

# The Oldest Case of Plague in Siberia

An international scientific team, which included a researcher from Siberian Federal University, has [expressed](#) a number of hypotheses about how peoples migrated and mixed on the territory of modern Western and Eastern Siberia, Yakutia and Transbaikalia. Having examined the genome of 40 people who lived 16,900–550 years ago in Northeastern Asia, the researchers discovered the Asian ancestors of the Paleo-Eskimos — peoples who inhabited the Arctic region from Chukotka to North America and Greenland. They also managed to find traces of the spread of plague bacillus in the northern territories of Siberia — scientists recorded the oldest known case of *Yersinia pestis* in human.



A large-scale study initiated by Swedish, British, Turkish, and Russian scientists used various genetic research methods to determine how the different populations of people inhabiting the vast territories lying to the west of Lake Baikal (Irkutsk region) were formed. The study covers the period from the Late Paleolithic to the Neolithic and the Bronze Age.

*“The team studied episodes related to the migrations of peoples in the northern territories of Russia. Today, we can only make some cautious assumptions about how this migration went, because not much genetic material survived, and not all of it is well preserved — the experts carried out mainly analysis of teeth, as well as fragments of the skeleton, skulls of people who inhabited these territories. About 38 thousand years ago, Northeast Asia was inhabited by *Homo sapiens*, a modern type of man. However, due to the strong Pleistocene glaciation in the 20–16 millennia BC, the natural and climatic conditions became so unbearable that they caused a gap in settlement of these territories by people. Did the locals survive? Went somewhere or just died out? We do not know. It was a long glacial standstill,”* said **Pavel Mandryka**, head of the Laboratory of the Archaeology of the Yenisei Siberia, professor of the Department of General History.



The scientists found that about 16 thousand years ago, a hitherto unknown human tribe passed through the north of Siberia — probably these were nomads who have already disappeared from the face of the earth, but whose genes remained in the genome of the ancient peoples who inhabited the territories north of Lake Baikal.

Pavel Mandryka noted that the version of the settlement of the northern territories of the United States of America by peoples who came from Siberia had gained more evidence. Genetic examination showed that, according to the remains found in Yakutia, representatives of the Belkachin archaeological culture that lived there 9 thousand years ago were highly likely to have become the progenitors of the so-called paleoinuit — peoples whose descendants still inhabit Alaska, northern Canada, Denmark, and Russia.

*“Another curious detail is that after the retreat of the glacier about 8.5 thousand years ago, the gradual settlement of the Baikal region began, and people of Eastern European and even North African origin appeared there at the same time. These migrants lingered on the Baikal lands until the Bronze Age, and after, naturalized and acquiring minor changes in the genome, they remained as an extensive group until modern times,”* continued **professor Mandryka**.

Traces of the *Yersinia pestis*, plague bacillus, which is a causative agent of a dangerous and highly infectious disease — were found in one of the world's northernmost regions thanks to the remains of a person who lived in the Kolyma River region in the Bronze Age. Using the sample from the Baikal region, the researchers managed to record the most ancient case of plague. According to the scientists, irrefutable evidence of infection with the deadly bacteria was present in the plaque on the teeth examined by the experts. The scientists dated the remains of a person affected by plague to the fourth millennium BC, suggesting that at that time a pandemic of this disease could well rage on the territory of Siberia because, in ancient times, mortality from plague was enormous.

*"We have contributed to the study of the complex and interesting processes of migration and mixing of peoples in Siberia, providing a team of foreign paleogeneticists with rare specimens of skulls found in the region of the city of Kansk (Krasnoyarsk Territory). These remains were found and interpreted by employees of Siberian Federal University during summer research expeditions. They are of great interest for further study of migrations, genetic characteristics and, possibly, diseases that the most ancient inhabitants of the Russian north faced for the past millennia. On the whole, judging by the first stages of the research, various human populations dynamically moved through this region and also actively mixed throughout the entire Holocene period. Some part of the genome of these ancient people still lives in their distant descendants - the indigenous people of Krasnoyarsk Territory, Irkutsk Region and Yakutia,"* concluded **Pavel Mandryka**.

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