The Subterranean Complexes of Maresha. An Urban Center from the Hellenistic Period in the Judean Foothills, Israel

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Abstract

The ancient city of Maresha is identified with Tell Sandahannah, situated in the Judean Foothills, about 40 km southwest of Jerusalem. The city was founded in the Iron Age and continued in existence until the late Hellenistic period. During the Hellenistic period Maresha flourished and became the central city of a region known as Idumaea.
The archaeological site consists of an Upper City (UC), a Lower City (LC) and a large number of artificial subterranean complexes comprising caves, columbaria, water cisterns, store rooms, oil presses, etc., designated as the Subterranean City (SC). This Hellenistic period's subterranean infrastructure is the focus of this paper.
In this paper we present and discuss the typology and functions of the caves of Maresha. We suggest to identify ten basic types of rock-cut (artificial) caves: 1. Columbarium (pl. Columbaria) – Subterranean dovecotes; 2. Olive presses (or, olive-oil plants); 3. Baths (and "filter chambers"); 4. Underground quarries; 5. Cisterns; 6. Stables; 7. Ritual caves; 8. Storage chambers; 9. Burial caves; 10. Hiding complexes.
Almost all Maresha subterranean spaces were hewn to serve existential and economic needs. The underlying assumption is that the residential houses of Maresha, and the subterranean chambers and means of production hewn underneath, served the local population over generations.
Economic activities were conducted below the surface of the ground out of engineering considerations, due to the durability of the rock walls and ceilings. The cost of quarrying and providing suitable spaces for workshops and installations in the underground was far cheaper and more convenient than constructing these above ground where the cost of building and maintenance of structures was much higher. Descent into the subterranean spaces was from the houses above, from courtyards and inner spaces, from rooms and corridors to baths, from passages between houses, and in some cases from passages to the street adjacent to the house through separate entrances.
Manufacturing and processing installations and other types were found in caves throughout the LC. Olive-oil presses and columbaria were very common, albeit in smaller concentrations in the northern sector compared with most of the areas of the city. As indicated above, these installations were closely connected with the large residential units. Even where the entrances to the installation were not in the house itself, the caves extended directly beneath the rooms of the house. Water for use in the home or for sale was drawn from rock-cut cisterns, sometimes being used jointly by neighbouring households. Thus, two such adjoining installations - even if they had been hewn in the rock during one operation - each had its own entrance and functioned independently.

Key words: Maresha, Judean Foothills, Hellenistic period, Underground complexes.

Riassunto

I complessi sotterranei di Maresha - un centro urbano di epoca ellenistica nella Giudea Foothills, Israele

L'antica città di Maresha è identificata con l'attuale Tell Sandahannah, situata nella giudaica Foothills, a circa 40 km a sud ovest di Gerusalemme. La città fu fondata nell'età del Ferro ed è esistita fino al tardo periodo ellenistico. Durante il periodo ellenistico Maresha fiorì e divenne la città centrale di una regione conosciuta come Idumea.
Il sito archeologico è costituito da una Città Alta (UC), una Città Inferiore (LC) e un gran numero di complessi sotterranei artificiali comprendenti grotte, colombari, cisterne, magazzini, frantoi, ecc, facenti parte

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di quella che viene designata come la Città Sotterranea (SC). L'obiettivo di questa ricerca si concentra sulle strutture sotterranee di questo periodo ellenistico.
In questo articolo presentiamo e discutiamo la tipologia e le funzioni degli ipogei di Maresha. Sono stati individuati dieci tipologie di cavità artificiali: 1. Colombaie sotterranee; 2. Frantoi, 3. Bagni (e "camere di filtraggio"), 4. Cave sotterranee, 5. Cisterne, 6. Scuderie, 7. Cavità di culto, 8. Camere di stoccaggio; 9. Cavità sepolcrali; 10. Nascondigli.
Quasi tutti gli spazi sotterranei di Maresha sono stati scavati a scopo abitativo e per motivazioni economiche. L'ipotesi è che le case residenziali di Maresha, e le varie opere sotterranee incluse quelle destinate ad attività produttive, siano state utilizzate dalla popolazione locale per più generazioni.
Le opere sotterranee per lo svolgimento di attività economico produttive sono state realizzate sulla base di considerazioni di carattere ingegneristico come la durabilità nel tempo di pareti e soffitti di roccia. Il costo di estrazione per ricavare spazi adatti per officine e impianti nel sottosuolo risultava molto più economico e più conveniente che realizzarli in superficie dove il costo di costruzione e manutenzione di tali strutture era molto più alto.
L'accesso agli spazi sotterranei avveniva dalle abitazioni soprastanti, da cortili e spazi interni, dalle camere e corridoi ai bagni, dai passaggi tra le case, e in alcuni casi da passaggi per la strada adiacente alla casa attraverso ingressi separati.
Installazioni per la produzione e la lavorazione e installazioni di altre tipologie sono stati trovati negli ipogei di tutta la Città inferiore. Presse di olio di oliva e colombari erano molto comuni, anche se in concentrazioni minori nel settore settentrionale, rispetto alla maggior parte delle zone della città. Come indicato sopra, questi impianti erano strettamente connessi con le grandi unità residenziali. Anche dove gli ingressi dell'impianto non erano nella stessa casa, gli ipogei si estendevano direttamente sotto le stanze della casa. L'acqua per uso domestico o per la vendita veniva ricavata da cisterne scavate nella roccia, a volte utilizzate congiuntamente dalle famiglie vicine. Così, due di questi impianti vicini - anche se fossero stati scavati nella roccia durante un'unica operazione - ognuno aveva il proprio ingresso e funzionavano in modo indipendente.

Parole chiave: Maresha, Judean Foothills, periodo Ellenistico, complessi sotterranei.

Introduction

The ancient city of Maresha is identified with Tell Sandahannah, situated in the Judean Foothills, about 39 kilometres east of Ashqelon, and approximately 40 km southwest of Jerusalem, as the crow flies (figs. 1, 2). Maresha is mentioned in the biblical text, and in the writings of Josephus and Eusebius. Biblical references include Maresha among the Judean cities in Joshua 15:44 along with Keilah and Achziv. It is included in the list of cities fortified by Solomon's son Rehoboam (2 Chron. 2:7–9) following Adullam, Gath and along with Adoraim, Ziph and Lachish. It is mentioned again with Lachish, Adullam, Achziv and Moreshet-Gath (Micah 1:13–15). Josephus (Antiquities VIII: 246) repeats the list, with Maresha situated in the vicinity of other towns of the Judean Foothills. Eusebius (Onomasticon 130:10) corroborates this, mentioning that the town was two miles from Bet Guvrin.
The site identification is based on a tomb inscription discovered by Peters & Thiersch (1905) that mentioned the Sidonian community "residing at Marissa" (Maresha). This information has been supported by the

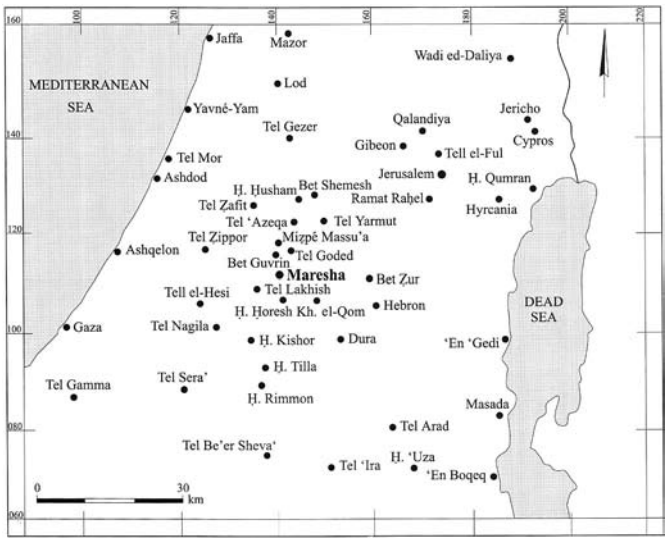

Fig. 1 - Location map (A. Kloner and Israel Antiquities Authority [IAA]).
Fig. 1 - Ubicazione dell'area di studio (A. Kloner e Autorità delle Antichità Israeliane [IAA]).

Fig. 2 - Maresha - oblique aerial photograph, looking south (A. Graicer).
Fig. 2 - Maresha - fotografia aerea obliqua, guardando verso sud (A. Gracier).

discovery of two ostraca in the subterranean complexes of Maresha that mention the toponym 'Maresha' (Kloner & Stern, 2007; Kloner et al., 2010). It should be noted that the toponym appears also in 17 *ostraca* – apparently uncovered by illegal excavators at Kh. el-Qom.

History of Maresha

The city of Maresha was founded in the Iron Age and continued in existence until the late Hellenistic period.

The biblical text mentions Maresha as one of the Canaanite cities (Joshua 15:14) belonging to the tribe of Judah as well as a fortified city in the time of Rehoboam (2 Chron. 11:5–12). The Bible mentions that the city was founded at the end of the United Monarchy (Iron Age II, tenth century BCE).

The excavations, however, have shown that there was a distinct presence at Maresha (Bliss & Macalister, 1902; Kloner, 2003) only from the beginning of the Iron Age II (eight to sixth centuries BCE). During the late seventh and early sixth centuries BCE the kingdom of Judah had been weakened by the conquering Babylonians. After the destruction of the First Temple (586 BCE) there was no central government in Judah. It appears that at this time there was an incursion by Idumaeans from the southeast into this region, to the extent that they became the dominant ethnic group; a fact that may be reflected in the name of the region, which became known as Idumaea (Greek for Edom). This phenomenon is reflected in the large number of ostraca and tomb inscriptions bearing Idumaean names (containing the theophoric element Kos). With the Persian conquest in 539 BCE Maresha became an important center and also the capital of Idumaea.

The site consists of an Upper City (UC), a Lower City (LC) and a large number of artificial subterranean complexes (SC) consisting of caves, columbaria, water cisterns, store rooms, oil presses etc, designated as the Subterranean City (SCit); (fig. 9). This subterranean infrastructure stands in the center of this paper.

Excavations in the UC revealed some walls from both the fifth and fourth centuries BCE. In the fourth century BCE, Phoenicians from Sidon and Greeks settled here, probably introducing Hellenistic culture. Some Egyptians as well as a few Judeans were also part of the population. This produced a particular ethnic and social fabric in this city.

Following the death of Alexander the Great in 323 BCE, the region became a battleground between the Ptolemaic and Seleucid empires. The Ptolemies dominated Maresha in the third century BCE when it became the administrative and economic center and main city of Western Idumaea. The site is mentioned in a number of the Zenon papyri (P. Cairo 59006, 59015, 58537), dated to ca. 259 BCE, attesting to the intensive commercial ties between Maresha and the Ptolemies. It was the seat of various government officials and remained in Ptolemaic hands until the Seleucids defeated the Ptolemies at the Battle of Paneas in 198 BCE and took control of the region. The city then came under Seleucid control, under whose auspices it continued to function as an important economic and administrative center.

According to 1 Macc. 5:66, Maresha was used by the Seleucids as a base from which to instigate attacks on Judea and therefore became subject to reprisals from the Maccabees (2 Macc.12:35). According to Josephus (Antiquities XIII:257), during the reign of the Hasmonean ruler John Hyrcanus I (137–104 BCE), Maresha, along with the rest of Idumea, was conquered and the inhabitants given the option of conversion to Judaism if they wished to remain in the region. Well dated destruction levels uncovered in the recent excavations, as well as in those carried out by Bliss and Macalister in 1900, attest to the abandonement of the upper and lower city in 112/111 BCE or slightly later (e.g. a well dated hoard of silver tetradrachms from this level [Barkay, 1992]).

While it is likely that after the conquest by John Hyrcanus I, the Hasmoneans continued to rule the city (Josephus, Antiquities XIII:396) it appears, at least from the archaeological evidence, to have been a limited presence. The 25 coins of Hyrcanus I, found on the tell during the 1900 excavations (Kloner, 2003) represent the latest coins found in a stratigraphic context there. This is probably the final occupation of Maresha, suggesting that no more than a relatively small occupation force remained in the UC, possibly in order to prevent the return of a Idumaean population. Maresha apparently remained in Hasmonean hands until the conquest of Pompey in 63 BCE. Pompey divided Western Idumaea from Judea and added it to the pagan cities along the coast.

While according to Josephus (Antiquities XIV:75; Wars I:156) the city was rebuilt in the time of Pompey's successor Gabinius, governor of Syria from 57 to 55 BCE, there is no unequivocal archaeological evidence to the existence of such a city at Maresha proper (except for coins minted by "The People of Maresha" in the first century BCE; Qedar, 1992). It is assumed that this city (perhaps located at this stage somewhat to the north, at Bet Guvrin) was given to Herod, along with all of Idumaea, in 40 BCE, the same year in which, according to Josephus, the Hasmonean king Mattathias Antigonus, with his Parthian allies, destroyed the city, which was never rebuilt. Thereafter, Bet Guvrin replaced Maresha as the regional capital.

Maresha was briefly inhabited during three later periods. Some of the subterranean complexes in the western part of the LC were interconnected by burrows and converted into hiding complexes, apparently by residents of nearby Bet Guvrin, during the Bar Kokhba Revolt (the second revolt of the Jews against the Romans, 132–136 CE). Some tombs in the northern necropolis were reused by Jews, apparently inhabitants of Bet Guvrin during the 1st and early 2nd centuries CE (Oren & Rappaport, 1984).

During the Byzantine period, a small village, mentioned as a ruin by Eusebius in his Onomasticon (Klosterman, 1904: No. 682) was re-inhabited in the southwestern area of the lower city, which included a church dating to the fifth–sixth centuries CE (Kloner, 2003).

Alterations in the Hellenistic-period complexes further reflect both Byzantine and early Islamic period settlement. SC 30 (see below), was changed from its original form as a columbarium into an underground mosque, which reflects a presence during the Early Islamic period. Remains from the Byzantine and Crusader period are also evident, most obviously at the Sandahanna Church, which gave the tell its Arabic name.

Archaeological Exploration and the Lower City

Archaeological excavations were conducted in the UC in the summer of 1900 by F.J. Bliss and R.A.S. Macalister on behalf of the Palestine Exploration Fund (PEF). These excavations revealed the ancient layers of a Tell (mound) dating to the Iron Age II and the Persian periods, with two Hellenistic phases (Ptolemaic and Seleucid; Bliss & Macalister, 1902). The Seleucid city, established on the top of the mound, dating from the 2nd century BCE, is referred hereafter as the Upper City. The UC in its last phase was fortified, almost square in plan and measured about 6 acres (24,000 square meters; Avi-Yonah & Kloner, 1993; fig. 3).

Bliss and Macalister's report does not mention subterranean chambers in the upper city. Bliss & Macalister (1902), Thiersch (1908), and Avi-Yonah (1977), who summarized the work of his predecessors, were aware only of the existence of the UC.

It is now clear that at the foot of the upper city there was a vast surrounding lower city, covering c. 80 acres (320,000 square meters). Excavations on behalf of the Israel Antiquities Authority (IAA) have been conducted by a team directed by the first author in the LC and in the SC from 1972 to 1999 (Kloner, 1996; Kloner, 2003).

It is evident that the construction of the UC predated that of the lower one by several decades. While no data exists which could enable an exact dating of the first construction of the LC, it may reasonably be assumed that it took place already in circa 280 BCE. Several of the excavation areas revealed the remains of structures dating back to the end of the 4th century BCE. (Few finds point to even earlier occupation - during the Iron Age and the Persian periods, on certain areas in the eastern, southeastern and southern LC).

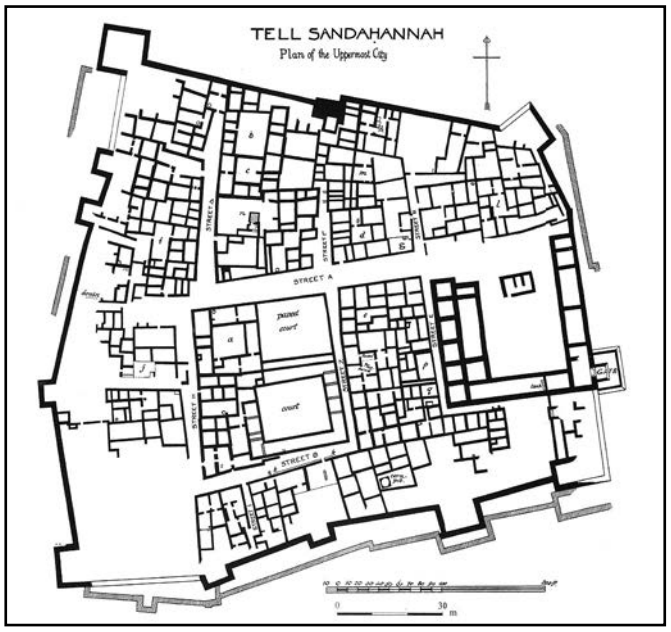

Fig. 3 - Plan of the last phase of occupation in the upper city, excavated by Bliss & Macalister (1902).

Fig. 3 - Pianta dell'ultima fase di occupazione della città alta, scavata da Bliss & Macalister (1902).

The LC - at least in its general layout - was almost certainly planned in advance (fig. 4). The street grid and adjacent buildings were obviously pre-planned and public buildings were also provided for. The town planners had to take into account the various limitations of the area, previous constructions, rock-cut cavities from the Iron Age and Persian periods, as well as the overall topography of the site. Most of the construction work at Maresha employed roughly rectangular blocks of local chalky limestone (regarding the characteristics of the local stone, see below). Most of this building stone was extracted from subterranean quarries that were left disused following the stone-extraction process. Other sources of stone were quarried in subterranean spaces that were primarily, and in a few cases only subsequently, adapted for use as workshops, columbaria, and water cisterns.

Until the LC began to develop, most probably in the first quarter of the 3rd century BCE, the UC apparently functioned as a self-contained urban unit, albeit of small size and with a limited population. It was from that time that manufacturing activities, processing of agricultural crops, water storage, and the keeping of livestock was commenced in the subterranean complexes of the LC. A fortification wall surrounded the LC. The general course of this defense wall is marked on the map (fig. 9), that also includes the location of the UC uncovered in the 1900 excavations, and the subterranean complexes that were surveyed, measured, and drawn by Kloner and IAA expedition. The suggested course of this wall is based on the assumption that the subterranean complexes were included within the walled area. Our assumption is that some collapsed caves represent complexes within the LC, while the burial caves must have been located outside the walled, inhabited area. These, like the other constructions mentioned above, were developed and added to mainly during the second half of the 3rd century BCE. Construction and hewing/quarrying activities in the LC spread from the acropolis (i.e. the mound or UC) towards the outer perimeter of the LC.

In excavation Areas 53, 61, and 930 in the LC, large dwelling houses were uncovered, with ground level areas extending between 150 to 400 square metres (figs. 4, 5, 7). Typically, they had a central, square-section pillar supporting a winding staircase which ascended to an upper storey (Kloner, 1996; fig. 6). Walls and parts of buildings were discovered in all of the excavation areas of the LC. In Area 100 five shops opened onto a street running in a W-E direction. In the back rooms and in the courtyards next to the shops were staircases ascending to upper storeys. Parts of buildings - but not complete residential dwellings - were uncovered in a number of areas. The densely built-

up buildings uncovered in the LC appear to have served as residences, commercial stores, and workshops. Probes conducted in the proximity of the openings and passages leading to rock-cut caves, have brought to light walls constructed of blocks of chalky limestone and covered with plaster. Additional walls, mainly foundation courses, built of hard *nari* type limestone were less common and of more limited distribution. Taking into consideration a population density ratio of 50 persons per 1000 square meters (Broshi, 1979), an area of densely built-up 240,000 square meters would have been inhabited by between 10,000-12,000 individuals. Another calculations based on about 900 residential houses multiplied by 15 inhabitants per house, provides the figure of 13,500 for the total population of the city at its peak.

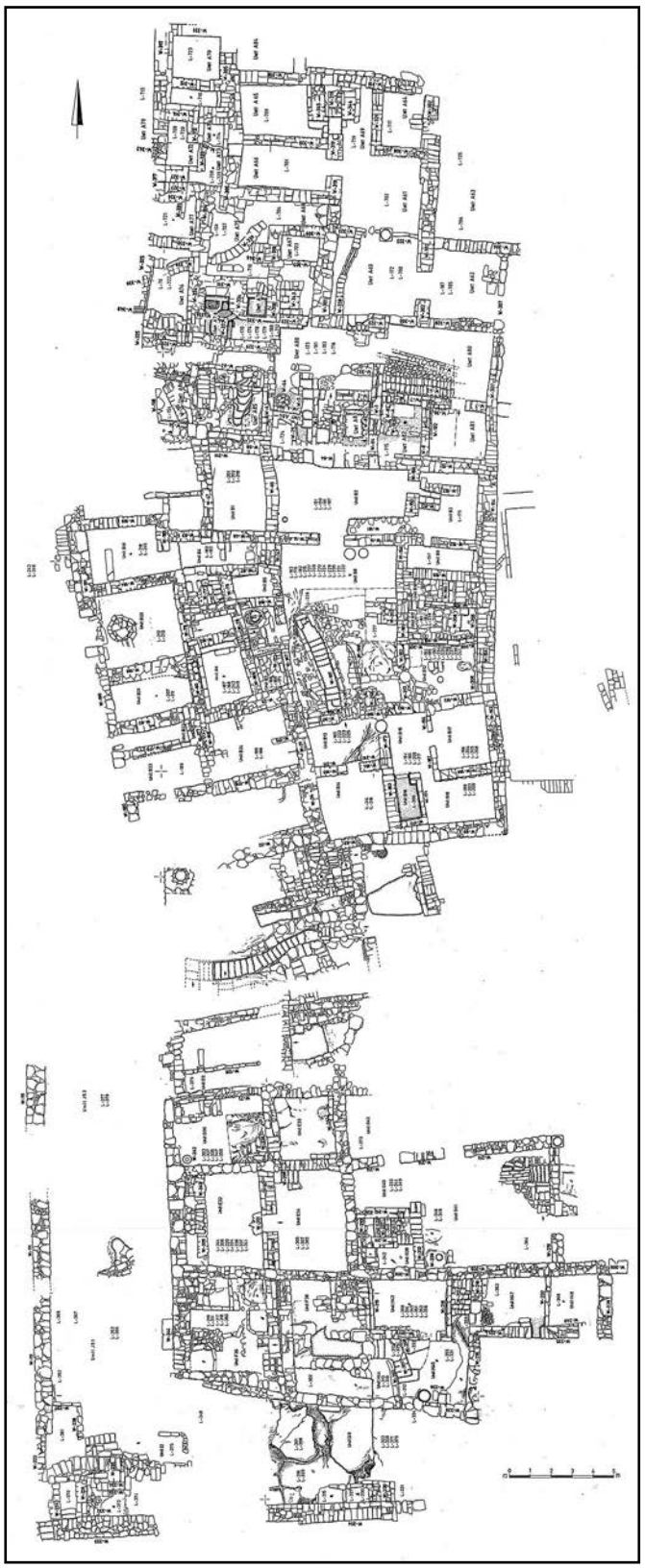

Fig. 4 - Plan of excavations area 61 - A residential area of the LC. The stepped corridors connect the houses to SC 61 (A. Kloner and IAA).

Fig. 4 - Pianta degli scavi dell'area 61 - Una zona residenziale della LC. I corridoi a gradini collegano le case al complesso sotterraneo (SC) 61 (A. Kloner and IAA).

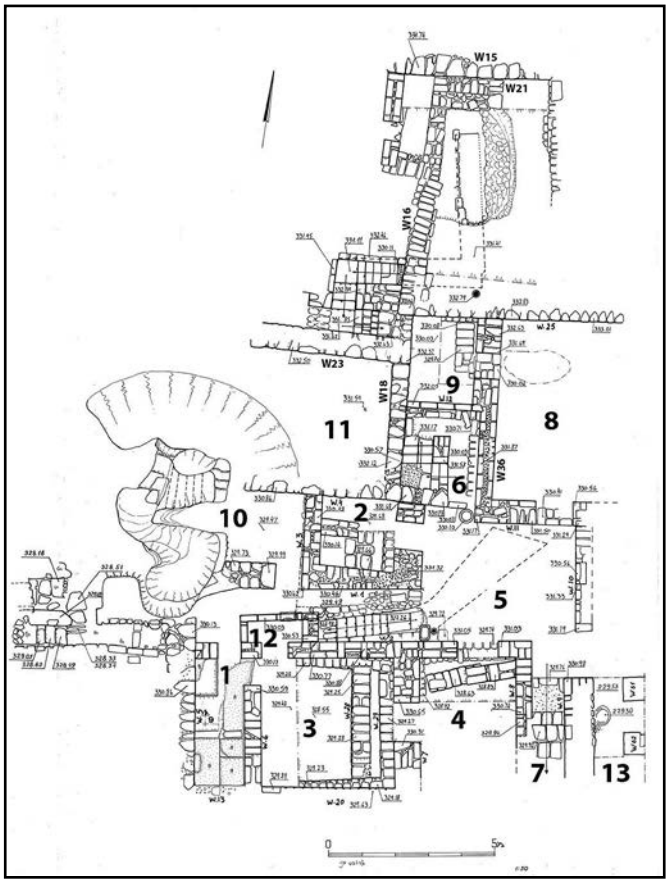

Fig. 5 - Plan of excavations area 53 - A residential area of the LC. No. 12 marks the entrance to SC 53 (A. Kloner, N. Graicer and IAA).

Fig. 5 - Pianta degli scavi dell'area 53 - Una zona residenziale della LC. Il n. 12 segna l'ingresso al complesso sotterraneo SC 53 (A. Kloner, N. Graicer e IAA).

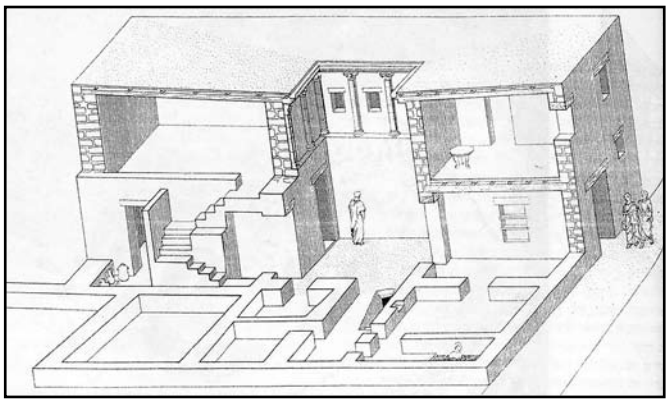

Fig. 6 - Reconstruction of a typical Hellenistic period residence in the LC Excavations Area 53 (drawing: Leonardo Gurevitz).

Fig. 6 - Ricostruzione di una tipica residenza d'epoca ellenistica nella LC Scavi Area 53 (disegno: Leonardo Gurevitz).

The Subterranean City

The SC is unique in terms of its overall size and number of spaces, by comparison to all other known complexes in other regions and from other periods. Artificial, man-made caves were found beneath all the residential houses and in all of the excavation areas. The number of subterranean chambers and spaces accessed through one opening from the ground surface varied from one to four. During the PEF 1900 excavations, while Bliss was supervising the work above ground, Macalister was deep in the bowels of the earth conducting the first systematic examination ever made of "these wonderful and mysterious underground rooms and passages. The labor was by no means easy, involving the passing of long hours in stifling air, creeping on hands and knees through long passages, and ascending steep slopes of chalky debris in order to secure measurements" (Bliss & Macalister, 1902).

The most common layout of a subterranean unit, consisted of a descent by way of a dromos-like staircase (fig. 32), which gave access to spaces on the right and left, and to a third space whose opening was opposite the lower end of the dromos (fig. 11). Only in few cases were there more than four subterranean spaces per house and in fewer cases - ten or eleven. Where there were more than four subterranean spaces, these apparently served specialized functions. The cave interiors were sometimes joined up at a later time by the cutting of openings through the contiguous walls; other walls were removed in their entirety. New chambers were also later hewn and added to the complex. This activity was mainly done in the second half of the 2nd century BCE, although in some places there is evidence of such work having been carried out at the beginning of that century. The joining and the connecting of adjacent caves became common at the time of the Hasmonean conquest at the end of the 2nd century BCE, and continued apace in the following centuries when the caves no longer filled their original function and became clogged with debris and silt. In a few cases, some of the subterranean spaces were intentionally blocked up.

In 1900, Bliss and Macalister numbered the subterranean complexes they found below the LC from 1 to 63 and published a map of their locations (fig. 8). They pointed out that many of these complexes were not surveyed. More than 100 additional complexes have been identified and documented since (fig. 9).

Bliss and Macalister determined that any connection between underground spaces and chambers, even if reached by climbing or crawling, associated them with the same complex. We still follow this method of documentation. However, sometimes these complexes include groups of chambers and caves that were not connected in antiquity (Kloner, 2003).

The SC 61, located in the south-western part of the LC, for example, which is defined as one cave, comprises of about 50 different chambers and spaces connected to each other in the underground (fig. 10).

Artificial caves at a particular site are usually intended for one specific purpose only and have no variety of usages or complicated purposes. However, that is not the case at Maresha (and in general in the central part of the Judean Foothills), where caves were used for a variety of purposes. The soft chalk that was systematically removed from the caves was used for building, and this process links between the quarrying of the caves, subsequently used for specific functions, and the construction of buildings on the surface of the site.

Fig. 7 - Photo of excavations area 53 at Maresha (B. Zissu).
Fig. 7 - Veduta della zona di scavo 53 a Maresha (B. Zissu).

The Geology of Maresha and the Surrounding Region

The area of the Judean Foothills is characterized by formations of soft, chalky limestone from the Eocene (approximately 56.5–35.5 million years BP). Maresha is

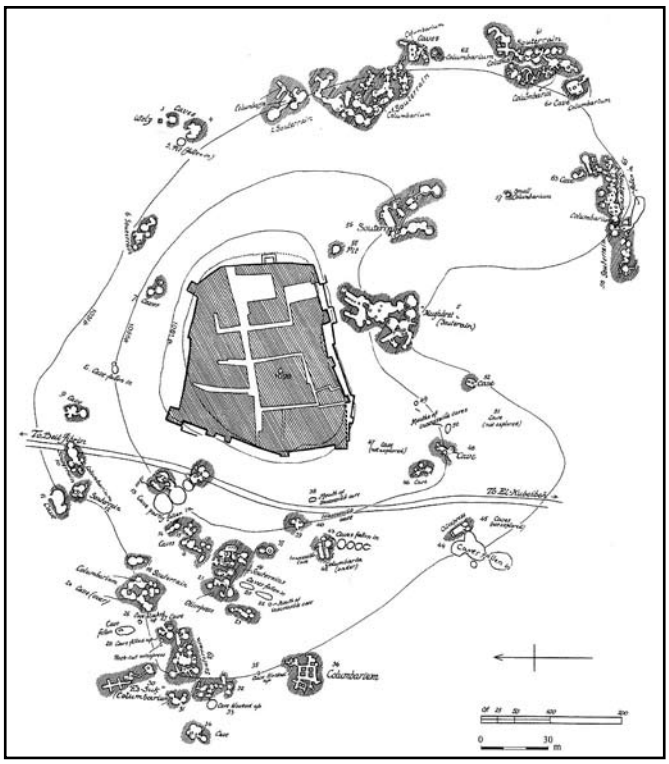

Fig. 8 - Plan of the LC and its subterranean complexes, as published by Bliss & Macalister (1902; Pl. 15).
Fig. 8 - Pianta della città bassa e distribuzione dei suoi complessi sotterranei pubblicata da Bliss & Macalister (1902; Pl. 15).

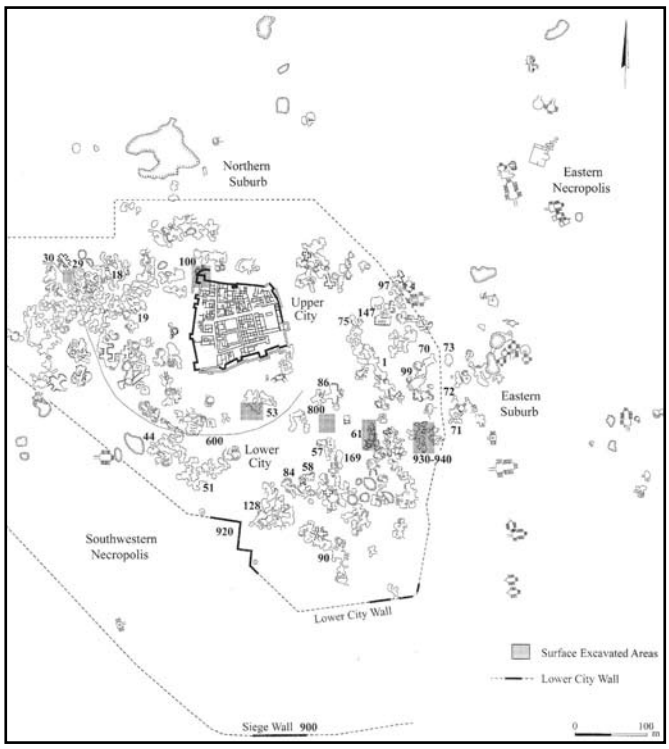

Fig. 9 - Plan of Maresha - the upper city, as uncovered by Bliss and Macalister is surrounded by 160 subterranean complexes (A. Kloner, Bliss and Macalister, IAA).
Fig. 9 - Pianta di Maresha – la città alta, come scoperta da Bliss e Macalister, è circondata da 160 complessi sotterranei (A. Kloner, Bliss and Macalister, IAA).

situated on rocks of the Zor'a formation, the Maresha member. The thickness of Maresha member varies between 30 m and 100 m. Above the chalky limestone, (known locally as *kirton*), a harder *nari* crust formed, 1 to 3 m thick.

The chalky limestone: this type of rock is friable and contains delicate crystals and minuscule pores - and therefore it is impervious to water. However, fissures in the rock allow water to penetrate into the ground. The residents of the region in antiquity were familiar with the geological conditions. Due to the relative ease of quarrying and accessibility, thousands of subterranean stable chambers were hewn in the region, for various purposes (Bliss & Macalister, 1902; Kloner, 2003). When necessary, the ceilings of chambers larger than 2 m wide were reinforced by quarrying the ceilings as vaulted arches or by leaving pillars as supports.

The *nari*: the surface of the chalky limestone is covered by a thinner, hard limestone crust, called *nari*. This crust is apparently the result of build-up and erosion processes in the marginal, semi-arid zones of the Mediterranean climate conditions (Kloner & Tepper, 1987). The *nari* is at its thickest in the Maresha-Bet Guvrin area (which explains the quantity and quality of the caves in that area) thinning out toward the W and the N.

In most of the Maresha caves the cutters didn't want to reach – from the bottom side – to the *nari* layer itself, but on the contrary, they left a layer of the chalk rock below the *nari* crust – a method that gave the caves their dome shaped or vaulting ceiling. The *nari* consolidates the whole upper layer of the cave, but it is not well preserved when it has no chalky limestone underneath. All through this region, there are dozens of ruins – the vestiges of ancient settlements, all of which contain caves of various types. The area of the Judean Foothills is about 1300 square kilometers, while at its central part, in an area of about 300 square kilometers, the above discussed phenomenon of chalky limestone with a layer of *nari* on top - is remarkably prominent.

A similar, but not identical, rock formation, which is composed of soft chalk covered by a crust of *nari* is found in Israel, in addition to the Judean Foothills region, only in the Lower Galilee. In these two regions many caves were quarried due to the specific characteristics of the rock.

A Typology of Caves

The entrance and basic layout: The most common arrangement of the caves in Hellenistic Maresha consisted of a descent by way of a dromos-like rectangular

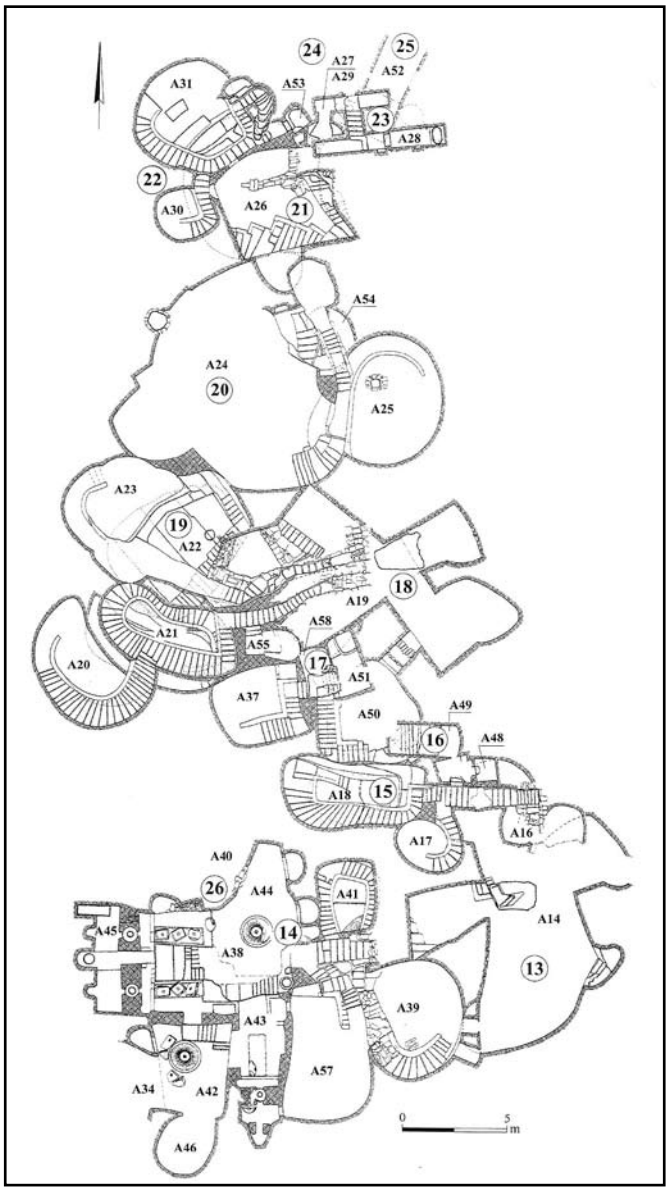

Fig. 10 - Plan of SC 61, located just underneath excavation area 61, shown in Fig. 4 (A. Kloner and IAA).
Fig. 10 - Pianta dei sotterranei 61 appena sotto l'area di scavo 61, mostrata in fig. 4 (A. Kloner e IAA).

staircase, which gave access to spaces on the right and left, and to a third space whose opening was opposite the lower end of the dromos-like staircase (fig. 11).
This basic layout, where there are three subterranean chambers, of various functions, is found also in other contemporaneous sites in the Judaean Foothills.
In this paper we present and discuss the typology and functions of various types of caves, typical to Maresha. We suggest identifying ten basic types of rock-cut (artificial) caves:

1. Columbarium (pl. Columbaria) - Subterranean dovecotes
2. Olive presses (or olive-oil plants)
3. Baths
4. Underground quarries
5. Cisterns
6. Stables
7. Ritual caves
8. Storage chambers
9. Burial chambers
10. Hiding complexes

1. Columbarium (pl. Columbaria) - Subterranean Dovecotes

Hundreds of columbaria hewn in caves have been found in Israel, mainly in the Judean Foothills. This large number may be due to the ease of hewing the soft limestone and the structures' durability even when subjected to secondary use in later periods. A great deal of research has been devoted to ascertaining the purpose of the niche-bearing structures, and numerous explanations have been offered (Tepper, 1986). Today, most researchers tend to agree that the structures in question were used to raise pigeons (Tepper, 1986; Kloner, 2000; Kloner & Hess, 1985; Zissu, 1995).
The term columbarium refers to structures used for the raising of doves or pigeons. The term also applies to subterranean structures containing niches for cremated ashes. But it should be stressed that the burial installations are common in Italy - in Rome, Ostia, Pompeii and elsewhere - but entirely absent from the archaeological record in Israel, where cremation was a rare custom, practiced mostly by Romans. Pigeons' raising was a source of economic income; pigeons were raised for three purposes: their meat was a fine source of food; their droppings were used as an excellent fertilizer; the doves were used for cultic purposes as sacrifice in pagan temples. In order to maintain this active economic endeavor there was the need of quarrying caves with small niches (about 0.25x0.25 m each), arranged in rows along the walls.
Additional support for this theory comes from the Hellenistic period graffito incised on a cave wall at Be'er Nahash, near Maresha. It contains a schematic depiction of a bird and four triangles, possibly representing a pigeon and four niches (fig. 12).
Pigeon-raising in Israel, particularly in the area of the Judean foothills, evidently dates back as far as the third century BCE; it flourished during the Hellenistic and Early Roman periods. The number and technological sophistication of underground dovecotes reached their peak in the Judean foothills, particularly in Maresha and its surroundings.
At Maresha LC, 85 columbaria installations were found in caves from the third and the second centuries BCE. The number of niches per cave varies from 200 to 4000.

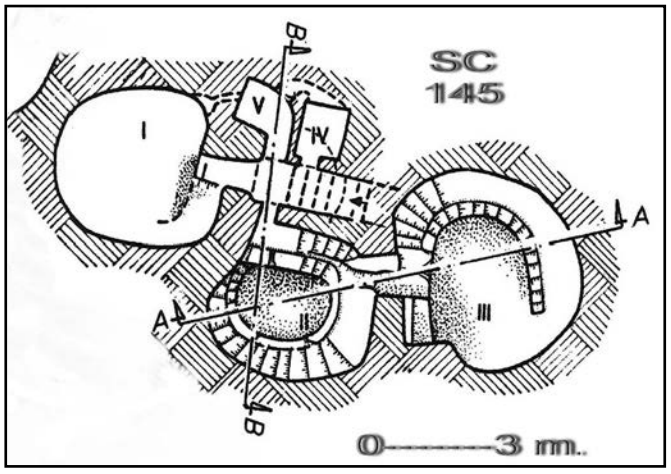

Fig. 11 - Plan of SC 145, showing basic layout of a subterranean unit in the LC (A. Kloner, Y. Tsoran and IAA).
Fig. 11 - Pianta di SC 145, che mostra lo schema di base di una unità sotterranea nella LC (A. Kloner, Y. Tsoran e IAA).

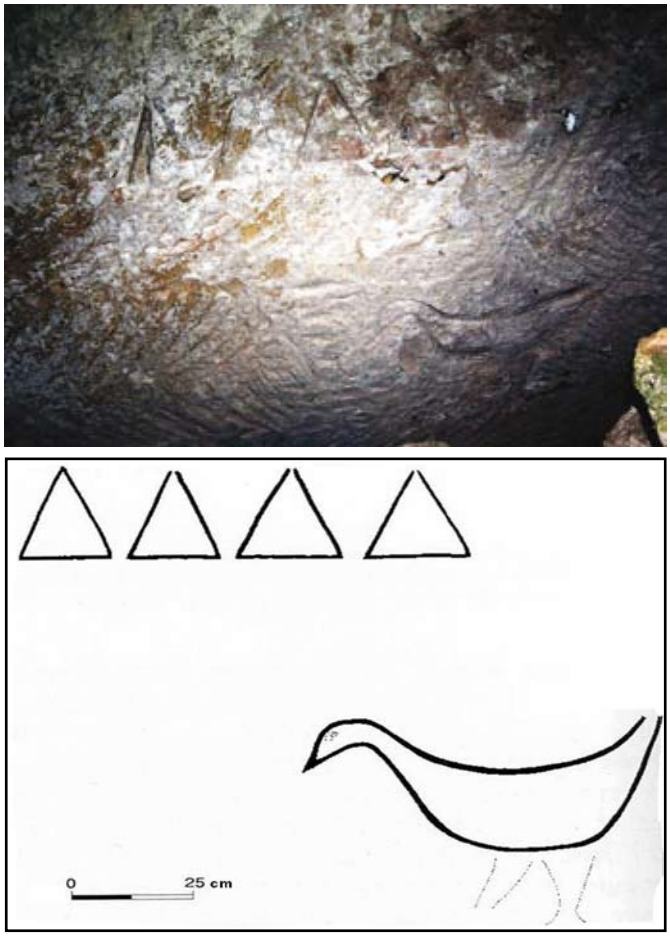

Fig. 12 - A) Hellenistic period graffito incised on a subterranean chamber wall at Be'er Nahash, near Maresha (photo B. Langford). B) Schematic depiction of a bird and four triangles, possibly representing a pigeon and four columbarium niches (drawing B. Zissu).
Fig. 12 - A) Graffito di periodo Ellenistico inciso su una parete della camera sotterranea a Be'er Nahash, vicino Maresha. B) Raffigurazione schematica di un uccello e quattro triangoli, che forse rappresenta un piccione e quattro nicchie di colombario (disegno B. Zissu).

These columbaria were carved underneath the dwellings of the lower city, and were accessed by staircases from their courtyards. The pigeons would fly in and out of the subterranean chambers through vertical shafts opening at the courtyard level of dwellings. In some cases cisterns are located adjacent to columbaria (fig. 13). The columbarium cave situated in the western part of the lower city of Maresha (SC 30), was quarried in the shape of a double cross and contains about 2000 niches (originally it contained about 2600). This cave, locally known as es-Suk, is one of the largest and best designed – by its size, by its shape and by its quarrying quality (figs. 14-19). The columbarium was no longer used as such from the beginning of the 2nd century BCE and became a storehouse or some other practical use. During the 2nd century CE burrows were cut and other changes occurred which attest to its use as part of a hiding complex, during the Bar Kokhba war. Typical burrows are found in at least four other more subterranean complexes (see below). The cave was again in use during the Byzantine and Early Islamic periods. Christian and Muslim graffiti on some of the walls in this system are further testimony to later habitation (fig. 19). During the Early Islamic period the cave was apparently converted from its original use as a columbarium into an underground mosque.

Subterranean columbaria installations similar to those in Israel are found also in East Turkey, near the border with Armenia and in Italy.

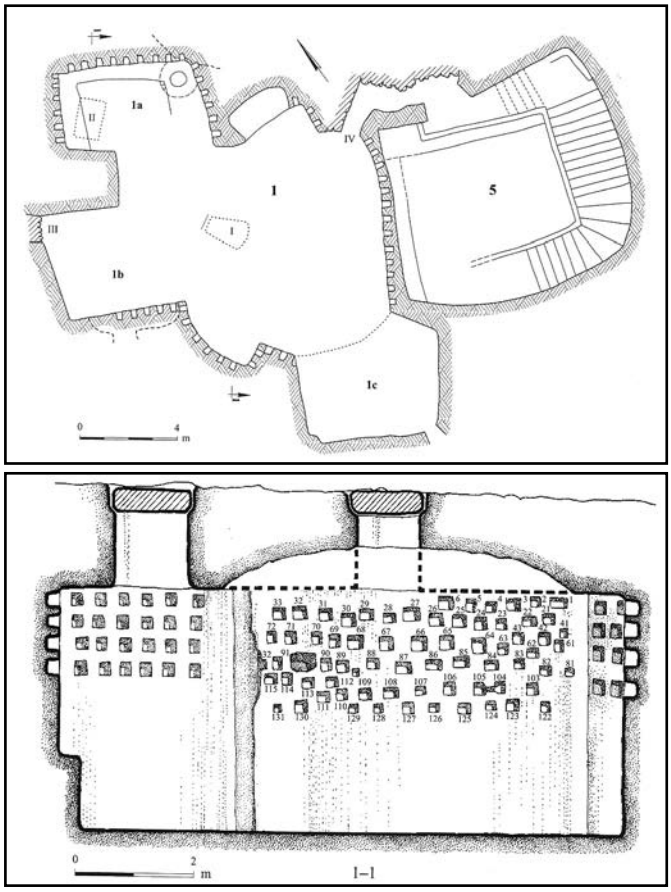

Fig. 13 - Plan (A) and section (B) through a columbarium incorporated in SC 21 at Maresha (after Kloner & Hess, 1985).

Fig. 13 - Pianta (A) e sezione (B) di un colombario in SC 21 a Maresha (da Kloner & Hess, 1985).

2. Olive Presses (Olive-Oil Plants)

Twenty-seven subterranean olive presses (or olive-oil plants), all of them hewn in the chalky bedrock, were found at Maresha (e.g. no. 14 in SC 61, see fig. 10). The presses are located beneath the dwellings of the LC and accessed by rock-cut steps from courtyards or from streets. The presses are dated to the Hellenistic period, from the third-second centuries BCE. With the

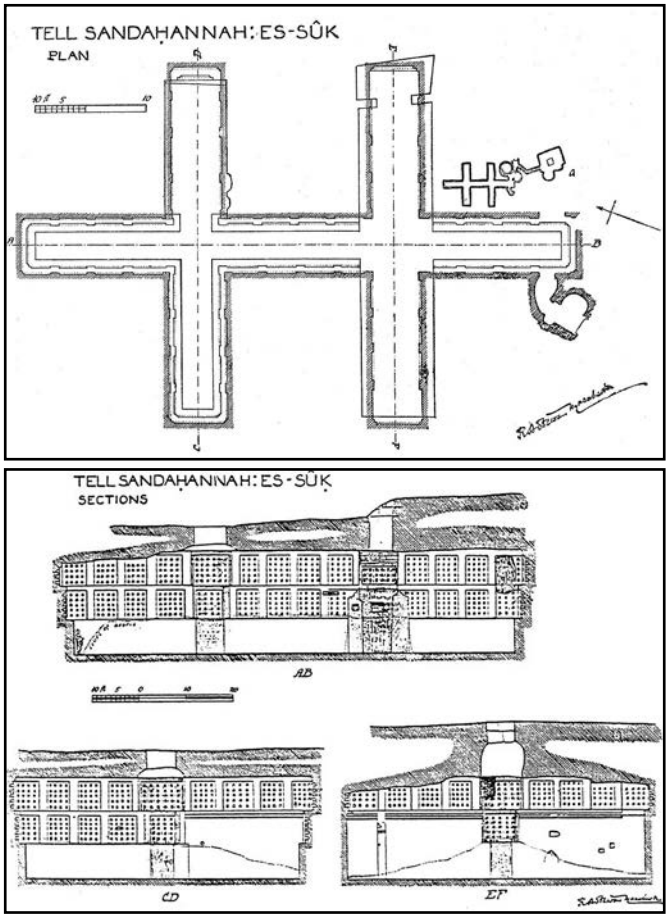

Fig. 14 - Plan (A) and section (B) of the columbarium known as "es-Suk", (SC 30), drawn by Macalister (Bliss & Macalister, 1902).

Fig. 14 - Pianta (A) e sezione (B) di un colombario noto come "es-Suk", (SC 30), disegnato da Macalister (Bliss & Macalister, 1902).

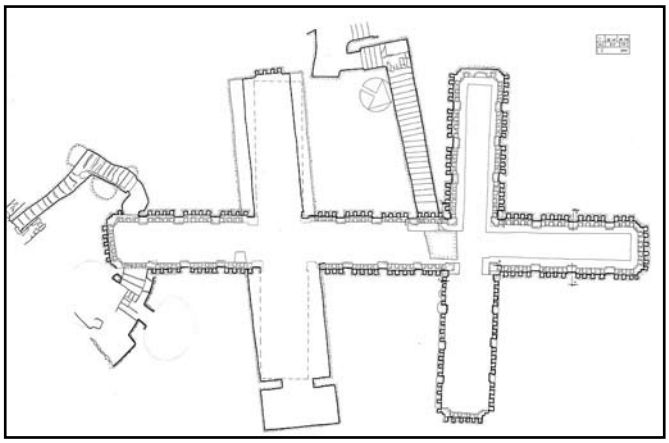

Fig. 15 - Updated plan of SC 30 prepared by A. Kloner and IAA expedition, following excavations in 1990-1991 (A. Kloner, D. Bechar, and IAA).

Fig. 15 - Pianta aggiornata di SC 30 realizzata dalla spedizione A. Kloner e IAA, a seguito della campagna di scavi del 1990-1991 (A. Kloner, D. Bechar e IAA).

exception of perishable components that were made of wood, leather and similar materials, the presses have entirely survived.

It is clear that all of them were planned in advance as olive-oil plants and were built and operated according to an identical method: Each contained a crushing basin and two or three pressing installations of the "lever and weights" type (Kloner & Sagiv, 1993; figs. 20, 21). The crushing basin had a concave crushing surface and

Fig. 16 - Photos of the columbarium, looking north (photo B. Zissu).

Fig. 16 - Foto dei colombari, guardando verso nord (foto B. Zissu).

Fig. 17 - Detail: columbarium wall in complex 30, and pigeon happily inhabiting niche in 2002 (photo B. Zissu).

Fig. 17 - Dettaglio: parete del colombario nel complesso 30, con nicchia utilizzata da un piccione ancora nel 2002.

Fig. 18 - SC 30 - Stepped corridor connecting the columbarium to the surface. The tunnel was concealed at the time of Macalister explorations, and was subsequently discovered by Kloner (compare figs 14 and 15; photo B. Zissu).

Fig. 18 - SC 30 - corridoio a gradini che collega il colombario in superficie. Il tunnel è stato occultato al momento delle esplorazioni di MacAlister, e successivamente è stato riscoperto da Kloner (confrontare con le figg. 14 e 15; foto B. Zissu).

Fig. 19 - Christian and Muslim graffiti on wall of stepped corridor (photo B. Zissu).

Fig. 19 - Graffiti cristiani e musulmani sul muro del corridoio a gradini (foto B. Zissu).

a convex or lens-shaped crushing stone cut in order to fit them (fig. 22). There was only one crushing stone to each crushing basin. The crushing basins are sometimes placed in the main press room but in some cases they are in specially cut round adjuncts often with large semicircular niches in the walls - doubtless to place olives before crushing.

The lens-shaped crushing stones (of a somewhat different method) are known from other Mediterranean sites, as Olinthos and Pompeii (Kloner & Sagiv, 1993).

The pressing installation: the beam (varied in length - 4.5m–7.5m) was anchored in a niche cut in the wall. A rock cut wall about 1.5m high divided the area at the back where the beam niche was found from the main chamber of the press (fig. 23). The collecting vat was at the bottom of a cylindrical aperture that was cut into this wall and that was open both to the back and the front. The frails of olive pulp were piled up over the opening of the collecting vat and held in place in the cylindrical aperture, the sections of wall on either side

acting as press piers. The beam was raised and lowered in the openings in the cylindrical aperture pressing down on the frails; the extracted liquid seeped straight down into the vat. In front of the collecting vat there was often an elongated shallow rock cut basin in which the jars for the oil, water and residue probably stood. Each press in which traces of the weights can be found, was equipped with three weights of the type with a bore in the form of a reversed T. The weights fit in a rectangular weight pit which allowed the beam to descend to the maximum depth. Three weights are also found in other Hellenistic period olive presses known in Judaea and other regions of the country.

There was usually an entrance in the dividing wall, cut with the purpose to enable passage between the back room and the main press room. The presses often came in pairs and then the approach to both back rooms was through one entrance in the wall that was usually between the two presses. In some cases a third press was added, probably because the two presses were insufficient to handle the amounts of crushed olives in given point of time. An unusual feature in the Maresha press rooms was a cultic niches - a small rock-cut altar located in a niche in the wall, often above the entrance in the dividing wall, between two presses (Kloner, 2003; fig. 24).

Another element found in one of the subterranean complexes at Maresha (Press 14) and also connected to the production of olive oil is a rock cut store room with round depressions in the floor in which the oil jars were set. "Maresha Type" presses, crushing basins and storage rooms with depressions in the floor, are found at other sites in the surrounding region.

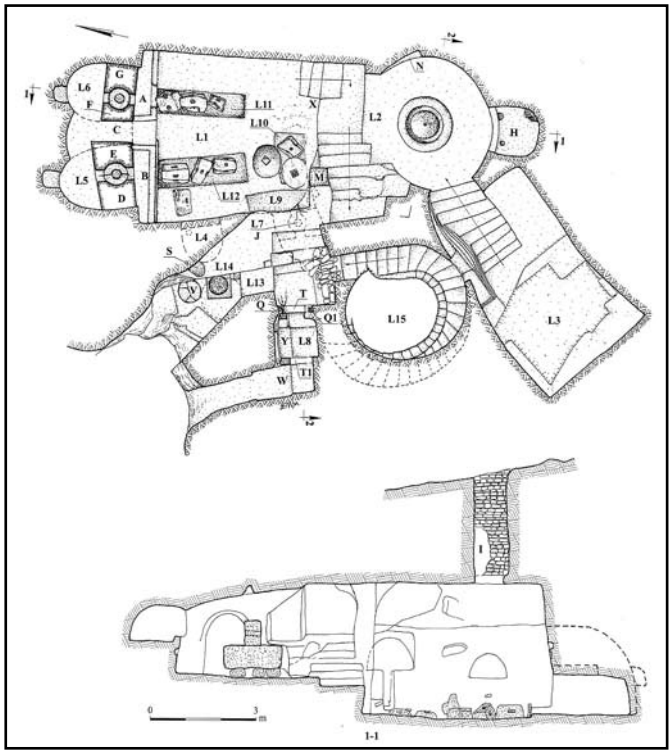

Fig. 20 - Plan of olive-oil plant documented by Kloner and N. Sagiv in SC 44 (Kloner, Sagiv, IAA).
Fig. 20 - Planimetria di un frantoio documentato da Kloner e N. Sagiv in SC 44 (Kloner, Sagiv, IAA).

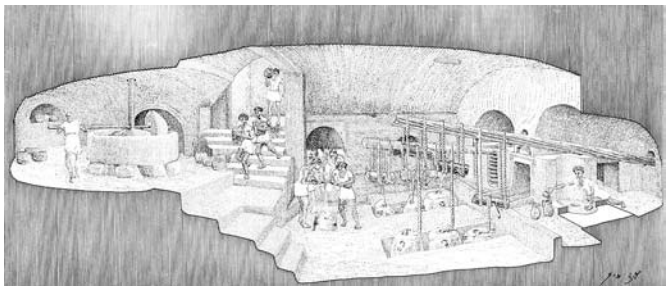

Fig. 21 - Reconstruction of olive-oil plant in SC 44 (drawing by Anna Yamin, IAA).
Fig. 21 - Ricostruzione artistica di un frantoio in SC 44 (disegno di Anna Yamin, IAA).

Fig. 22 - SC 44: crushing basin and lens-shaped crushing stone (photo B. Zissu).
Fig. 22 - SC 44: frantoio in pietra e macina a forma lenticolare (foto B. Zissu).

Fig. 23 - SC 44: the pressing installation. Two parallel beams anchored in niches cut in the wall of the chamber; Note cultic niche between two presses (photo B. Zissu).
Fig. 23 - SC 44: impianto per la spremitura. Due assi parallele ancorate in nicchie scavate nella parete della camera, si noti la piccola nicchia votiva tra le due presse (foto B. Zissu).

Fig. 24 - SC 44: cultic niche - a small rock-cut altar located above the entrance in the dividing wall (photo B. Zissu).
Fig. 24 - SC 44: nicchia di culto - un piccolo altare rupestre situato sopra l'ingresso nella parete divisoria (foto B. Zissu).

3. Caves used as Baths

Baths were unearthed in some of the subterranean complexes at Maresha. More than twenty rock-hewn facilities have been discovered, which served as baths mainly in the third and second centuries BCE. The plans of a the bathing installation at Maresha are similar to each other; a typical bath contained a staircase leading from the surface to a roomlet, a feeding channel and funnels, through which hot or lukewarm water were flown to the roomlet, and a low seat that was carved on the roomlet's floor, enabling the bather to seat inside the half-meter deep water.

It is worth mentioning the bath chambers in SC 82. It had two small chambers containing seats for the convenience of the bathers (seating-bath), who showered in sprays of water emerging from jets in the bedrock wall (figs. 25, 26). The bather was concealed from the slave pouring the water, and thus his modesty was preserved. One other cave with a bath, which is located in SC 61, under one of the dwellings, was probably the private bath of the house owner (fig. 27).

The type of baths discovered in Maresha is quite a rare installation of its kind and its existence there reflects the wealth and somewhat pleasure-seeking way of life of the city's residents.

Some scholars postulated that the baths and the practice of washing the body were involved with some cultic purifying rites. As early as the third and second centuries BCE, the Idumean population of Maresha used also another type of baths – similar in layout to the *mikwaot* or Jewish ritual immersion baths. These "small vaulted cisterns", as Bliss & Macalister (1902) described them, were stepped and plastered water installations, hewn underneath homes in the UC as well as in the LC (Kloner, 2003; Kloner & Arbel, 1998; fig. 28). A small but typical ritual bath that was architecturally connected to a house that had been destroyed ca. 112 BCE, was uncovered in Area 53 of the LC (marked no. 1 on fig. 5). The discovery of such a ritual immersion bath was seen as an ethnic indicator for the identification of Jewish population at a certain site (Reich, 1981; Reich, 1984; Zissu & Amit, 2008). Since the *mikwaot* at Maresha predate the conquest and conversion of the Idumaeans to Judaism by John Hyrcanus I by the end of the second century BCE they probably testify to similar ritual purification practices among Jews and Idumaeans. We cannot rule out entirely the possibility that the baths belonged to Jews living in the city prior to the Hasmonean conquest.

Another kind of installation involved with water, was designated as "filter chamber" by Macalister. There were at least 15 filter chambers, or filtration rooms at

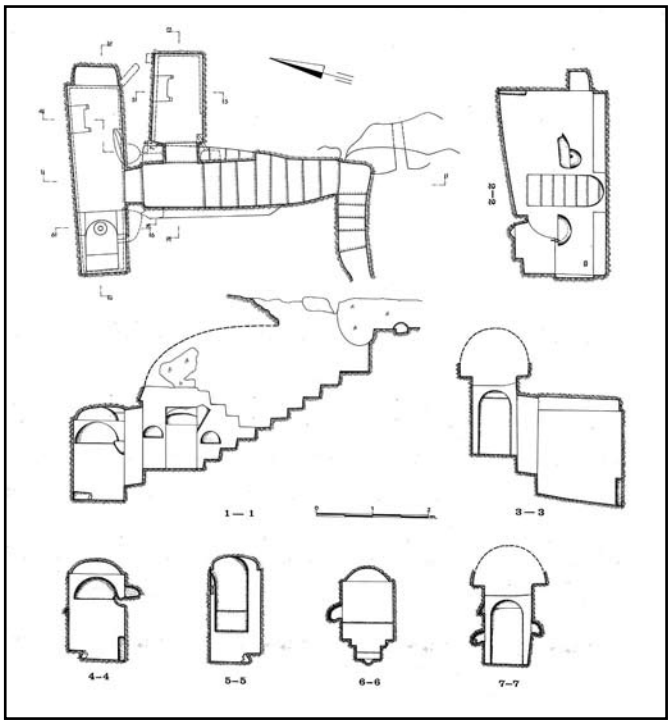

Fig. 25 - Plan and sections of bath - SC 82 (Kloner, IAA).
Fig. 25 - Pianta e sezioni del bagno – SC 82 (Kloner, IAA).

Fig. 26 - Photo of entrance to bath - SC 82 (photo B. Zissu).
Fig. 26 - Foto dell'entrata del bagno – SC 82 (foto B. Zissu).

the site, which were small rooms hewn directly above the cisterns to collect rainwater that was drained into them. The runoff water was flowed from these small rooms to the cisterns through a small opening spilling into the cistern itself. The cisterns were huge in size in proportion to these small rooms. The exact use of these installations, and the possibility that they were also used as baths, is being studied.
A total of about 45 bathing installations – baths and *mikwaot*, were unearthed so far at Maresha.

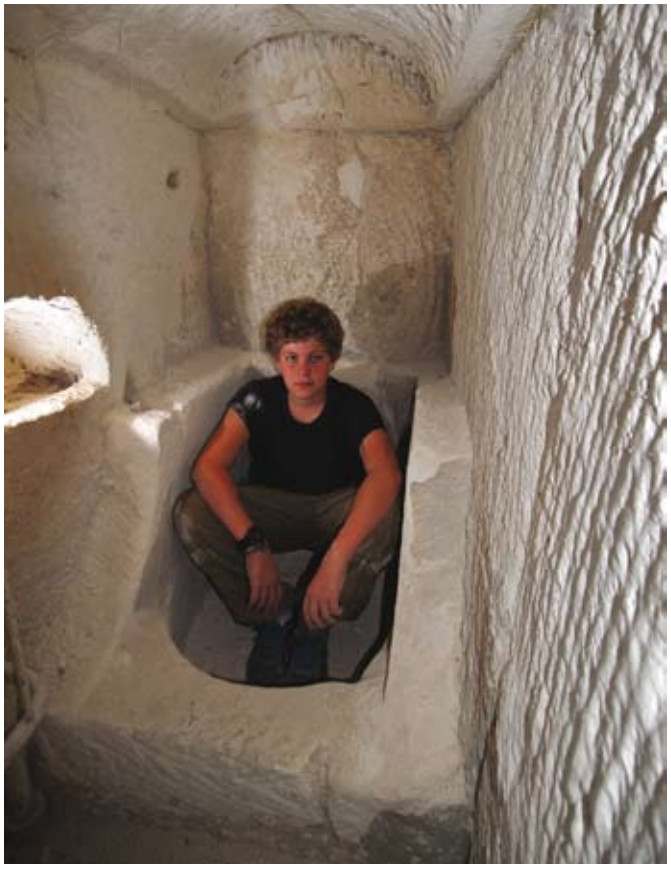

Fig. 27 - Stepped and plastered water installation, rock-cut underneath home in the UC (Bliss & Macalister, 1902).
Fig. 27 - Sistema di apporto dell'acqua, scavato nella roccia a gradini e intonacata presente sotto casa nel UC (Bliss & Macalister, 1902).

Fig. 28 - Detail - channel in the bedrock wall in SC 61 - the channel makes possible pouring of water from outside, preserving the modesty of the bather (photo A. Graicer).
Fig. 28 - Dettaglio - canale nella parete rocciosa in SC 61 - il canale rende possibile far confluire l'acqua dall'esterno, conservando la riservatezza del bagnante (foto A. Graicer).

4. Quarries

It should be noted that hewn caves, as well as natural caves, as a source for building material, are also found in other civilizations, due to the convenience of working in the moderate temperature inside the cave instead of under harsh weather conditions outside it. However, elsewhere, the transformation of such caves from quarries into domestic, economic and other useful functions is rare. In the case of the caves of the Judean Foothills, and mainly at Maresha, this is the norm.
Some 2,500 chambers and spaces of various sizes, dimensions and designs have been discovered beneath the lower city of Maresha and its surroundings. These spaces are arranged in 160 clusters, designated by us as 'subterranean complexes'. These complexes sometimes contain as many as 70 spaces per complex. The hewing of the caves at Maresha began in the eighth century BCE and continued until the second century CE.
Among the types of caves originally cut to quarry blocks of chalk, used to build the houses of the city, the underground quarries are particularly prominent. These mainly consist of halls and chambers, in the main precisely regular and occasionally round and less regular. Both kinds were clearly quarries for the extraction of chalky limestone. In some, the rock ceilings were supported by monolithic piers of bedrock that had been left intact; as many as 10 or more of these were found in one cave (figs. 29, 30). It can be clearly seen that

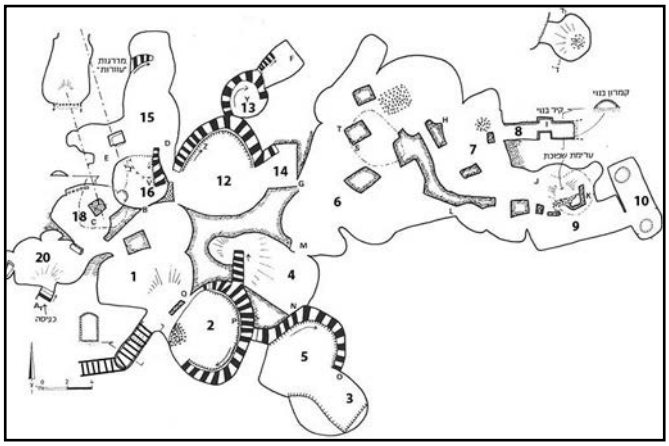

Fig. 29 - Plan of SC 53; No. 6 is a large underground quarry (Kloner, ICRC, IAA).
Fig. 29 - Pianta della ampia cava sotterranea N. 6 sotto SC 53 (Kloner, ICRC, IAA).

Fig. 30 - Photo of large underground quarry (no. 6 in fig. 29) in SC 53 (photo B. Zissu).
Fig. 30 - Vista di un'ampia cava sotterranea (n. 6 in fig. 29) in SC 53 (foto B. Zissu).

the purpose of the quarrying was to extract blocks of chalky limestone for construction and then to use the resulting large, underground spaces for various purposes, as storage, the housing of animals, and so on.

5. Cisterns

The water supply of Maresha was almost entirely based on runoff diverting and collection in water cisterns (Kloner 2005).

Most of the bell-shaped subterranean caves at LC that were accessed by spiral curving staircases with well carved parapets and comprised a hewn channel along the stairs for runoff drainage - are water cisterns (fig. 29, no. 2; fig. 31, A, B, C). The evaporation of the water was prevented by the cisterns' rock-roofs.

Usually, the cisterns were cut underneath houses, and accessed by way of a dromos-like staircase, descending from the courtyard; the *dromoi* in SC 53 were vaulted (fig. 32). Water channels or earthen pipes conducted rain water along the staircase to the cisterns. The cisterns are wide as well as relatively deep bell-shaped cavities, usually circular in plan (about 10 m high and 6 m across; few are oval or square in shape). Given that the local chalky limestone is water impervious, merely a part of the subterranean cisterns are plastered, usually along fissures in the rock, for allowing the collection and storage of rain water. A typical cistern has a spiraling staircase with parapets, leading down for the drawing of water and the cleaning of silt that accumulated over time (fig. 13A, no. 5). The cisterns could ha-

Fig. 31 - A) Photo of water cistern in SC 53 (marked as no. 2 in fig. 29); B) Photo of water cistern in SC 61 (marked as no. A21 in fig. 10); C) Photo of water cistern in SC 61 (marked as no. A18 in fig. 10); photo B. Zissu.

Fig. 31 - A) Veduta della cisterna per acqua in SC 53 (n. 2 in fig. 29); B) Veduta della cisterna per acqua in SC 61 (n. A21 in fig. 10); C) Veduta della cisterna per acqua in SC 61 (n. A18 in fig. 10); foto di B. Zissu.

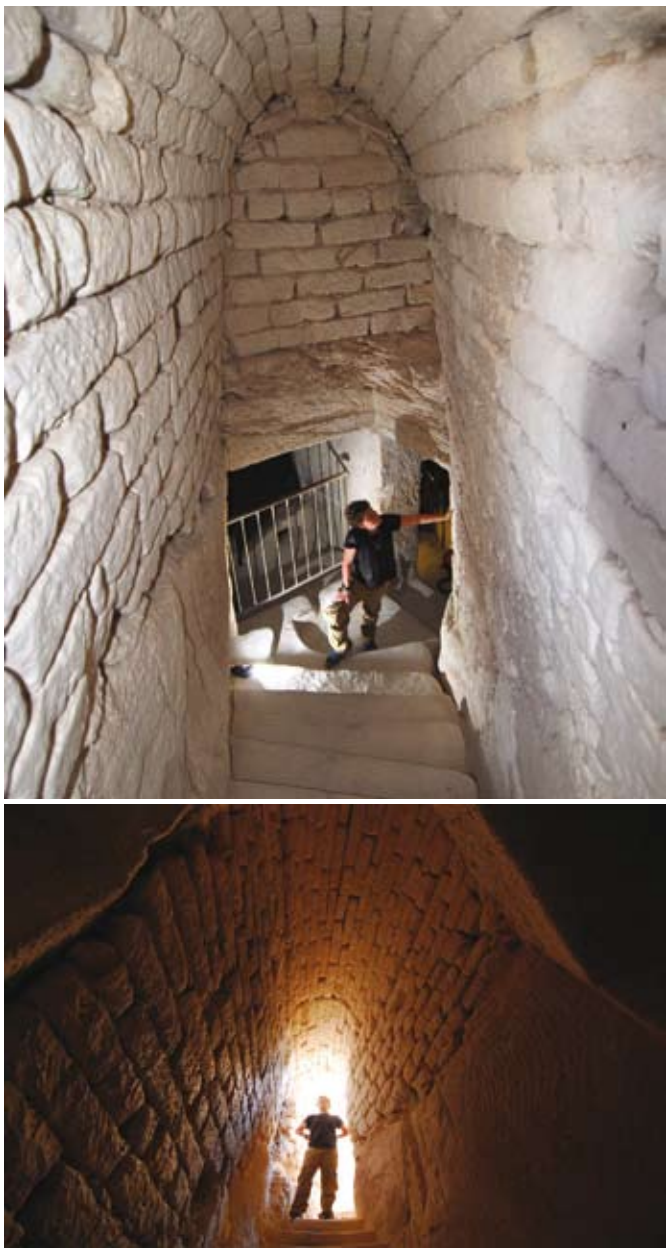

Fig. 32 - A) SC 53 - photo of constructed vaulted dromos leading to cistern no. 1 in fig. 29; B) Photo of the vault, made of chalky limestone blocks(photo B. Zissu).

Fig. 32 - A) SC 53 - foto del dromos a volta che conduce alla cisterna n. 1 in fig. 29; B) Foto della volta costruita con blocchi di calcare (foto B. Zissu).

ve held up to 300-400 cubic meters each, and they were usually cut in the rock in pairs or threes (fig. 11).
About 320 subterranean cisterns were identified underneath the houses of the LC, dating mainly from the third century BCE to the first century CE.
Many cisterns are found in every ancient site in Israel and in numerous sites all over the world. However, in no other site were found well preserved cisterns like those characterizing Maresha, with spiral curving staircases and aesthetically carved parapets that allowed the safe descend to the cistern's bottom. Cisterns of this type, with aesthetically designed banisters are found only at few other sites in the Judean Foothills.

6. Stables

Seven subterranean stables for horses, mules and donkeys were found in the LC. They were identified as such by the discovery of hewn feeding troughs placed between pillars supporting the roof, and by the stone floor that was sloped to facilitate the collection of urine, which was an important component in the tanning industry in antiquity. There are also places to tether the animals in these chambers.
The first underground stables to be identified in Israel were at Maresha, by Bliss and Macalister (fig. 33). Later, more stables were found, incorporated in subterranean complexes of the LC (fig. 34, chamber A-B). Similar installations have been discovered as well at other sites in the Judean Foothills. According to the study of Tepper & Shahar (1989), these installations were used for raising cattle or horses and there may be a connection between the stable and the adjacent olive press located in the same system of chambers. At other sites in the nearby region, these installations were initially hewn also in the Hellenistic period, and they remained in use during the Roman period, until the Bar Kokhba Revolt (132-136 CE).

7. Ritual Caves

Another type of cave-use is as artificially cut installations for ritual and cultic purposes. Such elements are found in SC 51 as well as in other subterranean complexes.
This assumption is based upon discovery of decorative cultic niches in some of the areas as well as schematic anthropomorphic reliefs carved into some of the walls. SC 51, is one of the largest subterranean complexes of the LC, containing 33 rooms in its 19 systems (fig. 35).

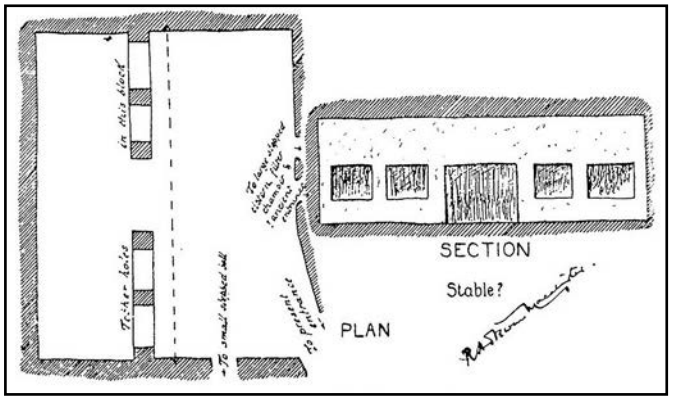

Fig. 33 - Plan and section of underground stable at Maresha (Bliss & Macalister, 1902).
Fig. 33 - Pianta e sezione di una stalla sotterranea a Maresha (Bliss & Macalister, 1902).

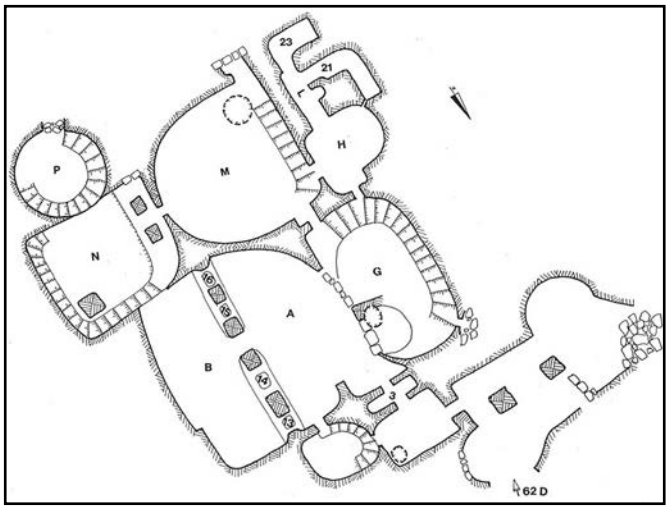

Fig. 34 - Stable (chamber marked A-B) in SC 19 (Kloner, Tzoran, IAA).
Fig. 34 - Stalla (camera indicate con A-B) in SC 19 (Kloner, Tzoran, IAA).

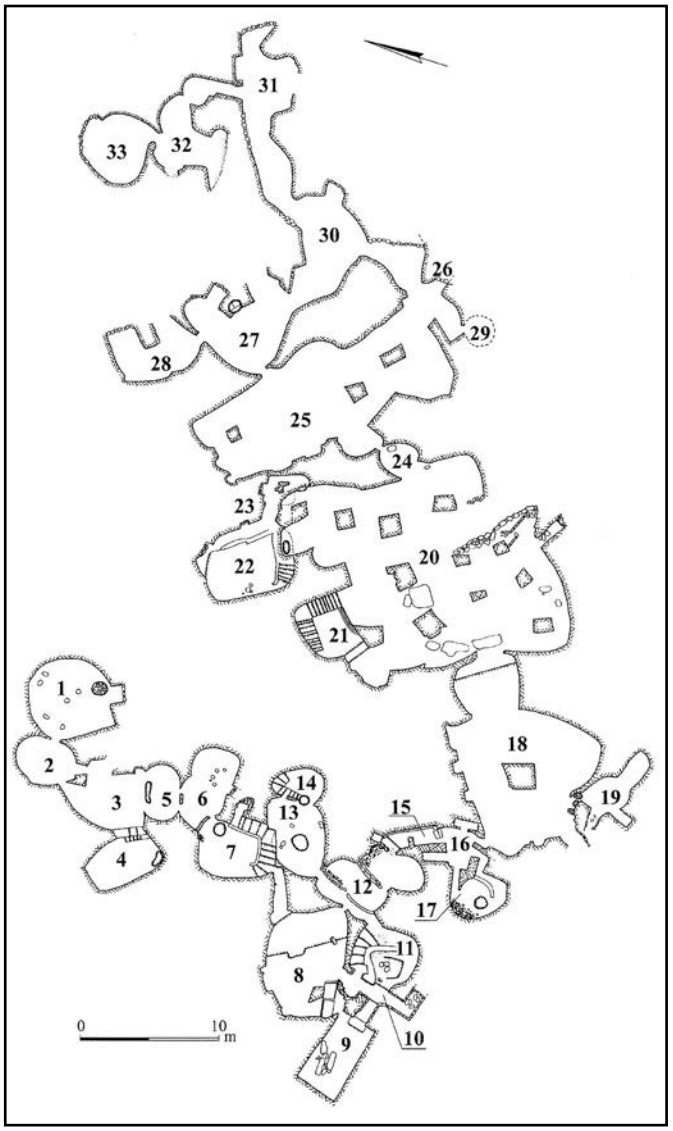

Fig. 35 - Plan of SC 51 - one of the largest subterranean complexes of the LC (Kloner, Tzoran, IAA).
Fig. 35 - Pianta SC 51 - uno dei più larghi complessi sotterranei della LC (Kloner, Tzoran, IAA).

One of these systems has a dromos entrance hall opening into two rooms (Rooms 8 and 9) and two cisterns. Room 8 has a supporting wall with marks; arches and tying holes were observed in the other walls. A socket was hewn in the northern wall. A large schematic cruciform relief was carved in another portion of the northern wall. Eyes and a neck are depicted at the top of the figure: it is possible this is a representation of the Idumaean god Kos with his arms outstretched to the sides (fig. 36). Three small depressions, functioning as receptacles, were hewn at different levels in the room, with channels for liquids connecting them. All the finds from Room 8 were dated to the Hellenistic period (third-second centuries BCE); a lamp with seven spouts may indicate cultic use. The exact purpose of these chambers awaits further discussion.

8. Storage Chambers

There is little doubt that many of the subterranean areas at Maresha were also used for the basic function of storage. The presence of ties in the walls, storage niches, and remains of silo-shaped chambers are clear indications of this.

SC 58 (the eastern part of SC 58-84; fig. 37) is a good example of a complex containing storage facilities. It consists of four interconnected systems. System 1 (rooms 1-6, 12) contains seven rooms, including an oil press, a service hallway, a room for liquid storage, and other plastered rooms. Room 2 is a square space, possibly used as a filtering installation, adjacent to the oil press. Room 12 is a hallway that breaks into the northern wing of a cross-shaped columbarium. System 2 (rooms 7 to 9) consists of three rooms, one of which is a filtering installation. System 3 (room 10) is a round stepped space entered by means of a descending staircase. System 4 (rooms 11, 13) consists of two rooms: a cruciform shaped columbarium and a long narrow space in whose walls are cells with small bottle-shaped silos.

9. Burial Chambers

Burial chambers are another type of rock-cut cave for a specific purpose. This is another example of the particular use of a cave, hewn for this purpose only, rather than for any type of domestic, agricultural or even ritual use. The tombs were not hewn in the city itself, as opposed to other types of caves, and were not part of the dwellings. Moreover, they were not subsequently used for a different purpose, which is not the case for other types of caves.

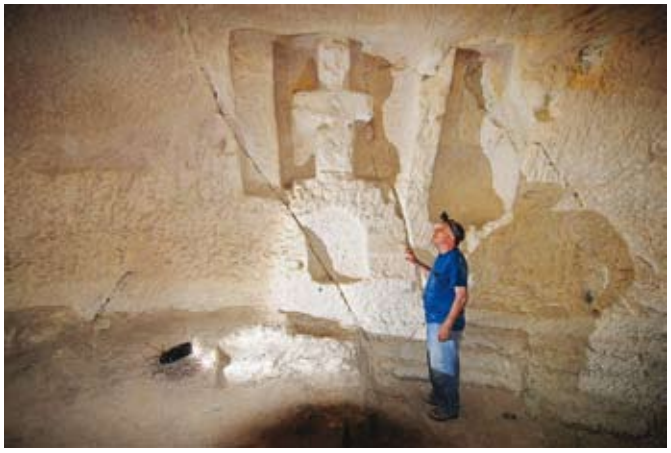

Fig. 36 - Large schematic cruciform relief, carved on a wall of room 8, in SC51 looking north (photo B. Zissu).

Fig. 36 - Grande rilievo cruciforme scavato nel muro della stanza 8 del SC 51 guardando verso nord (foto B. Zissu).

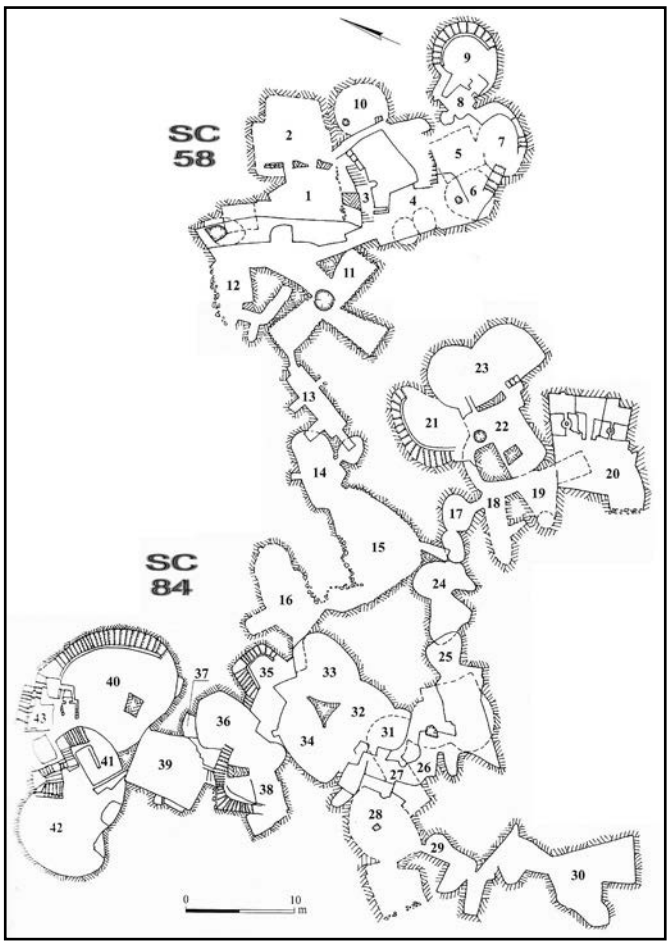

Fig. 37 - Plan of SC 58 - a complex containing storage facilities of SC 84 (Kloner, Tzoran and IAA).

Fig. 37 - Pianta di SC 58 – un complesso contenente un impianto di stoccaggio di SC 84 (Kloner, Tzoran e IAA).

Three cemeteries (necropolis) are known in the vicinity of the LC. The necropolis contain a total of 40 burial chambers, all of a similar design: a rectangular chamber into whose walls loculi (niches, or *kokhim* in Hebrew) were cut, featuring typical gabled openings. All the burial caves were initially cut in the Hellenistic period. Two of these tombs (nos. 1 and 2), discovered in 1902, had outstanding wall paintings (Peters & Thiersch, 1905) dating from the third century BCE. The paintings are characterized by a mixture of Semitic and Greek sepulchral elements. The animal frieze painted in Tomb 1 (The "Sidonian Community Tomb") is a unique document of its kind in the Hellenistic world. The paintings, which were damaged and have faded since their discovery, were restored in 1993 (fig. 38).

The Hellenistic period burial caves of Maresha were long-term family tombs - made for the burial of families of the city residents. The tombs continued to serve this purpose throughout the 3rd and 2nd centuries BCE. Burial in Hellenistic Maresha was in large family *kokhim* (loculi) tombs with many dozens, even sometimes hundreds, of burials over several generations. In some caves there appears to have been a continuity of in-

terment spanning six or seven generations. (Peters & Thiersch, 1905; Oren & Rappaport, 1984; Kloner, 2003). The plans of the halls and loculi of the tomb caves probably reached Maresha from the Hellenistic world, with which it communicated socially and economically, mainly from Alexandria in Egypt, then a major cultural and administrative hub of the eastern Mediterranean basin. The burial caves resemble the architectural and artistic style of Ptolemaic period's tombs (mostly from the third century BCE) in the Shatbi necropolis at Alexandria (figs. 39; 40).

Inscriptions and other epigraphic vestiges from Maresha's necropolis reflect the multi-ethnic composition of the city, combining Idumaeans, Phoenicians, Greeks, some Egyptians and possibly a few Judeans. These ethnic elements produced the outstanding social and cultural fabric of Maresha during the Hellenistic period.

10. Hiding Complexes

Hiding complexes are a particular type of subterranean complex, identified for the first time in the Judean Foothills in the late 1970s. The research has linked this phenomenon to the second Jewish Revolt against the Romans (known also as the Bar Kokhba Revolt, 132–136 CE) and to the period of preparation prior to the outbreak of that revolt. The Judean Foothills, where about 110 sites (out of total 140 in the Judea region) with about 380 (out of a total of c. 450 in the Judea region) hiding complexes have been found, has been revealed as a major focus for the activity of this revolt (Kloner & Zissu, 2009). At Maresha the remains of five hiding complexes were located on the western, southern and eastern slopes of the LC.

Fig. 38 - A) Tomb no. 1, "The Sidonian Tomb" – B) paintings restored in 1993 (photo B. Zissu).
Fig. 38 - A) Tomba n. 1, The Sidonian Tomb" – B) dipinti restaurati nel 1993 (foto B. Zissu).

Conclusions

Almost all Maresha subterranean spaces were hewn to serve existential and economic needs. The underlying assumption is that the residential houses of Maresha, and the subterranean chambers and means of production hewn underneath, served the local population over generations.

Economic activities were conducted below the surface of the ground out of engineering considerations, due to the durability of the rock walls and ceilings. The cost of quarrying and providing suitable spaces for workshops and installations in the underground was far cheaper and more convenient than constructing these above ground where the cost of building and maintenance of structures was much higher.

Descent into the subterranean spaces was from the houses above, from courtyards and inner spaces, from

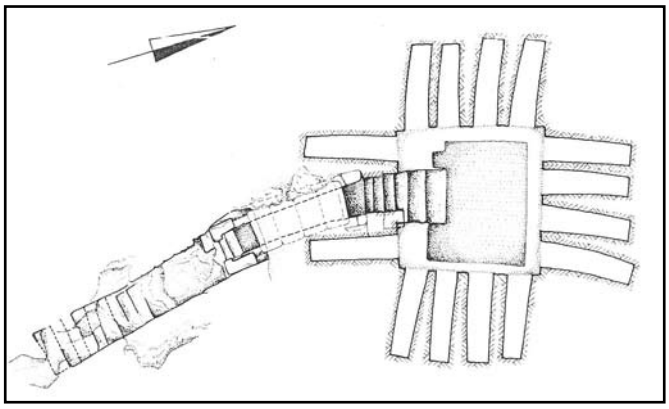

Fig. 39 - Plan of Tomb 557. The tomb's layout has striking parallels in Hellenistic Alexandria (Plan: A. Kloner and IAA).
Fig. 39 - Pianta della Tomba 557. La planimetria della tomba ha sorprendenti analogie con quelle nell'Alessandria ellenistica (disegno A. Kloner e IAA).

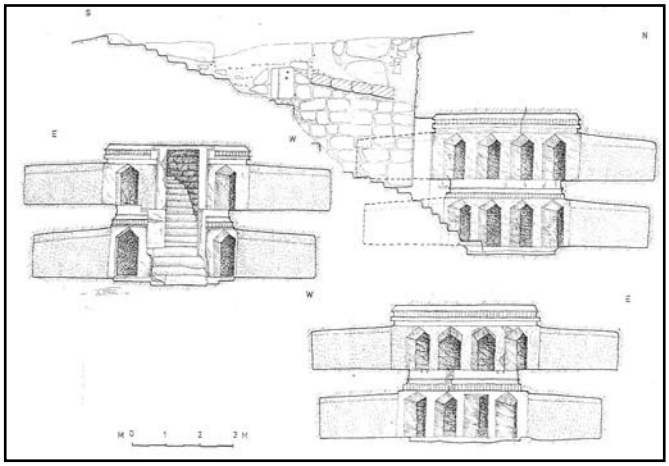

Fig. 40 - Sections of Tomb 557, showing the loculi, or kokhim, arranged on two levels. A band of dentil molding projects above each row of loculi (Section: A. Kloner and IAA).
Fig. 40 - Sezioni della Tomba 557, che mostra i loculi, o kokhim, disposti su due livelli. Il progetto reca una cornice di dentelli sopra ogni fila di loculi (disegno A. Kloner e IAA).

rooms and corridors to baths, from passages between houses, and in some cases from passages to the street adjacent to the house through separate entrances.
Manufacturing and processing installations and other types were found in caves throughout the LC. Olive-oil presses and columbaria were very common, albeit in smaller concentrations in the northern sector compared with most of the areas of the city. As indicated above, these installations were closely connected with the large residential units. Even where the entrances to the installation were not in the house itself, the caves extended directly beneath the rooms of the house. Water for use in the home or for sale was drawn from rock-cut cisterns, sometimes being used jointly by neighbouring households. Thus, two such adjoining installations - even if they had been hewn in the rock during one operation - each had its own entrance and functioned independently.

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