

reader may be tempted to adopt at least one form of correction factor to produce more absolute ages... (p73). The non-specialist, who has to make a selection and evaluate conclusions, understandably requires assistance, or positive or negative recommendations. In the examples given of the application of the methods, Dr Fleming concentrates on the results, and not the validity of their interpretation.

The selection of examples of applications is wide-ranging, and one of the merits of the book is that it draws on material not readily accessible, but some omissions are rather surprising from an archaeological viewpoint. For example, scientific dating has had a considerable impact on the chronology of prehistoric Europe, but two references to the same paper is scant recognition of the lengthy debate which has produced a book and numerous papers. It may be considered that no conclusions are yet possible or that the topic has already been fully discussed, but readers familiar with the arguments will also be conversant with much work in this book. Also, the chronological framework discussed in chapter 1, and that indirectly derived from it, have been discussed in the light of new dating evidence, and a final summary of the continuing validity of the original patterns would have been helpful.

The topics discussed are continually being developed and modified, and the author has made a conscious effort to keep the bibliography up-to-date. Although it is useful to find descriptions of methods, like acid racemisation, which have so far only achieved limited recognition, from the point of view of archaeologists the changes in the main methods have been evolutionary rather than revolutionary in the few years to elapse since the last synopsis was published.

Despite the comments above, there is much of merit in this book. It contains a wealth of information, it is up-to-date, the methods are described clearly with an adequate amount of detail, and the diagrams are particularly clear. One distinctive feature is that analytical techniques and applications which have chronological implications are rightly included. It can certainly be recommended as the most up-to-date text for non-specialists, and the author is only unfortunate that he has followed a path which a number have trod. Perhaps the definitive book on dating, which Dr Fleming is admirably qualified to produce, is not destined to appear in the immediate future. □

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## History of the Nile valley

**Gudrun Corvinus**

*Prehistory of the Nile Valley.* By F. Wendorf and R. Schild. Pp. xxiv+404. (Academic: New York and London, 1976.) \$25; £13.75.

THE INTENTION of this book is to assemble and present all the available data and observations made during three seasons of fieldwork (1967-69) along the Nile in Egypt. The first part of the book covers in considerable detail the geology and stratigraphy of the Final Pleistocene Nile sediments between the Assuan and Fayum Depressions, including comprehensive descriptions of sites and sections. The second part describes and revises the sequence of stratigraphical and chronological events, and attributes the archaeological sites to cultural units.

The book is well illustrated with maps, section drawings, drawings of artefacts and photographs which clarify the rather lengthy descriptions of the sites. Regrettably a few names of the areas discussed are not mentioned in any of the maps.

The title of the book is somewhat misleading in view of the detail concerning the geology and palaeoenvironment; this latter is, nevertheless, of considerable value. The purely archaeological descriptions occupy only a small portion of the book.

## Lake Rudolf Basin

**G. E. Kennedy**

*Earliest Man and Environments in the Lake Rudolf Basin: Stratigraphy, Paleocology and Evolution.* Edited by Y. Coppens, F. Howell, I. Clark, L. Glynn and R. E. F. Leakey. Pp. xxi+615. (University of Chicago: Chicago and London, 1976.) Cloth £11.90; paper £5.80.

PALAEANTHROPOLOGISTS have often discussed the value of an interdisciplinary, 'synthetic' methodology and yet this approach has not been highly visible in the literature. This book, and the recently published *After the Australopithecines* (ed. K. W. Butzer and G. L. Isaac; Mouton: The Hague and Paris; Aldine: Chicago; for review, see *Nature*, 262, 331, 1976) may represent a strong sign that broad interdisciplinary analyses of early man sites will become the rule rather than a

The most significant contribution that the book makes is the revision of the sequence of events of the Final Pleistocene and Early Recent periods. The authors have assembled and interpreted a considerable amount of new data, filling gaps in the existing knowledge of the prehistory of the Nile and leading them to revise previous concepts.

The principal amendments concern the two large aggradations of the modern Nile. The Ballana Masmis episode is regarded here as one unit of simultaneous dune formation and Nile silt aggradation. A number of carbon-14 dates place this period between 17,000 and 15,000 BC, two different archaeological complexes having been recognised (the Idfuan and the Fakhurian). Furthermore, the Darau Member of the Kom Ombo area and the late Sahaba Formation of Sudanese Nubia belong, according to the authors, to the same episode of Nile aggradation and are termed here the Sahaba-Darau aggradation. The archaeological sites attributed to this period, dated from 12,000 to 9,700 BC, are the Afian, the Sebilian and the Isnan industries.

The authors are to be commended in attempting to compile and interpret such a vast amount of data. The book will serve as an excellent base for further research and as a reference for comparative studies, and will mainly interest the specialist in this field. □

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rarity. It is no doubt a sign of this trend that reports of the hominids found at East Rudolf comprise only five papers out of a total of fifty in this volume. These papers, presented at a workshop held in Nairobi in September, 1973, have been arranged into three sections: Geology and Geochronology; Paleontology and Paleoecology; and Paleoanthropology.

From this volume it is apparent that there are areas of both agreement and disagreement among the thirty-eight scientists who were involved in the Nairobi workshop. An interesting area of agreement concerns the occurrence of a climatic change between 2.5 and 2.0 Myr BP. This change, which resulted in drier conditions and an expansion of grassland areas in the Rudolf basin, has been indicated by studies on pollen (Bonfille), bovids (Gentry) and micromammals (Jaeger and Wesselman). Documentation of climatic change at this time is of particular interest because the first clear evidence of archaeological materials also occurs within this period. Although the relationship, if any, between climatic