

First Americans were Europeans. Sort of. It's complicated.

It's not news that studies of ancient DNA are radically revising fields like anthropology and archaeology and paleontology. But the fact that ancient DNA research is now common doesn't mean that its revelations have become boring.

In the latest example, published last week, the researchers achieved a dual coup. They sequenced the [oldest genome yet from modern human bones, dated at about 24,000 years](#) ago. And they proposed an intriguing [new scenario for the first migrations to the Americas](#) that helps explain some puzzling features of Native American DNA.

The new story is based on DNA from the arm bone of a little boy. His remains were housed at the Hermitage Museum in St. Petersburg, Russia, after their discovery near a present-day Siberian village named Ma'ita almost a century ago. Despite his young age (about 4), the boy was evidently a person of consequence. He had been buried securely under a stone and wore a headdress made of ivory, a bead necklace and a pendant in the shape of a bird. Flint tools accompanied him into the afterlife.

The story his DNA tells is consequential too. The types of the boy's Y chromosome (from his father) and mitochondrial DNA (from his mother) are today found pretty much only in people from Europe and western Asia. But some of his autosomal genetic material matches DNA now found only in Native Americans.

What the boy did **not** have was DNA matching East Asians—today's Chinese and Japanese. Native Americans possess a significant amount of East Asian genes. That DNA is one reason for the prevailing theory about the first American immigrants. Which is that their ancestors came from East Asia, moved on to Siberia 15,000 or more years ago and then crossed the Bering Sea to the Americas over a land bridge. The bridge is long gone, drowned in rising seas as the Ice Age melted away soon after the crossing(s).

The new theory

The new research, accomplished by an enormous international team assembled by scientists at the Natural History Museum of Denmark in Copenhagen, implies that this prevailing theory must be wrong, or at least incomplete. The boy's DNA tells us that Native Americans are descended from his people as well as East Asians.

The researchers propose that the boy's ancestors came from the West to Siberia and met up and mingled with the ancestors of today's East Asians at some early point in Native American history. Perhaps, they suggest, this happened in Siberia and the new polyglot population then crossed the land bridge.

Anthropologist Dienekes Pontikos, who runs one of the best-known anthropology blogs, wonders whether the boy's ancestors were part of [an intrusive western population encroaching on east Eurasians](#). Or maybe they were the first settlers in this bleak empty land, later giving up their territory to east Eurasians who were perhaps from present-day China. He thinks the place where the two groups exchanged DNA is an open question. "Did the two mix in Siberia or did they arrive in the Americas in separate migrations and

mix there?”

The paper has commanded a lot of attention in large part because it proposes a new explanation for why Native Americans possess some European DNA. The prevailing theory about the presence of European DNA has been that this mingling is a recent event resulting from the colonizing invasion after Columbus. That is certainly true, but last week’s findings suggest that post-1492 genes are not the whole story.

The new idea is that some European DNA has been part of the Native American genome since the beginning, brought East through Siberia. (There is also a minority view, very much a minority, that Europeans brought their DNA across the Atlantic not only after the 15th century, [but also some 15,000 or more years earlier.](#))

Geography and genomics

Using geographic terms like “China” and “Europe” to describe the places where events occurred 20,000 or more years ago may be somewhat helpful in pointing curious onlookers like us to the right places on our maps. But identifying those locales using today’s place names contributes to public confusion. And not just geographic confusion. Genomic confusion as well.

Razib Khan, who blogs at Gene Expression, is bothered by this, pointing out that the labels are simply a geographic convenience. They tell us little about the genomes of the people who lived there long ago. “[M]odern Europeans are a new population which emerged through admixture processes over the past ~10,000 years. And one of those populations which contributed to their ancestry are the descendants of the Siberian boy!” he says. “Though the archaeology may clarify, I also don’t think it is definite that the ancient Siberians were from Europe as we’d understand it. Perhaps they all come from a common Central Eurasian stock which diversified?” He concedes that he has no better solutions for clarifying the geographic terminology.

Knight Science Journalism Tracker Charlie Petit is similarly vexed. He notes how misleading headlines can be when they say, for example, that American Indians have European roots, even though that’s not exactly wrong. “But anybody who writes an unembellished headline such as that should know a lot of [readers are going to think this means it was a European parade](#) across the Beringia land bridge 12,000 to 20,000+ years ago.”

It would be nice to figure out ways of conveying the subtleties and complications of human genetic history more clearly, especially since *Homo sap*’s backstory grows more tangled with every find of ancient DNA. One truth about geography and genomes is now certainly apparent: Because of humanity’s compulsive wanderlust, not to mention the equally compulsive other kind of lust, the human DNA that lives in a particular place now will hardly ever be like the human DNA that lived there then.

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