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A CONVERSATION WITH CHRIS STRINGER

## A Bone Here, a Bead There: On the Trail of Human Origins



**Origins of Modern Humans:** John Noble Wilford interviews the paleoanthropologist Chris Stringer of the Natural History Museum in London.

By JOHN NOBLE WILFORD  
Published: July 16, 2012 | 147 Comments

Who are we, and where did we come from? Scientists studying the origin of modern humans, Homo sapiens, keep reaching deeper in time to answer those questions — toward the last common ancestor of great apes and humans, then forward to the emergence of people more and more like us in body and behavior.

Their research is advancing on three fronts. Fossils of skulls and bones expose anatomical changes. Genetics reveals the timing and place of the Eve of modern humans.

And archaeology turns up ancient artifacts reflecting abstract and creative thought, and a growing self-awareness. Just last month, researchers made the startling announcement that [Stone Age paintings in Spanish caves were much older than previously thought](#), from a time when Neanderthals were still alive.

To help make sense of this cascade of new information, a leading authority on modern human evolution — the British paleoanthropologist Chris Stringer — recently sat

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John Noble Wilford interviews the paleoanthropologist Chris Stringer of the Natural History Museum in London.

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STUDY OF MAN A female figurine, top, was presented in Germany as one of the oldest examples of figured art in the world. [More Photos »](#)

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kinds have disappeared, and left us as the sole survivors.

**You wrote that in 1970, when you started doing research in this field, the origin of modern humans was hardly recognized as a topic worthy of study in science. What has changed since then?**

It's been a fantastic time to be involved in the field, and even when I was writing this book in the last two years, I had to regularly go back and rewrite things I thought I'd finished with, because new developments were coming up all the time. In 1970, for some people, there was no single origin of modern humans: We evolved globally, all over the world. There was a view that in the different regions an earlier species, Homo erectus, evolved relatively seamlessly to modern humans. This idea was known as multiregionalism.

The argument went that we remained one species throughout that evolutionary process, because there was interbreeding among the different populations. It meant that the Neanderthals in Europe, for example, would be the ancestors of modern Europeans; Homo erectus in China would be the ancestor of modern Asians. And Java Man would be a distant ancestor of modern Australian aboriginal populations.

What we have seen since then is a growth in the fossil record, in our ability to date that record and to CT-scan fossils and get minute details out of them. DNA studies have had a huge impact on our field. We now have the genomes of Neanderthals and of these strange people in Siberia called the Denisovans.

**Speaking of DNA, what about the African Eve? This established an approximate date for the genetic origin of modern humans, in Africa. As a leading advocate of the recent African origin, in contrast to the multiregional model, did you believe this settled the debate?**

To be honest, it's not been totally resolved, but the Mitochondrial Eve publication of 1987 was a key moment. Up to then, a few of us were arguing for a recent African origin from the fossil and archaeological evidence. But the evidence was pretty skimpy, and the majority opinion was against our view.

for an interview in New York that ranged across many recent developments: the evidence of interbreeding between Neanderthals and Homo sapiens; the puzzling extinct species of little people nicknamed the hobbits; and the implications of a girl's 40,000-year-old pinkie finger found in a Siberian cave.

Dr. Stringer, an animated man of 64, is an anthropologist at the Natural History Museum in London and a fellow of the Royal Society. But he belies the image of a don: He showed up for our interview wearing a T-shirt and jeans, looking as if he had just come in from the field.

A condensed and edited version of our conversation follows. In it and in a new book, he describes a new wrinkle to the hypothesis of a recent African origin of modern Homo sapiens. His ideas may light up more debate in a contentious science.

**First of all, would you explain the title of your new book?**

Yes, the title is "[Lone Survivors: How We Came to Be the Only Humans on Earth.](#)" And this comes from the fact that if we went back 100,000 years, which is very recent, geologically speaking, there might have been as many as six different kinds of humans on the earth. All those other

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When this new genetic technique appeared, it seemed to give clarity to the picture. Here was an independent bit of data, from our mitochondrial DNA, inherited through females, suggesting we originated, all of us, all over the world, from a single ancestral population that lived in Africa maybe 200,000 years ago.

I came to this conclusion gradually, starting with the Neanderthals. They were the best-known ancient humans, and there was a view that they were our ancestors. I tested that model in my Ph.D. research, and I concluded the Neanderthals did not make good ancestors of modern humans, even in Europe, where we had the best data. So gradually my search moved from one region to another, to see where the evidence best fitted the idea of our origins.

It turned out that Africa was the place that had the oldest fossils of modern humans. Africa, for me, was the only place that showed a transition from archaic to modern humans.

**In your book you propose that there was not one place in Africa where modern humans originated.**

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A version of this interview appeared in print on July 17, 2012, on page D1 of the New York edition with the headline: A Bone Here, a Bead There: On the Trail of Human Origins.

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**Skanik** Berkeley  
Hi Maggie,

Well let's think about this.

If sheer dumb luck got me through 5 generations, why not 40,000 ?  
I may not be the fittest, but as such I may avoid situations where the fittest, being quite self assured by their 'fitness' have no fear to go but sooner or latest in those 40,000 generations they go extinct, I mumble and stumble on - never quite the fittest, but never very daring either.

July 17, 2012 at 7:26 p.m. RECOMMEND 1



**Greg Warner** Indonesia

Paul, do you seen any link between the "50 mutations in our DNA compared with our parents" due to radiation from nuclear weapons used both in war and testing as well as radiation leaks from nuclear facilities?

What is the percentage of DNA mutations in our parents compared to our grandparents?

And going back, say, to the beginning of the Industrial Revolution?

Is the propensity for DNA mutations growing?

July 17, 2012 at 6:07 a.m. RECOMMEND 2

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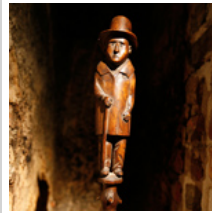
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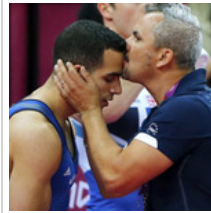
Despite all its political drama, Romania has done nothing to tackle clientelism and corruption.

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