

DNA research confirms recent interaction between Neanderthals and humans

May 1 2014, by Laf (Laurent) Frantz



Neanderthals and modern humans, tens of thousands of years ago, had sexual intercourse with each other in Europe and Asia. For this reason, we as modern humans still carry Neanderthal DNA in us. Researchers from Edinburgh University and Wageningen University come to this conclusion based on a comparative statistical analysis of DNA from Neanderthals and humans. They published their findings in the journal

Genetics.

The researchers Konrad Lohse of the University of Edinburgh and Laurent Frantz from Wageningen University investigated the biological relationship between modern humans and a previous human species that became extinct around thirty thousand years ago.

Experts already agreed that both groups came from a common ancestor in Africa before they spread all over the world. Research has shown that both groups have appeared at different times, where the Neanderthals left Africa 200 000 years earlier than humans.

Previous research by other groups resulted in two theories: Genetic exchange between Neanderthals and [modern humans](#) and an alternative explanation that modern Europeans and Asians are related to Neanderthals because they descended from the same sub-populations from Africa.

The Edinburgh-Wageningen team has now shown that the genetic similarity between Neanderthal and modern human populations should have occurred outside of Africa, after they interacted with each other in Europe and Asia. The new findings of the research team are in accordance with the first theory, and go even further into the extent of exchange than the original theory.

The researchers developed a new method to compare competing theories. They divided the genetic code of each species in a series of short DNA blocks, from which they could calculate the statistical probability of each scenario.

The method can also be used to reconstruct the history of other species, including species that are rare or extinct.

More information: "Neandertal Admixture in Eurasia Confirmed by Maximum Likelihood Analysis of Three Genomes" Konrad Lohse and Laurent A. F. Frantz. *Genetics* genetics.114.162396; Early online February 13, 2014,. [DOI: 10.1534/genetics.114.162396](https://doi.org/10.1534/genetics.114.162396)

Provided by Wageningen University

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