

begun by members of the universities of Liverpool and Aberystwyth and with Survey collaboration a 1:25,000 map covering Central Snowdonia was published in 1972. It served the geosciences community well for more than a decade, though it had no accompanying explanation.

There was then some debate as to whether to incorporate this compilation in the regional 1:50,000 sheet coverage or to resurvey at the scale of 1:10,000. Resurvey involved high cost, for it was recognized that the area, with its rugged terrain and complex lithologies, was of such academic interest that the quality of mapping would have at least to match that of the great Tertiary Volcanic mapping by the Scottish Survey in the 1920s. My own doubts as head of the unit at that time were over-ruled, and mapping on a topographic base provided by customised aerial photographs was begun. Had any doubts remained they would have been resolved by the publication of this memoir which rounds off 30 years of intensive and productive activity by the Survey and its supporting academic researchers. It is entirely appropriate that the senior author of the memoir should be M. F. Howells who remained as the core member of the unit from the outset of mapping and has more than a score of joint papers on mainly Snowdonian volcanological topics credited to him in the extensive bibliography.

With much of the volcanic stratigraphy and nomenclature already covered by earlier publications, the memoir has had the space to give a full accounting of the biostratigraphy of the mainly sedimentary Cambrian and early Ordovician successions. Structure, metamorphism and geophysical investigations are also fully covered. The text throughout is succinct and is handsomely illustrated by 29 two-coloured line diagrams. This, together with the good quality of the coloured plates forming the frontispiece and soft cover, makes the memoir a desirable addition to any bookshelf. It might be hoped that the barely adequate quality of some of the 13 black and white plates together with the overprinting error which rendered p. 88 totally illegible are peculiar to this reviewer's copy. E. H. FRANCIS

From isotopic dating through to the sourcing of artefacts, geology and archaeology share many techniques and approaches. However, the two fields probably interface most closely in the study of the processes that shaped the ancient landscape and its relationship with human activity.

The people of the Archaic Period (roughly 8000–2000 BC) were hunter-gatherers who subsisted mainly on small game, fishing and gathering wild fruits and nuts. The Archaic saw increases in population and the development of regional identities, specialised tools and strategies for intensive food collection. These changes precursored the later development of tribal societies or chiefdoms, the use of pottery and eventually the development of agriculture, and are generally considered to have been fostered by environmental pressures caused by climatic and sea-level changes.

Each of the seven papers in this volume reviews the evidence for the Archaic environment in a particular region of North America, from the Rocky Mountains across to the Atlantic Continental shelf. They also focus upon the extent to which the archaeological record as we see it today has been modified by geological processes, covering, exposing or destroying the sites in the intervening period. Thus not only does the archaeological geology provide an understanding of the prehistoric environment and its effect on cultural development, but it also gives an indication of the integrity of the archaeological record: to what extent is the distribution of archaeological remains today an accurate reflection of the past?

The contributions are well written and well illustrated, the reviews are comprehensive and well referenced with bibliographies typically containing ~ 500 entries each. For the reader who wishes to obtain an insight into the multi-disciplined approaches adopted in archaeological geology, it is highly recommended. I. C. FREESTONE

Radhakrishna, B. P. and Vaidyanadhan, R. *Geology of Karnataka*. Geological Society of India, Bangalore, 1997. Paperback, xii + 353 pp. US\$25.00. ISBN 81-85867-08-9.

Bettis, E. A. III. *Archaeological Geology of the Archaic Period in North America*. Geological Society of America Special Paper 297, 1995. 154 pp. Price US\$45.00 (post paid). ISBN 0-8137-2297-7.

This book is the enlarged and revised second edition of a volume first printed in 1994. The structure of the volume, divided into two unequal parts dealing with the geology and then geomorphology, remains the same. The revisions