

# The Age of the Earth: from 4004 BC to AD 2002

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The age of the Earth has long been a subject of great interest to scientists from many disciplines, particularly geologists, biologists, physicists and astronomers. This volume, *The Age of the Earth: from 4004 BC to AD 2002*, brings together contributors from these different subjects, along with historians, to produce a comprehensive review of how the Earth's age has been perceived since ancient times. Touching on the works of eminent scholars from the seventeenth to nineteenth centuries, it describes how concepts of the Earth's history changed as geology slowly separated itself from religious orthodoxy to emerge as a rigorous and self-contained science. Fossils soon became established as useful markers of relative age, while deductions made from geomorphological processes enabled the discussion of time in terms of years. By the end of the nineteenth century biologists and geologists were fiercely debating the issue with physicists who were unwilling to give them the time needed for evolution or uniformitarianism.

With the discovery of radioactivity, attempts to calculate the Earth's age entered a new era, although these early pioneers in radiometric dating encountered many difficulties, both technical and intellectual, before the enormity of geological time was fully recognized. This effort affected both the theory and practice of geology. Geochronology was largely responsible for it maturing into a professional scientific discipline, as increasingly refined techniques measured not only the age of the rocks, but the rate of processes which now elucidate many aspects of the Earth's evolution.

Even today the Earth's chronology remains a contentious topic - particularly for those dating the oldest rocks - and it is implicated in debates surrounding our hominid ancestors, the origins and development of life, and the age of the universe.

*The Age of the Earth: from 4004 BC to AD 2002* will be of particular interest to geologists, geochemists, geophysicists and historians of science, as well as astronomers, archaeologists, biologists and the general reader with an interest in science.

• 296 pages • 19 papers • index

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Cover illustration: The Dhustone Section. Ink and water-colour drawing in the Shropshire County Museum Service geological collections at Ludlow. This meticulously constructed geological section illustrates the rocks and strata of England, from the most ancient (at the base) to the most recent (at the top), as they were understood in mid-Victorian times. The prominent feature, coloured in red, is thought to represent the famous Shropshire dhustone, an intrusive igneous rock. For centuries, this hard black dolerite has been quarried for roadstone on Titterstone Cleve Hill, five miles east of Ludlow. Photograph by Gareth Thomas FRPS. © Shropshire County Museum Service (Ludlow Museum).

ISBN 1-86239-093-2

