

conservation of the undisturbed rain forest, because this vegetational zone has a higher density and diversity of primate species than any other.

According to the author, this monograph is intended to contribute not only to a better un-

derstanding of the African Colobinae, but also to the development of more realistic theories on the evolution of primate social systems and their relation to ecology. I feel that Struhsaker has fully succeeded in his intention.

Archaeology

Geoarchaeology: Earth Science and the Past. *D. A. Davidson and M. L. Shackley, eds.* London: Duckworth, 1976. x + 408 pp. £12.00 (cloth).

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Donald Davidson and Myra Shackley organized a symposium of "Sediment and Archaeology," held at the University of Southampton 15-16 December 1973. Some 24 papers were presented, mainly by British participants, and have been assembled and published in this volume. Only a few of the authors have attempted to present nonparochial papers that clearly pose problems, present data, and specify conclusions. And yet the composite provides a stimulating overview of research modes and interests in geoarchaeology that contributes substantially to the definition of an emerging subfield.

The lead paper by Colin Renfrew points out that archaeologists and "natural scientists" have, in the last two or three decades, attempted to bridge their mutual ignorance of each others' disciplines and sought to provide broader perspectives on problems of common interest. One result has been the crystallization of a subfield of *archeometry*, concerned primarily with dating techniques, magnetometer-assisted subsoil surveys, and a variety of artifact-specific techniques such as metallurgy. Another outgrowth has been the application of botanical or zoological expertise to the study of prehistoric man-plant or man-animal relationships, an endeavor now increasingly labelled *bioarchaeology*. Interaction between archaeology and the earth sciences has a much longer tradition. In fact, most Paleolithic archaeologists until the 1920s were trained geologists or paleontologists, and the establishment of archaeology as a social science can be attributed to an uneasy fusion between excavators coming from classics backgrounds and those trained in anthropology departments. Increasing concern with a specifically archaeological methodology came at the cost of interdisciplinary perspectives, and the unintegrated multidisciplinary report was first

implemented in the 1930s and remains fashionable (see my discussion in *American Antiquity* 40:106-111). Yet the need to focus information about sediments, soils, and geomorphic settings on the archaeological site is now greater than ever. Renfrew defines the primary concern of *geoarchaeology* as the context in which archaeological remains are found.

The book itself is oriented along the more traditional subdivisions of methodology and archaeo-sedimentary contexts, e.g., coastal, lacustrine, or terrestrial. I would prefer to discuss some of the major contributions according to the four geoarchaeological themes identified by Renfrew:

(1) *The site and its position in time.* A traditional concern has been the establishment of a lithostratigraphic sequence within or adjacent to a site, so as to allow correlation with whatever climato-stratigraphic scheme happens to be in fashion. This provides relative dating, an essential component to Paleolithic archaeology prior to the advent of isotopic techniques and still a critical aspect of site context. Although a majority of the papers do deal with stratigraphy, such concerns are mainly (and admirably) subordinated to procedural or paleoenvironmental goals.

(2) *The formation of the site.* The man-influenced geological processes that lead to sediment accumulation and archaeological preservation range from aggradation along streams and shores (possibly accelerated by human interference) to the creation of cave fills and the formation of midden heaps or tells. Surprisingly, little conscious attention is devoted to this theme, but F. G. Fedele does attempt to rationalize geoarchaeological procedures within a human ecosystem model, T. J. Wilkinson elucidates sedimentary processes peculiar to architectural ruins, and Davidson performs a veritable *tour de force* in his study of the processes involved in tell formation and erosion.

(3) *Dispersion processes.* The incomplete record of artifactual materials due to differential burial, preservation, or dispersal is at least to some degree a matter of geomorphic and pe-

dogenetic processes. Anne and M. J. Kirkby examine erosion of mounds, and dispersal or mixing of artifacts, as geomorphic problems relevant to archaeological survey, while Bruce Proudfoot and G. W. Dimbleby examine phosphates and pollen, respectively, in terms of production and preservation in archaeo-sediments.

(4) *The site and its environment*. Paleo-environmental reconstructions have become standard fare, but—as I have noted elsewhere (*Reviews in Anthropology* 4:125-131)—scale distinction between local, regional, or macro-environmental settings are seldom clearly made. The majority of the papers in this volume are focused on local landscape changes (with examples from Britain, Mexico, Italy, and Greece); broad environmental deductions; or procedures of lithostratigraphic inference (e.g., cave sediments in France and South Africa; paleohydrology).

Altogether *Geoarchaeology* provides multiple vistas, suggestions, or examples that help define the nature of an increasingly self-conscious subfield. It is to be expected that a sharper resolution of the goals and optimal procedures will result from this stimulus and that more and better contextual studies will contribute substantially to our understanding of prehistory.

Man in Prehistory. *Chester S. Chard*. New York: McGraw-Hill, 1975. x + 406 pp. \$9.95 (cloth). [Second ed. First ed. 1969.]

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In a critical review of the 1969 edition of this widely used undergraduate introductory text, Wilmsen (*AA* 72:689-691, 1970) takes Chard to task for espousing the pursuit of description (culture history) instead of explanation (culture process studies), for a “narrow inductivist” stance, which implies that data exist apart from the hypotheses that define them, and for a failure to make reference to systemic approaches to the study of culture change. Although revised and updated somewhat with respect to content and bibliography, the 1975 edition continues to be explicitly culture historical. Chard asserts that an appreciation of the chronologically ordered and spatially defined “facts” of global culture history is both more palatable to the novice archaeologist than the

more abstract “scientific approach,” and, at the same time, is logically prior to it, because culture history provides the foundation and perspective required for the study of culture process (pp. vii-viii).

While Chard’s assertions are certainly questionable, I think that Wilmsen, speaking for the “new archaeology,” unfairly castigated Chard for failing to accomplish what he never intended to do. It is not so much that Wilmsen’s remarks are inaccurate, but rather that they are beside the point from the perspective of many within the discipline. Chard, on the other hand, in defending the paradigm of culture history, has adopted an unnecessarily rigid position that seldom acknowledges that the “scientific approach” can lead to new insights useful in developing more adequate models for explaining the very events that he seeks to chronicle. Most archaeologists would probably regard these polarized positions as untenable today.

For those unfamiliar with it, the book consists of a straightforward, well written and fairly comprehensive overview of human biological and cultural evolution. It is divided into three parts that deal, respectively, with Pleistocene hunter-gatherers; the Early Holocene transition to food production; and the emergence of complex societies in the Near East, Asia, and the New World. The treatment of these “decisive ecological shifts” (p. 10) is necessarily uneven, but that is hardly Chard’s fault.

Whether the book is worthwhile or not depends ultimately upon the orientation of the instructor. If a strictly historical stance is taken, in which facts are regarded as primary and prehistory is viewed as an extension of history into the preliterate past, the book is reasonably well suited for that kind of course. If a thorough grounding in current theories that seek to describe/explain processes of culture change is considered fundamental, the book is narrow, dated, and inadequate. The continued existence of areally defined culture history courses in the curricula of most anthropology programs suggests that the former perspective still has many adherents, some of whom would probably argue, as does Chard, that a survey of man’s biocultural evolution is critical before theory building can proceed. But the humblest fact is theory laden, and foundation in archaeological method and theory at the undergraduate level is also part of most college curricula. On balance, a more successful text would have resulted if more current thinking about process questions could have been integrated with the up-