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LANDSCAPE ARCHAEOLOGY IN SOUTHERN CAUCASIA

FINDING COMMON GROUND IN DIVERSE ENVIRONMENTS

Proceedings of the Workshop held at 10^{th} ICAANE in Vienna, April 2016

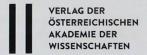
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Samshvilde: Multidisciplinary Approaches to a Historical City of Central Transcaucasia

David Berikashvili*

Abstract: Samshvilde, a historical city of the Kvemo Kartli region in the southern part of Georgia, is a complex and multi-period archaeological site. The city occupies a strategic and defendable location on a long basalt plateau above ravines formed by the Khrami and Chivchava rivers. This distinctive landscape position, combined with environmental conditions that include a mild climate and an abundance of natural resources, has attracted human occupation for millennia. Samshvilde and its surroundings may have been inhabited since the Neolithic era, but the urban complex dates mainly to the medieval period, when it became the region's principal fortress and political-economic centre. Proximity to the northern branch of the Silk Road further increased the site's importance. Accordingly, Samshvilde was a place where various ethnic groups and cultures converged, which is reflected in the preserved archaeological remains. Despite the site's importance and longevity, until recently there has been little concerted archaeological study of Samshvilde. In 2012 the Samshvilde Archaeological Expedition was initiated by the University of Georgia which has taken a multi-disciplinary approach to the site, using archaeological, historic, art-historical and geophysical methods. Future expansion of the project is envisaged through cooperation between the University of Georgia and research organisations and individual specialists who will bring new perspectives to the study of Samshvilde's past.

Keywords: Samshvilde; Samshvilde Archaeological Expedition; Geophysics; The University of Georgia; Interdisciplinary studies

Landscape and Historical Context

Samshvilde is a historic city situated in the Kvemo Kartli province, in the southern part of Georgia. The area's geology consists of Quaternary deposits, Cretaceous and Jurassic limestone, chalky clays, sandstones and volcanogenic formations. Volcanic plateaus have been cut by rivers to form deep ravines and basaltic plateaux that rise above incised valleys. Kvemo Kartli has abundant mineral resources, including copper, gold and iron deposits; stone was mined and quarried, including reserves of obsidian and the region's ecology supports diverse flora and fauna.¹

Since 2012, the Samshvilde Archaeological Expedition of the University of Georgia has been using a multi-disciplinary approach, involving archaeological, historic, art-historical and environmental science methods, to investigate the urban site at Samshvilde.² Here, a selection of key archaeological features at Samshvilde are reviewed and recent fieldwork and preliminary results are summarised before future objectives for the project are proposed. Samshvilde offers both a challenge and a unique opportunity to investigate an archaeologically significant and multi-period landscape of central Transcaucasia.

Georgian historic tradition associates the foundation of Samshvilde with the pre-Christian period. While our project has now detected proof of occupation dating back to the Neolithic period, it is recognised that Samshvilde was founded as an urban political-economic centre only in the early medieval period, in particular, during the 5th century.³

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¹ Berdzenishvili 1979, 7.

² Berikashvili 2017a, 102.

³ Chilashvili 1970, Vol. II, 118; Sanadze 2016, 256.



Fig. 1 Samshvilde citadel and the eastern tip of the promontory

As the Arabs appeared in Transcaucasia during the mid-8th century, a substantial part of eastern Georgia, including Samshvilde, was placed under the jurisdiction of the Arab Emir. This arrangement continued until the mid-9th century when the region fell under the influence of the Armenian royal Bagratuni dynasty of Shirak.⁴ In the 10th century, Samshvilde was the capital of the Armenian Kingdom of Tashir-Dzoraget which was a vassal of the Kingdom of Ani. The Geor-



Fig. 2 Samshvilde promontory, western and central parts of the city, facing east

⁴ Kutateladze 2001, 99.

gian King Bagrat IV restored it within the borders of Georgia in 1064. During the second half of the 11th century Samshvilde was under the influence of the Seljuk Turks and this continued until 1110, when it was liberated by King David IV (the Builder) and placed under the jurisdiction of the Georgian State.⁵

Various Georgian feudal families controlled Samshvilde in the late medieval and post-medieval period. First the influence of the Orbeli was dominant and later the Baratashvili-Kaplanishvili, whose tenure continued up to the 17th–18th centuries.⁶ In the second half of the 18th century the ethnic situation in Samshvilde and Kvemo Kartli in general changed significantly. From the end of the same century, these areas were occupied by newly arrived groups of Armenians who settled in Samshvilde and nearby areas.⁷ From the beginning of the 19th century, Turkish-speaking populations, Germans (1818) and Greeks (1829) were settled in this region by the Russian Imperial government.⁸ Even today, the population in this part of Georgia continues to have a diversity of ethnic elements.

Structures and Features at Samshvilde

Samshvilde occupies a long basalt plateau aligned west—east that rises above the confluence of two important rivers, the Khrami and Chivchava⁹. The medieval city covered the entire length of the promontory and its layout was arranged according to the occupations and status of the population: the western part of the city, which may have been the residential area of the lower classes, was separated from the central part where nobles resided by a 4m-high and 2.5m-wide stone wall (Fig. 1). The central district was separated from the easternmost part of the city, where high-status structures were located, by a 12m-high and 7m-wide fortification wall, forming a citadel (Fig. 2). Such a heavily fortified defensive system has not been preserved at any other medieval site, not only in Georgia but also throughout the Southern Caucasus.

The Water Supply System

Despite the separation of the city's three districts, its hydrological network was integrated so that water was supplied to residential, trade and artisanal areas as well as to the noble and royal districts. A well organised and serviceable water supply system was essential for cities of the medieval period. In designing this system, the builders of Samshvilde skilfully took advantage of the natural inclination of the promontory which is equal to 2cm per metre. The total difference between the highest and the lowest points of the city is 70m, which is sufficient to ensure the natural flow of water through the entire city.

Our project dedicated a considerable amount of time to studying Samshvilde's water supply system. It was established that the system starts from the Iraga River to the west of Samshvilde and that outside of the city it was arranged entirely underground. Thus, the system was concealed from the view of potential enemies, while open channels crossed the territory within the city. Two reservoirs or cisterns (diameter 20–25m, depth 2.5m) are cut into the basalt bedrock in the eastern part of the city. These were connected to the network and considerable reserves of water were stored in them, ensuring a ready supply as well as access to water during times of drought or prolonged siege. The 'Royal Bath', one of Samshvilde's noteworthy standing structures, is also connected to the water supply system.

⁵ Kutateladze 2001, 137.

⁶ Klimiashvili 1964.

⁷ Berdzenishvili 1979, 114.

⁸ Kaukhchishvili 1942, Vol, IV.

⁹ Berikashvili – Alasania 2017, 15.



Fig. 3 The 'Royal Bath', a late- or post-medieval bathhouse

The 'Royal Bath'

A bathhouse of the later medieval period is located in the eastern part of the city, in what is regarded as the 'Royal District', leading us to call this structure the 'Royal Bath' (Fig. 3). This unique structure has never been studied previously, making it difficult to talk about its chronology and past usage. While detailed survey and excavation are yet to be conducted, preliminary study through test trenches has established that much of the building is buried beneath soil and rubble. However, it may be said on the basis of its architectural details and by comparison with similar structures preserved in Georgia that the building dates to the 16th–17th centuries and may be regarded as a *hamam* of the Ottoman Turkish type. Its water supply and the furnace unit located underground require fuller study as does the purpose of walls that are directly connected to the main building. Excavations close to the Royal Bath were started in 2016 and will continue in future seasons.

Palaces and Residential Buildings

Residential structures at Samshvilde differed according to the social classes for which they were intended. For example, houses preserved in the district thought to have been inhabited by tradespeople and artisans were built from unprocessed stone and timber which contrasts with the mortared stone palaces in the supposed noble or royal districts. Although none of the palace buildings have yet been studied in detail, an impression of their construction and materials can be gained from walls preserved above ground. There are five ruined palaces preserved at Samshvilde. Three are located in the central part of the city and two are in the royal district. One of the royal district palaces was a two-storey building, judging from the preserved walls. It is assumed that this palace

was intended for the king and his family. This structure has been identified as a target to excavate test trenches in future seasons.

Churches

There are seven recorded churches at Samshvilde that belong to different phases of the medieval period. According to the Georgian Chronicles, the earliest church was built here by Queen Sagdukht in the 5th century, ¹⁰ but the whereabouts of this building is currently unknown. To help find its location, geophysical survey was used, together with the test excavation trenches; however, these did not establish the location definitively.

Of the churches preserved above ground, Samshvilde Sioni is among the most outstanding (Fig. 4). Indeed, it ranks among the most significant monuments of medieval Georgian church architecture. The Old Georgian inscription mentioning the Byzantine emperors, Constantine V Kopronymos and Leo V the Khazar, is preserved on its eastern façade. According to the inscription, the church's construction dates are defined precisely to the period of 756–777 AD. The art historian Niko Chubinashvili made small test trenches in the interior of Sioni Church in 1968, but otherwise the building has not been studied up until now.

Samshvilde Basilica (10th century), located 150m to the west of Sioni Church, is a Monophysite church. The basilica was built and functioned when Sioni Church was already in ruins as a



Fig. 4 Sioni Church, aerial view facing east

¹⁰ Kaukhchishvili 1955, 142.

¹¹ Muskhelishvili 1943, 97.

¹² Chubinashvili 1969, 5.

result of an earthquake and at the time that Samshvilde was the capital of the Kingdom of Tashir-Dzoraget. Restoration works at the basilica were carried out in the 1990s and today it is one of the active churches of the city. The so-called Palati Church, which belonged to the Kaplanishvili, the local feudal dynasty, is located near the basilica. Our surveys of Palati Church in 2014 established that members of the Kaplanishvili family were buried in the interior of this church. Ruins of the two-storey palace belonging to the same family are located nearby.

Four other churches are known at Samshvilde: St George's Church (10th–11th centuries), the Dormition Orthodox Church (10th–12th centuries), St Theodore's Church (12th century) and the so-called Theogonida. These structures all require further investigation.

The Cemetery of Samshvilde

One of the main questions arising from our surveys at Samshvilde is the location of the city's cemetery. After five seasons of fieldwork, using a combination of aerial mapping, pedestrian survey and geophysical methods, it has not yet been possible to locate any extensive cemeteries. One result was the discovery of graves dating from the 15th century that lie to the north of Sioni Church. However, these graveyards represent hastily arranged burials of people who likely died as a result of one of the invasions at this time. ¹⁴ It may only be assumed that the main cemetery of the city was located far from the residential areas in the same manner as occurs at Dmanisi. ¹⁵

Megaliths

Megalithic features at Samshvilde are in the form of two menhirs and a 'tetralith', a monument consisting of three balanced boulders (Fig. 5). One of the menhirs, a 2.45m-high stone column, is located in the interior of the Dormition Church. It seems that it was erected in the pre-Christian era, possibly during the Bronze Age, and the church builders intentionally located it within the medieval building. The 'tetralith', which consists of three massive basalt boulders balanced on top of each other, is a unique feature with no known parallels in southern Georgia. At present it cannot be precisely dated because no archaeological excavations have yet been carried out at this location, but it may be presumed that this and the other megalithic monuments date from the Bronze Age.

New Investigations at Samshvilde

As may be seen from the above overview, Samshvilde is an outstanding archaeological complex. It is perhaps surprising, therefore, that this site has never previously been the subject of a full-scale archaeological investigation. Only small-scale fieldwork was carried out during the Soviet and post-Soviet period which did not provide detail on the site's stratigraphy and chronology or the distribution of cultural features and monuments. In contrast, there has been fairly extensive archaeological investigation of the surrounding Kvemo Kartli region. This includes investigation of a burial mound of the early stage of the Kura-Araxes culture, the Tsopa Palaeolithic and Eneolithic site, Tetritskaro settlement, agricultural cultures, Shulaveri, Arukhlo, Imiri and

¹³ Kutateladze 2001, 83.

¹⁴ Berikashvili 2017b, 26.

¹⁵ Chkhvimiani 2015, 35.

Mirtskhulava 1975.

¹⁷ Grigolia 1960; Grigolia 1963; Nebieridze 2010.

¹⁸ Gobejishvili 1978.

Chubinashvili – Nebieridze 1971.



Fig. 5 Megalithic 'tetralith' monument

other Eneolithic hills,²⁰ Khrami valley rock monuments²¹ and Dmanisi, the famous Palaeolithic site, where there are also remains of the Late Bronze Age and medieval period.²² The fact that a site with the importance of Samshvilde remains unstudied leaves important questions regarding Kvemo Kartli's and the broader Caucasus region's archaeology unanswered.

The Samshvilde Archaeological Expedition of the University of Georgia, which has so far conducted five seasons of fieldwork from 2012 to 2016, is working to redress this situation. By adopting a variety of approaches to the varied archaeological remains at Samshvilde and its surroundings, we seek to generate new information on this multi-period complex.

Of the investigated sites near Samshvilde, Dmanisi, located 22km to the southwest, is particularly relevant.²³ This is because its geological and geomorphological situation is similar to that of Samshvilde. Similar to at Dmanisi, the promontory at Samshvilde is formed by deep valleys incised into basalt flows by two rivers. There are also archaeological parallels. At both sites, the upper stratigraphic layers are formed by thick layers dating from the high medieval period. The comparable landscape and terrain, geomorphology and nature of the medieval remains suggest that there is a possibility of early prehistoric remains existing at Samshvilde as well; however, locating such remains, if they do exist, would involve comprehensive surveys and specific geological and geomorphological conditions.

²⁰ Gogelia – Tchelidze 1992.

Bakhtadze 2007.

²² Gabunia et al. 2000; Gabunia et al. 2003.

Gabounia et al. 2002; Gabunia et al. 2003.

Such comprehensive surveys, involving archaeology, geology, geophysics, anthropology, palynology, remote sensing and osteology, are now being conducted in Samshvilde. The use of different methods is suited to the complicated nature of the site. Systematic and test excavations, geophysics, landscape and cave complex surveys and aerial mapping, as well as palynological, osteological and anthropological studies, provide complementary information to assess the varied archaeological conditions above and below ground.



Fig. 6 Obsidian scraper, arrowhead and amulet (above) and flint and obsidian sickle blades (below)

Excavations

Excavations have so far been conducted at two locations: the first is beside the main fortification wall of the city, within what is regarded as the citadel; the other is near the 8th-century Sioni Church.24

Excavations at the citadel have unearthed archaeological deposits of 1.3m depth belonging to the high-late medieval centuries (11th-13th centuries). Underlying and earlier archaeological layers have not yet been explored; the aim in future seasons is to determine the depth and age of the stratigraphy in the citadel area. Artefacts from the trenches are diverse and include ceramics, metal, stone, glass and bone items that date from the high and later medieval centuries.25

Excavations at the Sioni section, where two trenches were opened, have already produced important results. Remnants of a stone mortar structure and graves of the later medieval centuries were discovered to the north of the church. It is noteworthy that the depth of cultural layers, at 1m, is lower here compared to the citadel. The date of this layer is assigned to the 11th-13th centuries on the basis of finds. An initial interpretation of the graves is that they are later and belong to citizens killed during the invasion of the Turkmen leader, the king of Tabriz, Jahan Shah, in the 15th century.26

Alongside systematic excavations, test trenches measuring 1×1 m, 2×1 m and 3×2 m have been excavated across areas of potential further investigation. Important results were gained from the test trenches in the Sioni section where obsidian and flint tools were discovered. Forms include scrapers, burins, points, arrow heads and notched sickle blades, attributed to the final stage of the Georgian Neolithic by Prof. G. Grigolia and chronologically placed within the Tsopa culture of Kvemo Kartli (Fig. 6).27 Until these discoveries, the oldest material from Samshvilde and adjacent areas was represented by artefacts of the Kura-Araxes culture.²⁸ The discovery of Neolithic tools is a significant novelty and raises the prospect of identifying more extensive prehistoric deposits here.

Geophysical Survey

Concurrent with archaeological excavations, a geophysical survey is being carried out using ground penetrating radar (GPR).29 Three areas or 'sections' were surveyed using monostatic antennas of various capacities to the north, north-east and south of Sioni Church in 2015; features located at depths over 6m from the ground surface were observed.

In the first section, north of Sioni Church, ten 15m-long passes were made. The results appeared to be very noteworthy as they established that the area to the north of the church is characterised by archaeological deposits at three levels. The first level was interpreted as graves and wall fragments located close to the ground surface; the second level (at 3m to 6m depth) was identified as fragments of the wall base and sinkholes; remnants of a 10m-long and 10m-wide structure of complicated composition with walls of different thicknesses were observed at the third level, below 5-6m.

²⁴ Berikashvili 2017b, 23–25.

²⁵ Berikashvili 2017b.

Significant information about the invasion of Jahan Shah is provided by the 15th-century Armenian historian, Thomas of Metsoph: 'On March 27, 1440, on the day of Easter ... after a 50-day siege, they made the Samshvilde citizens suffering from hunger and thirst open the door of the fortress by deceit ... thousands of people were killed, their property was seized. A minaret was built from 1664 cut heads near Samshvilde fortress by order of the Shah... Metsopeli 1937, 24-26.

²⁷ Grigolia – Berikashvili in press.

²⁸ Mirtskhulava 1970; Mirtskhulava 1975.

²⁹ This survey utilises a certified GPR radar - Zond 12, 500, 300 MHz monostatic antennas and 150, 75, 38 MHz and 2 GHz bistatic antennas.

In the second section, to the north-east of the church, structural (wall) remains were also found at a depth of up to 6m in the shape of a 'bow tie'. In the third section, to the south of the church and near the Khrami canyon, sinkholes were again located at various depths as well as fragmentary sections of walls.

Analysis of the GPR images established that the area to the north of Sioni Church, where underground deposits are located at three levels, is the most promising from an archaeological point of view. The observed features located closest to the ground surface correspond to void spaces of anthropogenic origin, possibly graves. The excavation of graves, described above, confirmed the results of the GPR survey.

Aerial Mapping and Cave Exploration

Aerial mapping of the Samshvilde promontory and adjacent areas has obtained a precise view of the urban layout of the city-site, its main districts, the hydrological system and the location of architectural remains. In addition, aerial and video mapping is being conducted in the canyons of the Chivchava and Khrami rivers where there are multi-tiered cave complexes which are very difficult to reach. Using this method to define the exact location, number and size of these cave complexes is very effective. For example, as a result of aerial mapping of caves in the Chivchava canyon, carried out in 2015, access routes were defined, allowing our team to reach the caves and undertake test excavations there. Large amounts of ceramics and bone material were discovered in the test trenches as well as on the surface; obsidian artefacts were also discovered.

Some caves have entrances that are disguised and built up with masonry. It is impossible to establish the nature of these disguised and almost inaccessible caves using aerial mapping alone. Accordingly, a collaboration with the Academy of Robotics and Engineering of the University of Georgia is currently developing an unmanned aerial vehicle which will be adapted for movement on the rocky terrain.

Palynological, Archaeozoological and Anthropological Studies

Palynological, osteological and anthropological analysis is being undertaken as part of the excavations at Samshvilde. Palynological results obtained from the medieval layers of the citadel provide information on the environmental conditions of Samshvilde during the 12th—13th centuries and the nature of household activities at this time. The obtained results suggest that pine as well as broad-leaf forest of beech, lime and elm must have grown around the city. Spores of forest fern are also seen in the palynological spectrum, particularly *Asplenium trichomanes* which grows only in broad-leaf humid forests. *Lycopodium clavatum* also grows in humid climatic conditions. As the pine tree grows in dry rocky areas, it may be concluded that these were the conditions at Samshvilde in the 12th—13th centuries.

The plain near Samshvilde seems to have been used for seeding grains which points to well-developed agriculture. Grains of nut and hazelnut as well as grapes were discovered in the palynological samples which confirms viticulture and wine-making. There are also indications of the medicinal use of plants, which may have been stored in the Samshvilde citadel alongside cereals, flour and hazelnuts.³⁰

Archaeozoological studies define the anatomic identity of excavated animal bones. Despite the fragmentary nature of the excavated osteological material, anatomic and taxonomic categories of 862 samples of vertebrate animals were defined. Fragments of longitudinal bones are dominant (52%) followed by ribs and vertebrae (20.5%); skull fragments (including teeth and mandibles) make up 11.5% of the material. Animals identified at this stage of the analysis are the following:

³⁰ Kvavadze 2017.

Bos taurus, Sus scrofa, Ovis aries and Gallus gallus domesticus; in addition, one sample belongs to a donkey or a small-size horse and one sample belongs to Silurus glanis.

Anthropological studies were undertaken following the discovery of the first graves at Samshvilde during excavations in 2016. These studies are ongoing, and they are one of the project's of forceful mortification. This adds to the interpretation that the burials are of victims of a violent invasion of the city.

Problems, Questions and Future Directions

The results obtained by the Samshvilde Archaeological Expedition demonstrate the high significance of this unstudied site. The importance of the Samshvilde urban complex at a regional scale and at the scale of the entire Southern Caucasus requires a multi-disciplinary approach, using a variety of methods to obtain information on the varied archaeological remains. Due to the scale, complicated stratigraphy and large chronological range at the site, many issues remain problematic. However, the work completed so far has helped to define some key objectives.

At the present stage of the survey, specific objectives of the expedition are as follows. We seek to define the hydrological system scheme in the royal district and the nature of the Royal Bath. Residential areas in the western section of the city appear to be the dwellings of the city's lower classes and we will investigate the characteristics of this housing. The districts where nobles and the upper classes dwelt also require investigation, particularly the identified palace structures.

Churches are prominent features at Samshvilde, and further research is required to understand the chronology and nature of these buildings. There is a particular question over the location of the church built in the 5th century by Queen Sagdukht which our project aims to locate using geophysics and test excavation. Sioni Church, a building of high significance in Georgian medieval church architecture, and its surrounding infrastructure will be the subject of further study.

Mortuary practice at Samshvilde will be studied through the analysis of the graves excavated near Sioni Church, including osteological study of the recovered human skeletal remains. More generally, we seek to find the currently unknown location of the main cemetery and burial areas of the city.

Future archaeological investigations will attempt to establish a stratigraphic sequence, especially in the citadel area. This will be assisted by the use of scientific dating methods. The potential for prehistoric occupation layers will be explored, both on the Samshvilde plateau and in the caves along the surrounding canyons. The discovery of Neolithic stone tools is a significant finding, which may point to a more extensive prehistoric occupation at the site.

Advancing these objectives will require substantial time and material resources. Therefore, the University of Georgia and Samshvilde Archaeological Expedition seek to cooperate with scientific-research organisations and individual specialists to bring their expertise and knowledge to this unique and important archaeological complex.

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Recent years have witnessed an explosion of research projects in Southern Caucasia that apply the methodologies and approaches of landscape archaeology. Focused on understanding the interaction between humans and their environments at multiple temporal and geographic scales, these projects have made use of intensive and extensive surveys, remote sensing and GIS-based analysis, very often taking a diachronic view. Landscape Archaeology in Southern Caucasia presents and reflects on projects currently employing these fresh perspectives and techniques in the lands between the Black and Caspian Seas, including and adjacent to the Greater and Lesser Caucasus mountain ranges; this takes in Armenia, Azerbaijan, Georgia, and parts of eastern Turkey and northwestern Iran. Through the centuries, this region has been a vital zone of contact between the Near East, Anatolia and Central Asia, but has also – in large part due to its remarkable and often difficult terrain of mountains, river valleys and plains – maintained a unique and fascinating local trajectory of development.

Landscape Archaeology in Southern Caucasia presents the results of a workshop held at the 10th ICAANE in Vienna in April 2016, which brought together scholars from around the world engaged in archaeological survey and landscape analysis in Southern Caucasia. The contributions in the volume cover a broad timescale, from the Neolithic through the medieval period and into the modern day, and deal with such themes as the relationship between past and present landscapes, heritage management, the use of remote sensing, the value of integrating historical texts and legacy data into new projects, survey methodologies, and patterns of movement. The volume also includes discussion of avenues for further research, particularly in the fields of information sharing and deeper engagement with legacy data. Finally, Landscape Archaeology in Southern Caucasia reflects and celebrates the spirit of collaboration between scholars within and beyond Southern Caucasia that is both apparent in the diversity of current projects and crucial to achieving the aims of future work in the region.

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