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# Biological Anthropology: An Evolutionary Perspective

Course Guidebook

Professor Barbara J. King  
The College of William and Mary



**PUBLISHED BY:**

**THE GREAT COURSES**  
**Corporate Headquarters**  
**4840 Westfields Boulevard, Suite 500**  
**Chantilly, Virginia 20151-2299**  
**Phone: 1-800-832-2412**  
**Fax: 703-378-3819**  
**[www.thegreatcourses.com](http://www.thegreatcourses.com)**

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## **Barbara J. King, Ph.D.**

Professor of Anthropology, The College of William and Mary

Barbara J. King, a biological anthropologist, specializes in the study of primate behavior and human evolution. Since 1988, she has taught at The College of William and Mary and has won four teaching awards: the William and Mary Alumni Association Teaching Award, the College's Thomas Jefferson Teaching Award, the Virginia State Council of Higher Education's Outstanding Faculty Award, and the designation of University Professor for Teaching Excellence, 1999–2002.

Professor King's research interests center around the social communication of the great apes, the closest living relatives to humans. Currently, she and her students observe and film the gestural communication of gorillas living at the Smithsonian's National Zoological Park, in Washington, D.C. Funded by the Wenner-Gren Foundation for Anthropological Research, this research is the basis of her new book. Tentatively titled *The Dynamic Dance: Nonvocal Social Communication in the Great Apes*, this book will be completed during Professor King's year as a Guggenheim Foundation Fellow (academic year 2002–2003).

Other books authored or co-authored by Professor King reflect her longstanding interest in the "big issues" in anthropology. One such book, *The Information Continuum* (1994), is based on her doctoral research into baboon social learning in Kenya, and two others, edited volumes, resulted from major funded conferences in anthropology (*The Origins of Language*, 1999, and *Anthropology Beyond Culture*, co-edited with Richard Fox, 2002).

Professor King received her B.A. in anthropology from Douglass College, Rutgers University, and earned both her M.A. and Ph.D. in anthropology from the University of Oklahoma. At The College of William and Mary, she focuses on teaching primate studies and human evolution to undergraduates.

Professor King welcomes questions or comments at either of these addresses: Department of Anthropology, The College of William and Mary, Williamsburg, VA 23187-8795, or [bjking@wm.edu](mailto:bjking@wm.edu).

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***Acknowledgment:***

Footage of a rhesus monkey on Cayo Santiago provided by Christy Hoffman.



# **Biological Anthropology: An Evolutionary Perspective**

## **Scope:**

These twenty-four lectures present detailed, up-to-date material about all aspects of the evolution of humanity. Aimed at those who are curious about our origins as a species, this course covers the wide range of topics in the discipline of biological anthropology. Biological anthropology takes as its goal a comprehensive exploration of the forces of both biology and culture that shaped human prehistory and continue to shape our lives today.

Following an introductory explanation of the various scientific approaches that together make up the field of biological anthropology, the initial lectures focus on evolution and its mechanisms. Important concepts, such as Darwin's principle of natural selection, are defined clearly, with real-life examples, and their significance is explained. What emerges from this section of the course is an understanding of why evolution and religious faith never need be opposed, whereas evolution and the theory of creationism are in direct conflict (with creationism rejected by scientists).

Applying these concepts to evolutionary history, Lectures Four through Eight explore the origins and behavior of the nonhuman primates. As primates ourselves, we humans share a 65-million-year evolutionary history with prosimians, monkeys, and apes. These lectures concentrate on primate behavior, showing how our own cognition, language, and kinship bonds developed out of the abilities present in these primate relatives. Particular emphasis is put on the great apes, such as chimpanzees, those animals closer to us genetically and behaviorally than any other.

The hominids, our extinct ancestors that walked upright, evolved from a common ancestor with the great apes nearly 7 million years ago. The anatomy and behavior of these species, ranging from the famous "Lucy," to the less well-known but equally important "Nariokotome Boy," to the cave-dwelling Neandertals, are profiled in Lectures Nine through Fifteen. These lectures highlight ways in which biology and culture intersect to allow for milestones to be reached in human prehistory.

Examples include the enlarged brain that allowed stone tools to be manufactured for the first time by hominids at 2.5 million years ago and the increasing cognitive skills and emotional ties that together led to deliberate burial of the dead by Neandertals at about 60,000 years ago. Two lectures deal with issues related to gender in prehistory, asking what we can know about the relative roles of females and males in hominid societies.

Lectures Sixteen through Eighteen are devoted to the origins of modern human anatomy, behavior, and language. Biological anthropologists have identified what they believe to be the oldest modern-human remains at about 125,000 years ago. For reasons made clear, it is unlikely that these earliest *Homo sapiens* could have evolved from Neandertals. From which hominids, then, did they arise? Was Africa the center of modern human origins, as it had been the center for early hominid evolution? We consider two competing models in evaluating these questions. One model points to Africa as the sole home of our species, whereas the other posits simultaneous evolution in Africa, Asia, and Europe.

Even more debated are the origins of modern human behavior and language. New evidence points to significant shifts in biological anthropologists' understanding of each of these topics. Sites in Africa tell us that symbolism, art, and finely crafted tools may not have first appeared at 35,000 years ago in Europe as long thought; evidence for a long evolutionary history for language is mounting as well.

The final five lectures consider modern human life in evolutionary perspective. A near-consensus conclusion in biological anthropology, that the practice of grouping humans into "races" based on supposedly genetic traits is invalid scientifically, forms the heart of Lecture Nineteen. Subsequent lectures explore ways in which evolution has tailored human anatomy and behavior, even today, to specific environmental pressures.

Also considered at length are fascinating new suggestions that modern health problems and aspects of modern health psychology have arisen as a direct result of conditions in human prehistory—conditions to which we were once adapted but no longer are. Pregnancy sickness and human mate choice are two case studies in this section.

The course concludes with a look at twenty-first century "gene discourse," in which undue power is given to genes and genetic research as panaceas for the future. An evolutionary perspective yields an



understanding that the kinship we humans feel with other primate species (both living and extinct), as well as the tools we collectively have at our disposal for solving conflicts and other problems, are based not on genetics. Rather, they stem from a dynamic interplay of biological and cultural factors at work in our long evolutionary history.