

**Book Review: Hughes, D. J. Environmental Problems of
the Greeks and Romans (Baltimore: MD., 2014)**

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Book Review: Hughes, D. J. *Environmental Problems of the Greeks and Romans* (Baltimore: MD., 2014)

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As the effects of global warming become more apparent, and large scale political and industrial action towards protecting the environment remains sluggish, tensions between the material demands of humanity and the earth's ability to provide are reaching a dangerous high. Inspired by these pressures, academics of ancient Greece and Rome have been turning their attention to studies of various aspects of the ancient environment. Monographs such as Brian Campbell's *Rivers and the Power of Ancient Rome* (2012) focus on specific environmental aspects, while works like William Harris's edited volume *The Ancient Mediterranean Environment Between Science and History* (2013) collect together various methodological approaches to the ancient environment. Donald Hughes' *Environmental Problems of the Greeks and Romans* analyses the environment of ancient Greek and Roman civilisations in relation to modern environmental concerns, such as climate change, deforestation, and industrial pollution, in an attempt to argue that human-caused environmental damage contributed to their decline.

Within this book, Hughes attempts to analyse the interrelationship between the environment and the Greek and Roman civilisations. The author details damages caused by Greek and Roman civilisation to their lands, through deforestation, mining, noise and water pollution, and the destruction of habitats. The second edition of Hughes' work benefits from the introduction of new evidence and includes three new chapters on war, natural disasters, and climate change. New subsections within each chapter make navigating the study much easier, while black and white photos are a useful, if underexplored, addition to the text. Although a shorter work than Campbell and Harris's studies, Hughes admirably attempts to cover a broad time period, from the briefly discussed Palaeolithic Age to the end of the fourth

century CE, as well as expanding the range of issues analysed under the bracket of the 'environment'.

The introduction acquaints the reader with the role of ecology in environmental history, the problems ancient civilisations may have faced in relation to the environment, and the sources of evidence Hughes refers to throughout the book. This provides an overview of the benefits and drawbacks associated with utilising literary and archaeological sources, as well as of the implications of engaging with scientific studies.

The introductory chapters, 'The Environment: Life, Land, and Sea in the Mediterranean', 'Ecological Crises in Earlier Societies', and 'Concepts of the Natural World' help to situate the main body of Hughes' evidence in the ancient world. The first chapter details the parts that make up 'the environment' in the Mediterranean, which Hughes separates into the categories of the climate, the sea, the land, and living communities. This study focuses on the Mediterranean, which is appropriate for Greek civilisation, but possibly generalises the larger and more varied environment of the Romans.¹ In 'Ecological Crises in Earlier Societies', the author contextualises where Greek and Roman attitudes towards the environment might have been developed, with particular attention to Egyptian society and its reliance on Nile floods. Hughes acknowledges that due to the relative reliability of the Nile, Egyptian perceptions of the environment might be different to later Greek and Roman societies.² Considering this detailed analysis of pre-Greek and Roman Egypt in this introductory chapter, one might expect to see more about the Egyptian environment's role in Greek and Roman society in later chapters.

'Concepts of the Natural World' aptly examines different attitudes to the environment, with well explained aspects of the relationship between the gods and nature, such as divination, sacred places, justice and pollution, and Orphism and Pythagoreanism. As well as discussing religious attitudes towards the environment, Hughes also describes aesthetics,

¹ D. J. Hughes, *Environmental Problems of the Greeks and Romans* (Baltimore: MD, 2014), p. 9.

² Hughes, *Environmental Problems*, p. 42.

the enjoyment of nature in the ancient Mediterranean, and nature as an object to be philosophised. In a shorter, but equally interesting section, the author considers ancient philosophical enquiries that might today be considered the root of ecological science. Hughes touches upon ancient concepts of environmental determinism, but sadly fails to develop them any further. This chapter concludes with a discussion of attitudes towards human effects on nature, briefly surveying the positive and negative views of ancient writers. 'Concepts of the Natural World' provides a suitable introduction to the multitude of ways the environment could be perceived by the Greeks and Romans, and is a necessary background to the more in depth case studies outlined later in the book.

Chapter five, 'Deforestation, Overgrazing, and Erosion', constitutes the most convincing and well-constructed part of Hughes' argument, with a detailed discussion of the causes of deforestation, including demand for timber, agricultural expansion, fire, and increased urbanization. The author convincingly argues that Greek and Roman acts of deforestation contributed to increased erosion of the landscape, and demonstrates, through references to Plato and Pliny, that there was some awareness of the consequences of this process. This chapter also includes a small section on ultimately futile conservation efforts, further supporting Hughes' awareness argument. Chapter six, 'Wildlife Depletion and Loss of Habitat' naturally follows, and thoroughly explores aspects of hunting, both in relation to the gods and other types: subsistence, defence, and sport. The author also discusses the impact of using wildlife for entertainment, the introduction of new species not native to the Mediterranean, the depletion of other species, and the study and ownership of animals. This chapter ultimately concludes that while wildlife suffered under Greek and Roman civilisation, a lower human population than today allowed undiscovered 'refuges' and periods of recovery for certain species and habitats.³

³ Hughes, *Environmental Problems*, p. 108.

'Agricultural Decline' focuses on the demands of a rising population, describing Mediterranean agriculture in terms of crops, vineyards, orchards, and domestic animals. The detail in this chapter really appears in the discussion of the environmental problems of agriculture, where Hughes highlights issues such as unpredictable rainfall, soil exhaustion, and erosion. The final section shows different agricultural policies, including the pressures of taxation, the military's impact, land abandonment, preference for livestock over crops, and population decline. Using literary sources Hughes convincingly argues that the Greek and Roman farmers were aware of the environmental damage they were causing, but that short-term economic demands were more important than responsible agricultural practices. This chapter emphasises Hughes' argument regarding the importance of balance within the environment as a solution to environmental damage and resonates particularly with contemporary concerns.

Chapter eight, 'Industrial Technology and Environmental Damage' explores the technological capacity of the Greeks and Romans, with an expansive section on the process and effects of mining and quarrying, and a brief exploration of metallurgy and its impact. This chapter reflects modern concerns with industrial effects on the environment and leads to an interesting discussion of how slave-intensive industries, such as mining and agricultural processes, stunted the development of technological advances. Hughes suggests these advances were more environmentally damaging, but the Greek and Roman reliance on slavery made them unwilling to develop less labour intensive agricultural and industrial practices. The author's confrontation of the practice of slavery and consideration of its role within environmental damage is appropriately handled both in this chapter and the conclusion, with an emphasis on the slaves' inability to act against their masters' damage of the environment.

Deliberate environmental damage for the advantage of war is investigated in chapter nine, 'War and the Environment', a new section for the second edition. The author covers the economic demands of an army, such as timber and meat, as well as aspects of

environmental warfare itself. The consideration of the Spartans destroying the landscape outside Athens, and Hannibal's destruction of the Italian landscape during his invasion link back to Hughes' previous focus on deforestation, and highlights how the environment could be a victim during warfare. There is also an interesting, if short, discussion on how disease might be weaponized, which leads nicely into the tenth chapter, 'Urban Problems'. This chapter very much focuses on the issues of water and noise pollution, overcrowding, and fire. Water pollution in cities is covered from various different perspectives, including aspects of waste disposal, demand for clean water, and flooding within Rome. Hughes also includes a short section on air pollution, possibly once more reflecting modern concerns about the environment, where discussion is centred on the use of wood-burning fires, which led to suspended dust in the air of cities. This is then briefly contrasted with the rise of idealised rural spaces in elite literature.

'Paradises and Parks, Gardens and Groves' offers an ameliorative alternative to some of the issues presented in the previous chapter, focusing on the protection of some areas through the use of sacred space. Hughes suggests these policies failed to prevent long-term environmental damage, as they were not strongly enforced. The author also raises the interesting idea that the designation of a particular place or landscape as 'sacred' implies that other areas are regarded as 'non-sacred' and can, therefore, be exploited without recourse. The discussion of parks and gardens is rather more limited, and focuses mostly on listing their occurrences in Greek and Roman society. Aspects of cultivated environments are neglected in this volume, and would have perhaps benefitted from reference to various important works on gardening in the ancient world like Bowe and Farrar's works.⁴

Both chapters twelve, 'Natural Disasters', and thirteen, 'Changing Climates', are new sections for the second edition. Chapter twelve contains two in-depth case studies of natural disasters in the Greek and Roman world: the plague at Athens, and the eruption of

⁴ See P. Bowe, 'Civic and other public planting in ancient Greece', *Studies in the History of Gardens & Designed Landscapes*, 31 (2011), pp. 269-85; L. Farrar, *Ancient Roman Gardens* (Stroud, 1998).

Vesuvius. The case studies detail specific ancient sources within the text itself, and contain a useful discussion of the evidence available for these particular natural disasters. The able handling of ancient sources in this chapter unfortunately leads to the question of why this discussion is not replicated throughout the work, particularly for a general audience. On the other hand, 'Changing Climates' provides an interesting survey of general trends in changing environments, covering evidence used to show changing temperatures, and environmental disruption in prehistoric and ancient times, before carefully considering in detail the evidence for human based climate change in the period of the Greeks and Romans. The author cautions against making strong conclusions about human-caused environmental change in the ancient Mediterranean, but suggests that 'probable connections' could provide a way of using climate change analysis in the future.⁵

The final chapter, 'Environmental Problems as Factors in the Decline of Greek and Roman Civilisation', attempts to draw together the broad range of environmental issues covered to conclude that the Greek and Roman demand on the environment was too heavy. The author first discusses human-caused factors of deforestation, industry, and urbanization. Hughes acknowledges other aspects of Greek and Roman culture that might have led to their decline, such as the status of women, religious scepticism, and an economy that exploited and over-relied on slaves. This chapter strongly asserts that 'the decline in the environment in the Mediterranean basin was the result of the unwise actions of the Greeks and Romans themselves'.⁶ This conclusion is hinted at throughout the book, and while Hughes puts forward a large range of evidence for environmental change in the ancient Mediterranean, there are continuous reservations that make it seem as if Hughes himself is unsure of this conclusion.⁷

This book manages to cover a broad range and include a variety of aspects of the environment, as well as different landscapes. Unfortunately, this range hinders Hughes'

⁵ Hughes, *Environmental Problems*, p. 223.

⁶ Hughes, *Environmental Problems*, p. 235.

⁷ Hughes, *Environmental Problems*, pp. 108, 149, 223.

argument, as the conjunction of Greek and Roman makes it difficult to engage in a nuanced discussion of specific environmental damage by either Greek or Roman culture.

Occasionally, in pointing the reader to a specific ancient author, Hughes references secondary sources for ancient texts; for example, a discussion of Frontinus' *Strategems* in the text, with a footnote to modern scholarship rather than the line of Frontinus.⁸ The appropriateness of written ancient sources is often not questioned within the text, which may cause difficulty for a non-specialist audience.

Irrespective of potential weaknesses to the overall argument and reservations regarding Hughes' analysis of certain sources, *Environmental Problems* remains a useful study of ancient Greek and Roman interactions with their environment. With the effects of the modern climate damage becoming more apparent, the need for studies of past attitudes and uses of the environment continues to grow. The second edition's new content does not particularly alter Hughes' conclusions from the first, but the inclusion of specific case studies in the new chapters certainly strengthens Hughes' argument, and the addition of new climate change data in chapter thirteen further emphasises the connection with modern environmental problems. Hughes' coherent inclusion and analysis of technical climate studies provides a useful example of engaging with modern scientific sources, and using them appropriately for studies of ancient environments. The careful weaving of both ancient and modern sources should certainly encourage those of us investigating ancient landscapes to seek out new ways of looking at environmental change.

Environmental Problems of the Greeks and Romans continues to be an important introductory work for studies of the ancient environment, particularly to those new to the discipline. The broad range and clarity of the work make it accessible to non-specialists and students of both Classics and environmental studies.

⁸ This should be a reference to Frontinus Strat 3.7.3, Hughes, *Environmental Problems*

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