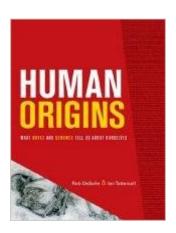
The book was found

Human Origins: What Bones And Genomes Tell Us About Ourselves (Texas A&M University Anthropology Series)





Synopsis

Ever since the recognition of the Neanderthals as an archaic human in the mid-nineteenth century, the fossilized bones of extinct humans have been used by paleoanthropologists to explore human origins. These bones told the story of how the earliest humans—bipedal apes, actually— first emerged in Africa some 6 to 7 million years ago. Starting about 2 million years ago, the bones revealed, as humans became anatomically and behaviorally more modern, they swept out of Africa in waves into Asia, Europe and finally the New World. Even as paleoanthropologists continued to make important discoveries—Mary Leakeyâ ™s Nutcracker Man in 1959, Don Johansonâ ™s Lucy in 1974, and most recently Martin Pickfordâ ™s Millennium Man, to name just a few— experts in genetics were looking at the human species from a very different angle. In 1953 James Watson and Francis Crick first saw the double helix structure of DNA, the basic building block of all life. In the 1970s it was shown that humans share 98.7% of their genes with the great apes—that in fact genetically we are more closely related to chimpanzees than chimpanzees are to gorillas. And most recently the entire human genome has been mapped— we now know where each of the genes on the chromosomes that make up DNA is located on the double helix. In Human Origins: What Bones and Genomes Tell Us about Ourselves, two of the worldâ ™s foremost scientists, geneticist Rob DeSalle and paleoanthropologist lan Tattersall, show how research into the human genome confirms what fossil bones have told us about human origins. This unprecedented integration of the fossil and genomic records provides the most complete understanding possible of humanityâ ™s place in nature, its emergence from the rest of the living world, and the evolutionary processes that have molded human populations to be what they are today. Human Origins serves as a companion volume to the American Museum of Natural Historyâ ™s new permanent exhibit, as well as standing alone as an accessible overview of recent insights into what it means to be human.

Book Information

Series: Texas A&M University Anthropology Series (Book 13)

Paperback: 216 pages

Publisher: Texas A&M University Press; Reprint edition (February 27, 2012)

Language: English

ISBN-10: 1603445188

ISBN-13: 978-1603445184

Product Dimensions: 7 x 0.6 x 9.9 inches

Shipping Weight: 1.5 pounds (View shipping rates and policies)

Average Customer Review: 4.1 out of 5 stars Â See all reviews (9 customer reviews)

Best Sellers Rank: #826,406 in Books (See Top 100 in Books) #156 in Books > Science & Math

> Biological Sciences > Animals > Fossils #503 in Books > Politics & Social Sciences >

Anthropology > Physical #1067 in Books > Medical Books > Basic Sciences > Genetics

Customer Reviews

Paleoanthropology has always been multidisciplinary. The addition of the study of the human genome has simply added incrementally to the disciplines required to fully understand human origins. Genomics is a discipline which could easily have glazed the eyes of the entry level reader without contributing to the understanding of the already scientifically literate. What DeSalle and Tattersall do with Human Origins is to show how molecular systematics contributes to the established interpretation of the fossil record. They tee up the subject by reviewing the state of scientific knowledge in the fields of evolution, geology, stratigraphy, genetics, x-ray crystallography, cladograms... And if you need a remedial paragraph or two on what "science" is, or what a brain is, this is your book. Pay particular attention to the factors which alter genomes over time. Understand how "genetic drift" and "natural selection" do the hard work in changing allele frequencies. The authors' explanations are masterful, for instance equating drift to sampling error in statistics. Understanding these basics will make it easier to understand the how certain features of early hominid physiology resulted from drift or selection. And you have to love how the authors refer to some of the facile misunderstandings of evolution as little more than "just so" stories (though they omit an attribution to Rudyard Kipling for the analogy). Most distressing is the revelation that the human y chromosome has been shrinking at a steady rate, and will in a mere 125,000 years completely disappear, leaving women alone on earth, with terminal consequences for our species.

When I first paged through this book, it reminded me of a school text book. The book has glossy pages and loads of full color vivid illustrations which I found very helpful. The authors start by discussing the field of Paleoanthropology and then spend some time explaining genomics. In these chapters one exposed to a lot of related terminology, such as phyletic gradualism, cladistics, introns, and autosomes and so on. It would have been nice if the authors included a glossary of terms to better define the terminology for readers not expert in these fields. Some definitions were brief and lacking. The section on evolution and human origins was very informative. Here the discussion turned to alleles, RNA, major ways genomes in populations can change with time, an interesting

example of the sickle cell allele and malaria, and exaptations. We then learn about evolutionary trees, the role of archaea in the tree of life and continuing on to human evolution where we learn about the "bipedal apes", the first stone toolmakers, Homo erectus, Homo ergaster, the out of Africa movement and Homo heidelbergensis, the Neanderthals, and the emergence of Homo sapiens. In chapter seven, there is an interesting discussion on the deterioration of the Y chromosome, something that has been going on for the past 100 million years since the common ancestor of all mammals. There is an explanation of the working of molecular clocks and human migration both in Eurasia and the Western hemisphere which I found very informative. We finally get into the significance of symbolic thought, cave art and eventually language.

Download to continue reading...

Human Origins: What Bones and Genomes Tell Us about Ourselves (Texas A&M University Anthropology Series) Bones, Bones, Dinosaur Bones The Delphic Boat: What Genomes Tell Us Horse Sweat and Powder Smoke: The First Texas Cavalry in the Civil War (Williams-Ford Texas A&M University Military History Series) Pickers and Poets: The Ruthlessly Poetic Singer-Songwriters of Texas (John and Robin Dickson Series in Texas Music, sponsored by the Center for Texas) Texas Coral Reefs (Gulf Coast Books, sponsored by Texas A&M University-Corpus Christi) Lighthouses of Texas (Gulf Coast Books, sponsored by Texas A&M University-Corpus Christi) German Seed in Texas Soil: Immigrant Farmers in Nineteenth-Century Texas (Texas Classics) Stories of Ourselves: The University of Cambridge International Examinations Anthology of Stories in English (Cambridge Learning) Appropriate: The Houses Of Joseph Esherick (Environmental Design Archives at the University of California, Berkeley Series) (Environmental Design Archives ... University of California, Berkeley Series Minecraft Comics: Flash and Bones and the Mystery of the Secret Stronghold: The Ultimate Minecraft Comics Adventure Series (Real Comics In Minecraft - Flash And Bones Book 7) Minecraft Comics: Flash and Bones and Leetah the Wicked Witch: The Ultimate Minecraft Comics Adventure Series (Real Comics In Minecraft - Flash And Bones Book 2) Minecraft Comics: Flash and Bones and the Creeper Canyon Quest: The Ultimate Minecraft Comics Adventure Series (Real Comics in Minecraft - Flash and Bones Book 12) Minecraft Comics: Flash and Bones and Agramon's Nether Fortress: The Ultimate Minecraft Comics Adventure Series (Real Comics in Minecraft - Flash and Bones Book 10) Minecraft Comics: Flash and Bones and the Enderman Zombie Potion: The Ultimate Minecraft Comics Adventure Series (Real Comics In Minecraft - Flash And Bones Book 5) Superman on the Couch: What Superheroes Really Tell Us about Ourselves and Our Society The Bare Bones Bible® Handbook for Teens: Getting to Know Every Book in the Bible (The Bare Bones Bible®

Series) Lies We Tell Ourselves (Harlequin Teen) Nursing: Human Science And Human Care (Watson, Nursing: Human Science and Human Care) Genetics: Analysis of Genes and Genomes, 8th Edition

<u>Dmca</u>