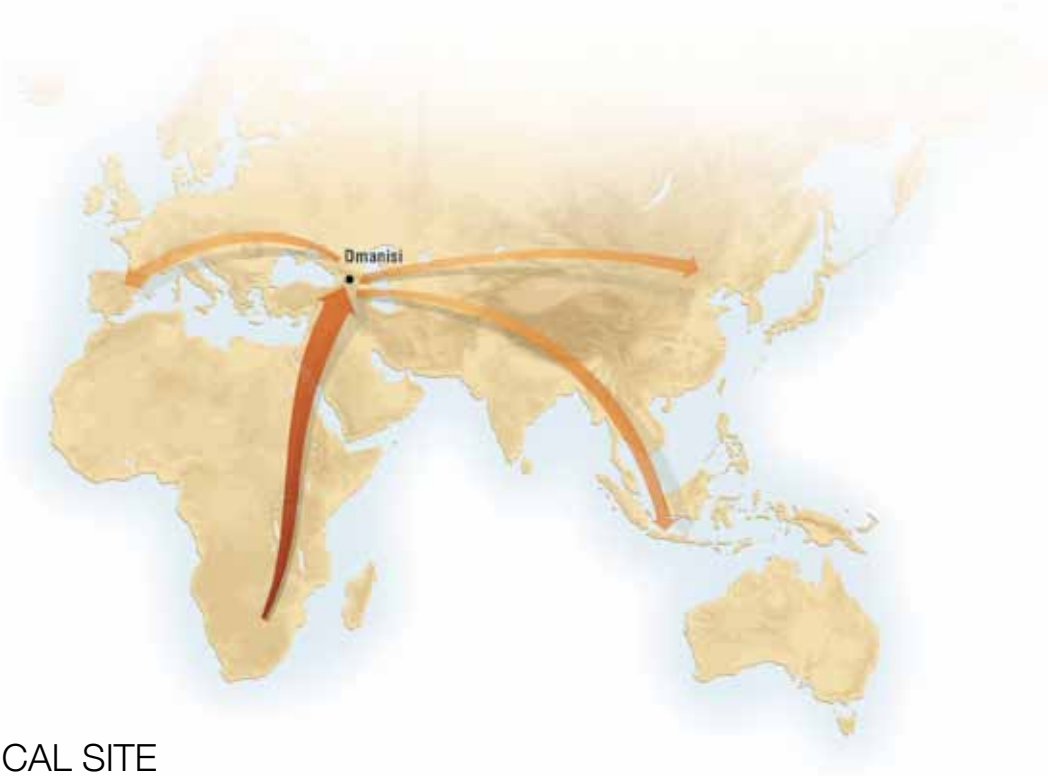


DMANISI ARCHAEOLOGICAL SITE
GEORGIAN NATIONAL MUSEUM

For me, this is a detective story, and I've loved detective stories since childhood. Dmanisi was one of the cities of the Silk Road. In 1991, our team found a human jaw on one of the last days of the excavations. It was a very big surprise for us.

This jaw, which dates back 1.8 million years, was the earliest human remains found outside Africa. The age was very important, because nobody believed that humans had been able to leave Africa before one million years ago. The prevailing view was that when humans left Africa they had larger brains and sophisticated stone tools. But Dmanisi changed these ideas.

The early 1990s were quite a difficult time for the country. Economically, we had a civil war, and it was a time of the real collapse of the Soviet system, so it was hard for science, very hard, but we were continuing to work.

This is one of the richest spots in the world. Can you imagine that three skulls and three human jaws were found here? This is amazing.

We organized an international and interdisciplinary team. We have famous scientists, on the one hand, and also a new generation of students just starting their careers. I was inspired by success, and that's why I would like these young people to see success, which will have influence.

The Rolex Award, together with the support of BP and of UNESCO, was crucial to the protection of this site, which risks being destroyed by nature or by humanity, as well as to preserve it, and at the same time to continue research and to leave it accessible to the public.

I would say that Georgia today is searching for its place in the world, and cultural heritage is one of the opportunities to be on the geographical map. Science is not just for scientists. It's useful. Archaeology will be helpful for the country and for the economy, and it will be helpful for future generations.

David Lordkipanidze
Director of the Georgian National Museum

Hominid migration from Africa

Located in southern Georgia, Dmanisi is a small Caucasus village 67 km south-west of the capital Tbilisi and a dozen km from the Armenian border. The mediaeval archaeological site, made up of a mausoleum, a fortress, a chapel and other remains, occupies a rocky promontory above the confluence of the Pinezauri and Mashavera rivers. Its history shows the importance of Dmanisi's geographical location in this mountainous area 1,000 m above sea level at the crossroads of Asia and Europe.

This history is indicated through the presence close to one another at the site of a Muslim mausoleum and a Romanesque chapel, testifying to the existence in the region of the Muslim and Christian worlds. Turkey is 100 km from the site, with Azerbaijan being 80 km and the north of Iran 200 km away. The site also contains Iron Age and Bronze Age tombs, which testify to east-west contacts during prehistoric times.

Around 1,800,000 years ago, the Dmanisi promontory had not yet emerged as a result of erosion. Its surface still formed part of the valley floor on which hominids had settled and fauna, in part originally from Africa and no longer found in this region, still roamed. Discovered from 1991 onwards, these hominids came as a revelation to the scientific community and to the world at large, since they later moved on to Asia and to Europe. Dmanisi was thus a first stopping-off point in the Caucasus following their migration from Africa.

What was the context of this first, primordial step in the human adventure? Why did the Dmanisi promontory play a strategic role in both pre-historic and historical civilizations? The development of the cluster of houses making up the village at the base of the promontory, the other side of the river and interpretation points on the promontory itself should allow all those interested in the long history of the area, so vital for understanding the history of humanity, to understand the stakes involved.

Dmanisi site, aerial view, 2009

There is a large gap between the most ancient periods, during which the first hominids appeared around 1.8 million years ago, and the later periods during which the first activities of modern man appeared, including the first agricultural settlements (4th millennium BCE), the first warfare with metal weapons (3rd and 1st millennia BCE), and finally the first named individuals, who are known from texts dating from the 5th century BCE onwards.

This gap is most probably explained by landscape erosion, which has destroyed all vestiges of human settlement by carving out two deep valleys through the actions of ice and water pouring down sheer mountain slopes. However, these actions also carried the remains of very ancient activities with them.

It was not until the climate became more moderate after many very cold 'glacial' periods that farmers moved into these mountain valleys in the 4th and 3rd millennia BCE. These farmers belonged to the Kura-Araxes cultural complex, and in the Dmanisi area archaeologists have found the remains of two villages at Ortsqlebi and Dalar in the outskirts of Gantiadi, as well as the Gomareti tomb.

In 1996, two Bronze Age tumuli were investigated at Irganchai in the Tashiri Valley in the Dmanisi area. Typical grave goods found in the tombs consisted of vases, arrow heads and a dagger blade made of bronze dating to the 2nd millennium BCE.

Jean Pierre Mohen
Musée de L'Homme, Paris, 2008

Aerial view of the Dmanisi fortress, 2006, and the mediaeval remains, 2009

In 1985, the Mashavera archaeological expedition discovered a necropolis at Abulmug in the gorge of the same name in the Dmanisi area. The tombs contained iron weapons, revealing the influence of ancient Hellenistic culture in the area in the 4th century BCE and thus of links with the Black Sea.

The mediaeval fortress of Dmanisi, which looks down on the prehistoric remains, is located at its high level as a result of the carving out of the valleys by the torrential rains that come from the mountains of the Caucasus. It was once a centre of civilization known for its political, economic and cultural influence.

Research undertaken by Jumber Kopaliani has drawn attention to the Sioni basilica at Dmanisi, constructed in the 9th century CE close to the defensive walls of the fortress. A more recent church and chapel were added in the 12th century at the apogee of the fortress's power. The settlement's monumental gateway, cellars, storehouses, oil-storage places, houses, mosque and madrassa show the prosperity of this settlement located at the crossroads of major commercial and travel routes. From the 14th century onwards, invasions carried out by Tamerlan, the Turks and the Persians marked the beginnings of its decline.

The paleoanthropological site of Dmanisi before the excavations, 1980

The village of Dmanisi lies some 85 km south-west of the Georgian capital of Tbilisi. In the Middle Ages, Dmanisi was one of the most prominent cities of the day and an important stop along the ancient Silk Roads. The region has thus long intrigued archaeologists, who have been excavating the crumbling ruins of a mediaeval citadel there since the 1930s.

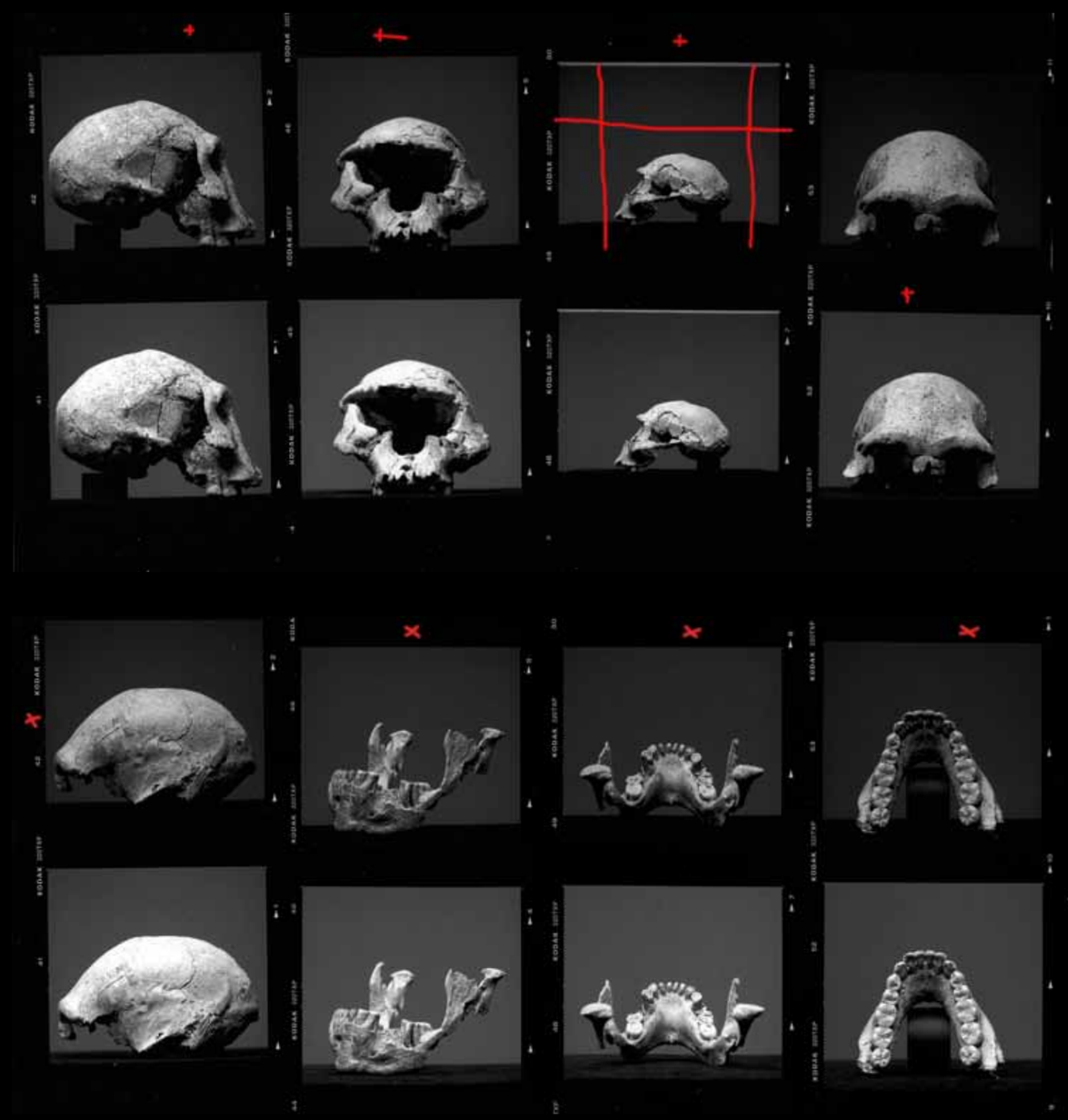
Excavations at the site were started by Professor Levan Mushelishvili, and later continued for 30 years under the supervision of Dr Vahtang Djaparidze. There then followed a period of ten years, during which the excavations were supervised by Dr Jumber Kopaliani. The first hint that the site might have a deeper significance came in 1983, when the paleontologist Abesalom Vekua discovered the remains of a long-extinct rhinoceros in one of the site's grain storage pits.

These pits, dug by the citadel's inhabitants, thus opened a window onto prehistory. The next year, during further paleontological excavations, primitive stone tools came to light. Identified by Dr Nugzar Mgeladze, these brought with them the tantalizing possibility that fossilized human remains might eventually follow.

In 1991, the first international team was organized with the Römisch-Germanisches Zentralmuseum (Germany). Georgian scientists including Medea Nioradze, Abesalom Vekua, David Tushabramishvili, Givi Maisuradze, Merab Tvalchrelidze and Nina Klopotovkskaia, and students David Zhvania, Gocha Kiladze, Teona Shelia and Giorgi Nioradze, worked together with German archaeologists Gerhard Bosinski and Antje Justus.

Finally, on the last day of the 1991 field season, a human mandible was discovered underneath the skeleton of a saber-toothed cat. The results of the study of the jaw bone, carried out under the supervision of the late Professor Leo Gabunia, provoked much discussion in the scientific world, with many scholars being sceptical about the age and taxonomy of the Dmanisi hominids.

(top) The Dmanisi archaeological site before the construction of the project
(right) Archaeologists and paleoanthropologists at work in Dmanisi



Abesalom Vekua and David Lordkipanidze with the first human skull discovered at the Dmanisi site

In 1999, two human skulls were found at the site, and this led to the international recognition of the Dmanisi remains. Since then, the site has yielded the richest collection of early hominid finds ever discovered at one site, along with a quantity of stone tools and thousands of animal bones.

The Dmanisi site has now yielded the remains of several hominid individuals, including four skulls, three of them with maxillas, three mandibles, 15 isolated teeth, and 35 post-cranial remains. This is the richest and most complete collection of indisputable early *Homo* remains from any one site or comparable stratigraphic context.

Despite certain anatomical differences among the Dmanisi specimens, we do not presently see sufficient grounds for assigning them to more than one hominid taxon. Thus, the Dmanisi assemblage gives us a unique opportunity to study variability within an early *Homo* population.

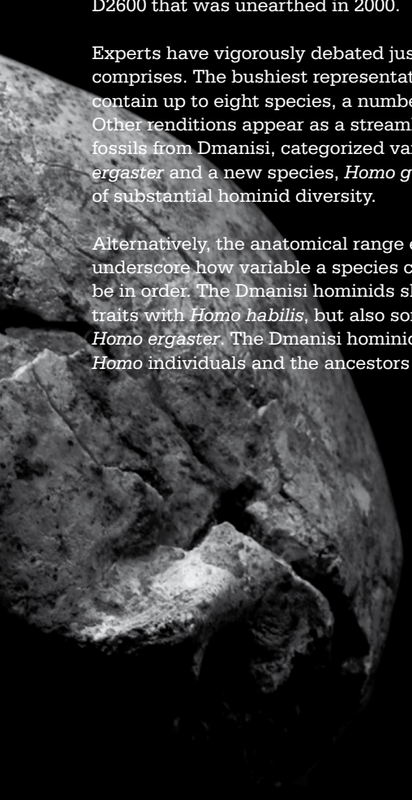
The Dmanisi skulls have very low cranial capacity, the smallest one having a capacity of 600 cubic centimetres, which is near the mean for *Homo habilis*. The largest Dmanisi specimen has a cranial capacity of around 750 cubic centimetres. Modern humans have cranial capacities of around 1,400 cubic centimetres.

The specimens from Dmanisi exhibit characteristic *Homo erectus* features, such as a heaping up of bone along the midline of the skull, known as a *sagittal kee*l, and marked constriction of the skull behind the eyes. But they stop short of the classic morphology of that hominid in several ways, in their small brain size, for example, which is about half that of a modern human.

Specimen D2700 from a teenager is especially primitive, resembling *Homo habilis* not only in size, but also in the thinness of its brow, the projection of its face and the rounded contour of the rear of the skull. Some researchers propose that these fossils might represent a new species of *Homo*. Others suggest that the remains belong to more than one species, pointing to the enormous lower jaw known as D2600 that was unearthed in 2000.

Experts have vigorously debated just how many species our genus, *Homo*, comprises. The bushiest representations of the *Homo* branch of the family tree contain up to eight species, a number of which were evolutionary dead ends. Other renditions appear as a streamlined succession of just a few forms. The fossils from Dmanisi, categorized variously as *Homo habilis*, *Homo erectus*, *Homo ergaster* and a new species, *Homo georgicus*, could be compatible with scenarios of substantial hominid diversity.

Alternatively, the anatomical range evident in the Dmanisi remains could just underscore how variable a species can be. Viewed in that way, some pruning may be in order. The Dmanisi hominids share a lot of cranial, dental and postcranial traits with *Homo habilis*, but also some similarity with later hominids such as *Homo ergaster*. The Dmanisi hominids represent the descendants of early African *Homo* individuals and the ancestors for the *Homo* from Eurasia.



One of the skulls found in Dmanisi

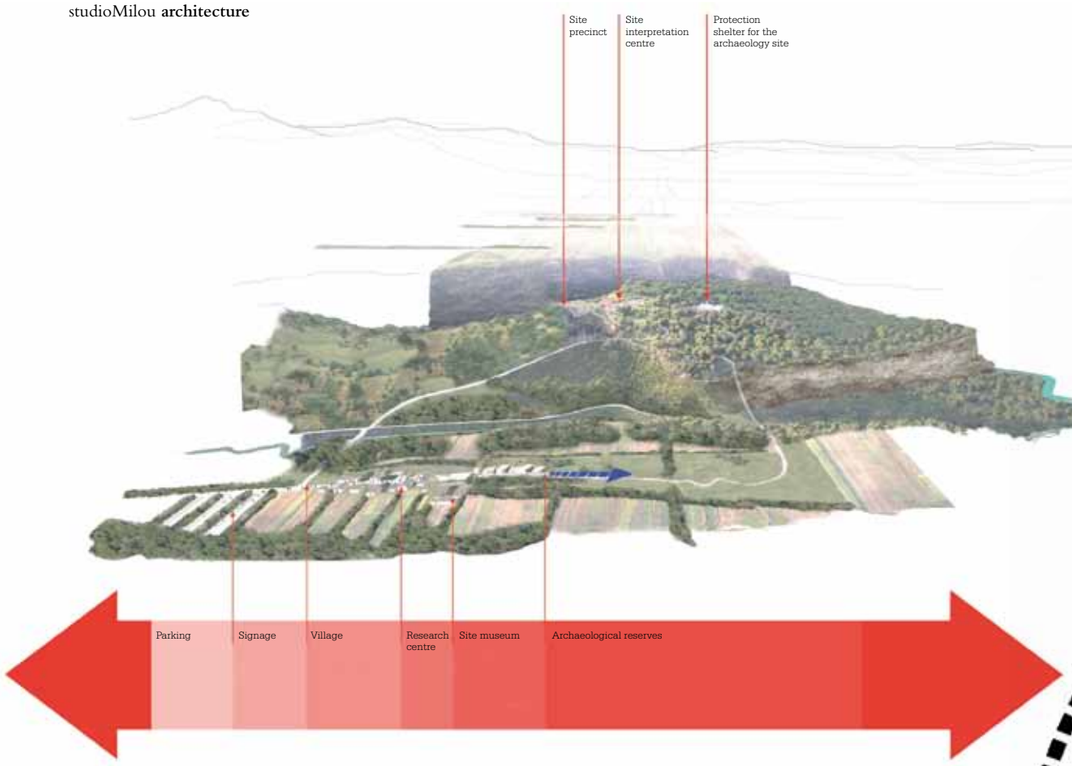
The period between two and one-and-a-half million years ago is a critical one in the study of human evolution, being marked both by the emergence of the genus *Homo* and its initial dispersal throughout the old world. Fundamental to this time period are questions of why hominids first dispersed out of Africa and which were the first colonizers.

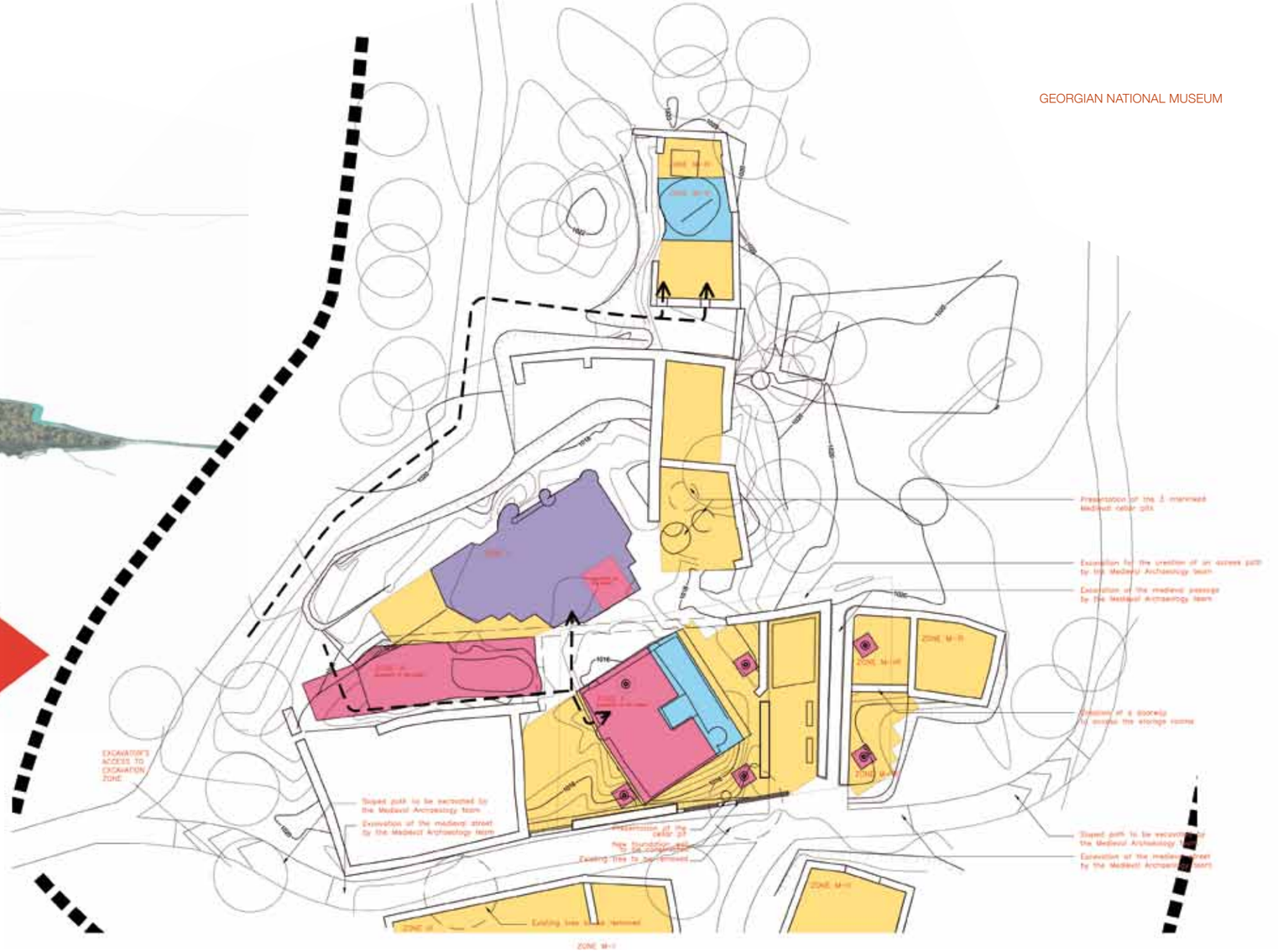
Scientists have long thought that the first hominids to disperse from Africa were *Homo erectus*, a species with large brains and a stature approaching human proportions. This species was widely assumed to have left the African continent once its members had evolved their greater intelligence and human-like body proportions and had invented more advanced stone tools. Our excavations at Dmanisi in Georgia, a site that dates to 1.75 million years ago, have revealed an extraordinary record of the earliest hominid dispersal beyond Africa.

The site provides new evidence and opportunities to study questions about which hominids left Africa and when and why they did so. It also raises questions about these first hominids who were intercontinental travellers and who set in motion the migrations that would eventually lead to the human occupation of the planet as a whole.

David Lordkipanidze
Director of the Georgian National Museum

(clockwise from left) The team of researchers on site in 2009: Francesco Berna, Reid Ferring, Oriol Oms, Jordi Agusti and David Lordkipanidze



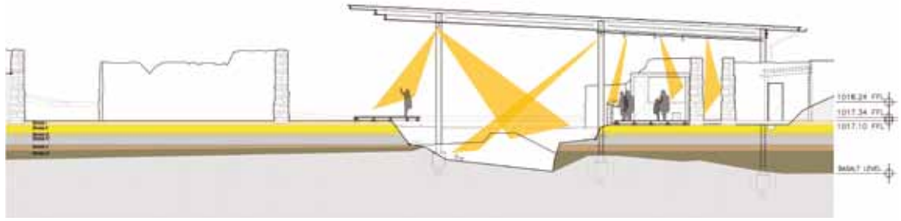


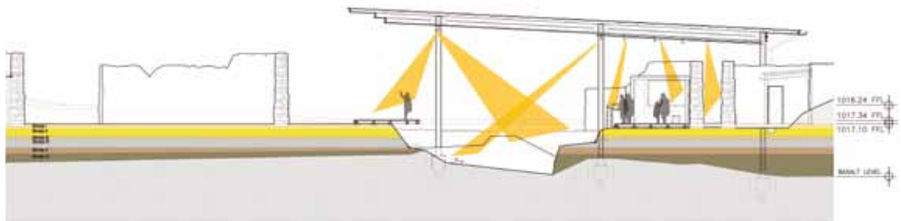
The project to protect the paleoanthropological site of Dmanisi and to present it to the public is part of a masterplan for the development of the village of Dmanisi. The objectives of this masterplan include:

- to improve the presentation to the public of the paleoanthropological site and the mediaeval site;
- to improve security at the paleoanthropological site and its protection;
- to plan for the development of infrastructure, research, and the reception of visitors, while at the same time respecting the site;
- to make employment and other opportunities linked to the development of the archaeological site available to the residents of Dmanisi, for example in the running of homestays or guesthouses.

In drawing up the masterplan, one important consideration was how to organize and direct the visitor flow to the site in such a way as to ensure its protection and security.

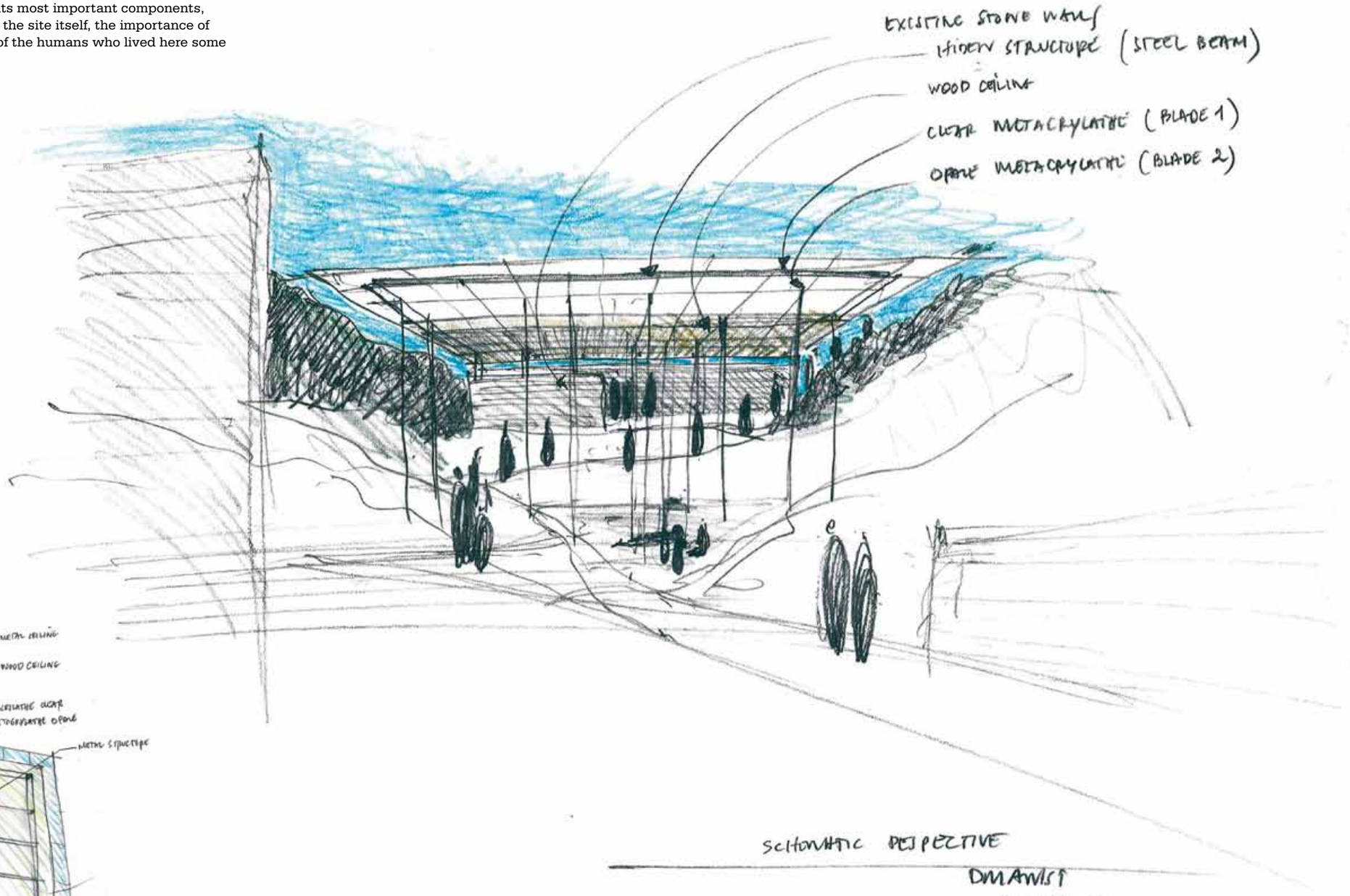
Jean François Milou
Architect, 2007

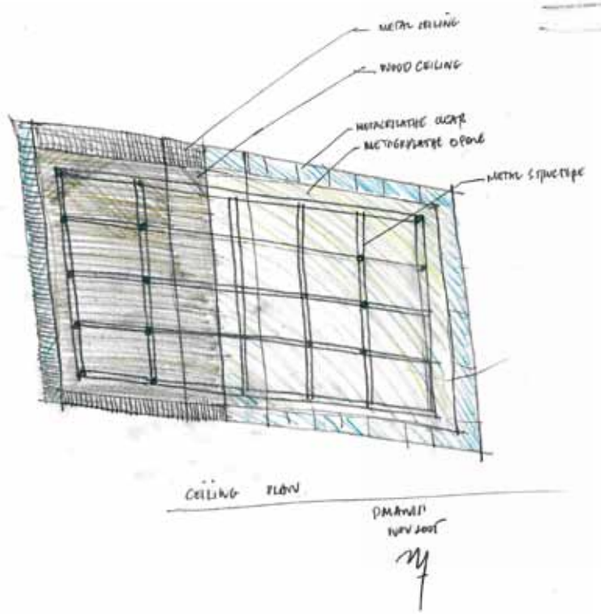




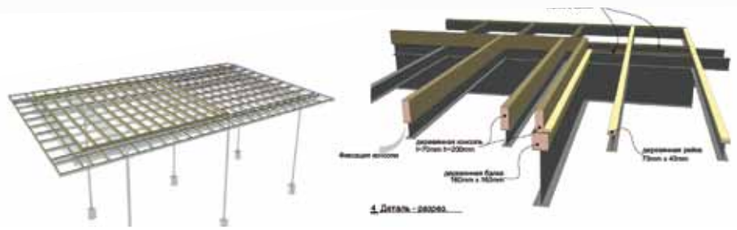
(top) Masterplan aerial view, studioMilou, 2004
(top right) Masterplan extract, studioMilou, 2005
(right) Section of public platform and site, 2006

The protective / presentational structure presented here represents the first stage of the masterplan for the site. It is also one of its most important components, since it underlines, in the importance given to the site itself, the importance of the archaeological discoveries of the remains of the humans who lived here some 1.7 million years ago.





Sketches made by Jean François Milou on site in Dmanisi, 2005



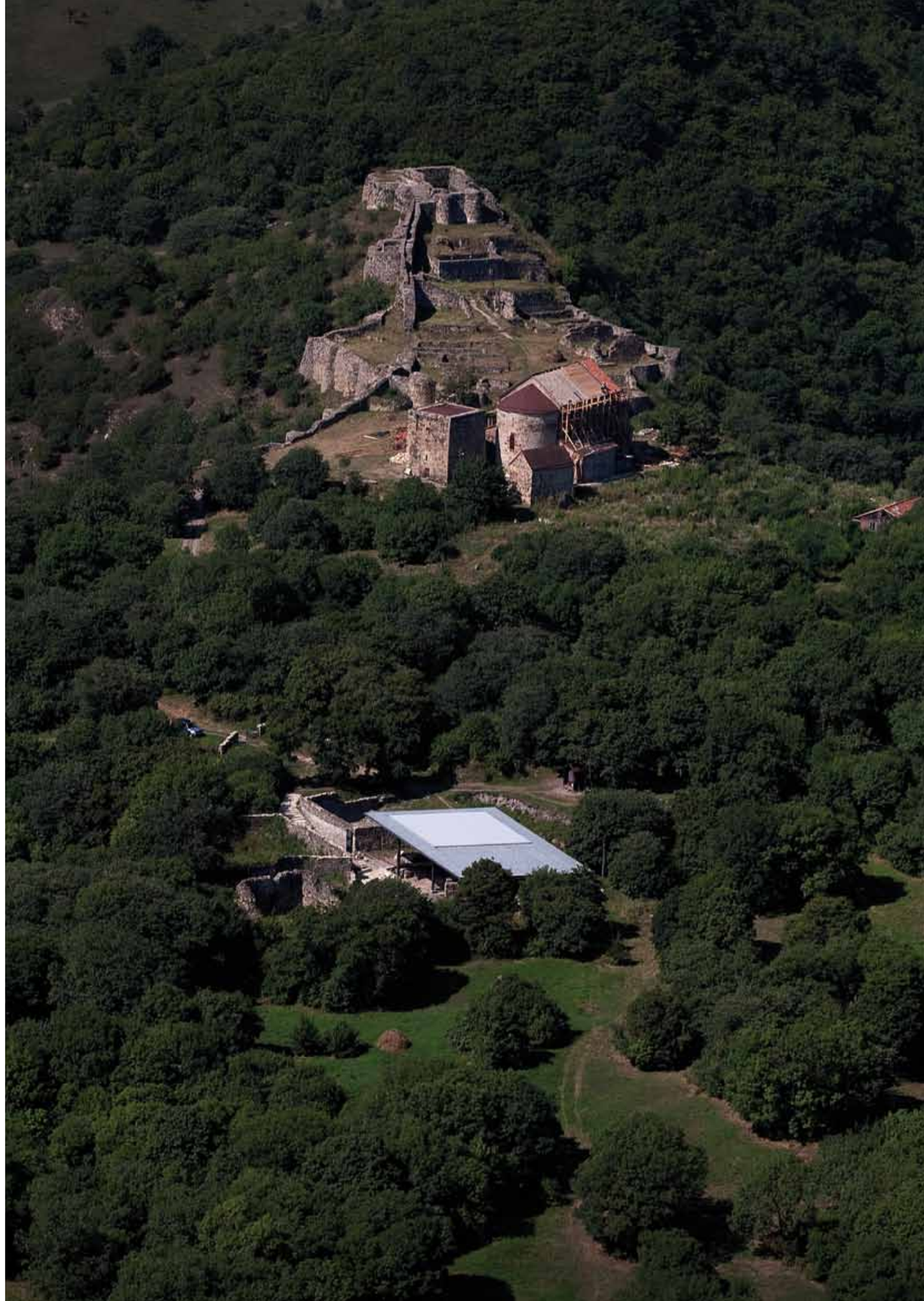
For studioMilou, one of the major challenges of working in Georgia in 2005 was working in a country that had gone through a difficult transition to a market economy following the break-up of the USSR. Many key sectors of the economy and society were paralyzed for years as a result.

In the field of architecture, Georgian architects in 2005 were not trained in the new IT techniques that had altered the profession everywhere else in the world, and it was therefore difficult for studioMilou to create effective partnerships with local architects during the study and working phases.

studioMilou became involved in training Georgian architects and conservators in conservation techniques and modern design in Paris, in cooperation with UNESCO and the French Embassy in Georgia. The Studio also became more involved in the work than had originally been planned, in order to guarantee quality of finish and detailing.

(top) 3D model of the site, studioMilou, 2005
(centre) Details of the construction model by studioMilou in Georgia, 2007
(right) Structure of the project on site, 2008

(top left) Off-site work, 2008
(top right) On-site work, 2008
(right) Aerial view of the mediaeval fortress and the archaeological site



In addition to components designed to facilitate the work of researchers and excavators, the project consists of a site museum and interpretation centre that presents the remains to the public. These remains consist of the following:

- the mediaeval remains;
- the Bronze Age necropolis;
- the paleoanthropological site.

(left) Public access to the site
(top) The new shelter is lower than the existing trees on site, 2009
(bottom left & right) Technical platform for archaeologists, 2009

The Dmanisi project continues work undertaken by studioMilou architecture at other site museums, such as those at Bougon and Cherbourg in France.
It proposes a simple and original solution in an architectural design that:

- marks the importance of the paleoanthropological discoveries made at the site;
- protects the site and the excavations underway;
- welcomes visitors to the site and presents it to the public.

The desire to locate the site, the researchers and the public under the same roof, despite the difficulties this approach could present, constitutes the originality of the design.

Jean François Milou on the public platform overlooking the site, 2009

The project is a rare example of a building that both facilitates work underway at the site, while at the same time presenting it to the wider public. It also reflects the vision David Lordkipanidze has of the project, and his view of the place of science in Georgia at the beginning of the 21st century and its importance for the country as a whole.

(top) Bronze Age remains, 2009
(right) Public skybridge over the remains, 2009

Public platform overlooking the ongoing survey, 2009

The project consists of both a protective structure for part of the paleoanthropological site and a space dedicated to presenting the site to the public. The Dmanisi site today is one where excavations are still being carried out and research is underway. This will be the case for many years to come, such is the enigma that aspects of the site still represent for the scientific community. The structure built as part of the project is thus both a place where researchers can work and one where members of the public can see excavations underway at the site itself.

The work carried out since 2005 by Jean François Milou and studioMilou in Georgia, particularly at Dmanisi, has built on a close relationship with the Georgian National Museum team and the research team at the Dmanisi site. The result has been the completion of the first phase of the project and the construction of a structure protecting the site and welcoming the public. This has been discretely placed among the trees that surround the site.

Today, we have explored maybe only 10 percent of the Dmanisi site. Daily, we are getting new evidence of the end of the story. Dmansi raises a lot of questions, and the answers will surely come. The creation of the shelter for the Dmanisi site, and the accomplishment of visitor access to it, have both been very important in revealing the importance of different aspects of the site.

The project in the Dmanisi landscape, 2009

The project was carried out during a period of armed conflict between Russia and Georgia. Despite difficulties encountered by the team working on the project, architectural and functional objectives were adhered to.

Gocha Kiladze, manager of the archaeological centre, inspecting work in progress in August 2009

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