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Ian Tattersall
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Handbook of Paleoanthropology

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Winfried Henke · Ian Tattersall (Eds.)

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Volume I
Principles, Methods and Approaches

In collaboration with Thorolf Hardt

With 102 Figures and 33 Tables

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Volume II
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We dedicate these volumes to our long-time colleagues
Hartmut Rothe and **Theodoros Pitsios**
in appreciation of their friendship and unique contributions to
primatology and paleoanthropology.

Preface to the Series

Palaeoanthropology is perhaps the most multidisciplinary of all the sciences. Any complete account of the evolution and of the cultural and biological contexts of *Homo sapiens* must combine information from geology, paleoecology, primatology, evolutionary biology and a host of other fields. Above all, historical information garnered from the fossil record needs to be combined with, and interpreted in the light of, what we know of the living world. In these volumes we have brought together contributions by a variety of leading specialists that reflect the broad spectrum of modern paleoanthropology, in an attempt to provide a resource that we hope will be useful to professionals and students alike.

Volume I of this three-volume Handbook deals with principles, methods, and approaches. In recent years enormous advances have been made in such areas as phylogenetic analysis, evolutionary theory and philosophy, paleoecology, and dating methods. The contributions aim to present the state of the art in these and other relevant fields, as well as to furnish succinct introductions to them and to reflect the many ways in which they interact. Human beings are primates, and Volume II is devoted to primate origins, evolution, behavior, and adaptive variety. In this compilation the emphasis is on the integration of fossil data with the vast amount that is now known of the behavior and ecology of living primates in natural environments. The third and final volume deals directly with the fossil and molecular evidence for the evolution of *Homo sapiens* and its fossil relatives (the family Hominidae or subfamily Homininae, according to taste, a matter that we have left to each individual contributor). Paleoanthropology is a pluralistic and actively developing field in which much remains to be settled, and we have not tried to impose any uniformity of viewpoint on our authors. Instead, while maintaining an emphasis on the data, we have encouraged them to express their individual interpretations rather than to cover all possible points of view. This has inevitably led to a certain degree of heterogeneity of opinion between the covers of this Handbook; but we believe that this is the best way of reflecting the excitement and momentum of the field and that it is best for the reader to be left to reach his or her own conclusions. Science is, after all, a process rather than a static product, and one of our primary aims here is to reflect the ongoing dynamism of that process in paleoanthropology.

We thank all of the contributors to these volumes for their participation. Some initially responded enthusiastically while others needed convincing about the basic strategy of the Handbook, but all responded marvellously to the

particular needs of a corporate effort such as this one. We are particularly grateful to those authors who responded at short notice to needs that became apparent only as the project progressed. This series was conceived in collaboration with Prof. Hartmut Rothe of the University of Göttingen, who was later forced to withdraw for reasons beyond his control. We thank him most warmly for his creativity in the conceptual stages and for his subsequent moral support. The laborious process of putting together the volumes could not have been accomplished without the cheerful help of Thorolf Hardt, whose active involvement was indispensable throughout.

This project could never have come to fruition without the enthusiastic support of Dr. Dieter Czeschlik, editor life sciences at Springer Publishing, and the efficient assistance of Mrs. Ursula Gramm. We express our deep gratitude to Mrs. Susanne Friedrichsen and Mrs. Caroline Simpson, who showed both care and commitment during the phases of copyediting and product development. The continuous cooperation and dialogue with them and their professionalism gave us the courage to see the project through. Further thanks go to Mrs. Sandra Fabiani and her colleagues at Springer Publishing, who prepared the eReference. Ms. Nitya Swaruba, compositor at SPi Technologies, deserves warm thanks for her efficient help, and finally our gratitude goes in addition to Britta Hardt, Peter Menke and Monika Sandführ, who also rendered much valuable assistance.

Winfried Henke and Ian Tattersall
Mainz and New York City
November, 2006

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