

chapter-headings are merely descriptions of actual texts, such as "The First Love-song", "The First Proverbs and Sayings", "The First Tale of Resurrection", "The First Library Catalogue". Others are aspects of Sumerian society deduced from incidental references in one or more texts, such as "The First Bicameral Congress", "The First Experiment in Shade-Tree Gardening", "Man's First Cosmogony and Cosmology". The strange theocratic world-view of the Sumerians is well illustrated by the document translated under the heading "The First Historian". Another text reveals their quaint analysis of their own culture into more than one hundred elements (ranging from institutions like "kingship" to abstractions like "justice" and "terror"), which can be loaded into a boat and carried from one city to another. The remarkably human essay quoted under the title "The First Case of Apple-Polishing" gives a vivid impression of the life of a Sumerian schoolboy; and in the chapter entitled "Man's First Heroic Age", Prof. Kramer draws some far-reaching conclusions about Sumerian origins, which will doubtless not remain unchallenged.

This is a thoughtful and scholarly book, despite the colloquial tone sometimes adopted, particularly in the opening pages. The occasional glimpses of moments in the life of a Sumerologist and his search for 'joins' provide an attractive background to the description of the literature. O. R. GURNEY

EVOLUTION OF MAN

The Fossil Evidence for Human Evolution

An Introduction to the Study of Paleoanthropology. By Prof. Sir W. E. Le Gros Clark. (The Scientist's Library—Biology and Medicine.) Pp. x+181. (Chicago: University of Chicago Press; London: Cambridge University Press, 1955.) 45s. net.

IF Pierre Charron in his "Treatise on Wisdom" was himself wise, the true science and study of man is man. Things, of course, were easier in the sixteenth century when fossil men were not in the laboratory or the study. How much happier we might be to-day if the wisdom of Charron had been coupled with the earlier wisdom of Job, who inquired: "What is Man, that thou shouldst magnify him?"

Alas, in recent years the study of man has been attempted and magnified by all classes and conditions of men: geologists and palaeontologists; anatomists and anthropologists; statisticians and geneticists; blood-group specialists and geochronologists; and adventurers and plain unvarnished liars. Many of the results have added to a confusion that Pope might well have had in mind when he wrote of the "Sole judge of truth, in endless error hurled".

There are, however, ways in which the judges can review the evidence and determine the end of error-making. It may be said that in this slim and elegant volume of a new and enterprising series in "Biology and Medicine", Sir Wilfrid Le Gros Clark has made a brilliant start. This is not easy to do. Man has the palaeontological misfortune to be represented fairly generously in the Pleistocene and thus shares in the general regard for antiquity with the taxonomic confusion due to an almost super-abundance of contemporary specimens of the same animal. To all, ancient and modern, a generous amount of anthropomorphization is applied on the lines most familiar to the particular writer.

The answer to the question "What is Man?" is thus both complex and unsatisfying. It is hard to separate the basic facts from a mass of observation and opinion and from an immense literature. Sir Wilfrid recommends the study of genetics, and rightly so. In "Genetics and the Races of Man" W. C. Boyd in 1950 forecast that more and more attention would become directed to blood-groups; and since he wrote, well over a thousand papers have been published on the subject—a sobering thought on the evolutionary picture. The strongest possible support must be given to Sir Wilfrid's plea that the student of human evolution should have a much closer acquaintance with the facts of functional anatomy. Without this and the assurance it gives for critical appreciation of structural analysis, all the highly important new work on the dating of the Pleistocene will be much reduced in value and the evolutionary pathways indubitably obscured.

The accumulation and recognition of a total morphological pattern is not simplified either when, through lack of anatomical knowledge, the desire to create new genera or species on every fragment of hominid bone persists. The current value of human remains is sometimes to be assessed by the value the observer places upon his observation rather than upon the intrinsic characters of the specimen.

It is of paramount importance that Sir Wilfrid here approaches the subject from the point of view of the scientific palaeontologist and examines each piece of evidence as if it belonged to some animal other than man. He pays primary attention to the morphological and phylogenetic problems in taxonomy in relation to hominid evolution. This leads to a sound taxonomic system based on comparative anatomy, and placed on a background of geological time, that enables the distinction of hominid and pongid radiations to be made.

In the major portion of the book he follows the story of man's evolution in the logical way—from the known to the lesser known, the unknown and the postulated. In this route he recognizes taxonomic categories for *Homo sapiens*, *Homo neanderthalensis*, *Pithecanthropus* and *Australopithecus*.

Each of these sections ends with a diagnosis of the genus concerned and a discussion of its relationship with the other genera. The final chapter is on the origin of the Hominidae.

So far, the author says, no undoubted hominids have been found of an antiquity clearly older than the Early Pleistocene, and so far no fashioned implements have been proved of any greater antiquity. The relics of Pliocene hominids have yet to be discovered, though there is no doubt that such hominids existed.

It is thus all the more important to be able to be precise about the characters that these may have possessed and which will serve to distinguish them from the ten (at least) genera so far described of anthropoid apes of Pliocene and Miocene age.

The text is well illustrated by line-drawings, and there is a long and useful list of references. As a whole, the book will be of great interest to the anthropologist and quite invaluable to the student. Not the least of its appeal to vertebrate palaeontologists is the fresh draught of common sense that the author lets in on the nomenclatural fog. This is a wise and valuable addition to the library of the palaeontologist and physical anthropologist, and it can also be read by the layman.

W. E. SWINTON