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Humans and Neanderthals shared ancestor, not beds

Wednesday, 15 August 2012

AFP

No hanky-panky Anthropologists have dealt a blow to theories that humans and Neanderthals interbred, according to a new study.

Over the last two years, several studies have suggested that *Homo sapiens* got it on with Neanderthals, an hominid who lived in parts of Europe, Central Asia and the Middle East for up to 300,000 years but vanished more than 30,000 years ago.

The evidence for this comes from fossil DNA, which shows that on average Eurasians and Asians share between one and four per cent of their DNA with Neanderthals, but Africans almost none.

But a new study by scientists at Britain's [University of Cambridge \(http://www.cam.ac.uk \)](http://www.cam.ac.uk) suggests the shared DNA came from a shared ancestor, not from "hybridisation" or reproduction between the two hominid species.

Reporting in the journal *Proceedings of the National Academy of Sciences* ([http://www.pnas.org/cgi/doi/10.1073/pnas.1200567109 \)](http://www.pnas.org/cgi/doi/10.1073/pnas.1200567109), Andrea Manica and Anders Eriksson at the university's Evolutionary Ecology Group devised a computer model to simulate a genetic odyssey.

Common ancestor

It begins with a common ancestors of Neanderthals and *H. sapiens* who lived around half a million years ago in parts of Africa and Europe.

Around 300,000 to 350,000 years ago, the European population and the African population of this hominid became separated.

Living in genetic isolation, the European range evolved bit by bit into Neanderthals, while the African range eventually became *H. sapiens*, which expanded in waves out of Africa from around 60,000 to 70,000 years ago.

Communities of *H. sapiens* that were geographically closer to Europe - possibly in North Africa - retained a relatively larger share of the ancestral genes, according to the theory.

They also became the first colonisers of Eurasia during the progressive 'Out of Africa' migration.

This could explain why modern-day Europeans and Asians but not Africans have the tiny bit of genetic similarity with Neanderthals.

"Our work shows clearly that the patterns currently seen in the Neanderthal genome are not exceptional, and are in line with our expectations of what we would see without hybridisation," says Manica.



Neanderthals lived in parts of Europe, Central Asia and the Middle East, but vanished more than 30,000 years ago
(Source: Wikimedia)

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"So, if any hybridisation occurred - it's difficult to conclusively prove it never happened - then it would have been minimal and much less than what people are claiming now."

Earlier split

One of the great questions of anthropology is what happened to the Neanderthals.

Hybridisation would have answered that, at least partly. By interbreeding with humans, the Neanderthals were not wiped out by *H. sapiens* or by climate change as some contest. Instead, Neanderthal genes were merged into the genome of the dominant strain of Homo.

In a separate study published in *Proceedings of the National Academy of Sciences* (<http://www.pnas.org/cgi/doi/10.1073/pnas.1211740109>), scientists led by Svante Paabo at the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany, found that Neanderthals and *H. sapiens* split between 400,000 and 800,000 years ago, an earlier date than thought.

The team also calculate that humans split from chimpanzees - our closest primate relative - around seven to eight million years ago, earlier than the six-to-seven million years ago that is a common estimate.

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