

In conclusion, the following typographical errors should be noted; *illiances* for *alliances* (p. 66), *take* for *takes* (p. 69), *palmiforlia* for *palmifolia* (p. 77), and *FaFlBrSon* for *FaElBrSo* (p. 24). It also appears to me that there might be an additional error in the listing of the kinship denotata. After the kin term *arunE* (p. 24), Newman lists MoSiDaDa. If the children of an *arunE* are *noho* (e.g. SiSo, SiDa), then MoSiDaDa would be *noho*. Perhaps Newman intends this listing to be MoSiSoDa rather than MoSiDaDa. But if this is so then he has not listed the kin terms for the children of either the MoSiDa or the FaBrDa and we can only assume that the proper term is *noho*. Obviously, the kinship terminological system of the Gururumba is more complex than this short list depicts.

Aside from some of my possibly misplaced criticisms, this monograph on the Gururumba should be a 'must' for all undergraduates and it won't hurt graduate students to study it as well.

Edwin A. Cook
Ass't Professor of Anthropology
University of Hawaii
Honolulu, Hawaii

*

*

*

Frameworks for Dating Fossil Man. Kenneth P. OAKLEY. Chicago, Aldine Publishing Company, 1964. x-355 pp., illus. \$8.75.

In an earlier review in this journal (*Anthropologica*, vol. VI, no. 2, 1964, pp. 253-255) I deplored the lack of a reliable and comprehensive textbook on Old World prehistory for use in advanced undergraduate courses. Oakley's book does not satisfy the need completely in this respect, nor did the author have this aim in mind, but it does go part of the way,

Oakley's intention originally, he tells us, had been to write a much longer book, but ill health and the persuasion of his superiors at the British Museum (Natural History) caused him to publish it as it stood in 1963.

The title may be somewhat deceptive, for it deals with prehistoric cultures of the Palaeolithic and Mesolithic periods as well as with fossil skeletal materials. Oakley is primarily a Pleistocene geologist with a particular interest in stratigraphy and in methods of dating hominid remains. He has himself been responsible for developing new means of establishing the ages of archaeological materials, especially the fluorine process which he used so successfully in the Piltdown case. The first half of his book is therefore devoted to descriptions of the principal ways of establishing absolute (or, as he now prefers to call it, chronometric) and relative dates. This part consists of 16 brief chapters on glacial and post-glacial chronology, river terraces, faunal correlations, palynology, varves, sea and land level changes and descriptions

of the stratigraphic sequences in a number of areas of the Old World. Part 2 concerns itself with archaeological dating and describes in broad outline the main Palaeolithic and Mesolithic cultures of Europe, the Near East, Africa and Asia. Each half of the book is followed by its own bibliography and its own series of notes. The latter are especially useful in enlarging on or clarifying points which could not be treated in the text. There is a valuable set of tables (in 44 pages) listing virtually all the Palaeolithic and Mesolithic skeletal remains known in the Old and New Worlds, giving for each the date of discovery, the name or type, the stratigraphic position, the cultural affinities and, if known, the age in years. Maps, charts and illustrations are liberally scattered through the volume.

This is essentially a handbook, for reference and information purposes, rather than a text. The emphasis is on description rather than analysis, especially in the archaeological sections. This is not meant as a pejorative criticism; the book was not intended to be a definitive treatment, Oakley does most of what he tried to do very well and the original sources on which he bases his descriptions are usually well chosen and up-to-date.

As a rule a reviewer deals most harshly with an author when he impinges on the reviewer's own field or speciality. In this case it is the reverse. Oakley's accounts of the Palaeolithic and pre-Neolithic cultures are good and show a commendable objectivity in treating Africa and Asia in as much detail as Europe and the Near East. Some of his suggestions show considerable insight, e.g. his remark (p. 271) that a number of industries in northern Asia might be viewed provisionally as belonging to a "Far Eastern Late Palaeolithic complex". One could quibble over his ambiguous use of such terms as *Levalloisian* (culture? technique?) and *Mesolithic* (cultural grouping? period?). Frequent references to "hybrid" industries could cause confusion. The West European Upper Palaeolithic sequence is given in detail but Central and Eastern Europe are left in the shadows. More space might have been allowed to the Late Palaeolithic in the Middle East. An archaeologist might be forgiven for feeling less confident than Oakley that major geological/climatological events can be shown not to be equivalent from one continent to another "by using the spread of Palaeolithic traditions as time lines" (p. 137).

The weakness of the book, in my opinion, lies in a certain lack of proportion in Part 1. For example, although much space is given to the principles of dating by river terraces, and the Somme Valley gets a complete chapter, that other vital European river, the Thames, where Oakley himself helped work out a magnificent chronology some years ago, is hardly mentioned. The eight pages devoted to fauna are not enough; the important question of "warm" vs. "cold" faunas is hardly touched. Palynology is disposed of in an even shorter chapter. The Alpine glacial sequence has been overemphasized in describing the European Pleistocene chronology. I wish more space had been devoted to loess, and that a separate section had been allowed for climatology. The scheme of Pleistocene subdivisions employed is essentially that proposed by Wolstedt in 1958; a fuller discussion of the criteria used and the superiority of one scheme over another would have been helpful for students who are

not acquainted with the geological and palaeontological backgrounds of these controversies. The terse, fact-filled writing makes this book difficult reading at times for the uninitiated; in fact, even specialists can be puzzled by certain statements.

These relatively minor criticisms should not disguise the fact that this is an important and valuable book. Nevertheless, one can feel a certain regret that Oakley abandoned his original plan of a book four times the length of this one, and especially his decision to publish separately his excellent essay "The Problem of Man's Antiquity. An Historical Survey" (*Bulletin of the British Museum, Natural History, Geological Memoirs*, vol. 9, no. 5, 1964).

Philip E. L. SMITH
Department of Anthropology
University of Toronto

*

*

*

Introduction to Applied Statistics. John G. PEATMAN. New York, Evanston, and London, Harper & Row, 1963. xv-458 pp., illustrations. \$7.95.

Peatman does not claim that his book presents any important new developments in statistical theory or technique; it is intended rather as an introductory text in applied statistics, primarily for psychologists, but of use also for sociologists and cultural anthropologists. It contains a good deal of solid substance, and more detail than many introductory texts offer. A diligent student who for some reason had no access to any other statistics book could learn many useful procedures from Peatman's, including uses for Chi Square and for the t Test, and multiple correlation and regression and analysis of variance methods. However, many other introductory books on statistics are available, addressed to roughly the same group of readers, and one must judge Peatman's book in comparison with these others.

My reaction is unenthusiastic. I can think of no potential reader who would not find alternative texts as good or better. In particular, I think it unsuitable for a one-semester introductory course because, judging by my experiences in several years of teaching such a course, most anthropologists lack the mathematical skills to be able to cover, with any useful comprehension, more than about half the material in that much time. For a one-year course, or for more mathematically inclined readers, I would still prefer other books; above all because this one has a general infelicity of style that too often becomes downright murky and obscure. A few examples can be mentioned. On pages 21 to 39 the discussion implies that variables which are countable and orderable differ in some important way from those called rankable, and that variables which are countable and scalable differ from "measurables" (that is, those for which an interval scale can be established). If there are important differences, I do not understand them.