

horn, the misunderstanding of the manner of flight of what Rudwick terms "pterodactyles", and the lack of awareness of the dorsal fin and tail-shape of ichthyosaurs. I must fault him for his confusion of *Cheirosauros*, *Chirotherium* and *Labyrinthodon* — the first two genera based on footprints, the last on bones — in his commentaries on Figures 47 (where the beast in the foreground gains no mention in the text), 49, 86 and 87. (These footprints were produced not by a quadrupedal amphibian, but by a bipedal reptile). Indeed, several vertebrates fare badly. *Archegosaurus* is not "the earliest reptile" (p. 180) but an

amphibian; *Rhamphorhynchus* is misspelled (p. 190); and the aurochs was not an "extinct wild bison" (p. 128) but the direct ancestor of our modern cattle.

Despite these carpings, this is a book that I can recommend wholeheartedly — an excellent concept, excellently executed. Historians of science and art, and indeed anyone interested in the creatures of the past, should find it fascinating. □

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Successor to Weidenreich

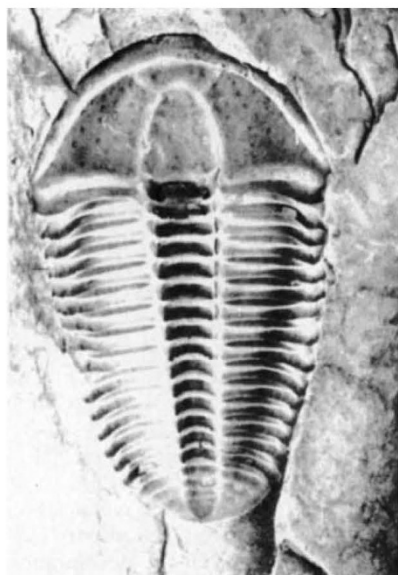
Eric Delson

Koobi Fora Research Project. Volume 4: Hominid Cranial Remains. By Bernard Wood. *Oxford University Press: 1991.* Pp. 466. £95, \$220.

THE fossil hominids (or more precisely hominins) recovered by Richard Leakey and colleagues from the northeast shore of Lake Turkana have been an important source of data and controversy in human palaeontology since 1969. The Koobi Fora deposits have yielded specimens allocated to the East African 'robust' australopith *A. boisei* and tentatively to the generalized *A. afarensis*, as well as to *Homo habilis* and *H. erectus*, whose definitions in fact are a main focus of this work. Although the specimens were usually briefly described after their discovery, it is only here that further details of their morphology and a comparative overview of their relationships are presented. Palaeo-anthropological monographs on human fossils are rare, but in the past two years G. P. Rightmire has perhaps too succinctly reported his worldwide survey of *H. erectus* (*The Evolution of Homo erectus*, Cambridge University Press, 1990), while P. V. Tobias has perhaps too verbosely detailed the fossils from Olduvai Gorge, Tanzania, attributed to *H. habilis* (*Olduvai Gorge IV*, Cambridge University Press, 1991). Wood's treatise is the best of these monographs and is a worthy successor to F. Weidenreich's series of reports on the Zhoukoudian remains (see, for example, *Palaeontol. Sinica, New Ser. D.* 10, 1; 1943), long the standard of comparison in the field.

F. H. Brown and his collaborators have recently surveyed in detail the chronology and palaeoenvironments of Koobi Fora, leaving Wood to concentrate on morphology. After listing all cranial (including dental) fossils by specimen number, Wood reviews previous analyses of early hominin taxonomy with a dozen tables of features distinguishing hominin species from one another. The meat of the book lies in Part II, three chapters providing descriptions and comparisons of the 126 Koobi Fora fossils. This section is organized by body part, but the breakdown makes it slightly hard to use. Wood first discusses the eight well-preserved crania and their attached teeth, followed by less-complete cranial fragments; the mandibular remains are treated similarly. But the isolated teeth are described separately, which may hinder direct comparison. All the metric

Tribute to trilobites



the entire Palaeozoic era. Indeed, they represent many people's first experience of fossil collecting.

This is why the appearance of this book should be welcomed. At first glance it has everything going for it — a comprehensive guide by an acknowledged authority, and the second volume in a series of illustrated guides to fossils aimed at a general readership. But apart from the photographs (which speak for themselves), *Trilobites* is a far less friendly proposition than *Graptolites*, edited by D. Palmer and B. Rickards, the book that opened the series (for a review see *Nature* 350, 202; 1991). There are very few concessions to the nonspecialist: too often one finds oneself enmeshed in the finer points of trilobite anatomy, almost always without a map or, often, a reason why. Clearly, Whittington is addressing not a general audience, but his peers.

It is ironic that the book's biggest flaw concerns a picture — or rather, the lack of one. There is no single, simple, labelled diagram in which the anatomy of trilobites is explained. In its absence, the meanings of terms such as pygidium, glabella, opisthoparian, pleura, hypostome, cranium and doublure remain hard to grasp except by inference; and the frequent discussion of such arcana without adequate explanation makes the book as a whole a tough read (the introduction to anatomy is itself hard to follow).

A further disincentive to the uninitiated is the price, which won't leave enough change out of £40 to sneeze into. As an album of glorious pictures, however, *Trilobites* would be cheap at half as much again, even if one didn't read the text. But it would be a pity not to do so, given the insight the text offers (albeit after extensive excavation). Published by Boydell, £39.95, \$79.

Henry Gee

If every picture is worth 1,000 words, *Trilobites* has 120,000 exclusive of text and captions. The author, Harry Whittington, presents us with a beautiful photographic guided tour of the trilobites he has examined during his long and distinguished career. The book is a kind of palaeontological *Desert Island Discs* in which each photograph has been selected to encapsulate a particular scientific point, whether about morphology of a single species or the preservation of fossils in general.

Trilobites were marine, jointed-legged creatures that looked a bit like modern crustaceans. They dominated the sea from their first appearance, back in the Lower Cambrian around 550 million years ago; diversified to occupy habitats from the plankton to the abyssal benthos; and survived until the great extinction that closed the Permian period, some 300 million years later. Longer-lived than the dinosaurs, and far more common as fossils, the trilobites epitomize