

Ancient genomes trace the origin and decline of the Scythians

March 26 2021



Mound 4 of the Eleke Sazy necropolis in eastern Kazakhstan. Credit: Zainolla Samashev

Generally thought of as fierce horse warriors, the Scythians were a multitude of Iron Age cultures who ruled the Eurasian steppe, playing a

major role in Eurasian history. A new study published in *Science Advances* analyzes genome-wide data for 111 ancient individuals spanning the Central Asian Steppe from the first millennia BCE and CE. The results reveal new insights into the genetic events associated with the origins, development and decline of the steppe's legendary Scythians.

Because of their interactions and conflicts with the major contemporaneous civilizations of Eurasia, the Scythians enjoy a legendary status in historiography and popular [culture](#). The Scythians had major influences on the cultures of their powerful neighbors, spreading new technologies such as saddles and other improvements for horse riding. The ancient Greek, Roman, Persian and Chinese empires all left a multitude of sources describing, from their perspectives, the customs and practices of the feared horse warriors that came from the interior lands of Eurasia.

Still, despite evidence from external sources, little is known about Scythian history. Without a [written language](#) or direct sources, the language or languages they spoke, where they came from and the extent to which the various cultures spread across such a huge area were in fact related to one another, remain unclear.

The Iron Age transition and the formation of the genetic profile of the Scythians

A new study published in *Science Advances* by an international team of geneticists, anthropologists and archeologists lead by scientists from the Archaeogenetics Department of the Max Planck Institute for the Science of Human History in Jena, Germany, helps illuminate the history of the Scythians with 111 ancient genomes from key Scythian and non-Scythian archaeological cultures of the Central Asian steppe. The results of this study reveal that substantial genetic turnovers were associated

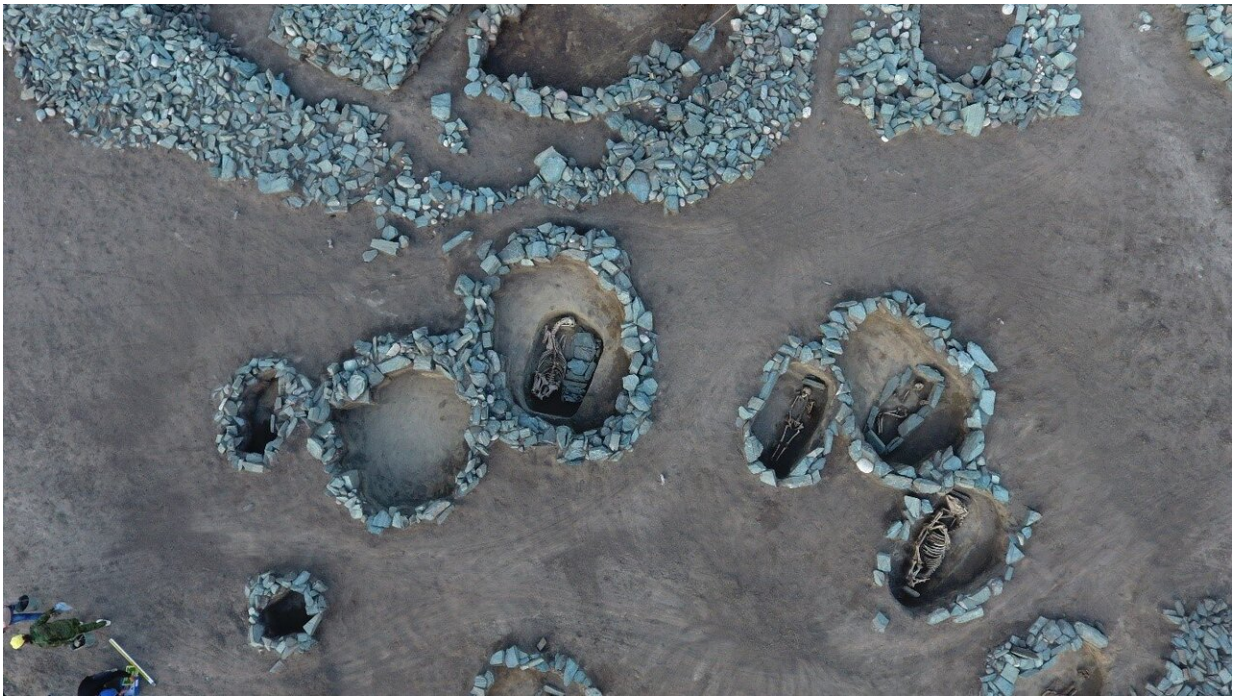
with the decline of the long-lasting Bronze Age sedentary groups and the rise of Scythian nomad cultures in the Iron Age. Their findings show that, following the relatively homogenous ancestry of the late Bronze Age herders, at the turn of the first millennium BCE, influxes from the east, west and south into the steppe formed new admixed gene pools.



The burial of a social elite known as 'Golden Man' from the Eleke Sazy necropolis. Credit: Zainolla Samashev

The diverse peoples of the Central Asian Steppe

The study goes even further, identifying at least two main sources of origin for the nomadic Iron Age groups. An eastern source likely originated from populations in the Altai Mountains that, during the course of the Iron Age, spread west and south, admixing as they moved. These genetic results match with the timing and locations found in the archeological record and suggest an expansion of populations from the Altai area, where the earliest Scythian burials are found, connecting different renowned cultures such as the Saka, the Tasmola and the Pazyryk found in southern, central and eastern Kazakhstan respectively. Surprisingly, the groups located in the western Ural Mountains descend from a second separate, but simultaneous source. Contrary to the eastern case, this western gene pool, characteristic of the early Sauromatian-Sarmatian cultures, remained largely consistent through the westward spread of the Sarmatian cultures from the Urals into the Pontic-Caspian steppe.



An aerial view of Hun-Xianbi culture burials. Both horses and warriors can be

identified. Credit: Zainolla Samashev

The decline of the Scythian cultures associated with new genetic turnovers

The study also covers the transition period after the Iron Age, revealing new genetic turnovers and admixture events. These events intensified at the turn of the first millennium CE, concurrent with the decline and then disappearance of the Scythian cultures in the Central Steppe. In this case, the new far eastern Eurasian influx is plausibly associated with the spread of the nomad empires of the Eastern [steppe](#) in the first centuries CE, such as the Xiongnu and Xianbei confederations, as well as minor influxes from Iranian sources likely linked to the expansion of Persian-related civilization from the south.

Although many of the open questions on the history of the Scythians cannot be solved by ancient DNA alone, this study demonstrates how much the populations of Eurasia have changed and intermixed through time. Future studies should continue to explore the dynamics of these trans-Eurasian connections by covering different periods and geographic regions, revealing the history of connections between west, central and east Eurasia in the remote past and their genetic legacy in present day Eurasian populations.

More information: "Ancient genomic time-transect from the Central Asian Steppe unravels the history of the Scythians" *Science Advances* (2021). advances.sciencemag.org/lookup.../1126/sciadv.abe4414

Provided by Max Planck Society

Citation: Ancient genomes trace the origin and decline of the Scythians (2021, March 26)
retrieved 24 April 2024 from
<https://phys.org/news/2021-03-ancient-genomes-decline-scythians.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.