution. Why, for example, is there so little epigraphic evidence of permanent forts having been built by alae certainly before the third century? Perhaps basic cavalry training in encampment on campaign was necessary, but the normal use of alae for speedy action would preclude the carrying of heavy entrenchment tools. Did cavalry rely upon the infantry to supply many of their building and camping needs, as that part of Hadrian's adlocutio from Lambaesis which was addressed to a cohors equitata might suggest (ILS 2487)? The study as a whole is well worth the serious attention of Roman military historians.

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