

St. Leonard Cave Church, Lunzjata I/o Rabat

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Geological Considerations

The Maltese Islands lie between the Latitude of 35.48° and 36.05° north and the Longitude of 14.11° and 14.35° east, in the central Mediterranean Sea, 93.3 km south of Sicily, 357.3 km north of Tripoli and 289.7 km east of Tunis. The largest islands in the archipelago are Malta, Gozo and Comino respectively. Malta has a total land surface area of 153 sq km and a maximum length and width of 27.4 km and 14.5 km (Fig. 1).

Dating to the Oligo-Miocene era of the Tertiary period, the Maltese archipelago is entirely composed of sedimentary rock which started to form in a marine environment between 30 to around 6 million years before present.⁶⁶ Four distinct rock layers constitute the basic geology of the archipelago and when undisrupted by land faulting the horizontal stratification from bottom to top reads as follows: (1) Lower Coralline Limestone, (2) Globigerina Limestone, (3) Blue Clay, and (4) Upper Coralline Limestone.⁶⁷ Based on micro-chemical similarities, this classification takes the Greensand layer as being the lowermost stratum of the Upper Coralline Limestone deposit and contradicts older classifications which regarded the Greensand deposit as being a completely distinct entity from Upper Coralline Limestone.

An exposed Upper Coralline Limestone deposit of Mtarfa Member limestone dominates the Lunzjata region. Four subdivisions of Upper Coralline Limestone have been identified in Malta, all of which are carboniferous in nature. The Mtarfa Member stratum occupies the lowermost spectrum of the Upper Coralline deposit. The thickness of the Mtarfa Member deposits varies from twelve to sixteen metres and is composed of massive to thickly bedded carbonate mudstones and wackstones which can be cut and quarried with relative ease, as opposed to other Upper Coralline Limestone strata.⁶⁸ The Mtarfa Member stratum directly overlies Blue Clay. Being a deposit of an impermeable nature, Blue Clay is responsible for the formation of an aquifer commonly referred to

⁶⁶ G. Zammit-Maempel, *An Outline of Maltese Geology*, (Malta, 1977), 18. See also M. Pedley, M. Clarke, P. Galea, *Limestone Isles in a Crystal Sea*, (Malta, 2002), 18.

⁶⁷ M. Pedley et al. *ibid.*, 35.

⁶⁸ K. Buhagiar, *Medieval and Early Modern Cave-Settlements in North-West Malta, South of the Great Fault – A Field Survey and Gazetteer*, (unpublished Masters Thesis, University of Malta, 2002), 49.

locally as the *Perched Water Table*.⁶⁹ At Lunzjata, Blue Clay deposits are located in the Wied Liemu area, immediately below the west facing Mtarfa Member ravine, into the side of which the St Leonard cave-church was excavated. Such a geological setup largely boosts the hydrological potential of the Lunzjata estate which is serviced by a number of perennial water sources.

The Historical Evidence

One of the first documented instances for the Lunzjata estate is a will dating to 5th June 1418, by the Noble Margarita d'Aragona,⁷⁰ who was to leave her entire country estate surrounding the church of the Annunciation in the limits of Rabat, to that religious order which accepted to recite daily office and establish a monastery there. Margarita d'Aragona had built and herself endowed the church of the Annunciation.⁷¹ It is not known when the offer was exactly taken up, but a fragment of a document dated to 24th January 1441 mentions a Frater Periconus of the Carmelite Order and a Frater Guillelmus Cassar *Prior Conventus Sancte Mariae Nuntiaite* and suggests a Carmelite presence on the islands by at least this date.⁷²

The course of events which led the Carmelites to become beneficiaries of Margarita d'Aragona's will, are obscure. Because the will was contested by Matteo del Caretto di Monteferrato, husband of Margarita d'Aragona's daughter Eleonora, her legal procurator was during the immediate aftermath, unable to execute her requests.⁷³ The 1441 document is the first known evidence that a friary had been established in Margarita d'Aragona's estate under the guidance of Frater Guillelmus Cassar. The toponym *Wied Liemu* (Liemu's Valley) may perhaps owe its origins to Frater Guillelmus.⁷⁴ An early fifteenth century document refers to the surrounding lands as *Santu Leonardu* (St Leonard), a toponym which probably came into being because of the presence of the St Leonard cave-church close by.⁷⁵

Donna Margarita d'Aragona's will also furnished the beneficiaries of her Lunzjata estate with a house within the precincts of the Civitas. This, the friars could use as a base for their religious activity within the city. The house could also serve as a refuge in the case of raids by North African marauders. The property still stands and can be identified with the tenement at no. 3, St Peter Street, Mdina.

⁶⁹ H. Bowen-Jones, J. C. Dewdney & W. B. Fisher, *Malta Background for Development*, (Durham, 1962), 43-7. See also P. Schembri, A. Baldacchino, *Ilma, Blat u Hajja*, (Malta, 1998), 41-3.

⁷⁰ Noble Maria d'Aragona was wife of Jacobus de Peregrino of Messina, who had rebelled against Frederick IV of Sicily. See M. Buhagiar & S. Fiorini, *Mdina – The Cathedral City of Malta*, (Malta, 1996), 70.

⁷¹ *Ibid.*, 339.

⁷² The document dating to 26th March 1446 was copied from 'a parchment', into the notebook of Gian Francesco Abela in the early 17th century. See NLM ms.140, f.39v. The text is reproduced as Doc. II in A. Luttrell, 'The Augustinians at Malta: 1413', *Anacleta Augustiniana* vol. XXXVIII, Institutum Historicum Ord. S. Augustini (Rome, 1975), 295-302.

⁷³ M. Buhagiar, *The Late Medieval Art and Architecture of the Maltese Islands*, (Malta, 2005), 170.

⁷⁴ *Ibid.*, 179.

⁷⁵ *Ibid.*, 77.

The church of the Annunciation mentioned in the 1418 document was of unknown antiquity. Margarita d'Aragona's will made provisions for its maintenance and for the purchase of liturgical ornaments and furnishings. The church was reduced in size and largely rebuilt anew during the course of the late seventeenth century, after the Carmelite Convent was transferred within the walls of the Civitas.⁷⁶

The Cult of St Leonard

St Leonard the Hermit was a Latin saint who was born towards the end of the fifth century in the province of Gaul. He was a Frankish noble in the court of Clovis I and was converted to Christianity along with the king on Christmas day of 496 AD by St Remigius, Bishop of Reims. Leonard managed to secure from the king the release of a great number of prisoners, and following the refusal of Episcopal honours offered to him by Clovis, he entered a monastery at Micy near Orléans, under the direction of St Mesmin and St Lie. According to tradition, it was at this stage that Leonard became a recluse in the forest of Limousin, where he gathered a number of followers. Having obtained, through prayer, a safe delivery for the Queen of the Franks, Leonard was granted royal lands at Noblac, 21 km from Limoges, where he founded the abbey of Noblac, around which a village subsequently grew.⁷⁷

There appears to be no trace of a cult to St Leonard in liturgical books, church dedications, or inscriptions earlier than the eleventh century. He became one of the most popular saints of Western Europe in the later Middle Ages, his most notable patronages being pregnant women and captives. During the course of the twelfth century, St Leonard became one of the great saints of the Normans in South Italy and Sicily. The cult of the saint was boosted in popularity as a result of the release of Bohemond, son of Robert Guiscard the Norman and nephew of Count Roger from a Danishmend prison in Antioch in 1103. This event was elevated to an alleged miraculous status and led to the proclamation of the saint as the patron saint of captives and slaves. Following his release, Bohemond, a charismatic leader of the First Crusade, visited the Abbey of Noblac, where he made an offering of gratitude. At around the same time, Noblac was establishing itself as a stage in the pilgrim route that led towards Santiago di Compostela in Spain. Pilgrims and patronage flowed to Saint-Leonard de Noblac and Leonard became one of the most venerated saints of the late medieval period. His intercession was credited with the release for prisoners, women in labour and the diseases of cattle and in iconography he is generally represented holding a pair of chains. His feast day is celebrated annually on the sixth of November.⁷⁸

The cult of St Leonard probably filtered into Malta during the course of the eleventh and twelfth centuries and there are two documented instances of cave-churches having

⁷⁶ A detailed analysis and description of the church of the Annunciation falls outside the scope of the present study. For the history and an architectural appreciation of the church of the Annunciation and the adjoining convent see M. Buhagiar, *The Late Medieval Art and Architecture of the Maltese Islands*, op. cit., 170-2; M. Buhagiar & S. Fiorini, *Mdina – The Cathedral City of Malta*, op. cit., 339-50; S. Abela, *L-Ewwel Karmelitani f' Malta – 'Il-Lunzjata l-Qadima' 1418-1659*, (Malta, 1993).

⁷⁷ Refer to 'New Advent – Catholic Encyclopaedia' website on: <http://www.newadvent.org/cathen/09178b.htm>

⁷⁸ D. H. Farmer, *The Oxford Dictionary of Saints*, (Oxford, 1992), 296-7.

such a dedication. The first recorded instance dates to 1588 and centres round a place known as *Il-Hofra ta' Għar* (The Sunken Cave), which can be probably identified with the troglodytic church of *Tal-Mensija* in the modern settlement of San Gwann, Malta.⁷⁹

The other church dedicated to St Leonard, located a few kilometres outside the Civitas and its Rabat, is the subject of the present study. Lunzjata is an area of rustic beauty and abounds in perennial water springs. The quaint seclusion and fertile nature of the site very probably provided an ideal springboard for the setting up of a troglodytic monastic station, a recollection of which is possibly portrayed by Rocco Pirri in 1638 and which makes reference to an oral tradition of hermits who around the start of the thirteenth century dwelt in caves in the Lunzjata area.⁸⁰

The Troglodytic Phenomenon

The St Leonard cave-church, the practiced water management techniques and several troglodytic dwellings excavated into the side of an Mtarfa Member ravine at Wied Liemu are reminiscent of a troglodytic tradition which flourished during the late middle ages, in countryside areas of Malta, which possessed favourable geological formations.⁸¹ The Maltese landscape is characterised by the almost complete absence of woodland vegetation and scarce soil deposits, leaving exposed the bare rock-face. This was instrumental in conditioning a type of architecture which was entirely stone oriented besides encouraging cave-dwelling. Most troglodytic dwellings are tied to the rural areas of the north and north-west sections of Malta.

Two distinct types of medieval troglodytic settlements have been identified in Malta. These consist of (a) the adaptation of a natural karst depression for settlement purposes, and (b) cliff-face settlements. Cave usage varies from (a) cultic worship, (b) human habitation, and (c) animal pens or agricultural storage spaces.⁸² An example of a karst feature settlement is Ghar il-Kbir in the limits of Dingli, and involves the occupation of one or more caves hewn into the sides of an open-air, natural rock-hollow. Cliff-face settlements are located within the sides of ridges and valleys and involve the occupation of a series of natural or man-enlarged caves. The location of most troglodytic settlements suggests that their occupants possessed a sound geological knowledge of the local geology. Most are hewn within exposed Mtarfa Member deposits and command unobstructed views of the surrounding countryside area and the underlying fields.⁸³

Dry-stone walls commonly screen a large section of the caves' entrance, leaving an arched or square-headed doorway as the only means of access. It is uncommon for screening walls to contain windows, but when available, these are represented by narrow slits located high up in the cave facade. The larger and more spacious caves were

⁷⁹ M. Buhagiar, *The Late Medieval Art and Architecture of the Maltese Islands*, op. cit., 76.

⁸⁰ Ibid., 77. See also R. Pirri, *Notitiae Siciliensium Ecclesiarum*, (Palermo, 1638), 84.

⁸¹ K. Buhagiar, *Medieval and Early Modern Cave-Settlements in North-West Malta, South of the Great Fault – A Field Survey and Gazetteer*, op. cit., 46-58.

⁸² Ibid., 48.

⁸³ Ibid., 53.

frequently internally partitioned by means of dry-stone walls, the scope of which was to divide the cave interior into a series of individual spaces.⁸⁴

Several settlements are accessed by means of one or more well-defined footpaths, some of which are surfaced by means of a cobbled type of paving. In areas of difficult terrain, dry-stone ramps were often constructed in order to facilitate access to troglodytic settlements. Ramps were built parallel to the cliff-face and are similar in method of construction to dry-stone walls. The gap between the cliff-face and the rubble-wall was bridged by a soil and rubble infill and occasionally capped by means of a cobbled surface.⁸⁵

The practice of adapting caves as houses or of hewing churches out of rock, provided little or no scope for architectural invention and development. Rock architecture was probably meant to reflect the influence of above-ground buildings and not vice-versa.⁸⁶ There is an almost complete lack of historical documentation for most of the surviving troglodytic remains and in the absence of an archaeological investigation their dating requires a measure of caution.

The Maltese troglodytic phenomenon reflects a deeply rooted Mediterranean tradition, well diffused in areas experiencing an arid or semi-arid climate and a lack of timber supply, but which on the other hand provided plentiful rock-cut shelters and an abundance of easily quarried stone.⁸⁷ Troglodytism was a widely diffused phenomenon in Medieval Sicily, and appears to have been boosted by the collapse of the grain markets and the subsequent economic recession of the fifth and sixth centuries. An increase in Saracenic incursions on coastal areas of Sicily during the course of the eighth and ninth centuries encouraged demographic displacement to the more easily defended mountainous areas, an instance which probably further conditioned the settlers to resort to cave-dwelling.⁸⁸ The siting of local troglodytic settlements also parallels the Sicilian model. Sicilian cave-settlement location was dictated by the available geological profile and settlements were often sited in naturally defensible and difficult to reach places.⁸⁹

The roots of Maltese late medieval troglodytism probably lies in the twelfth and the thirteenth centuries, where following the Norman reconquest of 1127, a spill into the countryside by the Muslim sector of the population may have taken place. This was presumably motivated by religious intolerance from the part of the newly established Latin garrison. In an attempt to safe guard their ethnic identity, the native population took to the countryside where enclaves of Muslim resistance were set up.⁹⁰ The local troglodytic tradition persisted well into the early modern period and was not a

⁸⁴ Ibid., 50.

⁸⁵ Ibid., 50-1.

⁸⁶ M. Buhagiar, 'Medieval Malta: Its Hypogea, Cave Churches and Ecclesiastical Buildings', *Architecture in Malta I: Historical Aspects*, SACES, (Malta, 1986), 44.

⁸⁷ K. Buhagiar, *Medieval and Early Modern Cave-Settlements in North-West Malta, South of the Great Fault – A Field Survey and Gazetteer*, op. cit., 46.

⁸⁸ A. Messina, *Le chiese Rupestri del Siracusano*, (Palermo, 1979), 4-8.

⁸⁹ A. Messina, 'Forme di Abitato Rupestre nel Siracusano', *La Sicilia Rupestre nell Contest delle Civiltà' Mediterranee*, C. D. Fonseca (ed.), (Catania, 1986), 245-50.

⁹⁰ M. Buhagiar, *The Late Medieval Art and Architecture of the Maltese Islands*, op. cit., 40.

phenomenon which was only registered in the countryside districts. In the 1530s, Jean Quintin describes the Birgu settlement as being dug into the hillock rather than built on it.⁹¹ A number of families are also reported to have dug caves in the sides of the ditch surrounding Valletta and Cottonera in the late eighteenth century.⁹²

Urban and Rural Troglodytic Churches

Caves were also used as places of cultic worship. The Apostolic Delegate Mgr. Pietro Dusina recorded several cave-churches in his 1575 visitation report.⁹³ There are two categories of Maltese troglodytic churches: (1) the urban, and (2) the rural.⁹⁴ Both share a number of common characteristics and are apparently the product of the same religious pressure and socio-economic conditions. Where present, their murals also speak a common iconographic language and point to a Sicilian-Byzantine context that hints a twelfth or thirteenth century date. During the course of the centuries, many cave-churches were subjected to a number of subsequent alterations. In many instances these almost completely erased all evidence accounting for the former cave setup.

Urban churches were often located within the precincts of palaeochristian hypogea and generally show a greater preoccupation with architectural elaboration and enhancement. The re-utilisation of catacombs as places of veneration often involved extensive re-cutting which resulted in the mutilation of several tombs. At St Paul's catacombs, one of the two large halls flanking the complex's entrance displays indications of having been converted into a place for cultic worship during the course of the twelfth and thirteenth centuries. It is also likely that its walls were decorated with cult images.⁹⁵ Examples of other urban rock-churches located within the suburbs of the Civitas are those of St Agatha, St Venera, Tal-Virtu, the Virgin of the Grotto and Abbatija tad-Dejr.⁹⁶

The rural cave-churches are more simplistic and display a poorer degree of architectural sophistication than that evident in the urban churches. Various rural cave-churches survive on the island, the most important of which are the cave-church dedicated to St Nicholas in the limits of Mellieha,⁹⁷ and the cave-church of S. Leonard at Lunzjata outside the Civitas. In both instances, fragments of murals survive within, but are unfortunately in a precarious state of preservation.

The adaptation of catacombs and palaeochristian hypogea as cave-churches was also a widespread phenomenon in medieval Sicily, a practice which was intimately connected to

⁹¹ J. Quintin d'Autun, *Insulae Melitae Descriptio*, (Lyons, 1536), 31.

⁹² K. Buhagiar, *Medieval and Early Modern Cave-Settlements in North-West Malta, South of the Great Fault – A Field Survey and Gazetteer*, op. cit., 56. See also J. Eynaud, *Carlo Castone Della Torre Di Rezzonico – Viaggio Di Malta Anno 1793*, (Malta, 1989), 61.

⁹³ For a reproduction of the Dusina visitation report see G. Aquelina and S. Fiorini, *Documentary Sources of Maltese History, Part IV – Documents at the Vatican, Malta: Visita Apostolica no. 51, Mgr Petrus Dusina 1575*, (Malta, 2001).

⁹⁴ M. Buhagiar, *The Christianisation of Malta*, (Oxford, 2007).

⁹⁵ M. Buhagiar, *Late Roman and Byzantine Catacombs and Related Burial Places in the Maltese Islands*, BAR International Series, (Oxford, 1986), 52-5.

⁹⁶ M. Buhagiar, 'Medieval Malta: its Hypogea, Cave Churches and Ecclesiastical Buildings', op. cit., 39-49.

⁹⁷ K. Buhagiar, 'The San Niklaw Cave-Settlement', *Melita Historica*, Vol. XII no. 2, (Malta, 1997), 131-7.

the revival of the Christian faith which had dwindled greatly during the Muslim occupation of the island.⁹⁸ Another affinity between Malta and Sicily is evident in the cave-church of Abbatija tad-Dejr in Rabat where parallels to the Grotta dei Santi at Monte Almo in Sracuse were noted. In both instances, the motif chosen for the decoration of the apsidal cap is of the Crucifixion and the Annunciation.⁹⁹

Description of the Remains

The St Leonard cave-church is accessed via a concrete-clad footpath and steps which from the northwest end of the Lunzjata car park perimeter past the edge of the ravine and gives access to the cave entrance (Fig. 2; Plate 3). There is so far insufficient evidence to establish if this has replaced a cobbled passageway which formerly serviced access to the cave. Cobbled footpaths commonly facilitated access to rural troglodytic settlements and appear to have been a common man-made accretion to the Late Medieval landscape in areas of difficult terrain. Many cobbled footpaths have in recent years either been destroyed or buried beneath concrete paving.¹⁰⁰

A dry-stone wall screens the west-facing cave entrance, and the only means of access into the interior is through a 0.9 m, wide square-headed doorway (Fig. 3 'a'; Plates 1 & 2). The gap between the cave roof and the northwest section of the screening wall is bridged over by roughly faced ashlars (Plate 16). Such a method of roofing was commonly resorted to in other local cave-settlements in a bid to regain more internal space without having to undergo the more labour-intensive process of reshaping the cave interior.¹⁰¹

The cave-church is excavated into the brittle Mtarfa Member deposit and appears to have experienced at least two separate phases of development, which in the absence of further archaeological investigation are difficult to date. The current internal setup is the product of the cave's final phase of occupation and consists of an irregular-shaped cave with an east-end cylindrical apse, built partly of ashlars, and partly of wet-rubble (Fig. 3 'c'). The use of faced stones is only limited to the skeletal framework of the arch and the roof slabs bridging the gap between the keystone section of the arch and the adjoining wet-rubble wall (Plates 4, 5 & 7). Several coatings of a mortar rendering and white washing were noted in the apse area, over which painted decoration was applied, and traces of which still survive (Plates 14 & 15). The mortar varies from one to one and a half centimetres in thickness. Abutting the apse is a rectangular-shaped, wet-rubble altar (Fig. 3 'd'; Plate 4). The central floor area is paved by means of a flagstone paving (Plates 5 & 17). Another section of flagstone flooring survives in the northeast end of the cave (Fig. 3 'b'; Plate 13).

A wall-niche in the southeast corner of the apse probably provided a convenient space for the keeping of sacred vessels used during the celebration of mass (Fig. 3 'e'; Plates 5 & 6). The wall-niche is stylistically similar to a rectangular recess located in the

⁹⁸ A. Messina, 'Trogloditismo Medievale a Malta', op. cit., 116-117.

⁹⁹ M. Buhagiar, *Late Roman and Byzantine Catacombs*, op. cit., 117.

¹⁰⁰ K. Buhagiar, *Medieval and Early Modern Cave-Settlements and Water Galleries in North-West Malta South of the Great Fault*, op. cit., 50-1.

¹⁰¹ *Ibid.*, 51-2.

southeast corner of the apse, at the church of the Annunciation at Hal Millieri, similarly used for the keeping of sacred vessels. The 1575 Pietro Dusina report found such niches to be liturgically inappropriate, and ordered their substitution by gilt wooden tabernacles that were to be mounted on the altar itself.¹⁰² Two other wall niches are present in the southeast corner of the cave-church (Fig. 5).

A rock-cut bench perimeters the south rock-wall of the cave (Fig. 3 'f'; Plates 8 & 17) and recalls the *dukkien* or stone bench which furnished several of the Maltese Late Medieval countryside churches. At the Church of the Annunciation at Hal Millieri, a low stone bench was fitted in between the wall piers in order to provide a limited form of seating accommodation.¹⁰³ Similar benches were a common feature to the Late Medieval town house. It is possible that within a domestic context, stone benches also served the purpose of beds on which mattresses could be spread out at night, or rolled up and put away during daytime.¹⁰⁴

A mutilated fresco in the southeast corner of the cave-church (Fig. 3 'g'; Plates 8 - 12), which measures 87 by ca. 182 centimetres, betrays Sicilian Renaissance elements and is stylistically datable to the late fifteenth or early sixteenth centuries. The painting's precarious state of preservation does not facilitate its critical appreciation. The mural has more over suffered from a loss of pigment and the head and torso sections of the image appear to have been vandalised at an unknown date (Plates 9 & 10). The surviving sections of the painting point towards a work of pedestrian quality. It is painted in an apparent fresco technique and shows St Leonard in a full length, three-quarter profile, standing against a background of a low stone wall with a few trees showing behind it.¹⁰⁵ The saint's identity can be firmly established from the captive's irons, the saint's symbol in iconography. The complete absence of anecdotal elements echoes a Siculo-Byzantine tradition.

Mario Buhagiar has tentatively attributed the St Leonard painting to Antonio Pulcella, a Carmelite friar documented in the interim 1496-1508 period and who seems to have thrived from paintings commissioned by local village churches during this period.¹⁰⁶ Pulcella entered into many contractual agreements for the execution of altar pieces and wall paintings. The fact that none of Antonio Pulcella's paintings can be identified deprives the art historian of knowledge of his artistic manner and technique, and Pulcella's connection with the mural of St Leonard, therefore, remains uncertain. Pulcella is an unusual surname for Malta, and may have originated from the neighbouring Sicilian town of Puzallo.¹⁰⁷ Antonio Pulcella was also locally employed in the conservation and maintenance of a variety of ecclesiastical *objets d'art*. He undertook

¹⁰² M. Buhagiar, *The Late Medieval Art and Architecture of the Maltese Islands*, op. cit., 97.

¹⁰³ *Ibid.*, 86.

¹⁰⁴ G. Wettinger, 'The Arabs in Malta', in *Malta: Studies of its Heritage and History*, (Malta, 1986), 87-104.

¹⁰⁵ M. Buhagiar, *The Late Medieval Art and Architecture of the Maltese Islands*, op. cit., 76.

¹⁰⁶ *Ibid.*, 184.

¹⁰⁷ This is the modern day settlement of Pozzallo.

restoration works at the Mdina Cathedral between 1495-6. In the 1480s, he was commissioned to service the artillery and manufacture gun powder.¹⁰⁸

Images of saints sharing the same stylistic and iconographic idiosyncrasies with that of St Leonard at Lunzjata were a feature common to Maltese churches at the turn of the sixteenth century. An almost complete cycle of such paintings survives in the cave-church of St Agatha in Rabat, Malta, where they may have replaced earlier Siculo-Byzantine icons.¹⁰⁹

The St Leonard mural is not the only surviving element of painted decoration within the cave-church. The remains of a lime based mortar and daubs of red pigmentation still cover sections of the apse and south rock wall (Plate 14), and hint towards the former presence of an extensive decorative programme of which only a few traces survive. Insufficient data survives, however, to allow a reconstruction of the decorative motif employed.

In the absence of further archaeological investigations, the dating of the current cave arrangement is difficult to ascertain. Neither can the approximate construction date of the east end apse be ascertained. The wet-rubble technique employed in its construction can not be dated with any accuracy and was possibly first imported locally during the Saracenic or sub-Saracenic period, and remained in use until at least the early seventeenth century.¹¹⁰

An assessment of the tool marks preserved in the rock-walls of this subterranean sacred space, permit a partial reconstruction of the former cave setup, which appears to have experienced two distinct phases of occupation (Fig. 4). The former cave apparently had narrower proportions in its north to south axis, but extended further westward by several more metres. The changes brought about to the general cave setup appear to have been dictated by the natural process of weathering and erosion. Cracks and fissures in the cave roof close to the present entrance are symptomatic of a partial roof collapse caused by the weathering and the erosion of the brittle Mtarfa Member layer (Plate 3). Cliff-face detachment appears to have also substantially modified the external cave appearance. This necessitated the reconstruction of the present cave screening wall. Cliff dislocation in the Lunzjata area is being further enhanced by the erosion of underlying clay deposits due to water action. The current access passageway is also probably the result of post cliff-face dislocation repair works (Plate 3). The present cave screening wall abuts against a section of the St Leonard mural, and shows that the screening arrangement is posterior in dating to the mural (Plates 9 & 10).

The interior space lost due to the process of cliff recession was probably made good for by extending the north and south extent of the cave by ca. a metre in each direction. The former north – south extent of the cave is still delineated by the lower roof section of the extended areas and a slightly elevated floor level (Fig. 5). The rock ceiling of the extended areas is only ca. two metres high, as opposed to the ca. three and a half metre

¹⁰⁸ M. Buhagiar, *The Late Medieval Art and Architecture of the Maltese Islands*, op. cit., 184-5.

¹⁰⁹ Ibid., 185.

¹¹⁰ M. Buhagiar & S. Fiorini, *Mdina – The Cathedral City of Malta*, op. cit., 51-2.

high ceiling in the central cave area. The rock walls of the extended areas also display a slightly cruder finish. The surviving paving section in the northern end of the cave, and the dry-stone screening wall, both appear to be post cliff-face detachment alterations.

Hydrological Supply

A water gallery is excavated into the Mtarfa Member deposit directly below the St Leonard cave-church. It provides the surrounding area with a perennial water supply and is largely responsible for boosting the agricultural potential of this section of the Lunzjata valley. Identical hydrological systems are common features to areas of the Maltese countryside which possess similar geological stratifications and are evidence of past human interventions on the landscape.¹¹¹

Galleries are generally easily identified from their rectangular shaped rock-cut entrance which is on average 0.8 metres wide and a bit more than 1.5 metres high. As is the case with the artificial spring at Lunzjata, there are instances where galleries are fronted by an underground water storage reservoir. The depth of these hydrological systems is unknown, but several of the water tunnels recorded and studied by the author may be well over half a kilometre deep and sometimes branch into one or more minor arteries. A canal carved into the floor of the gallery eases the flow of the water retrieved from the perched aquifer.¹¹²

The dating of the Maltese galleries is a task that requires caution. Not all galleries in any given area are necessarily coeval, but it appears that the majority of these artificial water springs are not recent efforts attempting to increase the hydrological potential and the agricultural yield of specifically selected areas, and have been tentatively dated to the Arab occupation of the island and its immediate aftermath, where new horticultural skills were introduced.¹¹³

Conclusion

It appears likely that past maintenance works and alterations within the cave-church were conditioned by agents of weathering and erosion which resulted in cliff-face detachment and a partial roof collapse. These were probably carried out by the Carmelite friars who since the first half of the 1400s have been in possession of the St Leonard cave-church and tenement.

Several wide fissures in the Mtarfa Member ravine, at close proximity to the St Leonard cave-church are a constant reminder to the ongoing natural process of cliff degradation. This process is being accelerated further by eucalyptus trees, planted in a field above the cave-church around a decade ago. Eucalyptus, is a fast growing alien tree species, well adapted to grow in Mediterranean-type climates, and is notorious for causing soil nutrient depletion.¹¹⁴ The trees' roots penetrate deep into the ground and considering the brittle and friable nature of the Mtarfa Member deposit within which they lie, these are accelerating rock deterioration and stability and will eventually be the cause of further rock dislocation. This will adversely affect the structural stability of the St Leonard cave-church and threatens the site's preservation.

¹¹¹ K. Buhagiar, *Medieval and Early Modern Cave-Settlements and Water Galleries in North-West Malta South of the Great Fault*, op. cit., 59-83.

¹¹² Ibid., 59-83.

¹¹³ Ibid., 59-83.

¹¹⁴ H. D. Allen, *Mediterranean Ecogeography*, (Harlow, 2001), 201.

The mural of St Leonard survives in a precarious state of preservation and is being subjected to constant damage by rain and irrigation water seepage, the damp microclimate present within the cave, and algal growth. This necessitates the drawing up and the implementation of a comprehensive conservation strategy to ensure the preservation of the site and fresco for future generations. The removal and cleaning of algal growth from the east and south walls of the cave by competent personnel will almost certainly lead to the uncovering of more decorative painted motifs and might provide sufficient data to allow a reconstruction of the church interior decorative programme.

The future archaeological investigation of the St Leonard cave-church and other key areas in the Lunzjata tenement might furnish the archaeologist and historian with further important data. Minimal soil deposits survive within the cave interior, but archaeological soundings of what lies beneath the stone slab flooring might provide interesting results apart from establishing whether any burials have actually taken place within the cave interior. The archaeological investigation of the agricultural land below the cave-church entrance might likewise lead to the detection of archaeologically relevant deposits.

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Flagstone floor detail. Visible in the foreground is the rock-cut bench (dukkién).

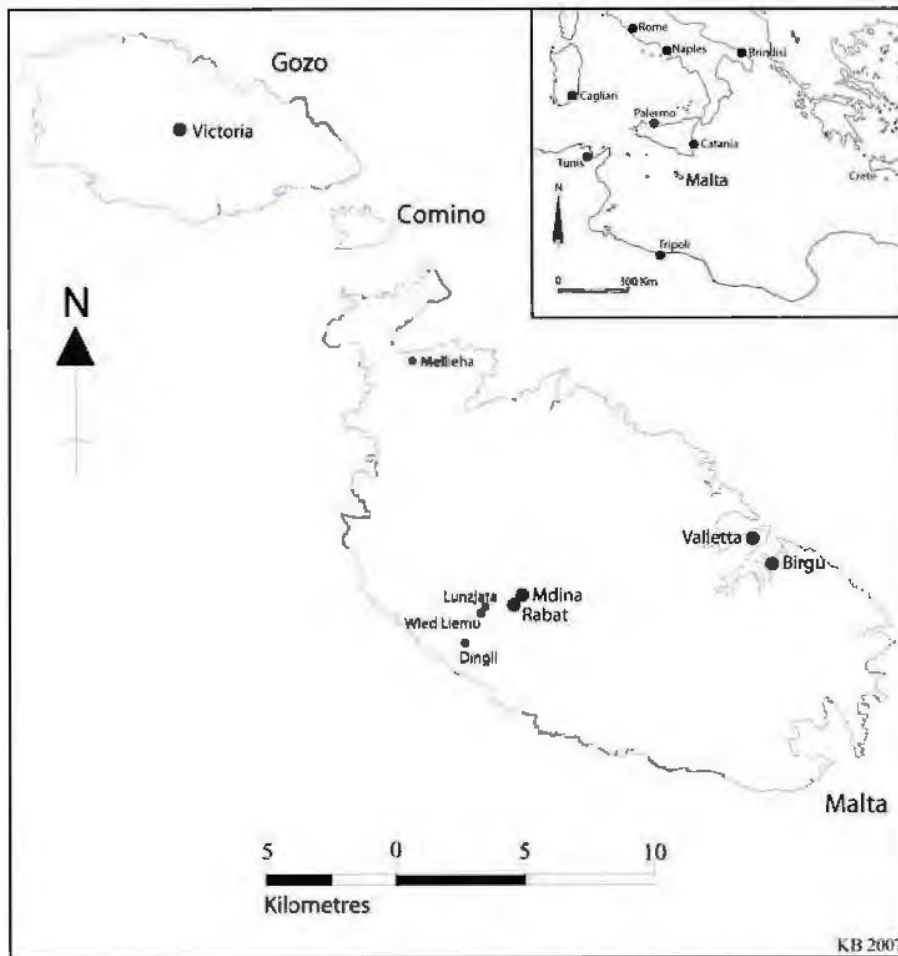


Fig. 1
Map of the Maltese archipelago showing the location of Wied Liemu and Lunzjata.

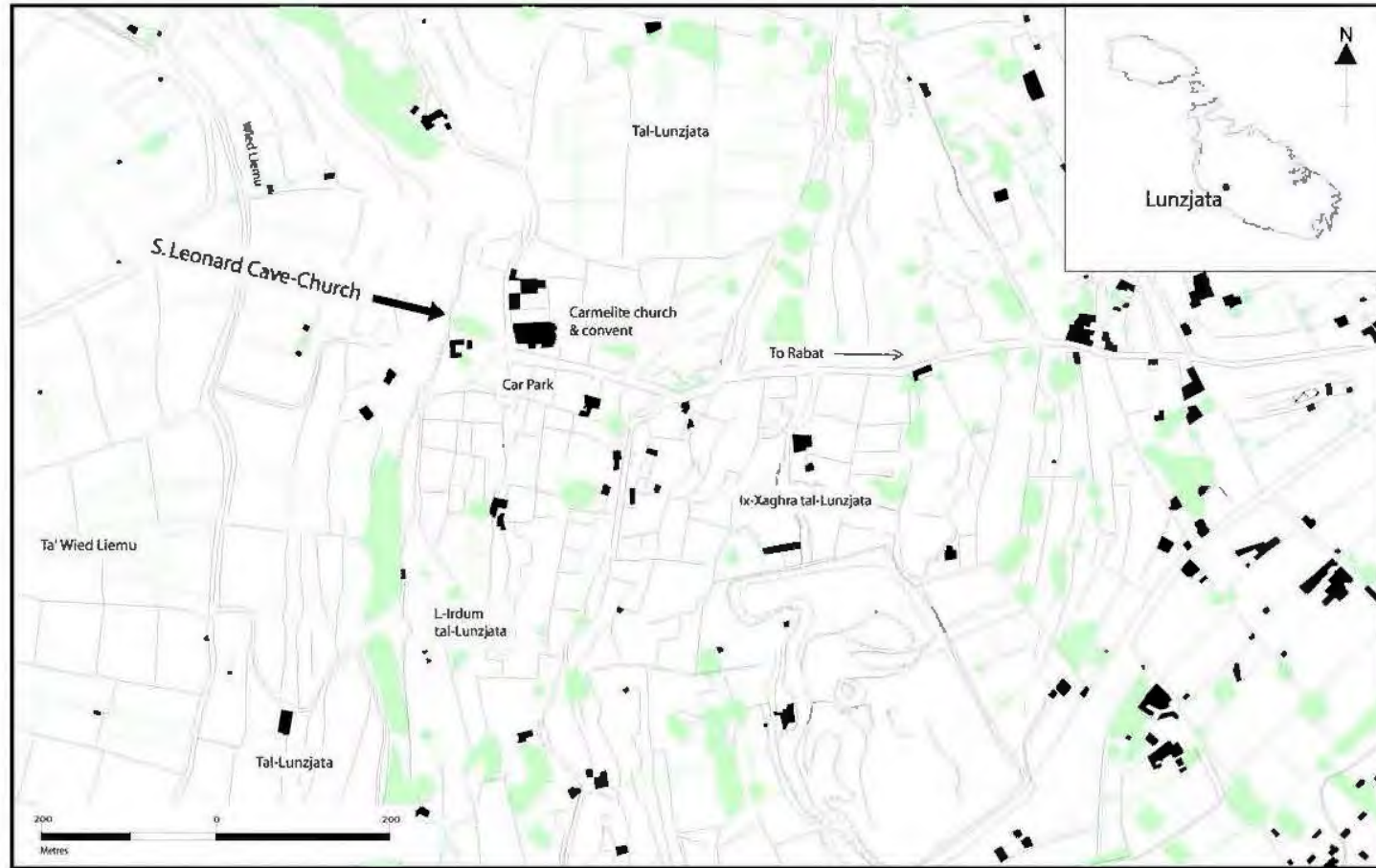
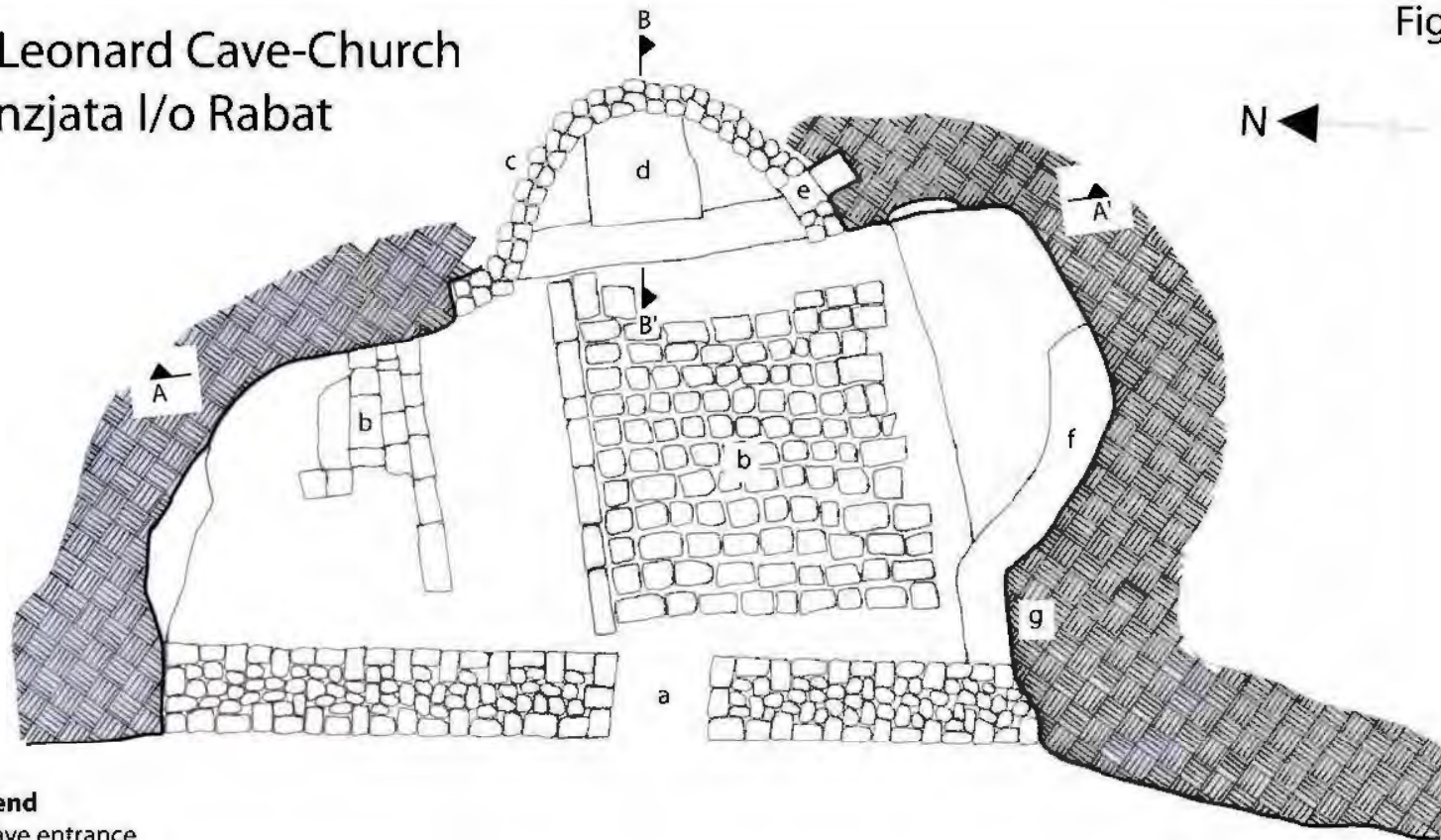


Fig.2 Site plan of the Lonzjata area.

St Leonard Cave-Church Lunzjata I/o Rabat

Fig. 3



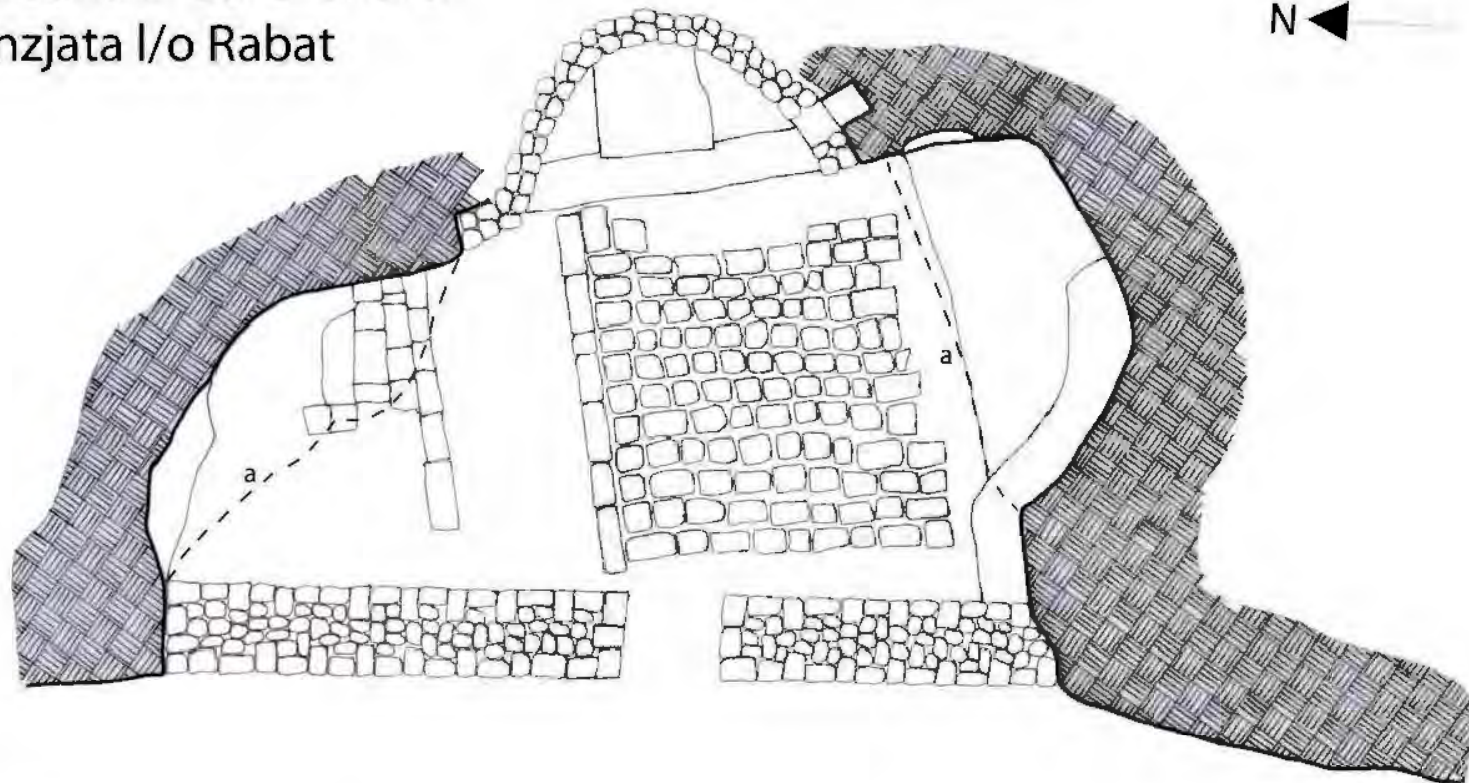
Legend

- a. Cave entrance
- b. Falgstone paving
- c. East-end apse built out of wet rubble and faced ashlar surrounds
- d. Altar
- e. Wall-niche possibly used for the keeping of sacred vessels
- f. Rock-cut bench
- g. Fresco of St Leonard



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St Leonard Cave-Church Lunzjata I/o Rabat



Legend

a. Dotted line shows the probable extent of the former cave

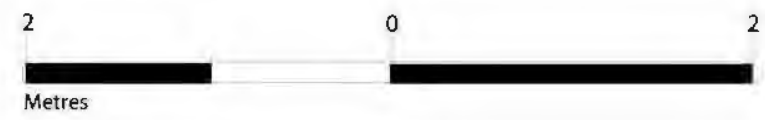
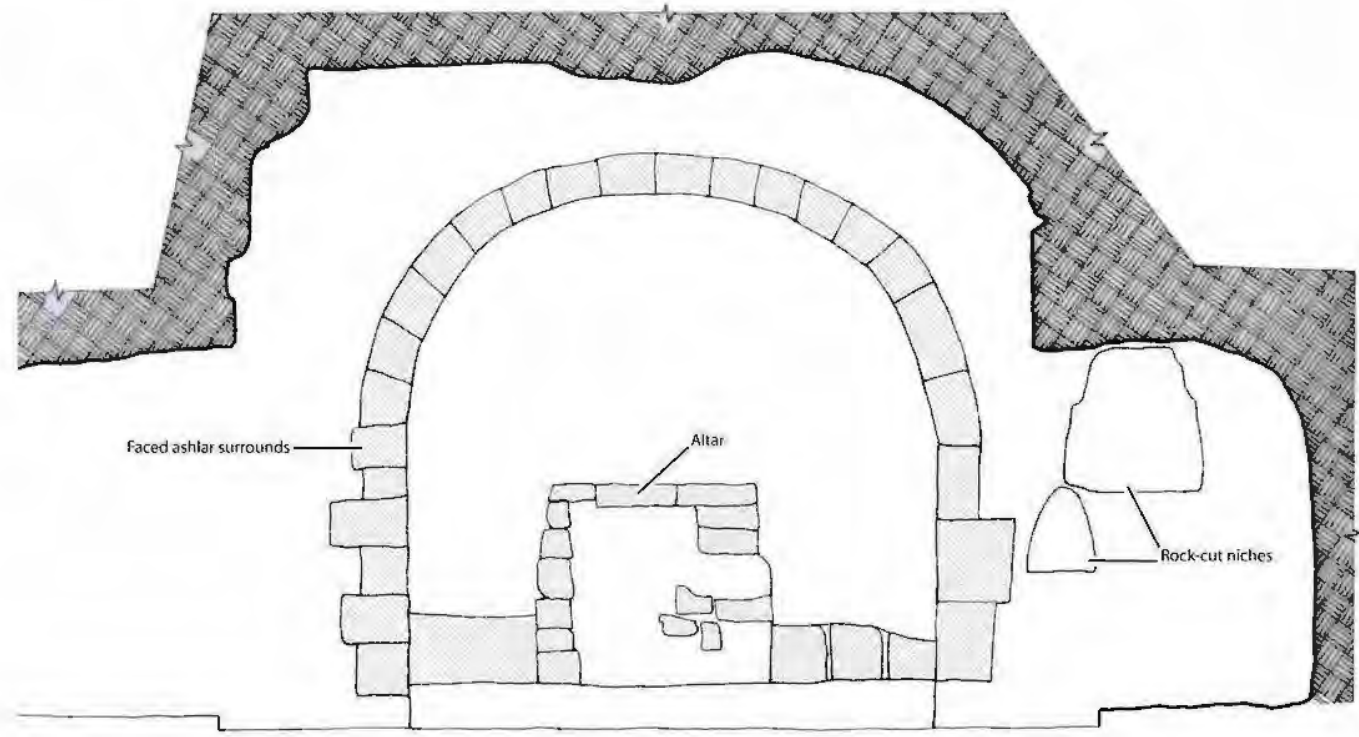


Fig. 4

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St Leonard Cave-Church, Lunzjata I/o Rabat
East Internal Elevation, Section A-A'

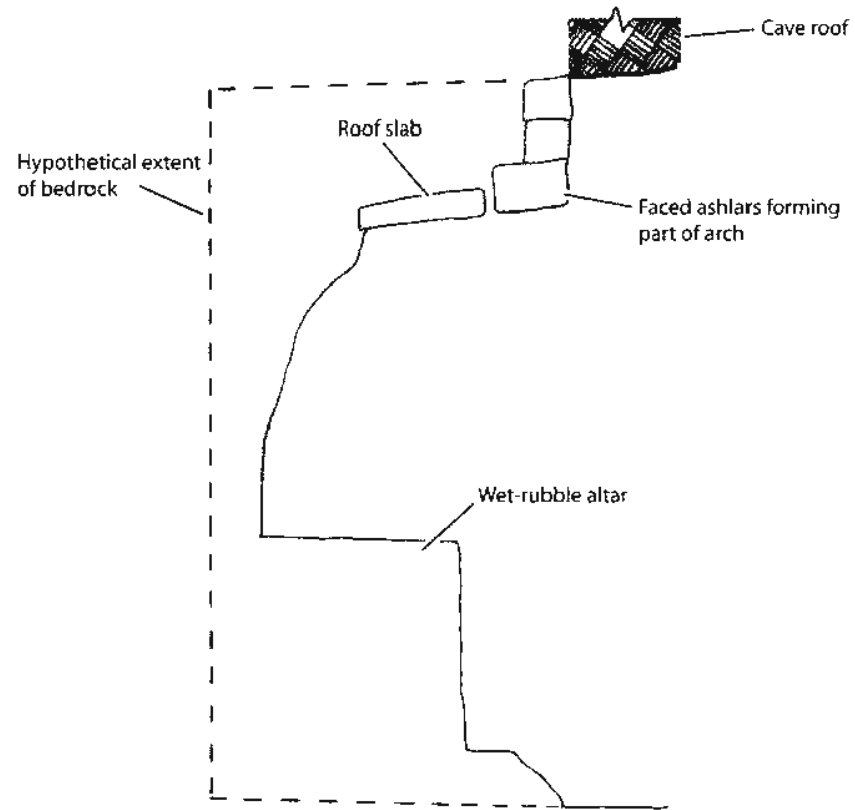
Fig. 5



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St Leonard Cave-Church, Lunzjata I/o Rabat
Section B-B'

Fig. 6



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Metres

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Plate 1

Dry-stone wall screening access to St Leonard cave-church.



Plate 2 Detail of square-headed doorway giving access to the cave

interior.



Plate 3 Concrete-clad footpath and steps giving access to the cave-church entrance. Fissures in the rock-face are symptomatic of cliff-face detachment.



Plate 4 St Leonard cave-church. East-end cylindrical apse and altar built partly of ashlars and wet-rubble.



Plate 5 General view of the east-end cylindrical apse and the fronting flagstone flooring.



Plate 6 Detail of wall-niche in the southeast corner of the apse, probably used for the keeping of sacred vessels.



Plate 7 Roof slabs bridging the gap between the keystone section of the arch and the adjoining wet-rubble wall.



Plate 8 The mutilated fresco of St Leonard and the rock-cut bench (dukkien), perimentering the south rock-wall of the cave.



Plate 9 The mutilated fresco of St Leonard.



Plate 10 Detail of the upper section of the St Leonard fresco.



Plate 11 Fresco of St Leonard. Detail of halo and surviving remnants of the face section consisting of hair detailing, eyebrow and an almond-shaped eye.



**Plate
12**

Fresco of St Leonard. Detail of tree cluster.



Plate 13

North extent of the St Leonard cave-church. Detail of flagstone floor and cave screening wall.



Plate 14 Daub of white-washed mortar in the altar area containing traces of paint decoration.

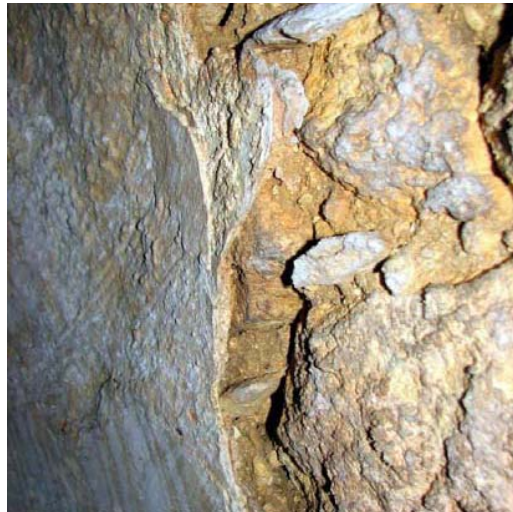


Plate 15 Detail of white-washed mortar rendering applied to the dry-stone walls in the apse area.



Plate 16 Roughly faced ashlars bridging the gap between the cave-roof and the dry-stone screening wall.



Plate 17 Flagstone floor detail. Visible in the foreground is the rock-cut bench (dukkien).