

## Review

*Astronomy before the Telescope*, edited by Christopher Walker (British Museum Press, London), 352 pp. + 20 colour plates, ISBN 0-7141-1746-3, £25.00, hardback, 195 × 250 mm.

Nineteen authors (including the editor) conduct the reader back in time to most areas of the world, which still leave some areas and cultures to be researched, and some excluded from the book for one reason or another. Astronomy and/or astrology do not go back as far in time as some mythological concepts, such as those of the Australian Aborigine, who had not developed the art of written records before the arrival of Europeans on the continent during the seventeenth century and permanent European settlement at the end of the eighteenth century. This same unfolding of information applies to the bulk of the continent of Africa.

The volume is divided into a Foreword by Patrick Moore and seventeen chapters, the last of which deals with the ancient recorded observations and their application in modern astronomy. The other sixteen chapters are devoted to geographic regions, races, periods, cultures, or religions so that some cross referencing is necessary for they are in themselves separate entities. 'Astronomical records' prior to 1609 can be broadly divided into six groups: archaeological, visual observations, instruments, agricultural/calendar, mathematical interpretations of observations, and cosmological/mythological ideas all of these are covered in this volume.

Beside the one hundred plus excellent illustrations and twenty colour plates, there are eleven maps for ten of the chapters which make it so much easier to visualize the locations about which the author is writing. There is a good index which details the various aspects of the book, although I found difficulty with the use of continuous figure numbers when I started looking at the page number instead (if all else fails, read the instruction manual). The extensive bibliographies to be found at the end of each chapter are most useful, and those readers not greatly familiar with the subject will find them very useful.

The first essay describes archaeoastronomy in Europe, which, like the Great Pyramid, suggest an association with astronomical objects, but no practical applications. This is followed by the Egyptian contributions to our knowledge of a 365-day year and a 12-hour day and night. They were amongst the first to use astronomical phenomena for practical purposes – agriculture. Two thousand years of Mesopotamian astronomy are succinctly covered, despite the mathematical nature of its contribution to future generations of Greek philosophers. The latter are covered in two essays on pre- and post-Ptolemaic astronomy, when celestial phenomena were studied in a scientific fashion. The part played by the Romans is considered briefly in their ability to spread existing knowledge.

Four essays are devoted to European astronomy – archaeological, Middle Ages, Renaissance, and pre-telescopic instruments – occupy a quarter of the book and give an erudite summary of our present knowledge of the area's astronomical history and heritage.

The remaining six essays are of geographical or religious disciplines. David King in his essay on Islamic astronomy starts with, "From the ninth century to the fifteenth, Muslim scholars excelled in every branch of scientific knowledge. In particular their contributions to astronomy and mathematics are impressive". Impressive is the word to describe the work carried out by Muslim scholars in the three sides of the Mediterranean Sea. Indian, Far East, American, African, and Australasian astronomical concepts are considered in the remaining six essays. It is a pity that more space could not have been devoted to such a large part of the globe, perhaps some other publisher will take up the task of welding together authorities on their parts of astronomical history.

*Astronomy before the Telescope* is a book which can be picked up for a short reading session without losing the thread, and for an abstract of the book, Patrick Moore's Foreword is excellent. At the end of his forward, he gives the rationale behind the book "It was designed to complement the range of the British Museum's own archaeological and historical collections, and to look beyond mathematics and trigonometry to the contemporary cultural milieu and the surviving material remains." This it does.

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