

Researchers find signs of western Eurasian genes in southern African Khoisan tribes

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33-year-old San tribesman from Namibia. Image: Wikipedia.

(Phys.org) —A team of researchers with representatives from the U.S., Germany and France has found evidence of western Eurasian genes in

Khoisan tribes living in southern Africa. This suggests, the researchers conclude in a paper they've had published in *Proceedings of the National Academy of Sciences*, that a migration from the Middle East back to Africa occurred approximately 3000 years ago.

Scientists believe humans evolved from ancestral primates in Africa several hundred thousand years ago, but it wasn't until approximately 65,000 years ago that they made their way out of Africa and into the Middle East and eventually the rest of the world. Until recently, that migration has been viewed by most scientists as a one-way trip. Gene studies over the past several years has turned that thinking around, however, as its been found that many people in several parts of Africa have European or Asian gene segments in their DNA. In this latest study, the researchers have found evidence of Eurasian [genes](#) in tribespeople who were thought to have a purely African ancestry.

The Khoisan tribespeople of today still live much as their ancestors did—they are hunter-gathers who are also pastoralists—they are most familiar to westerners as the people who speak with distinctive clicking noises. Until now, they were believed to have the purest African gene pool due to their thousands of years of isolationist practices.

The team acquired DNA samples from 32 people living in Khoisan tribes in southern Africa—an analysis revealed Eurasian gene segments in all of them. But that wasn't the end of the story. To understand how the gene fragments got into the Khoisan tribespeople, the researchers turned to archeological and linguistic evidence to build a possible timeline of events. In so doing, they've found what they believe to have been a migration back into Africa by people of the Middle East (ancestors of the people that migrated to Europe and Asia) approximately 3000 years ago. Those people made their way to various parts of the continent, including a part of eastern Africa from which the Khoisan tribespeople had migrated south approximately 900 and 1800 years ago.

The researchers found something else—the Khoisan tribespeople also had snippets of Neanderthal DNA in their genes as well—courtesy of their Eurasian heritage.

More information: Ancient west Eurasian ancestry in southern and eastern Africa, Joseph K. Pickrell, *PNAS*, [DOI: 10.1073/pnas.1313787111](https://doi.org/10.1073/pnas.1313787111)

Abstract

The history of southern Africa involved interactions between indigenous hunter–gatherers and a range of populations that moved into the region. Here we use genome-wide genetic data to show that there are at least two admixture events in the history of Khoisan populations (southern African hunter–gatherers and pastoralists who speak non-Bantu languages with click consonants). One involved populations related to Niger–Congo-speaking African populations, and the other introduced ancestry most closely related to west Eurasian (European or Middle Eastern) populations. We date this latter admixture event to ~900–1,800 y ago and show that it had the largest demographic impact in Khoisan populations that speak Khoe–Kwadi languages. A similar signal of west Eurasian ancestry is present throughout eastern Africa. In particular, we also find evidence for two admixture events in the history of Kenyan, Tanzanian, and Ethiopian populations, the earlier of which involved populations related to west Eurasians and which we date to ~2,700–3,300 y ago. We reconstruct the allele frequencies of the putative west Eurasian population in eastern Africa and show that this population is a good proxy for the west Eurasian ancestry in southern Africa. The most parsimonious explanation for these findings is that west Eurasian ancestry entered southern Africa indirectly through eastern Africa.

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