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EDITORS

Mario Parise

Carla Galeazzi, Roberto Bixio, Carlo Germani



## THE SAN PELLEGRINO ROCK-HEWN COMPLEX AT MATERA: A MAGNIFICENT EXAMPLE OF THE RUPESTRIAN CULTURE IN SOUTHERN ITALY

Gianfranco Lionetti <sup>1</sup>, Vito Borneo <sup>2</sup>, Samantha Santarcangelo <sup>2-3</sup>,

Marco Pelosi <sup>1</sup>, Marco Viva <sup>3-4</sup>, Mario Parise <sup>2-5</sup>

<sup>1</sup> Freelance, Matera, Italy

<sup>2</sup> Centro Altamurano Ricerche Speleologiche, Altamura, Italy

<sup>3</sup> Archeoclub d'Italia "Don Ignazio Fracalvieri", Santeramo in Colle, Italy

<sup>4</sup> Gruppo Speleologico Neretino, Nardò, Italy

<sup>5</sup> CNR-IRPI, Bari, Italy, m.parise@ba.irpi.cnr.it

### Abstract

The town of Matera is worldwide known for the remarkable development of the inhabited area, one of the best examples of the so-called rupestrian culture, consisting of settlements formed by houses and shelters carved in the rocks, especially along the faces of deep valleys (locally called *gravine*). Physical properties of the local rock allowed to use the natural caves and shelters, and to enlarge them, to create even very complex, multi-stories, settlements. Due to richness of such evidence, and the magnificent natural scenario in which the town is located, Matera was listed in the World Cultural Heritage Sites by Unesco in 1993. This contribution describes a complex of caves located at the southern outskirts of town, in locality Ofra, consisting of four different levels of natural and man-made cavities, along the right cliff of the *gravina*. Named San Pellegrino, the cave complex is situated in an area that shows at the surface several archaeological evidence, testifying a long occupation of the site. About in the same area, in many other caves remarkable prehistoric remnants have repeatedly been brought to light. The San Pellegrino complex follows the geological passage between the Cretaceous limestone bedrock, and the overlying Plio-Pleistocene calcarenites. Natural caves developed typically at the contact, mainly formed as rock shelters, or phreatic caves of limited length. They were later on modified by man, that also excavated further rooms at higher levels, thus creating the overall multi-story complex. Since its origin, San Pellegrino was dedicated to agriculture and breeding, mainly for sheep and goats. This is testified by the high walls realized at the lowest entrance of the system, to create a space where to control of the herds. Two underground spaces were, on the other hand, dedicated to beekeeping. At the surface, the highplain shows farmyards for cereal ventilation, holes to host poles to sustain the vineyards, and water cisterns to collect the rainfall. In the central part of the complex, the rupestrian church is placed, also with a function of burial-place. The overall complex is of high historical importance, but it is at present in a very degraded state, being affected by diffuse instability processes, testified by past falls, unstable blocks, and a pervasive system of cracks. The instability throughout the history of the site is also testified by changes in the distribution of the spaces, and by sustaining pillars in calcarenites in the most dangerous places, as well as by new passages, realized to overcome the obstacles created by the occurrence of rockfalls.

**Keywords:** rupestrian culture, breeding, religious site, stability, Matera, Italy.

### Riassunto

La città di Matera è nota in tutto il mondo per l'eccezionale sviluppo dell'area urbana, che costituisce uno dei migliori esempi della cosiddetta cultura rupestre, costituita da un insieme di case e rifugi scavati nella roccia, lungo le ripide pareti rocciose di valli fluvio-carsiche (localmente denominate *gravine*). Le proprietà fisico-meccaniche dell'ammasso roccioso consentirono lo scavo e l'ampliamento di grotte e ripari naturali, sino a creare complessi insediamenti a più livelli. Per la ricchezza di tali evidenze, e il magnifico scenario naturale ove la città si sviluppa, Matera è stata inclusa nel 1993 nella lista del Patrimonio Culturale Mondiale dell'Unesco. Il presente lavoro descrive un complesso di cavità alla periferia sud di Matera, in località Ofra, consistente in quattro livelli di cavità naturali e artificiali, sul versante destro della *gravina* che limita la città. Denominato San Pellegrino, il complesso di grotte è sito in un'area che presenta in superficie numerose evidenze archeologiche, a testimonianza di una lunga frequentazione del sito. Inoltre, all'incirca nella stessa zona altri resti di grande importanza preistorica sono stati più volte portati alla luce, compresi quelli dalla vicina Grotta dei Pipistrelli. Il complesso di San Pellegrino, come molti altri nell'area di Matera, segue il passaggio geologico tra il substrato calcareo del Cretaceo e la sovrastante calcarenite Plio-Pleistocenica. Grotte naturali si sviluppano al contatto, tipicamente formate come rifugi sotto roccia o come cavità freatiche di limitata lunghezza. Queste vennero poi modificate dall'uomo, che scavò anche ulteriori ambienti a livelli più alti, dando così vita al complesso a più livelli. Dalla sua origine, San Pellegrino fu dedicato all'agricoltura e all'allevamento, principalmente di caprini. Ciò è evidenziato dalle alte mura di recinzione all'ingresso del sistema, a creare uno spazio interno dove custodire gli armenti. Due ambienti sotterranei erano dedicati all'allevamento delle api. In superficie, il pianoro presenta alcune aie per l'areazione dei cereali, buche per alloggiare pali per il sostegno dei vigneti, e cisterne per la raccolta dell'acqua. Nella parte centrale del complesso, è sita la chiesa rupestre, anche con funzione di luogo di sepoltura. Il complesso di San Pellegrino è di grande importanza storica, ma versa attualmente in uno stato di degrado, per diffusi processi di instabilità, evidenziati da crolli già avvenuti, blocchi instabili (anche di grandi dimensioni), e sistemi pervasive di fratture. L'instabilità che interessa il sito è anche testimoniata da variazioni nella distribuzione degli ambienti, e da colonne di sostegno in calcarenite posizionate nei punti più pericolosi, oltre a nuovi passaggi, realizzati per superare gli ostacoli derivanti dalla occorrenza di crolli.

**Parole chiave:** cultura rupestre, allevamento, luogo di culto, stabilità, Matera, Italia.





Fig. 1: overall view of the San Pellegrino rock-hewn complex (photo M. Parise).

Fig. 1: veduta generale del complesso rupestre di San Pellegrino (foto M. Parise).



Fig. 3: view of the gravina from the San Pellegrino rock-hewn complex (photo M. Parise).

Fig. 3: vista della gravina da un'apertura nel complesso rupestre di San Pellegrino (foto M. Parise).

## Foreword

The “Archaeological Historical Natural Regional Park of Rock-cut Churches in the Matera area”, is a park managed by Basilicata Region, established with Regional Law no. 11 of April 3, 1990. It covers more than 6000 hectares in the municipalities of Matera and Montescaglioso, in a territory of bare rocks, with deep valleys and several caves, incised by the Gravina stream, bounding the *Sassi* of Matera. Since 2007

the original definition of *Sassi di Matera* within the list of cultural heritage by UNESCO was enlarged to include “Sassi and the Park of Rock-cut Churches of Matera”, with more than 150 rock-cut churches. Flora in the Park counts for 923 species, among which about one hundred are rare species, including many of mediterranean and eastern origin. Lesser kestrel (*Falco naumanni*), a small raptor commonly present in the Matera area, is the emblem of the Park.

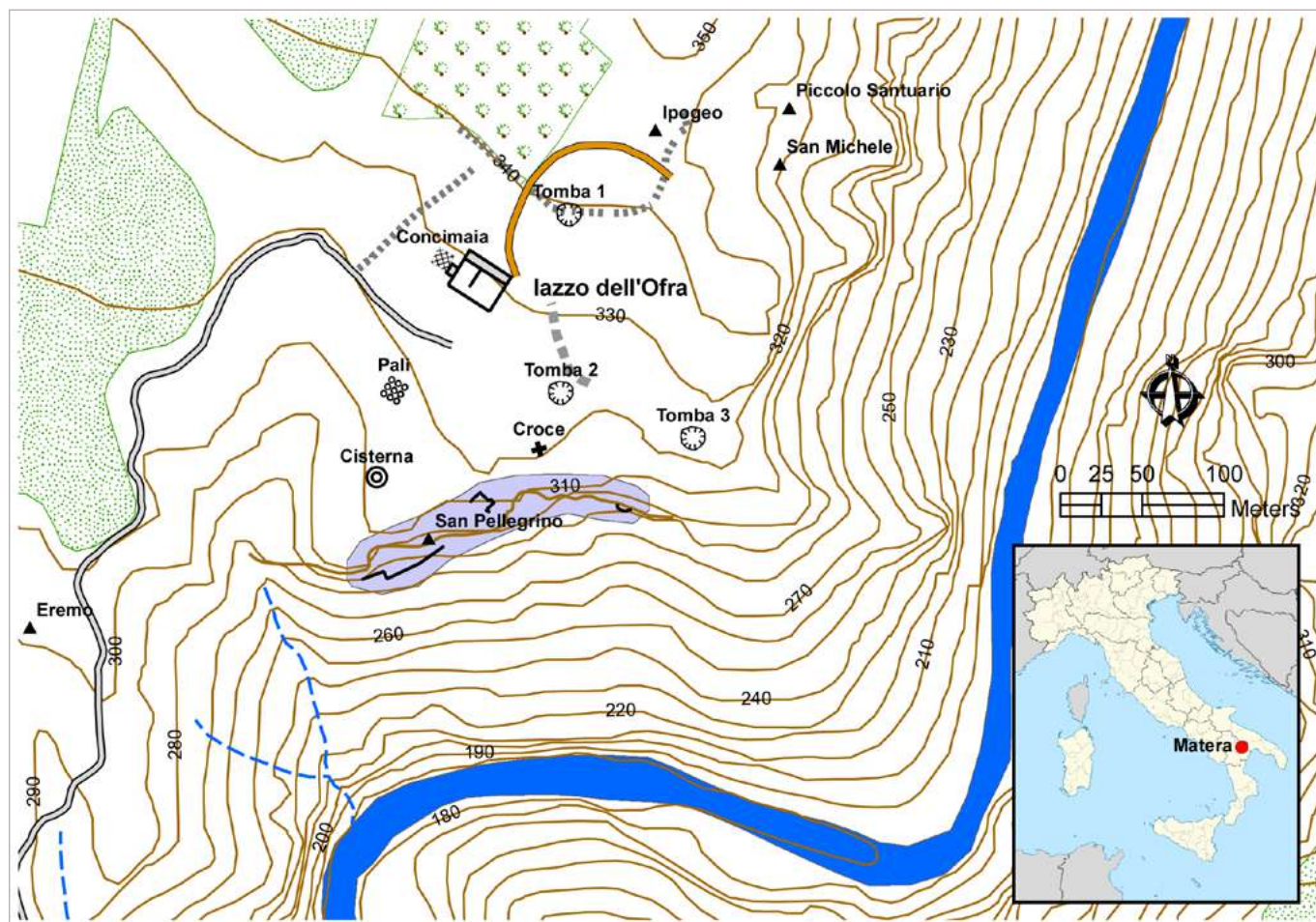


Fig. 2: location of the site (drawing V. Borneo).

Fig. 2: ubicazione del sito (elaborazione grafica V. Borneo).



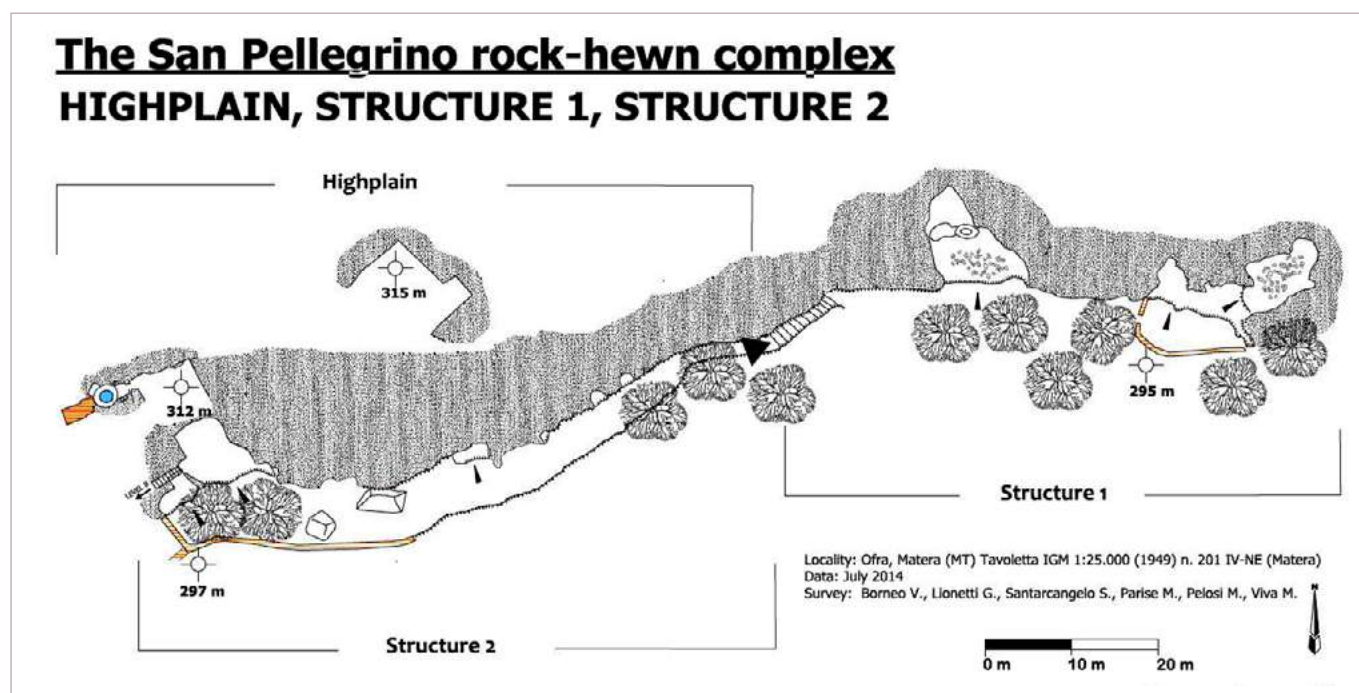


Fig. 4: survey of the highplain at the San Pellegrino rock-hewn complex (drawing S. Santarcangelo). For the legend see Fig. 6.  
Fig. 4: rilievo dell'altopiano nel complesso rupestre di San Pellegrino (elaborazione grafica S. Santarcangelo). Per la legenda si veda Fig. 6.

Man frequented this area since prehistoric times, with settlements dating back to Paleolithic and Neolithic. Many evidence at this regard are in the collections of the National Archaeological Museum "Domenico Ridola" at Matera.

The site of San Pellegrino (Fig. 1) stands among the most significant at Matera. Located at the southern outskirts of town (Fig. 2), in the Agna district, at locality Ofra, it is worth of study for the historical, anthropological, naturalistic and productive features. In this area, from april to october, it is possible to see Egyptian vulture, European roller, black stork, Lanner falcon, sparrow, common raven, hoopoe. Throughout the year, evidence of porcupine, wild boar, stone marten, and fox can be found.

The examined structures extend for some 300 meters in the upper portion of a S-facing rock wall. Since prehistory, due to presence of several erosional caves, the site favored the establishment of man who, in the second millennium A.C., excavated many artificial caves in the calcarenite rock, using those sites for beekeeping and livestock of pasture animals. Notwithstanding the notoriety of the site, very few information are known about it; this article tells about its origin, functions, and evolution.

### General information

The San Pellegrino site was not always as today it appears, with a wall curtain delimiting the cavities surrounding the rupestrian church. The documentary sources actually describe a very different, more articulated and complex, situation, that included also the two structures located just uphill. In particular, the prehistoric-protohistoric morphology of the rock wall where the caves open is of great interest.

For the sake of clarity, in the following the numbers 1, 2

and 3 indicate the complexes of its ancient organization, with 3 being that of the wall curtain enclosing the church and its present lots. The articulated productive settlement is comprised between two meanders of the *gravina* (PARISE et al., 2003), with upper limit a rock ridge at the bend of the first meander, and lower limit an erosion channel within the second meander (Fig. 2). In addition, the overall property included wide portions of the highplain, reaching downvalley the *gravina* below (Fig. 3).

Structure no. 1 (Fig. 4) consists of an erosion cavity enclosed in a wall curtain with a single access. This is followed by a wider natural cave, which pavement is characterized by abundance of flowstones. Structure no. 2 (Fig. 4) consists of a few excavated caves, survived to the many falls, with the integration of a terraced wall (a small rock shelter below the terrace is also included). Structure no. 3, downvalley (Figs. 5 and 6), including the S. Pellegrino church, is the most complex, since it develops in turn in three levels of caves.

The rock cliff under study presents erosion caves and man-made cavities. The first ones develop in the limestone bedrock, whilst the artificial cavities were dug in different phases into the calcarenite, the ancientmost dating back between XI-XII centuries A.C. In prehistoric time a neolithic settlement was on the highplain, and above this further structures would develop in the Bronze Age.

The whole *gravina* is interested by presence of several erosion caves and rock shelters, as well as by caves, mostly with horizontal development. Some of these caves (as *Grotta dei Pipistrelli*, not far from our site) were used by man in the Middle-Upper Paleolithic. The deeper caves, with dripping waters, were destined to fertility cults in Neolithic time; these practices continued until post-Middle Age epoch, related to the

# The San Pellegrino rock-hewn complex

## STRUCTURE 3 - LEVEL B / LEVEL C

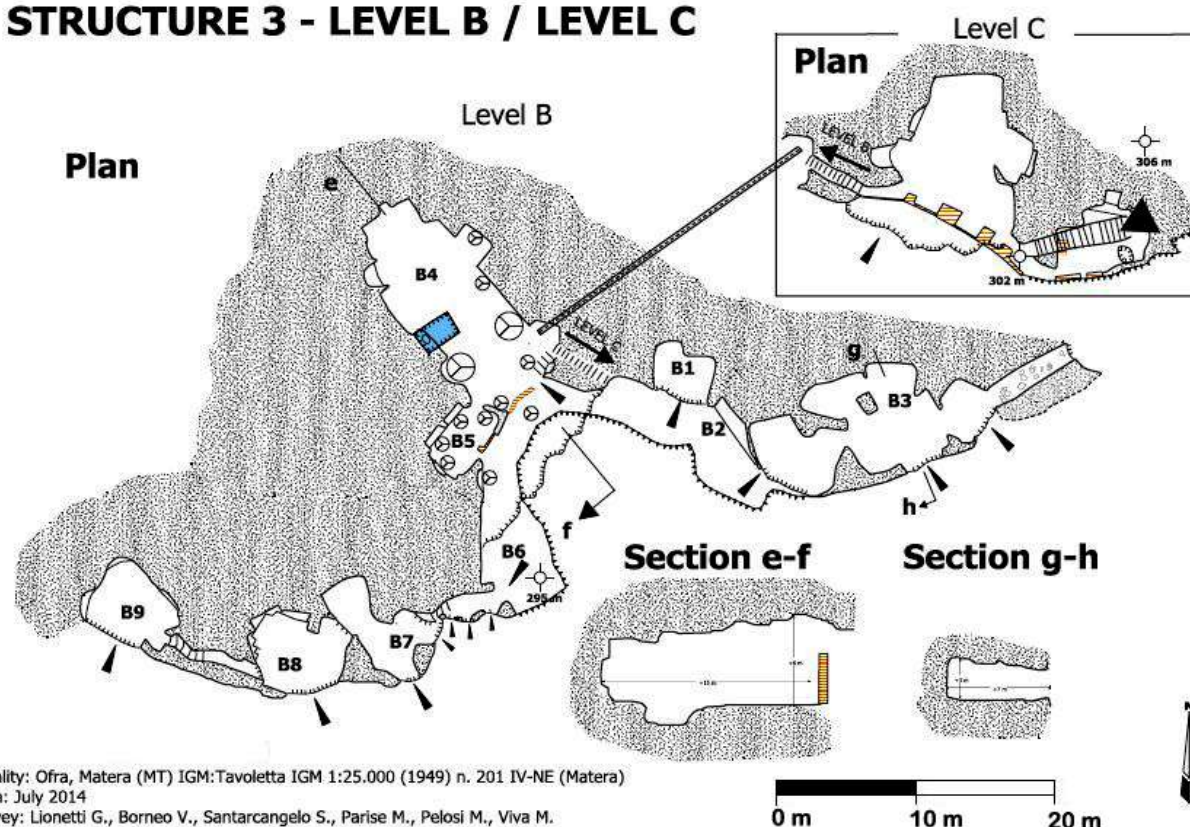


Fig. 5: survey of the structure 3 at the San Pellegrino rock-hewn complex, levels B and C (drawing S. Santarcangelo). For the legend see Fig. 6.

Fig. 5: rilievo della struttura 3 del complesso rupestre di San Pellegrino, livelli B e C (elaborazione grafica S. Santarcangelo). Per la legenda si veda Fig. 6.

figure of S. Michele Arcangelo (BIANCO & TRAMONTI, 1976). In the Bronze Age, many caves become temporary or permanent shelters, according to the type of economy of the inhabitants. Evidence of such occupations characterize many caves, but in several other cases these have been canceled or destroyed, due to the many centuries-long occupations by shepherds that used the site for the cattle. In particular, the documentary sources report mainly sheep and goats, followed as importance by cattle and pigs, and locally horses; frequently, the caves situated on the cliffs and with good exposition were used for beekeeping. This occupation, in most cases, lasted until after the II World War. When the shepherds periodically cleaned the sites from the animals excrements, together with these they removed also the archeological deposits.

In the surroundings of the San Pellegrino complex many other caves with abundant prehistoric findings have been found. Among these, the *Grotta dei Pipistrelli*, with evidence of human frequentation from the Middle Paleolithic to the present (RIDOLA, 1912; LO PORTO, 1988). Within its deepest layers remnants of Quaternary fauna have been found (MIRIGLIANO, 1957a, b). Downvalley from it, the so-called *Grotta Funeraria* has given Paleolithic and Neolithic materials, and was used as burial site during the Copper and Bronze Ages.

In about the same area, many other caves with deposits of archaeological interest were casually discovered by farmers and shepherds during the past centuries, who adapted them to their specific needs; others were found intact and were excavated, unfortunately in approximative manner, between the end of the XIX century and the first decades of the XX century (RIDOLA, 1912; CAMERINI & LIONETTI, 1995).

### Previous studies

With the exception of the contribution by the local historian FRANCESCO PAOLO VOLPE (1842), the international historiography begins to deal with rupestrian churches at the end of XIX and the beginning of XX centuries (LENORMANT, 1881-1882; GATTINI G., 1882, 1916; DIEHL, 1894; BERTAUX, 1904; GATTINI N., 1917). Especially in the second phase, the scholars catalogue the sites of cult at Matera and the surrounding territory, according to artistic and architectonic criteria.

The first citation of the rupestrian complex here dealt with is due to GIOVANNI GABRIELI (1936), who in the list of rupestrian churches published in 1936 with the crucial contribution of the studies by LUIGI DE FRAIA<sup>1</sup>, 1) GABRIELI (1936), pp. 10-11: «Di uno studio sulle Cripte Materane iniziato alcuni anni addietro dal Prof. Luigi De Fraia



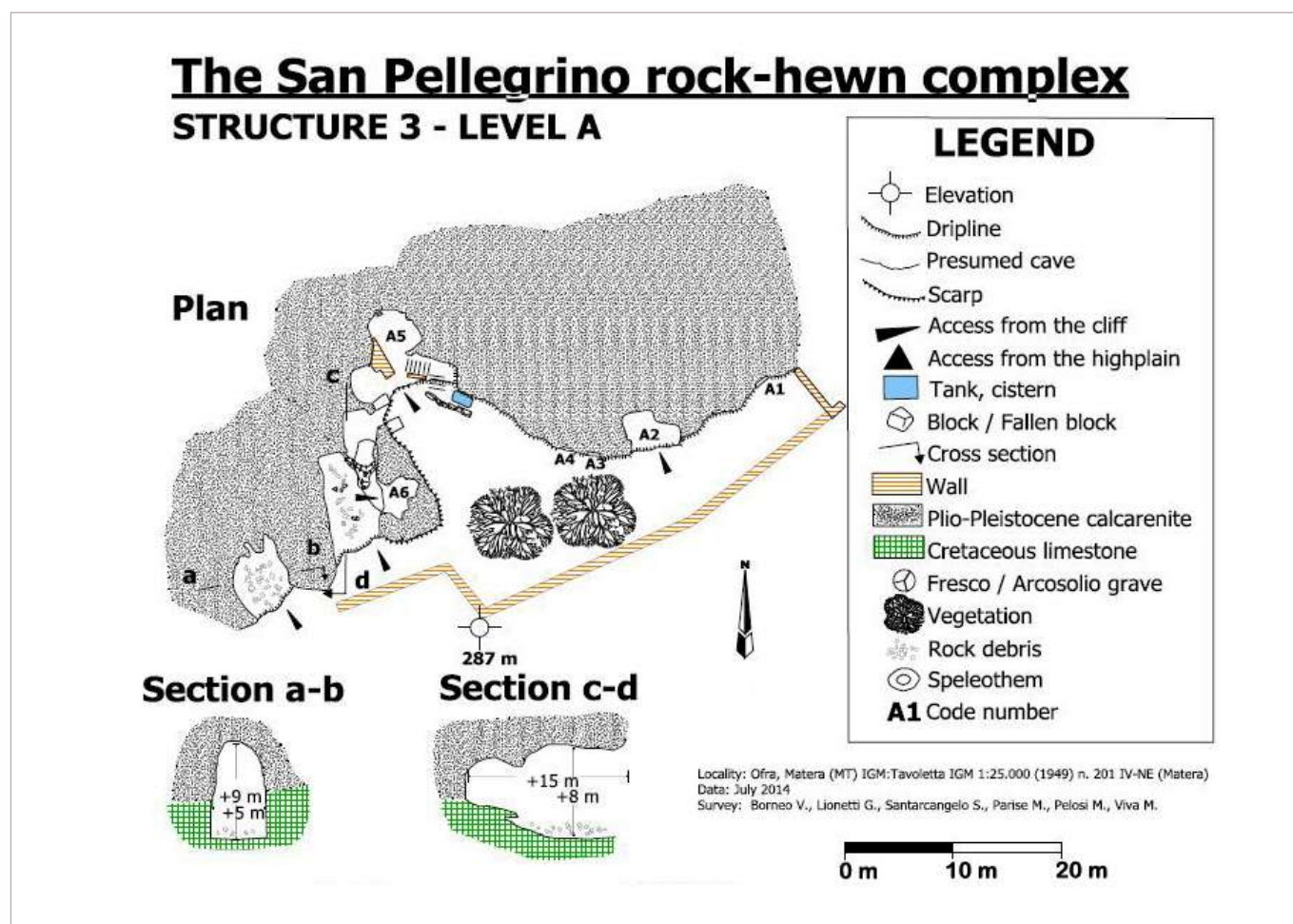


Fig. 6: survey of the structure 3 at the San Pellegrino rock-hewn complex, level A (drawing S. Santarcangelo).

Fig. 6: rilievo della struttura 3 del complesso rupestre di San Pellegrino, livello A (elaborazione grafica S. Santarcangelo).

cites a «Ofra church, in the surroundings [of town], in gravina, beyond the Cappuccini».

Some years later, ELEONORA BRACCO (1955) relates the same church specifying «S. Nicola dei Greci “iuxta ripam Gravinae” probably on the rock of Agna, left of Ofra – complex of caves with frescoes near the S. Nicola sheepfold – opposite to the small house at the Serritella (property Gattini)».

Later, notwithstanding the clear doubts of BRACCO, BIAGIO CAPPELLI (1957) and the CIRCOLO LA SCALETTA (1966, 1995) ascribe to the church the title, still nowadays used, of San Nicola all’Ofra. It is not known how ELEONORA BRACCO reached a similar conclusion,

già Rettore del Convitto Nazionale a Matera, ebbi notizia colà nell’ottobre 1932, nel mio breve giro per la Puglia e la Basilicata, che ha dato origine a questo inventario. Ho poi saputo, da una corrispondenza epistolare con lui, che quasi tutto il materiale da lui messo insieme (lastre e negative fotografiche, elenchi, piante e schede descrittive) era stato da lui stesso depositato presso la R. Soprintendenza per le antichità e l’arte del Bruzio e della Calabria in Reggio; la quale me ne ha gentilmente trasmesso una notizia qui utilizzata, e varie negative qui riprodotte»; pag. 49: «A queste undici cripte materane, più o meno note il De Fraja ne aggiunge più di una cinquantina, da lui fuggacemente esplorate, nel seguente Elenco delle chiese rupestri esistenti nel territorio del Comune di Matera, con l’indicazione del sito dove si trovano e delle negative ch’egli ne trasse».

but the indication “iuxta ripam Gravinae” seems to be taken by other citations rather than from a direct consultation of the documentary sources. BRACCO, in fact, as shown by some passages of her *Elenco*, knows the contributions by DE FRAIA and GABRIELI, and the publication by RAFFAELE SARRA (1939) where, for the first time, the author makes an abundant use of archival sources.

Further, CAPPELLI maintains that «is possible to recognize a very primitive monastery in S. Nicola at locality Ofra, where the steep scary cliff is all over drilled by many caves, including the church, lined one to the others by means of stairs and small galleries and passages hanged above the abyss». For CAPPELLI, as well as for later authors (CIRCOLO LA SCALETTA, 1966, 1995; MOLITERNI, 1996), the Ofra is a monastic complex.

#### Toponymy of the area

The area bounded to NW by the rupestrine church of Madonna dell’Arena, not far from the former Cappuccini convent, and to SE by the Ofra zone, is denominated *Agna*. This name, that in many documentary sources includes the Ofra, derives from *Angulus*, clear reference to the shape of this portion of territory extending toward Murgia San Campo-Tempe Rossa, and delimited by the two meanders of

the *gravina*. The documentary sources use frequently the two denominations, *Agna* or *Angolo*, to designate the same sites.

The toponym *Ofra*<sup>2</sup>, or to better say *Ovra* or *Overa*, should derive from the latin *Opus*–*Operis*, in the sense of “factory”, or more generically “working place” or “site of production”. In fact, the area under study had always a productive function, testified by the more ancient remnants of quarries, until the recent barnyards used for the cereals aeration.

### The Ofra complex in the documentary sources

In a deed to a property of 29 August 1533 a certain «pyrrho antonio angeli de blasio» from Matera trades with «domno donatello njcolaj iudicis petri et domno pantaleone de andrullo», from Matera, «tria alvearia seu apjcularia contigua parjetibus clausa sita et posita in tenimento matere in **contrata de ovara et proprie in contrata sancti peregrinj intus gravinam ex in currentum**; iuxta loca domnj hyeronimj nardelli, iuxta loca mense archjepiscolalis et alios fines cum aliis quibusdam locis extra dicta alvearia»<sup>3</sup>. The coincidence of the toponyms *Ofra* and *San Pellegrino* is thus clear. In a second deed of 12 December 1565 the location of a church dedicated to San Pellegrino is evident. In the document a certain «don hieronimo dj nardello de matera», cited as neighbor in the previous deed, sells to the “Magnificent” Leonardo Padula «apicularem unum cum quibusdam locis griptaleis a parte superiorj et redditibus omnia cum tribus piscinis et comoditatibus pertenendo aqua cum pluribus griptis et pluribus arboribus plurium fructum et precise olivarum cum quodam pomariolo arborum a parte superiorj cum quibusdam terris partim cultivatorijs et parti lapides et incultivatorijs quantum se extendit, acqua pendente usque ad cursum gravine situs sive sitos sitas et sita in territorio mathere in **contrata sancti peregrinj et proprie intus dictus apiculare et ecclesia sanctj peregrinj**, juxta cursum aquarum gravine iuxta loca Reverendissimi archiepiscopj materanj et acherontinj **vulgo ditta l’ovara** iuxta apicularem don prosperj de stephanjs iuxta loca maioris ecclesie matherane que fuerunt blasij dj caperrone et alios fines»<sup>4</sup>.

It is therefore clear that there is a succession of “*pecchiare*”, that is rupestrian structures dedicated to beekeeping, including the San Pellegrino church, coincident with that erroneously indicated as San Nicola. The careful examination of the archival documentation excludes the possibility that San Pellegrino was the site of cult indicated by CIRCOLO LA SCALETTA (1995).

The San Pellegrino “*pecchiara*”, the other nearby structures, and about the whole *Ofra* place pass later from the Padula to the noble family Venusio, and exactly to the branch of the Marquises of Turi.

In the Catasto Ostiario of Matera, edited in 1732, among the properties of Ottavio Venusio is recorded «*Un parco antico in contrada detta d’Agna di versure sessanta, de’ quali otto versure sono seminatoriali, e le restanti sassose con vigne, e varj arbori d’amendole, molte grotti per ricovero d’animali, palumbaro, e tre’ avucchiare, una de’ quali, ch’è la più grande si trova sotto posta al beneficio di detta sua Chiesa particolare, qual luogo si trova dato a’ diversi particolari per giardeni, vigne, ed altri, e ne percepisce docati trenta, in trenta cinque l’anno, e rende annui carlini tre’ al Venerabile Seminario grana dieci al Capitolo Barisano, grana diecisette, e mezo alla Cappella del Venerabile dentro la Metropolitana, ed altri carlini cinque, e mezzo alla Menza Arcivescovale per detta avucchiara beneficiale*»<sup>5</sup>. The clerical benefit referred to here is that of Madonna dei Sette Dolori, founded by the same Venusio family. Thus, in the first decades of ‘700 the complex changes its function, becoming stable site for animals, particularly goats and sheep. Only during the ‘900 the church is used as stable for cattle.

From the Register of the Contribuzione Fondiaria<sup>6</sup> of Matera Municipality, edited in 1807–1808, comes out that Don Giuseppe Venusio, Marquise of Turi, owns in place *Ofra* 60 *tomoli* of «Park of closed grassland», 1,4 *tomoli* of 1st class terrain «to be sown», 1,4 of 2nd class, and 3 of 3rd class<sup>7</sup>. The sum provides practically the same area indicated in the 1732 Cadastre. Scrutinizing the register the only property, not belonging to Venusio, in locality *Ofra* is of the «Law Doctor» Don Arcangelo Copeti, with only two 2nd class *tomoli*.

In the State of Section of the 1821 Temporary Cadastre the situation is about the same: the only properties at *Ofra* are those of Ottavio Venusio, Marquise of Turi, that is 63 *tomoli* of 1st class pasture<sup>8</sup>.

The examined registers allow therefore to define the extension of locality *Ofra* in slightly more than 25 hectares, bounded by the *gravina* thalweg, the localities *Agna*, *Le Piane*, *Serra Sant’Angelo*, and including the right slope of the stream and a portion of the highplain. At middle ‘900 the Venusio alienate the property<sup>9</sup> to Andrea Lamacchia, and later it passes to the Petito family. Today the whole complex of San Pellegrino, included in the Archeologic Historic Natural Park of the Rupestrian Church of Matera territory, does not have any restriction.

### Survey technique

Given the complexity of the system, the survey operations required a heavy effort. It was performed by means of a series of integrated digital tools (disto/

2) So reported in the topographic map IGMI, sheet Matera 201 IV NE, series M 891.

3) ASMt, Fondo notarile. Notaio Valentino Gambaro di Matera, n. 7, coll. 11, Protocollo aa. 1530–1535, c. 152v

4) ASMt, Fondo notarile. Notaio Giacomo Verricelli di Matera, n. 10, coll. 18, Protocollo aa. 1564–1567, c. 56v

5) ASMt, Catasto Ostiario della Città di Matera, ms. anno 1732, cc. 286r–v.

6) In the Matera municipality one hectar corresponds to 2,5 *tomoli*.

7) ASMt, Uffici Finanziari. Direzione delle contribuzioni dirette di Potenza. Contribuzione fondiaria. Comune di Matera, Registro n. 7, aa. 1807–1808, Sezione F, nn. 156–157.

8) ASMt, Catasto Provvisorio poi Terreni di Matera, Stato di Sezione del 1821, coll. 267, Sezione C n. 81.

9) Cadastre data: Matera Municipality, Sheet 137, Particle 249.



compass/clinometer wireless connected with a PDA) that allowed us to obtain real-time projection of the volumes of the caves, and the representation of details by means of dedicated softwares.

The technique corresponds to cave surveying, through the identification of a number of benchmarks connected to each other, to eventually define a closed polygon. For each target point we measured distances of walls, vaults, floor and details, and used removable targets in cardboard to avoid impact on the delicate natural park environment.

The accuracy of the survey amounted to grade 6 D in the classification of the British Cave Research Association, where Grade 6 is given by a very accurate magnetic survey (horizontal and vertical angles measured to  $\pm 1^\circ$ ; distances should be observed and recorded to the nearest centimetre and station positions identified to less than 10 cm) and Class D (measurements of details made at survey stations and wherever else needed to show significant changes in passage dimensions).

The negative total slope is about -25 m, from 328 metres a.s.l. on the highplain, to the base of level A, at 303 metres a.s.l. The total surface area accounted at 2214.15 m<sup>2</sup> with an average height of the sections of about 5,77 meters (max 10,41 m, min 1,14 m).

### Evolution of the cliff

The rock cliff where structure no. 3 is located, with the presence of the S. Pellegrino church, shows a recess, more than 10 m-deep (Fig. 7); it was already in the cliff before construction of the church, and its origin has to be found in the fall of an erosional cavity interposed between the limestone bedrock and the overlying calcarenite. There is evidence to believe that between the Iron Age and the Magno-Greek period the site was interested by further human presence, and the rockfall deposits were already removed. In fact, some quarries were found in the highplain to extract great calcarenite plates, mainly dedicated to building funeral monuments.

### Description of the productive settlement

The articulated productive settlement object of this research developed in Middle Age, and was mainly addressed to beekeeping, with secondary activity the breeding of sheep and goats. The changes occurred until the present day have been caused by several factors: first and foremost, the frequent rockfalls from the cliff that forced the land owners to re-adapt more than once the access to the single structures; to this, the passage of properties, and the subdivision of the land, have to be added, together with changes in the function of the different caves.

The site has a very good exposition as concerns the breeding before mentioned. The bees still today naturally create their honeycombs in the clefts of the cliff whilst, as concerns sheep and goats, the Murge highplain and slopes have always been one of the favoured sites for pasture and grazing, since these animals were introduced in this territory by the first Neolithic people, over 7.000 years ago. During the past centuries beekeeping was a very widespread and



Fig. 7: frontal view of the San Pellegrino rock-hewn complex, showing the openings of the church at middle height (photo M. Parise).

*Fig. 7: vista frontale del complesso rupestre di San Pellegrino, con in evidenza a mezza altezza le aperture della chiesa rupestre (foto M. Parise).*

economically convenient activity. It was finalized to honey production – used as sweetener and for other uses – and to produce wax, which main use was in the production of candles for lighting and cultural practices. Sheep and goat breeding until the first half of the XX century was a crucial element in the economy of central-southern Italy: from these animals the products were the milk and its derivatives (cheese), the leathers, the wool (the goat hair were used to produce ropes and weaves), and the meat (even though the main habit was to keep in life the animals, to exploit the milk and the fleece).

### Structure no. 1

It is an erosional cave, enclosed by a solid and well preserved wall. The wall curtain is of limited size, realized with irregular quarried blocks, placed without mortar, to make difficult the access to man and animals. The entrance is in the sector perpendicular to the cliff. The cavity enclosed in the walls is of limited size too, with the vault that is subject to erosion and weathering. Above this, there is another erosional cave where today no evidence of elements for locating the hives is visible.

At short distance, downvalley, a wide natural cave with ogival access is present. Its pavement is rich in speleothems, and still today the cave has continuous





Fig. 8: access stairs to the San Pellegrino rock-hewn complex, from the highplain above (photo M. Parise).

*Fig. 8: scalinata di accesso al complesso rupestre di San Pellegrino, dall'altopiano sovrastante (foto M. Parise).*

dripping. At its base, below one of the exit points of water, there is a bowl that may have had an important role for the prehistoric and historic occupations of the site.

### **Structure no. 2**

It is located just above the St. Pellegrino *pecchiara*. The access is through stairs dug into the calcarenite rock mass (Fig. 8). This structure is organized for beekeeping, too. From its terrace, to the east, rough steps, dug in the hard bedrock, bring to structure no. 1. The terrace was obtained by eliminating the overlying calcarenite. Due to dishomogeneity in the limestone rock mass, it was leveled by means of a terraced wall and earthfill. On the terrace, moving downvalley of the stairs, there are three niches, one still showing the furrow for collection of rainwater. They are spaces to keep dry the wood bundles necessary to start the fire. At about half length of the terrace a cut in the calcarenite rock wall, similar to a support structure, is present.

This is followed by a cave and a niche, then a large rock block fallen by the cliff, and eventually two other niches. Two partially superimposed caves, again disturbed by rockfalls, are at the lower margin of the terrace. In the upper cave, on the right wall, the connection with stairs descending from the next *pecchiara* opens.



Fig. 9: lithological passage between calcarenite deposits and limestone bedrock, level A, entrance of cave A6 (photo M. Parise).

*Fig. 9: passaggio litologico tra le calcareniti e il substrato calcareo, nel livello A, in corrispondenza dell'entrata della grotta A6 (foto M. Parise).*

Below the terrace, along its steep wall, we find two erosional cavities. The first is under the stair coming down from the highplain, the second a few meters downhill. In this latter a wall in square blocks to protect the hives by wild animals looking for honey, such as badger, is present.

### **Structure no. 3: San Pellegrino *pecchiara***

The following criteria have been adopted for description of the structures: the levels are marked by uppercase letters A, B, C. etc., where A is the lower level, corresponding to the erosional cavities, that were the first occupied/used by man. The single caves, even when small, are indicated with the uppercase letter of the level, and by an associated number, moving downvalley along the level.

#### **Lower level A:**

A1) Small erosional niche to locate the hives.

A2) Man-made cave to locate the beehives. High above the main pavement, it can be reached through small steps and handholds in the rock wall. It consists of two spaces, with the one in the east, where the steps arrive, being the ancientmost.

A3) Small niche for the hives, strongly weathered.

A4) Niche as A3, with the same function and weathering grade. To the west there is a stair bringing to the level above.

A5) To the west of the above mentioned stair, there is a man-made cave with vault showing calcarenite blocks to reinforce it (it is located just below the church). The reinforce work dates back to the most recent works to safeguard the site (end of XIX century).

A6) Cavity interesting both the limestone bedrock and the calcarenite rock mass (Fig. 9), probably derived by the fall of two superimposed caves. The pavement shows clear evidence of the excrements left by the last cattle that lived within the enclosure (during the 1970s).

In the initial phase of the complex life, all these structures were dedicated to beekeeping; later on, this activity was transferred to the level B, and the caves below used for sheep and goats. Similar changes in the use of the caves have occurred, in time, more than once.

*Level B):*

It can be reached through the stair between A4 and A5. When the *pecchiara* were moved to this level, the stair had walls and gate, to avoid that the herbivorous living in the enclosed area might disturb the bees. Along the stair there is a bowl to water the bees.

B1), B2) Man-made large niches to locate the hives.

B3) Complex of three communicating rooms in the calcarenite. The first is very small, in turn subdivided into two spaces, with a niche with holes to accommodate the timber frame for a bed. The other two are rooms for the shepherds night sleep. These caves were originally reached by means of an outer stair, still visible, even though greatly degraded, on the cliff, out of a large window looking to the space below. This window, originally a site for the hives, was later on widened during the excavation of the new rooms. On the pavement of one of the caves another stair, now partly canceled, used to bring to the *pecchiara* located above this complex. The rock wall in the yard shows a serious crack, threatening also the upper level C.

B4) Situated in central location within the complex, the San Pellegrino church can be accessed from the upper level of caves through a narrow corridor. The originary access, probably fallen in the XVI century, is in axis with the apse and partly closed by a wall in calcarenite blocks where, on the outer side, a red cross is visible. Inside the church, looking at the ancient entrance, an *arcosolio* grave is visible to the east, that has been tampered when the new passage was realized. To the west, beside the wall, there is a series of *arcosolio* graves, mostly destroyed to realize another passage leading to a funerary room, later transformed with beds.

The church is a natural cave that has been continuously reworked during the centuries (Fig. 10).

Looking at the apse, on the east wall four small niches are visible at different heights, and the lower part of a fresco depicting a bishop saint, arbitrarily identified as San Nicola (CIRCOLO LA SCALETTA, 1966, 1995). Then, some remnants of frescoes, a deep niche and – closer to the apse – fresco remnants in the upper part. The stratified soot coating almost entirely the cave does not allow to identify further frescoes.

The apse presents in the middle a niche with round arch, without evidence of frescoes. The altar and



Fig. 10: the San Pellegrino church, from the inside (photo M. Parise).

Fig. 10: chiesa rupestre di San Pellegrino, vista dall'interno (foto M. Parise).

the other liturgical fires have been destroyed by the repeated lowering of the planking level, well visible along the borders of the walls.

Still looking the apse from the old entrance, to the left, following the passage to the funerary cell, a wide, not so deep, niche (maybe, an ancient *arcosolio* grave, later reworked) shows a rough fresco of *Madonna con il Bambino affiancata da due santi*. The figure to the right, made unrecognisable due to removal of the face, is a bishop saint that can be identified through the *pallium*. The Saint holds in the right hand the pastoral staff, and in the left one a closed book. The left hand has a ring at the annular; the right has two rings, at index and annular. The Saint to the left, tonsured, with white hairs and beard, holds the pastoral staff with the right hand, symbol in this case of the abbey rank. Along the border of the small moon there is the inscription: «S. G. P. P. t. r. e V. G. M. M. G. 1839 s. d. t. il devot. COSIMO CAIONE».

Again along the west wall, but on the pavement, a cistern and a deep trough to collect the manure follow. Both these excavations date back to the time when the church was transformed into stable.

The vault is irregular, with many cracks.

The original structure of the church is estimated to



go back to the XIII century. It initially had an outer passage that allowed to reach the nearby caves.

B5) At present, we move through the church crossing a small cave, originally a sepulchral cell: it consists of a squared room with four *arcosolio* graves, one of which was destroyed to allow the passage with the church. The remaining three were transformed in beds for shepherds. Similar sepulchral monuments, associated to cultual sites, are quite common in the Matera territory: for instance, they can be observed at S. Maria di Pantone, and in two sites quite close to our site, that is the church of S. Angelo lo Mense and at S. Angelo lo Cupo (CIRCOLO LA SCALETTA, 1995), inside the already cited Grotta dei Pipistrelli.

Above the entrance, the San Pellegrino church has a hole to allow the exit of the smokes and the passage to light. At middle height of the wall there are holes for wood beams and incisions for sustaining a wall vault. This indicates that the ancient church was later transformed into a productive space, and subdivided in two rooms (upper and lower). Likely, this occurred at the time when the cistern and other excavations were realized.

B6) Beyond the funerary cell B5 it is possible to pass on a wide outer terrace, which margin was protected by a wall bulwark (today only its support plain is visible). The vertical rock wall shows evidence of what had probably been parts of fallen caves, including, probably, another *arcosolio* grave now incomplete. Among the more recent signs, it is worth to cite what remains of the incisions for the beams of a roof; this represented another structure useful for beekeeping, to protect the hives from the unfavorable climate.

Beyond the terrace, we reach the corridor to the lower caves in the complex (B7, B8 and B9), a passage with several bends due to the rockfalls.

B7) This cave consists of two rooms: the inner one is more recent, built to widen the space, and to allow entrance to the following caves. Originally, it was reached through an outer passage from the highplain above. After the fall of that access way, the winding corridor was realized. This space, too, was initially a deep niche for the hives.

B8) It consists of two rooms, that once were divided by a calcarenite partition. The planking level shows the typical cuts to extract blocks of rock (used in XIX century to reinforce the structures). As for B7, also this cave was initially a niche for the hives.

B9) From B8 the last cave of level B can be reached through a recently excavated corridor, with a sharp and steep bend. Originally, this cave was accessible from above, and composed by two rooms. Its inner wall shows mortar residues, deriving from small cells bounded by calcarenite: in this case, clearly, the hives were not built with vegetal components, such as the ferula trunks. The wide window over the cliff shows narrow stairs, highly weathered, leading to nowhere, and two rings carved in the rock: following the fall of the outer passage, the cave was likely reached through wooden ladders that were secured to the rings.

*Level C:*

C1) This cave is located at the base of the rock stairs

coming down from the highplain, now representing the main access to the rupestrian complex. It is a kitchen, with a deep niche for the oven, now without the coating refractory material, and two niches for storage.

The south part is half in wall, with a small window and a hole to discharge the fumes. Here, too, the pavement has been lowered to quarry calcarenite blocks. The final wall shows a stair, now filled with rock blocks, leading down to the caves of level B. The whole right wall is greatly compromised, with open cracks that also develop through the main access stair. Instability of the site is furtherly proved by the presence of a recently built column of reinforcement.

C2) At the base of the main stair of access to the complex, opposite to C1, we enter a cave entirely blackened by smokes. The outer wall, facing the yard, has fallen since a long time, and was substituted by a strong wall with two ogival windows. Several stilized females, typical of the pastoral decorations, are incised in the walls. The rock shelf toward the cliff was originally part of the vault, and is still blackened; as a consequence of the fall, the entrance had to be moved, too.

The cave is a site for transformation of the milk into its derivatives. It presents an alcove with two niche beds, preceded by a cistern. On the opposite wall, a large niche for oven is carved. To the west, another niche shows a recent votive altar, surmounted by a latin cross; on the same side, the corridor leading to level B is present. Clear evidence of the changes in direction following the fall of part of the cave and of the man-made outer passages can be identified. Eventually, on the same wall, about at the vault, cells for pigeons are present.

The curtain wall enclosing the rupestrian complex consists of a base made with large rock mortar-bond. Above this, the vertical wall is also bond with mortar. It has, at its upper portion, irregular rock elements put in place without mortar (dry stone wall). Here, a small door opens to allow the passage of sheep and goats toward the slopes and the stream. At present, the curtain wall has fallen in the downvalley sector, and is greatly unstable on the exit door for the herds.

Downhill from the San Pellegrino walls, between this and the stream marking the lower boundary of the property, other erosional cavities are present. Some are of limited size, and were likely used for beekeeping; two are larger, with walls blackened by the smokes, and had probably been used by shepherds.

### **Access ways**

Originally the three productive structures were accessed through a wide stair between *pecchiare* 1 and 2. This important access way is still partly recognisable along the slope, with some stairs greatly weathered. It was composed by two ramps: the lower one was canceled by fall of the cliff. After the fall, and in consequence of the repeated divisions of the property, the other access ways were built.

On the plain above, near the stairs, a small *kamenitza* in the exposed rock is visible: it has been transformed in basin, with the capacity of a few litres, and furnished with few man-made elements, now strongly eroded

but still visible. These are two small channels bringing the rainwater to the basin, and, among the twos, the incision of a latin cross; this latter had the function to mark a property limit.

### The highplain

Part of the highplain above the rupestrian complex belonged to the post-medieval property, together with the nearby slope. On the highplain some two-facing paleolithic tools, now in the Matera museum (Lo PORTO, 1988), have been found, testifying a very ancient occupation of the site. Further, the rock surface shows a culvert of a Neolithic village. As for many other Neolithic settlements in the Matera area, human occupations at the site were repeated during the Metals Age, as testified by three sepulchres in artificial cavities, all of them reworked in recent historical epoch. Two of these monuments are still well recognisable, whilst the third one suffered more serious alterations (Fig. 1). An alignment of large blocks SE of the wall sheepfold could probably be dated to the Bronze Age. To this, another one is counterposed, with a few blocks remaining.

In the highplain, and the conterminous areas as well, quarries of Magno-Greek epoch are also present, similar to those found in the nearby Gravina di Picciano (LIONETTI & PELOSI, 2011). Quarrying activity had in this site a long history, as evidenced by the many remnants of medieval and recent quarries. North of the wall sheepfold the ancient quarries were used to cultivate olive trees, almond trees and vineyard.

SW from the wall sheepfold, at a distance of some tens of meters, a rock surface shows elongated pits, about 25–30 cm long, that represent the main evidence of the presence of vineyards. Two cisterns for water collection are located on the highplain: one, ancient and reworked, is near the stairs leading to San Pellegrino; it is a bell-shaped cistern, later on transformed into stable for working horses. To the east of these structures, in the nearby quarry, a couple of troughs and an incised date (1912) are present. W from the quarry, at a distance of some tens of meters, there is a new cistern with water bowls, today almost entirely concealed among the mastics.

The highplain is grooved by several carriage ways and mule tracks, that reach the productive sites especially from the N, that is from the town. Mountain paths are also along the slopes, as rapid ways of connection among the different complexes of caves.

### Conclusions

The case study here described has high value as concerns landscape and nature, but, at the same time, is in a present situation of high risk for instability phenomena. The site is remarkable for the pre-historic occupations, especially with regard to the very ancient practices of cult: the deepest caves in the area, with dripping water from the vault, since the Neolithic time were occupied for carrying out fertility rites. The cave was, in the prehistoric imagination, the womb of Mother Earth, and the dripping water was considered as the fecundating liquid. Probably, in the nearby

Grotta dei Pipistrelli neolithic people deposited vases with fruits and seeds under the points where water was dripping, so that the water coming down from the vault, rich in mineral salts, and whitish as the mother's milk, could wet fruits and seeds, thus guaranteeing future abundance. It is likely that men, and especially women, got wet with the milk-like drops. Similar fertility rites had a very long age and life. Locally, they are still practiced today. With the advent of Christian religion these rites were absorbed by it, and the figures related to the pantheon of the pagan world were substituted by those of the new religion. In this way the Virgin Mary and S. Michele Arcangelo became the tutors of the cycle life–death, with S. Michele, in particular, as the “prince of the waters”. In many caves where he was venerated, the dripping water was collected in recipients or basins, and used for ablutions of pregnant women. In the same cavities the rite of incubation was also practiced, with which the shepherds protected the health and fertility of their animals. Further, the caves were considered as the access to the underworld, hell, where the souls of the deaths were brought, and S. Michele Arcangelo, instead than Mercury, took on the role as the one who carries souls. The karst caves dedicated to the Virgin Mary and S. Michele became thus important sites where anybody assured of the burial, to commit the soul into their hands, and avoid that the Demon could appropriate of it.

For all of the above, it has to be noted that the structures here described are interposed between two cavities dedicated to the S. Michele cult: the church of S. Angelo lo Mense, uphill, and that of S. Angelo lo Cupo, in the Grotta dei Pipistrelli. Both these temples were important burial sites, as the San Pellegrino church, with its *arcosolio* graves and funerary cell. Further, we have to remind that the bees, in the Middle Age liturgy, were associated to the Virgin Mary because it was thought that they bred without coupling; thus, bees and their product, the wax, became symbols of verginity. Eventually, it is worth to remind the presence, in a natural cave close to San Pellegrino, of a thick layer of speleothems on the pavement, formed because of abundant dripping waters, and, therefore, probably linked to rites of purification. This is a further element to highlight the remarkable cultural and productive importance of this stretch of the *gravina*; these cults and productions have created a millenary history that is worth to be thoroughly investigated.

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#### Abbreviation

ASMt = Matera State Archive.