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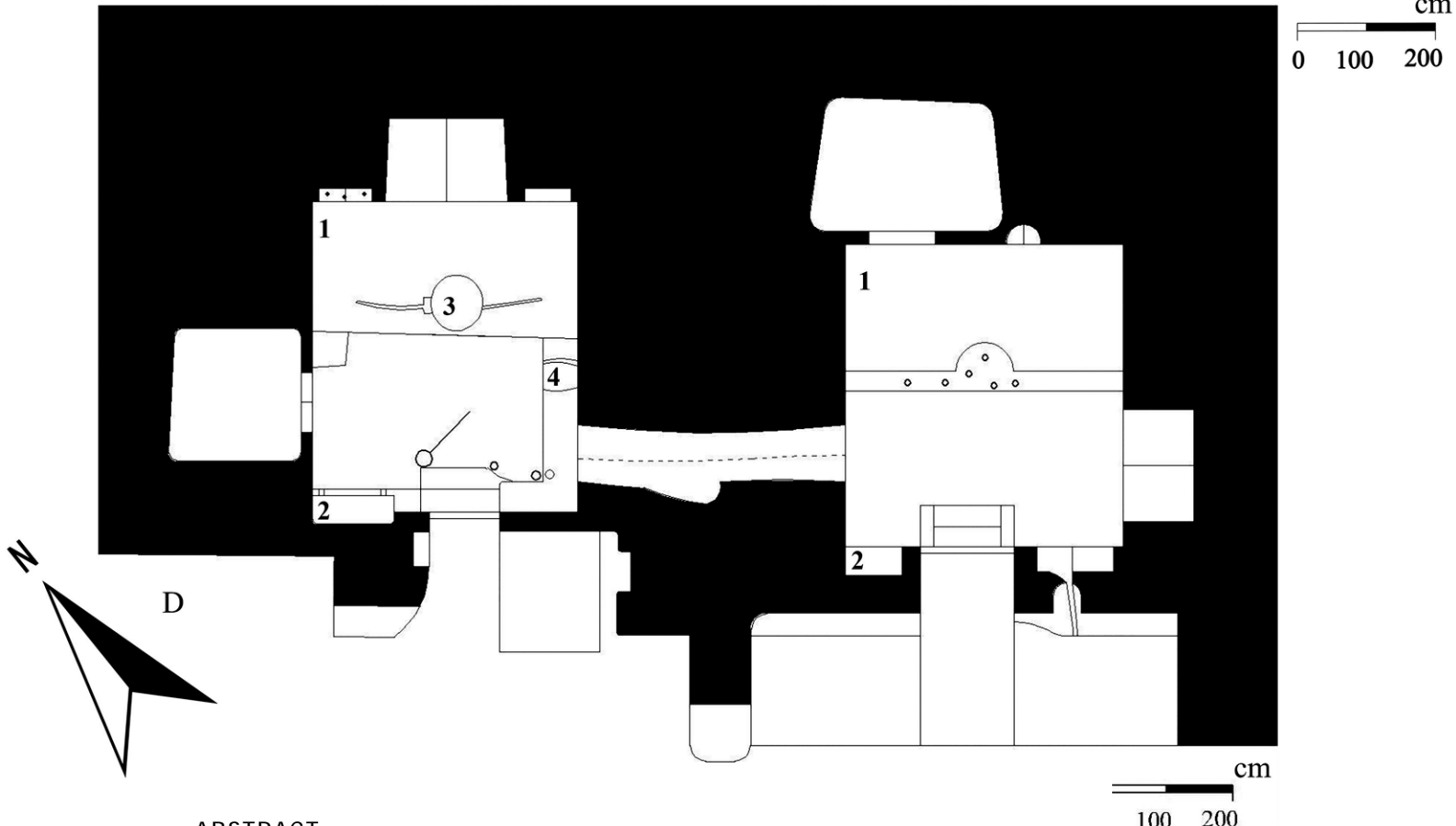
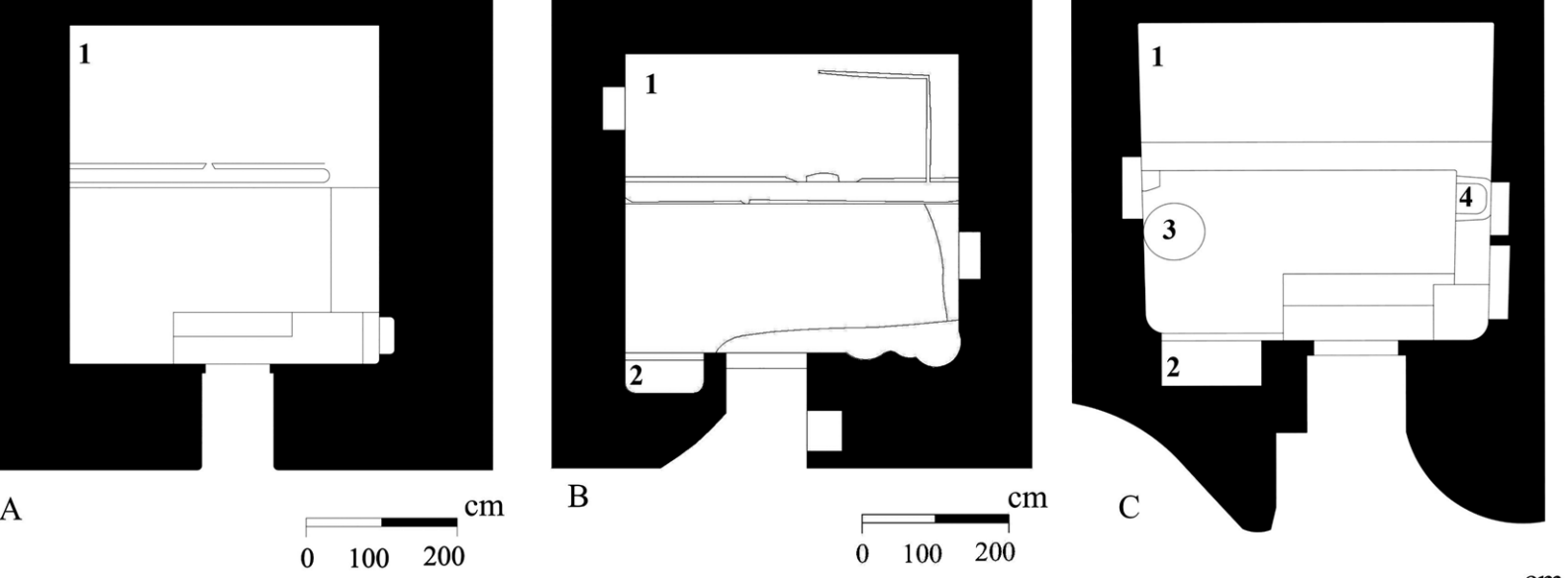
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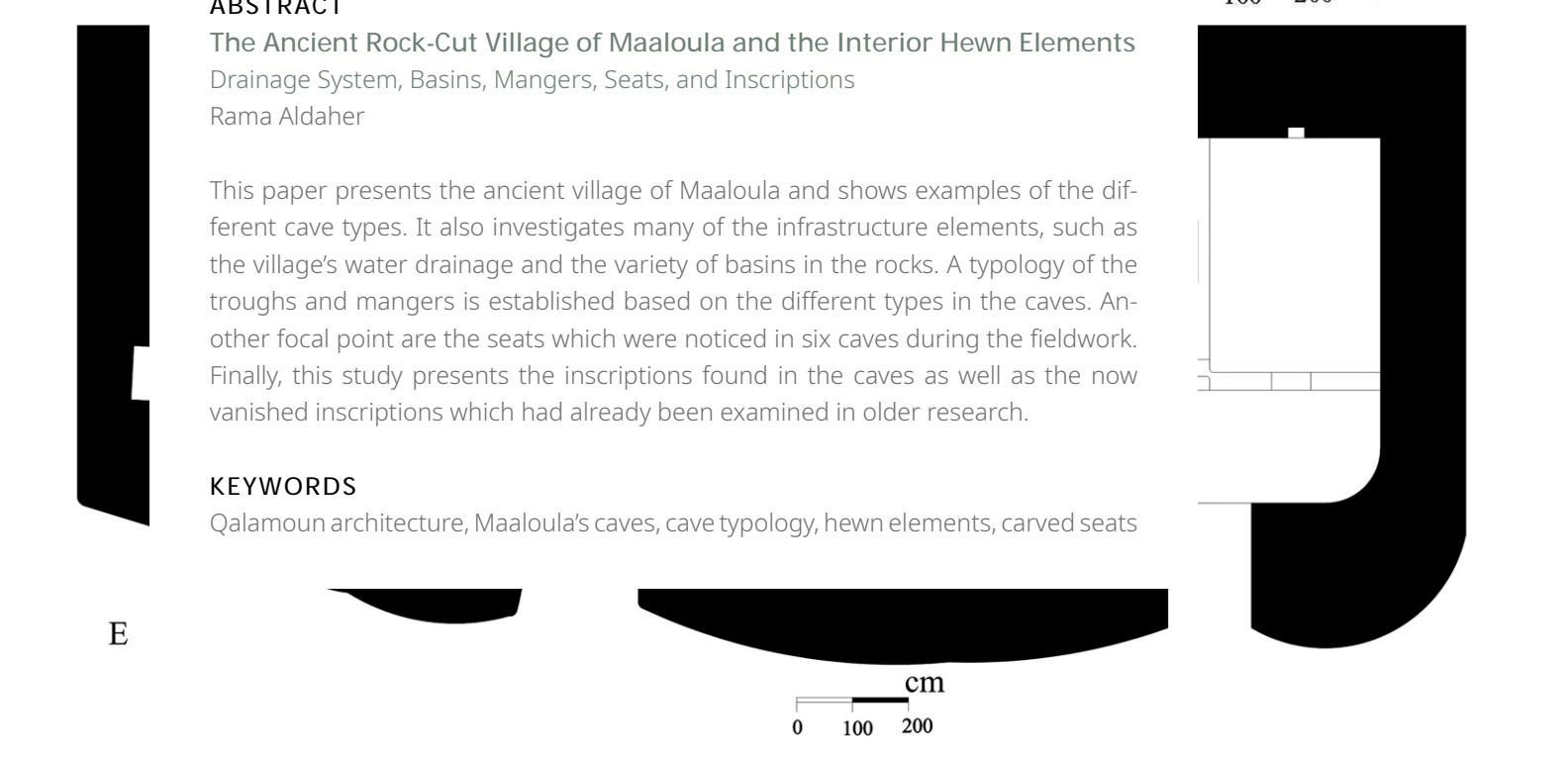
ABSTRACT

The Ancient Rock-Cut Village of Maaloula and the Interior Hewn Elements
 Drainage System, Basins, Mangers, Seats, and Inscriptions
 Rama Aldaher

This paper presents the ancient village of Maaloula and shows examples of the different cave types. It also investigates many of the infrastructure elements, such as the village's water drainage and the variety of basins in the rocks. A typology of the troughs and mangers is established based on the different types in the caves. Another focal point are the seats which were noticed in six caves during the fieldwork. Finally, this study presents the inscriptions found in the caves as well as the now vanished inscriptions which had already been examined in older research.

KEYWORDS

Qalamoun architecture, Maaloula's caves, cave typology, hewn elements, carved seats



The Ancient Rock-Cut Village of Maaloula and the Interior Hewn Elements

Drainage System, Basins, Mangers, Seats, and Inscriptions

1 Historical Framework

1 Bloto Olo is the name of the ancient village in Maaloula.¹ It is in the Qalamoun region, on the Anti-Lebanon mountain range, around the monastery of St. Sergius. Syria became a Roman province in 64 BC, with Antioch as the capital. The Lebanon mountain range was handed to the Romans that year to establish borders for the province. However, Maaloula and other ancient towns with distinct provinces were administered by the Iturean and Herodian dynasties until the end of the 1st century AD.² The territory of the Abilene tetrarchy reached as far north as Maglula (the older name of Maaloula) with Abila as the capital and Jabruda where an inscription mentioning Agrippa's son was discovered. The Abilene tetrarchy is closely connected to the name Lysanias, its ruler from 40-36 BC.³ Lebanon and Anti-Lebanon's mountain ranges were unstable for a long time due to the continued conflict between the Romans and the indigenous population.⁴

2 The persistent military presence impacted the lives of the long-established civilian population. The symbiotic relationship grew stronger as the occupation was supplemented by locals and reduced to a semi-peasant border colony. Due to this situation, the territory of the former Abilene tetrarchy was treated as a separate administrative unit. It was a zone of similar non-urbanised districts on the east side of the Anti-Lebanon confined to the north and northeast, including the territories of Maglula (Maaloula), Jabruda (Yabroud) and Danaba.⁵

3 Consequently, Maaloula was a local settlement influenced by the Roman occupation, and for years, it was part of the Roman empire, leading to an essential position as an alliance. The location saved it from significant transformation over time. The Roman civilisation affected the inhabitants where many architectural traces exist; on the other

1 Coordinates: 33°50'41.5" N, 36°32'32.1" E.

2 Aliquot 2012, 129.

3 Jones 1938, 208.

4 Schürer 1891, 337.

5 Alt 1950, 33.

hand, the local architecture was the main. During the Byzantine period the Abilene tetrarchy was divided into two so-called 'climata': Abila and Maglula.⁶

2 The Hewn Architecture in Qalamoun Region

⁴ Rock-hewn shelters are the typical architecture in the region. Maaloula is not the only town with rock-cut shelters in the Qalamoun Mountains. This region is geographically well defined: its plateau stretches from the desert to the Anti-Lebanon. Several tiny settlements are scattered throughout its area, making communication challenging. This orographic system does not permit extensive watercourse development; instead, settlements were located close to natural sources where human habitat was created since the earliest times. Today, there are at least 31 settlements in this very impoverished area, some, like Yabroud and Nébeck, form large towns of 8–9,000 inhabitants, and the others, like Ras-el-Ain and Bakh'a, have barely 300.⁷

⁵ There are no studies considering the carved settlements in Qalamoun, while on the other hand many different investigations examined the carved monasteries in many locations. Leeming in 2018 published his research on using caves as monastic cells as a common practice in Eastern and Oriental monasticism. It's not entirely apparent how this practice became ingrained in Christian Eastern monastic practices, even if the literary evidence from groups like the Essenes shows a connection between ascetic activities and living in caves.

⁶ Leeming argued that, naturally, the geological conditions of each particular place determine the viability of cave monasteries or rock-cut churches of any kind. As a result, only one region in Syria is suitable for this type of monument: Qalamoun. It includes several predominantly Muslim or Christian communities situated in the foothills of the Anti-Lebanon mountain range. Saydnaya and Maaloula are well-known Christian pilgrimage locations, home to sanctuaries honouring the Virgin Mary and St. Thecla, respectively. Though none of the towns' monasteries and convents have traditional rock-cut foundations in the sense that were found elsewhere, they do include some aspects of the local rock-architecture.

⁷ Leeming presents Deir Mar Musa al-Habashi in Nebek as a typical lavra configuration, where the monastery's first occupants lived in the caves surrounding a central chapel, refectory, and library complex constructed on an east-facing spur of the limestone mountains. An active scriptorium or at least a monastic library was supported by a monastic community at the site by the late 7th century. According to the archaeological assessment, the location was formerly most likely a Roman fort overlooking the valley of limes, which was converted for monastic use in late antiquity.⁸

⁸ Immerzeel and Kleiterp (2011) as well as Çetinkaya (2017) studied Deir Mar Tuma, approximately 2 km north of Saydnaya, at 1670 m a.s.l. The complex is close to a contemporary monastery. It comprises a walled courtyard with the temple church in the centre and other rock-cut cavities. The nature of the pre-Christian complex is revealed by the few inscriptions discovered at the site. These consist of a slab with a portion of a lengthier dedicatory inscription set in the eastern outer wall, a block with a Greek inscription integrated into the ancient pronaos, and a stone with an Aramaic inscription.

⁶ Due to an inscription of Agrippa II discovered north of Jabrud, 'climata' refers to toparchies: Jones 1937, 229–233.

⁷ Nasrallah 1940, 83.

⁸ Leeming 2018, 169–171.

9 There are several manufactured rock shelters around the church and monastery, probably pre-Christian and perhaps pre-Roman. While some of these grottos have been restored and are now utilised as supply and rainwater depots, others may have served as tombs or as housing for the construction workers, temple staff, and later monks.⁹ 'House-type' or 'temple-type' tombs were terms used to describe buildings with a shape akin to temples that were utilised for interment. This kind is widespread in Syria.¹⁰ Çetinkaya mentions small remains of carved portions of a sizable rocky hill, intended initially to be burial sites, but saw a shift in its use over time.

10 The caverns were likely removed during the ensuing building efforts, as evidence of quarrying can be seen in multiple locations, especially in the compound's northeastern section. The rock surface has been smoothed there, and one can see crudely worked stones that were never retrieved in front of a sizable cavern. Southeast of the complex is a monumental chamber approximately 14.60 m long, 6.20 m wide, and 3.20 m high. It has been renovated with benches and cut-out pillars. This intricate cave is referred to as a 'diwan' (council chamber) by the Franciscan study team. It was a refectory or *diclinium*, a central meeting space connected to the temple, and it served a similar purpose when the site was converted to a monastery.¹¹

11 The most notable is the Cherubim monastery, which is situated high above the main town of Saydnaya, on the tallest peak north of Deir Mar Tuma, also known as Deir as-Sherubim. Like Deir Mar Tuma, the complex has evidence of significant quarrying and rock-cut caverns. Rebuilt in 1982 from its spoils, the edifice Pococke refers to as 'the same kind of building as that of Saint Thomas'.¹²

12 Ma'arrat-el Bash is a village 12 km north of Yabroud. The village has preserved a church, channels, and molasses presses from Roman.¹³ There is a large cave, and many carved chambers resemble those in Maaloula; they are not inhabited and are used for storage.¹⁴

13 The previous examples are not the only ones in the Qalamoun region, but the caves in those examples are the only ones mentioned in research publications. Many other settlements in the region have similar structures as ancient Christian churches and caves. Most of the villages and towns have either rock-hewn residences or carved tombs. Due to the shortage of research about this issue in the region, most of the sources mention this carved architecture under the category of carved tombs, which is in some way similar to the situation of Maaloula, where the Bloto Ollo was labelled as 'monks' cells'.

3 Literature Review and Significance of the Research

14 Maaloula has captured the interest of researchers due to its use of the Aramaic language in everyday life. The town and its dialect have been prominent in research since the end of the 14th century. Sir John Mandeville (end of the 14th century) first mentioned the carved village. He discovered inhabited caves near Maaloula utilised as hermits' nests.¹⁵ Many travellers visited the village and wrote about it after him, like John Fuller (1829),¹⁶ Josias Leslie Porter (1870),¹⁷ and others. They described its

9 Immerzeel – Kleiterp 2011, 87.

10 Çetinkaya 2017, 190-195.

11 Immerzeel – Kleiterp 2011, 87-96.

12 Immerzeel – Kleiterp 2011, 87-96.

13 Center for Military Studies 1992, 442.

14 Post 1891, 30.

15 Oliphant 1881, 366.

16 Fuller 1829, 403-420.

17 Porter 1870, 128.

population, architecture, and Aramaic. Jules Ferrette (1863)¹⁸ was the first orientalist to study the dialect of Maaloula. In his publication, he described the location, the houses, and the main features of the village. But the main focus was on the Aramaic dialect in Maaloula. After that many travellers came to Maaloula to build on prior research. Theodor Nöldeke (1867),¹⁹ Eugen Prym (1869),²⁰ Clement Huart (1878),²¹ and Rubens Duval (1879)²² put Maaloula under the light, and also the German orientalists interested in the Aramaic language could not avoid this village. Additional research in the 20th century by Anton Spitaler (1957), Jean-François Fourcade (1967), and Werner Arnold (2000)²³ expanded on the exploration of Maaloula, explicitly focusing on the language aspect.

15 However, there is other research with a broader scope of interest. In 1890, Frederic Jones Bliss published 'Malula and its Dialect', which tied together prior investigations. This work looked into several facets of Maaloula's character. Bliss described the general scenery, architecture, home designs, demography, and churches. Moreover, he explored the caves and the carved hamlet at Maaloula, providing basic descriptions of the proportions, interior aspects, and inscriptions and transcribing the Aramaic alphabet.²⁴

16 Joseph Nasrallah (1956) released a study on the Qalamoun throughout the Roman and Byzantine eras; in this work, Nasrallah analysed the historical significance of Maaloula as a capital in the Qalamoun region, providing valuable insights into the shifting dynamics of the region. He also described the cave dwellings in Maaloula as part of this study, adding dimensions to understanding the living conditions at the time.²⁵

17 To sum up, Maaloula Aramaic was the main aim of most previous studies, and they presented the importance of this dialect which was the primary reason most researchers wrote about Maaloula. At the same time, those researchers could not ignore the village's unique location, architecture and heritage. Hence, most of the research started by describing simply the way to the village, the land, houses, ancient tombs, and its monasteries. There is no complete study concerning the architecture or the hewn village, however; this part was always only part of the Aramaic study, which contributed a lot to a complete perspective of the town over time. Thus, studying similar architecture in this case helps to comprehend the features in the caves of Maaloula. Despite the time gap between these ancient sites and modern Maaloula, the main characters can be traced, like the carved sheltered complexes in Cappadocia in Turkey, Meymand in Iran and Eski Kermen, Ukraine.

18 Consequently, the novelty of our study is that it is the first to focus on the carved part of the village and its documentation. It aims to conduct a detailed architectural analysis of the hewn village of Maaloula caves (Bloto Olo). By doing so, we contribute to the documentation and understanding of the settlement.

3.1 Research Methodology

19 This study follows a mixed-method approach incorporating on-site measurements, photogrammetry and digital drafting tools. The workflow integrates manual and technological processes to create detailed, accurate documentation of the hewn caves. The research followed a distinct programme of steps: The initial phase was on-site data collection; it involved measuring and sketching all the caves. The equipment used in

18 Ferrette 1863, 431–436.

19 Nöldeke 1867, 183–200.

20 Prym – Socin 1890, X.

21 Huart 1878, 478–510.

22 Duval 1879, 456–457.

23 Spitaler 1957, 299–339; Fourcade 1967, 98–103; Arnold 2000, 347–370.

24 Bliss 1890, 74–98.

25 Nasrallah 1956, 83–113.

this step was Laser meters and measuring tapes. The necessary step here was sketching and recording the field and initial sketches to outline the cave's features, layout and structure.

20 In a second phase, photogrammetry was used to create 3D models of the caves by using the software Agisoft Metashape, with AutoCAD we created 2D plans. The work was digitally stored to provide a resource for future research, restoration, and educational purposes. Many challenges occurred during the fieldwork; some caves had limited accessibility, sometimes adequate photos crucial for the photogrammetry were hard to take, and a certain amount of mistakes were made in a number of caves, affecting photo processing.

4 The Ancient Village in Maaloula, Bloto Ollo

21 Maaloula is a distinctive town that represents a superimposed model in an urban area. Ancient people shaped their settlements using unique and natural landscape forms, adding another characteristic marker to the cultural landscape and demonstrating a profound grasp of and engagement with nature. Primarily, individuals have a minimalist approach to creating living spaces. Because of this, a first-time visitor sees unaltered nature before seeing artificial alteration on the mountainside. Due to the village's unstable past, this feature served as a defence element when Maaloula was a contested location between the Itureans (locals) and the Romans.

22 Bloto Ollo extends between the western and the eastern gorge where the caves are situated and divided into three sites A1, A2, and A3. Area A1 is the primary part, containing 42 caves that have dwellings and functional caves. In comparison, both A2 (three caves) and A3 (four caves) can be considered working areas, where both have presses (Fig. 1).

23 This area was included in the heritage sites list of the Rif Dimashq Governorate in 1966. Maaloula captured the world's attention when it was added to the UNESCO tentative list on June 8, 1999, based on selection criteria (v) and (vi).²⁶ The requirements demonstrate that Maaloula is a one-of-a-kind example of a traditional human settlement and is directly and indirectly linked to events, living traditions, ideas, or beliefs, with extraordinary literary and artistic creations of exceptional universal value.²⁷

5 Caves Typology in Area A1

24 The ancient village has various cave types, varying between 8m² and 43.50 m²; all the caves are human-made and have many characteristics. The field observation shows damage only to a few caves. Otherwise, the caves' durability contributes to the historical studies of an ancient civilisation. All units in the area have only one opening, the door, in the middle of the wall, with no windows – except for two caves which definitely had a special function. The profiles of the caves in Area A1 have the same main characteristics: all caves are carved into the foothill with the same orientation. Two types of caves can be easily recognised: residential, used for living, and functional, where the people used to work.

25 The residential caves contain the same interior elements and partitions and can be identified easily. Typically, the interior space extends over two levels, with a kind of platform of 70 cm in height used by the humans and the lower part for the animals.

26 UNESCO 1999.

27 UNESCO 2004.

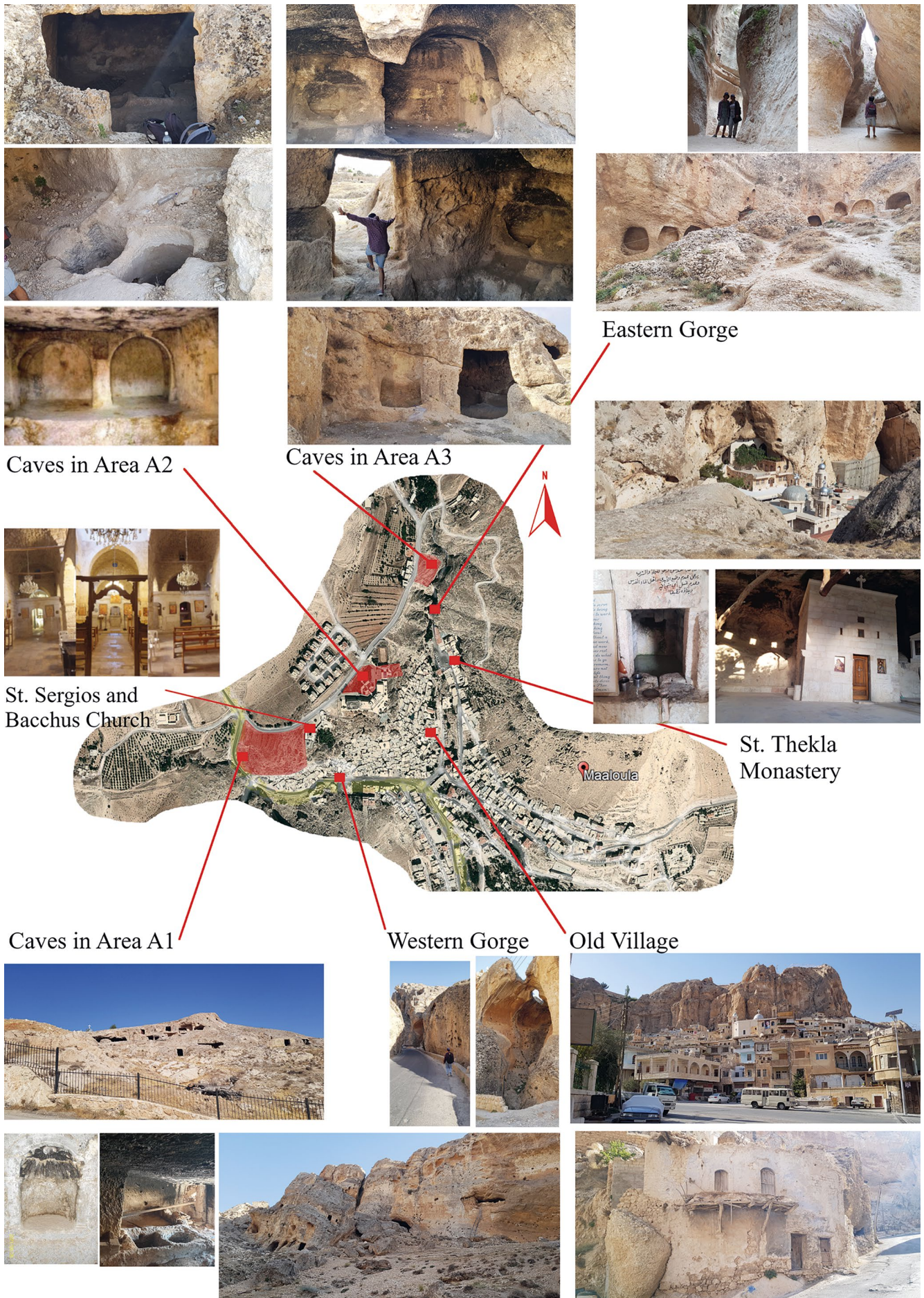


Fig. 1: Aerial photo of Maaloula, the important sites are highlighted

الشكل 1: صورة جوية لمعلولا، وقد أُبرزت المواقع المهمة

This design is considered the basic layout of the caves and helps to define the residential ones. All caves have one door opening in the middle of the wall facing the upper level. Due to that, the interior platform is the main feature to categorise the type, either by its existence or absence. Other items classify the type of the cave due to their existence. The main layout of the residential cave is one central unit; the average size is 4 × 5 m. There can be a variety of additions to the space, like nooks, ornamented niches, niches with shelves or a room attached to the central unit of the cave and, in some cases, a stable.

26 Considering the platform as the main character to tell apart the residential from the functional caves is very significant due to the small size of the caves. On the other hand, the functional caves in Maaloula are evident: they have different interior designs representing the various functions of the spaces. Most of these caves have carved basins varying in quantity, depth, size, and the link between them. The caves' limited space means they have only one function, with no residential part.

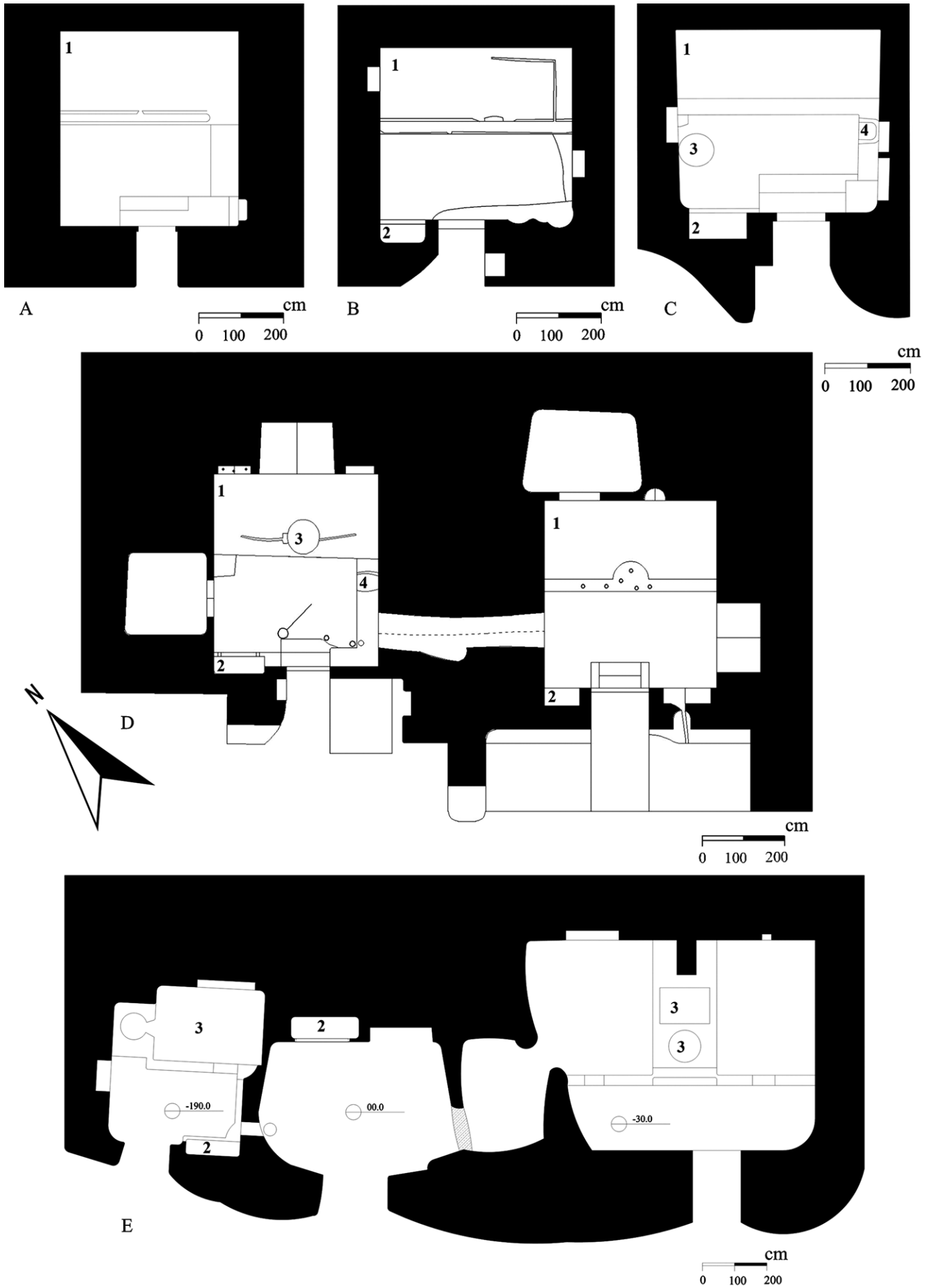
27 Figure 2 presents different examples in the village. Types A–D represent residential units, type E a functional one. Generally, all caves are three steps down from the outside level. A is the simplest type, one room with a platform. Type B is more advanced than A in the interior parts; besides the platform, this type has a manger on the left side of the door; moreover, in many of them, we can find niches. Considering the hewn architecture of the village, adding any carved part is an advance, whereas many caves only have holes to hold light. Thus, the more carved parts exist, the wealthier the owner is, and for that, the presence of a manger suggests that the owner could afford to keep an animal.

28 Type C, similar to the previous examples, is a one-unit space with more carved features. This example has a basin in the lower part and a carved seat on the right bench. Type D is a more complicated cave where a carved tunnel connects two units. Moreover, each unit has a nook and an attached room to the central unit to add more space. Another specialty in this example is the carved area in front of the door, which is rare in the village; all these features mark this example as a unique cave.

29 Type E presents a group of functional caves where interior designs indicate their functions. The caves on the sides have big basins and are connected with the middle stage unit. The middle unit is linked to the unit on the right by a door. To the cave on the left, a small carved tunnel leads to the adjoining unit which ends as a niche, thus serving as an unloading area. This unit type has no typical features, as each example includes different characteristics reflecting its specific function. Thus, they are defined as functional caves, where each cave's design is tailored to its specific needs. This example indicates how indigenous people overcame the problematic terrain to provide more space.

6 Interior Elements

30 The previous examples represent the caves in Bloto Olló; since the village is carved into the mountain, each added feature requires more effort and cost. Due to that, the more elements – especially the attached room and the well-carved niches and nooks – the unit has, the wealthier the owner is. The function of many carved parts inside the rooms cannot be identified easily. We can approach this by making comparisons with features in caves or houses from other sites that existed of the same period. However, for many instalments we can still only assume the role they once played; in fact, these features could have had no actual use and were maybe just used for symbolic reasons. This study examines those elements of the Bloto Olló caves – drainage elements, basins, mangers, seats, and inscriptions – nevertheless, because they are part of some caves, even if not the standard.



2

Fig. 2: Caves in Bloto Olo, Maaloula. Types A–D represent residential units, type E a functional one. 1) platform; 2) manger; 3) carved basin, shallow or deep, depending on the function; 4) carved seat or bench

الشكل ٢: كهوف في بلوتو أولو، معلولا. النماذج A-D تمثل وحدات سكنية، أما النموذج E فيمثل وحدة وظيفية. 1) منصة؛ 2) معلق؛ 3) حوض منحوت، سطحي أو عميق، يتعلق بالوظيفة؛ 4) تحت لمقعد أو دكة

6.1 Water and Drainage System

31 When choosing the place for a settlement, the landscape characteristics would have been fundamental, such as easy defence, access to commercial routes, and general river use.²⁸ As a factor of settlement selection, ancient societies always studied the water types in the site, whether the water flowed continuously or intermittently, copiously or feebly, sweet, salty or sulphurous, and likewise, the suitability for all purposes.²⁹ Literary texts mention that healthy waters must be moving because of the continuous water agitation, where water pollutants are removed through constant movement. The importance of running water further expands its portability; the waters used in religious practice in purifying rituals must also be moving. Thus, the importance of moving over stagnant water was stressed in various aspects.³⁰

32 Since the Maaloula Basin is wealthy, with many well-documented springs and lakes that have attracted civilisations since the Pleistocene era,³¹ but likewise, the village is situated off from the main roads and is of problematic nature. Maaloula's situation and geographical features have kept it safe for a long time. As there were no sizable collecting items found, there is consequently no doubt that inhabitants found the Maaloula area well water supplied at that time.

33 COLLICIÆ or COLLIQUIÆ, is a term which means "Open drains or gutters in the country, for the purpose of carrying away the rain water from the lands into the ditches".³² Since underground water and runoff are the central challenges in Maaloula, the drainage system at the site is simple. The different shapes and distributions indicate that drainage is not a standard element; its existence refers to its use under need. Otherwise, there are no traces of a whole sanitation system. Water is supplied by the excellent nearby springs. Also, the absence of sewage can be explained by the significance of the village: Maaloula is a middle-class village in a rural area. All these conditions cannot be compared to, e.g., the situation and facilities of an urban metropolis.

34 Observations and studies of the site indicate the village's main drainage patterns. The following features represent the site's simple system. The initial feature is the rainwater and the runoff response, as the village is carved on a cliff, and there are no traces of protecting roofs above the doors. Inhabitants carved a groove into the part above the door. The primary purpose of these grooves is to stop the water from gathering in front of the doors, though they do not direct water to a tank or cistern. This feature is based on the cave location; hence, not all caves have this groove above the door; moreover, the existing grooves are different in depth and shape, probably related to the runoff water abundance (Fig. 3 a).

35 Changing the waterway was obviously insufficient to prevent the water from reaching the interior; a threshold raised about 10 cm at the door kept the water outside (Fig. 3 b). Another solution is presented at a cave (Fig. 3 c), where the door is 75 cm lower than the surrounding area and the water is easy to gather; the solution was carving a small canal to lead the water away from the entrance.

36 In case d (Fig. 3 d) the door has no threshold at all since a groove at the door guides the water to a hole in the door frame that opens to a hole in the ground outside the cave. This alternative was typical for draining water to natural underground holes or cracks. Numerous small-scale constructions exist at other sites, like wells for groundwater exploitation and cisterns receiving rainwater from roofs;³³ however, Maaloula has no traces of enormous cisterns to collect water.

28 Buxó 2008, 11–13.

29 Crouch 1993, 193.

30 Rogers 2018, 8.

31 Canard et al. 2006, 195–202.

32 Rich 1873, 186.

33 Koutsoyiannis – Patrikiou 2014, 7.



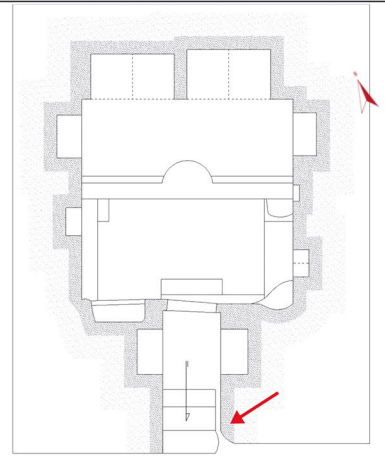
A



B



C



0 100 200 cm



D



E

3

Fig. 3: Different solutions for interior and exterior water drainage

الشكل ٣: حلول مختلفة لتمديدات صرف صحي داخلية أو خارجية

37 The seeping water is a main problem at the site, because the houses are hewn into the rock. The groundwater leaching from the walls was a concern, especially in the upper part (the platform). In response to this issue, the people carved grooves flanking the walls, guiding the leaching water from the wall to the lower part to keep the central, upper (human) part dry (Fig 3 e). Sometimes, the water is guided to a basin engraved inside the space. In some cases, the platform has a grooves net which ends at two basins in different places; this net extends over the whole platform.

38 These examples show an evident development response to the leaching problem. Depending on the amount of water, the solution could be a web of grooves that lead to a basin in the heavy-leaching caves. In the medium-level leaching area, merely grooves led the water to the lower area, and there is no drain net where there is no leaching (Fig 4).



Fig. 4: Grooves flanking the platform leading water to a carved collection basin

الشكل ٤: أحادييد بمحاذاة المنصة تقود المياه إلى حوض مقتطع في الصخر لتجميعها

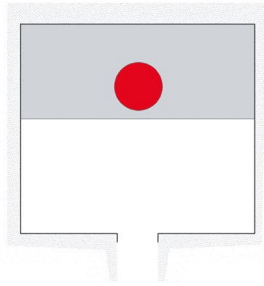
6.2 Basins

39 Nine basins were found inside Maaloula's cave houses. These basins have different shapes and positions depending on the need; only two caves have the basins on the platform, while in the rest the basins are in the lower part of the house (Fig 5 a). The first example is a rectangular basin in the lower part of the cave (110 × 52 cm, depth 20 cm). However, the basin is covered by dust, so the depth could not be measured accurately. The significant element of this basin are its edges, 20 cm wide and about 5–10 cm high, that kept the water and other fluids from the lower part of the cave – bearing in mind that this part of the house was used by the animals – from getting into the basin. The water here is led to the basin by a groove in the platform, taking the shape of a small open canal slipping down to terminate in the basin (Fig 5 b).

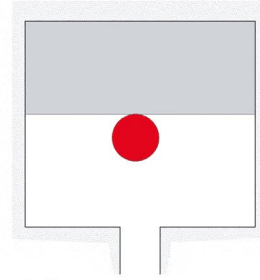
40 The second example has an irregular shape; it is an ellipse (79 × 90 cm); the depth is unclear due to the debris inside. Grooves come from the platform, and lead to the lower-level ending at the basin (Fig 5 c). The third example of Fig. 5 d is carved into the rock in the corner of the platform, where the carving of the flanked wall is not well executed. It has a rectangular shape (80 × 67 cm); the depth is unclear due to the earth inside. Generally, the basins collected the leaching water in the caves where grooves flanked the wall, driving it away to keep the platform dry.

41 Example four (Fig. 5 e) shows a particular basin in the middle of the platform, where two main grooves end. The basin is a circle of 95 cm in diameter and 70 cm deep. Many factors distinguish this basin from the others: the basin's place and depth, in addition to the grooves, differ from the rest. Where most grooves flank the walls, these grooves here are away from the walls. Furthermore, the unique design of this cave leads us to the assumption that this basin was used for sacrificial practice to gather the blood of the animals for ritual reasons and not for collecting water (Fig. 2 d).

42 Rain harvesting is another method of collecting water, common in areas where groundwater was inadequate or nonexistent. IMPLUVIUM describes “a large square basin sunk in the floor of the atrium in private houses, intended as a receptacle for the rain water which flowed in through the compluvium or opening in the roof of the



2 Caves



7 Caves



A



B



C



D



E



F

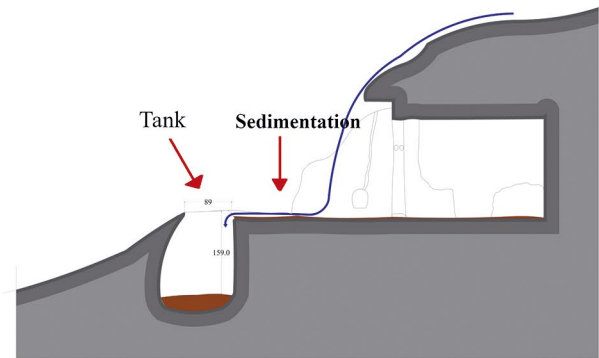


Fig. 5: Various types and positions of the basins

الشكل 5: نماذج ومواقع متنوعة للأحواض



6

same".³⁴ The site of Maaloula adopted the idea of reusing the rainwater only on a small scale. The basins in the houses are small compared to those at other sites; due to the area's permanent springs, there was no need for massive reservoirs. As we have seen, the leaching water of the walls was a good water supply additional to the springwater. Generally speaking, surface and bedrock runoff supports rainfall harvesting systems wherever appropriate surfaces exist for collection.³⁵ Harvesting rainwater from the open spaces of establishments into cisterns was a widely known method, especially during the Hellenistic period. There are examples of hewn cisterns in the rock and well-waterproofed in Olynthus in the early 4th century BC. These cisterns have a water treatment technique with smaller sedimentation tanks nearby open to the cisterns, where debris was collected. The cisterns are flask-shaped with a narrow mouth and long necks, walls gradually broadened to the bottom, and the bottom sloped to a bowl-like depression to collect mud and debris.³⁶ A similar example of a small-size water harvesting technique exists in a cave at Maaloula (see Fig. 5 f); the platform in front of the annexe has raised edges of about 20 cm height, taking the shape of a shallow sink. This platform (ca. 2 × 2.8 m) opens to a hewn basin with drainage. The tank is approximately bottle shaped, as it widens in the lower part. The tank opening is rectangular (89 × 149 cm) and 1.58 m deep. However, this is a small example of how the platform works as sedimentation ends at the cistern. Furthermore, the bottom could not be examined due to the earth that gathered in the cistern over time.

43 There are other types of basins for other uses rather than gathering water. Those basins are sizable and have a different format. Bloto Ollo has many presses in various locations on the site; the basins and their designs defined the function of the caves. The dimensions varied between 100 and 160 cm, and the width changes according to its use. Figure 6 presents examples of the presses in the village and the two types

Fig. 6: Various designs and shapes of the presses' basins

الشكل ٦: تصاميم وأشكال متنوعة لأحواض المعاصر

34 Rich 1873, 347.

35 Boyer 2019, 66.

36 Yannopoulos et al. 2016, 1026.

of basins associated with them: big open basins, which are shallow, between 30 and 50 cm deep, and open by drainage holes to the other, deeper basins (Fig. 6 a). The basins in these caves show two shapes: square/rectangular or cylindrical like wine storage vessels, which are more profound than the others for fermentation.

44 The connection between these basins and their size is the key to considering the pressing function of these caves, especially for the example in Fig. 6 c, which presents the steps of winemaking: fresh grapes were likely pressed with bare feet. The juice was then collected and again pressed in the shallow basin; the liquid then flowed by gravity into the cylindrical vessel – the significant fermentation – (2.14 m deep, with a capacity of roughly 3000 L), where it was fermented and stored in underground carved pithoi. Grape skins, seeds, and stems were collected in sedimentation pits next to the open examples (Fig. 6 b–c). This type was common design used in the South Caucasus and Levant from the 9th century BC to the 8th century AD.³⁷

6.3 Mangers

45 Both wild and domesticated animals played essential and multifaceted roles in the lives of the ancient peoples. The bond between individuals and animals began with economic needs but extended beyond mere practicality.³⁸ Culture heavily influenced food production, preparation, and animal husbandry approaches. Consequently, faunal assemblages are particularly valuable for identifying cultural shifts as they provide large quantities of measurable information across time and space.³⁹

46 The origin and spread of animal husbandry are of particular interest in the context of early food-producing economies. Archaeological investigations in the 1970s and 1980s revealed that the Northern Levant's PPNB population participated in this process.⁴⁰

47 EQUILE is a stable for horses. An ancient stable on the bay of Centorbi in Sicily is the only original example of such buildings that still exist. The manger there recedes gradually inside from the top to the bottom; it is made of masonry and divided into several cribs, one for each horse. The horses' headstall's string passed through a small aperture before each crib.⁴¹ In Tall al-'Amarina, eight mangers were discovered in a house, dating back to 1351–1323 BC. These mangers have square shapes attached to the wall and detached from each other.⁴²

48 The dimensions of a stable or an individual stall depend on the size of the horse, contemporary practice allows 3 × 1.8 m.⁴³ The estimated area for each horse in the assumed Roman military stables is usually somewhat different, and each animal could have occupied a space from 4 or 5 to 6 or 7 m².⁴⁴

49 Other examples include a sizeable aisled building at Tebessa, where the space between the mid-points of each trough is 1 m. This example resembles the 1 m distance of the possible mangers set into the walls, three to a chamber, at the late Roman fort of Qasr Bshir in central Jordan. The same arrangements were also noted at the military post at Umm el-Jimal.⁴⁵ Wells introduced two points for consideration about these reconstructions. The distance between the centre points of the worn areas on the floor

37 Harutyunyan – Ferreira 2022, 8. The absence of the sedimentation pits was considered a simpler design.

38 Keller – Band 1910, 357.

39 Albarella et al. 2008, 1829.

40 Peters et al. 1999, 125.

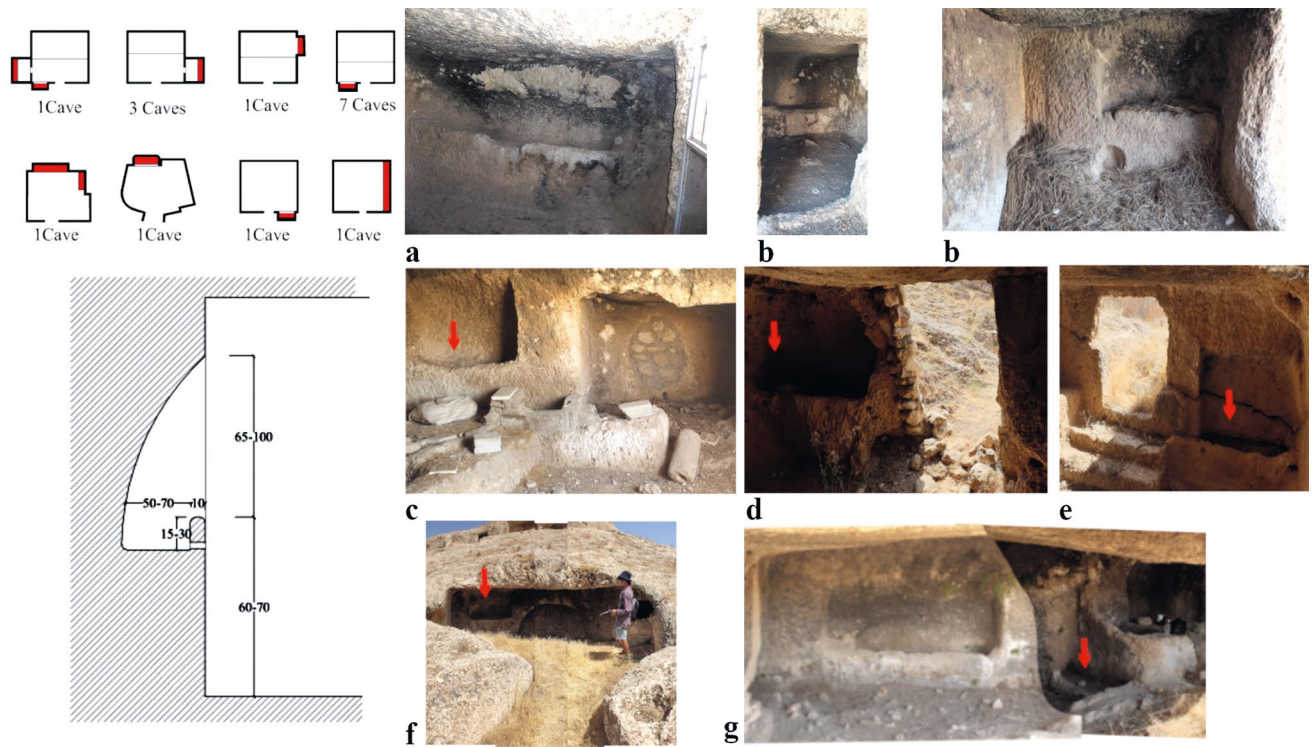
41 Rich 1873, 265.

42 Newton 1924, 291.

43 Ewer 1982, 30.

44 Dixon – Southern 1997, 181.

45 Parker 1987, 60.



7

was only about 1 m, implying that the animals were relatively small, and it has been hypothesised that the stables were for luggage animals.⁴⁶

50 Regarding the animal's role in ancient times, living in the same space with humans was considered a common practice. In Maaloula, the caves have a standard type; the residential cave, with a platform raised 60-70 cm from the entrance level, separates the cave into two areas. The manger in the Maaloula caves is a feature that can be observed as an engraved part taking the shape of a sink which recedes gradually inside from the top, leaving a space range between 65 and 100 cm, 15-30 cm in depth, with two holes, the height of the ground ranging between 60 and 70 cm. When the manger is in the main space, it is between 100-120 cm long; in an annexe room, its length is between 1.3 and 2.9 m, which is suitable for two animals (Fig. 7).

51 Since the site has 42 caves, only 15 have mangers. Seven caves have it to the left of the door; three caves have the manger in the annexe room. Only one cave has two mangers, one to the left of the door, which is standard, and one inside an annexe room; this issue may refer to the annexe room added later to the house. A unique example exists in one of the houses, where the manger exists on the platform. This example displays another assumption for this part, where, in this case, using it as a manger cannot be the proper purpose due to the height of the platform of 60 cm. According to the indigenous, this part was used as a baby cradle. However, this hypothesis cannot be confirmed since only one house has this feature on the platform, the human section, while the rest of the manger-installments are next to the door. Maybe this difference could be due to the transformation of the cave's use over time (Fig. 7).

52 The average space for the animal in front of its manger in the caves of Bloto Ollo is approximately 1.2×2 m, which is the width of the manger and the space of the lower part of the cave. While the dimensions of the annexes are approximately 2×1.8 m, the mangers in the annexe rooms have more space than the ones in the main space. According to the spaces defined for stables, these dimensions could include a

Fig. 7: Positions and main dimensions of the carved mangers; different examples from residential and functional caves

الشكل 7: مواضع المعالف المقتطعة من الصخر وأبعادها الرئيسية؛ أمثلة مختلفة من كهوف سكنية ووظيفية

46 Wells 1977, 44.

horse, where the height of these mangers can give a more accurate deduction of the animals; thus, smaller animals need lower troughs than the bigger ones.

53 The caves without platforms are designed for various purposes; one of these caves functioned as a stable, where a manger occupies an entire wall. This cave measures 3.23×3.30 m, with the manger located along the 3.23 m wall. The manger's dimensions are 105 cm in height, 50 cm in width, and 15 cm in depth, and it includes three holes (Fig. 7 a). Another example of a functional cave without a platform contains two mangers of different heights. The manger on the right is raised approximately 35 cm of the ground, with dimensions of 15 cm in depth, 53 cm in width, and 1.57 m in length. The other manger is longer and higher, measuring 57 cm in height, 26 cm in depth, 60 cm in width, and 2.35 m in length. The main space containing these two mangers measures 4.86×1.57 m (Fig. 7 g). In caves with platforms, the mangers are consistently located in the same area and have two holes for tightening the animals. However, the small manger in cave g, see Fig. 7 g, has no holes because it was intended for small animals.

6.4 Seats

54 Another significant feature was recorded in six caves of the village: a piece of rock-cut furniture, taking the shape of a chair. The six seats display the following similarities:

- All seats were set on the right wall of the units, carved on a bench.
- Their semicircular shape on the bench is carved into the rock; in some examples, it has a frame prominent about 5–7 cm.
- Generally, the seat dimensions are approximately 40 cm wide and 35–40 cm deep.
- The wall behind this part is concave in five examples, complementing the chair's shape.
- There are several holes in the wall carved behind the seat in three caves, while in the other ones there is only one hole.
- There is a space (20–35 cm) left blank to the right of every seat.

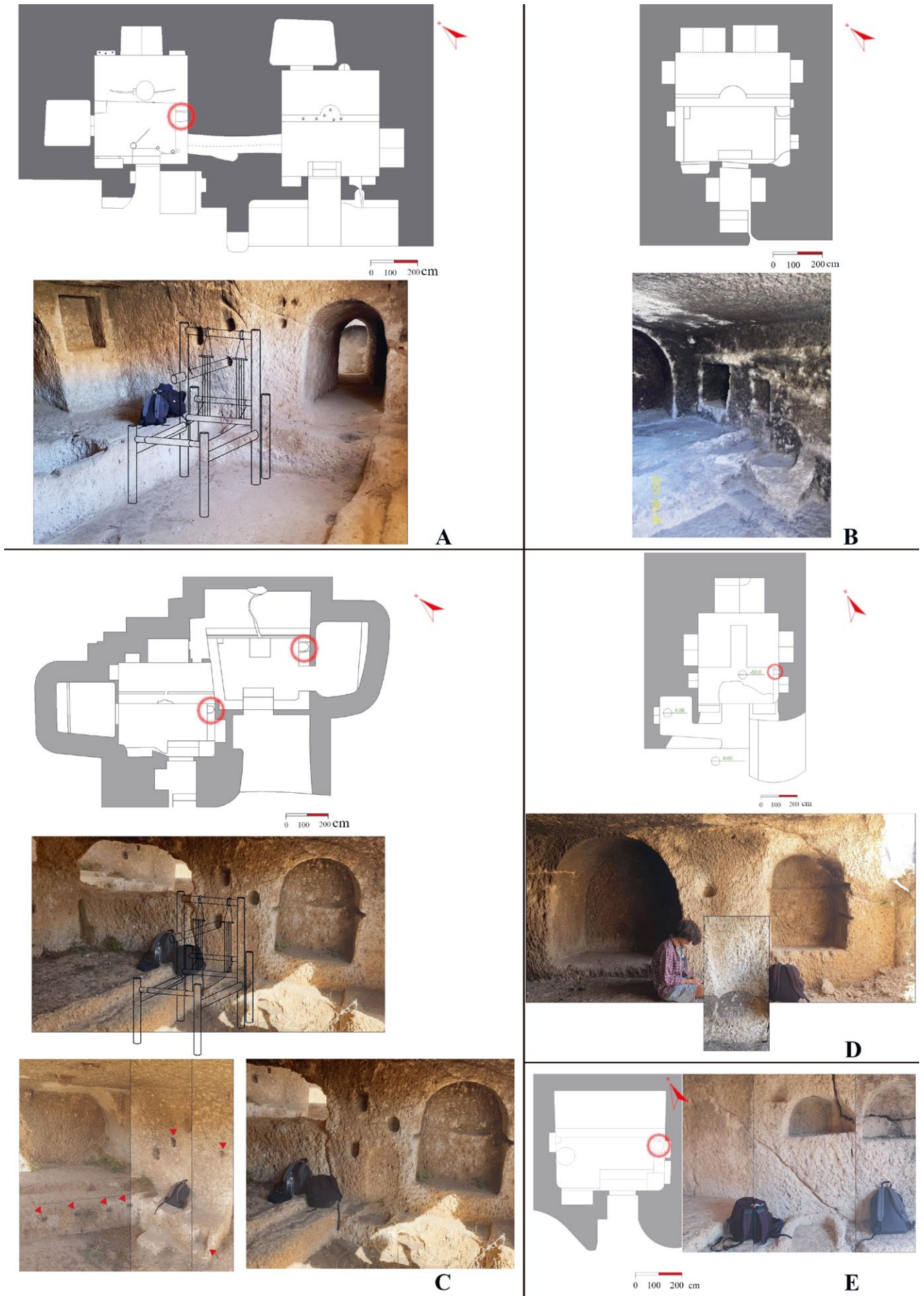
55 There are two hypotheses for this part: these seats were used by high-rank personalities; this assumption considers the element's overall shape, with the back part of the chair, and the cave design. The caves' rank in the village can be classified by the interior design and sections. Hence, high carving quality exists in the high-rank cave. Due to that, three of the seats exist in distinguished caves, considering the niches and ornaments in the caves. Two other seats were found in big caves, and the last one in a smaller one. Consequently, this distribution weakens the suggestion.

56 Furthermore, all the examples have holes in the wall next to the seat, placed to the left. Three examples have three holes in different locations, while the rest have only one. These holes, in addition to the space on the left of the seat, could be a place to install a tool. Therefore, this feature may be identified as weaving chair, approximating an example in Cappadocia for a pit loom.⁴⁷ The similarity in the shape of the carved seat leads to the second hypothesis that the village of Maaloula used the loom above the ground (Fig. 8).

57 Since the Neolithic era, loom weights have been discovered across Europe and the northern Mediterranean. However, they were not discovered in eastern Mediterranean Egypt, Syria, and Canaan until the Bronze or Iron Ages, when they were reportedly brought by immigrants or invaders from the north.⁴⁸ Households producing textiles in

47 Kalas 2006, 288.

48 Seevers – Winslow 2019, 21.



8

Fig. 8: The six caves with seat elements: position, different designs and ranks of the caves; example (a) suggests the position of a loom related to the seat

الشكل ٨: المغارات الست المحتوية لعناصر للجلوس: المواضع، تصاميم ومراتب مختلفة للكهوف؛ ويدل المثال (a) على موضع لنول مرتبط بمقعد

most parts of Europe, the Near East, and North Africa regularly used one or both types of the vertical loom – the wrap-weighted loom or the two-beam loom – throughout most of antiquity and the early Middle Ages. Nevertheless, during the Roman era, most of the people were farmers who produced the raw materials used by the women for spinning. Girls were taught to spin with a hanging spindle at a young age, regardless of social standing. Roman tombstones often depict the widow with her workbasket full of balls of yarn or new spindles since spinning symbolises a devoted wife.⁴⁹

58 In the weaver seat assumption, the loom would be placed vertically to the wall in Maaloula's caves, and the weaver would sit between the wall and the frame. The wall would serve as a weaver's backrest and extra frame support. Figure 8 c is an abundant example of carved details in the seat area. This example shows a step to reach the seat, and a cut on the right of the seat taking a rectangular shape can be considered a beam bed. There are two holes on the same level on the wall behind the seat; this is the only example with two holes. On the left, there are four holes on the side of the platform as well as a stone arm on the ceiling over the tool space. These details provide evidence to determine the use of the seat as a tool chair.

6.5 Inscriptions

59 Two inscriptions are preserved inside the caves, one in Area A1 and the other in A2 (Fig. 1). The cave in Area A1 is functional due to its interior parts, and the inscription was placed in the middle of the main façade between the two arches. The other inscription was found in Area A2, in a cave called 'Father Youssef Cave', under a carved depiction of the sun god. The texts are unclear; it is erosion, and apparently fire damage in the unit of Area A1, where the walls are covered with soot of coal.

60 Bliss visited Maaloula in 1888 and described some caves in the ancient village:⁵⁰ he saw three inscriptions and provided a copy in his article. The first inscription was documented on the backwall of a room with an arch. In 2021, an inscription was found inside a cave on also a wall next to an arch; but it is unclear whether the inscription is identical to the one Bliss had seen in 1888 (Fig. 9).

61 Bliss mentioned a different, third inscription found in another ancient dwelling. Due to the current situation of the village, where most of the caves have either been ruined or vandalised, the inscriptions can no longer be found. Bliss noted a cave with two rooms with an elevation for a divan or seat in one of them. The inscription was cut into a rock overlapping the inner door lintel. The letters were crude, and some of them were indefinite. Bliss documented a long inscription, nine lines indistinct to read. The long text (Fig. 9 c, above) was interpreted as 'In the year 418 of the Seleucids [corrected to 518, equating to 106/107 AD], the sons of Cyrillus Patroclus created this niche, shared equally, for the god Malachedas'. Malachedas possible interpretations of the divine name *Μαλαχηδας* has the vocalization 'Malec', which appears to suggest a connection to Palmyra while excluding the Phoenician name composition 'mlk'. In Phoenician, 'Malak' or 'Mal'ak - 'Eda' translates to 'king' or 'messenger' in Semitic languages.⁵¹

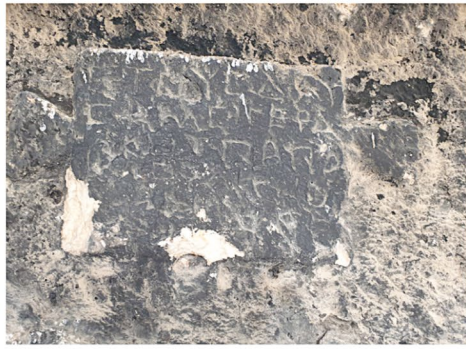
62 The second text reads ' | ' (Fig. 9 c, below). There are no resources that translated this text. Similar to the previous text, *ἔτους* is the first word, typically translates to 'year' or 'in the year of', it indicates that the inscription could be dating an event or a dedication.⁵² *Ζαβδεος* is derived from the Aramaic root *zbd*, 'gift' – it is a personal name used in Semitic dialects that

49 Wild 2003, 13.

50 Bliss 1890, 78–79.

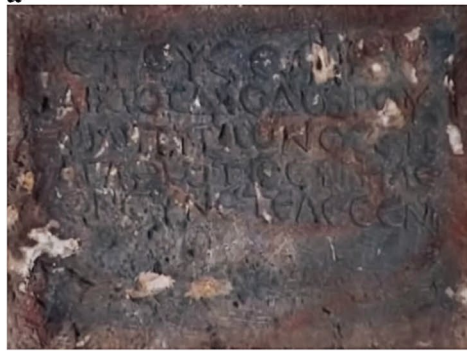
51 Mouterde 1959, 55–57.

52 Meimarīs – Nikolaropoulou 2005, 47.



a

ΕΤΟΥΣΗΥΥ – – ΙΟΦΙΧΛΟΥ
ΠΑΤΡΟΚΛΟΥΕΠΟΙΗΣΑ
ΝΤΗΝΚΟΝΧΗΝΟΓ
ΜΕΡΟΥΣΗΜΟΙΣΟΥΣ
ΠΩΘΕΩΜΑΛΑΧΗΔΑΑ
ΕΙΑΝ



b

ΕΤΟΥΣΗΟΥΑΥΔΝΕΟΥΓΧΕΙΛΟΣ
ΖΑΒΔΕΟΥΑΒΙΣΑΛΥΥΛΣΕΡΜΟΥ

c

9

indicates the idea that the child is a gift of God. This Semitic name appears frequently in Palmyrene and Nabataean inscriptions.⁵³ This inscription likely commemorates or records an event related to Zabdeos. It could be a dedication to a structure or public space, marking the date and honouring a significant individual from a distinguished family.

Fig. 9: a) and b) the inscriptions at Maaloula (current condition); c) the inscriptions published in Bliss 1890

الشكل ٩: أ و ب) النقوش الكتابية في معلولا (الوضع الحالي)؛ و ج) النقوش الكتابية المنشورة في Bliss 1890

7 Conclusions

63 This paper presents the significance of these caves as more than just shelters; they served as spaces where daily life, community organisation, and individual roles were outlined. Therefore, variations in the caves' size, design, and sophistication indicate a stratified social structure, which indicates a society with defined roles and perhaps a hierarchical organisation that influenced the design and distribution of residences.

64 The study of the hewn rock architecture in the Qalamoun region, particularly the ancient village of Maaloula and the site at Bloto Olo, sheds light on the live and social organization of the communities who inhabited these caves. In addition, this paper analyses the caves' typologies and interior elements. Besides, it shows how these communities organised their daily activities, managed resources and expressed their cultural values despite the limited size of the accommodation and workplaces. People who lived in Bloto Olo challenged the problematic location and created an integrated society.

65 The interior features display how this community adapted to their environment and handled essential resources. The simple drainage systems, for example, highlight their practical knowledge, demonstrating a deep understanding of local hydrology and sustainable water usage. Basins point to practices in dyeing and grape pressing, suggesting that the village's economy included a mix of agriculture and commerce. Maaloula is famous for its sumac cultivation used to dye leather in the old times. The

53 Meimaris – Nikolaropoulou 2005, 121.

presence of these features within individual caves suggests that families maintained their resources while potentially collaborating in more substantial community efforts, indicating an economy that balanced individual independence with communal cooperation.

⁶⁶ Inscriptions offer a glimpse into the community's cultural values and craftsmanship skills. These inscriptions reflect the interaction between the local society and the change of power; they used the new Greek language to identify their local names even though they kept their origin language, Aramaic. Additionally, the presence of carved seats speaks to the technical skill of artisans and the importance of aesthetic and functional design in their daily environment.

⁶⁷ The construction of the Qalamoun caves demonstrates a highly structured, ingenious, and culturally expressive society. Their homes demonstrated an integration of social structure, cultural identity, and practicality, and their everyday life were carefully planned to take advantage of the availability of the materials. By demonstrating how they created intentional, organised life within the limitations and opportunities of their surroundings, these discoveries deepen our understanding of the ancient inhabitants of the Qalamoun region. This study emphasises how crucial it is to look at architectural typologies in order to comprehend the ancient societies' complicated social, cultural, and economic dynamics.

Bibliography

- Anousamra 2020** G. Abousamra, Nabataeans or Ituraeans in Mount Lebanon? About the Aramaic inscription of Yanou , *Jordan Journal for History and Archaeology* 14/4, 2020, 165–180
- Albarella et al. 2008** U. Albarella – C. Johnstone – K. Vickers, The Development of Animal Husbandry from the Late Iron Age to the End of the Roman Period: A Case Study from South-East Britain, *Journal of Archaeological Science* 35/7, 2008, 1828–1848; <https://doi.org/10.1016/j.jas.2007.11.016>
- Aliquot 2012** J. Aliquot, *La vie religieuse au Liban sous l'Empire Romain* (Beirut 2012)
- Alt 1950** A. Alt, Ein Dorfbezirk im Hinterland von Damaskus, in: S. Morenz (ed.), *Aus Antike und Orient: Festschrift Wilhelm Schubart zum 75. Geburtstag* (Leipzig 1950) 25–37
- Arnold 2000** W. Arnold, The Arabic Dialect in the Turkish Province of Hatay and the Aramaic Dialects in the Syrian Mountains of Qalamun: Two Minority Languages Compared, in: J. Owens (ed.), *Arabic as a Minority Language, Contributions to the Sociology of Language* 83 (Berlin 2000) 347–370
- Bliss 1890** J. F. Bliss, Ma'lula and Its Dialect, *Palestine Exploration Fund Quarterly Statement* 22/2, 1890, 74–98
- Boyer 2019** D. D. Boyer, *An Analysis of the Historical Water Management System to Gerasa in the Period 100 BC to AD 700* (PhD Thesis, The University of Western Australia 2019); <https://doi.org/10.26182/5de9fbc0178f>
- Buxó 2008** R. Buxó, The Water Management in an Ancient Greek-Roman City (I): An Example in the North-East of Spain, in: M. El Moujabber – M. Shatanawi – G. Trisorio-Liuzzi – M. Ouessar – P. Laureano – R. Rodríguez (eds.), *Water Culture and Water Conflict in the Mediterranean Area, Options Méditerranéennes, Série A, Séminaires Méditerranéens* 83 (Bari 2008) 9–16
- Canard et al. 2006** N. Canard – K. Bretzke – K. Hillgruber – M. Masri, Research in 2005 at Kaus Kozah Cave, in: N. Canard (ed.), *Tübingen-Damascus Excavation and Survey Project 1999–2005* (Tübingen 2006) 195–205
- Center for Military Studies 1992** Center for Military Studies, *Geographical Dictionary of the Syrian Arab Country* / *الروسال يبرع ل رطق ل ل يفار ع ج م ل م* Vol. 3 (Damascus 1992)
- Çetinkaya 2017** H. Çetinkaya, Church of Deir Mar Touma: A Roman Tomb Turned into a Church at Saidnaya (Syria), *Actual Problems of Theory and History of Art* 7, 2017, 190–195; <http://dx.doi.org/10.18688/aa177-2-20>
- Crouch 1993** D. Crouch, *Water Management in Ancient Greek Cities* (Oxford 1993)
- Dijkstra 1995** K. Dijkstra, *Life and Loyalty: A Study in the Socio-Religious Culture of Syria and Mesopotamia in the Graeco-Roman Period Based on Epigraphical Evidence, Religions in the Graeco-Roman World* 128 (Leiden 1995)
- Dirven 1999** L. Dirven, *The Palmyrenes of Dura-Europos: A Study of Religious Interaction in Roman Syria, Religions in the Graeco-Roman World* 138 (Leiden 1999)
- Dixon – Southern 1997** K. Dixon – P. Southern, *Stable and Grooming*, in: K. Dixon – P. Southern, *The Roman Cavalry from the First to the Third Century AD* (London 1997) 181
- Duval 1879** M. Duval, Notice sur le dialecte de Ma'loula, *Journal Asiatique* 13, 7^e Série, 1879, 456–475
- Ewer 1982** T. Ewer, *Practical Animal Husbandry* (Bristol 1982)
- Ferrette 1863** J. Ferrette, Art. XIX. On a Neo-Syriac Language, Still Spoken in the Anti-Lebanon, *Journal of the Royal Asiatic Society of Great Britain & Ireland* 20, 1863, 431–436
- Fourcade 1967** J.-F. Fourcade, Mission à Malula, *Compte rendu du Groupe Linguistique d'Études chamito-sémitiques* 11/2, 1967, 98–103
- Fuller 1829** J. Fuller, *Narrative of a Tour Through Some Parts of the Turkish Empire* (London 1829)
- Harutyunyan – Ferreira 2022** M. Harutyunyan – M. M. Ferreira, Historical and Heritage Sustainability for the Revival of Ancient Wine-Making Techniques and Wine Styles, *Beverages* 8/1, 2022; <https://doi.org/10.3390/beverages8010010>
- Huart 1878** C. Huart, Notes prises pendant un voyage en Syrie, *Journal Asiatique* 11–12, 7^e Série, 1878, 478–498
- Immerzeel – Kleiterp 2011** M. Immerzeel – L. Kleiterp, The Church of Deir Mar Tuma in Saydnaya: A Reused Roman Temple, *Eastern Christian Art* 8, 2011, 83–100; <https://doi.org/10.2143/ECA.8.0.2961367>
- Jeffery 1990** L. Jeffery, *The Local Scripts of Archaic Greece: A Study of the Origin of the Greek Alphabet and Its Development from the Eighth to the Fifth Centuries B.C.* (Oxford 1990)
- Jones 1937** A. Jones, *The Cities of the Eastern Roman Provinces* (London 1937)
- Jones 1938** A. H. Jones, *The Herods of Judaea* (Oxford 1938)
- Kalas 2006** V. Kalas, The 2004 Survey of the Byzantine Settlement at Selime-Yaprakhisar in the Peristrema Valley, Cappadocia, *Dumbarton Oaks Papers* 60, 2006, 271–293
- Keller – Band 1910** O. Keller – E. Band, *Die antike Tierwelt* (Leipzig 1910)
- Koutsoyiannis – Patrikiou 2014** D. Koutsoyiannis – A. Patrikiou, Water Control in Ancient Greek Cities, in: T. Tvedt – T. Oestigaard (eds.), *A History of Water: Water and Urbanization* (London 2014) 130–148
- Leeming 2018** E. L. Leeming, The Unknown Factors: Evidence from the Cave Monasteries and the Significance of Georgian Vernacular Religion as a Relic of Earlier Ritual Practices, in: E. L. Leeming, *Architecture and Asceticism: Cultural Interaction between Syria and Georgia in Late Antiquity, Texts and Studies in Eastern Christianity* 13 (Leiden 2018) 167–186; https://doi.org/10.1163/9789004375314_010

- Meimaris – Nikolaropoulou 2005** Y. Meimaris – K. Nikolaropoulou, *Inscriptions from Palaestina Tertia Ia: The Greek Inscriptions from Ghor es-Safi (Byzantine Zoora)*, μ 41 (Athens 2005)
- Millar 1993** F. Millar, *The Roman Near East, 31 BC–AD 337* (Harvard 1993)
- Mouterde 1959** R. Mouterde, *Cultes antiques de la Coeléyrie et de l'Hermon, Mélanges de l'Université St. Joseph* 36, 1959, 51–87
- Nasrallah 1940** J. Nasrallah, *Manuscripts melkites de Yabroud dans le Qalamoun, Orientalia Christiana Periodica* 6, 1940, 83–113
- Nasrallah 1956** J. Nasrallah, *Le Qalamoun a l'époque Romano-Byzantine, Les Annales Archéologiques de Syrie* 6, 1956, 68–149
- Newton 1924** F. G. Newton, *Excavations at El-'Amarnah, 1923–24, The Journal of Egyptian Archaeology* 10/3–4, 1924, 289–298
- Nöldeke 1867** T. Nöldeke, *Beiträge zur Kenntniss aramäischer Dialecte, Zeitschrift der Deutschen Morgenländischen Gesellschaft* 21, 1867, 183–200
- Oliphant 1881** L. Oliphant, *The Land of Gilead, with Excursions in the Lebanon* (London 1881)
- Parker 1987** T. S. Parker, *The Roman Frontier in Central Jordan: Interim Report on the Limes Arabicus Project 1980–1985* (Oxford 1987)
- Peters et al. 1999** J. Peters – A. von den Driesch – D. Helmer – M. Sanasegui, *Early Animal Husbandry in the Northern Levant, Paléorient* 25, 1999, 27–48
- Porter 1870** J. L. Porter, *Five Years in Damascus: With Travels and Researches in Palmyra, Lebanon, the Giant Cities of Bashan, and the Hauran* (London 1870)
- Post 1891** G. E. Post, *Narrative of a Trip to Palmyra in April 1890, Palestine Exploration Fund Quarterly Statement* 23, 1897, 20–49
- Prym – Socin 1890** E. Prym – A. Socin, *Kurdische Sammlungen: Erzählungen und Lieder in den Dialecten des Tür Abdin und von Bohtan* (St. Petersburg 1890)
- Rich 1873** A. Rich, *A Dictionary of Roman and Greek Antiquities: With Nearly 2000 Engravings on Wood from Ancient Originals* (London 1873)
- Rogers 2018** D. K. Rogers, *Water Culture in Roman Society, Brill Research Perspectives in Ancient History* 1, 2018, 1–118; <https://doi.org/10.1163/25425374-12340001>
- Schürer 1891** E. Schürer, *A History of the Jewish People in the Time of Jesus Christ* (New York 1891)
- Seevers – Winslow 2019** B. Seevers – A. Winslow, *Iron Age I Israelite Looms: An Archaeological and Experiential Study, Near East Archaeological Society Bulletin* 63, 2018, 19–25
- Spitaler 1957** A. Spitaler, *Neue Materialien zum neuaramäischen Dialekt von Ma'lûla, Zeitschrift der Deutschen Morgenländischen Gesellschaft* 107, 1957, 299–339
- UNESCO 1999** UNESCO, *Maaloula Description*, <https://whc.unesco.org/en/tentativelists/1299/> (March 16, 2025)
- UNESCO 2004** UNESCO, *The Criteria for Selection*, <https://whc.unesco.org/en/criteria> (March 16, 2025)
- Wells 1977** M. C. Wells, *Where Did They Put the Horses? Cavalry Stables in the Early Empire*, in: J. Fitz (ed.), *Limes: Akten des XI. Internationalen Limeskongresses, Székesfehérvár, 30.8.–6.9.1976* (Budapest 1977) 659–665
- Wild 2003** J. P. Wild, *General Introduction*, in: D. Jenkins – D. Jenkins (eds.), *The Cambridge History of Western Textiles* (Cambridge 2003) 9–25
- Yannopoulos et al. 2016** S. Yannopoulos – G. Antoniou – M. Kaiafa-Saropoulou – A. Angelakis, *Historical Development of Rainwater Harvesting and Use in Hellas: A Preliminary Review, Water Supply* 17/4, 2016, 1022–1034; <https://doi.org/10.2166/ws.2016.200>

ZUSAMMENFASSUNG

Das antike Felsendorf Maaloula und dessen steinerne Inneneinrichtung

Abwassersysteme, Becken, Tröge, Sitzgelegenheiten und Inschriften
Rama Aldaher

Dieser Beitrag stellt das antike Dorf Maaloula vor und zeigt Beispiele für seine verschiedenen Höhlentypen. Außerdem werden zahlreiche Infrastrukturelemente untersucht, wie die Wasserableitungen des Dorfes und die verschiedenen Felsenbecken. Eine Typologie der Tröge und Krippen wird für die verschiedenen Höhlen vorgeschlagen. Ein weiterer Schwerpunkt sind die Sitzplätze, die während der Feldforschung in sechs Höhlen festgestellt wurden. Schließlich werden in dieser Studie die in den Höhlen gefundenen Inschriften sowie die bereits aus älteren Untersuchungen bekannten, inzwischen verwitterten Inschriften vorgestellt.

SCHLAGWORTE

Qalamounarchitektur, Maaloulas Höhlen, Höhlentypologie, Felseninstallationen, Felsensitze

FIGURE CREDITS

Frontispiece: R. Aldaher

Fig. 1: Aerial photo: Google Maps, Image © 2024 Airbus, CNES/Airbus, Maxar Technologies; photos: R. Aldaher

Fig. 2: R. Aldaher

Fig. 3: R. Aldaher

Fig. 4: R. Aldaher

Fig. 5: R. Aldaher

Fig. 6: R. Aldaher

Fig. 7: R. Aldaher

Fig. 8: R. Aldaher

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الخلاصة

معلولا، القرية القديمة المحفورة في الصخر والعناصر الداخلية المنحوتة:

نظام التصريف، الأحواض، المعالف، المقاعد، والنقوش
راما الضاهر

يتناول هذا المقال قرية معلولا القديمة ويقدم أمثلة لنماذج كهوفها المختلفة. كما تجري دراسة العديد من عناصر البنى التحتية كتمديدات تصريف المياه في القرية والأحواض المتنوعة المقتطعة من الصخر. هذا ويتم اقتراح تصنيف للأجران والمعالف بالاعتماد على الكهوف المختلفة. أما المقاعد التي تمت ملاحظتها إبان الأعمال الميدانية في ست من المغارات فتشكل محورًا آخر للمقال. أخيرًا يأتي في هذا البحث التعريف بالنقوش المكتشفة في المغارات، وكذلك النقوش المعروفة من أبحاث سابقة والتي تآكلت مع مرور الوقت.

الكلمات المفتاحية

عمارة القلمون، كهوف معلولا، تصنيف الكهوف، رصانع تجهيزات منحوتة، مقاعد صخرية

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