#### THE UMM EL-IIMAL PROJECT 1972- 1977

by Bert De Vries

Umm el-Jimal, located twenty kilometers east of Mafraq in the semi-arid lava region of the southern Hauran (fig. 1), ranks behind Petra and Jerash in size and state of preservation among Jordan's archeological monuments. However, it differs dramatically from those two monuments because it is built entirely of sombercolored steel basalt which gives it the appearance of a bombed out and burned modern city from a distance. The great strength of the basalt stone lent itself to an unusual style of architecture: corbeling. The ancient builders were able to construct ceilings and roofs by laying stone beams two to three meters long on cantilevered supports protruding from the walls (fig. 2). The application of cantilevering to the construction of stairways eliminated the need for cumbersome and costly support structures and increased useable living space on the lower floors (figs. 3,4). The success of this building method impresses itself on the visitor by the fact that numerous buildings are still standing two to three stories high with some of their ceilings intact after fifteen hundred years.

The city was founded in the Early Roman period when it enjoyed considerable Nabataean influence, flourished as a frontier city of the Roman and Byzantine Empires, and continued to prosper in the Umayyad period, perhaps because of its proximity to the Desert Castles. Umm elJimal was destroyed by earthquake at the end of this period and not rebuilt because the region of the Hauran lost its preeminence when the seat of government shifted to Baghdad under the Abbasid Caliphs.

Most visitors to Umm el-Jimal are surprised to learn that its ancient citizens were not Roman or Greek, but Arab. Numerous gravestones, although written in the Latin and Greek scripts, have given us a catalogue of names of the inhabitants which indicates that the residents were local Arabic nomads who settled in this region and built Umm el-Jimal under the security providied by the Roman Empire -- a process that has been repeated by their modern descendents under the security of the Jordanian Government.

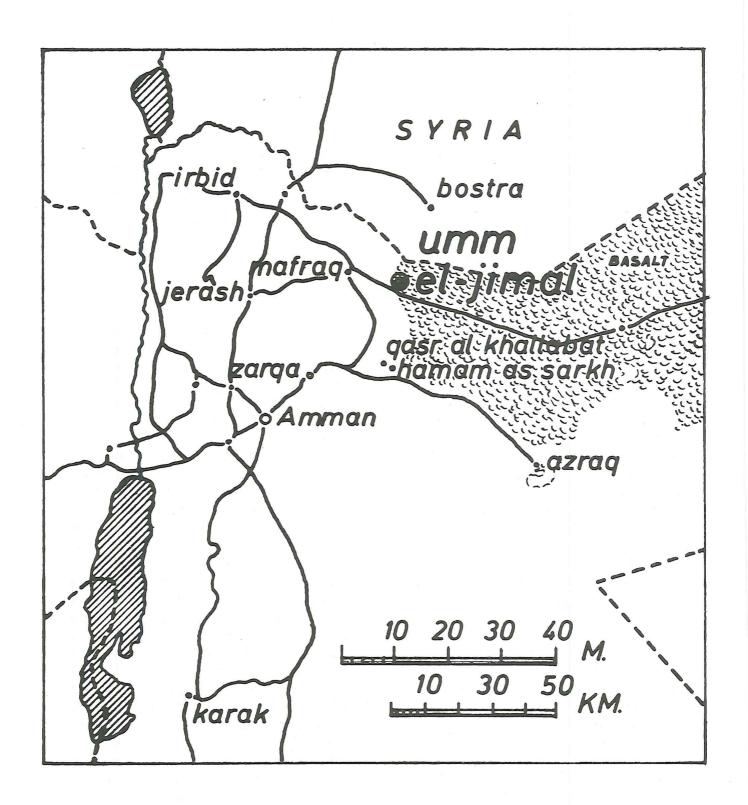
#### Previous Research

Prior to 1972 a minimal amount of work had been done at Umm el-Jimal. The first major project was the survey by the Princeton University Archeological Expedition to Southern Syria in 1904-5 and 1909 directed by Howard C. Butler (Butler (1913). This expedition produced a map of the city including plans of 40 major buildings. The resulting publication included detailed architectural and historical analysis of the buildings surveyed and a record of the numerous inscriptions found in and around the city. This publication has served as the basic reference on the site ever since.

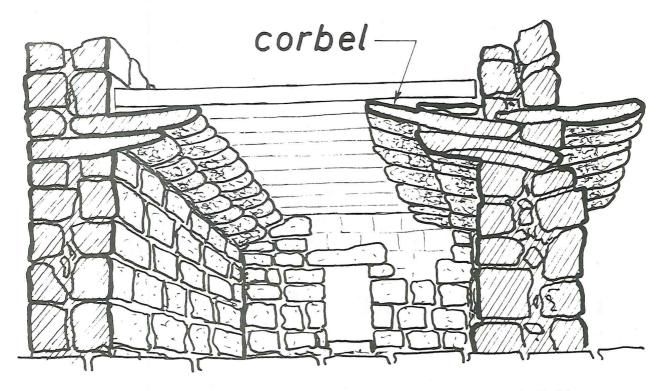
In the late 1930's and early 40's Nelson Glueck made several visits to Umm el-Jimal in search of evidence for his thesis that the city was a major link on the Nabataean trade route from Southern Jordan to Syria via the Wadi Sirhan (Glueck 1939: 140-146, 1942:3-8, 1944:7-17, 1951:1-34.) From the absence of Nabataean pottery at Umm el-Jimal and other Syrian sites he concluded that Nabataean influence (attested by numerous inscriptions) there was in the form of commercial and strategic interest rather than in the form of dense settlement (Glueck 1951: 13, 17).

In 1937 G. Horsfeld published aerial photographs of Umm el-Jimal that are extremely useful for studying the process of decay and human alteration that has taken place from the time of Butler's survey to the present (Horsfeld 1937:456-60).

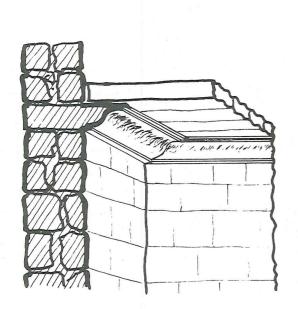
In 1956 G.U.S. Corbett did an architec-



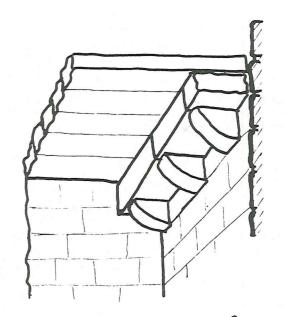
North Jordan figure 1



room above gate of house XVI

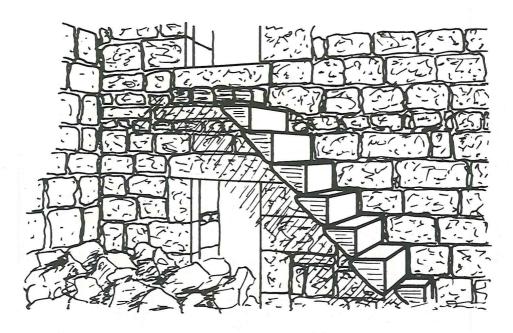


house XVIII

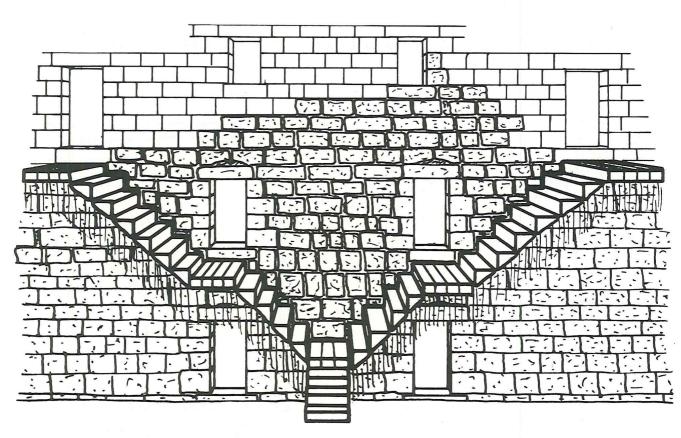


s.w. corner of barracks

figure 2 methods of corbeling



stairs,n.w.corner of court xvIII figure 3



reconstruction of stairs in east wall of court xvIII figure 4

tural study of the "Julianos" Church in order to test Butler's conclusion that this church had been built in A.D. 344. Corbett concluded that the Julainos Inscription from which the date was derived was actually a funerary inscription reused secondarily in the building and revised the building date of the church to the early 5th century on the basis of architectural parallels (Corbett 1957:39-66).

## Purpose of Present Research

During his first visit in 1971 the author was amazed that a site of this magnitude and in such an excellent state of preservation was not being worked on and he decided it needed to be "rescued" from oblivion. The first step was the completion (and correction, if necessary), of the Princeton Survey which had dealt with only one fourth of the existing architecture. Next, it was necessary to begin stratigraphic excavation in order to test the various chronological, historical and cultural conclusions that the above scholars had drawn from their study of remains above the surface. Finally, it was important to study the historical-geographic context of Umm el-Jimal as one of many similar settlements in the Southern Hauran. The effort to complete these goals developed into a five phased project over an eleven year period, 1972 to 1983:

- 1. The Architectural Survey, 1972-74.
- 2. Stratigraphic Soundings, July, 1974.
- 3. Excavations in the Southern half of the City, Summer 1977.
- 4. Excavations in the Northern half of the City, planned for Summer, 1981.
- 5. Regional Survey, planned for Summer, 1983.

The results of the three completed phases will be summarized below.

### The Architectural Survey

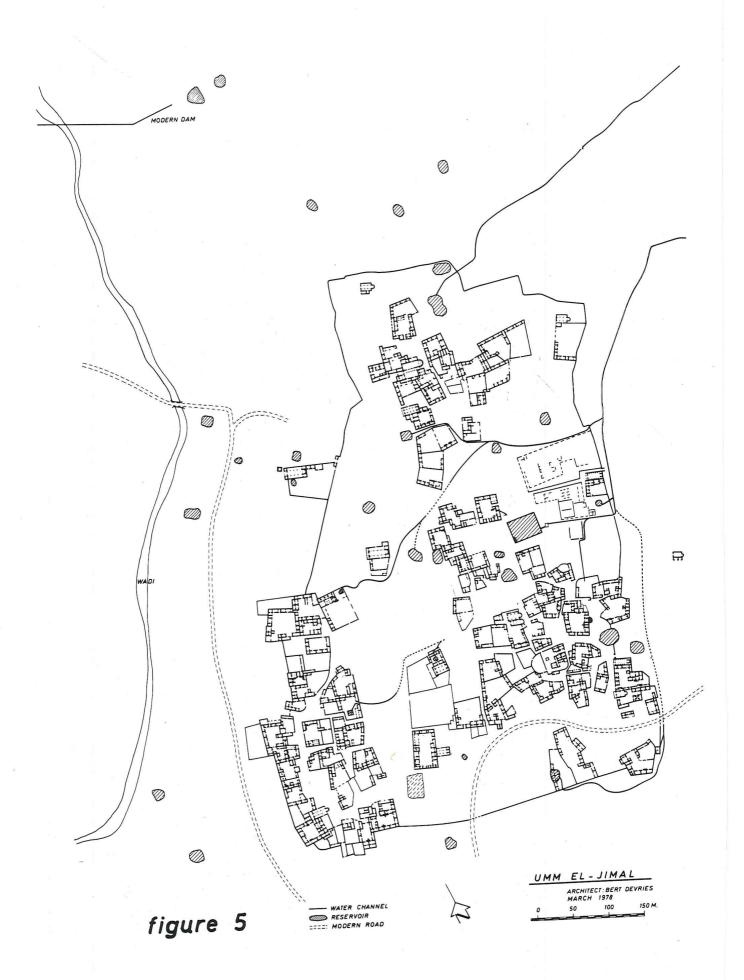
The survey was carried out on a part time basis from 1972 to 1974 while the author was Albright Fellow of the American Schools of Oriental Research (1972-3) and Research Associate of the American Centre of Oriental Research (1973-4). It

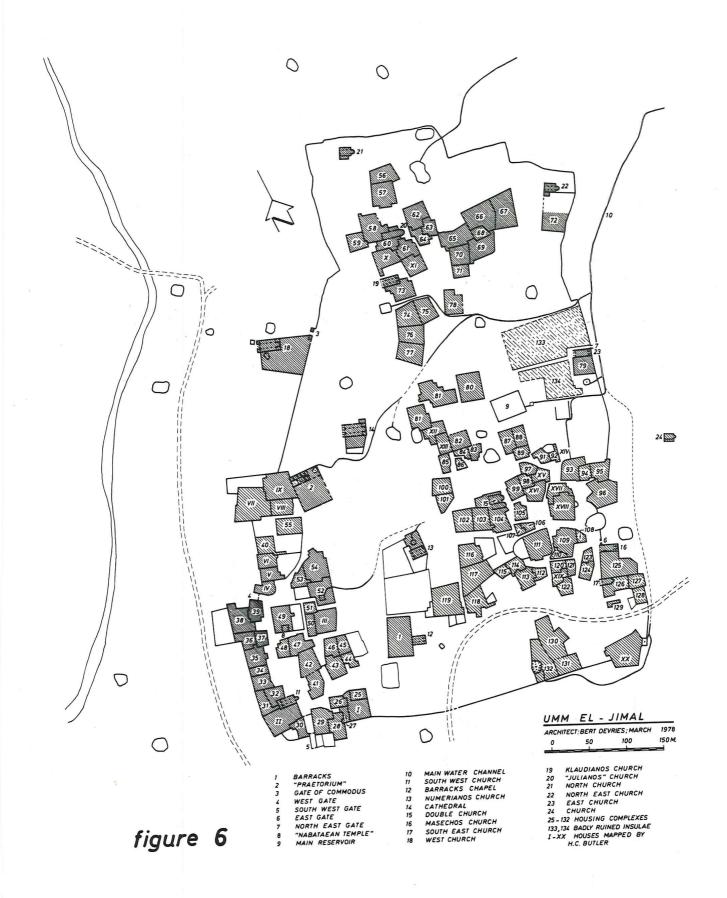
was financed with the stipend of the Albright Fellowship of the American Schools, the author's salary as director of the Christian Reformed World Relief Committee and his wife's salary as teacher at the American Community School and a grant from the Calvin Foundation. Thanks is in order to these organizations for their support, to the Department of Antiquities for its cooperation and to the succession of volunteers on the other end of the measuring tape, especially former student Gary Rozeboom.

The Southeast quadrant of the city, including all of the buildings south of the main reservoir and east of the central open space (fig. 5) was mapped wall for wall with theodolite and tape with the help of one assistant. In the spring of 1973 the author and Aero-Precisa Co. of Beirut completed an aerial survey of the site, under the auspices of the Ministry of Municipalities and Rural Affairs and with funding from the Department of Antiquities. After this it was possible to complete the mapping of the remaining two thirds of the city much more rapidly by combining the photograph and topographical map produced by Aero-Precisa with ground control measurements.

The results of this two-fold process are the maps published with this article, one (fig. 5) showing the city plan in detail while the second (fig. 6) shows the buildings schematically for identification purposes. For ease of cross reference the names given to buildings by Butler have been kept. In cases in which these reflect a now questioned interpretation these names have been put in parentheses. For the twenty housing complexes mapped by Butler his Roman numerals have been retained, but for the rest it was necessary to switch to Arabic numerals to conserve space.

In comparing the results of the new survey with that of the Princeton Expedition (fig. 7) it must be stressed that the author considers his survey completion rather than correction of that expedition's work. The main impression of the earlier survey is that the fieldwork was generally accurate and that the published drawings are of outstanding quality. In this respect the major





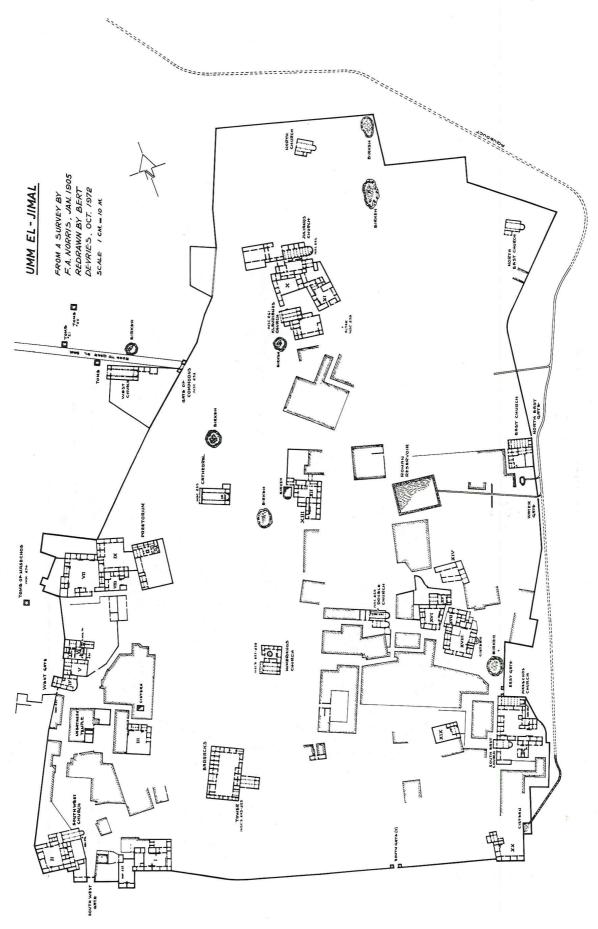


figure 7

change in the new map is the addition of 107 housing complexes and two housing insulae (133 and 134) which were too badly ruined to survey in detail.

The shape and size of the overall city plan drawn by Butler is generally identical with the new one with several important exceptions. The location of the city wall between the Southwest and West Gates was misplaced, due, perhaps, to the incompleteness of the survey at that point. The Princeton map shows the main aqueduct originating from behind the dam to the northwest of the city. Actually, this aqueduct was fed by a channel that runs for many kilometres up the sloping terrain to the northeast. A second channel from the northeast supplied reservoirs in the northern part of the city. At the southern end the aqueduct does not end in the cistern of House XX, but continues to the cistern in House 132. The aqueduct crosses the city wall at the approximate point of the South Gate on the Princeton map. Because there is no evidence for a gate anywhere in this section of the wall, it may be possible that Butler mistook the entry of the aqueduct for a city gate.

In the plans of individual buildings the Butler map shows a geneal tendency toward layout on a ninety degree grid. However, with the exception of the "Praetorium" and several churches, almost all buildings are laid out haphazardly. This is sometimes due to the carelessness of the builders (the Barracks), but most often in order to take advantage of available space (many housing complexes). There are a few cases of discrepancy concerning the locations of walls and doorways. It is often impossible to determine whether these are the product of inaccuracy or of remodelling since the Princeton Survey was completed.

The most significant differences between the Princeton Survey and the author's are due to reconstruction and quarrying activity in this century. From both the Princeton publication and analysis of surface artifacts it is clear that between the Umayyad Period and 1904 the city remained nearly totally undisturbed. In the past seventy years, on the other hand, a variety of human actions have caused

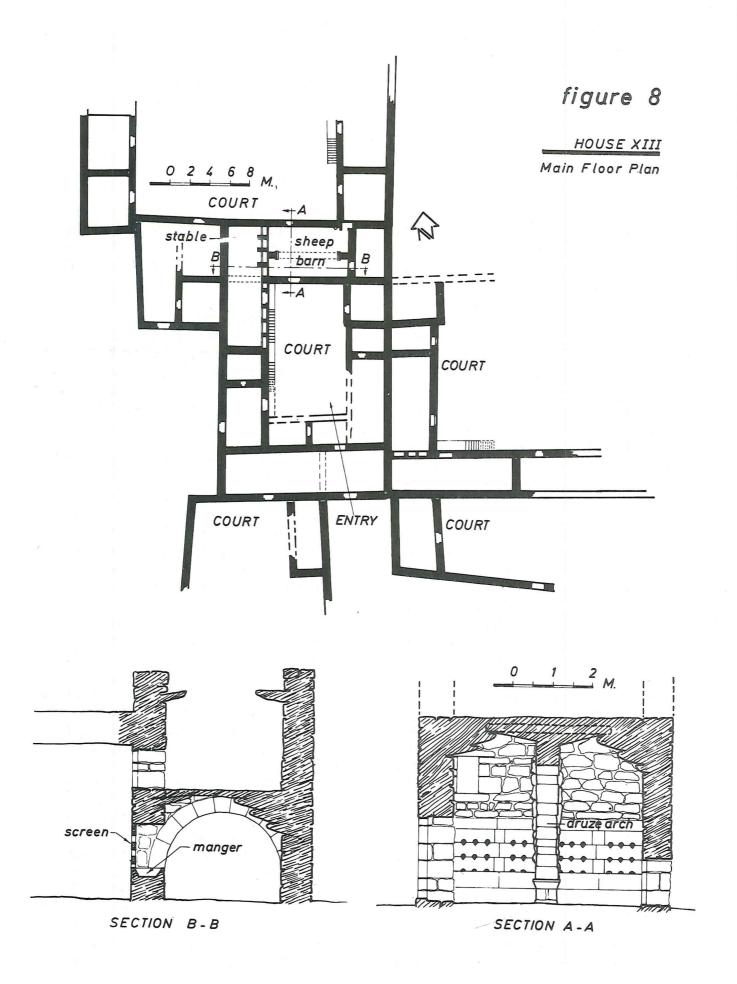
major changes at Umm el-Jimal. The fact that Bulter had the opportunity to study the city before these modern changes took place make his publication an invaluable record that cannot be duplicated today.

Major alterations in the structure of many buildings resulted from a Druze settlement of the site that began between 1905 and 1909 (Norris and Stever 1930:34, 91), and lasted for three decades. This Druze community worked energetically at the reconstruction of the ancient buildings in order to make them habitable. This work is most obvious in the numerous ceilings and roofs that are still intact today. These are often mistaken to be ancient because the Druze were adept at copying the ancient methods of corbeling and erection of arched partitis. Their work can usually be distinguished from the ancients' by the irregular masonry at the tops of walls, mixed shapes of corbels and ceilings beams and fresh cut marks on the voussoirs of the arches.

In some cases, identification of Druze construction is also possible by comparison with the Princeton publication. Butler's plan and photograph of the room with the screened west wall in House XIII (Butler 1913: 203, fig. 205:183) is without the transverse arch that covers the middle of the screened wall and supports the ceiling today (fig. 8). Butler's plan shows the "Nabataean Temple" as a simple rectangular room with a two-columned pro-style porch (Butler 1913:fig. 155: 131). Today the room contains two transverse arches which support the ceiling, while the porch is no longer apparent on the surface. Examination of the standing architecture leads one to conclude that everything except the front wall with the triple doorway is contemporary with the Druze reconstruction of the building.

The survival in several buildings of temporary walls used to support voussoirs during arch construction is evidence that the remodelling was still in process when the Druze abandoned the city in the 1930's.

In the 1920's before agreement was reached on the Mandate border a French army detachment was camped in and near the Barracks, according to the present vil-



lagers. It left behind raised tent platforms and a basalt walk in the Barracks courtyard as well as whitewash on some doorposts and lintels in rooms near the tower. Similar tent bases also remain in House 47. About the same time the tribe of the present villagers began to settle in the area. Most rooms restored by the Druze were used as stables and barns until the government fenced off the site in 1975. Recent government construction includes the paving of the road through the southeast corner, the restoration of the main reservoir (9) and the building of a dam in the wadi several meters to the south of the remains of the ancient dam. Although domestic water is now supplied to the villagers from the Azraq line the reservoir is still in great demand for the watering of flocks of sheep, goats and camel.

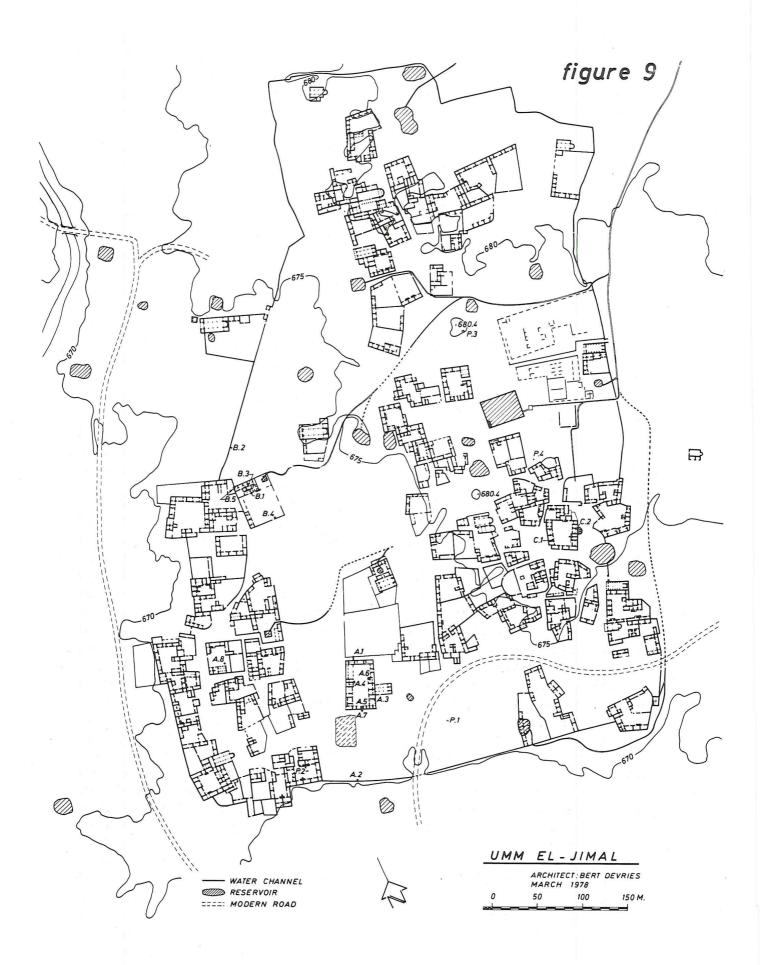
Significant changes have also taken place since 1904 as the result of natural collapse and quarrying. The Numerianos Church, today ruined almost to ground level, was preserved to roof height at the time of the Princeton Survey (Butler 1913: figs. 192: 171-173). Some accessible wall sections of quality masonry, such as the south wall of the "Praetorium" courtyard (Butler 1913: fig. 160:140) and the east city wall near the East Gate (Butler 1913: fig. 158:137) have almost entirely disappeared. The Barracks especially has suffered much recent damage. The interior tower floors and stairs were destroyed in 1970; a section of roof adjacent to the tower collapsed in 1973. and the large V-shaped gap in the north enclosure wall was created by a combination of recent collapse and quarrying. Sections of the exterior aqueduct. described as intact by Butler (Bulter 1913: fig. 160: 139), are now only detectable as depression in the terrain.

Howard Butler's estimate that most of the domestic architecture dates from the Late Byzantine period is correct (Butler 1913:196. See below for stratigraphic evidence). In fact, the completed map (fig. 5) represents the city as it was inhabited in the 6th, 7th and 8th centuries. Because of extensive remodeling of apparently older structures not much can be said about the nature and extent of the earlier Roman and Nabataean settlements.

Butler's interpretation of the function of the domestic architecture and his population estimate based on that can now be revised on the basis of the more complete survey. His conclusion that "only a few houses have stables, and there is no evidence that any considerable number of domestic animals were housed within the city gates" (Butler 1913:195) is substantially incorrect. It is in fact difficult to find housing complexes that do not include at least one stable with a row of five to ten mangers built in. These long, narrow, low ceilinged stables are usually adjacent to a large, arched room with which they form an L-shape and share a set of mangers. Corbett's interpretation of these large rooms as barns or stables (Corbett 1957: 43-45, fig. 44:3) is more plausible than Butler's view that they are the core room of a family's living quarters (Butler 1913: 195). The fact that many of these large rooms have a latrine built into one corner need not preclude their use as barns. One can imagine the advantage of locating such a facility away from the living quarters.

An especially fine example of this stable-barn combination is in House, XIII (Butler 1913: fig. 203: 182). In this case a row of four well built managers is separated from the large room by means of a screen constructed of well dressed, thin slabs of basalt perforated by cone shaped openings (fig. 8). Butler's attempt to identify these rooms as a small industrial establishment (Butler 1913: 204) ignores the numerous parallels of the stable-barn arrangement, of which this is merely a more elaborate version. The perforations in the partition were simply necessary to supply air to the animals tethered in this otherwise closed section of the stable. The doorway from the large room to the courtyard of House XII (shown much too large in Butler's drawing) is too small for people or larger animals, but adequate for sheep and goats. It seems likely, therefore, that the long stable with the mangers was used for larger animals (cattle, horses), while the large room provided indoor shelter for sheep and goats.

From the above it is clear that in a typical housing complex much of the



ground floor space was devoted to animals. The people lived on the second and higher floors and had access to their living quarters by the exterior stairways. One would have to agree with Corbett "that cattle-dealing was one of the principal occupations of the inhabitants" (Corbett 1957:40) at least in the Byzatine period. Further substantiation for this is in the fact that much of the open space in the city was taken up by walled enclosures. Many of these enclosure walls have not been included on the map because they are barely visible at ground level. However, the walls enclosing the area between the Barracks, the Numerianos Church and House 119 are typical (fig. 5). It is possible that what appears as open space today was partitioned in the Byzantine period and served as outdoor animal pens.

Butler's population estimate of from seven to ten thousand people (Butler 1913: 195) will have to be reduced because it is based on the inclusion of numerous stables and barns as living space for people. Even with a conservative estimate that twenty five percent of this space was devoted to animals would lead to a new figure of about five thousand as the population of Umm el-Jimal within the city walls in the Late Byzantine period.

## Stratigraphic Soundings, UJ74

In the week of June 16-22, 1974 four small probes were excavated in order to obtain a stratigraphic check on the periods apparently represented by both the architecture and inscriptions on the surface and to test the feasibility of carrying out more extensive excavation in the future.

The project was carried out under the same sponsorship and financing as the architectural survey. In addition to the author the staff consisted of Jim Sauer, co-director and ceramicist; Hikmat Ta'ani, department representative; Zee Aime, Dick Dorsett, Gordon Malarckey and Sue Sauer, square supervisors.

The four probes were located (fig. 9) in various types of open spaces throughout the city. They were deliberately placed away from architecture in order to be able

to achieve rapid progress in simple soil layers. P. 1 was located 80 meters eastsouth-east of the Barracks Tower in the Large open space now intersected by the modern pavement. The 2 x 2 m. square was excavated to bedrock 0.30 m. below the surface. P. 2 was located in the courtyard of House I in the southwest corner of the city. This 1x2 m. square was excavated to virgin soil 1.60 m. below the surface. P. 3 was located 80 meters north of the large reservoir (no. 9) on a three meter high mound in the open space between houses 76, 78, 80 and 133. This 1x2 m. probe. was excavated to virgin soil 2.70 m. below the surface. P. 4 was located 50 meters south of the south east corner of the large reservoir (no. 9) in a raised area contained by a retainer wall and adjacent to an artificial pool on the north of houses 91 and 92 XIV. This 1x2 m. probe was partially excavated to a depth of 1.10 m. below the surface.

On the basis of Jim Sauer's pottery analysis the following outline of the occupational history of Umm el-Jimal could be determined:

Pre-stratum 7. There is no evidence of pre-Roman pottery in any of the trenches. This suggests very strongly that the site was occupied for the first time in the Roman period.

Stratum 7, Early Roman (63 B.C.-A.D. 135). Early Roman pottery was found in all four probes, but always with later pottery in the same locus. No soil layer could be identified as having been deposited in the Early Roman period.

Stratum 6, Late Roman (A.D. 135-324). While Late Roman pottery was found mixed with later pottery in P. 2, 3 and 4, it was clearly the latest pottery in P. 1:2 and 3, the soil layers between the surface soil and shallow bedrock.

Stratum 5, Early Byzantine (A.D. 324-491). Early Byzantine pottery was clearly the earliest in P. 2:1-8, all loci from the surface to virgin soil. This evidence may suggest that House I enjoyed its most intense occupation during this period. P.

4:10-13 also had no pottery later than Early Byzantine.

Stratum 4, Late Byznatine (A.D. 491-ca 636). Clearly identifiable Late Byzantine pottery was the latest only in P. 4:5-9. It was impossible to fit P. 3:1-18, all loci above virgin soil into the stratigraphic sequence from Early Roman to Late Byzantine. "Ceramic analysis revealed that loci 1-18 were probably deposited fairly rapidly in a fill manner, not over a long time, because some late pottery was also found in lower layers. The latest pottery was Byzantine, but Late Roman and Early Roman sherds were also well attested" (Sauer 1981). Explanation for the deposit of this mound as well as refinement of the date of the deposit will require more excavation.

Stratum 3, Umayyad ca. A.D. 636-750). P. 4: 1-4 yielded Umayyad pottery as the latest. No Umayyad pottery was found in any loci in P. 1, 2 and 3.

Post-stratum 3 gap (A.D. 750-ca. 1900). The absence of Post-Umayyad pottery in any of the probes indicates total abandonment of the site until the modern era.

Stratum 2, Late Ottoman-Mandate (ca. A.D. 1900-1940). No pottery from this period is included in the corpus form P. 1-4. However, the stratum is added to this list on the basis of surface evidence elsewhere and to round out the stratigraphic scheme to be used for future seasons of excavation.

Stratum 1, Modern (ca. A.D. 1940-present). See notation for stratum 2.

# Excavations in the Southern Half of the City, UJ77

The 1977 season of excavation, carried out in July, was part of a six month project done jointly by the author and the Department of Antiquities of Jordan. In addition to the excavation the project included the consolidation of the Barracks. In exchange for the author's services on the restoration project the Department hired

the laborers needed on the excavation. In addition to the Department's generous contribution the excavation was funded by grants from the Kyle Kelso Fund and the Calvin Foundation, participants' camps fees and course tuition, Sally De Vries' salary at the American Community School and the author's sabbatical pay from Calvin College. The project was affiliated with ASOR and received a great deal of assistance from ACOR, ranging from excavation equipment to logistical support and advice on pottery analysis from Director Jim Sauer. The financial support and personal involvement of so many organizations and individuals was overwhelming. I am deeply grateful to all.

The core staff was a talented group of excavators and specialists, almost all of whom did double duty by supervising the digging in addition to their speciality. Robin Brown and S. Thomas Parker teamed up as chief stratigraphers with Robin taking responsibility for the "Praetorium" and House XIII, while Tom supervised the Barracks, the City Wall and the so-called Nabataean Temple. In addition Tom Parker did the ceramic analysis.

The rest of the core staff and their specialities were: Salley De Vries, administrative director; Jennifer Groot, object registrar; Bud Haggard, pottery registrar; Frank Koucky, geologist; Paul McDermott, epigrapher; Jim Sauer, ACOR advisor; Hikmat Ta'ani, Department representative and foreman; Mike Toplyn, osteologist. There were assisted by a very able group of novices, six of whom participated for course credit at Calvin College. They were: Richard Abma, photographer and square supervisor; Roger Brummel, photographer; Craig Bultsma, square supervisor; Laurette De Veaux, square superivisor; Shelley Dunn, square supervisor; Charles Fondse, surveyor; Barbara Oppewall, square supervisor; Keith Vander Laan, surveyor. Daughters Tara and Tanya De Vries also participated full time as assistant square supervisors and pottery registrars. The marvelous cooking of Mohammed Adawi contributed to both the good health and morale of this group.

The goal of the excavation was to study a representative sample of buildings in the southern half of the city, with the northern half to be done in a future season. Specific structures were selected according to three functional motifs: public buildings except churches (also left for a future season), the city's defense, domestic buildings. With this in mind six squares were opened in the Barracks, A.1, 3-7 (figures 9, 10), in order to verify its building date, study the history of its remodelling, and, if possible, determine the function of the various components of the structure. Two squares were placed against the city wall, one, A.2 (fig. 9), against the south wall and the other B.2 (fig. 9), against the west wall in order to determine the building date and reconstruction phases. One square, A.8 (fig. 9) was placed on the location of the porch of a building Butler had called a Nabataean Temple (Butler 1913: 155-56) in order to test that thesis. Three squares were placed in the "Praetorium," B.1, 3,5 (figures 9, 11) in order to determine the building date and history of usage and to test Butler's guess that the building was a praetorium (Butler 1913: 164-66). One square, B.4 (fig. 9) was placed against the "Praetorium" courtyard wall in order to check its chronological relationship to the building proper. Two squares were located in House XVIII. This particular domestic complex was selected not only because it is a typical house, but also because its outstanding quality of construction and decoration make it a primary candidate for consolidation and reconstruction. The first square, C.1 (fig. 9) was located in a west room in order to check floor construction while the second, C.2, was placed in a basement reservoir under the main floor of an east room (Plate XXV No.: 1). All of these squares were treated as soundings for stratigraphic sampling. They were, therefore, kept as small as was practically possible, for in no case was the clearing of an entire building or room an excavation objective.

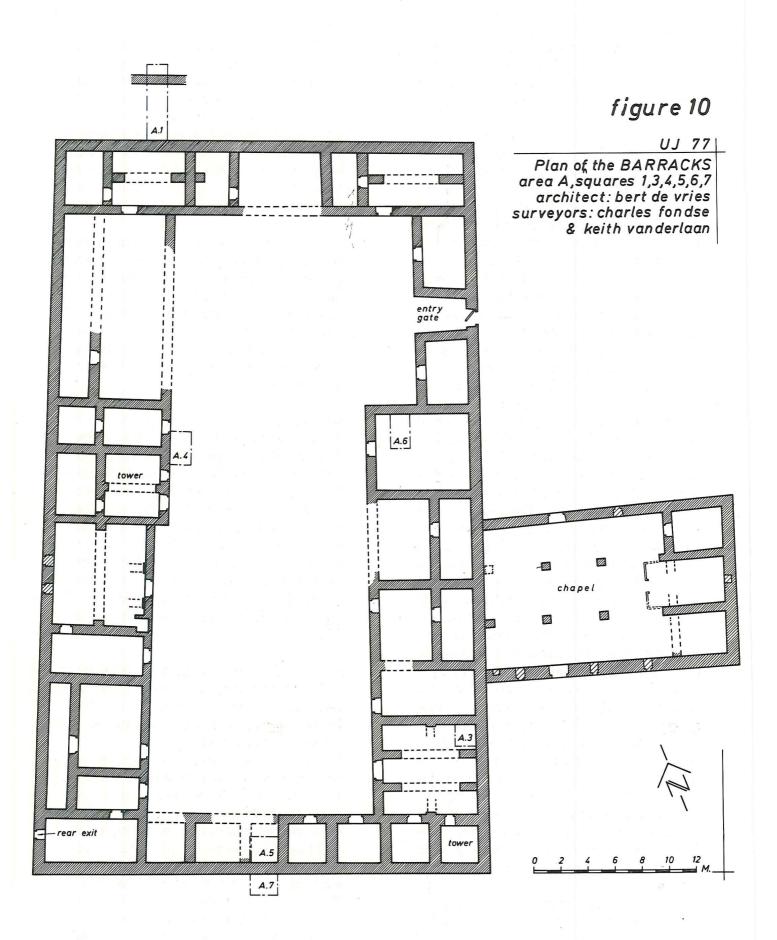
The brief summary of the results will follow the stratigraphic scheme determined by the 1974 soundings. This summary will follow the interpretations of area super-

visor Tom Parker for the Barracks, the City Walls and the so-called Nabataean Temple (Parker 1978) and those of area supervisor Robin Brown for the "Praetorium" and House XVIII (Brown 1978). It should be noted that the almost total absence of foundation trenches made the dating of walls difficult. In some cases dates were based on that of the soil layer under the foundations, and, where possible, dismantling was resorted to.

Stratum 7, Early Roman. Although numerous early Roman and a few distinctly Nabataean sherds occurred mixed in with later pottery, no soil layers were dated to this period. If a settlement existed at all before the end of the Nabataean kingdom, it must have been much smaller than the current city which began to develop in the Late Roman period.

Stratum 6, Late Roman. Even though the pottery sample from the city wall probes, A.2 and B.2, is very small, it points to a Late Roman founding date. In both cases the soil layers on which the walls were founded (A. 2:8 and B. 2:6) were Late Roman, as was the pottery in the bottom two courses of wall B. 2:10. This evidence bears out the inscriptional evidence which dates the construction of the Commodus Gate, 150m. north of B.2, to A.D. 176-80 (Butler 1913:157, Littmann 1913: 131, no. 232).

Stratum 5, Early Byzantine. Soil layer A.1:19 under the north wall of the Barracks (A. 1:13) was dated to the Early Byzantine period, as was soil layer A. 7:7 under the south wall (A. 7:2 Hence those sections of the Barracks wall that have survived remodelling originate from this period. This makes Butler's dating of the building to A.D. 412 on the basis of a nearby inscription referring to the building of a castellum plausible (Butler 1913: 171). The excavation of A.5 exposed a latrina or toilet bonded into wall A. 5:2. This installation consists of a basin below two protruding stones (the right one is broken off; see (plate XXV No: 2) which actually could have served as the seat. The



back side of the wall above. A.7 has the other side of this toilet-drain protruding (plate XXVI No: 3). A similar installation was later built into the second floor of the corner tower.

Stratum 4, Late Byzantine. Extensive occupational evidence came to light in the Barracks for this period. Of particular interest is the construction of corral wall A. 1:2 to the north of the north Barracks wall. The resulting space between the two walls became a street or roadway (A. 1:14, 18). The Barracks also enjoyed extensive Late Byzantine remodelling. From the dating of soil layer A. 4:11, which lies under interior tower wall A. 4:2, it is clear that this smoothly finished tower was built then. By using careful architectural phasing it can be concluded that the corner tower with its Christian inscriptions and symbols was built at the same time, as well as the current gate and possibly the chapel. The small rear gate (fig. 10), exposed in clearing of tumble for consolidation in September of 1977, was almost certainly also added in this reconstruction phase. The Christian texts, symbols and structure make conversion to monastic use a possible alternative to continued military use. The top two courses of the west city wall, B. 2:9 and 8 contained Late Byzantine pottery, indicating that the city defenses were also rebuilt.

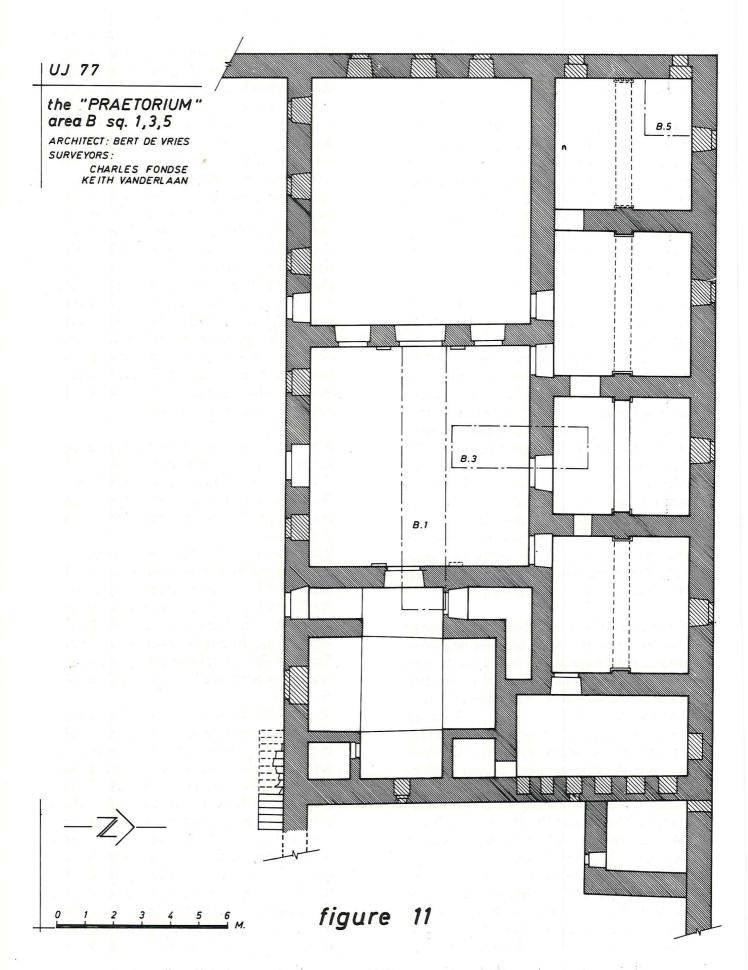
Excavation of A.8 revealed the existence of column support base A.8:3 and flag stone step A.8:6 (Plate XXVI No: 4) both components of the porch shown by Butler on his plan of the so-called Nabataean Temple (Butler 1913: 155, 111, 131). However, these architectural remains were founded on occupation debris layer A. 8:9, which had accumulated on Late Byzantine floor A. 8:12. This makes the porch several centuries too late to belong to a Nabataean temple. The date of the building itself will have to be checked in a future season before this issue can be settled completely. Of all the structures both the "Praetorium" and House XVIII have been most difficult to date. It is fairly certain, however, that both emerged in the flurry of building and remodelling of the Late Byzantine period.

The main difficulty is that in both cases later floors (Umayyad) were constructed after the earlier floors and occupation layers were removed. A good stratigraphic occupational history is therefore difficult to come by. However, in the northwest corner of the "Praetorium" Late Byzantine plaster floor B. 5:12 was plastered against the wall with a vertical lip (B. 5:14) at foundation level. Enough of this survived the Umayyad reflooring to make it clear that this was the earliest floor in the room. In the atrium a support base for an atrium roof column in the southwest corner of B.3 a late Byzantine foundation trench. The building of House XVIII cannot yet be clearly dated. Pottery in the bottom part of sedimentation layer C.2:5 revealed that the basement cistern was in use in this period. In C.1, however, all pre-Umayyad occupational evidence has been removed. Further study of this and other domestic complexes will be necessary in a future season.

Stratum 3, Umayyad. Perhaps the most sensational result of our investigation is the discovery that Umm el-Jimal continued to flourish as a rural town well into the eighth century, possibly to the end of the Umayyad period.

The roadway that originated between the north Barracks wall and corral wall A. 1:2 continued in use as surface A. 1:7. Inside the Barracks, however, there was collapse. The roof of the *latrina* caved in (A. 5:6) on top of Late Byzantine occupation debris. This collapse is followed by evidence of crude squatting (wall A. 5:11 and camp fire A. 5:12).

In the "Praetorium" much more sophisticated remodelling took place. It was also possible to refine the stratigraphy by separating the remains into a Byzantine-Umayyad transitional phase (A.D. 636-696) and a Late Umayyad phase (A.D. 696-750). The transitional phase was represented in both the atrium and the northwest room by sedimentation layers (B. 3:23 and B. 5:4) containing fallen (Late Byzantine?) wall plaster and a mixture of Late Byzantine and Umayyad transitional pottery. The Late Umayyad phase was represented by a systematic cobblestone



reflooring in the atrium (B. 1:10,11; plate XXVII, No: 5) and the northwest room (B. 5:8,9; plate XXVII, No: 6) The West room of House XVIII had two phases of similar cobble floors (C.1:13, the earlier, C.1:11 the later). This room suffered roof collapse later in the Umayyad period C.1:9). That the basement cistern continued to hold water is evident from the fact that the waterlaid sediment layer C.2:5, which began to be deposited in the Late Byzantine period continued to accumulate through the Umayyad period.

It appears therefore, that while the Barracks building in the south of the city suffered from some neglect, more centrally located buildings like the "Praetorium" and House XVIII continued to flourish with quality maintenance throughout this period.

Post-stratum 3 Gap. Umm el-Jimal was almost totally abandoned after the Umayyad period. The one possible exception is debris pit B. 1:14 in the atrium, which contained one Ayyubid-Mamluk sherd.

Stratum 2, Late Ottoman. No attempts at resettlement were made until the second decade of the Twentieth Century, so that H.C. Butler had the advantage of visiting a still undisturbed site. Three phases of post 1910 resettlement attempts could be made out from local oral tradition and were recognizable in the stratified remains. Attempts by a group of Druze to resetle and rebuild the city took place for several decades after 1910. Typical of their remodelling is the so-called Nabataean temple, in which all walls except the facade, the two interior arches and the roof are their work. In the west room of House XVIII locus

C.1:5 consists of Late Ottoman squatter debris. This is probably contemporary with the partially completed arch for which the temporary wall, necessary to support the voussoirs until the keystone is in place, is still standing.

A second occupation phase is the French army encampment in the Barracks immediately after World War II before the Mandate borders were drawn. Locus A. 4:3 was a rough stone platform filled with late Ottoman soil (A. 4:4,5,7) containing bullet cartridges and a French army uniform button. Local tradition has it that this platform as well as the larger one at the south end of the courtyard and the stone pathway connecting them to the entrance was constructed by the French for tent bases and traffic.

Stratum 1, Modern. The latest occupation of Umm el-Jimal resulted from the migration into the area of the tribe that still resides in the village around the now protected antiquities site. Squatting evidence, dung accumulation and modern debris is present in all surface loci of the squares excavated.

In looking back at the above chronological summary of the excavated remains two concluding observations are worth making: First, the city's long standing reputation as a significant Nabataean site has obscured the fact that it really prospered in the Late Byzantine and Umayyad periods. Second, enough problems remain with the so-called Nabataean temple, the "Praetorium" and House XVIII to warrant continued investigation in the next season. Refined definition of the various strata of occupation will be the major goal of the 1981 season of excavation.

Bert De Vries

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