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Perilous Planet Earth - Catastrophes and Catastrophism through the Ages, by Trevor Palmer, 2003. Cambridge University Press, The Edinburgh Building, Cambridge CB2 2RU, United Kingdom. Hardcover, 369 pages text, 129 pages notes, 20 pages index, 44 figures. Price GB£ 45.00. ISBN 0-521-81928-8.

To succinctly characterise the book under consideration, the following quotation from its author is appropriate: "Two particular historical aspects are considered. Firstly, the book looks at the way in which prevailing views about modes of global change have changed dramatically over the years. The move away from support for change through relatively rare catastrophic events, toward theories of uniformity and incremental change, is charted. The author then discusses how modern theories consider both catastrophic and gradual change to be important forces in shaping the world around us. The second theme considers the way in which catastrophic events are now seen to have influenced the course of evolution in the distant past, as well as the rise and fall of civilisations in more recent times."

A great deal of attention has been given to the wider context of the first theme, the catastrophism versus gradualism controversy, which profoundly affected ideas on the evolution of both the Earth's surface and the forms of life occurring on it. Since the study of life not only refers to animals and plants but also touches upon the origin and evolution of mankind, natural science regularly clashed with the teachings of the Church and with philosophical trends of the time. In particular in the 18th and 19th century, clergymen, politicians, academics and gentlemen of leisure with intellectual ambitions were eager to participate in the debate on evolution which, according to the more conservative minds, threatened the very foundations of society. It testifies to the high standard of the book that, in Part I (Catastrophism: the story of its decline and fall - and resurrection), ample space is given to molecular biology and astronomy of the Solar System, two disciplines which have a considerable bearing on the subject matter. It fits, furthermore, in the overall design of the work that myths and legends that possibly had their origin in actual catastrophic events, are mentioned and discussed. Obviously, the concept of evolution, especially biological evolution, was challenged, not only by professional scientists but also by adherents of the so-called 'creation science movement'. Their assertions are taken seriously and refuted in a clear, cogent manner.

Part II of the book, entitled 'Catastrophes and the history of life on Earth' reviews geological, prehistorical and historical periods of environmental crisis and mass extinction of biota. For each timespan under consideration, causes of the pertinent events are analysed and the possible effects of extraterrestrial impacts are discussed. In particular in Part II, a really impressive amount of information has been compiled and commented upon in a very readable style. An important contribution to the content of Part II comes from participants in the Cambridge conferences of the Society for Interdisciplinary Studies (SIS) and the Cambridge Conference Network. Of course, the approach chosen by the author involves selection. In the section on Pleistocene climatic variation, this has resulted in an overemphasising of cosmic causes at the expense of well established theories having a terrestrial origin; this applies in particular to the drastically improved versions of the astronomical theory of Milankovitch.

In the last section of the fascinating publication reviewed here, the author summarises the ultimate objective of his work as follows: "In contrast to the situation only twenty years ago,

mainstream scholars are now prepared to take seriously the possibility that catastrophic events, including ones of terrestrial origin, may have shaped the course of life on Earth."

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