NEAF Grant-In-Aid Report

Assessing the role of migration in the Late Antique period cultural transition at Samtavro Cemetery, Georgia.

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Synopsis

Samtavro cemetery is one of the largest burial grounds in the southern Caucasus, and was used by the local inhabitants for over 2000 years between the Late Bronze and Early Medieval periods. The cemetery consequently provides a fantastic record of changes in burial traditions and cultural practices over time. A transition in the cultural and mortuary practices was recognised at Samtavro dating to the 4th-5th centuries AD, leading archaeologists to hypothesize a new cultural influence was introduced to the region via an influx of migrants at that time. A primary aim of my PhD project is to use strontium stable isotope analyses of human remains to test whether individuals associated with the novel cultural attributes at Samtavro might indeed have originated from elsewhere.

In 2016, I was lucky enough to receive the Leone Crawford Travel Grant, which allowed me to collect and analyse samples from Samtavro cemetery and the surrounding area in the Republic of Georgia. Here I'd like to report on the progress and successes of this project in 2016, made possible with the support of the Near Eastern Archaeological Foundation.

Figure 1. Densely packed stone-cist burials at Samtavro cemetery, near the town of Mtskheta, Georgia.

Research Background:

Samtavro cemetery is a vast and well renowned necropolis, situated in the Southern Caucasus region of the Republic of Georgia. Thousands of burials have been excavated from the 18-hectare site, which was most extensively used during the Roman and Late Antique periods (300BC-AD600). [1] During this time, the nearby town of Mtskheta formed the administrative capital of the Iberian Kingdom, and hosted a dense and multi-cultural human population.[2]

Mtskheta and Samtavro cemetery are strategically located on the confluence of two major rivers, which provide passages for communication and migration with the Eurasian Steppe to the north, and the Near East to the south.[3] Historical sources indicate the Iberians maintained complex political and trade relationships with the Romans, Sassanids, and later the Byzantines, while managing to retaining their own unique culture. Ancient Mtskheta has been described as a cultural melting-pot, with abundant evidence of contact with neighbouring civilizations, including traded goods and gifts, and borrowed architectural technologies.[4]

Figure 2: View of Mtskheta from the Bagineti archaeological site.

The Transition

Recent excavations at Samtavro have exposed a cultural transition that occurred between the 4th and 5th centuries AD, in the later period of the Iberian Kingdom. Prior to this transition, two of the most common burial types at Samtavro consisted of tile-lined burials, and stone-cists. Tile-lined burials typically contained single articulated interments, while stone-cists frequently contained secondary burials of numerous commingled individuals. Radiocarbon dates from both burial types indicate that tile-lined burials ceased to be used after the 4th century AD, and stone-cist burials came to predominate the burial record.[5] This shift in burial traditions was accompanied by the appearance of adult individuals with artificially modified crania, and new artefact types such as bronze mirrors within stone-cist tombs.

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[1] Apakidze et al., 1955; Tsetskhladze, 2007.

[2] Sagona et al., 2010; Gamkrelidze, 2014.

[3] Braund, 1994.

[4] Apakidze and Nikolaishvili, 1994; Khatchadourian, 2008.

[5] Sagona et al., 2010.

The co-occurrence of these novel cultural features at Samtavro may indicate a new cultural influence entered the region in the 4th-5th century AD. Archaeologists have tentatively suggested these new traits are consistent with the cultural hallmarks of nomadic tribes from the Eurasian steppes, such as the Huns.[6] Many of these tribes practiced artificial cranial modification as a means of distinguishing their group members, and were highly mobile in the Eurasian steppes with onset of the Migration Period in the 4th-5th centuries AD.[7] The practice of artificial cranial modification involves moulding the shape of the head during infancy to produce a desired shape. Cranial modification has independently developed throughout the world at various dates, and thus has multiple potential points of origin. It is unclear if the appearance of the practice in Mtskheta during the Late Antique period represents a local origin, or if it was introduced to Mtskheta by migrants who used this cultural practice. To investigate the origin of this cultural transition, I intend to use strontium stable isotope analyses of human remains from Samtavro to test whether individuals with modified crania originated in Mtskheta, or migrated to the region from elsewhere.

Strontium Studies of Human Mobility

Strontium stable isotope ratios have proven very useful in studies of human mobility. The ratio of Sr^{87}/Sr^{86} isotopes in tooth enamel is derived from the environment where the person (or animal) spent their childhood.[8] Thus if the Sr^{87}/Sr^{86} ratio from a tooth differs from the local strontium signature where the person was buried, it can be inferred that the individual migrated to the region at some point during their lives. This comparison can be made once the local range for strontium has been defined, which can be achieved by measuring the isotope ratios in plants, snail shells and faunal tooth enamel from the geographic area near archaeological sites of interest.

Sample collection and analyses in 2016

I visited Georgia in the summer months of 2016 to collect research samples, including human and faunal tooth enamel from Samtavro cemetery, as well as plant and snail shell samples from the surrounding region.

Human and faunal tooth samples were collected from the Georgian National Museum collections in Tbilisi and Mtskheta. The skeletal remains of individuals included in this study were also analyzed to determine their sex and age-at-death, and species in the case of fauna. I also spent several days collecting plant and snail shell samples from forests and mountain-sides in the region surrounding Mtskheta and the larger Kura river basin area, up to 70km away from Samtavro.

Upon returning to Australia, preparation of the collected samples was completed at the University of Melbourne School of Earth Sciences clean laboratories, and strontium isotope ratios were measured via ICP mass spectrometry. This was a very rewarding process, and gave me the opportunity to learn the laboratory procedures associated with strontium isotope analysis, under the tutelage of Dr Roland Maas.

[6] Hakenbeck, 2009; Sagona et al., 2010.

[7] Molnár et al., 2014.

[8] Bentley, 2006.

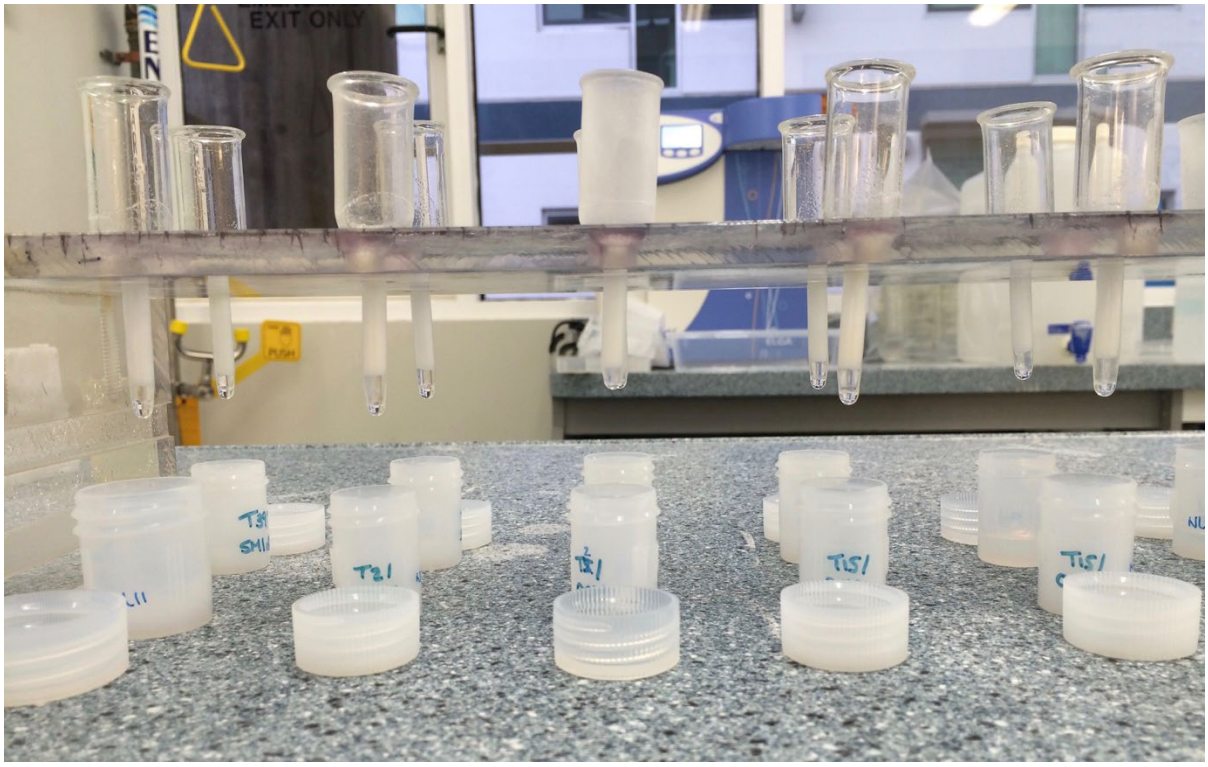

Figure 3: Columns loaded with Sr-Spec resin for the extraction of strontium from dissolved tooth enamel samples. Photo taken at the University of Melbourne Earth Sciences laboratories.

Thanks to generous support from the Near Eastern Archaeology Foundation, these strontium analyses are well underway. Emerging results are preliminary, however the human strontium isotope ratios show very low variance, suggesting that most of the individuals studied originated from the local area, including most of those with modified crania. While I am still awaiting further results at the present time, the results indicate that migrants were present in Mtskheta prior to, as well as during the cultural transition in the 4^{th}-5^{th} century.

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