Multidisciplinary Research at Grasshopper Pueblo, Arizona. Edited by W. A. Longacre, S. J. Holbrook and M. W. Graves. 1982. ix + 138 pp. Anthropological Papers, University of Arizona (Tucson), No. 40. (paperback). $12.95.

Grasshopper is a large "pueblo" site in the upper Salt River drainage of Arizona that was occupied for about a century after about AD 1275. This monograph brings together over a decade of research, and represents the first systematic attempt to present and *integrate* multidisciplinary data for a site of this type or, for that matter, any site in the American Southwest. Various chapters present the modern environment, archaeological sediments, dendrochronology, the different faunal components, plant remains, pollen profiles, selected human skeletal data, and some interesting contributions to settlement formation and abandonment. The geo-archaeological study, including an experiment in the formation of lamina-sets, explicitly emphasizes the importance of distinguishing cultural and non-cultural deposits, without, however, applying sedimentological techniques or geochemical analyses. Not a novel realization as such, this nevertheless is a significant landmark in Southwestern archaeology. The lists of aquatic animals, larger mammals (non-domesticated), microfauna, and birds are remarkably comprehensive, but include no quantitative data, e.g. minimum numbers of individuals. The seeds suggest some

utilization of wild plants. The cranial data are utilized to reconstruct biosocial units and mating patterns, a challenging even if not entirely convincing experiment. Whatever its shortcomings, this volume should stimulate other archaeologists working in the Southwest to deviate from their introverted, autecological paradigm to make better use of bio- and geo-archaeological data.

Karl W. Butzer

Geoarchaeology of the Hiran Valley, Saurashtra, India. By Ashok R. Marathe. 1981. xii + 130 pp. Deccan College, Postgraduate and Research Institute, Poona.

This painstaking doctoral dissertation focuses on a single drainage of the Gujarat Peninsula, but contributes significantly to the Quaternary history of a region once studied by the late F. E. Zeuner. Various alluvial generation, transgressive sediments (*miliolite*, including beach, intertidal, and eolian beds), and paleosols are examined by means of profiles and solid analytical work to develop the most impressive regional sequence yet published for the Indian subcontinent. Noteworthy is that the alluvial units and at least some of the soils are linked to lower world sea-levels. The archaeology is on less solid ground, with a few Acheulian implements apparently linked to the older and coarser of two Pleistocene fluvial formations, a little "Middle Palaeolithic" material to the younger, finer-grained of these. One may hope that future Palaeolithic research in India will encompass similar regional studies, but also include excavation of more productive, *in situ* archaeological sites.

Karl W. Butzer

Pleistocene vertebrates in the British Isles. By A. J. Stuart. 1982. 212 pp., 20 tables, 161 figures, appendix, index. London: Longman. £16.50.

The stark specialist title of this excellent book rather belies its content because taxa (of all vertebrate classes) are examined from several points of view, and successful attempts are made to draw generalizations carefully within the limits of the material. A relaxed style and high standard of presentation make the book delightful to handle and easy to use and these qualities are facilitated by the commendable practice of combining Latin and common names in the text and full indexing of both.

A major point of interest concerns the organization of the book which invites comparison with B. Kurtén's *Pleistocene Mammals of Europe* (1968). The bulk (Part 2) of the latter comprises a catalogue of species grouped by order and family, discussion of each taxon referring to its distribution, evolutionary history and systematic relationships. Stuart cuts across this pattern and, at risk of repetition, disperses his information into separate chapters on Taxonomy and Identification (3) Palaeoecology (5) and stage faunas (6, 7, 8). But he neatly avoids overlap and has succeeded in presenting ecological and environmental accounts of much interest and value to other Pleistocene specialists.

Chapter 2, an uncontroversial summary of Pleistocene stratigraphy, chronology, floras and environments, serves well to support the ensuing examination of vertebrate fossils but it also reveals the inability of vertebrate evidence to revise the traditional sequence. Although Stuart expresses the fear that new sites are being placed perhaps too readily into traditional chronological slots, he nevertheless tacitly supports this sequence by accepting a Wolstonian glaciation and by regarding all Ipswichian material as representing a single interglacial.

Man merits separate consideration in Chapter 10 where a review of archaeological evidence for hominid presence inevitably prevails over discussion of the meagre human fossils. Man's influence on the vertebrate fauna at large is assessed but Stuart seems unenthusiastic about a human cause for Late Pleistocene extinctions of large animals.

British archaeologists at least should find much of interest in Chapter 3 which elucidates both the nature of available vertebrate material and the characters useful in taxonomy and identification, and a more than passing interest in Hoxnian faunas contemporary of course with the