

Neanderthals could have died out because their bodies overheated

Neanderthals may have died out because their bodies overheated as the Earth grew warmer, according to new research.

By Richard Gray, Science Correspondent
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Analysis of DNA obtained from Neanderthal remains has revealed key differences from modern humans that suggest their bodies produced excess heat.

While in the cold climate of an ice age this would have provided the species with an advantage, as the earth warmed they would have been less able to cope. Ultimately this would have caused their extinction around 24,000 years ago.

Scientists at Newcastle University have put forward the theory after examining a particular form of genetic material which was obtained from the fossilised bones of Neanderthals.

By comparing it with that found in modern humans, they discovered that Neanderthals had key differences in the sections responsible for producing energy in all living cells.

Professor Patrick Chinnery, a neurogeneticist at Newcastle University, believes the differences in this mitochondrial DNA could have caused Neanderthals to be inefficient at producing energy, meaning their cells leaked heat.

He said: "The question is why did Neanderthals disappear? There are lots of explanations to do with changes in climate and the food supply.

"Differences in these mitochondrial DNA sequences might explain why modern humans were able to survive while Neanderthals were not.

"We compared mitochondrial DNA sequences from Neanderthals that have been obtained by other researchers with a huge database of human sequences from around the world to see how different it was from modern humans.

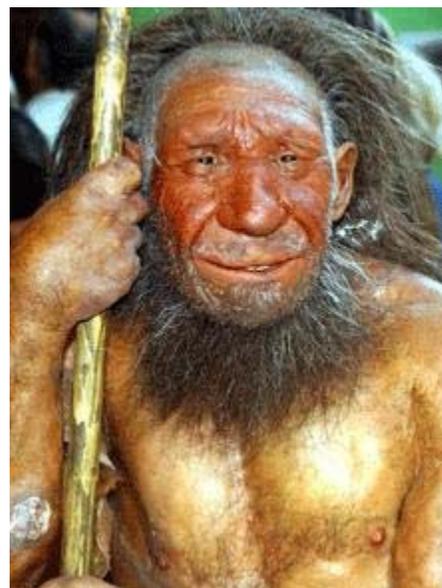
"We found a number of differences within a certain part of the mitochondrial DNA that were quite unlike anything we see in modern humans.

"It is difficult to get a definitive answer, as it is rather like looking through a misty window. We can only get clues to what went on."

Mitochondria are tiny structures found inside all living cells and are the biological power stations that produce the energy cells need to survive by converting sugar from food into energy.

The research by Professor Chinnery, which was recently presented at a conference held by the American Society on Human Genetics, is the latest attempt to find out why our ancient cousins died out.

Scientists have also been attempting to read the entire Neanderthal genome in the hope that it will shed more light on the



Neanderthal DNA reveals key differences from modern humans Photo: EPA

differences between them and modern humans.

Recent work by scientists at the Max Planck Institute in Germany revealed that Neanderthals shared a language gene that is only found in modern humans. The controversial findings raised the debate about whether Neanderthals were capable of speech.

Neanderthals are thought to have evolved from a common ancestor shared with modern humans around 400,000 years ago. It is thought they died out around 10,000 years after modern humans began spreading in to Europe.

There is a great deal of debate about what actually sealed Neanderthals fate, with the changing climate, dwindling food supplies and modern humans themselves all being blamed for killing the species off.

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