Anthropology

Understanding Culture. John J. Honigmann. Harper and Row, New York, 1963. x + 468 pp. Illus. $6.75.

The purpose of this volume is very honestly and concisely indicated by its title. Indeed, from the start, this consistently serves as a keynote for the author's method of presentation. The writing is clear and straightforward, the examples cited are pertinent, and the author never appears to hesitate in setting forth his opinions. The range of evidence cited, although it leans heavily on a few cultures, is world-wide. Quite properly, the cultures emphasized are those which Honigmann knows best, including the middle-class, Atlantic seaboard, white, modern culture of the United States. The advertising blurb on the dust jacket calls this simply United States culture, but I do not hold the author responsible for this mistake.

The extensive use of pictures, charts, maps, and pertinent quotations from original sources add to the explanatory nature of the book. Its utility as a textbook is also helped by the extensive and well-selected bibliography at the end of each chapter. A different aspect of culture is investigated in each of the first 15 chapters, and the sequence of chapters is as logical as that in any other text. The last four chapters deal more specifically with chronological change, and in my opinion, they are weaker than the others. The author, a confirmed functionalist, seems a little uncertain, or perhaps unhappy, about the dimension of time. Indeed one sometimes gets the impression that he considers time to be nothing but an artifact of the cultural predispositions of Occidentals. As a lesson to beginning students who are unaware of other cultures, this point of view has excellent shock value, but as scientific analysis, it is dubious.

As a result, the treatment of the varied evolutionary hypotheses of different anthropologists is a bit shallow and sketchy: Honigmann seems quite unable to perceive that biological and cultural evolution are as different as either one is from physical or chemical evolution. Chapter 18 deals most inaccurately with the biological evolution of our species and really should have been omitted entirely. A chapter or two (at the beginning of the book) that demonstrate the way in which the biological capacity for culture emerged among our ancestors, and how culture moulded their biological evolution thereafter, would have been more suitable. On the other hand, the author's vigorous exposition of the fallacies inherent in economic and environmental determinism is excellent. His consideration of the range of individual variation, within what he aptly terms the "Map" provided for human behavior by culture, is even better. As a whole, and in most of its parts, the book is good.

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Palynology

Lower Upper Cretaceous Plant Microfossils from Minnesota. R. L. Pierce. University of Minnesota Press, Minneapolis, 1961. xi + 86 pp. Illus. Plates. $3.75.

This monograph, *Minnesota Geological Survey Bulletin No. 42,* is a published Ph.D. dissertation that deals with the palynology of lower Upper Cretaceous (Cenomanian?) clay and lignite deposits in south-central, central, and northeastern Minnesota. It is the first extensive study of Cretaceous palynology published in the United States and for an area where the stratigraphy of the Cretaceous rocks is not definitely established.

It is inferred that the flora reported constituted a forest principally of conifers that belong to the family Podocarpaceae which is found today in eastern Asia, Mexico, and the southern hemisphere. Dicotyledonous angiosperm pollen constitutes a minor element in the palynological assemblages. The paleoecology of Minnesota during the time covered by the sediments studied is postulated as a moist, warm-temperate climate, in an area of low relief.

The format of the volume is good and the illustrations, one text-figure and three plates that contain a total of 114 photomicrographs, are of good quality, except for a few illustrations of sporomorphs which are too small to show desirable details. The text is divided into five parts or chapters. The introduction contains a brief review of the Cretaceous deposits in Minnesota and of previous work on Cretaceous palynology in North America and elsewhere and a statement of the investigator's objectives. Chapter 2 is a description of the sections studied and the palynological techniques employed. Chapter 3, "Classification and description," constitutes nearly one-half of the volume; in this chapter the author deals with his concept of the problems of nomenclature and classification. The chapter also contains a historical résumé of sporomorph nomenclature and classification, eclectic aspects of palynological nomenclature and of sporomorph morphology and classification, and descriptions of sporomorphs observed in the Cretaceous deposits of Minnesota. In chapter 4, "Interpretations and discussion," the author reviews the Dakota Sandstone flora and affinities of the sporomorphs, compares the megafossil and microfossil records, and considers paleoecology, paleofloristics, Cretaceous palynology and plant evolution, and the geological aspects of Cretaceous palynology. Chapter 5 is entitled "Summary and conclusions." A large list of references is included, some of which have little or no bearing on the subject.

This study contains a good description of the sporomorph types from the Cretaceous deposits of Minnesota. The paleofloristic and paleoecological observations are very thought-provoking. Palynologists will criticize the system of classification and the nomenclature used, the brevity of descriptions, and the polysyllabic names proposed for new genera. The rules for valid names set forth in the International Code of Botanical Nomenclature have been ignored, and it is possible that all of the new genera proposed by Pierce can be related to others now validly published.

In separating genera, the author places much stress on ornament detail —for example, on granulation, punctation, reticulation, and the like in the saccate pollen grains. On many fossils and modern sporomorphs some of these characters occur together on the same specimen, or on more than one individual of the same species, as a result of differences in the preservation or in the processing of the specimen, or because their appearance varies with different optics. Pierce neglects morphological characters more basic than ornamentation, and obviously dissimilar sporomorphs will be united if his extremely artificial classification is followed. Other sources should be consulted for valid generic names.

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