

Preface

WHY WE WROTE THE BOOK

We began working on the first edition of this book over 34 years ago. At that time, all the other introductory physical anthropology texts reflected the personal research interests of each of the book's authors. We, as teachers, decided to write a book that covered the field of physical anthropology in a balanced and unbiased way. We also decided to write a book for the general education student, but at the same time provide an excellent background in physical anthropology for students who wanted to go into anthropology in the future.

In this Ninth Edition, we have remained true to our initial approach. We have not concentrated on areas of our own interest. Instead, we have written a text that provides a truly balanced approach based on the most recent information available. We also have presented competing views on various topics such as ideas on the evolution of modern hominins. These contrasting presentations serve to show students that physical anthropology is a dynamic field of study, with concepts competing for acceptance.

We also have remained true to our goal of writing a book for students. Our book shows a concern for the student in a number of ways. We have made sure to write in a manner that does not assume previous knowledge. We explain all concepts carefully. We have made an effort to make complex topics as easy to understand as possible. Yet we have not simplified topics to the point of inaccuracy. Throughout the text, we have consistently tried to show the complexity of topics in a systematic and understandable way. Reviewers have unanimously praised the book as being well written and well suited for the intended audience.

FEATURES OF THE BOOK

In this new edition of *Physical Anthropology* we continue to share our love of discovery with students. Every concept is carefully explained and illustrated, guiding students step by step through difficult material. We have learning aids in each chapter (see below) as well as a new supplemental Online Learning Center (see below).

This text maintains its emphasis on three important themes: first, that anthropology is a holistic discipline; second, that human beings are an integral part of nature; and third, because humans depend on learned behavior, our maintenance of a balance with nature can be strengthened by an understanding of our evolutionary past. As always, we use the most current data to unravel the mystery of the evolution of humankind and examine the dynamic relationship between humans and their environment.

Each chapter of the book guides the student along with a number of study aids that we designed in an effort to make the book easy to use. Every chapter begins with a chapter outline to let the student know in general terms what is to come. This is followed by a number of questions that the student should keep in mind and be able to answer after reading the chapter. Chapters are organized by first-, second-, and third-degree headings to help the student see the relationship of the chapter topics to each other. Rather than having one large summary at the end of the chapter, each section begins with a first-degree heading and ends with a section summary. Each chapter is illustrated with numerous line drawings and photographs. We also have increased the number of charts and tables in this edition and have updated the numerous maps. There are boxes in each chapter on cutting-edge information, controversies within the field, topics of historical interest, and information from fields other than anthropology that relate to the chapter's topics. All technical terms are bolded, and there is both an in-chapter glossary in the margins of the book and an end-of-text glossary. Each chapter has marginal icons that direct the student to the Online Learning Center. The end of each chapter has study questions, critical thinking questions, annotated suggested readings, and suggested websites.

WHAT IS NEW IN THE NINTH EDITION?

Physical anthropology is a dynamic field. We have updated all the chapters on the basis of new information. This is seen most clearly in the chapters on the fossil record of human evolution. In fact, as the book was going to press, it was announced that a new hominin species had been discovered in Indonesia, characterized by small stature and small cranial capacity and dated at 18,000 B.P. (Chapter 15). We have added questions to the chapter openings that give the student a preview of the important concepts found in each chapter.

The major design change made in this edition is the addition of full color. In previous editions we had color inserts and two-color illustrations. Now almost all the illustrations are in full color. Although the illustrations have been chosen for their instructive value, we hope that they are an aesthetically appealing addition to the book. More specific additions and changes in this edition are listed below:

Chapter One—Investigating the Nature of Humankind. The sections on scientific thinking, “creation-science,” and intelligent design were revised. The box on the Scopes trial was revised, and a new box has been added on William “Strata” Smith.

Chapter Two—The Study of Heredity. We have expanded the information on twin studies and clarified the section on the principle of segregation. We rewrote the box on Gregor Mendel and added to the box “Facts about DNA.” The section on hemoglobin and sickle-cell anemia has been moved to Chapter 5.

Chapter Three—The Modern Study of Human Genetics. We updated the material on molecular genetics, rewrote and updated much of the section called “The Control of Human Biological Evolution,” and added a section on stem cell research and new material on cloning.

Chapter Five—Natural Selection and the Origin of Species. We expanded the section on kin selection and the section on hemoglobin and sickle-cell anemia. A new box on the meaning of the word *evolution* has been added.

Chapter Seven—The Living Primates. We adopted a new classification of the primates that reflects current thinking about taxonomy and primate evolution. Because of the new taxonomy, we have followed the current practice of replacing *hominid* with the term *hominin* to refer to humans and their predecessors that lived after the split from a common ancestor with the apes. The chapter includes an extensive reorganization of the descriptions of major groups of primates. We also added a box on color vision.

Chapter Eight—Comparative Studies of Anatomy and Genetics. The chapter includes new illustrations that blend tables and pictures. Sections on comparative cytogenetics and molecular biology have been updated and reorganized.

Chapter Nine—Nonhuman Primate Behavior. We have updated the box on the behavior of the Coquerel’s dwarf lemur and the material on the social behavior of chimpanzees.

Chapter Ten—Human Behavior in Perspective. We rewrote the material on the human band and added a new section on demographics and life history. We also rewrote the section titled “Skepticism about Ape-Language Studies” to show more clearly why what the apes are doing (in terms of sign language) is not really language. We discuss the significance of the Fox2P gene to the evolution of language in a new box.

Chapter Eleven—The Record of the Past. The geological time scale was recalibrated, using the latest available radiometric dates.

Chapter Twelve—The Early Primate Fossil Record and the Origin of the Hominins. With the discovery of very old hominin fossils, the gap is closing between the oldest hominins and the apelike fossils. Therefore, the material on the oldest hominins was moved from Chapter 13 to Chapter 12. We also discuss recently discovered fossils.

Chapter Thirteen—The Early Hominins. All new significant fossil finds are described and discussed. We rewrote and reorganized the material on the evolution of human social and cultural behavior.

Chapter Fourteen—Early Species of the Genus *Homo*. All the new significant fossil finds that fall into the time period covered by this chapter have been included and discussed. We added new discussions of the evolution of human social organization and cultural potentials.

Chapter Fifteen—The Evolution of *Homo sapiens*. As in Chapters 13 and 14, new significant fossil finds are discussed. As in Chapter 14, we discuss the further evolution of social and cultural potentials that evolved in the time period covered by this chapter.

Chapter Sixteen—The Biology of Modern *Homo sapiens*. We moved the discussion of Gloger's, Allen's, and Bergmann's rules from Chapter 17 to this chapter.

Chapter Seventeen—The Analysis of Human Variation. We did a major rewrite of the concept of "race" in which we discuss in more detail why race is a social construct with little biological validity. There is a new section titled "Race as Illusion." We added the most recent genomic data and a new section on why the medical profession still uses racial categories in research and diagnosis.

Chapter Eighteen—The Modern World. We added a section on global warming and one on terrorism, including the possible use of dirty bombs.

SUPPLEMENTS

For the Student

Student's Online Learning Center—This free Web-based student supplement features the following helpful tools at www.mhhe.com/stein9:

- Chapter objectives, outlines, and overviews.
- PowerPoint lecture notes.
- Self-quizzes (multiple choice and true/false questions with feedback indicating why an answer is correct or incorrect).
- Essay questions.
- Key terms.
- Vocabulary flashcards.
- Interactive exercises.
- Internet activities.
- Audio glossary.
- Anthropology Supersite with tutorials, breaking news, and other features.
- PowerWeb: Anthropology is a password-protected website that includes current articles from *Annual Editions*, weekly updates with assessment, informative and timely world news, refereed Web links, research tools, student study tools, interactive exercises, and much more.

FOR THE INSTRUCTOR

Instructor's Manual/Test Bank—This indispensable instructor supplement features chapter outlines, chapter summaries, learning objectives, media and film suggestions, and a complete and extensive test bank with over a thousand test questions.

Instructor's Disk—This computerized disk contains

- An electronic version of the instructor's manual.
- An easy-to-use computerized testing program that is available for both Windows and Macintosh computers.
- A complete set of chapter-by-chapter PowerPoint lecture slides.

Instructor's Online Learning Center—Password-protected access to important instructor support materials and downloadable supplements such as

- The instructor's manual.
- PowerPoint lecture slides.
- Links to professional resources.
- A message board.

PowerWeb: Anthropology—A password-protected website that offers professors a turnkey solution for adding the Internet to a course. It includes current articles from *Annual Editions*, curriculum-based materials, weekly updates with assessment, informative and timely world news, refereed Web links, research tools, student study tools, interactive exercises, and much more.

PageOut—Designed for the instructor just beginning to explore Web options, this technology supplement allows even novice computer users to create a course website with a template provided by McGraw-Hill.

Videotapes—A wide variety of videotapes from the *Films for the Humanities and Social Sciences* series are available to adopters of the text.

As a full-service publisher of quality educational products, McGraw-Hill does much more than just sell textbooks. The publisher has created and published an extensive array of print, video, and digital supplements for students and instructors. This edition of *Physical Anthropology* includes an exciting supplements package. Orders of new (versus used) textbooks help us defray the cost of developing such supplements, which is substantial. Please consult your local McGraw-Hill representative for more information on any of the supplements.

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