

Tracing the origin and expansion of the Turkic and Hunnic confederations

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Turkic-speaking populations are highly heterogeneous genetically, but relatively homogeneous linguistically. The split-off of the first outlier, the Bulgars (modern Chuvash language), can be dated to the end of the 1st millennium BCE. The earliest confederacy of indisputably Turkic affiliation, the Göktürks, emerged on the steppe in the 6th c. CE. Earlier history of Turkic groups remains debatable, including their connections to the Xiongnu and Hunnic confederations. We study the history of Turkic groups from three perspectives.

Despite the fact that main clades of the Turkic tree do not raise doubts, the exact Turkic phylogeny cannot be reconstructed without lexicostatistical data from dialects which are mostly poorly documented so far, since some modern literary languages (which are much better described than their living dialects) are actually somewhat artificial being full of hidden loans. The representative set of Turkic dialectal wordlists is currently in preparation by Moscow linguists.

We also co-analyzed new genome-wide data from Central Asia, spanning the period from 3000 to 500 YBP, and the data published by de Barros Damgaard *et al.* (*Nature*, 2018). Using the PCA and *qpAdm* methods, we revealed that a majority of Turkic groups share the same ancestry profile, being a mixture of Tungusic or Mongolic speakers and populations of Central Asia in the early 1st millennium CE. The latter are themselves modelled as a mixture of western Scythians or Sarmatians and ancient Caucasians or Iranian farmers. For some Turkic groups in the Altai region and Volga basin, a different admixture model fits the data: the same West Eurasian source + Uralic/Yeniseian-speaking Siberians. Thus, we revealed an admixture cline between Scythians and the Iranian farmer genetic cluster, and two further clines connecting the former cline to distinct ancestry sources in Siberia. Interestingly, few Wusun-period individuals harbor substantial Uralic/Yeniseian-related Siberian ancestry, in contrast to preceding Scythians and later Turkic groups. It remains to be elucidated whether this genetic influx reflects contacts with the Xiongnu confederacy.

Building on these genetic results, we will study the genetic makeup of Hunnic and post-Hunnic groups in the Volga basin. It is obvious that the Huns themselves were only one group among a complex mixture of “Asian” peoples who invaded the Volga steppes at the beginning of the 4th c. CE. Their movement westward involved Late Sarmatian population of the Volga steppes along with some Kama Finnish peoples, making room for another wave of newcomers in the 5th c. CE with distinctive “Asian” traits in their culture. After the collapse of the Attila’s reign, the Hunnic core of his former realm

totally melted in the European post-Roman tribal mess. But the migrants of the second wave mostly remained in the East European steppes during the 5th-6th cc. CE. While those new groups were not described as “Huns” at the time of Attila, they adopted the famous name in the post-Hunnic time. It is highly likely that this population was mostly Turkic-speaking, but also included heterogeneous debris of the Hunnic confederation.