

Jonathan Roth (1998). *The Logistics of the Roman Army at War (264 B.C. – A.D. 235)*. (Leiden; Boston; Köln: Brill) 1998. Pp. i–xxi, 1-399.

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The successful commanders of antiquity well knew the critical importance of supply; the also-rans learnt it quickly and to their cost. Ancient logistics has not received half the scholarly attention it therefore deserves, which makes the appearance of R.'s excellent work all the more gratifying.

It is still impossible to discuss the subject without reference to Donald Engels' *Alexander the Great and the Logistics of the Macedonian Army* (1978). This work opened an entirely new approach to the study of ancient warfare which, whilst it has been criticised in detail, remains fundamentally sound. R. follows it, and the qualifications he makes are probably the most valuable since its publication. The literary sources evenly represent the whole period under discussion, and are supplemented where appropriate by archaeological evidence and comparative material from early modern warfare.

R.'s first task is to define the scale of the logistical problem: what quantity of rations and equipment was a Roman force obliged to transport? The solutions to this problem are then examined: the choice between finding supplies in theatre (foraging and requisition), versus bringing them in from afar (supply lines), and the permutations thereof. Finally R. examines the interaction between strategy, tactics and logistics. Hunger can be used as a weapon; at the same time, supply lines and troops forced to disperse in order to forage are vulnerable to attack. The thorough administration of logistics, R. concludes, gave Roman armies a decisive edge over their opponents.

Many fascinating ideas are introduced along the way, only a few of which can be discussed in a short review. As previously mentioned, Engels' findings are re-examined. E. used data from an army nutrition manual and modelled his Macedonians on a modern-day eighteen year old U.S. soldier. R. uses the same data, but demonstrates that the average *miles* was both older and slighter. As both these characteristics reduce an individual's nutritional requirements, R. suggests rations constituted a considerably smaller burden (7-13). Incidentally, this must also be true of the Macedonian army.

On the relative merits of local foraging against long range supply, R. inclines more to supply than E. whose idea of an "effective range" of five or six days for overland transport has long been criticised. R. now presents a very strong case against it, using both literary sources and comparative evidence (198-202). On the other hand, the problems of foraging are emphasised. Troops set out daily for water, fodder and

firewood, and the less frequent *frumentatio* for provisions was a major undertaking in terms of labour: security detachments were obliged to stand under arms to ensure the safety of numerous comrades rifling through field and barn.

Using evidence spanning the period under discussion, R. illustrates the nature and function of the *stativa* or *sedes belli*, which he calls the “operational base”. This is an installation at which supplies and troops are mustered at the outset of the campaign, and provides a position to fall back on should it go awry. Its location is unlikely to change in the course of the operation, and is often the point at which water transport gives way to pack or haulage. Where possible it is a city, with port facilities. The operational base concept allows a convincing explanation for the seemingly superfluous capacity of the granaries in certain fortresses. It is suggested that such fortresses served as operational bases for expeditionary forces much larger than their garrisons. The enlargement at South Shields in the Severan period, and the construction of Rödgen, c.11 B.C., are linked to the campaigns of Septimius Severus and Drusus respectively (169-177).

R. has some strong views on unit organisation. As the soldier’s daily grain ration was two *sextarii*, the eight-man *contubernium* established by Augustus would, conveniently, have required exactly one *modius*. From this it is concluded that the principle rationale behind the organisation of the imperial legion was ease of ration calculations: ten *modii* per century, sixty *modii* per cohort, and so on. As R. puts it, “Note that there are no fractions in any of these figures. There is little question that the number of soldiers in these units were set for exactly this reason,”. To the present reviewer this seems a large claim. Eight men is about the right number for a junior N.C.O. or squad leader to control (surely someone was in charge of the *contubernium*?), and has the convenience of being, so to speak, a pair of pairs of pairs. The British army’s present-day rifle squad has eight men. The convenience of the *modius:contubernium* ratio is clear, but it need not be the only, or even the main, reason for an eight-man squad.

The comment that “it was the geography of their empire that determined the Romans would move most military supplies by water” is frustrating. R. misses the chance to show that the opposite was true: the superior capacity of water transport for supply and strategic movement (which he does demonstrate) dictated the limit of expansion. In the Rhine and Danube, the Atlantic Ocean, and the Mediterranean and Black Seas, nature had provided a superb communications network. Consciously or not, imperial deployment along the frontiers endorsed by Augustus could hardly have been better devised to exploit this fact.

E.’s *Alexander the Great* was a milestone in ancient warfare studies, spawning a number of articles which applied his approach to various campaigns. It would be useful to re-assess much of this work in the light of R.’s important findings.

To those who would understand how ancient warfare was really conducted, a knowledge of logistics is indispensable. To that end, this book is highly recommended.