

Watering the Roman Army: Logistics and Imperial Power in the Classical World

This paper investigates how ancient Roman armies provisioned fresh water while on campaign, arguing that water logistics placed an important limit on Rome's ability to project power on the fringes of her empire. Despite the crucial importance of drinking water for armies both ancient and modern, this subject has been largely neglected in previous work on Roman military logistics (Adams, 1976; Erdkamp, 1998; Roth, 1999)

This paper opens with quantitative analysis both of the water requirements of an ancient army and of the logistical solutions available to meet them. On these grounds, I argue that a Roman army's ability to wage war, particularly in arid environments, was harshly limited by the availability of local water supplies: the shortcomings of ancient technology made it physically impossible for troops to carry enough water for protracted desert campaigns. This paper then investigates how reliance on local water supplies limited the strategic maneuverability of Roman forces. GIS analysis of the Roman frontier in Tripolitania (modern northwest Libya) demonstrates how the scarcity of water sources on this desert border curtailed the movement of Roman troops. In short, I argue that large swaths of nominally "Roman" territory in Tripolitania were inaccessible to Roman troops, and that the strictures of water logistics made it particularly challenging for the Roman Empire to adequately secure its desert frontiers.

This paper concludes by suggesting some broader implications of GIS analysis, water logistics, and military geography for the study of both the Roman Empire and other pre-modern states. The limits this paper demonstrates for Roman force-projection in ancient Tripolitania faced the empire along most of its southern and eastern borders. Similar challenges confronted Alexander in the Middle East, Crusaders in the Medieval Levant, and Han China on its western

steppes. Through the techniques of quantitative GIS analysis employed in this paper, it becomes possible to more fully understand the dynamics and limits of state power on arid frontiers.

Bibliography

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