

A·N·N·U·A·L E·D·I·T·I·O·N·S

Physical Anthropology

00/01



Student Web Site



Northern Light

Free access!

see inside front cover for details

1. Natural Selection

Unit photo—courtesy of New York Public Library.

2. Primates

Unit photo—United Nations photo by George Love.

3. Sex and Society

Unit photo—courtesy Baron Hugo van Lawick; © National Geographic Society.

4. The Fossil Evidence

Unit photo—courtesy of the American Museum of Natural History.

5. Late Hominid Evolution

Unit photo—AP Photo of prehistoric cave painting by Jean Clottes.

6. Human Diversity

Unit photo—United Nations photo by Doranne Jacobson.

7. Living with the Past

Unit photo—© Napoleon Chagnon.

Cataloging in Publication Data

Main entry under title: Annual Editions: Physical Anthropology. 2000/2001.

1. Physical anthropology—Periodicals. I. Angeloni, Elvio, comp. II. Title: Physical anthropology.
ISBN 0-07-236398-3 573'.05 ISSN 1074-1844

© 2000 by Dushkin/McGraw-Hill, Guilford, CT 06437, A Division of The McGraw-Hill Companies.

Copyright law prohibits the reproduction, storage, or transmission in any form by any means of any portion of this publication without the express written permission of Dushkin/McGraw-Hill, and of the copyright holder (if different) of the part of the publication to be reproduced. The Guidelines for Classroom Copying endorsed by Congress explicitly state that unauthorized copying may not be used to create, to replace, or to substitute for anthologies, compilations, or collective works.

Annual Editions® is a Registered Trademark of Dushkin/McGraw-Hill, A Division of The McGraw-Hill Companies.

Ninth Edition

Cover image © 2000 PhotoDisc, Inc.

Printed in the United States of America

1234567890BAHBAH543210

Printed on Recycled Paper

Members of the Advisory Board are instrumental in the final selection of articles for each edition of ANNUAL EDITIONS. Their review of articles for content, level, currentness, and appropriateness provides critical direction to the editor and staff. We think that you will find their careful consideration well reflected in this volume.

EDITOR

Elvio Angeloni
Pasadena City College

ADVISORY BOARD

Walter R. Adams
Brown University

Michael Gibbons
University of Massachusetts-Boston

Michael S. Alvard
SUNY at Buffalo

H. Gill-King
University of North Texas

Anna Bellisari
Wright State University

David Lee Greene
University of Colorado-Boulder

Donna C. Boyd
Radford University

Robert J. Jeske
University of Wisconsin, Milwaukee

Russell L. Ciochon
University of Iowa

Roberta D. Lenkeit
Modesto Junior College

Christopher R. DeCorse
Syracuse University

R. Barry Lewis
*University of Illinois
Urbana-Champaign*

Katherine A. Dettwyler
Texas A & M University

Suzanne K. Engler
Los Angeles Valley College

Michael A. Malpass
Ithaca College

Michael Finnegan
Kansas State University

Susan K. McIntosh
Rice University

Elizabeth Peters
Florida State University

Frank E. Poirier
Ohio State University

Karen R. Rosenberg
University of Delaware

Mary K. Sandford
University of North Carolina

Sam D. Stout
University of Missouri-Columbia

Wenda R. Trevathan
New Mexico State University

Harold F. Turnbull
*California State
Polytechnic University*

Ronald K. Wetherington
Southern Methodist University

EDITORIAL STAFF

Ian A. Nielsen, Publisher
Roberta Monaco, Senior Developmental Editor
Dorothy Fink, Associate Developmental Editor
Addie Raucci, Senior Administrative Editor
Cheryl Greenleaf, Permissions Editor
Joseph Offredi, Permissions/Editorial Assistant
Diane Barker, Proofreader
Lisa Holmes-Doebrick, Program Coordinator

PRODUCTION STAFF

Brenda S. Filley, Production Manager
Charles Vitelli, Designer
Lara M. Johnson, Design/
Advertising Coordinator
Laura Levine, Graphics
Mike Campbell, Graphics
Tom Goddard, Graphics
Eldis Lima, Graphics
Juliana Arbo, Typesetting Supervisor
Marie Lazauskas, Typesetter
Kathleen D'Amico, Typesetter
Larry Killian, Copier Coordinator

In publishing ANNUAL EDITIONS we recognize the enormous role played by the magazines, newspapers, and journals of the public press in providing current, first-rate educational information in a broad spectrum of interest areas. Many of these articles are appropriate for students, researchers, and professionals seeking accurate, current material to help bridge the gap between principles and theories and the real world. These articles, however, become more useful for study when those of lasting value are carefully collected, organized, indexed, and reproduced in a low-cost format, which provides easy and permanent access when the material is needed. That is the role played by ANNUAL EDITIONS.

New to ANNUAL EDITIONS is the inclusion of related World Wide Web sites. These sites have been selected by our editorial staff to represent some of the best resources found on the World Wide Web today. Through our carefully developed topic guide, we have linked these Web resources to the articles covered in this ANNUAL EDITIONS reader. We think that you will find this volume useful, and we hope that you will take a moment to visit us on the Web at <http://www.dushkin.com> to tell us what you think.

This ninth edition of *Annual Editions: Physical Anthropology* contains a variety of articles relating to human evolution. The writings were selected for their timeliness, relevance to issues not easily treated in the standard physical anthropology textbook, and clarity of presentation.

Whereas textbooks tend to reflect the consensus within the field, *Annual Editions: Physical Anthropology 00/01* provides a forum for the controversial. We do this in order to convey to the student the sense that the study of human development is an evolving entity in which each discovery encourages further research and each added piece of the puzzle raises new questions about the total picture.

Our final criterion for selecting articles is readability. All too often, the excitement of a new discovery or a fresh idea is deadened by the weight of a ponderous presentation. We seek to avoid that by incorporating essays written with enthusiasm and with the desire to communicate some very special ideas to the general public.

Included in this volume are a number of features designed to be useful for students, researchers, and professionals in the field of anthropology. While the articles are arranged along the lines of broadly unifying subject areas, the *topic guide* can be used to establish specific reading assignments tailored to the needs of a particular course of study. Other useful features

include the *table of contents* abstracts, which summarize each article and present key concepts in bold italics, and a comprehensive *index*. In addition, each unit is preceded by an overview that provides a background for informed reading of the articles, emphasizes critical issues, and presents *challenge questions*. Also included are *World Wide Web* sites that can be used to further explore the topics. These sites are cross-referenced by number in the topic guide.

In contrast to the usual textbook, which by its nature cannot be easily revised, this book will be continually updated to reflect the dynamic, changing character of its subject. Those involved in producing *Annual Editions: Physical Anthropology 00/01* wish to make the next one as useful and effective as possible. Your criticism and advice are welcomed. Please complete and return the postage-paid *article rating form* on the last page of the book and let us know your opinions. Any anthropology can be improved, and this one will continue to be.



Elvio Angeloni
Editor

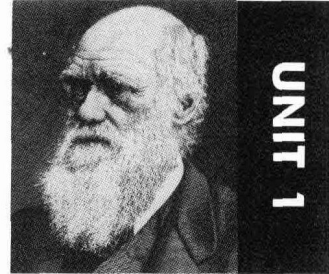
(E-mail address: evangeloni@paccd.cc.ca.us)

Contents

To the Reader	iv
Topic Guide	2
Selected World Wide Web Sites	4
Overview	6

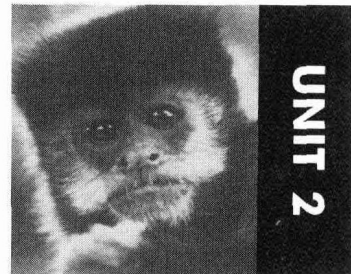
1. **The Growth of Evolutionary Science**, Douglas J. Futuyma, from *Science on Trial*, Pantheon Books, 1982. Before the rise of **science**, the causes of orderly events were sought in the **divine purposes** they were thought to have served. Today, patterns and designs are seen to be the result of **natural selection**. 8
2. **Curse and Blessing of the Ghetto**, Jared Diamond, *Discover*, March 1991. **Tay-Sachs disease** is a choosy killer, one that for centuries targeted Eastern European Jews above all others. By decoding its lethal logic, we can learn a great deal about how **genetic diseases** evolve—and how they can be conquered. 17
3. **The Saltshaker's Curse**, Jared Diamond, *Natural History*, October 1991. **Physiological adaptations** that at one time helped West Africans and their descendants cope with unusually high **salt loss** may now be predisposing African Americans to **hypertension** and a premature **death**. 23
4. **A Gene for Nothing**, Robert Sapolsky, *Discover*, October 1997. Because the effects of genes are modulated by environmental circumstances, our worst fear about **human cloning**—that we will become photocopies of the same person, all thinking, feeling, and acting identically—is nowhere near possible. 28

Overview	32
5. Machiavellian Monkeys, James Shreeve, <i>Discover</i> , June 1991. Deception plays such an important role in primate survival that it may not simply be the result of great intelligence . It may also be a driving force behind the development of intelligence.	34
6. What Are Friends For? Barbara Smuts, <i>Natural History</i> , February 1987. An understanding of friendship bonds among baboons is not only destroying our stereotypes about monkeys in the wild, but it is also calling into question traditional views concerning the relationships between the sexes in early hominid evolution.	38



Natural Selection

Four articles examine the link between genetics and the process of natural selection.



Primates

Eight selections examine some of the social relationships in the primate world and how they mirror human society.

7. **Dian Fossey and Digit**, Sy Montgomery, from *Walking with the Great Apes*, Houghton Mifflin, 1991. 43
Dian Fossey's study of the **mountain gorilla** arose out of a quest for personal fulfillment as well as for scientific knowledge. Ultimately, that quest became a dedicated effort to save a species.
8. **The Mind of the Chimpanzee**, Jane Goodall, from *Through a Window*, Houghton Mifflin, 1990. 50
It has long been recognized that the differences in anatomy and physiology between apes and humans are a matter of degree. Because of the work of Jane Goodall, we have come to realize that there is continuity in **mental** and **emotional development** as well.
9. **Dim Forest, Bright Chimps**, Christophe Boesch and Hedwige Boesch-Achermann, *Natural History*, September 1991. 55
Contrary to expectations, forest-dwelling **chimpanzees** seem to be more committed to **cooperative hunting** and **tool use** than are savanna chimpanzees. Such findings may have implications for the course of human evolution.
10. **To Catch a Colobus**, Craig B. Stanford, *Natural History*, January 1995. 59
When **chimpanzees** in Gombe National Park band together to **hunt** red colobus monkeys, the most important ingredient seems to be the number of males and the presence of at least one estrous female. Their goals appear to be more **social** than dietary.
11. **Language Training of Apes**, E. S. Savage-Rumbaugh, *The Cambridge Encyclopedia of Human Evolution*, Cambridge University Press, 1992. 62
The **language training of apes** presents a serious challenge to the long-held view that only humans can **communicate symbolically**. Language comprehension may, indeed, be an older evolutionary adaptation than is the ability to talk.
12. **Are We in Anthropodenial?** Frans de Waal, *Discover*, July 1997. 67
To endow animals with **human emotions** and **mental qualities** has long been a **scientific taboo**, but the more we learn about them, especially our closer relatives, the more it seems that there really are similarities.

Overview

70

13. **These Are Real Swinging Primates**, Shannon Brownlee, *Discover*, April 1987. 72

Although the muriqui monkeys of Brazil are heavily invested in **reproductive competition**, they seem to get along just fine without a **dominance hierarchy** and fighting over females. In other words, their mission in life seems geared to making love, not war.

14. **The Myth of the Coy Female**, Carol Tavris, from *The Mismeasure of Woman*, Simon & Schuster, 1992. 77

It may be impossible for us to observe the behavior of other species in a way that does not mirror the assumptions of our own way of life. In this light, **primate behavior** and the **theories** it generates need to be handled with care.

15. **First, Kill the Babies**, Carl Zimmer, *Discover*, September 1996. 81

In the early 1970s, Sarah Hrdy proposed a new explanatory model for **infanticide**. Its evolutionary logic has since generated a wealth of research and continuing controversy.

16. **A Woman's Curse?** Meredith F. Small, *The Sciences*, January/February 1999. 86

An anthropologist's study of the **ritual of seclusion** surrounding **women's menstrual cycle** has some rather profound implications regarding human evolution, certain cultural practices, and **women's health**.

17. **What's Love Got to Do with It?** Meredith F. Small, *Discover*, June 1992. 91

The **bonobos'** use of sex to reduce tension and to form **alliances** is raising some interesting questions regarding human evolution. Does this behavior help to explain the origins of our **sexuality**, or should we see it as just another primate aberration that occurred after humans and primates split from their common lineage?

18. **Apes of Wrath**, Barbara Smuts, *Discover*, August 1995. 95

Whether or not males beat up females in a particular species seems to have a great deal to do with who is forming **alliances** with whom. This, in turn, has powerful implications as to what can be done about **sexual coercion** in the human species.

Overview

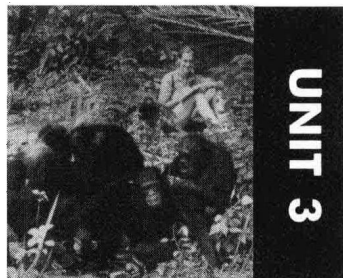
98

19. **Sunset on the Savanna**, James Shreeve, *Discover*, July 1996. 100

The long-held belief that **hominid bipedalism** owes its origin to a shift from life in the forest to life in a more open habitat is being challenged by new evidence regarding fossils found in the wrong place at the wrong time.

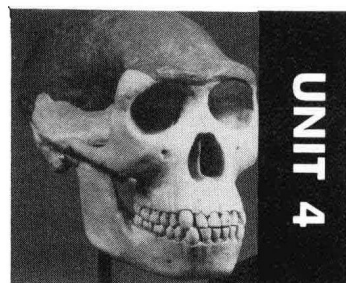
20. **Early Hominid Fossils from Africa**, Meave Leakey and Alan Walker, *Scientific American*, June 1997. 106

Fossil finds in Africa display similarities to modern African apes. Not only do these discoveries hint at our **common ancestry** with apes, but the **environmental context** is raising questions about whether early hominids evolved on the savanna or in a more wooded setting.



Sex and Society

Six articles discuss the relationship between the sexes and the evolution of a social structure.



The Fossil Evidence

Six selections discuss some of the fossil evidence for hominid evolution.



Late Hominid Evolution

Eight articles examine archaeological evidence of human evolution.

21. **A New Human Ancestor?** Elizabeth Culotta, *Science*, 111
April 23, 1999.
Recent discoveries in Ethiopia may generate more questions than answers, but one finding is the best evidence yet for **animal butchery by hominids** 2.5 million years ago.
22. **Asian Hominids Grow Older**, Elizabeth Culotta, *Science*, 114
November 17, 1995.
Discoveries in China could "alter the picture of **human dispersal and evolution**." Moreover, there now seems to be a "west side story," about which we know very little, but which challenges the traditional East African-centric view fostered by past fossil evidence.
23. **Scavenger Hunt**, Pat Shipman, *Natural History*, April 118
1984.
Microscopic analyses of tooth wear and cut marks on bone, combined with an increased understanding of the advantages of **bipedalism**, point in the direction of a "**man the scavenger**" model rather than "**man the hunter**."
24. **New Clues to the History of Male and Female Size Differences**, John Noble Wilford, *New York Times*, 122
August 26, 1997.
Recent fossil evidence indicates that the reduction in **sexual dimorphism** in humans occurred at least 300,000 years ago and may mark the fateful transition in **human sexual and family life**, when humans began to bond with only one partner.

Overview 124

25. **Erectus Rising**, James Shreeve, *Discover*, September 126
1994.
Most paleoanthropologists used to agree that **Homo erectus** was confined to Africa until one million years ago. Now, new finds and a new **dating method** are challenging that view.
26. **Hard Times among the Neanderthals**, Erik Trinkaus, 131
Natural History, December 1978.
Despite the coarseness of their lifestyle and the apparent **violence** between individuals, **Neanderthal** skeletal remains reveal a prehistoric record of affection and respect, and they should be accorded the status of **human beings**.
27. **Old Masters**, Pat Shipman, *Discover*, July 136
1990.
Systematic analyses of the **cave paintings** in Europe reveal Cro-Magnons' intimate knowledge of the animals that were hunted and, perhaps, even purposeful **rituals** associated with the images.

28. The Gift of Gab, Matt Cartmill, *Discover*, November 1998. **139**

While the **origin of human language** is rooted in aspects of psychology and biology that we share with our close animal relatives, our kind of communication seems to be associated with **making tools and throwing weapons**.

29. The Dating Game, James Shreeve, *Discover*, September 1992. **144**

Newly discovered **dating methods** are challenging previous notions about the evolution of **Homo sapiens**. The accuracy of these methods, however, is still a matter of controversy.

30. The Neanderthal Peace, James Shreeve, *Discover*, September 1995. **149**

Recent evidence suggests that **Neanderthals** and modern humans lived in the same place at the same time for tens of thousands of years yet never mingled. We still do not know what happened to the Neanderthals, but it does appear that they were a **separate species** and did not leave a genetic legacy.

31. Learning to Love Neanderthals, Robert Kunzig, *Discover*, August 1999. **157**

The chance discovery of a **25,000-year-old skeleton** of a child is interesting in itself, but the traits it exhibits—a **mixture of Neanderthal and Cro-Magnon**—is causing a lot of head-scratching among anthropologists.

32. Archaeologists Rediscover Cannibals, Ann Gibbons, *Science*, August 1, 1997. **162**

From digs around the world, researchers have unearthed strong new evidence of **cannibalism**. People may have eaten their own kind from the early days of human evolution through recent prehistory.

Overview **166**

33. The Lost Man, Douglas Preston, *The New Yorker*, June 16, 1997. **168**

Recent skeletal findings indicate that the **first Americans** might not be who we think they were. Before the evidence could be adequately assessed, however, the U.S. government withheld the bones. Native Americans have wanted to rebury the bones, and archaeologists have gone to court to retrieve them. In the process, issues of **race** and **ethnicity** have been brought to a steaming head.

34. Black, White, Other, Jonathan Marks, *Natural History*, December 1994. **177**

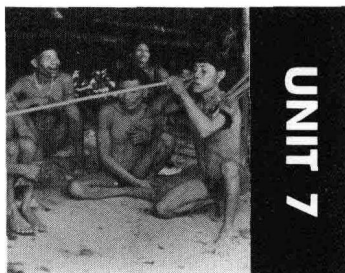
With regard to classifying human beings, the central message of anthropology is: You may group humans into a small number of **races** if you want to, but you are denied biology as a support for it.



UNIT
6

Human Diversity

Five articles examine human racial evolution and diversity.



Living with the Past

Seven articles discuss evolutionary theory and how genetic heritage impacts on our present and our future.

35. **Racial Odyssey**, Boyce Rensberger, *Science Digest*, 180
January/February 1981.
Despite the many attempts over the past 200 years to classify humans into separate and "pure" ***races***, the consensus among geneticists and anthropologists is that there are overlapping differences among us that are matters of degree rather than of kind.
36. **Culture, Not Race, Explains Human Diversity**, 186
Mark Nathan Cohen, *The Chronicle of Higher Education*,
April 17, 1998.
What too many people see as racial differences in behavior are in fact due to ***variations in culture***. If anthropologists are to make any headway in counteracting ***racism***, says the author, they must convey the importance of ***cultural relativism***—the only road to tolerance and freedom of thought.
37. **The Tall and the Short of It**, Barry Bogin, *Discover*, 190
February 1998.
Rather than being able to adapt to a single environment, we can—thanks to our ***genetically endowed plasticity***—change our bodies to cope with a wide variety of environments. In this light, research suggests that we can use the average ***height*** of any group of people as a barometer of the ***health*** of their society.

Overview 194

38. **Profile of an Anthropologist: No Bone Unturned**, 196
Patrick Huyghe, *Discover*, December 1988.
The skills displayed by ***physical anthropologists*** and ***archaeologists*** in the analysis of old bones have resulted in the development of a whole new field: ***forensic anthropology***.
39. **Gorilla Warfare**, Craig B. Stanford, *The Sciences*, July/August 1999. 201
Ecotourism has so far protected the ***mountain gorillas***. Deprive the gorillas of their wildlife preserves and the loggers and poachers would soon drive them to extinction. Change their ***biological classification***, warns Craig Stanford, and taxonomists could end up killing the mountain gorillas as effectively as do the poachers.
40. **HIV 1998: The Global Picture**, Jonathan M. Mann 206
and Daniel J. M. Tarantola, *Scientific American*, July 1998.
In economically advantaged nations, powerful ***therapies*** have succeeded in retarding the progression of ***HIV***. However, worldwide, the populations most affected by the AIDS virus are often the least empowered to confront it.
41. **The Viral Superhighway**, George J. Armelagos, *The Sciences*, 209
January/February 1998.
According to George Armelagos, international travel as well as environmental disruptions have accelerated the occurrence of serious, new diseases upon humans. However, protective cultural practices could provide a countervailing effect to fight the encroachments of many diseases.

42. Exploring Our Basic Human Nature: Are Humans Inherently Violent? Robert W. Sussman, *Anthro Notes*, Fall 1997. 214

From the beginning of Western thought, the *theme of human depravity*, which related to the idea of humankind's fall from grace and the doctrine of original sin, runs deep. This view continues to pervade modern *"scientific" interpretations of the evolution of human behavior*.

43. Dr. Darwin, Lori Oliwenstein, *Discover*, October 1995. 219

The application of *Darwin's theory of evolution* to the understanding of *human diseases* will not only help us to better treat the symptoms of diseases, but it also promises to help us understand how microbes and humans have evolved in relation to one another.

44. Wonders: How Fast Is Technology Evolving? 223

W. Brian Arthur, *Scientific American*, February 1997.

When we compare the *blistering pace of technology* to the *slow rate of biological evolution*, human beings seem to have come a long way recently. But, have we really gone anywhere?

Index 225

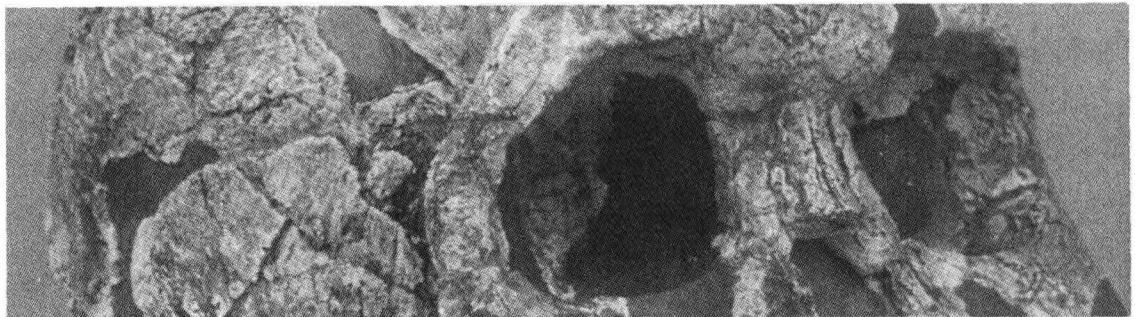
Article Review Form 228

Article Rating Form 229

Physical Anthropology

Ninth Edition

00/01



EDITOR

Elvio Angeloni

Pasadena City College

Elvio Angeloni received his B.A. from UCLA in 1963, his M.A. in anthropology from UCLA in 1965, and his M.A. in communication arts from Loyola Marymount University in 1976. He has produced several films, including *Little Warrior*, winner of the Cinema VI Best Bicentennial Theme, and *Broken Bottles*, shown on PBS. He most recently served as an academic adviser on the instructional television series, *Faces of Culture*.

Dushkin/McGraw-Hill

Sluice Dock, Guilford, Connecticut 06437

Visit us on the Internet

<http://www.dushkin.com/annualeditions/>

Topic Guide

This topic guide suggests how the selections and World Wide Web sites found in the next section of this book relate to topics of traditional concern to physical anthropology students and professionals. It is useful for locating interrelated articles and Web sites for reading and research. The guide is arranged alphabetically according to topic.

The relevant Web sites, which are numbered and annotated on pages 4 and 5, are easily identified by the Web icon (Ⓢ) under the topic articles. By linking the articles and the Web sites by topic, this ANNUAL EDITIONS reader becomes a powerful learning and research tool.

TOPIC AREA	TREATED IN	TOPIC AREA	TREATED IN
Aggression	5. Machiavellian Monkeys 6. What Are Friends For? 9. Dim Forest, Bright Chimps 10. To Catch a Colobus 13. These Are Real Swinging Primates 15. First, Kill the Babies 18. Apes of Wrath 26. Hard Times 32. Archeologists Rediscover Cannibals 42. Exploring Our Basic Human Nature Ⓢ 15, 16, 18, 26, 28, 31, 34	Cro-Magons	27. Old Masters 29. Dating Game 30. Neanderthal Peace Ⓢ 4, 5, 6, 7, 25, 26
Anatomy	17. What's Love Got to Do with It? 19. Sunset on the Savannah 21. New Human Ancestor? 22. Asian Hominids 24. New Clues 25. <i>Erectus</i> Rising 26. Hard Times 28. Gift of Gab 30. Neanderthal Peace 31. Learning to Love Neanderthals 33. Lost Man 38. Profile of an Anthropologist Ⓢ 20, 21, 22, 23, 24, 25, 26	Disease	2. Curse and Blessing of the Ghetto 3. Saltshaker's Curse 35. Racial Odyssey 40. HIV 1998: The Global Picture 41. Viral Superhighway 43. Dr. Darwin Ⓢ 6, 13, 28, 30, 32, 33, 34
Archeology	25. <i>Erectus</i> Rising 27. Old Masters 29. Dating Game 30. Neanderthal Peace 31. Learning to Love Neanderthals 32. Archeologists Rediscover Cannibals 33. Lost Man 38. Profile of an Anthropologist Ⓢ 22, 23, 24, 25, 26	DNA (Deoxyribonucleic Acid)	2. Curse and Blessing of the Ghetto 4. Gene for Nothing 34. Black Ⓢ 29, 30, 31, 33, 34
Australopithecines	19. Sunset on the Savannah 20. Early Hominid Fossils 21. New Human Ancestor? 24. New Clues 42. Exploring Our Basic Human Nature Ⓢ 22, 23, 24	Dominance Hierarchy	6. What Are Friends For? 13. These Are Real Swinging Primates 17. What's Love Got to Do with It? 18. Apes of Wrath Ⓢ 15, 16, 18, 19, 20, 21
Bipedalism	17. What's Love Got to Do With It? 19. Sunset on the Savannah 20. Early Hominid Fossils 21. New Human Ancestor? 23. Scavenger Hunt Ⓢ 19, 20, 21, 22, 23, 24	Forensic Anthropology	38. Profile of an Anthropologist Ⓢ 32, 33, 34
Blood Groups	34. Black, White, Other 35. Racial Odyssey Ⓢ 29, 31, 32, 33, 34	Genes	2. Curse and Blessing of the Ghetto 3. Saltshaker's Curse 4. Gene for Nothing 34. Black, White, Other 43. Dr. Darwin Ⓢ 28, 29, 30, 31
Catastrophism	1. Growth of Evolutionary Science Ⓢ 11, 12, 13, 14	Genetic Drift	1. Growth of Evolutionary Science 2. Curse and Blessing of the Ghetto Ⓢ 11, 12, 13, 14
Chain of Being	1. Growth of Evolutionary Science Ⓢ 11, 12, 13, 14	Genetic Testing	2. Curse and Blessing of the Ghetto 4. Gene for Nothing Ⓢ 11, 12, 13, 14, 28, 29
		Homo erectus	22. Asian Hominids 25. <i>Erectus</i> Rising 32. Archeologists Rediscover Cannibals Ⓢ 22, 23, 24, 25, 26, 28
		Homo sapiens	29. Dating Game Ⓢ 25, 26, 28
		Hunting and Gathering	9. Dim Forest, Bright Chimps 10. To Catch a Colobus 23. Scavenger Hunt 26. Hard Times 27. Old Masters 30. Neanderthal Peace Ⓢ 16, 18, 22, 23, 24, 25, 26

TOPIC AREA	TREATED IN	TOPIC AREA	TREATED IN
Hunting Hypothesis	6. What Are Friends For? 14. Myth of the Coy Female 23. Scavenger Hunt 42. Exploring Our Basic Human Nature ☉ 17, 22, 24, 26		39. Gorilla Warfare ☉ 15, 16, 17, 18
Locomotion	13. These Are Real Swinging Primates 17. What's Love Got to Do with It? 19. Sunset on the Savannah 20. Early Hominid Fossils 21. New Human Ancestor? ☉ 15, 16, 28, 22	Race	33. Lost Man 34. Black, White, Other 35. Racial Odyssey 37. Tall and Short of It 42. Exploring Our Basic Human Nature ☉ 27, 28, 29, 30, 31
Mutation	1. Growth of Evolutionary Science ☉ 12, 14	Reproductive Strategy	4. Gene for Nothing 6. What Are Friends For? 10. To Catch a Colobus 13. These Are Real Swinging Primates 14. Myth of the Coy Female 15. First, Kill the Babies 16. Woman's Curse 17. What's Love Got to Do with It? 18. Apes of Wrath 24. New Clues ☉ 15, 16, 17, 18, 19, 20, 21
Natural Selection	1. Growth of Evolutionary Science 2. Curse and Blessing of the Ghetto 3. Saltshaker's Curse 4. Gene for Nothing 24. New Clues 34. Black, White, Other 35. Racial Odyssey 37. Tall and Short of It 41. Viral Superhighway 42. Exploring Our Basic Human Nature 43. Dr. Darwin ☉ 11, 12, 13, 14, 29, 30, 31	Sexuality	10. To Catch a Colobus 13. These Are Real Swinging Primates 16. Woman's Curse? 17. What's Love Got to Do with It? 18. Apes of Wrath 24. New Clues ☉ 15, 16, 17, 18, 19, 20, 21
Neanderthals	26. Hard Times 29. Dating Game 30. Neanderthal Peace 31. Learning to Love Neanderthals 32. Archeologists Rediscover Cannibals ☉ 1, 4, 5, 6, 7, 9, 26	Social Relationships	6. What Are Friends For? 7. Dian Fossey and Digit 9. Dim Forest, Bright Chimps 10. To Catch a Colobus 13. These Are Real Swinging Primates 14. Myth of the Coy Female 16. Woman's Curse 17. What's Love Got to Do with It? 18. Apes of Wrath 24. New Clues 27. Old Masters 42. Exploring Our Basic Human Nature ☉ 15, 16, 17, 18, 21
Paleo-anthropology	19. Sunset on the Savannah 20. Early Hominid Fossils 21. New Human Ancestor? 22. Asian Hominids 24. New Clues 25. <i>Erectus</i> Rising 26. Hard Times 29. Dating Game 30. Neanderthal Peace 31. Learning to Love Neanderthals 32. Archeologists Rediscover Cannibals 33. Lost Man 42. Exploring Our Basic Human Nature ☉ 5, 6, 10, 22, 23, 24, 26	Taxonomy	1. Growth of Evolutionary Science 20. Early Hominid Fossils 21. New Human Ancestor? 22. Asian Hominids 25. <i>Erectus</i> Rising 33. Lost Man 34. Black, White, Other 35. Racial Odyssey 39. Gorilla Warfare ☉ 11, 12, 13, 14, 24, 26, 28
Primates	5. Machiavellian Monkeys 6. What Are Friends For? 7. Dian Fossey and Digit 8. Mind of the Chimpanzee 9. Dim Forest, Bright Chimps 10. To Catch a Colobus 11. Language Training of Apes 12. Are We in Anthropodenial? 13. These Are Real Swinging Primates 14. Myth of the Coy Female 15. First, Kill the Babies 17. What's Love Got to Do With It? 18. Apes of Wrath 24. New Clues 28. Gift of Gab	Technology	25. <i>Erectus</i> Rising 27. Old Masters 29. Dating Game 30. Neanderthal Peace 44. Wonders: How Fast Is Technology Evolving? ☉ 4, 5, 10, 12, 14, 17, 19, 23, 28, 29, 30, 33, 34

● AE: Physical Anthropology

The following World Wide Web sites have been carefully researched and selected to support the articles found in this reader. If you are interested in learning more about specific topics found in this book, these Web sites are a good place to start. The sites are cross-referenced by number and appear in the topic guide on the previous two pages. Also, you can link to these Web sites through our DUSHKIN ONLINE support site at <http://www.dushkin.com/online/>.

The following sites were available at the time of publication. Visit our Web site—we update DUSHKIN ONLINE regularly to reflect any changes.

General Sources

1. American Anthropological Association (AAA)

<http://www.ameranthassn.org/index.htm>

Maintained by the AAA, this site links to AAA's publications (including tables of contents of recent issues, style guides, and others) and links to other anthropology sites.

2. Anthromorphemics

<http://www.anth.ucsb.edu/glossary/index2.html>

Access anthropological glossary terms at this site.

3. Anthropology in the News

<http://www.tamu.edu/anthropology/news.html>

Texas A&M provides data on interesting news articles that relate to anthropology, including biopsychology and sociocultural anthropology news.

4. Anthropology on the Internet

<http://www.as.ua.edu/ant/libguide.htm>

This indispensable site provides excellent Web addresses and tips on acquiring links to regional studies, maps, anthropology tutorials, and other data.

5. Anthropology 1101 Human Origins Website

<http://www.geocities.com/Athens/Acropolis/5579/TA.html>

Exploring this fun site provided by the University of Minnesota will lead to information about our ancient ancestors and other topics of interest to physical anthropologists.

6. Anthropology Resources on the Internet

<http://www.socsciresearch.com/r7.html>

This site provides extensive links to Internet resources of anthropological relevance, including Web servers in different fields. *The Education Index* rated it "one of the best education-related sites on the Web."

7. Anthropology Resources Page

<http://www.usd.edu/anth/>

Many topics can be accessed from this University of South Dakota site. South Dakota archaeology, American Indian issues, and paleopathology resources are just a few examples.

8. Library of Congress

<http://www.loc.gov>

Examine this extensive Web site to learn about resource tools, library services/resources, exhibitions, and databases in many different subfields of anthropology.

9. The New York Times

<http://www.nytimes.com>

Browsing through the archives of *The New York Times* will provide a wide array of articles and information related to the different subfields of anthropology.

10. The PaleoAnthro Lists Home Page

<http://www.pitt.edu/~matff/PalAntList.html>

Spend time at this site and the related PaleoChat site, at <http://www.pitt.edu/~matff/PaleoChat.html>, to exchange information related to physical anthropology.

Natural Selection

11. Charles Darwin on Human Origins

<http://www.literature.org/Works/Charles-Darwin/>

This Web site contains the text of Charles Darwin's classic writing, *The Origins of Species*, which presents his scientific theory of human origins.

12. Enter Evolution: Theory and History

<http://www.ucmp.berkeley.edu/history/evolution.html>

Find information related to Charles Darwin and other important scientists at this Web site. It addresses preludes to evolution, natural selection, and more. Topics cover systematics, dinosaur discoveries, and vertebrate flight.

13. Fossil Hominids FAQ

<http://www.talkorigins.org/faqs/fossil-hominids.html>

Some links to materials related to hominid species and hominid fossils are provided on this site. The purpose of the site is to refute creationist claims that there is no evidence for human evolution.

14. Harvard Dept. of MCB—Biology Links

<http://mcb.harvard.edu/Biolinks.html>

This site features sources on evolution and links to anthropology departments and laboratories, taxonomy, paleontology, natural history, journals, books, museums, meetings, and many other related areas.

Primates

15. African Primates at Home

<http://www.indiana.edu/~primate/primates.html>

Don't miss this unusual and compelling site describing African primates on their home turf. "See" and "Hear" features provide samples of vocalizations and beautiful photographs of various types of primates.

16. Chimpanzee and Great Ape Language Resources—Anthropology

<http://www.brown.edu/Departments/Anthropology/apelang.html>

This series of Web sites on primates includes the Primate home page and the Gorilla home page. It provides links to the entire text of Darwin's *Origin of Species* and more.

17. Electronic Zoo/NetVet-Primate Page

<http://netvet.wustl.edu/primates.htm>

This site touches on every kind of primate from A to Z and related information. The long list includes Darwinian theories and the *Descent of Man*, the Ebola virus, fossil hominids, the nonhuman Primate Genetics Lab, the Simian Retrovirus Laboratory, and zoonotic diseases, with many links in between.

18. Jane Goodall Research Center

<http://www.usc.edu/dept/elab/anth/goodall.html>

The Jane Goodall Research Center, a program of the University of Southern California's Anthropology Department, is a repository for data gathered over more than 30 years at Gombe National Park, Tanzania. Search this site for information about primate research.

Sex and Society

19. American Anthropologist

<http://www.ameranthassn.org/ameranth.htm>

Check out this site—the home page of *American Anthropologist* for general information about anthropology as well as articles relating to such topics as biological research.

20. American Scientist

<http://www.amsci.org/amsci/amsci.html>

Investigating this site will help students of physical anthropology to explore issues related to sex and society.

21. Bonobo Sex and Society

<http://songweaver.com/info/bonobos.html>

Accessed through Carnegie Mellon University, this site includes a *Scientific American* article discussing a primate's behavior that challenges traditional assumptions about male supremacy in human evolution.

The Fossil Evidence

22. The African Emergence and Early Asian Dispersals of the Genus *Homo*

<http://www.sigmaxi.org/amsci/subject/EvoBio.html>

Explore this site and click on this title to learn about what the Rift Valley in East Africa has to tell us about early hominid species. An excellent bibliography is included.

23. Anthropology, Archaeology, and American Indian Sites on the Internet

<http://dizzy.library.arizona.edu/users/jlcox/first.html>

This Web page points out a number of Internet sites of interest to different kinds of anthropologists, including physical and biological anthropologists. Visit this page for links to electronic journals and more.

24. Long Foreground: Human Prehistory

http://www.wsu.edu:8001/vwsu/gened/learn-modules/top_longfor/lfopen-index.html

This Washington State University site presents a learning module covering three major topics in human evolution: Overview, Hominid Species Timeline, and Human Physical Characteristics. It also provides a helpful glossary of terms and links to other Web sites.

Late Hominid Evolution

25. Archaeology Links (NC)

<http://www.arch.dcr.state.nc.us/links.htm#stuff/>

North Carolina Archaeology provides this site, which has many links to physical anthropology sites, such as the paleolithic painted cave at Vallon-Pont-d'Arc (Ardeche).

26. Human Prehistory

<http://users.hol.gr/~dilos/prehis.htm>

The evolution of the human species, beginning with the *Australopithecus* and continuing with *Homo Habilis*, *Homo erectus*, and *Homo sapiens*, is examined on this site. Also included are data on the people who lived in the Palaeolithic and Neolithic Age and are the immediate ancestors of modern man.

Human Diversity

27. Cult Archaeology Topics

<http://www.usd.edu/anth/cultarch/culttopics.html>

This fun site provides information on interesting pseudoscientific theories that have attracted scholarly attention. The Lost

Tribes and the Moundbuilder Myth; and Cryptozoology: Big foot, and Nessie are among the many myths debunked here.

28. Hominid Evolution Survey

<http://www.geocities.com/SoHo/Atrium/1381/index.html>

This survey of the Hominid family, categorizes known hominids by genus and species. Beginning with the oldest known species, data include locations and environments, physical characteristics, any technology processed, and social behaviors. Includes charts and citations.

29. Human Genome Project Information

http://www.ornl.gov/TechResources/Human_Genome/home.html

Obtain answers about the U.S. Human Genome Project from this site, which details progress, goals, support groups, ethical, legal, and social issues, and genetics information.

30. OMIM Home Page-Online Mendelian Inheritance in Man

<http://www3.ncbi.nlm.nih.gov/omim/>

This database from the National Center for Biotechnology Information is a catalog of human genes and genetic disorders. It contains text, pictures, and reference information of great interest to students of physical anthropology.

31. Patterns of Human Variability: The Concept of Race

<http://www.as.ua.edu/ant/bindon/ant101/syllabus/race/race1.htm>

This site provides a handy, at-a-glance reference to the prevailing concepts of race and the causes of human variability since ancient times. It can serve as a starting point for research and understanding into the concept of race.

Living with the Past

32. Ancestral Passions

http://www.canoe.ca/JamBooksReviewsA/ancestral_morell.html

This review of Virginia Morell's book, *Ancestral Passions*, a biography of the famously dysfunctional Leakey family, will likely spur you to the bookstore in order to learn more about the history of paleontology and the thrill and trials of the hunt for human origins. It is this evolutionary detective story that is the book's true drama. Jump over to http://url.co.nz/african_trip/tanzania.html to read an individual's account of a recent trip "In the Cradle of Humankind."

33. Forensic Science Reference Page

<http://www.lab.fws.gov>

Look over this site from the U.S. Fish and Wildlife Forensics Lab to explore topics related to forensic anthropology.

34. Zeno's Forensic Page

<http://users.bart.nl/~geradts/forensic.html>

A complete list of resources on forensics is presented on this Web site. It includes general information sources, DNA/serology sources and databases, forensic medicine anthropology sites, and related areas.

We highly recommend that you review our Web site for expanded information and our other product lines. We are continually updating and adding links to our Web site in order to offer you the most usable and useful information that will support and expand the value of your Annual Editions. You can reach us at:
<http://www.dushkin.com/annualeditions/>

Unit Selections

1. **The Growth of Evolutionary Science**, Douglas J. Futuyma
2. **Curse and Blessing of the Ghetto**, Jared Diamond
3. **The Saltshaker's Curse**, Jared Diamond
4. **A Gene for Nothing**, Robert Sapolsky

Key Points to Consider

- ◆ In nature, how is it that design can occur without a designer, orderliness without purpose?
- ◆ What is "natural selection"? How does Gregor Mendel's work relate to Charles Darwin's theory?
- ◆ Why is Tay-Sachs disease so common among Eastern European Jews?
- ◆ What is the "saltshaker's curse," and why are some people more affected by it than others?
- ◆ To what extent do identical twins actually differ from one another and what implication does this have for cloning humans?
- ◆ What do genes actually do and how predictive are they of human social behavior?



Links

www.dushkin.com/online/

11. **Charles Darwin on Human Origins**
<http://www.literature.org/Works/Charles-Darwin/>
12. **Enter Evolution: Theory and History**
<http://www.ucmp.berkeley.edu/history/evolution.html>
13. **Fossil Hominids FAQ**
<http://www.talkorigins.org/faqs/fossil-hominids.html>
14. **Harvard Dept. of MCB—Biology Links**
<http://mcb.harvard.edu/BioLinks.html>

These sites are annotated on pages 4 and 5.