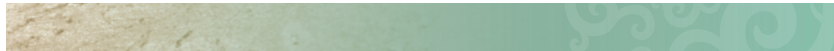


# PREFACE



Contemporary biological anthropology is a dauntingly broad field. It studies humans in the same way that zoologists study their subject species—from a perspective that includes *all* aspects of the species' biology and that emphasizes the interrelationships among those aspects. In addition to encompassing the traditional topics of the human fossil record and human biological variation, bioanthropology includes primatology, modern technologies in molecular genetics, human demography, disease and medical issues, development of the individual, life histories, and such applications as forensic anthropology. Bioanthropology also appreciates that our cultural behavior is an integral part of our behavior as a species.

No wonder, then, that I (and others I have spoken to) have had difficulty in covering the entire field in a one-semester course. We have ended up leaving out important aspects (or paying them little more than lip service), or we have sacrificed the sense of bioanthropology as an integrated whole for a rushed and encyclopedic inventory of all the field's current topics.

As modern bioanthropology increased in breadth and complexity over the past several decades, so too did the size and detail of introductory texts. Several are now more than 600 pages long. Attempts to produce shorter introductory texts have consisted of simply cutting out parts of these tomes, resulting in rather uneven, sometimes oddly organized, presentations of the field.

I wrote this text in order to present a diverse scientific field to beginning students. Here are the major assumptions that guided my writing:

- Because this is a text for introductory courses, I have tried to reduce the field to its most basic information. No part of the discipline has been left out; instead, I have achieved brevity by managing the level of detail and including only the information necessary to clearly and

accurately convey the basic themes, theories, methods, and facts of bioanthropology.

- The text assumes that students have limited background knowledge of the material and little understanding of what science is and how it works. The text *explains* rather than simply itemizes facts and ideas, and it does so, as much as possible, in a narrative format. A lesson from the study of folklore is that a story is far more easily understood and retained than is a list of facts.
- I want students to feel that they are reading a text written by a real person who has participated in the field. I have tried to achieve a balance between informal and formal styles, and I have not shied away from the occasional colloquialism or personal comment.

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## FEATURES

I've included a number of features that I hope will make this text a more useful learning tool for students.

- *I use the scientific method as a theme throughout the book to demonstrate the integrity and nature of bioanthropology.* I describe the scientific method and then try to show specifically how scientific reasoning has provided us with knowledge about the topics of bioanthropology. For example, I present extended discussions of bipedalism and the issue of modern human origins by posing questions, suggesting answers, and then testing the logic of and evidence for those answers.
- *The text is organized to help students navigate their way through what is still a fairly hefty amount of information.* To help students feel a little less at sea in the midst of new facts and ideas, I regularly refer back to previous topics and ahead to topics that will be covered. The headings and subheadings I use as signposts are as descriptive as possible (for example, "Natural Selection: The Prime Mover of Evolution").
- *Within chapters, a consistent format helps students better understand material new to them.* Each chapter starts with an **introduction**, which sets the stage and context for what's to come, followed by a series of **questions** that the chapter will answer. Because science proceeds by asking and answering questions, this format is also used within the body of the text. A **Contemporary Reflections** box examines a topical application of each chapter's themes and ideas. **Key terms** are

boldfaced in the text and defined in the margins at their first appearance. Each chapter concludes with a list of key terms and a **summary** that not only recaps the important points of the chapter but also provides some new ideas and thoughts that help put the chapter into context within the whole discipline. Also concluding each chapter are **questions for further thought**, which are designed to help students explore the real-world ramifications of the chapter's topics. And a list of **suggested readings**, made up mostly of nontechnical works, tells interested students where to find more information on the material discussed.

- *Two appendixes* discuss in detail the subjects of protein synthesis and population genetics.
- *Two glossaries, a reference list, and a comprehensive index make information more accessible.* A Glossary of Human and Nonhuman Primates, with pronunciations for each term, defines and describes the taxonomic groups discussed in the text. In addition to the running glossary within chapters, a comprehensive Glossary of Terms appears at the back of the book. The References section contains complete sources for the suggested readings and also lists technical works referred to within the text. The Index helps students access information quickly.
- *The text's visual appeal enhances its readability.* Detailed, colorful charts and drawings, as well as full-color photographs, underscore significant points in the text. Captions for the artwork add information rather than simply label the pictures.

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## WHAT'S NEW IN THIS EDITION?

- The biggest change is in further streamlining and condensing the material presented throughout the book. As a result, the book is now fourteen chapters long instead of fifteen. No major topic is left out; I have simply managed the amount and level of detail so that readers can more easily get to and understand the basic concepts. What I have trimmed are the asides and extended introductions, detail that is not referred to again, and qualifications or exceptions that are not built on later in the text. This gives instructors the choice of adding in details as they wish, either in class or in other readings. My hope is that students will then come to class having the essential material well in mind to build upon.

- Throughout the text, I have further increased the number of chapter headings and subheadings to help readers navigate their way through the material. These headings reinforce ease of study by also acting as a built-in outline of the chapters.
- In a field where new discoveries are made on a regular basis, and vital new interpretations appear frequently, I have been careful to provide the most up-to-date information in all the chapters. There are almost thirty new bibliographic references, half of which come from 2011.
- Among the most important specific chapter changes and updates are these:
  - Chapter 3, “Evolutionary Genetics,” reflects new information in that field, including the importance of epigenetics.
  - Chapter 5, “The Origin of Species and the Shape of Evolution” has a new section, “The Grand Pattern of Evolution,” that better explains punctuated equilibrium in its context within an independent theory of macroevolution—in terms beginning students can understand.
  - Chapter 7, “The Primates,” simplifies the concept of cladistic taxonomy and has a new section, “Are We Hominids or Hominins?” in which I explain why I am returning to the model that classifies only humans in family Hominidae.
  - Chapter 10, “Evolution of the Early Hominids,” suffered from a forest-for-the-trees problem. The sections on *Australopithecus* and *Paranthropus* have been condensed to focus on the data at the level of the genus. Details on the individual fossil forms can be added, if desired, by the instructor. I have updated the map and chart to include *A. sediba*.
  - Chapter 11, “The Evolution of Genus *Homo*,” begins with a description of the nature and features of the whole genus. I have condensed detail on the individual proposed species of genus *Homo* and have added a new section about the Denisovans. Most important, I condensed the entirety of previous Chapter 12 on the modern human origins debate into a new section in this chapter, which includes my rationale for the change. I have thoroughly updated the chapter to reflect new finds and dates.
  - Chapter 12, “Evolution and Adaptation in Human Populations,” I have updated data on causes of death and HIV/AIDS. There is a

new Contemporary Reflections box, “Are There Jewish Diseases? Are There Black Pharmaceuticals?”

- Chapter 13, “Human Biological Diversity,” includes a rewritten and updated section on the genetic evidence for the nonexistence of biological races and a new section on “Anthropology and the History of Race Studies.”

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## SUPPLEMENTARY MATERIAL

Visit our Online Learning Center Web site at [www.mhhe.com/parkba7e](http://www.mhhe.com/parkba7e) for a variety of resources.

- Resources for instructors include the Instructor’s Manual, with chapter overviews, suggested activities, and key terms; a Computerized Testing Program with multiple-choice and short-answer/essay questions; and chapter-specific PowerPoint lecture slides.
- Biological anthropology is eminently visual. Available to students and instructors on the Online Learning Center Web site are fossil images that make the course more vivid and interactive, reinforcing concepts and content students learn in the course.

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## ACKNOWLEDGMENTS

Thirty-nine years now since leaving Indiana University, I still feel a profound debt to my first teachers there in bioanthropology, Robert Meier, Paul Jamison, and Georg Neumann. This book, I trust, reflects some of the knowledge and inspiration I received from them.

It was Jan Beatty who first brought me to Mayfield Publishing Company over twenty years ago. She was the sponsoring editor of ten editions of my books before Mayfield joined forces with McGraw-Hill. It is an understatement to say that her knowledge of all aspects of publishing, combined with her understanding of anthropology and the needs (and quirks) of us academic types, has been a major influence on all my written work. Although I consider this book the result of a collaboration of many capable people over the years, it owes its heart (in every way) to Jan.

Thanks to the able staff at McGraw-Hill for once again transforming my ideas and words into an attractive and useful finished product.

They are: Nicole Bridge, developmental editor and; Lisa Bruflodt, project manager.

The manuscript was reviewed by the following people: Mark Griffin, San Francisco State University; Melissa Tallman, Hunter College/Columbia University; Michele Buzon, Purdue University; Jeremy DeSilva, Boston University; Anne Titelbaum, Tulane University. I thank them all for their helpful and insightful contributions. All final content, decisions, and errors are, of course, my own.