

BOOK REVIEW

Global Environments through the Quaternary – Exploring Environmental Change

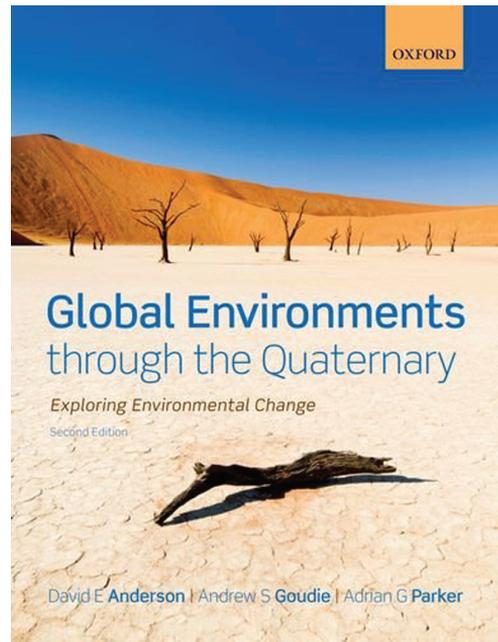
Global Environments through the Quaternary – Exploring Environmental Change, Anderson, D. E., Goudie, A. S. and Parker, A. G., Oxford: Oxford University Press, 2013.

Josephine Mills*

Born from a series of volumes titled *Environmental Change*, first printed in 1976, this book is the second edition of a revised history of the global environment published in 2013. It is the collaborative work of David Anderson, Andrew Goudie, and Adrian Parker, all experts in the field of geography, with Parker also having a background in anthropology.

Global Environments through the Quaternary provides a general scientific guide to interpreting environmental change. It is aimed at a wide audience and has a full glossary of less well known terms for added clarity. It would be a good accompaniment to a geoarchaeology course or for those interested in the history of environmental fluctuation, with its particular strengths lying in the concise and accessible presentation of scientific data. This enables it to work well as a reference guide that can be used alongside more in-depth research as it provides a key knowledge base with which to formulate personal theories.

The book is organised into nine chapters with thoughtfully delineated subheadings making for easy selection of subject matter whilst the discussion is frequently supplemented with the views of other scientists. It



begins with a wide overview of the history of environmental science ranging from the early climate history of the earth to the recognition of geological time and the existence of the 'Ice Age'. The authors then move on to covering methods of reconstructing past environments, describing phenomena such as aeolian wind blown deposits and their value as an indicator of arid climatic conditions. The idea of archaeological effects on depositional environments is also introduced in the early

* UCL Institute of Archaeology, United Kingdom
josephine.mills.10@ucl.ac.uk

chapters (2) with reference to the prevalence of anthropogenic deposits found in cave sites due to their use as 'shelters' (p.49).

Chapters three and four are focused on quaternary environmental change in different latitudes, with a helpful reference section explaining the process of reading deep sea cores and how ancient climate can be extrapolated from this data. These chapters both explain the complexity of climate fluctuation and describe the different techniques used to measure it. They also emphasise the wide geographic zone covered by the book, in which case studies are included from locations in Europe, America, Asia, and Africa.

Personally I would highlight the chapter (6) about sea level change throughout the quaternary, as it is particularly relevant to my research area of the Channel Islands and other locations with archaeological sites situated on modern coastlines that may have offshore palaeo-landscapes, for example the tip of Gibraltar. Information is provided indicating the sheer force and power of sea-level change and its effects on world geography with the authors covering the massive changes that would have followed these events including the opening and closing of land bridges and the flooding and exposure of continental shelves. I have a fascination with these lost landscapes and found this volume particularly useful to gain a scientific perspective about global sea level change and how both glacio-eustatic and eustatic features have a part to play.

The only slight downfall of this book lies in the chapter (8) focusing on linking the

environmental changes to human evolution and behaviour. Although the information provided about early hominins is accurate and precise there is a distinct lack of focus on how environment affected populations. For example it would have benefitted from including the debate about climate in relation to Neanderthal extinction. However omission is likely due to the sheer amount of content and information covered in this volume, with the aim instead to inspire the reader to research further indicated by the selected reading at the end of the chapters.

Global Environments through the Quaternary ends on a reflective note outlining the possible agents of climate change and how, as more is discovered about the history of the environment, its complexity seems to increase exponentially. Our current knowledge is progressing, yet remains imperfect, and the archaeology of climate change is integral to predicting the future of the planet. Overall this volume provides a well-balanced combination of information and theory to create an extremely thorough account of environmental fluctuation through the quaternary that is both relevant to past and modern climate debates. It is likely to give an archaeologist interested in studying palaeoenvironmental reconstruction an Earth Science perspective, however, somewhat understandably as foremost a geography volume, the link to archaeology is not often reiterated. Therefore it lies in the researchers hands to recognise the processes and information relevant and apply it to the study of archaeology.

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