

Who decides this? If enemies are still alive when the danger has passed, what is to be done with them, especially when the language of politics has been so thoroughly militarised?

Later chapters consider the *res publica* under the emperors. By this time, it was less a public ‘thing’, a space for the community to interact, than the public ‘things’, for which the emperor cared. The *res publica* became, essentially, imperial business, and so eventually encompassed the entire empire. In telling this story, M. focuses on the materiality of the *res publica*. What emerges from this section of the book is the emptiness of the concept once Augustus took over. Romans of the imperial period knew they had lost something, but did not really understand what that was.

What unites these two books is the seriousness with which they treat Roman political thought. Both authors recognise the existence of a native intellectual attitude to the political order which we might, following S., call ‘constitutional’. Thus both recognise Sulla’s dictatorship (created by law though it might have been) as beyond the bounds of the acceptable. Yet debate about what was acceptable (and why) was, from the start, partisan and contested; it was born in response to Polybius and the controversies of 133 B.C.E.

What impact should these two books have on scholarship? Following Wiseman, we need to accept the genuine political content of Roman politics after 133 B.C.E. Some of the aristocracy may have wanted politics to be a game just for them, but this hope was disappointed. Real and important issues were at stake, about how the Romans were to live with each other. And both scholars show the Romans’ own messy attempts to resolve these issues.

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O. D. CORDOVANA and G. F. CHIAI (EDS), *POLLUTION AND THE ENVIRONMENT IN ANCIENT LIFE AND THOUGHT* (Geographica historica 36). Stuttgart: Franz Steiner Verlag, 2017. Pp. 296, illus. ISBN 9783514116671. €54.00.

In recent years environmental history has gained prominence in scholarship on the Greeks and Romans. Alliances between historians and scientists and historical ecology changes our view of the ancient economy while environmental criticism opens new perspectives on ideology, ethics and aesthetics. *Pollution and the Environment* represents the potential of these new approaches to advance our understanding of the ancient world. The volume collects papers from a 2014 Berlin conference inspired by two questions: to what extent were ancient societies aware of environmental problems, and how did they respond? Answers vary, as the papers address social, cultural, scientific and economic aspects of the relationship between humans and the environment.

The editors’ introduction lays out the project, taking the griffin mosaic at the Villa of Casale near Piazza Armerina as an example that models a multi-layered approach to environmental history. The mosaic and its architectural context are a microcosm of elite lifestyle and values in which the emperor’s power to subjugate even exotic animals for the games tropes the owner’s social influence. The mosaic also depicts actual hunting techniques and the exploitative trade in exotic animals. Finally, closer examination reveals that the griffin is not hunted but hunter. The mythical beast clutches a cage that imprisons a man: only the human face is visible through the barred door to the cage. The scene thus figures a role reversal that challenges human control over the natural world. This nuanced reading of visual art illustrates the stimulating new approaches of the volume as well as a persistent issue, namely, the unintended consequences of human interventions in the environment.

Pollution and the Environment presents an impressive range of topics, evidence and approaches to environmental history. The volume is unified, but not limited, by the focus on pollution. The chapters are grouped in four sections, defined by the nature of the sources (law, literature and inscriptions, material evidence) and, to some extent, by topic.

The first section includes two papers on environmental law. ‘*Usò e gestione delle acque in Mesopotamia nel secondo millennio a. C.*’, Cristina Simonetti’s study of early Babylonian laws on flooding and navigation, is an especially welcome introduction to materials outside the usual

ambit of Classical Studies. In 'Roman rural landscape and legal rules', Luigi Capogrossi Colognesi examines four areas of environmental regulation — centuriation, drains, water supply and air pollution — that shaped the environment.

The second section contains six papers on literary and epigraphic evidence. In the first paper, 'Ancient ecology: problems of terminology', Cinzia Bearzot confronts the lack of an ancient Greek word for 'ecology', and establishes conceptual oppositions and key terms that the Greeks used to explain their environment. The other papers present complementary views of Roman practices and attitudes towards the environment. Arnoldo Marcone's paper, 'L'evoluzione della sensibilità ambientale a Roma all'inizio del Principato', explores Roman concepts of pollution and cleanliness to uncover the normative attitudes that informed laws and practices aimed at protecting the environment. In 'Floods of the Tiber in Rome under the Julio-Claudians', Edoardo Bianchi assesses the impact of Tiber flooding and Rome's governmental response. His analysis reveals the power of religion and its manipulation for political aims in Roman responses to environmental disasters. In 'Pliny the Elder and ancient pollution', Orietta Dora Cordovana analyses Pliny's 'environmental consciousness' in order to contextualise broader Roman debates on sanitation and public health. Luca Montecchio's paper, 'La cultura dell'ambiente in ambito monastico tra V e VIII secolo', extends the temporal scope of the volume, charting continuity and change in late antique religious views of human interventions in the environment.

The third section has two complementary papers on the relationship between disease and the environment. In 'Malaria and the environment of Greece', Elizabeth Craik applies modern diagnostic methods to analyse the Greeks' knowledge of malaria as well as its incidence in Greece during the fifth and fourth centuries B.C. Isabella Andorlini investigates ancient attitudes toward the effect of pollution on health in 'Environmental diseases according to papyri from Egypt and ancient medical thought'. Both papers combine literary and material evidence to generate a dynamic model of human interaction with the environment: for example, industrial processing of flax for textile manufacture releases dust that pollutes the air and in turn causes lung damage and disease.

The last section also adopts a dynamic model of environmental impact, in three papers exploring material evidence. Alain Bresson investigates the causes and effects of carbon monoxide smoke and lead contamination, two kinds of 'Anthropogenic pollution in Greece and Rome'. His paper also offers a balanced, new appraisal of the old debate about lead pollution. In 'Deforestation and forest protection in the ancient world', J. Donald Hughes takes a similar approach to clear-cutting forests and charcoal production that reveals the economic incentives for environmental damage. Finally, Jocelyne Nelis-Clément tackles the politically charged impact of games through both the capture of exotic animals and the construction of venues.

The essays in *Pollution and the Environment* satisfy with their fine-grained analysis of specific phenomena. Yet they also yield broader reflections on ancient use and abuse of the environment. Several themes run through the essays: the influence of religion, economic constraints and the dynamic interaction between humans and the physical world. The volume illustrates the variety of methods and sources that can profitably be used in writing ancient environmental history. The diversity of the papers surely generated rewarding conversations at the conference, but as so often in such collections, the authors do not integrate these interactions into the published versions. Nevertheless, readers will benefit from exploring the connections with support from a comprehensive bibliography and index. Moreover, the volume will strike a chord with modern audiences as they recognise familiar dilemmas, notably our recurring failure to anticipate or mitigate or sometimes even perceive the deleterious effects of our attempts to control the natural world. *Pollution and the Environment* thus uncovers problematic interactions between humans and the environment in the ancient world with signal implications for the modern world.

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