

Notes on the survey of the Catacomb of San Senatore at Albano Laziale (Rome, Italy)

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Abstract

The underground complex of the Catacomb of San Senatore is located at the fifteenth mile of the Via Appia, where the territory of Albano Laziale borders with that of Ariccia. The entrance opens in that section where the *Regina Viarum*, after crossing the historic centre of Albano and passing by the curious republican monument known as the Tomb of the Horatii and the Curiatii and the nearby monumental complex and cemetery of Santa Maria della Stella, begins a steep descent to the bottom of the valley. The Christian complex dates back to the 4th century AD at least, as confirmed by important surviving iconographic evidence. Presumed to be connected with other catacombs under the centre of Albano, it has been known in written sources for several centuries. After the medieval and Renaissance oblivion, it was rediscovered the second half of 17th century and reconnected to a monumental system that attracted the travellers of the Grand Tour. Such an urban system kept on growing up to XIX century, thanks to the cemetery built by the church in 1833 and used up to the cholera epidemic of 1867. Although studied and mapped between the end of the 19th and the beginning of the 20th century, the catacomb was in a state of semi-abandonment for decades. Only a collapse, at the end of the 1980s, convinced the Pontifical Commission for Sacred Archaeology, then directed by the illustrious Vincenzo Fiocchi Nicolai, of the need to carry out some excavation and consolidation interventions which determined the current state of the monumental site. At the entrance, a steep linear staircase leads into the basement of the current convent of the Discalced Carmelites, annexed to the church, where the ancient nucleus of the catacombs is located. From here, a series of underground perimeter rooms branch off. Some are excavated, some covered by the earth that came out of the collapses, some interrupted by recent consolidation walls of the buildings above. This paper presents the early results a historical research and architectural survey, the first carried out through digital technologies, which is part of a PRIN entitled *Le strade di Pietra* and dedicated to the ancient historical routes. It concerns not only with providing a faithful cartography of very irregular spaces in order to relate it to the overlying and neighbouring structures and to plan an organic project of enhancement, but also to develop an integrated method of documentation of the remaining pictorial fragments.

Keywords: Albano Laziale, San Senatore, catacomb, architectural survey, rock-cut architecture.

Introduction

Along its sides, the *Regina Viarum* Via Appia collects an incredible number of signs of the past, often of extraordinary quality. Today, some of its sections are often defined as a sort of open-air gallery, a widespread museum of Roman art that blends with the typical landscapes of central-southern Italy. Unfortunately, many of the ancient sepulchres that marked the route have now disappeared or been reduced to unrecognizable and mute ruins; conversely, others were intentionally 'invisible' and silent since their creation. This is the case of the ancient and little-known Catacomb of San Senatore at Albano. It is near the Republican Roman monument known as the Tomb of the Horatii and the Curiatii and beneath the complex formed by the church of Santa Maria della Stella, its cemetery and the attached Convent of the Carmelites (fig. 1). The Catacomb constitute the link between Paganism and Christianity in a place characterized by the funerary destination in different forms for almost 2000 years. The historical research and the survey of the

Catacomb presented here is part of the Research Project of National Interest (PRIN) entitled *Le Strade di Pietra* and aimed at analyzing the quality of ancient stone road surfaces and at prefiguring a possible enhancement compatible with their characteristics and their conservation, of course. From the point of view of the architects, studying the streets means above all studying the architectures that stood *by*, *along* and *over* them – or, like this case, *beneath* them. Often, the architecture is the main reason for the construction or the use of a street and, at the same time, influence the perception along it.

The survey of the Catacomb – here you find only the early results of this activity – is therefore conceived in direct relationship with the Via Appia and what is on the surface, i.e. the Republican Tomb, the original layout of the road itself the church and the convent built behind it. In this operational context, the particular morphology of the land – the site is located along a section of the Appia that descends to the valley before going up again to the nearby Ariccia – adds elements of complexity both in the survey operations and in the

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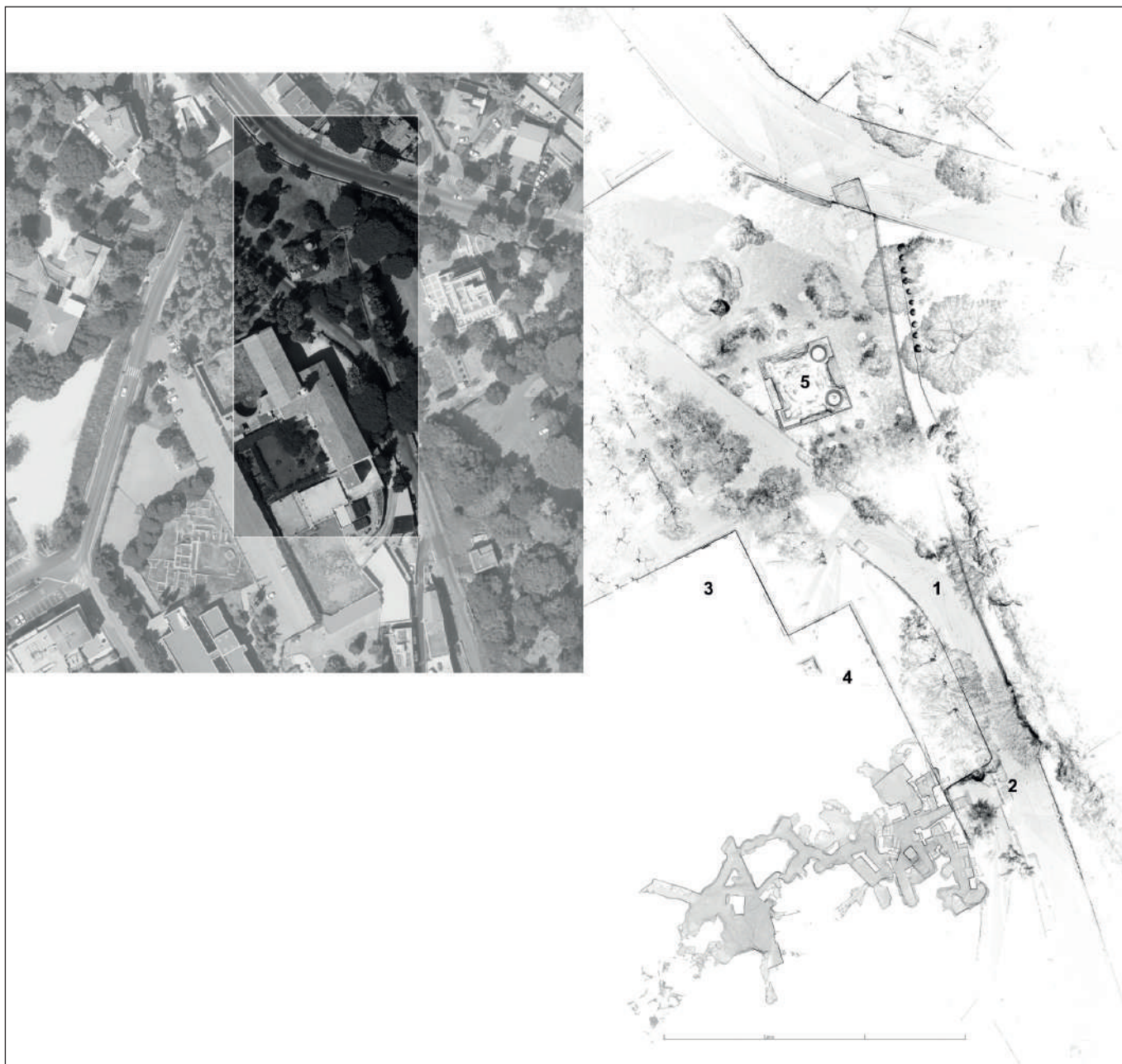


Fig. 1 – Aerial photo of the area of Santa Maria della Stella at Albano, with the section under investigation highlighted. The drawing shows the corresponding part in the plan projection after the points cloud: 1. Via Appia; 2. Entrance to Catacomb of San Senatore; 3. Church of Santa Maria della Stella; 4. Convent of Discalced Carmelites; 5. Tomb of the Horatii and the Curiatii (image by M. Carpiceci).

perceptive considerations. Added to these difficulties, the mazy plan and the poor lighting of the hypogeum, guaranteed only by a network of light points, has suggested the use of a laser-scanner in combination with spherical references.

At the same time, the Catacomb of San Senatore has specific characteristics, in some ways unique, which make it worthy of an in-depth study to be extended both to the remarkable wall paintings (Marinone 1992), the object of an integrated survey through photography, and to the atmosphere of the underground environments. This study, which is still ongoing, is planned to be conducted above all in the perspective of the future enhancement of the hypogeum – the same

could be said of the Tomb above and the garden around it – which requires their complete exploration, for the consolidation of the parts today considered unsafe; the systemization with the museum circuit of the artistic centers of the area and a more systematic opening to the public as part of a cultural and spatial experience planned in detail.

A brief history

The Appia is presumed to have been built in 312 BC by the censor Appius Claudius (Livio IX, 29) following an older road that led from Rome to the Colli Albani.

Livy (Livio VII, 39) reminds that 30 years before its construction, some soldiers in revolt had stationed in Campania and then had marched towards Rome along the “way which is now called Appia”. While the paving was being carried out in different phases, the Appia was equipped with stations and lodgings for changing horses. They were usually located between seven and eight miles away in the most inhabited places, while in the less populated areas, the stations were located every ten to twelve miles. In particular, by the 15th mile of Via Appia, funerary structures and burials of different shapes and types were built. This results from some excavations carried out between 1999 and 2002, which unearthed structures belonging to a villa from the Roman age, adjacent to the Catacomb. In the south-west sector of the villa, near the service areas, there are evidence of works for the creation of a funerary area, dating back to the late imperial age. Here the depositions were carried out in *formae* partly excavated in the tuff and partly covered with cement. These cavities are mentioned in ancient sources of Christian origin. Although there is no direct source to document this, it is today presumed that the area was also featuring a pozzolana quarry, which was later turned into a Christian cemetery, the Catacomb of San Senatore.

The *Geronimian Martyrology* says that at the 15th mile of the Via Appia, in Albano, there were the remains of the saints Secondo, Carpofofo, Vittorino and Severiano (*Martyrologium Hieronymianum* p. 102), who are commemorated on 8 August. Another source is *De locis Sanctis Martyrum quae sunt foris civitatis Romae*, a reference text for Christian pilgrims of the end of the 7th century, which, at least in the present form, should be dated to the last years of Honorius I (625 - 638), or to beginning of the pontificate of Theodore I (642 - 649). It reports that “Through the same road [Appia] then one reaches the city of Alban, and, through the same city, the church of San Senatore, where the body of Perpetua and innumerable saints also rest, and great miracles happen”. It therefore seems that the pilgrims visited the suburban Christian cemetery of the *Civitas Albana* to pay homage to the remains of the martyrs and saints Senatore and Perpetua amongst the others. Added to this, the *Vetus Martyrologium Romanum* indicates the date of the anniversary of San Senatore and Albano as his place of deposition.

The early news regarding the existence of the hypogeum of San Senatore, after the abandonment presumably occurred in the Middle Ages, dates back to 1671. Upon the casual discovery of some rooms of the catacombs, due to the construction works of the upper Carmelite convent, the basements were visited and described by the Carmelite Father Ludovico Perez de Castro. Then Marcantonio Boldetti explored the catacombs in 1720 while the historian Antonio Riccy (Riccy 1787) mentioned them in 1787. G. B. De Rossi visited it in 1843 and published his research on it in 1869.

The latest searches are the result of the excavation campaign which took place under the direction of Vin-

cenzo Fiocchi Nicolai, on behalf of the Pontifical Commission for Sacred Archaeology, from 1989 to 1991. His publication (Fiocchi Nicolai 1992) is still the fundamental text for any research work on the catacomb. Before him, the geological conformation of the ancient pozzolana quarry was investigated by Gioacchino De Angelis D'Ossat (1942). He stated that the peperino bank visible on the entrance door to the catacomb, which he estimated about 5.30m-thick, was also the vault of the hypogeum. The material beneath that layer, which was the object of the extraction activity by the quarrymen, is of the incoherent sandy type. D'Ossat underlined that this last pozzolanic layer was suitable for use in the preparation of mortars and therefore the pre-cemetery cavity was certainly an *arenario* (a sand quarry). The layer of pozzolana that was extracted from the quarry was about three meters deep. The pozzolanic level was included between two banks of peperino: while the upper forms the vault of the catacomb, the lower forms a sort of floor of the ancient quarry. Added to this, the former presence of a pozzolana quarry is confirmed by the conformation of the structure itself: the galleries are very large, the vaults and the walls are rounded and develop along irregular and sinuous paths.

Today, the Catacomb is accessible through a metal door in the stone wall along Via Appia. A long staircase leads down to the main room of the whole complex. The apse of the back wall of this regular excavated room, likely the result of the activity of the *fossore*s, shows a painting with an Apollonian Christ surrounded by the saints Peter, Paul, Lawrence and a fourth unknown. He is depicted in the gesture of the *Deesis* (the presentation) which helps date the whole painting to the 4th century.

This hall, which is also known as the “historical crypt”, is the result of the expansion of an original room of smaller size maybe to welcome the cultic activities related to the Christian cemetery. Both the richness of the frescoes, and the high chronology of some of them (the Byzantine-style fresco with Blessing Christ, the Mother of God and San Smaragdo would even date back to the 11th or 12th century), and a sort of small *arcosolium* tomb, at an angle between the back wall and the western wall, testify of the particular consideration of this sector of the cemetery.

The dedication to San Salvatore is rather recent. During the works directed by Fiocchi Nicolai, the face of a young saint of high artistic quality came to light under a layer of the laying bed of the mosaic. The archaeologist interpreted it as the portrait of San Senatore (Fiocchi Nicolai 1992), whose remains were found inside the tomb in the shape of a small *arcosolium*. Furthermore, Fiocchi Nicolai proposed that this hall could be the *Ecclesiam Sancti Senatoris* mentioned in the *De Locis*.

Surveying the Catacomb

Architectural surveying is a relationship of knowledge between the detector and the detected, a continuous

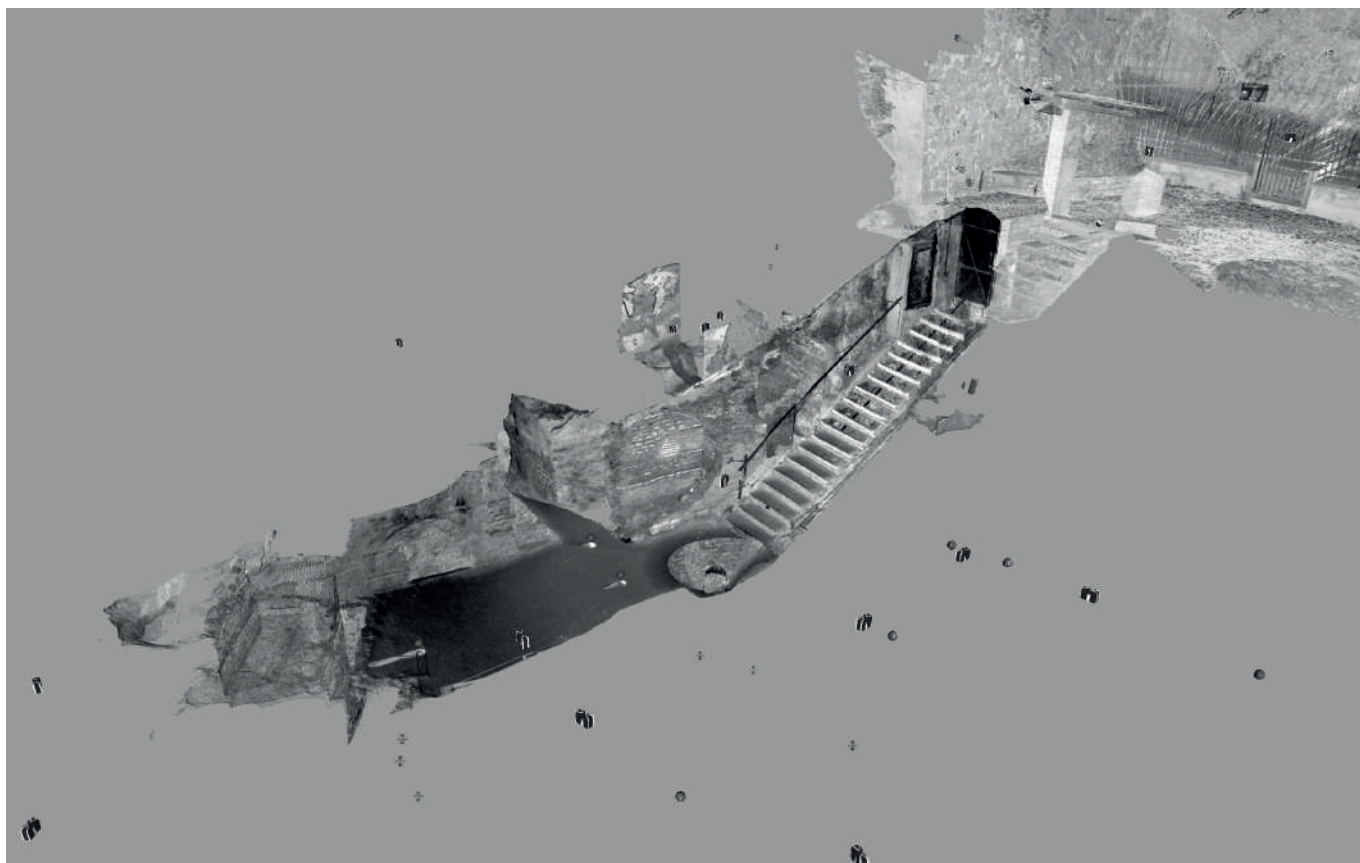


Fig. 2 – Perspective view after the points cloud related to the access staircase (image by M. Carpiceci).

iteration of observing, understanding and deciding which involves establishing a path, sometimes retracing one's steps, sometimes repeating operations in another way. No subject is the same as another and no subject appears the same as the previous time. Experience and analogy can facilitate some decisions but often one has to find the solution at the very moment and place.

Surveying a catacomb is a particular, gradual experience, to be assimilated with 'prudence'. It presents as a maze of cavities that are unknown and alien and that only slowly become familiar, indirectly rebuilding one's feeling of knowledge, of 'belonging to'.

From the entrance, one descends a staircase for about 5m up to the ground of the first cave (fig. 2), which is connected to the hall (fig. 3) featured by the only remaining traces of wall painting (fig. 4). The sequence of scans has been planned according to the main exploratory path, then branching off from the hall, radially, to secondary routes, some annular, others mixtilinear, in order to obtain a (more or less) complete coverage of the catacomb.

As known, stitching the scans requires one or more homologous points that can be automatically identified by the software or manually defined by the operator. The rocky surfaces generally do not provide this kind of recognizable elements. To bypass this problem, polystyrene spheres were used. The spherical shape is independent of the direction from which one look at it and therefore the center can always

be geometrically determined. 4 points are enough to calculate its position, and the software, taking a congruous overabundant number of points, marks what statistically is closer to reality. It is therefore intuitive that when each pair of scans share the same two spheres (but three of them work even better), the coordinates of their centers and the vertical axis of the scanner (bubble) can reconstruct the position of each pair of stations and consequently of the entire subject (fig. 5). The scanner is a 'polar' instrument, therefore in complex topographic survey operations, such as a catacomb, one must follow closed or open polygonal paths. The closed ones provide a greater reliability as they compensate for the inevitable, albeit small, uncertainties present in every metric acquisition.

The survey revealed that the catacomb develops in a rectangular area which is about 30m-wide and of 50-55m-long. The longitudinal axis starts from the entrance to the east and develops in a West/South West direction.

The hall presents an average height of 2-2.5m. In the middle, the ceiling shows a vertical well with a quadrangular plan that formerly connected the hypogeum with the upper rooms. Currently, this sort of 'chimney' rises for about 9.20 m from the floor, 4m upper than the entrance level. The height is slightly lower than the ground floor of the convent and its external courtyard (fig. 6). Proceeding from the hall through the catacomb, one finds a west/south-west route that



Fig. 3 – Plan after the points cloud related to the hall (image by M. Carpiceci).



Fig. 4 – Perspective view after the points cloud of a lateral room with wall paintings (image by M. Carpiceci).

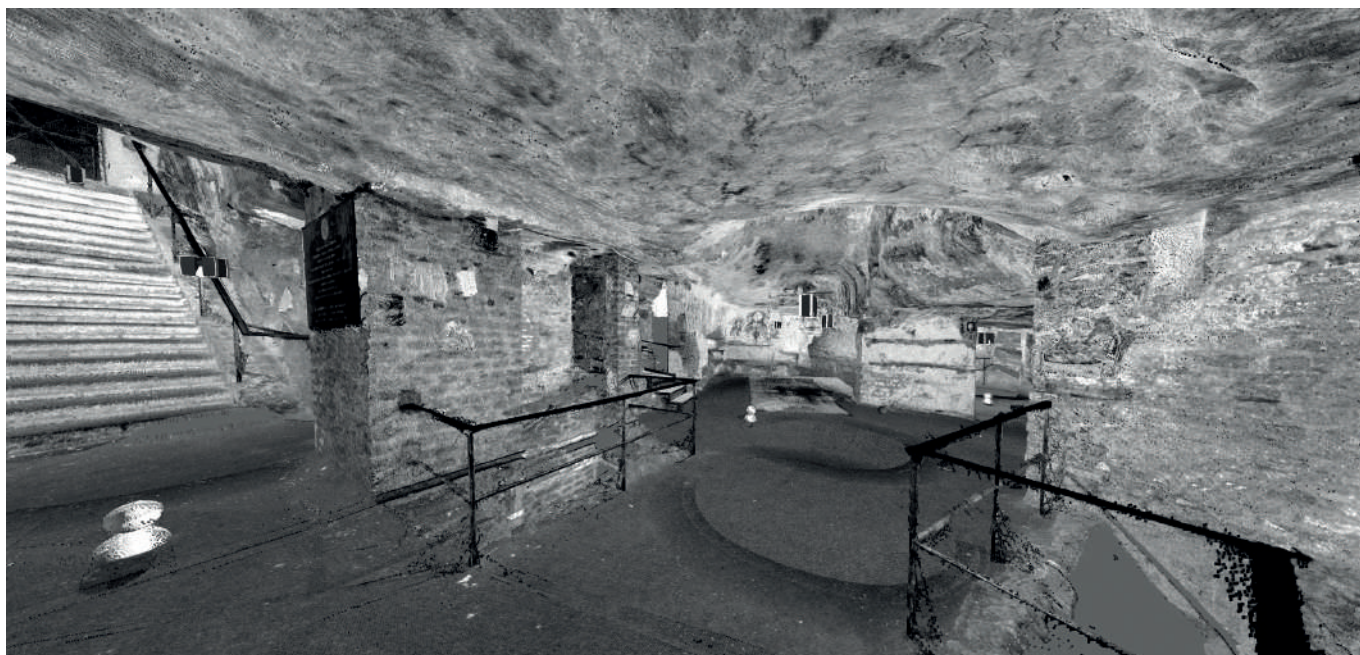


Fig. 5 – Perspective view after the points cloud of the hall: on the left the access staircase and at the bottom the areas with the presence of wall paintings (image by M. Carpiceci).

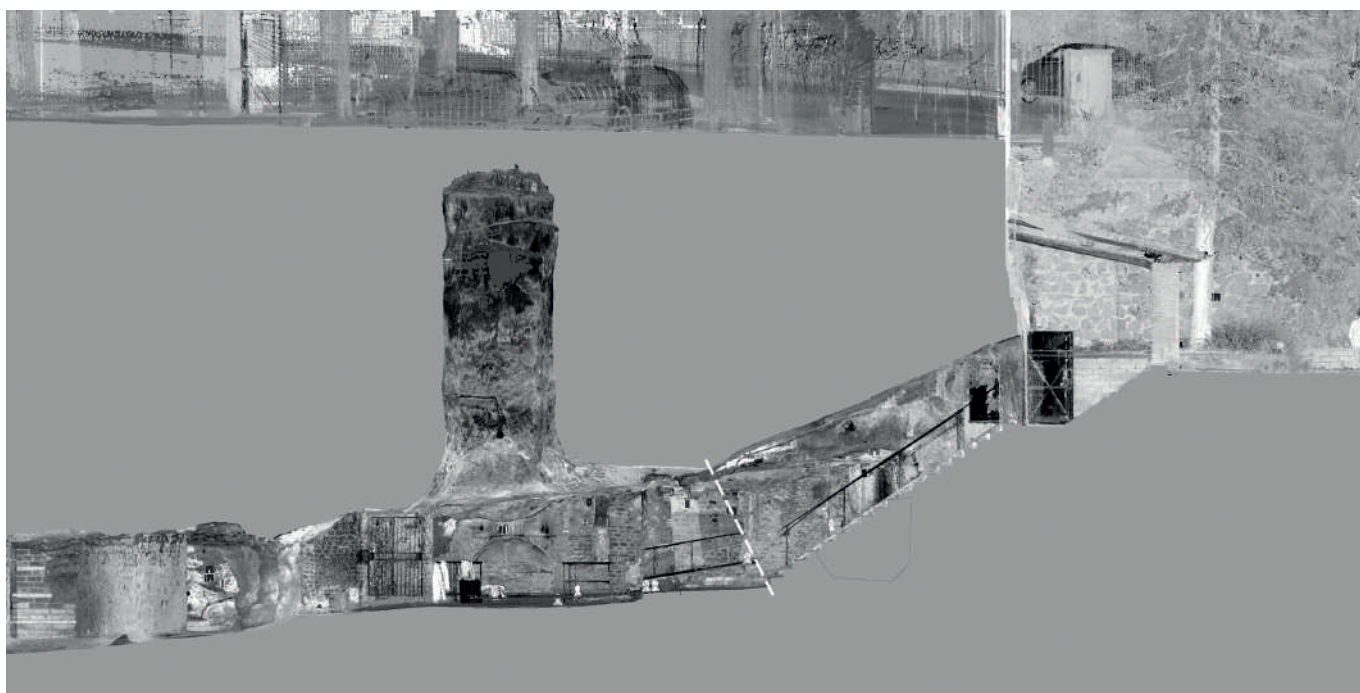


Fig. 6 – Composed longitudinal section on the access staircase and the vertical 'chimney' (image by M. Carpiceci).

descends slightly to the farthest western rooms that are four meters below.

Walking along the tunnels, one notice the variable compactness of the excavated mass, which has occasionally generated collapses and consequent closures of former paths. In this sense, they testify to the ancient transformation from *latomia* to catacomb (Palombi 2011). There are many *posticce* wall structures that contain the invasion of the earth along the corridors and just as numerous are the masonry works

erected perhaps as foundations of the upper structures such as the Church of the Madonna della Stella and the conventual structures. There is also the possibility that some structures were built to support the vaults of caves that in the past have shown static problems. Some inaccessible structures show environments delimited by walls, as if they had been used as cellars or other. Certainly, they will be the subject of the next stage of this survey and representation project. At this moment, 41 stations were used to cov-

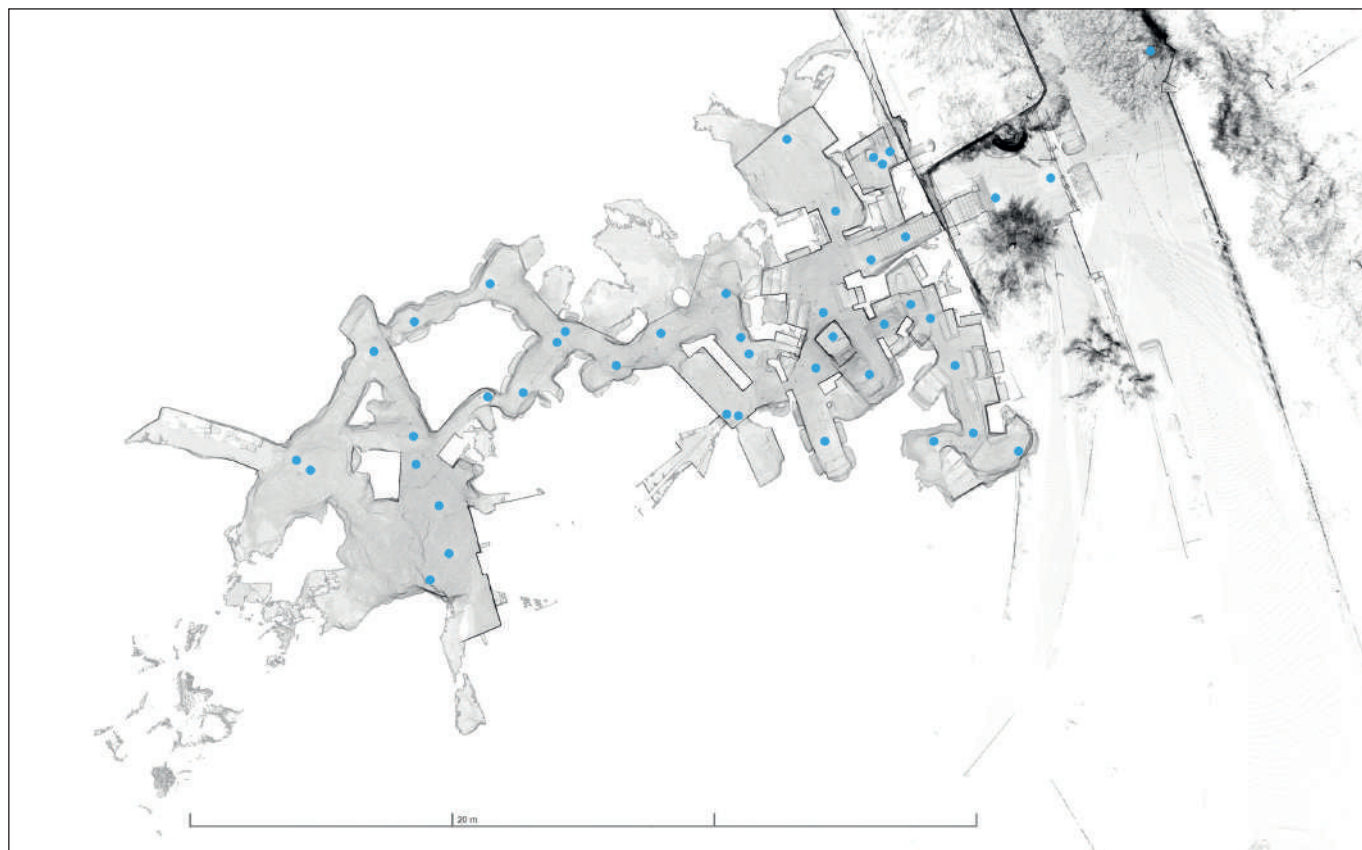


Fig. 7 – Plan after the points cloud related to whole accessible hypogeum. On the left, the caves that are yet to be explored (image by M. Carpiceci).

er all the accessible areas of the catacombs (fig. 7). Once the maximum coverage of the visible surfaces has been verified, the clouds will be merged. The subsequent elaboration will consist in elaborating a model by contour lines (*isoipse*) with an equidistance of 10cm, to represent the distribution of routes and rooms together with the actual three-dimensional morphology. Subsequently, the main vertical positions for which to repeat the operation of Multiple Equidistant Sections (EMS) will be determined

(Carpiceci 2013; Carnevali, Carpiceci 2020). With regard to the painted surfaces, the approximately flat surfaces will be represented according to the average position, and therefore in true form. In the case of reproducible striped surfaces, it will perform the simple leveling according to the groove closest to the surface. In the case of spherical surfaces, representations will be made that can visualize the surface closest to the 'compliant' development (Carpiceci 2011, Carnevali-Carpiceci 2020).

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