

Genetic evidence reveals extensive inbreeding between humans, other hominids

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Until recently, anthropologists drew the human family tree in the same way that my 10-year-old son solves a maze. He finds it much easier to work from the end to the beginning, because blind alleys lead with depressing sameness away from the start. In just this way, scientists once traced our own lineage from the present into the past, moving backward through a thicket of fossil relatives, each perched upon its own special branch to extinction.

This approach yielded the now-ubiquitous image of the human family tree, with *Homo sapiens* – the one and only living hominid – sitting alone, seemingly inevitable, at the top. It's a powerful metaphor, but it also turns out to be a deeply mistaken one. Where once we saw each branch in isolation, DNA evidence now reveals a network of connections. From an African origin more than 1.8 million years ago, human ancestors flowed into different populations, following separate paths for hundreds of thousands of years, yet still coming together to mix their genes.

In the 1970s, geneticists noticed that humans are surprisingly inbred for a worldwide species. Other great apes – the chimpanzees, gorillas, and orangutans – each have much more variation, so much that today's primatologists recognise two species of orangutans, and up to four species of chimpanzees and gorillas. These apes have deep histories, with populations separated for hundreds of thousands of years. By contrast, humans throughout the world look like refugees from a single small part of Africa. Some scientists even wondered if a massive volcanic eruption might have decimated our numbers.

Read full, original post: Human evolution is more a muddy delta than a branching tree