

Chapter 11

Caves in Context: The Late Medieval Maltese Scenario

Keith Buhagiar

Areas of the Maltese countryside containing a brittle limestone deposit known locally as Mtarfa Member contain numerous cave-settlements of unknown antiquity. Even though remaining in use until the early modern period, and some until the first few decades of the twentieth century, the available archaeological and landscape evidence hints at a twelfth century date, and might indeed be related to a period of agricultural expansion experienced by Maltese rural areas during this period. The various late medieval Maltese cave typologies, the rock-cut churches – several of which were situated within the precincts of palaeochristian hypogea, and the hydraulic strategies employed by the cave occupants in order to retrieve a perennial water source from the occupied landscape are all discussed. This study forms part of a broader research project, aimed at investigating Maltese late medieval settlement location and any related water management systems. Landscape and settlement analysis is based on available archaeological, archival and historical evidence, together with extensive personal non-invasive field research conducted in various parts of the archipelago.

Introduction

The roots of Maltese late medieval troglodytism probably lie in the twelfth and thirteenth centuries and possibly reflect coordinated attempts at increasing the agricultural output of specifically designated countryside areas of Malta. It was formerly observed that the north-west sector of Malta is ‘strangely bare’ of late medieval aboveground village-type settlements known locally as *raħal* (Wettinger 1975, 190). Blame was tentatively placed on a defect in the surviving documentation, or the fact that the countryside in this part of Malta had been depopulated for such a long period of time, that the surviving place names dropped their *raħal* prefix (Wettinger 1975, 190).

Following the identification of numerous man-excavated cave-settlement sites and water galleries tapping the perched aquifer in the north and west of Malta, this study proposes the hypothesis that it was the *ghar* (cave) settlements which prevailed in this region and not the *raħal* ones. The geographical parameters for the field investigation were determined by the natural distribution of Upper Coralline Limestone deposits.

The geological and climatic context

The Maltese archipelago lies in the central Mediterranean Sea south of Sicily. Its largest islands (listed in descending order according to size) are Malta, Gozo and Comino. Central to this paper’s discussion is the island of Malta, which occupies a total land surface area of 153km², and has a maximum length and width of 27.4km and 14.5km respectively (Fig. 11.1). Geological deposits are almost exclusively sedimentary in formation, and started to form in a marine environment between 30 and 6 million years before present. The archipelago owes its origin to prolonged stress between the European and African continents, where plate tectonic activity completely reshaped the central Mediterranean basin into a series of horst and graben formations. Tectonic activity also uplifted several portions of the Sicilian-Tunisian Platform on which Malta lies, a few hundred metres above sea level (Zammit-Maempel 1977, 18; Pedley *et al.* 2002, 1, 18–29).

Four distinct rock layers constitute the basic geology (Fig. 11.2), and when undisturbed by land faulting, the

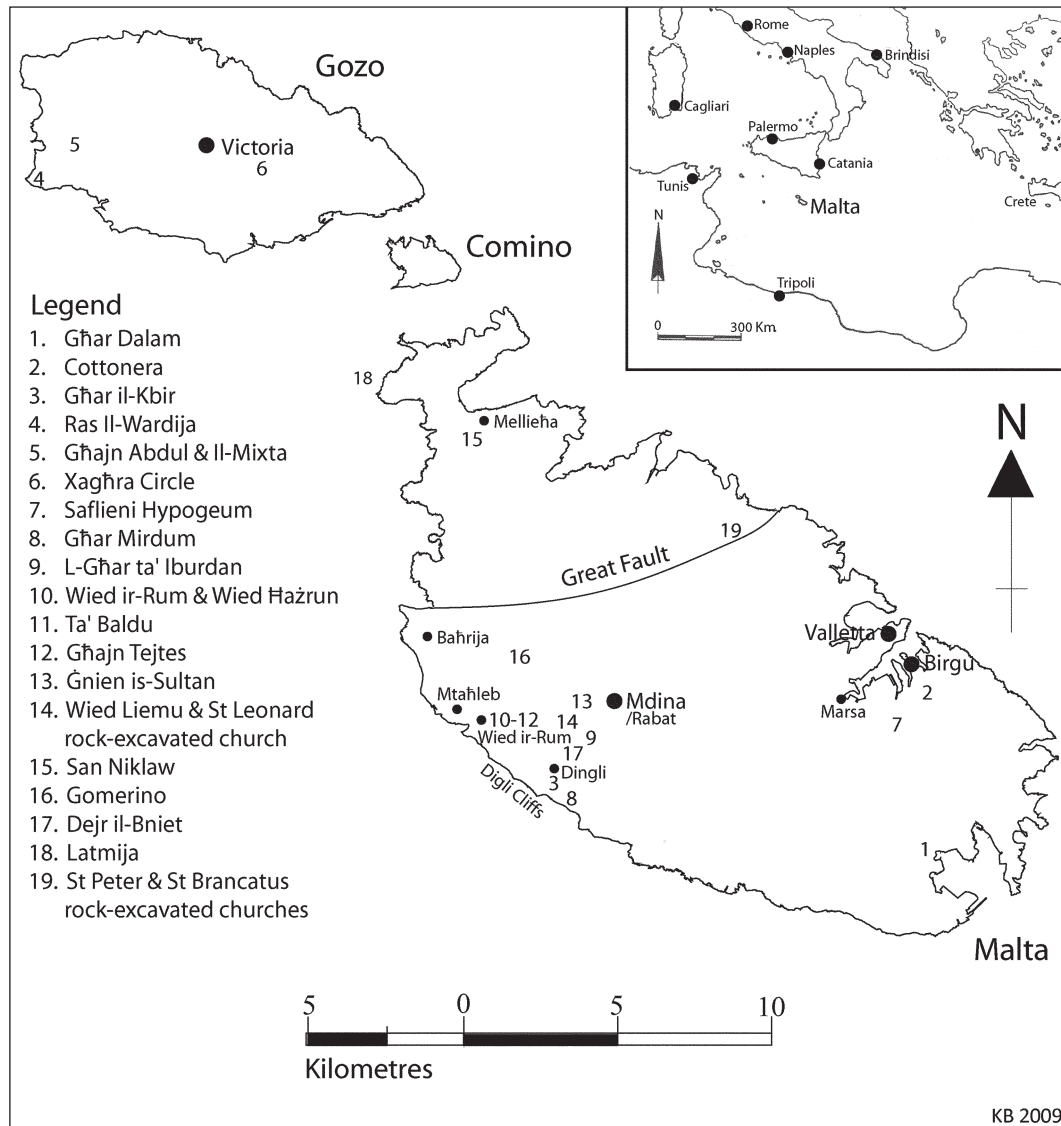


Figure 11.1: Map of the Maltese archipelago showing toponym spatial distribution.

horizontal stratification from bottom to top reads as follows: (1) Lower Coralline Limestone; (2) Globigerina Limestone; (3) Blue Clay; and (4) Upper Coralline Limestone (Pedley *et al.* 2002, 35). Exposed Lower Coralline and Globigerina Limestone deposits mainly cover areas of central and southern Malta. Late medieval cave-settlement location was nonetheless mainly determined by Upper Coralline Limestone and Blue Clay distribution.

From a technical perspective, Blue Clay is the most important rock horizon, and it is due to its presence that an easily accessible water table, locally referred to as the *perched aquifer*, exists. Water stored above this impermeable rock deposit has, since antiquity, been recognized as a vital and easily accessible resource.

In the absence of the required technical expertise to extract water from the *mean-sea-level aquifer*, the perched water table was the only reliable water source available in the archipelago until the mid nineteenth century.

Upper Coralline Limestone is the youngest rock formation, four subdivisions of which have been identified. The most important of these is Mtarfa Member, which is composed of massive to thickly bedded carbonate mudstones and wackstones. The thickness of this stratum varies from 12 to 16m and, in contrast to other Upper Coralline Strata with their characteristically hard deposits, Mtarfa Member deposits can be cut and quarried with relative ease. It is within this rock deposit that almost all cave settlements

in north and north-west Malta are located (Buhagiar, K. 2007, 110–112).

Malta's climate is typically Mediterranean and is characterised by hot dry summers and warm wet winters (Bowen-Jones *et al.* 1961, 48–49). The annual temperature range is of approximately 15°C and an average precipitation of 560mm makes rainfall insufficient and erratic and creates regular drought conditions (Skinner *et al.* 1997, 188). The Maltese landscape is, furthermore, characterised by the almost complete absence of woodland vegetation and scarce soil deposits leaving the bare rock exposed. The prevailing environmental conditions and the local geology and topography provided an ideal springboard for the widespread diffusion of troglodytism.

The historical context

The adaptation of caves into houses and cultic shrines represents an ancient Mediterranean practice. Places such as Granada in Spain, Matera in Basilicata (Italy), Matmata in Tunisia and Cava d'Ispica in Sicily amongst others, show that, 'Mediterranean people have always chosen caves and grottoes, natural and excavated, as providing convenient, cool and often defensible dwellings, stores, stalls, cisterns, churches, burial places and catacombs' (Luttrell 1979, 461).

Strabo (XVI, 7, 25–260), amongst other ancient authors, noted the habit of some African people of using caves as houses. When the Mediterranean coast of Africa was colonized by the Romans, they too adapted themselves to the scarcity of timber and

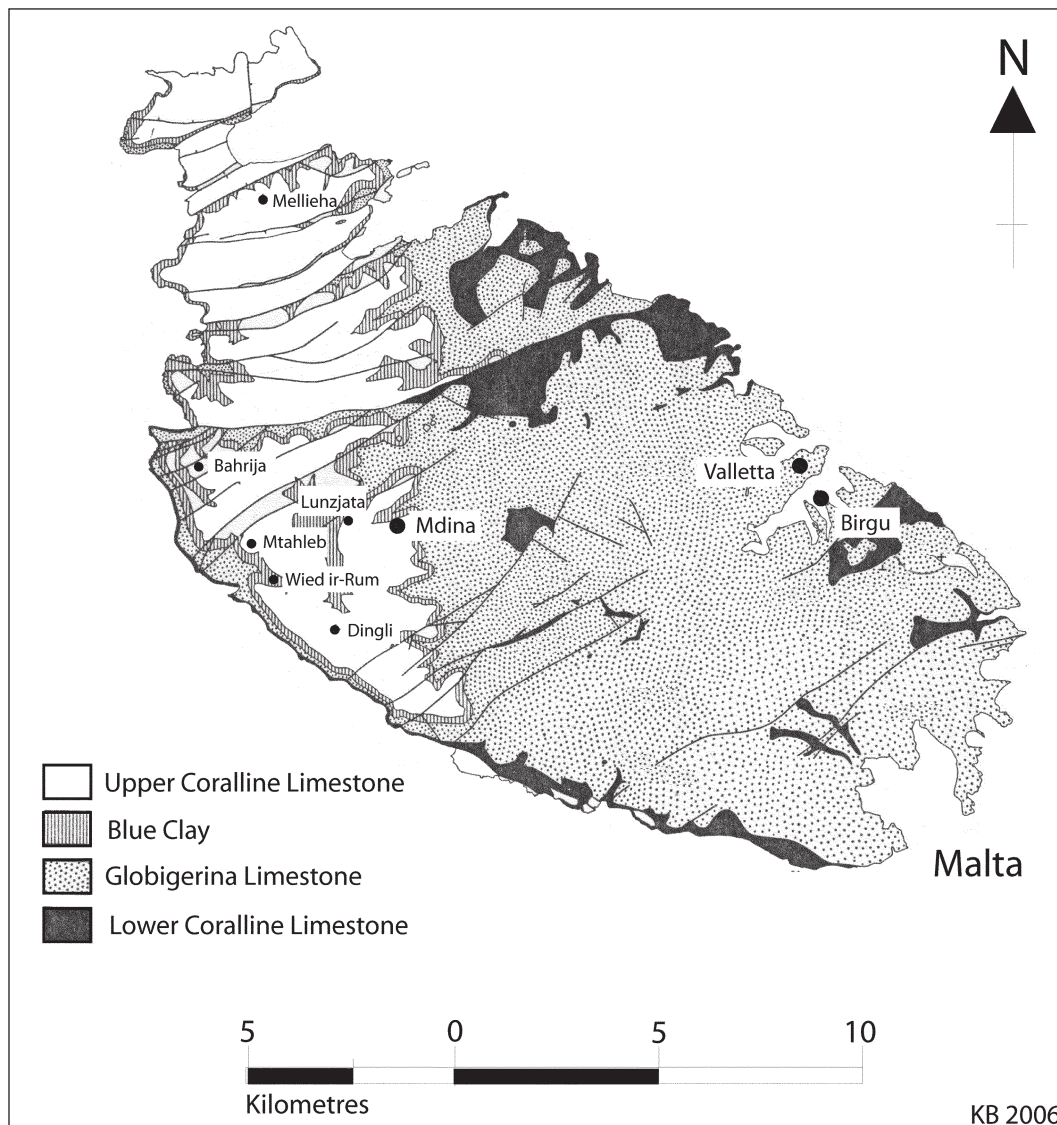


Figure 11.2: Geological map of Malta (after Bowen-Jones 1961, 24).

the availability of easily quarried rock, and there are examples at Cyrenaica, Bulla Regis and elsewhere of villas and other structures that are wholly or partially rock-cut (Buhagiar, M. 1984, 17). Malta was no exception, and the local archaeological record gives testimony to the widespread use of caves for dwelling, burial and cultic purposes since prehistoric times (Fig. 11.1). Worth mention are the human remains unearthed at Ghar Dalam dating to around 5000 BC. Archaeological material dating to the Ghar Dalam phase has also been discovered in the caves at il-Mixta, close to Għajn Abdul in Gozo. The Saflieni and the Xagħra Circle prehistoric burial complexes, besides being multi-period burial places, also had a cultic significance (Trump 2000, 90–2, 169, 184, 67–74, 177–8). The discovery of substantial amounts of Borg in-Nadur type pottery in Ghar Mirdum, in the territory of Dingli, points to the occupation of the cave by a Borg in-Nadur type, Bronze Age community (Mallia 1965, 9; see also <http://www.shurdington.org/gharmirdum/index.html>).

Excavations by the Italian, *Missione Archeologica Italiana a Malta* (the Italian Archaeological Mission at Malta), at Ras il-Wardija in Gozo in the late 1960s revealed the extensive use of a rock-hewn cave during the Punico-Hellenistic era (Buhagiar M. 1988, 69–87). Fragments of late-Roman coarse pottery and medieval glazed ware at l-Għar ta' Iburdan in the territory of Rabat (Malta), denote the cave's probable use for habitation purposes in late Roman and Byzantine times (Hägglund 1976–7, 397; Buhagiar, M. 1988, 17).

In the late Middle Ages many Maltese were cave dwellers. Jean Quintin is the first known author to mention troglodytism in Malta (Quintin d'Autun 1536, 31). His *Insulae Melitae Descriptio* (A Description of the Maltese Islands), published in 1536, shows Quintin's surprise at the great number of cave-dwellers inhabiting the rural section of the island – a trend which probably reflects a long-established medieval life-pattern in the Maltese countryside. Even the maritime settlement of Birgu appears to have been, partially at least, troglodytic in nature. Toponyms starting in *Għar* (cave) as is the case with Għar il-Kbir in the territory of Dingli and l-Għar ta' Iburdan, territory of Rabat (Malta), also hint at the diffused nature of troglodytism in Malta (Wettinger 1975, 181–216). Late medieval documentation also shows how caves were used during this period for the purpose of animal pens (Wettinger 1982, 34).

The troglodytic phenomenon was widespread in the Mediterranean region throughout the middle ages whenever environmental conditions proved favourable. Arid and semi-arid areas which suffered from a lack of timber, but which on the other hand provided plentiful

natural rock shelters and an abundance of easily quarried stone, were instrumental in conditioning a type of architecture which was entirely stone oriented besides encouraging cave-dwelling.

The cave-dwelling phenomenon during the late medieval period

The roots of Maltese late medieval troglodytism probably lie in the twelfth and thirteenth centuries, and are the result of new attitudes adopted following the Norman reconquest of 1127 (Buhagiar, M. 2005, 40). A strong troglodytic tradition during this period might possibly reflect coordinated attempts at increasing the agricultural output of specifically designated countryside areas of Malta.

A reconstruction of the Maltese landscape in late antiquity and the medieval period at large is still a work in progress, but the available archaeological and historical documentation hints at a clear-cut break between the Byzantine period, which ended in 870 AD, and the Norman occupation of Malta, which commenced in 1091 AD. The definite Muslim conquest of 870 was marked by bloodshed and destruction, probable retaliations against the Christian inhabitants and an orchestrated demographic shifting programme which included the death or exile of the local bishop with the island being reduced to an uninhabited ruin (Brown 1975, 81–84; Luttrell 1975, 21–28; 1992, 100; Wettinger 1986, 90–91). The post-870 phase is unfortunately sparsely documented and the majority of the tenth century Muslim sources concerning Malta are silent on the period between 870 and 1048. One of the handful of known sources dating to this period hints at Malta being an uninhabited island containing large flocks of sheep, wild donkeys and an abundance of honey (Dalli 2006, 27). Malta was, moreover, visited by ship builders, because its wood was of the strongest kind, by fishermen, due to the tastiness of its fish, and there is also the mention of trees of pine, juniper and olive (Brincat 1995, 11–12).

It is unlikely that Malta was totally depopulated during this period (Luttrell 2002, 100; Molinari and Cutajar 1999, 9–16; Cutajar 2004, 58), but a drastic decline in population numbers is not improbable. By way of hypothesis, it is likely that Muslim retaliation against the local population would be primarily directed towards the urban centres of the archipelago, namely Mdina and Birgu in Malta, and the Citadel in Gozo. Even if an ethnic cleansing policy was employed, it is doubtful that this would efficiently target more remote countryside locations which could still harbour small communities accustomed to living

at subsistence or near-subsistence level. Cliff-face settlements excavated in remote areas of the Maltese countryside provide an excellent case in point. Anyone unfamiliar with the topography and terrain is almost certain to overlook the presence of inconspicuous troglodytic settlements which blend extremely well with their natural surroundings. Nonetheless, even if this was the case, the remaining inhabitants appear to have been too few in number to influence the subsequent course of events – even to leave any trace of their existence in the spoken language (Wettinger 1986, 95). A linguistic analysis of the Maltese language excludes any signs of language stratification, with the linguistic basis appearing to be solely of an Arabic origin (Brincat 1995, 1–7). There are furthermore, close parallels between Sicilian and Maltese toponyms which suggest intimate Sicilian – Maltese linguistic connections (Brincat 1995, 27).

Historic documentary sources claim that Malta was once more repopulated by the Muslims in 1048–9, in time to ward off a Byzantine invasion – a fact which has been tentatively interpreted not as being a sure sign of the island's depopulation in earlier centuries, but from the perspective of a large-scale Muslim colonisation which possibly took place as late as the early eleventh century (Dalli 2006, 58–62). The fact that women and daughters formed part of this early eleventh century wave of migration makes it improbable that the sole purpose behind the colonisation of Malta during this period was the establishment of a garrison. Demographic expansion connected with a period of economic prosperity experienced by Sicily during the first half of the eleventh century, the Sicilian civil war between the different Muslim caliphates which commenced in 1038, or even fear of the Normans, whose territorial ambitions in the Southern Italian peninsula certainly made them a force to be reckoned with, are all possibilities which must be given their due weight. The uncertainty caused by the impending Norman conquest of Sicily in the eleventh century led a section of the wealthier Muslim families to emigrate from Sicily (Brincat 1995, 20–21; Von Falkenhausen 2002, 262; Metcalfe 2003, 28), and there is the remote possibility that several opted to settle in Malta.

Malta was far from a deserted place around a century later, when the Muslim geographer Al Idrisi speaks in terms of the archipelago as being, '...away from the island of Pantelleria at a distance of 100 miles towards the east one finds the island of Gozzo with a secure port. From Gozzo one goes to a small isle named Kamuna. From there going eastwards one finds the island of Malta. It is large and has a sheltered place on the east side. Malta has a town and abounds in pastures, sheep, fruit and honey' (Wettinger 1986,

97; for a slightly different translation of Al Idrisi see Amari 1880, vol. i, 53, 75). Investment in agricultural intensification, which seemingly took place in the post-1127 period, appears to have been generally successful, and succeeded in placing to the forefront cotton cultivation, an item of luxury trade, mention of which is made in a property inventory drawn up in Genoa in June 1164 (Buhagiar, M. 2007, 18, 40). Furthermore, it is significant that twelfth century pollen samples retrieved from the Marsa plain adjoining the east coast of the island indicate an increase in wood, cereal and flax vegetation (Fenech 2007, 112), and appear to confirm the agricultural intensification process the island is proposed to have been experiencing during this period.

There is no direct archaeological evidence for any major settlement outside Mdina and its suburb of Rabat throughout most of the Norman and early post-Norman period, but it is my suspicion that several rock-cut settlements in the north-west sector of Malta associated with *giardini*-type cultivations (orchards), might have already made their appearance during this period. Similarly, landscape evolution in South Italy during the Norman period appears to have initially centred on the development of *giardini*-type cultivation and was only subsequently followed by the development of dry-farming (Martin 2002, 19). Furthermore, it is probably within the context of population recovery experienced in the western Mediterranean basin, which commenced during the eight and ninth centuries and gained momentum by the eleventh century (Martin 2002, 17), that the local troglodytic phenomenon has to be assessed. Population recovery was indeed the main driving force for fuelling an agricultural intensification process during this period.

It is possible that fertile valleys in the north-west sector of Malta, such as Wied Ħażrun, Wied ir-Rum, Ġnien is-Sultan and Wied Liemu, which contain extensive field terraces, water galleries, and rock-cut settlements, all formed part of this post-1127 intensification process. Field terracing construction coupled with the hydrological intensification of an area entails a labour intensive input, and it may take decades to completely transform a previously uncultivated landscape into an agriculturally productive one. The *Gumerin* (Gomerino) and *Deir Ilbniet* (Dejr il-Bniet) estates, both in the territory of Rabat (Malta), were already listed as *giardini* in 1317 and 1351 respectively (Bresc 1975, 152). Due to the availability of perennial water springs, *giardini* are capable of producing a summer crop in an otherwise arid season, thus increasing the economic value of such land.

Water galleries (Fig. 11.3), the life-source of *giardini*-type cultivations, are hewn into Mtarfa Member

deposits at a right angle to the rock-face and are commonly located in the upper terraced sections of valleys, a short distance below troglodytic settlement sites and above agricultural land. Galleries are generally easily identifiable from their rectangular-shaped rock-cut entrance that is on average 0.8m wide and a little more than 1.5m high and are located in areas of northern and north-western Malta and areas of Gozo which possess the necessary geological stratification (Buhagiar, K. 2007, 119–121). There are instances; however, where the gallery entrance lies in a cave's interior.

The depth of such galleries is unknown, but several of the recorded water tunnels may well be over half

a kilometre deep. A gallery partially investigated at Lunzjata in the territory of Rabat (Malta) is over 90m long. The investigation of difficult to access water galleries has in recent years been facilitated by the use of a remotely operated experimental submersible camera (Fig. 11.4), equipped with video and sonar sensors, digital compass, robotic arm and a Global Positioning System (GPS) locator (see <<http://users.csc.calpoly.edu/~cmclark/MaltaMapping/index.html>>). Remote gallery exploration was indeed a breakthrough when it comes to the mapping and investigation of submerged gallery sections.

All galleries provide the surrounding area with a perennial water source, though the volume of retrieved



Figure 11.3: Rock-hewn water gallery at Santi, territory of Rabat (Malta). The canal at the base of the gallery channels the extracted water towards the gallery entrance.

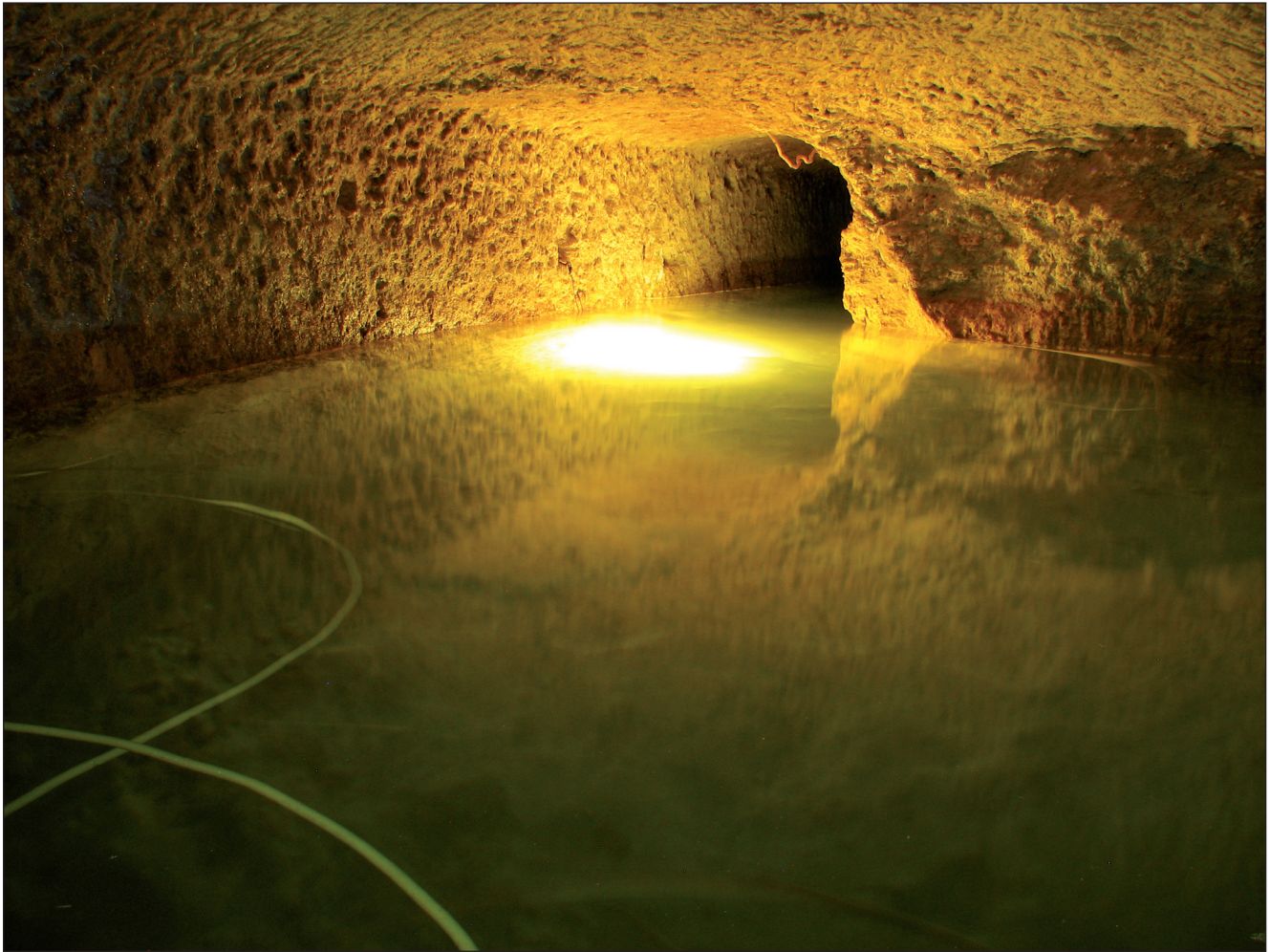


Figure 11.4: The Remotely Operated Vehicle (ROV) in action whilst investigating and mapping the Lunzjata water gallery in the territory of Rabat (Malta).

water varies from one gallery to the other. In order to ease the flow of water retrieved from the perched aquifer, a canal is often carved into the gallery floor. Galleries are generally level with the highest terraced field on the valley side, with water being transported from the gallery's entrance to any adjoining and underlying fields by means of stone canals. The dating of the Maltese galleries is a task which requires caution, but they closely resemble Qanat-type water extraction systems which probably filtered into Malta through neighbouring Sicily (Buhagiar, K. 2007, 118–122). Field trips to Sicily have so far succeeded in the identification of three such galleries at Enna, S. Lucia di Mendola in the territory of Palazzolo Acreide, and Ferla in the territory of Syracuse. The first recorded instance for water galleries in Sicily is the early 1300s, but they are likely to have been present in the landscape at a much earlier stage.

It has been observed by Wettinger that the north-west sector of Malta is 'strangely bare' of known *rahal* (village) settlement sites, either due to a defect in the surviving documentation, or because the Maltese countryside had been depopulated for so long that the surviving placenames dropped their *rahal* prefix (Wettinger 1975, 190; Fiorini 1993, 118–119). Personal fieldwork and non-invasive field surveys carried out in north and north-west Malta were in many ways an eye-opener and make it probable that it was the *ghar*-type settlements which prevailed in these areas. Sicilian cave-sites were also distinguished by the *ghar* prefix and it is frequent for Maltese caves to derive their names from Muslim personal nomenclature. A translation of *Ghar Dalam* is not the 'Cave of Darkness', but the 'Cave of Dalam' – Dalam being a surname which survived right into the fifteenth century (Fiorini 1988, 14).

The majority of such settlements, even though presently lying in an abandoned state, still survive to a fair degree. There are two distinct types of medieval cave-settlement in Malta: first, the adaptation of natural karst depressions; and, second, cliff-face settlements. Cave usage varies from cultic worship to human habitation, animal pens or storage spaces often connected to agricultural usage, animal-driven mills (*centimolo*), and apiaries. Examples of karst feature settlements are Ghar il-Kbir and Latmija. These involve the occupation of one of more caves hewn into the sides of an open-air, natural rock-hollow, and in the case of Ghar il-Kbir, it appears that the settlement was geared towards a pastoral economy (Buhagiar, K. 1997, 64–70). Because karst feature settlements occur in Upper Coralline deposits, it is probable that the hard geological formations frequently restricted cave enlargement.

Cliff-face settlements are located within the sides of ridges and valleys and involve the occupation of a series of natural or artificially enlarged caves. The majority of the caves surveyed fall under this category, and are often hewn into a surprisingly brittle Upper Coralline deposit locally referred to as the Mtarfa Member. This formation is very easy to excavate, and does not make the process of cave excavation and enlargement as labour intensive and time consuming as commonly argued. Indeed, the location of most cave-settlements suggests that their occupants possessed a sound knowledge of the local geology. Mtarfa Member deposits are commonly located only a few metres above the perched aquifer, often successfully tapped by means of an underground gallery, ensuring the settlement and the underlying fields had a perennial water source.

The majority of the local troglodytic settlements was probably subject to an organic type of development and appears to be closely associated with the development of *giardini*. Cave re-occupation and enlargement often involved the destruction of previous occupation phases, but, in the absence of stratified deposits, dating is a difficult task. The presence of animal troughs easily identifies caves utilised in their last phase of occupation as animal pens. Caves containing no water or feeding troughs were used either for human habitation or for storage purposes. Tethering holes are common features associated with both the human and animal occupation of caves.

Caves frequently cluster together into units, but isolated caves containing evidence of human or animal habitation are fairly frequent. A terrace, often present on the outside of cliff-face settlements, is a common addition aimed at linking together two or more adjoining caves (Buhagiar, K. 1997, 72–86). Dry- and wet-stone walls commonly screen a large section

of the caves' entrance, leaving an arched or square-headed doorway as the only means of access to the dimly lit cave interior (Fig. 11.5). Narrow slits in the upper section of the cave screening wall sometimes act as windows, and dry-stone constructions frequently partition cave interiors into a series of individual spaces. There are instances where cave screening walls and interior partitioning walls were occasionally plastered and whitewashed, but the widespread nature of this practice in the late medieval period has still to be appropriately verified.

Maltese cave-settlements are accessed by means of one or more well-defined footpaths, some of which have a cobble-type paving. Numerous other similarly surfaced paths probably lie buried beneath modern concrete paving. In areas of difficult terrain, dry-stone ramps facilitated access to troglodytic settlements. The ramps, built parallel to the cliff-face, are similar in method of construction to dry-stone walls, and a soil and rubble infill, sometimes capped by means of a cobbled surface, bridges the gap between the cliff-face and the rubble wall.

Two distinct types of roofing strategies were recorded. When the dry-stone screening walls were built around 0.6m apart from the overhanging rock-ledge roofing the cave, the intermediate gap was bridged and sealed by means of roughly sawn, thin ashlar slabs. These rested against the rock-face at an angle that generally varies between 20° and 40°, secured in place by means of mortar, and made watertight with a *deffun* or *cocciopesto* covering (in both instances this consists in a mixture of ground pottery and lime mortar) (Fig. 11.6). This technique was probably resorted to in an attempt to gain more internal cave space.

A light roof structure often covered those caves with screening walls, and was built at a distance of over 0.7m from the overhanging cave roof. It is unlikely that the roof structures observed by the author predate the first decades of the twentieth century, but the materials utilised and the construction methods employed remained essentially unchanged since the late medieval period, and are probably similar to those recorded by Quintin in the 1530s (Quintin de Autun 1536, 31). Only dead vegetal material, easily obtainable from the surrounding countryside, was utilised. Unrefined carob and fig tree branches were often used as load-bearing members instead of timber beams, and were normally spaced between 0.6 and 0.8m apart. Large quantities of dried bamboo reeds bridged the gap between each beam. A thick, compact layer of hay finally capped the roof, presumably tied to the beams in order to prevent its dispersal during rough weather (Fig. 11.5).

Several caves to the north of the island were also used as bee hives for honey production. Known locally as *mġiebah*, most of these are probably of an early modern date, and belong to the phase following the abandonment of a number of cave-units in the interim late sixteenth to early eighteenth century, when a number of these were converted into apiaries. The entrance of such caves is likewise screened off by means of a dry-stone wall, the only access to the interior often being via two square-headed doorways. Bee-apertures, usually in the shape of rectangular perforations are usually neatly arranged in one or more registers in the cave screening wall. The arrangement of the interior is rather simple, often consisting of two registers of shelves abutting the interior screening wall on which are mounted the earthenware hive-jars.

For centuries, the rural inhabitants of the island lived at an almost subsistence level. Caves portray a marked absence of unnecessary ornamentation and were primarily conceived as being practical rather than fashionable. Cave-dwelling remained a common feature of the Maltese rural landscape until the first decades of the twentieth century, but it is likely that troglodytism drastically decreased in popularity following the appearance of the *razzett* (farmhouse) structure, which even though of an unknown antiquity, probably dates to the early modern period, and was a direct response to the economic well-being generated by the Hospitaller Order of the Knights of St John of Jerusalem in seventeenth century Malta (Buhagiar, M. 2005, 49).

The emerging scenario based on personal research shows how, in the early modern period and possibly earlier, a number of peasant families residing in the countryside area surrounding the *Civitas* (Mdina), owned a small property, often consisting of one or two rooms in the suburb of Rabat (Malta), which were meant to function as an overnight temporary shelter whilst visiting or conducting agriculture-related business there (Mary Grace Vella pers. comm. 22/4/2008). Should this have been the case, it might also help explain why the militia registers compiled during the course of the fifteenth century speak in terms of a complete demographic vacuum in the north-west section of Malta, whereas it is more than evident that, due to the well-managed water resources, field terracing and the overall fertile nature of the land, it is highly improbable that such territory could be allowed, at any stage, to remain vacant. The complete absence of *rahal*-type toponyms in the north and north-west sectors of Malta can probably be explained by the fact that the exposed Mtarfa Member deposits and the easily accessible perched aquifer water sources, tapped by means of galleries, encouraged the presence of troglodytic settlements.

The sighting of Maltese troglodytic settlements also parallels the Sicilian model, where the location of most cave-settlements is likewise conditioned by the available geological profile. Sicilian cave-sites are often sited in naturally defensible, difficult-to-reach places (Messina 1989, 109–11), and troglodytic settlements such as Scicli, Cava d’Ispica and Pantalica were observed by the author to be excavated within a friable sedimentary rock deposit which is visually identical to the Maltese Mtarfa Member rock stratum. The caves’ setting in relation to their surrounding landscape also closely parallels the Maltese model, the majority of which command unobstructed views of the surrounding area and underlying fields, which in the past were probably tilled by the cave occupants themselves.

The rock-cut churches and oratories

Maltese rock-cut churches can be divided into two different categories: urban; and rural. Whilst the setting in which they are located is different, both share a number of common characteristics and are the product of the same religious pressures and social-cultural conditions. The urban churches lie within the precincts of palaeochristian hypogea and tend to show a greater preoccupation with architectural enhancement and elaboration than their rural counterparts (Buhagiar, M. 2005, 58). Rural rock-cut churches are more simplistic than their urban counterparts and form an integral part of the troglodytic landscape in which they are located. Cave churches adjoin cliff-face settlement sites and are almost exclusively excavated into Mtarfa Member rock-deposits. As is the case with the cave church dedicated to St Nicholas at Mellieħa, which gave its name to the underlying valley, troglodytic churches must have been a landmark within the context of the late medieval Maltese landscape. The same applies to the cave churches of St Peter in the territory of Naxxar and St Brancatus at Ghargħur, the dedication of which was assimilated in the toponymy of the surrounding area (Buhagiar, K. 1997, 72–77, 84–86).

Rural cave churches were of a rather intimate size, had a dimly lit interior, and were frequently accessed from the rock-terrace which connected two or more cave settlement units. The cave church exterior was commonly enclosed by a dry-stone wall, the only means of interior access being a narrow square-headed doorway. The diffused nature of the troglodytic phenomenon and rock-excavated churches in late medieval north and north-west Malta is perhaps illustrated by the fact that the principal cave church of Mellieħa occupied the status of a parish in the



Figure 11.5: Cave cluster, fronted by a wet-rubble wall and partially roofed over by a light-roof wooden structure at Il-Bahrija, territory of Rabat (Malta).

fourteenth century, and assisted the spiritual needs of nearby cliff-face settlements (Wettinger 2002, 41–47).

Both rural and urban churches were probably fitted with either masonry or wooden altars and in the instance of the cave church of St Leonard in the territory of Rabat (Malta), and that dedicated to St Peter at Naxxar, there is evidence of a flagstone floor in the interior, or a cobbled passageway facilitating access to the often difficult-to-reach entrance. Cave church interior furnishing was probably sparse, with *dukkien* type benches (rock-excavated benches aimed at providing seating accommodation) sometimes excavated into the rock-face along the side walls. Several of the surviving churches were decorated by murals which survive in a precarious state of preservation. The surviving murals speak a common iconographic language and are Siculo-Byzantinesque in tradition and inspiration (Buhagiar M. 2007, 98).

The dating of both urban and rural churches is difficult and constant cave reutilisation makes it improbable that any archaeologically relevant deposits survive within. In many instances the area fronting caves, including cave churches, has been too disturbed to make its archaeological assessment a viable exercise. The most reliable dating source remains the art historical analysis of the preserved murals, with those surviving at Abbatija tad-Dejr and the rock-cut oratory of St Agatha's catacombs, both at Rabat (Malta), being the most important. The analysis of the sinopia of a possible Deësis (the representation of a blessing Christ, the Virgin Mary and St John the Baptist) located in the apsed niche of the east wall in Oratory I at Abbatija tad-Dejr, coupled with data furnished by a nineteenth century report on the painting, hint at a work of art which stylistically comes from the milieu of Siculo-Norman Sicily, where similar representations



Figure 11.6: Detail of a wet-rubble wall enclosing access to a cave-compound at Bahrija, territory of Rabat (Malta).

of Christ the Pantokrator are frequently encountered in the rock-cut and built churches (Messina 1979, 49; Buhagiar M. 2005, 59–61). Within the same oratory at Abbatija tad-Dejr are two other murals, probably showing the archangel Michael and St John the Evangelist. The icons are contained within a deep red frame and probably carried the legend with the saints' names in Latin characters. The combination of the Byzantine style with Latin text is another reliable dating element, even though such an artistic style remained a standard practice locally till at least the fifteenth century (Buhagiar M. 2005, 61).

Another mural painting surviving within the adjoining Oratory II at Abbatija tad-Dejr, today on display at the National Museum of Fine Arts at Valletta, shows the fusion of the Crucifixion and the Annunciation scenes – the amalgamation of both themes suggesting a fourteenth century date (Buhagiar M. 2005, 63), and parallels closely a painting at the *Grotta dei Santi* at *Monterosso Almo* at Ragusa, Sicily, which also seems to be of a coeval date (Messina 1989,

117). Similarly, another two Siculo-Byzantine icons survive in an oratory at St Agatha in Rabat. It is probable that the icons belonged to a more extensive fresco-cycle destroyed in the late-fifteenth century or early sixteenth century to make way for a series of Late Gothic devotional images (Buhagiar M. 2005, 65–66).

Even though there is no direct historical documentary evidence, it has been proposed that in post-Islamic times, several of the Maltese cave-churches were administered by Greek-rite Basilian monks (Buhagiar M. 2007, 317–338). This hypothesis is based on Sicilian and Pantallerian models where Greek-rite monks operating from rural monasteries and anchoritic stations saw to the spiritual needs of rural, often isolated communities (Luttrell 1975, 37–38). Much of the argument centres round the meaning of the word *Dejr*, which can mean either a cow shed, or animal pen or a monastic building (Wettinger 2000, 107–108). Used all over the Islamic East, Muslim Sicily and Spain, *dejr* is often associated with a Christian monastic establishment. Whilst making no distinctions between Greek and Latin-rite clergy, historical Sicilian documentation favours the presence of Greek monks who carried out their evangelisation programme amongst the Muslim communities of the island.

Local archaeological evidence does hint in an indirect manner towards the presence of Greek-rite monasticism, but the issue is still the subject of debate and necessitates further scholarly investigation. So far, none of the known cave churches and troglodytic settlements can be associated with monastic establishments, but of particular interest is the site of Abbatija tad-Dejr, where an impressive palaeochristian burial complex was re-utilised as a cult centre during the post-Muslim period and is the foremost contender for a Greek-rite site during this period (Buhagiar M. 2005, 58–60). *Raheb* toponyms may also offer valuable clues on this issue, with the word either meaning monk or hermit. The modern Maltese word for monk is *patri*, derived from the Italian *padre*. There is the possibility that *raheb* was used to denote an Augustinian friar during the late medieval period, but, in all probability, the word's linguistic origins recall a pre-late fourteenth century date. It is furthermore significant that the name of a field located close to the Abbatija tad-Dejr site is *Bir Rhiebu* (the monk's well) (Buhagiar M. 2005, 58–61; 2007, 95).

Conclusions

The emergent scenario, based on the available archaeological, historical and toponomastic evidence eludes to the ever increasing probability that present day settlement and field patterns owe their origin to

twelfth century agricultural intensification efforts. Landscape transformation must have entailed significant capital investment, and was, in its initial stages, a labour intensive process which consisted in the construction of terraced land and the excavation of troglodytic dwellings and water galleries in areas of exposed Mtarfa Member deposits. Both caves and water galleries are difficult to date, but it appears that in the latter instance these are twelfth or thirteenth century efforts in improving the hydrological potential of selected valley-sites. The resultant agricultural setup became eventually known as *giardino*.

The Maltese troglodytic phenomenon and landscape evolution appears to have close parallels with neighbouring Sicily and particular areas of South Italy. The Puglia region for instance has a semi-arid type climate, water-carved valleys, and garigue areas of karst formation and *terra rossa* (red-coloured soil deposits) which closely parallel the Maltese scenario. Landscape evolution in South Italy during the Norman period appears to have first centred on the development of *giardini*-type cultivations, then dry-farming, and, only at a later stage, the utilisation of waste-land for rough grazing and wood gathering (Martin 2002, 19). Within a Maltese context, dry-farming involved field construction, mainly on formerly Upper Coralline and Globigerina plains and appears to be closely associated with the widespread appearance during the late medieval period of *rahal*-type settlements.

For centuries, the rural inhabitants of the island lived almost at a subsistence level. They did not try to conquer or crush nature, but attuned to the challenge posed by topography. Cave-settlements portray a marked absence of unnecessary ornamentation and, together with rural structures when available, were conceived to be practical rather than fashionable. Rectangular recesses hewn into the rock walls of caves were frequently utilised for storage purposes. Habitable caves were presumably sparsely furnished and perhaps contained a table and door, apart from a couple of other wooden furnishings. Settlements were sometimes spread out on different levels, making the best possible use of the limited space available.

Each settlement is unique, and size, asymmetry and usage create endless combinations. Troglodytic settlements and any adjoining above ground vernacular architectural elements are often the result of successful human interaction with the landscape. These frequently complement and form an integral part of their natural surroundings. Cave-dwelling was probably not limited to rural areas. Carlo Castone Della Torre di Rezzonico wrote in a 1793 travel account that a number of families preferred to dig caves in the sides of the ditch surrounding Valletta and in the Cottonera area (located

in the south Grand Harbour area), rather than having to pay a housing rent (Eynaoud 1989, 61).

Future research will explore possibilities by which the agricultural landscape, cave-settlements and the water galleries discussed above can be scientifically dated. Of hindrance to this challenging exercise is the possibility that many of the caves included in the field survey may have been abandoned as late as in the first half of the twentieth century. This would have resulted in major disturbance of older layers. Moreover, it is likely that most cave-units only preserve shallow internal deposits and probably lack stratification. The investigation of terraced land fronting cave-settlements might on the other hand prove to be a more fruitful exercise and surface counts of potsherds can perhaps lead to the identification of a settlement's dumping ground. The employment of this method of investigation is likely to yield encouraging results in two troglodytic sites in particular: the St Nicholas cave-settlement in Mellieħa and a cave settlement site located below the cliff-face at Rdum Dikkiena in the locality of Siggiewi (Buhagiar K. 2003, 242). In both instances, concentrations of ceramic scatters were located in the terraced land underlying these settlements. Such an exercise would however require the availability of a more reliable Maltese medieval pottery typology (Luttrell 2002, 1–17; Molinari and Cutajjar 1999, 9–15).

References

- Amari, M. (1880) *Biblioteca Arabo-Sicula* 1. (Reprinted in 1982 with appendix of 1880).
- Bowen-Jones, H., Dewdney, J. C. and Fisher W. B. (1961) *Malta: Background for Development*. Durham, University of Durham.
- Bresc, H. (1975) The secrezia and the royal patrimony in Malta: 1240–1450. In A. Luttrell (ed.) *Medieval Malta: Study on Malta before the Knights*, 243–265. London, The British School at Rome.
- Brincat, J. M. (1995) *Malta 870–1054: Al-Himyari's Account and its Linguistic Implications*. Malta, Said International.
- Brown, T. S. (1975) Byzantine Malta: a discussion of the sources. In A. Luttrell (ed.) *Medieval Malta: Study on Malta before the Knights*, 71–87. London, The British School at Rome.
- Buhagiar, K. (1997) The Għar Il-Kbir settlement and the cave-dwelling phenomenon in Malta. Unpublished thesis, University of Malta.
- Buhagiar, K. (2007) Water management strategies and the cave-dwelling phenomenon in late-medieval Malta. *Medieval Archaeology* 51, 103–131.
- Buhagiar, M. (1984) Mediterranean architecture: medieval cave-dwellings and rock-cut churches in Malta. *Atrium: Mediterranean and Middle East Architectural and Construction Review* 3, 17–22.
- Buhagiar, M. (1988) Two archaeological sites: Ras Ir-Raħeb, Malta, and Ras Il-Wardija, Gozo. *Melita Historica* 10(1), 69–87.

- Buhagiar, M. (2005) *The Late Medieval Art and Architecture of the Maltese Islands*. Malta, Fondazzjoni Patrimonju Malti.
- Buhagiar, M. (2007) *The Christianisation of Malta: Catacombs, Cult Centres and Churches in Malta to 1530*. British Archaeological Reports International Series 1674. Oxford, Archeopress.
- Cistern Exploration Project (2009) available from: <<http://users.csc.calpoly.edu/~cmclark/MaltaMapping/index.html>>
- Cutajar, N. (2004) The archaeology of Malta's Middle Ages. In K. Gambin (ed.) *Malta Roots of a Nation: The Development of Malta from an Island People to an Island Nation*. Malta, Midsea Books.
- Dalli, C. (2006) *Malta: The Medieval Millennium*. Malta, Midsea Books.
- Eynaud, J. (1989) *Carlo Castone Della Torre Di Rezzonico – Viaggio Di Malta Anno 1793*. Malta, Midsea Books.
- Fenech, K. (2007) *Human-Induced Changes in the Environment and Landscape of the Maltese Islands from the Neolithic to the 15th Century AD*. British Archaeological Reports International Series 1682. Oxford, Archaeopress.
- Fiorini, S. (1988) Sicilian connections of some medieval Maltese surnames. In G. Brincat (ed.) *Incontri Siculo-Maltesi*, 104–138. Malta, Malta University Press.
- Fiorini, S. (1993) Malta in 1530. In V. Mallia-Milanes (ed.) *Hospitaller Malta 1530–1798*, 111–198. Malta, Mireva.
- Hägglund, R. V. (1976–1977) Għar Ta' Iburdan: un insediamento in eta tardo-Romana. *Kokalos*, 22–23 (Atti del iv Congresso Internazionale di Studi sulla Sicilia Antica, Rome), 396–399.
- Luttrell, A. T. (1975) Approaches to medieval Malta. A. T. Luttrell (ed.) *Medieval Malta: Study on Malta before the Knights*, 1–70. London, The British School at Rome.
- Luttrell, A. T. (1979) Malta troglodytica: Għar il-Kbir. *Heritage* 2, 461–465.
- Luttrell, A. T. (2002) *The Making of Christian Malta*. Aldershot, Ashgate.
- Mallia, F. S. (1965) A dagger from the second millennium before Christ at Dingli. *The Sunday Times* [Malta], 7th March 1965, 9.
- Martin, J. M. (2002) Settlement and the agrarian economy. In G. A. Loud and A. Metcalfe (eds.) *The Society of Norman Italy*, 17–45. Boston, Brill.
- Messina, A. (1979) *Le Chiese Rupestri del Siracusano*. Palermo, Istituto Siciliano di Studi Bizantini e Neoellenici.
- Messina, A. (1989) Trogloditismo medievale a Malta. *Melita Historica* 10(2), 109–120.
- Metcalfe, A. (2003) *Muslims and Christians in Norman Sicily: Arabic Speakers and the End of Islam*. London, Routledge.
- Molinari, A. and Cutajar, N. (1999) Of Greeks and Arabs and of feudal knights. *Malta Archaeological Review* 3, 9–16.
- Pedley, M., Clarke, M. H. and Galea, P. (2002) *Limestone Isles in a Crystal Sea*. Malta, P.E.G.
- Quintin d'Autun, J. (1536) Insulae Melita descriptio. In H. C. R. Vella (1980) *The Earliest Description of Malta (Lyons 1536)*. Malta, DeBono Enterprises.
- Skinner, M., Redfern, D. and Farmer, G. (1997) *The Complete A–Z Geography Handbook*. London, Hodder & Stoughton.
- Trump, D. (2000) *Malta: An Archaeological Guide*. Malta, Progress Press.
- Von Falkenhausen, V. (2002) The Greek presence in Norman Sicily: the contribution of the archival material in Greek. In G. A. Loud and A. Metcalfe (eds.) *The Society of Norman Italy*, 253–287. Boston, Brill Leiden.
- Wettinger, G. (1975) Lost villages and hamlets of Malta. In A. Luttrell (ed.) *Medieval Malta: Study on Malta before the Knights*, 181–216. London, The British School at Rome.
- Wettinger, G. (1982) Agriculture in Malta in the late Middle Ages. In M. Buhagiar (ed.) *Proceedings of History Week 1981*, 1–48. Malta, The Historical Society of Malta.
- Wettinger, G. (1986) The Arabs in Malta. *Malta: Studies of its Heritage and History*, 87–104, Malta, Mid-Med Bank Ltd.
- Wettinger, G. (2000) *Place-Names of the Maltese Islands ca. 1300–1800*. Malta, P.E.G.
- Wettinger, G. (2002) Mellieħa in the Middle Ages. In J. Catania (ed.) *Mellieħa though the Tides of Time*, 41–47. Malta, Mellieħa Local Council.
- Zammit-Maempel, G. (1977) *An Outline of Maltese Geology*. Malta, G. Zammit-Maempel.