



The Medieval cave village of Casalrotto (Mottola, Apulia): New data on the settlement and its necropolis from archaeological and geophysical measurements



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ABSTRACT

This study concerns the main results of the research activity aimed at a new integrated knowledge of Casalrotto, a Medieval cave village (12th–13th century) near Mottola (Province of Taranto southern Italy). The research was based on archaeological and geophysical surveys performed in 2015. In particular, archaeological investigations have allowed the upgrading of the existing plan of the village through Differential Global Position System (DGPS) topographical surveys, while geophysical measurements, using ground-penetrating radar (GPR) and magnetometry in gradiometry configuration, have allowed a better delimitation of the necropolis and the detection of buried structures.

1. Introduction

The research activities described in this paper were carried out in 2015 within IT@CA project (PON01 00625 “Ricerca e Competitività” 2007–2013), whose main objective was the study and experimentation of innovative technologies and methodologies to apply in the knowledge and management of cultural heritage.

In particular, this study regarded the Medieval site of Casalrotto (southern Italy), within the western territory of Taranto and partially excavated between the late 1970s and early 1980s by the Institute of Medieval and Modern History of the University of Lecce in collaboration with the Superintendence for Archaeological and Monumental Heritage of Apulia Region, under the direction of Fonseca [6]. The staff of the Laboratory of Ancient Topography, Archaeology and Remote Sensing, and the Laboratory Geophysics applied to the Archaeological and Monumental Heritage of CNR-IBAM in Lecce have carried out archaeological and geophysical surveys aimed at the systematic documentation and study of the Medieval cave village.

New investigations have been carried out in order to clarify some aspects of the ancient topography of Casalrotto: i) the extension of the inhabited area, characterized by caves spaces, many of which overgrown, or in bad state of conservation, or reused; ii) the extension of the necropolis, only partially excavated in 1979–1982, especially along the south and south-west sides; iii) the general organization of the settlement, especially the relationship between inhabited area, necropolis, religious buildings, access roads.

2. The studied area

The studied area is located within the “Parco Naturale Regionale Terra delle Gravine”, characterized by wide dry karst valleys (called “gravine”, or “lame” or “valloni” in the local language) carving the calcareous terraces of the Murge platform.

The site of Casalrotto («Casal Ruptum» in the Medieval sources) is just nestled in one of this valleys (Fig. 1), exactly close to the homonymous eighteenth-century farmhouse, about 2 km south-west of the modern town of Mottola (Taranto). On the base of archaeological excavations and documentary sources, the lifetime of the village is dated to the period between the 11th and the 14th century, although a gradual decay is already attested since the 13th century.

The settlement is characterized by about one hundred “terraces” cave houses and spaces with other uses, carved along both the rocky slopes of the NE-SW karst valley (Fig. 1, A). These caves are the result of the enlargement and adaptation of natural cavities dug out by water. Moreover, many of these caves overlook small vegetable gardens bordered by stone drywall. A sector of this settlement was excavated (Fig. 1, D). The investigations highlighted the entrances of two semi-underground spaces, the widest of which had an original residential use because of the presence of holes for wooden partitions and niches carved in the interior; subsequently this space is partially collapsed and was re-used as reservoir between the sixteenth and seventeenth centuries.

To the north-west of this complex there is the necropolis of the

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Fig. 1. The site of Casalrotto in a Google Earth image (2016): A. cave houses reused as stables and barns; B. Church of Sant'Angelo; C. Necropolis; D. hypogeal houses.



Fig. 2. An example of hypogeum overgrown with vegetation.

village (Fig. 1, C), partially brought to light in 1979 and 1982. At north-east of the modern farmhouse, on the plateau between the southern edge of the karst valley and the old road connecting Mottola and Palagiano, whose carriages grooves are still visible on the limestone bedrock. The excavated sector covers an area of 40×15 m. It consists of simple rectangular grave tombs with trapezoidal section (108 in all with single, double or multiple depositions) carved into the bedrock, according to a system widespread since the Middle Ages, although a precise chronological definition is difficult because of the absence of grave goods and personal items. The southern sector of the necropolis has partially destroyed to arrange a modern farmyard, obtained by lowering the original bedrock of 50 cm. On this floor, the archaeological evidences such as tombs, cisterns and wells have been subsequently fill up by stones to get a uniform level. The archaeological excavation did not clarify the extension of the necropolis along the southern and south-western sides.

At the south-western end of the village, where the karst valley sags and opens to wide areas of cultivable field, in the southern side of the valley there is the Church of Sant'Angelo (Fig. 1, B), consisting of two large hypogeal rooms on two floors including fresco paintings executed between 12th and 14th century [7]. Another possible religious cave could be at the north-eastern end of the village, where the large cave “cripta No. 4” preserves painting traces. Its identification with the Church of Santa Maria built between 1155 and 1165, as mentioned by Medieval sources, could be possible.

It was assumed that the original nucleus of the village of Casalrotto was the Church of Sant'Angelo, but around this cave are only a few remains of houses. After the settlement gradually moved to the large complex of caves placed north-east of the eighteenth-century farmhouse. The church annexed to farmhouse is of the same period and its type is common to the conventual churches; therefore, the hypothesis that the present farmhouse includes an ancient convent and the annexed church is built over a more ancient ecclesiastical edifice is possible.

3. Archaeological and topographical surveys

In order to produce a more detailed definition of the ancient organization of the Casalrotto village, archaeological and topographical surveys were carried out in integration with geophysical prospecting.

First of all, the raster documentation produced in 1979–1982, such as the general plan of the site at a scale of 1:200, the detailed plans of the caves and the excavated sectors, have been acquired, digitized and georeferenced on a large-scale topographical map so, new topographical surveys have been performed using a high-precision GPS system with dual differential antenna, in RTK mode (<https://www.novatel.com/an-introduction-to-gnss/chapter-5-resolving-errors/>). They were carried out both to check the old plans and in the areas around the settlement in order to identify its extension and the access roads. Moreover, an archaeological examination of the caves, in order to define their original use and chronology, was performed with the aim of evaluating previous hypothesis about the gradually displacement of village core around the Church of Sant'Angelo to the area of caves located at north-east of the eighteenth-century farmhouse. To this regard, it is important to highlight that the research was in many cases very difficult, because the interior of the hypogeal caves was in poor state of conservation and often invaded by vegetation or reused as stables and barns (Fig. 2).

Evidence not documented in the previous studies has been detected: in particular, some hypogeal caves at the north-western end of the settlement (Fig. 3), near carriages grooves of an ancient road (Fig. 4). In addition, the discovery of a scattering area of tiles and pottery fragments, as well as numerous stone fragments, detected in the flat and rocky area overlooking from the northern side of the karst valley, could suggest the presence of further masonries and structures connected to the settlement.

Finally, topographical surveys have also provided the positioning of the areas investigated by geophysical prospecting, providing a useful tool for georeferencing the profiles and time slices on the cartography.

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