

Book Review

Evolutionary History of the "Robust" Australopithecines. Edited by Frederick E. Grine. Aldine de Gruyter, New York, 1988, 527 pp., \$99.95 (hardcover).

Almost 50 years after Robert Broom initially introduced *Paranthropus robustus* to the scientific community, a group of leading scholars of human evolution was assembled on Long Island, during the spring of 1987, for a 5-day workshop to discuss and debate current understanding of the hominid group to which *Paranthropus* belongs, the so-called robust australopithecines. The robust australopithecines, for a long time considered an interesting, but less than pivotal "side branch" of the human evolutionary tree, have been sorely neglected over the past two decades. So why the revived interest? Certainly a major factor has been the recent recovery of important hominid specimens from Swartkrans and West Turkana, which have profoundly disturbed the interpretation of human phylogeny.

This volume, edited in exemplary fashion by Fred Grine, represents a complete collection of the formal papers presented at the workshop. It comprises 30 original essays by 34 authors. The result is a well-produced, rigorously edited, and attractive, though somewhat prohibitively priced, compendium. It contains a wealth of information on the anatomy, phylogeny, systematics, natural history, and paleoecology of the robust australopithecines. In addition, as noted by Howell in his perspicacious Foreword, many of the contributions discuss issues that have much broader relevance for the field of paleoanthropology as a whole. It is certainly safe to say that this volume is essential reading for all those interested in human evolution. Most of the issues and views proposed here are already available, at least in essence, in articles scattered throughout the technical literature, so there will be few surprises in store for the well-informed bibliophile. Nevertheless, the volume does provide an easily accessible and focal collection of detailed papers, written by all of the "key players" studying robust

australopithecines during the 1980s. It will undoubtedly prove to be a useful resource for students and experts alike to turn to as a classic for many years to come. It provides an excellent synthesis and assimilation of the wealth of evidence that has accumulated steadily over the 50 years since the initial discovery at Kromdraai. However, it is worth pointing out that many of the contributions represent detailed technical reports by seasoned practitioners—they are certainly not recommended either for the uninitiated or as light reading for the inquisitive browser.

The book is conveniently subdivided into six sections. The first includes six papers which provide useful information on the anatomy and functional significance of the craniodental evidence. The second section contains four papers on body weight estimation and postcranial morphology. Susman describes important new postcranial material of robust australopithecines from Swartkrans. He concludes from the anatomy, as well as from the contextual evidence, that the robust australopithecines were tool-using hominids. This is an arguable viewpoint, with a number of shortcomings, but overall, the scenario is one which contains compelling logic, especially when the empirical evidence is detached from a *Homo*-centric resistance to accepting tool-using capabilities by small-brained hominids. The chapters by Jungers and McHenry independently corroborate that all early hominid species were, somewhat surprisingly, uniformly small in body size, with an average body weight of between 40 and 60 kg. From this, we are led to conclude that the massive proportions of the jaws and teeth of *Paranthropus* did not extend to the postcranial skeleton. This discovery prompted Grine, in the Preface and Summary of the book, to take umbrage with the term *robust* for this group of australopithecines; hence the somewhat distracting quotation marks around robust throughout the text. However, Broom originally perceived robustness as implying thick jaws and megadonty, and in this sense the concept is upheld by the authors in this volume. In my view, the sobriquet remains a useful vernacular term, especially in light of the consensus that the robust australopithecines represent a monophyletic grouping. Paradoxically, the term australopithecine, which is firmly rooted in formal nomenclature, is applied throughout the book without undue concern to a group which is clearly perceived by most of the authors as paraphyletic.

The third and fourth sections examine the variation, taxonomy, and evolutionary relationships of the robust australopithecines. The nine papers in these sections provide an intriguing insight into the current uncertainties surrounding studies of human phylogeny. It is clear that the old guard purveyors of orthodoxy only 5 years ago have been visibly shaken by the disorienting recovery of the "black skull," KNM-WT 17000. These papers reflect a more cautious and questioning approach, with greater concern

about the importance of detailed character analysis, homoplasy, phylogenetic parsimony, and taxonomic diversity. Although there is no final agreement among the contributors about what form the hominid phylogenetic tree should take, there are clear indications that the recent upheavals produced by the unexpected nature of the black skull are being satisfactorily rationalized and that workers will soon settle on a consensus phylogenetic scheme—at least until a new and unexpected skull of a different hue is unearthed!

The fifth and lengthiest section contains 10 chapters by specialists in a diversity of disciplines, who attempt to reconstruct the paleogeography, paleoecology, and natural history of the robust australopithecines. This section is fascinating reading. Each chapter is packed with original and thought-provoking ideas that will undoubtedly stimulate further discussion and criticism. Based on their reconstruction of habitats of East African fossil sites using bovid community structure, Shipman and Harris propose that *Australopithecus boisei* preferred closed wet habitats, while early *Homo* was more wide-ranging. However, Vrba provides a critique of their interpretation, and I must agree that a reanalysis of their data does not confirm a significant difference between the habitat associations of *Homo* and those of *Australopithecus*. White's critical essay on the contextual evidence is much more cautious and sobering than the other contributions in this section are. His contention that "contextual data provide little insight into the lifeways of robust *Australopithecus* species" will not be enthusiastically received by anthropologists on the trail of the big picture. Nevertheless, I approve of this "tell it as it is" approach to science. It is much better to recognize from the outset the inherent shortcomings of the fossil record, and to appreciate just what is beyond our grasp at present, than to mislead ourselves by filling in missing pieces on the basis of speculation and presumption.

The final section of the volume comprises summary comments by the editor. Grine masterfully weaves together the major threads of the book and adds his own erudite vision of australopithecine research. It is skillfully packaged into less than 8 pages of text, though a more comprehensive synopsis would be useful for readers without the time or inclination to tackle the entire volume from cover to cover.

Generally, I have been disappointed by the burgeoning number of edited volumes that have appeared in recent years. They tend to be edited with insouciance and frequently contain inadequately peer-reviewed papers of inconsistent quality. This volume is a notable exception and Grine has clearly set a standard of excellence for future editors. It represents a superior collection of quality papers written by researchers with something worthwhile to say. There are certainly plenty of new insights and a wealth

of information on the evolution, anatomy, and natural history of robust australopithecines, making it an essential purchase for all physical anthropologists. As Wolpoff whimsically observes in his contribution, we “live in interesting times,” but if this book is a true reflection of the past, things were a lot more interesting during the Plio-Pleistocene.

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