

Neanderthal Man In Search Of Lost Genomes Svante Paabo

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Almost Human

“Even-handed, up-to-date, and clearly written. . . . If you want to navigate between the Scylla and Charybdis of Neanderthal controversies, you’ll find no better guide.” —Brian Fagan, author of Cro-Magnon In recent years, the common perception of the Neanderthal has been transformed thanks to new discoveries and paradigm-shattering scientific innovations. It turns out that the Neanderthals’ behavior was surprisingly modern: they buried the dead, cared for the sick, hunted large animals in their prime, harvested seafood, and spoke. Meanwhile, advances in DNA technologies have forced a reassessment of the Neanderthals’ place in our own past. For hundreds of thousands of years, Neanderthals evolved in Europe very much in parallel to the Homo sapiens line evolving in Africa, and, when both species made their first forays into Asia, the Neanderthals may even have had the upper hand. Here, Dimitra Papagianni and Michael A. Morse look at the Neanderthals through the full dramatic arc of their existence—from their evolution in Europe to their expansion to Siberia, their subsequent extinction, and ultimately their revival in popular novels, cartoons, cult movies, and TV commercials.

The Invaders

The Smart Neanderthal

A preeminent geneticist hunts the Neanderthal genome to answer the biggest question of them all: what does it mean to be human? What can we learn from the genes of our closest evolutionary relatives? Neanderthal Man tells the story of geneticist Svante Pääbo's mission to answer that question, beginning with the study of DNA in Egyptian mummies in the

early 1980s and culminating in his sequencing of the Neanderthal genome in 2009. From Pääbo, we learn how Neanderthal genes offer a unique window into the lives of our hominin relatives and may hold the key to unlocking the mystery of why humans survived while Neanderthals went extinct. Drawing on genetic and fossil clues, Pääbo explores what is known about the origin of modern humans and their relationship to the Neanderthals and describes the fierce debate surrounding the nature of the two species' interactions. A riveting story about a visionary researcher and the nature of scientific inquiry, Neanderthal Man offers rich insight into the fundamental question of who we are.

The Singing Neanderthals

Neanderthals in the Classroom examines the ongoing battle surrounding evolution from a cultural and historical perspective and then puts Theodosius Dobzhansky's claim that "nothing in biology makes sense except in the light of evolution" to the ultimate test by exploring the potential evolutionary roots of this societal and educational clash over human origins. In examining the biological roots of the conflict, Watts demonstrates how understanding our inner Neanderthal allows us to consciously choose more highly evolved forms of communication as a means of alleviating societal division and creating space for more effective science education. Key Features: Introduces readers to the multifaceted world of evolution education. Describes the complex interplay between religious beliefs and science as well as the clash of false information and formal education. Offers an overview of the transformation of public opinion of evolution and science over time in the United States due to the perceived conflict between science and religion. Examines students' misconceptions about the theory of evolution and the general nature of scientific discovery due to the contradictory messages that they receive in popular culture. Offers potential means to amend misconceptions so that students and other individuals can integrate evolutionary theory into their worldviews, regardless of their religious background.

Neanderthal

From beloved CBS Sunday Morning correspondent and humorist Mo Rocca, an entertaining and rigorously researched book that celebrates the dead people who have long fascinated him. Mo Rocca has always loved obituaries—reading about the remarkable lives of global leaders, Hollywood heavyweights, and innovators who changed the world. But not every notable life has gotten the send-off it deserves. His quest to right that wrong inspired Mobituaries, his #1 hit podcast. Now with Mobituaries, the book, he has gone much further, with all new essays on artists, entertainers, sports stars, political pioneers, founding fathers, and more. Even if you know the names, you've never understood why they matter until now. Take Herbert Hoover: before he was president, he was the "Great Humanitarian," the man who saved tens of millions from starvation. But after less than a year in the White House, the stock market crashed, and all the good he had done seemed to be forgotten. Then there's Marlene Dietrich, well remembered as a screen goddess, less remembered as a great patriot.

Alongside American servicemen on the front lines during World War II, she risked her life to help defeat the Nazis of her native Germany. And what about Billy Carter and history's unruly presidential brothers? Were they ne'er-do-well liabilities...or secret weapons? Plus, Mobits for dead sports teams, dead countries, the dearly departed station wagon, and dragons. Yes, dragons. Rocca is an expert researcher and storyteller. He draws on these skills here. With his dogged reporting and trademark wit, Rocca brings these men and women back to life like no one else can. Mobituaries is an insightful and unconventional account of the people who made life worth living for the rest of us, one that asks us to think about who gets remembered, and why.

Bones of Contention

Since the late 1980s the dominant theory of human origins has been that a 'cognitive revolution' (C.50,000 years ago) led to the advent of our species, Homo sapiens. As a result of this revolution our species spread and eventually replaced all existing archaic Homo species, ultimately leading to the superiority of modern humans. Or so we thought. As Clive Finlayson explains, the latest advances in genetics prove that there was significant interbreeding between Modern Humans and the Neanderthals. All non-Africans today carry some Neanderthal genes. We have also discovered aspects of Neanderthal behaviour that indicate that they were not cognitively inferior to modern humans, as we once thought, and in fact had their own rituals and art. Finlayson, who is at the forefront of this research, recounts the discoveries of his team, providing evidence that Neanderthals caught birds of prey, and used their feathers for symbolic purposes. There is also evidence that Neanderthals practised other forms of art, as the recently discovered engravings in Gorham's Cave Gibraltar indicate. Linking all the recent evidence, The Smart Neanderthal casts a new light on the Neanderthals and the 'Cognitive Revolution'. Finlayson argues that there was no revolution and, instead, modern behaviour arose gradually and independently among different populations of Modern Humans and Neanderthals. Some practices were even adopted by Modern Humans from the Neanderthals. Finlayson overturns classic narratives of human origins, and raises important questions about who we really are.

Masters of the Planet

International Bestseller One of the most anticipated books of 2017: The Millions, CBC, Chatelaine, Globe and Mail, Maclean's From the author of The Bear, the enthralling story of two women separated by millennia, but linked by an epic journey that will transform them both Forty thousand years in the past, the last family of Neanderthals roams the earth. After a crushingly hard winter, their numbers are low, but Girl, the oldest daughter, is just coming of age and her family is determined to travel to the annual meeting place and find her a mate. But the unforgiving landscape takes its toll, and Girl is left alone to care for Runt, a foundling of unknown origin. As Girl and Runt face the coming winter storms, Girl realizes

she has one final chance to save her people, even if it means sacrificing part of herself. In the modern day, archaeologist Rosamund Gale works well into her pregnancy, racing to excavate newly found Neanderthal artifacts before her baby comes. Linked across the ages by the shared experience of early motherhood, both stories examine the often taboo corners of women's lives. Haunting, suspenseful, and profoundly moving, *THE LAST NEANDERTHAL* asks us to reconsider all we think we know about what it means to be human.

Neanderthal Man

The triumphant memoir of the man behind one of the greatest feats in scientific history Of all the scientific achievements of the past century, perhaps none can match the deciphering of the human genetic code, both for its technical brilliance and for its implications for our future. In *A Life Decoded*, J. Craig Venter traces his rise from an uninspired student to one of the most fascinating and controversial figures in science today. Here, Venter relates the unparalleled drama of the quest to decode the human genome—a goal he predicted he could achieve years earlier and more cheaply than the government-sponsored Human Genome Project, and one that he fulfilled in 2001. A thrilling story of detection, *A Life Decoded* is also a revealing, and often troubling, look at how science is practiced today.

The Last Neanderthal

A war is coming, a battle that will stretch from the prehistoric forests of the ancient past to the cutting-edge research labs of today, all to reveal a true mystery buried deep within our DNA, a mystery that will leave readers changed forever . . . In this groundbreaking masterpiece of ingenuity and intrigue that spans 50,000 years in human history, New York Times bestselling author James Rollins takes us to mankind's next great leap. But will it mark a new chapter in our development . . . or our extinction? In the remote mountains of Croatia, an archaeologist makes a strange discovery: a subterranean Catholic chapel, hidden for centuries, holds the bones of a Neanderthal woman. In the same cavern system, elaborate primitive paintings tell the story of an immense battle between tribes of Neanderthals and monstrous shadowy figures. Who is this mysterious enemy depicted in these ancient drawings and what do the paintings mean? Before any answers could be made, the investigative team is attacked, while at the same time, a bloody assault is made upon a primate research center outside of Atlanta. How are these events connected? Who is behind these attacks? The search for the truth will take Commander Gray Pierce of Sigma Force 50,000 years into the past. As he and Sigma trace the evolution of human intelligence to its true source, they will be plunged into a cataclysmic battle for the future of humanity that stretches across the globe . . . and beyond. With the fate of our future at stake, Sigma embarks on its most harrowing odyssey ever—a breathtaking quest that will take them from ancient tunnels in Ecuador that span the breadth of South America to a millennia-old necropolis holding the bones of our ancestors. Along the way, revelations involving the lost continent of

Atlantis will reveal true mysteries tied to mankind's first steps on the moon. In the end, Gray Pierce and his team will face to their greatest threat: an ancient evil, resurrected by modern genetic science, strong enough to bring about the end of man's dominance on this planet. Only this time, Sigma will falter—and the world we know will change forever.

Cro-Magnon

Was Neanderthalman our direct ancestor, or was he perhaps a more alien figure genetically very different?

Neanderthal

Perfect for fans of John Green and Becky Albertalli, *Neanderthal Opens the Door to the Universe* is a "sneakily thought-provoking" and "utterly unforgettable" must-read for every fan of contemporary YA. Cliff Hubbard is a huge loser. Literally. His nickname at Happy Valley High School is Neanderthal because he's so enormous—6'6" and 250 pounds to be exact. He has nobody at school, and life in his trailer-park home has gone from bad to worse ever since his older brother's suicide. There's no one Cliff hates more than the nauseatingly cool quarterback Aaron Zimmerman. Then Aaron returns to school after a near-death experience with a bizarre claim: while he was unconscious he saw God, who gave him a list of things to do to make Happy Valley High suck less. And God said there's only one person who can help: Neanderthal. To his own surprise, Cliff says he's in. As he and Aaron make their way through the List, which involves a vindictive English teacher, a mysterious computer hacker, a decidedly unchristian cult of Jesus Teens, the local drug dealers, and the meanest bully at HVHS, Cliff feels like he's part of something for the first time since losing his brother. But fixing a broken school isn't as simple as it seems, and just when Cliff thinks they've completed the List, he realizes their mission hits closer to home than he ever imagined. Razor sharp, moving, and outrageously funny, *Neanderthal Opens the Door to the Universe* is an unforgettable story of finding your place in an imperfect world.

Neanderthal Language

There have been many books, movies, and even TV commercials featuring Neandertals--some serious, some comical. But what was it really like to be a Neandertal? How were their lives similar to or different from ours? In *How to Think Like a Neandertal*, archaeologist Thomas Wynn and psychologist Frederick L. Coolidge team up to provide a brilliant account of the mental life of Neandertals, drawing on the most recent fossil and archaeological remains. Indeed, some Neandertal remains are not fossilized, allowing scientists to recover samples of their genes--one specimen had the gene for red hair and, more provocatively, all had a gene called FOXP2, which is thought to be related to speech. Given the differences between their faces and ours, their voices probably sounded a bit different, and the range of consonants and vowels they could generate

might have been different. But they could talk, and they had a large (perhaps huge) vocabulary--words for places, routes, techniques, individuals, and emotions. Extensive archaeological remains of stone tools and living sites (and, yes, they did often live in caves) indicate that Neandertals relied on complex technical procedures and spent most of their lives in small family groups. The authors sift the evidence that Neandertals had a symbolic culture--looking at their treatment of corpses, the use of fire, and possible body coloring--and conclude that they probably did not have a sense of the supernatural. The book explores the brutal nature of their lives, especially in northwestern Europe, where men and women with spears hunted together for mammoths and woolly rhinoceroses. They were pain tolerant, very likely taciturn, and not easy to excite. Wynn and Coolidge offer here an eye-opening portrait of Neandertals, painting a remarkable picture of these long-vanished people and providing insight, as they go along, into our own minds and culture.

The Neanderthals Rediscovered

Robert J. Sawyer, the award-winning and bestselling writer, hits the peak of his powers in *Humans*, the second book of *The Neanderthal Parallax*, his trilogy about our world and parallel one in which it was the *Homo sapiens* who died out and the Neanderthals who became the dominant intelligent species. This powerful idea allows Sawyer to examine some of the deeply rooted assumptions of contemporary human civilization dramatically, by confronting us with another civilization, just as morally valid, that has made other choices. In *Humans*, Neanderthal physicist Ponter Boddit, a character you will never forget, returns to our world and to his relationship with geneticist Mary Vaughan, as cultural exchanges between the two Earths begin. As we see daily life in another present-day world, radically different from ours, in the course of Sawyer's fast-moving story, we experience the bursts of wonder and enlightenment that are the finest pleasures of science fiction. *Humans* is one of the best SF novels of the year, and *The Neanderthal Parallax* is an SF classic in the making. *Humans* is a 2004 Hugo Award Nominee for Best Novel. At the Publisher's request, this title is being sold without Digital Rights Management Software (DRM) applied.

Processes in Human Evolution

Argues that Neanderthal skeletons are the remains of post flood very old biblical patriarchs.

Wonderful Life: The Burgess Shale and the Nature of History

Them and Us

An influential geneticist traces his investigation into the genes of humanity's closest evolutionary relatives, explaining what his sequencing of the Neanderthal genome has revealed about their extinction and the origins of modern humans.

Neanderthal Man

The discoveries of the last decade have brought about a completely revised understanding of human evolution due to the recent advances in genetics, palaeontology, ecology, archaeology, geography, and climate science. Written by two leading authorities in the fields of physical anthropology and molecular evolution, *Processes in Human Evolution* presents a reconsidered overview of hominid evolution, synthesising data and approaches from a range of inter-disciplinary fields. The authors pay particular attention to population migrations - since these are crucial in understanding the origin and dispersion of the different genera and species in each continent - and to the emergence of the lithic cultures and their impact on the evolution of cognitive capacities. *Processes in Human Evolution* is intended as a primary textbook for university courses on human evolution, and may also be used as supplementary reading in advanced undergraduate and graduate courses. It is also suitable for a more general audience seeking a readable but up-to-date and inclusive treatment of human origins and evolution.

Neanderthal Opens the Door to the Universe

An examination of our language instinct. Steven Mithen draws on a huge range of sources, from neurological case studies, through child psychology and the communication systems of non-human primates to the latest paleoarchaeological evidence.

Neanderthal Man

When a paleoanthropologist mysteriously disappears in the remote upper regions of the Pamir Mountains in Tajikistan, two of his former students, once lovers and now competitors, set off in search of him. Along the way, they make an astounding discovery: a remnant band of Neanderthals, the ancient rivals to *Homo sapiens*, live on. The shocking find sparks a struggle that replays a conflict from thirty thousand years ago and delves into the heart of modern humanity.

Kindred

Presents new information on the evolution and behavior of prehistoric man, describing behavior that is more modern than what has been traditionally attributed to them, including burying their dead, taking care of the sick, hunting and fishing.

The Last Neanderthal

New York Times Bestseller A Summer Reading Pick for President Barack Obama, Bill Gates, and Mark Zuckerberg From a renowned historian comes a groundbreaking narrative of humanity's creation and evolution—a #1 international bestseller—that explores the ways in which biology and history have defined us and enhanced our understanding of what it means to be “human.” One hundred thousand years ago, at least six different species of humans inhabited Earth. Yet today there is only one—homo sapiens. What happened to the others? And what may happen to us? Most books about the history of humanity pursue either a historical or a biological approach, but Dr. Yuval Noah Harari breaks the mold with this highly original book that begins about 70,000 years ago with the appearance of modern cognition. From examining the role evolving humans have played in the global ecosystem to charting the rise of empires, Sapiens integrates history and science to reconsider accepted narratives, connect past developments with contemporary concerns, and examine specific events within the context of larger ideas. Dr. Harari also compels us to look ahead, because over the last few decades humans have begun to bend laws of natural selection that have governed life for the past four billion years. We are acquiring the ability to design not only the world around us, but also ourselves. Where is this leading us, and what do we want to become? Featuring 27 photographs, 6 maps, and 25 illustrations/diagrams, this provocative and insightful work is sure to spark debate and is essential reading for aficionados of Jared Diamond, James Gleick, Matt Ridley, Robert Wright, and Sharon Moalem.

The Humans Who Went Extinct

A preeminent geneticist hunts the Neanderthal and Denisovan genomes to answer the biggest question of them all: how did our ancestors become human? Neanderthal Man tells the riveting personal and scientific story of the quest to use ancient DNA to unlock the secrets of human evolution. Beginning with the study of DNA in Egyptian mummies in the early 1980s and culminating in the sequencing of the Neanderthal genome in 2010, Neanderthal Man describes the events, intrigues, failures, and triumphs of these scientifically rich years through the lens of the pioneer and inventor of the field of ancient DNA. We learn that Neanderthal genes offer a unique window into the lives of our ancient relatives and may hold the key to unlocking the mysteries of where language came from as well as why humans survived while Neanderthals went extinct. Pääbo redrew our family tree and permanently changed the way we think about who we are and how we got here. For readers of Richard Dawkins, David Reich, and Hope Jahren, Neanderthal Man is the must-read account of how he did it.

Bigfoot, Yeti, and the Last Neanderthal

"you're talking about a yeti or bigfoot or sasquatch. Well now, you'll be amazed when I tell you that I'm sure they exist."

—Jane Goodall on NPR This is "The Big Book of Yetis." What the reader gets here is a world-class geneticist's search for evidence for the existence of Big Foot, yeti, or the abominable snowman. Along the way, he visits sites of alleged sightings of these strange creatures, attends meetings of cryptozoologists, recounts the stories of famous monster-hunting expeditions, and runs possible yeti DNA through his highly regarded lab in Oxford. Sykes introduces us to the crackpots, visionaries, and adventurers who have been involved in research into this possible scientific dead-end over the past 100 years. Sykes is a serious scientist who knows how to tell a story, and this is a credible and engaging account. Almost, but not quite human, the yeti and its counterparts from wild regions of the world, still exert a powerful atavistic influence on us. Is the yeti just a phantasm of our imagination or a survivor from our own savage ancestry? Or is it a real creature? This is the mystery that Bryan Sykes set out to unlock.

How To Think Like a Neandertal

Cro-Magnons were the first fully modern Europeans--not only the creators of the stunning cave paintings at Lascaux and elsewhere, but the most adaptable and technologically inventive people that had yet lived on earth. The prolonged encounter between the Cro-Magnons and the archaic Neanderthals, between 45,000 and 30,000 years ago, was one of the defining moments of history. The Neanderthals survived for some 15,000 years in the face of the newcomers, but were finally pushed aside by the Cro-Magnons' vastly superior intellectual abilities and cutting-edge technologies. What do we know about this remarkable takeover? Who were these first modern Europeans and what were they like? How did they manage to thrive in such an extreme environment? And what legacy did they leave behind them after the cold millennia? This is the story of a little known, yet seminal, chapter of human experience.--From publisher description.

The Neanderthals

This first-person narrative about an archaeological discovery is rewriting the story of human evolution. A story of defiance and determination by a controversial scientist, this is Lee Berger's own take on finding *Homo naledi*, an all-new species on the human family tree and one of the greatest discoveries of the 21st century. In 2013, Berger, a National Geographic Explorer-in-Residence, caught wind of a cache of bones in a hard-to-reach underground cave in South Africa. He put out a call around the world for petite collaborators—men and women small and adventurous enough to be able to squeeze through 8-inch tunnels to reach a sunless cave 40 feet underground. With this team of "underground astronauts," Berger made the discovery of a lifetime: hundreds of prehistoric bones, including entire skeletons of at least 15 individuals, all perhaps two million years old. Their features combined those of known prehomnids like Lucy, the famous *Australopithecus*, with those more human than anything ever before seen in prehistoric remains. Berger's team had discovered an all new species, and they called it *Homo naledi*. The cave quickly proved to be the richest prehomnoid site ever discovered, full of

implications that shake the very foundation of how we define what makes us human. Did this species come before, during, or after the emergence of Homo sapiens on our evolutionary tree? How did the cave come to contain nothing but the remains of these individuals? Did they bury their dead? If so, they must have had a level of self-knowledge, including an awareness of death. And yet those are the very characteristics used to define what makes us human. Did an equally advanced species inhabit Earth with us, or before us? Berger does not hesitate to address all these questions. Berger is a charming and controversial figure, and some colleagues question his interpretation of this and other finds. But in these pages, this charismatic and visionary paleontologist counters their arguments and tells his personal story: a rich and readable narrative about science, exploration, and what it means to be human.

The Neanderthal's Necklace

Explores the nature of the debate over the findings of paleoanthropologists, looking at how the biases and preconceptions of scientists in the field shape their work, and telling the stories of some of the world's major fossil finds.

A Life Decoded

Humans domesticated dogs soon after Neanderthals began to disappear. This alliance between two predator species, Pat Shipman hypothesizes, made possible unprecedented success in hunting large Ice Age mammals—a distinct and ultimately decisive advantage for human invaders at a time when climate change made both humans and Neanderthals vulnerable.

Ideas on Human Evolution

An award-winning Museum of Natural History curator and author of *Becoming Human* traces the evolution of homo sapiens to demonstrate how they prevailed among other early humans because of their unique cognitive ability, in an account that also explains how their superior mental abilities were acquired. 40,000 first printing.

Lone Survivors

Did Neanderthals have language, and if so, what was it like? Scientists agree overall that the behaviour and cognition of Neanderthals resemble that of early modern humans in important ways. However, the existence and nature of Neanderthal language remains a controversial topic. The first in-depth treatment of this intriguing subject, this book comes to the unique conclusion that, collective hunting is a better window on Neanderthal language than other behaviours. It argues that Neanderthal hunters employed linguistic signs akin to those of modern language, but lacked complex grammar. Rudolf

Botha unpacks and appraises important inferences drawn by researchers working in relevant branches of archaeology and other prehistorical fields, and uses a large range of multidisciplinary literature to bolster his arguments. An important contribution to this lively field, this book will become a landmark book for students and scholars alike, in essence, illuminating Neanderthals' linguistic powers.

The Inheritors

The long-awaited story of the science, the business, the politics, the intrigue behind the scenes of the most ferocious competition in the history of modern science—the race to map the human genome. On May 10, 1998, biologist Craig Venter, director of the Institute for Genomic Research, announced that he was forming a private company that within three years would unravel the complete genetic code of human life—seven years before the projected finish of the U.S. government's Human Genome Project. Venter hoped that by decoding the genome ahead of schedule, he would speed up the pace of biomedical research and save the lives of thousands of people. He also hoped to become very famous and very rich. Calling his company Celera (from the Latin for “speed”), he assembled a small group of scientists in an empty building in Rockville, Maryland, and set to work. At the same time, the leaders of the government program, under the direction of Francis Collins, head of the National Human Genome Research Institute at the National Institutes of Health, began to mobilize an unexpectedly unified effort to beat Venter to the prize—knowledge that had the potential to revolutionize medicine and society. The stage was set for one of the most thrilling—and important—dramas in the history of science. The Genome War is the definitive account of that drama—the race for the greatest prize biology has had to offer, told by a writer with exclusive access to Venter's operation from start to finish. It is also the story of how one man's ambition created a scientific Camelot where, for a moment, it seemed that the competing interests of pure science and commercial profit might be gloriously reconciled—and the national repercussions that resulted when that dream went awry. From the Hardcover edition.

Evidence as to Man's Place in Nature

Originally published in hardcover: Oxford; New York: Oxford University Press, 2009.

Mobituaries

David Reich describes how the revolution in the ability to sequence ancient DNA has changed our understanding of the deep human past. This book tells the emerging story of our often surprising ancestry - the extraordinary ancient migrations and mixtures of populations that have made us who we are.

The Neanderthals Rediscovered: How Modern Science Is Rewriting Their Story

'Beautiful, evocative, authoritative.' Professor Brian Cox 'Important reading not just for anyone interested in these ancient cousins of ours, but also for anyone interested in humanity.' Yuval Noah Harari Kindred is the definitive guide to the Neanderthals. Since their discovery more than 160 years ago, Neanderthals have metamorphosed from the losers of the human family tree to A-list hominins. Rebecca Wragg Sykes uses her experience at the cutting-edge of Palaeolithic research to share our new understanding of Neanderthals, shoving aside clichés of rag-clad brutes in an icy wasteland. She reveals them to be curious, clever connoisseurs of their world, technologically inventive and ecologically adaptable. Above all, they were successful survivors for more than 300,000 years, during times of massive climatic upheaval. Much of what defines us was also in Neanderthals, and their DNA is still inside us. Planning, co-operation, altruism, craftsmanship, aesthetic sense, imagination, perhaps even a desire for transcendence beyond mortality. Kindred does for Neanderthals what Sapiens did for us, revealing a deeper, more nuanced story where humanity itself is our ancient, shared inheritance.

The Genome War

*Includes pictures *Includes online resources and a bibliography for further reading In popular culture, the term Neanderthal is used as a colloquial insult for a degenerate or someone perceived as stupid. This seems to have been the case even from the first recognition of the Neanderthals as a species. The first Neanderthal fossil discovery was that of a child's skull in Belgium in 1829, but it was badly damaged. Another would be discovered in 1856 in a limestone mine of the Neanderthal region of what is present-day Germany, and a skull with differing distinct traits (indicating a different species than the Neanderthals) would be discovered just over a decade later in southwestern France. The latter specimen would come to be recognized as an example of the species Homo Sapiens, and these anatomically modern humans arrived in Europe between 45,000 and 43,000 years ago, around the time the Neanderthals are believed to started going extinct. The Neanderthals are a member of the genus Homo just like Homo sapiens and share roughly 99.7% of their DNA with modern humans (Reynolds and Gallagher 2012). Both species even lived briefly during the same time in Eurasia. However, the Neanderthals evolved separately in Europe, away from modern humans, who evolved in Africa. Physically, the Neanderthal skeleton was much more robust, suggesting that there was more room for muscle attachment. However, while Neanderthals were stronger than modern humans, the average height of the Neanderthal male was shorter, standing at only about 5'5 tall. Other physical characteristics that set the Neanderthals apart from modern humans were certain skull traits. The skull in general was low and elongated, featuring a sloping forehead with an occipital bun (a bone projection at the back of the skull), whereas modern humans have a more vertical forehead with no occipital bun. The cranial capacity of the Neanderthal skull was also greater than the modern human at 1,500-1,740 cc, and it lacked a chin and had more circular eye orbits, in contrast to Homo sapiens, which have a chin and tend to feature more rectangular eye orbits (Wolpoff 1999). Despite these

differences, the Neanderthals may have been recognizable enough to interact with Homo sapiens or even blend in with Homo sapiens for the thousands of years they lived together in Europe. The Neanderthals lived in Europe and Asia for nearly 200,000 years and thrived in these regions, but they went extinct between 40,000 and 30,000 years ago, around the same time that modern humans began arriving in Europe. This has prompted much speculation as to the nature of the interactions between Neanderthals and Homo sapiens, especially since some researchers believe they interacted with each other for over 5,000 years before the Neanderthals began going extinct at different times across Europe. One hypothesis is that Homo sapiens displaced the Neanderthals and were better suited for the environment, and it is obviously possible if not likely that these two groups had become competitors for food and other resources, with Homo sapiens being more successful in the end. If such close interactions were taking place, there is also a possibility that the relatively new-to-Europe Homo sapiens brought pathogens from Africa with them that were unknown to the Neanderthal's immune system. A more recent example of this type of resulting interaction is the European expansion into the Americas, which brought diseases like smallpox that the natives of America had never experienced before, especially diseases resulting from the domestication of animals. It is possible that the domestication of the dog by Homo sapiens may have contributed in spreading foreign diseases among the Neanderthals. This book looks at the evolution of the Neanderthals and examines the theories regarding how they went extinct.

Buried Alive

Put aside everything you thought you knew about being human - about how we got here and what it all means. Australian theoretical biologist Danny Vendramini has developed a theory of human origins that is stunning in its simplicity, yet breathtaking in its scope and importance. *Them and Us: how Neanderthal predation created modern humans* begins with a radical reassessment of Neanderthals. He shows they weren't docile omnivores, but savage, cannibalistic carnivores - top flight predators of the stone age. Neanderthal Predation (NP) theory reveals that Neanderthals were 'apex' predators - who resided at the top of the food chain, and everything else - including humans - was their prey. NP theory is one of those groundbreaking ideas that revolutionizes scientific thinking. It represents a quantum leap in our understanding of human origins.

Neanderthals in the Classroom

A small tribe of Neanderthals find themselves at odds with a tribe comprised of homo sapiens, whose superior intelligence and agility threatens their doom.

Who We Are and How We Got Here

The Neanderthals provide a surprising mirror for modern-day humanity. They belonged to our evolutionary group and lived like the Cro-Magnons, our ancestors, did — worshipping, socializing, and hunting. The struggle between Neanderthals and Cro-Magnons lasted thousands of years. The Cro-Magnons were not biologically fit for extreme cold weather, but their ingenuity allowed them to settle down, band together, and survive. In this tale of life, death, and the awakening of human awareness, Juan Luis Arsuaga, Spain's most celebrated paleoanthropologist, depicts the dramatic struggle between two clashing species, of which only one survives.

The Bone Labyrinth

Scientists have long known that the popular image of the Neanderthal as a primitive, hairy, heavily browed, club-wielding brute is not supported by the fossil evidence. But to date, no such consensus has existed on the riddle of Neanderthals' disappearance. *The Last Neanderthal*, written by one of the most respected authorities on the subject and supported by a dazzling wealth of material, paints the first full portrait of the most familiar and haunting of human relatives. Drawing on the latest findings and sophisticated new techniques of analysis, Ian Tattersall marshals the best available evidence to unravel the mysteries of the Neanderthals - who they were, how they lived, how they succeeded for so long. Drawing on his own research and the work of others, Tattersall takes on the most fascinating question of all - what happened to them? This revised edition is fully updated to include information on Tattersall's recent survey of all known Neanderthal fossils, cutting-edge work with Neanderthal DNA, and new discoveries in Spain.

Humans

A study of the Burgess Shale, a sea bed 530 million years old, and attempts to tackle what the findings are and what it means

Sapiens

A leading researcher on human evolution proposes a new and controversial theory of how our species came to be In this groundbreaking and engaging work of science, world-renowned paleoanthropologist Chris Stringer sets out a new theory of humanity's origin, challenging both the multiregionalists (who hold that modern humans developed from ancient ancestors in different parts of the world) and his own "out of Africa" theory, which maintains that humans emerged rapidly in one small part of Africa and then spread to replace all other humans within and outside the continent. Stringer's new theory, based on archeological and genetic evidence, holds that distinct humans coexisted and competed across the African continent—exchanging genes, tools, and behavioral strategies. Stringer draws on analyses of old and new fossils from

around the world, DNA studies of Neanderthals (using the full genome map) and other species, and recent archeological digs to unveil his new theory. He shows how the most sensational recent fossil findings fit with his model, and he questions previous concepts (including his own) of modernity and how it evolved. Lone Survivors will be the definitive account of who and what we were, and will change perceptions about our origins and about what it means to be human.

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