At first sight it might seem that there can be little to say about this book other than that it is the third edition of a work which, since its first publication in 1952 has become established as the leading work on geodesy in the English language, valued throughout the English-speaking world and indeed far outside it, as an authoritative compendium of the principles of geodesy, of methods of measurement and of application.

The third edition will surely maintain the reputation of its predecessors. Yet there is more to say, for Brigadier Bomford has revised, brought up to date and extended in a most thorough way. Thus while the traditional methods of triangulation, based on measurements of angle, are still to be found thoroughly discussed, the processes of traverse and trilateration, dependent on electromagnetic measurements of distance, are given full weight and, as the author says right at the start, they have to a large extent superseded in practical geodetic survey the methods of triangulation. Thus full account is taken of the impact of electromagnetic measurements of distance upon geodesy. Indeed, the theme of this edition may be said to be the effect of three great technical developments on geodesy—electromagnetic measurements of distance, electronic computers and the consequent thorough revision of methods of computation, and artificial satellites used both for geometrical and dynamical measurements. A very impressive idea of the revolution that has taken place in geodesy in the last ten years even, may be gained by comparing the present edition with the second, in which none of those technical developments, on which geodesy now completely depends, had a place.

Checks in many places show the new edition to be admirably up to date. For example, the section on time gives particulars of atomic time and universal time as provided by radio time signals in 1968. Again the tracking of satellites by timing of a reflected pulse of laser light, a quite recent development, is included. There is, however, one section that could do with pruning of antiquated material. The account of gravity measurements includes the three-pendulum method for the measurement of gravity at sea, now I suppose never used, and various gravity meters long since superseded. The description of pendulum measurements on land also refers to what, by the standards of this edition, is the distant past (at least in the diagrams).

The reader new to 'Bomford's Geodesy' can be assured that he will find here a succinct account of the essentials of every aspect of geodesy, a starting point for the student, a ready reference for the practitioner. The ten appendices are, as in previous editions, a most valuable feature and there are 531 references, a large number of them from the last fifteen years.

The production is impeccable.

A. H. Cook

Adventures in Earth History

Preston Cloud (Editor)

(W. H. Freeman and Co., New York, 992pp. cloth £8.20, paperback £3.70)

The idea of gathering together important articles on a particular branch of science, providing editorial annotations, and then publishing the result as a supplement to, or even as a replacement of, the traditional textbook has grown in popularity during the last few years. But the British and American approaches tend to differ. This can be clearly seen if the present compilation by Dr Cloud is compared with another recently published volume, Understanding the Earth—the Open University reader in the Earth Sciences. Both have somewhat similar aims, in that they are intended to provide background reading for university courses in geology, but whereas the British book consists mainly of articles specially written for the occasion, and therefore