

# Georgian Monasteries between invasion and resilience during Middle Ages

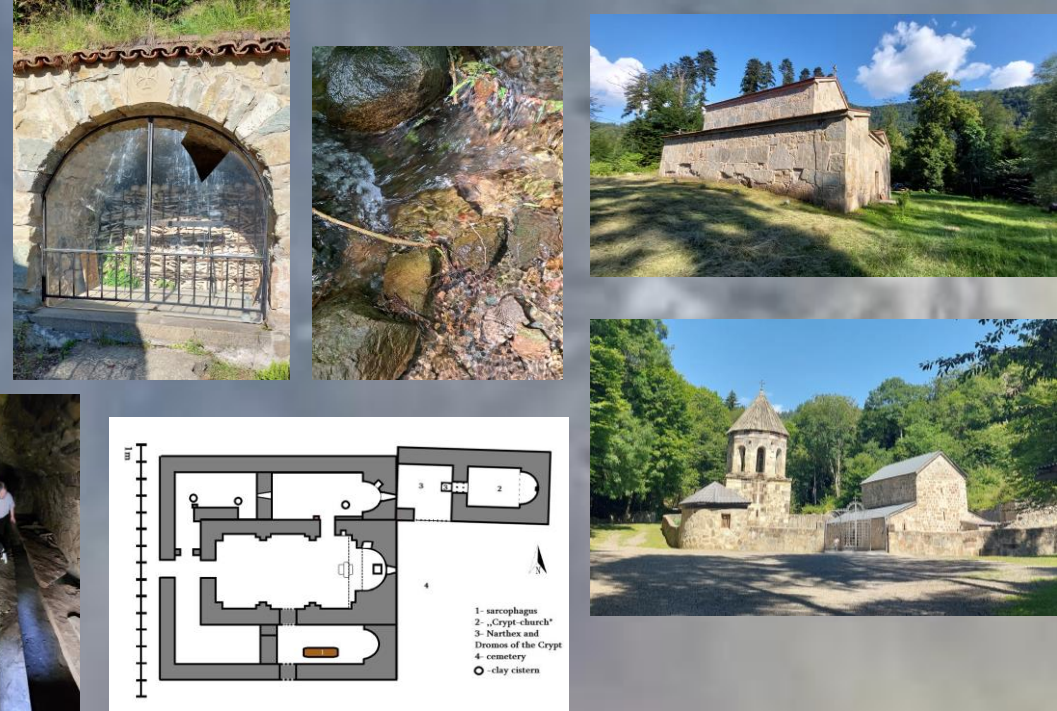
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**in cooperation and under the supervision of Father Andria Tariadisi, Eparchy of the Monastery of the Nativity of the Mother of God, Borjomi, Georgia**

## 1. Introduction

A preliminary survey of the osteological bone material recovered from the Berebis Saqdrebi (Borjomi, Georgia) crypt and church has been conducted by prof Liana Bitadze of Tbilisi State University after their discovery and led to the publication of the anthropological study of three subjects, one recovered from the sarcophagus and the other two (those found still articulated) from the crypt. From 17th and 21st July 2023 and from 25<sup>th</sup> October-8<sup>th</sup> November 2023 a survey funded by IIMAS and partly by of one of the writers' Erasmus grant for training and by Overseas agreement grant of Ca' Foscari has been conducted at Borjomi Monastery of the Nativity of the Mother of God, Potoleti Church and Green Monastery, followed by x-rays and sampling of all the preserved teeth specimens from Berebis Saqdrebi 619 skulls in June 2024. Currently this anthropological and archaeological mission is conducted under the patronage of Italian MAECI for 2024 and funded by the Ca' Foscari University funds for archaeological excavations.



## 2. The ecclesiastic buildings

The Berebis Saqdrebi complex, excavated in summer 2020 by G. Laghiashvili and G. Mtskeradze during the restoration and reconstruction works of the church, is located in the Samtskhe-Javakheti region, in the territory of Borjomi, 3 km east of the village of Kvibisistskali (41°51'47.8" N, 43°27'04.5" E), Potoleti church is 5 km from the village of Akhaldaba (41°30'54.4"E, 43°48'17.8"N) and it has been restored in 2007, while Green Monastery is close to Chitakhevi (41°31'00.7"N, 43°31'00.7"E) and it was founded in IXth century, raided by Shah Tamasp and a legend connects the red stains in the river close to the church, to the tortured and killed monks' blood stains. The archaeological excavation of Berebis Saqdrebi led to the discovery of its original plan, formed by an apse and rectangular building and a partly underground crypt, a single room with stone barrel vault. Two shelves made of stone slabs run along the N and S sides of this crypt at a height of 1 m. from the ground floor. A walkway on pillars runs parallel to the stone shelves in the middle of the room, leaving a space of around 50 cm from the shelves. Given that the last three subjects buried here were found fully articulated on these shelves and the rest of the underlying space was filled by a mass of disarticulated skulls and postcranial bones it is reasonable to think that the disarticulated bones of the individuals were periodically pushed from the shelves to the underneath space, featuring this both as a primary burial for the most recently and articulated buried subjects and a disturbed primary collective one (not secondary and not strictly an ossuary, given that the bones probably rested in the same burial place and were not transported from elsewhere) for those deceased earlier. At the moment of the discovery this burial place was still sealed by stone slabs covering the rectangular small opening and the steps leading to the crypt so that it appeared in the way it was sealed in ancient times.

## 3. The bio-archaeological sample

The human sample from Berebis Saqdrebi church is currently kept at the Monastery of the Nativity of the Holy Virgin in Borjomi under the supervision of Mama Andria Tariadisi who granted us permission and access to these unique collection. Skulls and post cranial remains have been divided and collected by the nuns of the monastery according to the type of bone. The skulls sum up to an astonishing number of 619. Some boxes of bones' fragments have yet to be processed and cleaned so at the end the number will almost surely increase. The state of preservation of these remains is very good and on roughly 20% of the cranial remains evidence of **cranial traumas** (peri-mortem and ante-mortem) has been recorded and connected to war episodes during Middle ages (Timur and shahs often raided and devastated the territory of Borjomi). A preliminary sample of 54 skulls has been selected for anthropological analysis and preliminary age determination both through anthropological methods (cranial sutures and dental wear) and experimental radiographic methods (the so called Cameriere's method on canines).



## 4. Preliminary results

The Cameriere's approach already turned out to be extremely useful also when applied to human remains recovered from archaeological sites. It is based on the principle of the progressive reduction of the dimensions of the teeth pulp chamber, as age increases, due to the formation and deposition of secondary dentine. In a young subject the area of the pulp chamber is quite wide, while in an older subject its dimensions will decrease. Once the total area of tooth and the area of the pulp chamber are calculated, we insert the values in the formula and we easily obtain an estimation of the age at death of the subject and, what is more important for statistical and palaeodemographical purposes, it appears as a single numerical value and not as a mere age span. This application has recently given very promising results especially for the age diagnosis of older subjects that traditionally fell in the ample and poorly significant "45-50+" age span (evaluated with anthropological methods), not allowing more precise age determination especially for mature and senile age spans. In our sample we realized that the dental wear method for age estimation is not very reliable while cranial sutures show a good concordance with radiographic estimation of age. The advantage of Cameriere's method stands out because of the possibility of quantifying the age of older adults, who, using cranial sutures are simply lumped in the 45+ years age class. Indeed, with Cameriere's method 9 individuals (22% of the sample) could be assigned to the 50-59 years class age and 2 (5% of the sample) to the 60-69 years age class. The mean adult age at death of the Berebis Saqdrebi sample, formed mostly by male subjects as we expected, is estimated to 40.4 years

Skull N°	Sex	AGE Cranial sutures	AGE Tooth wear	Age Cameriere	Skull N°	Sex	AGE Cranial sutures	AGE Tooth wear	Age Cameriere
1	M	50+	40-50	2024	28	F?	40-50	25-30	31.1
2	M	20-45	40-50	premolar	29	M	25-50	40-50	premolar
3	M	20-45	40-50	?	30	M	20-45	20-25	2024
4	M	50+	40-50	39.7	31	M	20-45	20-25	x
5	M	30	30-35	26.2	32	F?	50+	50+	premolar
6	M	30-40	30-35	34.7	33	M	30-45	30-35	43.6
7	M	50+	50+	50.7	34	M	50+	40-50	60
8	M	50+	50+	65.3	35	M	50+	40-50	43.0
9	M	50+	30	58.1	36	F	20-45	40-50	19.2
10	M	30-40	50+	44.0	37	M	20-45	40-50	35
11	M	20-25	25-30	32.3	38	M	20-45	25-30	x
12	M	50+	40-50	53.5	39	M	50+	20-25	30.8
13	M	30	25-30	32.4	40	M	20-45	50+	39.2
14	M	35	30-35	26.4	41	M	20-45	18-20	40.8
15	M	20-45	35-40	47.4	42	M	20-45	20-25	premolar
16	M	40-50	50+	premolar	43	M	50+	50+	54.1
17	M	30-40	50+	46.2	44	M	20-45	30-35	23.4
18	M	40-45	18-20	27.9	45	M	50+	40-45	59
19	M	50+	50+	31.1	46	M	20+	30-35	x
20	M	40-50	40-50	27.5	47	M	20-45	50+	39.1
21	M?	50+	40-50	43.9	48	M	20-45	30-35	28
22	M	20-45	30-35	premolar	49	M	20-45	18-20	20
23	M	<20	20-25	premolar	50	M	20-45	18-20	32.9
24	M	20-45	40-50	44.3	51	M	50+	40-50	56.5
25	F?	50+	50+	46.7	52	M	20-45	18-20	20
26	M	20-45	30-35	56.7	53	M	20-45	50+	59.4
27	M	20-45	40-50	29.8	54	F	50+	50+	57.6

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