

WE EURASIANS AND THE NEANDERTHALS

For millennia man has considered himself as something completely / intrinsically / absolutely ... different from the rest of the creatures on Earth. Then, evolutionary genetics, especially with the advent of sequencing, showed us how much of our genome has in common with other organisms, even very distant ones. A total change in the way of thinking! Saying, for example, that we diverged from yeast about a billion years ago is correct, but perhaps it is even more correct and effective to say that we were the same living organism for ~ 2.5 billion years (considering the origin of life was ~ 3.5 billion years ago). The last blow to our self-image of "exceptionality", for us Eurasians, came with the discovery that our ancestors had interbred with the Neanderthals. Part of our genome, although small, came to us from the Neanderthals, especially those genes that represent adaptation to new conditions, pathogens in particular, to which the Neanderthals had had more time to adapt. The Neanderthals, indeed, came to Eurasia much earlier than *Homo sapiens*. This movement of genes between species by backcrossing is called introgression. Now, a new publication in Science

<https://science.sciencemag.org/content/366/6463/eaax2083>

adds new data and shows that not only single genes or mutations, but entire duplicate blocks of DNA (segmental duplications) have introgressed into the genome of some modern human populations.