

THE HASHEMITE KINGDOM OF JORDAN

Annual  
of the  
Department of Antiquities

1974

XIX

Department of Antiquities  
Amman  
The Hashemite Kingdom of Jordan

*Editorial Board*

Mr. Yacub Oweis : Director General  
Mr. Yousef Alami  
Dr. Moawiyah Ibrahim  
Dr. Fawzi Zayadine  
Mrs. Hanan Kurdi  
Mrs. Lina Sa'di  
Miss Rose Habaybeh

*Subscription Fee*

2,000 Jordanian Dinars

*Mailing Address*

P. O. Box 88  
Amman  
JORDAN

Opinions expressed in this *Annual* do not necessarily represent the policies of the  
*Department of Antiquities.*

PRINTED IN JORDAN  
BY  
THE COOPERATIVE PRINTING PRESSES WORKERS SOCIETY



## Table of Contents

Survey of the Southeastern Plain of the Dead Sea, 1973 : by Walter E. Rast and R. Thomas Schaub .....	5
Second Season of Excavation at Sahab, 1973 : by Moawiyah M. Ibrahim .....	55
Observations on the Bronze Age in Jordan : by Thomas L. Thompson .....	63
The Excavation of the Roman Forum at Amman (Philadelphia), 1964-1967 : by Adnan Hadidi .....	71
An Examination of the Ruins of Qasr Burqu' : by Heinz Gaube .....	93
Observations about the Roman Installations at Mukawer : by August Strobel .....	101
City Planning of Tell el 'Ajjul. Reconstructed Plan : by Khair N. Yassine .....	129
Excavations at Petra (1973-1974) : by Fawzi Zayadine .....	135
The 1973 Season of Excavations at Tell Hesban : by Siegfried H. Horn .....	151
Beit Zer'a Tombs (1974) : by Mohammed Murshed A. Khadija .....	157

## Archaeological Notes

Grain from the Tell Siran Bronze Bottle : by Hans Helbaek .....	167
Pella of the Decapolis (Book Review) : by James A. Sauer .....	169

## Arabic Section

Excavation at Bassah Cave : by Zahidah Safar .....	5
Excavations in Jordan (1973-1974) : by Moawiyah M. Ibrahim .....	11



# Survey of the Southeastern Plain of the Dead Sea, 1973

by

Walter E. Rast and R. Thomas Schaub

## *Part I : The Sites*

The following report presents the results of a survey of the southeastern plain of the Dead Sea conducted by the authors between June 3 and June 19, 1973.<sup>1</sup> The area covered extended from the modern settlement of Haditha, 6 km. north of Bab edh-Dra' due east of the Bay of Mazra', to the Wadi Khanazir approximately 45 km. to the south at the southern end of the *Ghor*, just east of the entrance into the Arabah ( Pl. I ). The project received its budgetary support from the Committee on Research of Valparaiso University (Indiana, U.S.A.) and from a private grant made by Mr. Frank Schneider (Pittsburgh, U.S.A.), to both of whom the authors wish publicly to express their thanks. Special recognition is also due Mr. Ghaleb Barakat, Minister of Tourism and Antiquities of the Hashemite Kingdom of Jordan, for arranging the permits; Mr. Yacoub Oweis, Director-General of Antiquities, and his staff, for much help throughout the project, and for allowing us to ship pottery picked up on the survey to the United States for closer study; Sami Saleyman Rabadi and Nabeel Attalah Beqa'in of the Department of Antiquities at Kerak, for accompanying

us and facilitating our stay at Kerak; Dr. Bastiaan Van Elderen, Director of the American Center of Oriental Research in Amman, and Dr. John Marks (Princeton, U.S.A.), chairman of the Amman Committee of the American Schools of Oriental Research.

## **Plans and Objectives**

Plans for the survey arose as the authors were preparing materials from Bab edh-Dhra' excavated by the late Paul W. Lapp for publication. Both the town site of Bab edh-Dhra', first discovered in 1924 (Albright 1924; Kyle 1924; Mallon 1924; Albright 1926:53-66; Kyle 1928; Albright 1944), and the large cemetery to the south, which came to light more recently, were excavated under Lapp's direction between 1965 and 1967. Lapp's untimely death in 1970 deprived him of the chance to publish the results as a whole, but he left behind several important preliminary treatments (Lapp 1968a, 1968b, 1970).

As the plans for publishing this important material have proceeded, the problem of the meaning of the impressive site of Bab edh-Dhra' has become paramount. Since no additional Early Bronze

(1) In the division of labor for the report, the responsibility for Part I was undertaken by Walter E. Rast, who also did final editing. R. Thomas Schaub, who is specializing in Early Bronze Age pottery, wrote Part II and all

descriptions and comparisons of the pottery. Schaub also was surveyor for the expedition, and prepared the plans and pottery drawings. The conclusions are the joint work of the authors.

Age sites were definitely discovered in the southern *Ghor*, either during the 1924 expedition or by two explorations launched subsequently, by Fritz Frank of the German Institute in Jerusalem in 1932 (Frank 1934), and by Nelson Glueck as part of his Transjordan survey (Glueck 1935). Bab edh-Dhra' has tended to stand out as an isolated site along the southeast basin. Its uniqueness has given rise to several interpretations, an early one being that it was possibly a great open-air cult site to which people from cities now beneath the southern end of the Dead Sea repaired for special religious purposes (Albright 1924:6-7; Albright 1926:61; Mallon 1924:445-46; Kyle 1928:78-9). Lapp's soundings at the site in 1965 brought this interpretation under question and showed rather that the town contained architectural features typical of Early Bronze Age cities (Lapp 1968a:4-5).

The basic objective of the 1973 survey was to determine what could be found along the southeast coastal area of the Dead Sea to help set Bab edh-Dhra' into an even clearer context. This included plans to survey the terrain from *Ghor el-Mazra'* west and north of Bab edh-Dhra' deep into the *Ghor es-Safi* at the south end of the Dead Sea. It also involved the search for Early Bronze Age tombs elsewhere along the southeast plain that might help to clarify the many tombs at Bab edh-Dhra'.

The results proved to be more illuminating than had been anticipated. Several additional Early Bronze Age sites, two with identifiable cemeteries, were discovered (Pl. I). In the presentation

(2) To facilitate publication the report uses a minimum of long vowel indicators and diacritical marks in transliterated names and words. Technically the transliteration of the site names would approximate

which follows, each Early Bronze Age site discovered and surveyed will be discussed. The choice has been made to present them in geographical order rather than in the time sequence in which they were found. Thus we begin with Bab edh-Dhra' in the north and proceed southward to the southernmost sites of Feifeh and Khanazir.<sup>2</sup> The ceramic remains discussed in Part II follow the same arrangement. A summary pointing to several conclusions suggested by the survey concludes the report.

#### A. Bab Edh-Dhra'

Although this site was originally the focus of the survey, we postponed our exploration of it to the very end when the new sites farther to the south began to come to light. This had the advantage of allowing Bab edh-Dhra' to be viewed from a new perspective in its relation to several other contemporary sites nearby. The last three days were devoted to combing the area and making a new contour plan of the town site (Pl. II). We were able to gather fresh data from the site and new possibilities concerning its significance suggested themselves.

1. To the east and southeast of Bab edh-Dhra' for approximately  $1\frac{1}{2}$  km., the entire area is presently under cultivation. At the time of the survey the soil had recently been turned over, and occasional sherds, mostly Early Bronze, as well as some flints, could be observed. The present usage of the land surrounding the town site may suggest a similar usage in much earlier times. Careful sampling of these open fields in the future could well provide important data on the ancient agrarian economy of the region.

the following: Bâb edh-Dhrâ', Numîrah, Safi Fifah, and Khanazîr. On some maps, including Plate 1, Numeirah is transliterated as Numeira (sometimes Numeireh) and Feifeh as Feifa.

2. Approximately 1 km. east of the east defense wall of the town site, an installation more or less in the middle of the cultivated area was discovered. It was bounded by four stone walls still visible on the surface, forming a rectangular enclosure measuring approximately 38 m. by 13 m. At the west end of this enclosure was a large pile of flints and cores. Approximately 40 m. to the southwest from this structure was a further one, somewhat smaller but of the same type. Within it were again many flints and cores, and one example was found of a core and flint which fit together. These remains suggest "flint workshops", in which implements used in the field were probably made. Flints with the sheen still present have been found in abundance in the town site area in previous explorations of Bab edh-Dhra', and a fine example was discovered on the present survey. Further exploration of these interesting loci in the cultivation area could reveal much about ancillary industries for the farming done around Bab edh-Dhra'.

3. In light of the newly discovered sites and their locations noted below, the placement of Bab edh-Dhra' as a settlement area now stands out more clearly. That it was situated next to an important perennial water supply carried in the Wadi edh-Dhra' and the Wadi Kerak makes it nearly identical to several of the other sites. In addition, its location on the bluffs above these wadis betrays a plan and strategy. The town site was sufficiently elevated to overlook the entire farmland to the east described above, as well as most of the Ghor el-Mazra' spreading before it to the west and north.

4. A new area was discovered approximately 180 m. northeast of the town site (Pl. II). This area consists of a soft limestone bluff above the deep

Wadi edh-Dhra', by which it is separated from the town site. Here the surface was covered with stone foundations and remains of buildings. The pottery collected from this area appeared to be both homogeneous and to post-date the town site (see below). Remains of similar structures with the same type of pottery were also found in the plain east of the town site for approximately  $\frac{1}{2}$  km. One of the buildings found approximately 200 m. east of the east defense wall was well-preserved and measured 7 m. by 4 m. Both areas were covered by a large number of tombs of either cist or cairn type. Future excavation will have to determine more precisely the relation of the people represented by these buildings and burials to the town, which generally has different pottery.

5. The area south of the south wall of the town site is particularly intriguing. This area was closely examined since many lines of walls are visible here, some of which have been sketched on the plan (Pl. II). Several possibilities offer themselves as explanations for this area. The rectangular shapes of most of the structures suggest buildings of some sort, possibly permanent dwellings. If these structures were contemporary with the town site, they would indicate that some of the population resided outside the town, but very near it. On the other hand, the buildings may belong to the latest phase associated with the buildings and burials mentioned above, and thus may post-date the town. In addition to these walls on the south were other larger and longer walls, suggesting that the main entry to the town may have been from the south side, or that there were towers or other large administrative structures built in front of the town at this point.

6. The survey also presented the opportunity to study the interior of the

town. The general nature of the site is now clearer as a result of the other sites discovered. There does not exist at Bab edh-Dhra' the depth of debris representing different periods as is customary for Palestinian *tells*. Since little subsequent occupation occurred at the site after Early Bronze, the remains from the latter period appear directly on the surface, making it possible to reconstruct aspects of the town from a surface survey alone.

The most distinctive feature of the town is the way it utilized the natural contours of the area, a series of bluffs above the wadis. The great stone wall circumscribing the area simply follows the contours of the hillocks, just as is the case at Numeirah, Feifeh and Khanazir. For this reason Bab edh-Dhra' was also strongest on the north and west and most vulnerable on the east and south. There is abundant evidence for structures on the interior of the site (Pl. VII, 1). Such buildings were built up against the hills of the interior, much like some modern Arabic villages are constructed. Further exploration of the interior could result in a more precise reconstruction of the lay-out of the settlement. At the moment the rubble remains of buildings are seen on the surface, and many door sockets and basalt mortars are strewn about. Of note, too, is the evidence of severe burning on many of the stones.

7. No effort was devoted in 1973 to surveying the main cemetery of the site south of the town across the Kerak road since this area has been extensively explored by Lapp. The main immediate result of the survey for the cemetery is that Bab edh-Dhra' seems to have used a greater variety of tomb types during the Early Bronze Age than the other sites described below. Surface evidence does not suggest that the cemeteries at

es-Safi or Feifeh had charnel houses like those at Bab edh-Dhra'. Only excavation will show whether they had shaft tombs, which also does not seem to be indicated by the terrain of the new sites (cf. Lapp 1968a:6-10).

## B. Numeirah

The site of Numeirah was discovered on June 7 in an exploration of the Wadi Numeirah area. In his report of his 1934 survey, Glueck recorded that he had approached this site after exploring the Nabatean *Rujm Numeirah* off the west side of the es-Safi road (Pl. III). After examining the *rujm* once again ourselves, our attention was drawn to Glueck's statement that several hundred meters to the east of this Nabatean ruin was an enclosure wall situated "on top of a high, flat-topped outspur" (Glueck 1935:7). Since Glueck also recorded that he found a few indistinguishable sherds at this location, we were led to examine the area anew. Our finds show that this site is, in reality, an Early Bronze Age site, as the pottery and architecture both attest, and its features are similar to Bab edh-Dhra', although it is not as large as the latter.

1. The location of Numeirah is approximately 13 km. south of Bab edh-Dhra' on the south side of the Wadi Numeirah near where it debouches into the plain of Ghor en-Numeirah. Like Bab edh-Dhra' the town was built on a hilly area consisting of limestone conglomerate above the wadi. On its east and south sides it is separated by deep valleys from other hills of the area. The major ruins are on the hill called by local inhabitants Numeirah, but there also seem to be traces of walls on a lower area to the southwest (Pl. III). In the latter area we believed we could see some evidence of cist burials, but this is not certain. There are no

examples of recently plundered tombs in the Numeirah area as at es-Safi and Feifeh discussed below.

2. The wall which encompasses the site is clearly more than an enclosing wall. It is at least 2.50 m. wide and was constructed of large, undressed stones, mostly local sandstone and limestone. On the southwest side the inner and outer faces are well-preserved (Pl. VII, 2). The entire south and west sides of the outspur are covered with stones which have fallen from this wall, whereas on the steep north side facing the wadi, the stones have either rolled into the wadi and been swept away by sudden streams, or are embedded in crevices created by erosion. Architecturally the wall fits well with those known from the Early Bronze Age, and has similarities to the one at Bab edh-Dhra'.

3. At the east end of the site is a large heap of stones, whose architectural significance should become apparent in excavation (Pl. VIII, 1). Similar heaps are found toward the west end of the interior of Bab edh-Dhra', and also at Feifeh and Khanazir, as will be seen below. It is tempting to speculate that these stone piles may belong to lookout towers which were strategically positioned at each of the sites. It is also possible that they may represent a later phase of the sites, although later surface pottery at Numeirah itself was scarce.

4. Since recent trenches dug on the site had thrown up some debris, our fortunes were better at Numeirah than were those of Glueck. As can be seen below, sherds recovered from this debris are distinctly Early Bronze. The site as a whole is covered with ashy soil, suggesting that it was not utilized after the destruction which appears to be so evident on the surface. On the north side

especially, the soil is spongy ash, and can be picked up in handfulls. By accident a door socket was found *in situ* in the wall on the north (Pl. VIII,2). It may suggest a gate leading from the town on that side.

5. The most notable feature of this site is its placement adjacent to the perennial stream running in the Wadi Numeirah. We were not able to trace the stream to its source, which is no doubt in the fertile area of the modern village of Iraq on the plateau. Just east of the settlement site it flows through a sandstone gorge which could rival the siq at Petra for its beauty, although it is not as large. Beyond this it enters the Ghor en-Numeirah, where it has probably supplied irrigation for farming in this region since historical times. It is possible that there are remains of a stairway going down to the stream from the north side of the town, beginning near where the door socket was found. This area is now filled with stones fallen from the wall, and will have to be cleared to determine whether such a stairway existed here.

#### C. Es-Safi

Ruins have long been known in the area of es-Safi, but the survey of 1973 has succeeded in putting the site into a more comprehensive perspective. Es-Safi was the most complicated of all the sites since it was used not only in Early Bronze, but also in the Iron Age and later, especially Byzantine, times (Avi-Yonah 1954:42-3). Albright discovered only Byzantine and Arabic traces in his soundings at Khirbet Sheikh Issa and Tawahin es-Sukkar (Albright 1924:4; Albright 1926:57), which he explained by postulating that the remains of earlier cities in the area were submerged beneath the lower end of the Dead Sea (Albright 1924:7-9). Our survey suggests another

explanation. The remains from the Early Bronze period are probably to be sought to the southeast of the ruins of Tawahin es-Sukkar, whether directly behind the latter site on the flat plateau, or more likely even farther southeast on the high area to the east of the temporary road where the later "Fortress Ruins" are marked on the plan (Pl. IV). This site is approximately 13 km. south of Numeirah, and is located  $\frac{1}{2}$  km. west of the small modern settlement of Naqa'a.

1. The key to es-Safi is the large number of tombs which have come to light around the site, some of which have been plundered. The first to see tombs in this area was Frank on his survey in 1932. Frank records that he saw tombs which had been clandestinely opened on several hills to the southeast of Qasr et-Tuba (Tawahin es-Sukkar). These tombs measured approximately 2 m. by .50 m. They were cut from the surface and lined with stones, with one end being rounded (Frank 1934:207). His photograph of one of these is instructive (Frank 1934: Pl. 23B) because it provides an excellent parallel to a distinctive cist-type tomb found in 1965 at Bab edh-Dhra' (A2). Fortunately Frank also published a photo of some of the pottery from these tombs (Frank 1934: Pl. 21A). Although Frank seems not to have recognized the date of this pottery, Glueck correctly assigned it to Early Bronze (Glueck 1935:8).

2. Our survey showed that the situation had not changed appreciably since the time Frank was in the area. Several tombs had been opened recently on a number of the hills to the southeast of Tawahin es-Sukkar (Pl. IV). They seem

to fit the description given by Frank as well, being cist type tombs with walls lined either with slabs or medium-sized smooth stones, and with one end rounded (Pl. IX, 1). Large slabs lying about the opened tombs were apparently originally used as coverings. Pottery from the tombs had clear resemblances to types from Bab edh-Dhra', as noted below.<sup>3</sup> There are many tombs and they are spread all about the site. However, the cemetery at es-Safi does not seem to be as large as that at Bab edh-Dhra'.

3. From the sites of Bab edh-Dhra' and Feifeh it could be inferred that there should be a town site nearby to accompany this cemetery. The survey did not succeed in establishing a definite location, but it did find some clues. Below the area marked "Fortress Ruins" on the plan, the slope contained many fallen stones, much like those off the slopes of Bab edh-Dhra', Numeirah and Feifeh. Among these stones were several Early Bronze Age sherds as well as a broken basalt stone jar (Fig. 6:141) and a broken shell bracelet. There are tombs nearby and the latter objects may have come from them, but this area could profitably be investigated for a possible Early Bronze town site. It is possible that building remains and walls may have been robbed by later construction. Since es-Safi was identified as Zoar in Byzantine times, it is to be expected that the site was considerably modified during this period when it experienced rather heavy use. Of the other sites only Feifeh may have been similarly utilized in the later periods.

4. What also speaks for the location of a settlement at this site is the impressive water supply adjacent to the

(3) Pottery published by Ruth Amiran, *Ancient Pottery of the Holy Land* (New Brunswick, New Jersey: Rutgers University

Press, 1970), p. 49, Photos 44-45, was probably also acquired from tombs like these at es-Safi.



area. Es-Safi is situated just south of the Wadi Hesa, through which flows one of the finest perennial sources of water in the entire southern *Ghor*. Small ditches are cut by modern inhabitants and the water is diverted into the entire area north of the site, making it a fertile area at the present. During Byzantine and Arabic times this area was extensively used for farming, and no doubt its attractiveness as a site goes back to the Early Bronze period as well. Certainly the large number of tombs suggests that a sizeable population was supported in this area during Early Bronze.

#### D. Feifeh

Along with the cist tomb and pottery from es-Safi published by Frank, several vessels said to have come from the Feifeh area were instrumental in provoking our interest in a further survey of the southern *Ghor*. Early in 1972 the authors had seen several pieces of pottery while visiting in Amman and Kerak, and their provenience was given as the Feifeh area. To check out this information Feifeh was the first site visited on the survey, and the results were extraordinary.

1. The first area which became clear at this site was the cemetery east of the town. A number of tombs had been opened here recently by modern tomb plunderers. We were able to clean up one and to photograph it (Pl. IX,2). Similar to es-Safi the tombs were rectangular, stone-lined cists, with some of the stones being flattened slabs. One end was usually rounded. The burials were apparently disarticulated, but only excavation will identify this with certainty.

Most remarkable is that such tombs cover an extensive area of approximately  $1 \frac{1}{2}$  km. in an east-west direction and approximately  $\frac{1}{2}$  km. along a north-south axis. This size of the cemetery makes

the Feifeh burial area a good competitor of that at Bab edh-Dhra'. There were also tombs cut into the slope beneath the town on the north side. Here again the burials were the usual cist types. It was not possible to determine whether any other kind of tomb than the cist type was used, and this problem will require further exploration of the area.

2. The town site was discovered on a flattened hilly area to the west of the cemetery on terrain similar to that of the other sites discussed (Pl. X, 1). The most characteristic feature was the large wall constructed of medium-sized stones which marked off the settlement area. This wall closely resembles those at Nu-meirah and Bab edh-Dhra' and as was the case at the latter two sites many of the stones of the wall have toppled off on the sides of the hill. The entire eastern end of the site is clearly encompassed by this wall, but it is not certain whether it was connected with the similarly walled area at the western end of the site, or whether the latter was a self-contained area. It is possible that there was an open area between the two parts of the settlement so that the site consisted of two distinct confinements (Pl. V). The large wall is best preserved on the southeast where its inner and outer faces are clear. It turns definite corners at both the north and south ends of the east side. The structure in the center of the east enclosure is a large stone heap with a squared-off base. It is possible once again that this may belong to the remains of a tower. Whether the smaller area at the west end was part of the early town or whether it is of later date remains to be clarified. It is noteworthy that on the east end mostly Early Bronze sherds were found, while to the west there were more Roman, Byzantine and Arabic sherds along with Early Bronze, suggesting heavier usage of this end in the later periods.

A surface feature worthy of attention was the thick spongy charcoal across much of the site. Feifeh is much like Numeirah in this regard, the destruction dating probably to the end of the Early Bronze settlement.

3. On the north side a distinct line of stones down the slope to the plain beneath may be the remains of a ramp. This suggestion receives support from the impressive Early Bronze site of Modowwreh on the plateau, described by Glueck (Glueck 1939:90) and also visited by us during one of the days of the survey. There is a well-preserved ramp at Modowwreh, and the remains at Feifeh suggest something similar. This could mean that the main access to the site was on the north side. It is also noteworthy that a number of door sockets were found strewn on the slope on the north and northwest sides.

Interestingly, Feifeh has been approached at least once previously, and there have been some suspicions that an important site existed in this area. Frank was at the site in 1932 (Frank 1934:209-11) but he was unsuccessful in establishing a date for his discoveries. Glueck went as far as the Arabic *qasr* approximately 1 km. west of the Early Bronze settlement site and cemetery. The former was called Qasr el-Feifeh, but more recently there is almost nothing remaining of these ruins. Glueck then decided to turn southward into the Arabah, and thus failed to approach the earlier site while on the ground (Glueck 1935:9-10). However, several years later he reported seeing a site of considerable importance while flying over the area (Glueck 1937:21). It is to the latter that Emil Kraeling makes reference in his atlas, and he

(4) Glueck's doubts notwithstanding, the site he visited and that described by Frank were apparently one and the same, corresponding

correctly concluded that the site was important for the early history of this area (Kraeling 1956:71). The survey of 1973 represents the first successful effort to determine the relation of this site to the Early Bronze Age culture of the southern *Ghor*.

4. The site of Feifeh is strategically located adjacent to a perennial fresh spring flowing in the Wadi Feifeh. As at the other sites the supply of water is much utilized today by means of temporary ditches. At the moment the main stream runs to the southwest of the site, but a smaller one is found on the northern side just below what has been designated a ramp.

#### E. Khanazir

The fifth and final Early Bronze site discovered is located approximately 6 km. southwest of Feifeh. It is the highest of all the sites, situated on a hilly spur east of Wadi Khanazir, but it is also smaller than the other sites discussed. This site was visited by both Frank (Frank 1934:212) and Glueck (Glueck 1935:10-11), the latter calling it Rujm Khaneizir.<sup>4</sup> Neither Frank nor Glueck succeeded in dating the site, or in seeing its possible significance as part of a system of Early Bronze sites in the *Ghor*. The site is the last one at the south end of the *Ghor* just before one enters the Arabah. It is a prominent one and can be seen from some distance when approaching from the north (Pl. X, 1).

1. The exploration of Khanazir was prompted by the reports of Frank and Glueck. Frank records that the sherds he picked up at Tell el-Chanzir had no Roman pottery among them, and that

also with the one reported here. Glueck 1935:10, n. 27a.

they were probably older (Frank 1934: 212). Glueck failed to find diagnostic sherds, and thus his suppositions about the date of the site as either medieval Arabic or Nabatean were strictly based on conjecture (Glueck 1935:11). The site shows the effects of continual blistering by the hot sun in the south end of the *Ghor*. The remains were impacted in hard soil, and thus the number of sherds on the surface was less than at other sites. Nonetheless, a sufficient amount was gathered to indicate a date, as seen below.

2. The promontory on which Khanazir is located is encompassed by a wall whose interior face was traced at several places (Pl. VI). Stones from the wall have fallen off the slopes, and on the steep east side have toppled into the wadi below. Similar to the other sites, the wall follows the contours of the hillock on which it was built (Pl. XI, 1).

3. On the southeast side a heap of stones provides a curious parallel to several of the other sites, and may again be the remains of a tower. The date of this heap is not certain. One or more sherds found near it were apparently Iron Age, but only excavation will tell the relation of the tower to the site as a whole.

4. Two interesting items were discovered in addition to the pottery. An unfinished macehead (Pl. XI, 2) was found just behind the wall on the slope at the south end of the site. A piece of slag was also retrieved from the slope at the northwest end.

5. Outside the town site a tomb was discovered approximately 125 m. from the south wall, on a second hilly area behind the settlement site. The tomb had recently been plundered, but one important

piece of pottery remained in it (Pls. XI, 2, 22:306). The tomb was cut from the surface and had an oblong oval shape. The sides were lined with stones. Thus it may fit the class of cist or cairn graves found at several of the other sites, but it does not seem to be exactly parallel to those discovered at es-Safi or Feifeh. It was also not possible to tell whether the finished tomb had a cairn of stones heaped above it or not.

6. To the northwest of Khanazir at a much lower level were some apparent remains of walls (Pl. VI). Sherds found in this area consisted almost entirely of Nabatean decorated and plain ware, and thus it is probable that this was the Nabatean site related to other contemporary sites such as Rujm Numeirah and those found in the Arabah by Glueck. There were also a few remains on the west side of Khanazir at a much lower level near the wadi, but nothing certain could be concluded from these finds.

7. The Wadi Khanazir adjacent to the site no doubt supplied the water supply in ancient times. For the most part this wadi was dried out when we were at the site in June. However, there was evidence that it had contained water recently, with a few trickles remaining in early summer.

#### *Part II : the Pottery*

In the treatment of each site the occupational and cemetery areas have been separated where possible, and within each of these areas the material has been ordered in broad chronological periods. Although Early Bronze occupation was a prime concern of the survey, all forms suitable for drawing collected on the survey have been published. A preliminary sorting was made in Amman before the material was shipped to the United States.

In this sorting 528 sherds were set apart for possible publication. A second sorting eliminated a large number of body sherds which had been included because of their surface treatment, as well as forms for which a stance could not be clearly determined, resulting in the published group of 331 sherds.

Comparative material supporting the assignment of chronological periods to the pottery has been listed. Given the nature of the material as surface finds, no attempt has been made to be exhaustive in citing parallels. The objective has been to let the evidence speak for itself. The commentary is limited to pointing out the more significant diagnostic features and summarizing the implications of the comparative materials.

#### A. Bab edh-Dhra' (Fig. 1:1-3:66)

The occupational history of Bab edh-Dhra', extending throughout the Early Bronze Age, has been firmly established by the excavations of Lapp during 1965-67. These excavations concentrated on the cemetery, revealing its lengthy use between Early Bronze IA and Early Bronze IV. Limited soundings were also made inside and outside the walls of the settlement, dating the latter between Early Bronze IB and Early Bronze III. The 1973 survey collected pottery from two new areas outside the settlement. This evidence supplements our present knowledge of the occupational history of the site.

1. East Area (Fig. 1:1-2:51). As noted above, to the north and east of the settlement, across the deep Wadi edh-Dhra' a new area was found. The pottery from here was later than that found in the 1965-67 soundings in the settlement, and may be dated by comparative material to late Early Bronze III and IV. The latest material is similar to that found

in two tombs, A52 and A 54, excavated in 1967 (Schaub 1973).

The most distinctive bowl forms, flat rims with rounded lip (1-6), rolled rims (8-9), rolled pointed rims (10-14), and beveled rim bowls with exterior ribbing and rills (19-25), have clear parallels at the Early Bronze IV sites of Aro'er, Khirbet Iskander and Ader in Jordan. Although some of these forms have an earlier history (Dever 1973), the combination of form and fabric, particularly in the case of the rilled rim bowls, points to Early Bronze IV. Added support for this is given by the distinctive plastic bands (46-49), the pinched-lapped ledge handle (45), and the incised straight and wavy line decoration on the jar sherd (51). The latter is the common decoration of the caliciform culture, and it is also found on an unpublished Early Bronze IV jar from Tomb A52 at Bab edh-Dhra'.

The jar with short everted, square-cut rim (32) is unique among the sherds from the survey and is unparalleled by anything found in the recent excavations at Bab edh-Dhra'. The paste is finely levigated, dense and well-fired. The fabric and grooved-line decoration have similarities to the "scrabbled" wares of the Jebel region (Ehrich 1939:35), a few examples of which were also found in the Amuq. The fabric is even closer to the "smeared wash" wares of Phases I and J in the Amuq. These wares in certain unusual cases were also decorated with wavy bands and "smeared with some sort of tool and with pressure almost sufficient to incise the clay surface under the wash" (Amuq:450). The latter perfectly describes the decoration of this sherd. Its date in the J Phase in the Amuq corresponds well with the other Early Bronze IV material in this area, and might also suggest northern contacts during this period.

2. **Southern Area** (Fig. 2:52-3:66). Between the town site and the cemetery to the south the area is covered with the foundations of buildings. The pottery collected in this area corresponds for the most part to the Early Bronze II-III pottery of the settlement, including inverted and incurved rims (52-55), thickened rims (57-59), thumb-indented ledge handles (65), and an Abydos jug handle (64). Although the nature of the remains in this area needs to be determined by future excavation, the ceramic evidence suggests that these buildings were contemporary with the main occupation of the settlement site.

#### B. Numeirah (Fig. 3:67-91)

The sherds from Numeirah were collected in two areas: the town settlement and along the lower terraces to the southwest of the town, where a number of walls were observed.

1. **Town Settlement Area** (Fig. 3:67-87). The sherds collected within the town settlement were typical Early Bronze in fabric and form, including inverted rims (69-70), thickened beveled rims (71-72), a large stump base (79), a series of flat jar bases (80-85), and two ledge handles (86-87). The two inverted rims were found in the ashy debris surface near the town wall. The most distinctive forms for dating are the inverted rim (70), which belongs to a large banquet bowl, a form occurring outside the settlement at Bab edh-Dhra' in the latest phases, and appearing for the first time in Early Bronze IIIb levels at Jericho; the thickened beveled rims (71-72), forms associated with deep flat base bowls with steeply angled sides, which are common in the later phases at Bab edh-Dhra', as well as at Aro'er; the grooved holemouth jar (78), which appears in the upper Early Bronze levels at Jericho; the tall narrow stump

base (79), a common Early Bronze III form; and the two ledge handles (86-87), which also have many Early Bronze III parallels, although they could be earlier. All of the sherds have parallels in the Early Bronze III period, so that an extended occupation during this period, at least, seems likely.

2. **Lower Slopes** (Fig. 3:88-91). On the lower terraces, between the Early Bronze Age settlement and the Nabatean Rujm Numeirah, a few Roman sherds, one Nabatean bowl, and one Byzantine handle were found. The base (89) is Roman I or Herodian ware dated at Samaria to 75-25 B.C.

#### C. Es-Safi (Fig. 4:92-6:164)

The exploration of es-Safi was restricted to the slopes and plateau area above Tawahin es-Sukkar. Although the slopes were predominantly covered with tombs, the plateau and slopes just below it appear to have been used, at least in part, for occupation. Pottery from the latter is separated in the plates from that which is clearly from tombs, although a satisfactory differentiation was not possible. Three major phases of occupation are indicated by the pottery: Early Bronze, Iron and Byzantine.

1. **Early Bronze Age** (Fig. 4:92-6:144). The pottery in Plate 15 contains the evidence gathered in the settlement area on the plateau. The majority of these sherds, particularly the tall, wide-mouth flaring rim jars (97-101), and the bases (104-109), find their best parallels in the earliest phases of the Bab edh-Dhra' cemetery. This is also true of the small pierced ledge handle with thumb indentation (110), which is closely paralleled by a complete jar from the cemetery at es-Safi (123), and by two examples from Feifeh (244-45).

The tomb material from es-Safi (Fig. 5:113 - Fig. 6:144), mostly complete forms from broken pots abandoned by tomb robbers, was abundant. The forms and fabric are predominantly early, corresponding to the Early Bronze I phase at Bab edh-Dhra', with some forms possibly later. The Early Bronze IA use of the cemetery is supported by the small bag-shaped jars (117-121), the medium wide-mouth jars with tall neck, flaring rim and ring base (123-126), the basalt stone jar (141), and the raised-band decoration on two sherds (142-43). All these forms are paralleled in the Early Bronze IA phase at Bab edh-Dhra', and many also at Jericho in the Proto-Urban A tombs. Early Bronze IB is represented by the jar with short everted neck and vertical painted lines (133), and the small jar sherd with group line painted decoration (144). The best published parallels for the large store jars with tall flaring neck (127-132), come from Arad, Strata IV-II.

The most distinctive forms of the es-Safi cemetery are the shallow cup bowls with loop handle from the rim to the rounded base (Pl. 16:113-116). The fabric is thin, well-levigated, with some traces of mica temper along with small limestone grits. The bowls are handmade but finely shaped, with slight everted rim. The handles are round in section and thickened at the upper attachment with a distinctive bulge or horn. This horn may have been more or less functional, providing a better grip on the vessel. A similar function is suggested for the clay strips added over handles on Early Bronze I juglets (cf. Jericho I:Fig. 12:7; Bab edh-Dhra' 1962: Fig. 23:5,15). Many one-handled cup bowls are common in Early Bronze III contexts in the charnel houses of Bab edh-Dhra' (cf. Bab edh-Dhra' 1965: Fig. 28:8). They are also found at Jericho in Tombs A, D1 and F2. The low profile and everted rim of these bowls is close

to certain Khirbet Kerak forms. Yet none of the parallels are as shallow, nor do they have the triangular bulge at the rim and the flattened attachment of the handle at the base characteristic of the es-Safi vessels.

Given the predominance of Early Bronze I wares in the cemetery at es-Safi, the possibility must be left open that they are a novel type in Early Bronze I. Additional evidence for an Early Bronze I date is provided by parallels from the Amuq (shallow bowls without handles) and from the Jebel region (shallow bowls, some with similar handles), attributed by Ehrich to phases earlier than Early Bronze III. The "natural burnished" ware (IIC) of the Jebel region, from Qal'at er-Rus Layers 17-19, of which all the fragments "are of bowls, either wide, shallow and plate-like or small, deeper cups" (Ehrich:10) appears closest to the es-Safi cup bowls. This ware is assigned to the beginning of the fourth millennium B.C., but it is also paralleled by the "Late Neolithic" of Level VIII at Jericho. In fact, three of the ten examples of IIC ware were in Layer 14, dated to 3100 B.C. To summarize, these shallow vessels at es-Safi may be Early Bronze III, but the possibility remains that they may be earlier.

2. Iron Age (Fig. 6:145-149). Only a few Iron Age forms were found at es-Safi. The bowl with beveled, inverted rim (145) was recognized as a common form at Buseirah by Sami Rabadi, who has worked there. It is also found at Sahab and at other sites in Jordan. The large crater with grooved rim (146) has parallels at Dhiban, Heshbon and Samaria. The two thickened jar rims (147-48) are also paralleled at Heshbon. In general, the forms point to Iron II.

3. Late Roman and Byzantine (Fig. 6:150-164). The series of shallow bowls

(150-157) are all Late Roman C ware. These forms are dated to the third and fourth centuries A.D. at Tarsus, but at Dhiban to the third quarter of the sixth century A.D., although it is noted they could be earlier (Dhiban:75). A similar date is provided by Dhiban parallels for the cooking pot (159) and the handled cooking pan (161).

#### D. Feifeh (Fig. 7:165-11:299)

The site of Feifeh yielded the largest amount of pottery among the sites examined, as well as evidence for a considerable use of the site. The Early Bronze, Iron, Roman, Byzantine and Islamic periods are represented. The discussion is arranged chronologically, with the Early Bronze town and cemetery treated first, followed by the remaining periods.

1. **Early Bronze Age** (Fig. 7:165-9:247). Among the bowl rims the small bowl (165) is a common form in Early Bronze III, usually exhibiting a string cut base. The rolled rim platter (169) is also common in Early Bronze III, although it could be earlier. Platters with thickened rims (170) are a deceptive form. The exterior flange appears on these forms only at two opposed areas on the circumference. These thickenings are obviously designed for gripping the bowl. On the remainder of the circumference the profile of the rim does not show the flange and is similar to the flat rim bowls from Bab edh-Dhra' (Fig. 1:1-5). The plain pointed rims (166-67), and slightly thickened rounded form (168), belong to deep bowls and are similar to the bowls of the Early Bronze IA phase at Bab edh-Dhra', but are also represented in later phases at Ai. None of the jar rim forms (171-78) — all from wide mouth, tall necked jars, some with more pronounced flare than others, — are distinctive enough to be assigned to a separate period within Early Bronze. The parallels from Ai range from Phase IV to VII. The

same must be said of the series of flat bases and the ledge handles (189-206). The punctured decoration of the jar necks (207-208) is best paralleled by the Early Bronze IA material at Bab edh-Dhra'.

The cemetery material from Feifeh is from a series of robbed cist tombs east of the town site. The pottery is similar in form and fabric to the es-Safi cemetery material, and is best paralleled by the Early Bronze I pottery of the Bab edh-Dhra' cemetery and the Proto Urban pottery of Jericho. At Feifeh a short, sharply flaring rim is more common on the larger jars (214-19, 262). This is a form which appears in late Early Bronze IA at Bab edh-Dhra', and is more common in Early Bronze IB and later. All of the bases are from jars with the exception of (237-39) which belong to platters or deep bowls.

2. **Iron Age** (Fig. 9:248-10:261). The best attested Iron Age forms are the wide bowl with thickened rim and long horizontal handles (248), the Iron II storage jar (252), a large-handled crater (255-56), and the small tripod cups (257-59). These forms all have good parallels in Iron II contexts.

3. **Roman** (Fig. 10:262-267) and **Byzantine** (Pl. 21:268-277). The Roman sherds belong to the early and late Roman periods, dating from the late first to the third centuries A.D. The cooking pot (264) is paralleled by examples from the Judean desert caves, and two of the jar forms (263-266) find parallels at Petra. One of these from Phase XVIII is dated by Parr to the second century A.D. (cf. 263), and the other from Phases X-XII to the first century A.D. (cf. 266). Byzantine forms are less numerous than at es-Safi. The bowl with combed decoration (271) is made of red brick ware. Forms from Nebo and Jerash are made of similar ware, and often have a white



slip. They are dated at these sites to the end of the sixth century A.D. The cup (276) is of reddish yellow ware, continuously burnished and decorated with incised wavy lines. The parallels cited to it date it in Late Byzantine to the sixth - seventh centuries A.D.

4. **Late Islamic** (Fig. 10:278-11:299). The latest pottery from Feifeh belongs to the Ayyubid-Mameluke phases of Late Islamic. A number of parallels from the Ayyubid destruction phase at Dhiban are supplemented by parallels from the latest phases at Khirbet Mefjar. Mameluke pottery is best represented by the bowl forms in 281-285 (and probably also 209). The fabric is a soft ware using grit and organic material for temper, with the burnt out traces of the latter evident on the surface. The surface is often cracked, and bands of finger impressions are frequently used for decoration. The cooking pot sherd (292) with traces of glaze on the rim may also be Mameluke. It is found in the Ayyubid destruction phase at Dhiban. The horned ledge handle (295) could be an Early Bronze form, but the ware and cracked surface recall Mameluke wares, & the finger impressions at the level of the handle suggest a poor imitation of pierced Ayyubid horned handles (see Dhiban: Fig. 8:4). Two examples of glazed ware (298-99) appear to be late Mameluke.

#### E. Khanazir (Fig. 11:300-12:331)

Although the pottery from Khanazir is limited in scope, several periods of occupation are indicated: Early Bronze, Iron, Roman, Byzantine and Islamic.

1. **Early Bronze Age** (Fig. 11:300-308). Evidence for the Early Bronze Age is limited to a hole-mouth jar rim (300), a series of flat bases (301-304) and a jar handle (305). All of the pieces are very worn but are distinctively Early Bronze in fabric. Two of the sherds (304-305) have traces of red slip. Three sherds from

a robbed tomb south of the town site, the squat jar with incised combing (306), a jar shoulder and neck (307), and the vestigial handle (308), may be classified as Early Bronze IV according to the new terminology proposed by Dever (Dever 1973:58-61).

2. **Iron Age** (Fig. 11:309-320). The Iron Age is represented by a shallow bowl with everted rim (309), three jar rims (310-312), and four ring bases (313-16). One of these (309) could also be from an Iron I chalice, and the rest of these forms also find parallels in Iron I. The remaining Iron Age forms belong to Iron II. The bases (313-16) and two craters (317-18) are distinctive in ware, with pitted surfaces like the Edomite wares from Sela-Petra (Horsfield 1939:Pl. XL IX).

3. **Roman** (Fig. 12:321-25), Byzantine (Fig. 12:326-28) and Islamic (Fig. 12:329-31). Among the few scattered sherds of later periods, the Byzantine handle (328) belongs to a jar with carinated shoulder (drawing is upside down), the bowl rim (329) is of the same soft ware as the Feifeh sherds dated to the Mameluke period, and the wheel-made form (330) belongs most likely to a deep sugar vat. The latter is similar to forms from Pella, although exact parallels have not been published (Pella: 237).

#### CONCLUSIONS

The survey of the sites and the study of the pottery suggest the following conclusions, which have a bearing upon the site of Bab edh-Dhra' but also broader implications for the southern *Ghor*, as a whole during the Early Bronze Age.

1. The ceramic remains at the various sites are noteworthy for many similarities in form and sometimes also in fabric. Perhaps more significant is the range found at several of the sites. At least three of the sites — Bab edh-Dhra', es-



Safi and Feifeh — suggest an occupation from Early Bronze I through Early Bronze III or IV. Numeirah, and probably also Khanazir, appear to have been founded later in Early Bronze III.

2. The most important conclusion is that the site of Bab edh-Dhra' need no longer be viewed in isolation, but was in fact part of a system of Early Bronze Age towns or bastions in the southern *Ghor*, at least in its latest phase of occupation at the end of Early Bronze III or the beginning of Early Bronze IV. During this period the towns are characterized by great similarity in location and layout. As the northernmost and largest site in this system, Bab edh-Dhra' seems to have controlled the area of the plain to the east (*Ghor edh-Dhra'*), as well as the large plain to the north and west (*Ghor el-Mazra'*). The sister towns, spaced at roughly regular intervals to the south, also apparently controlled the areas of the plain adjacent to them. Thus Numeirah would have been ideally situated to oversee the *Ghor en-Numeirah*, es-Safi the *Ghor es-Safi*, Feifeh the area presently called *Ghor el-Feifeh*, and Khanazir the entire area at the south end of the *Ghor*.

3. A new context is similarly established for the large cemetery at Bab edh-Dhra'. The new data from cemeteries at es-Safi and Feifeh puts in question the interpretation of the Bab edh-Dhra' cemetery as a burial ground for an extensive area. Rather it seems that it may simply have served as the cemetery of the town itself. Several factors need to be weighed on this problem. In the first place, the history of the settlement at Bab edh-Dhra' extended over a long enough time to account for the large number of burials apparently in this cemetery. Along this line the cemetery reflects closely the occupational history of the settlement site. In the second place, Bab edh-Dhra' probably possessed

the most intensively used cemetery because of the size of the town itself, as well as the much wider and probably more heavily populated area which it controlled. The soft limestone terrain around Bab edh-Dhra' apparently also encouraged a greater variety of tomb types, including shaft tombs as well as charnel houses.

4. From surface survey and a consideration of the region as a whole, it appears that the economy of the southern *Ghor* throughout Early Bronze was essentially oriented toward an agricultural and pastoral mode of life (Albright 1962:56-57). The examination of the Bab edh-Dhra' environs in particular has shown the viability of such an interpretation. The results point to the desirability of a more comprehensive exploration of these sites and the areas over which they assumed control.

5. Implications from the survey for two related areas of investigation may also be noted. In the first place, the sites may bear on the biblical tradition of the "cities of the plain" (Gen. 14, 18, 19), long believed to be located in this area and sometimes thought to have been submerged beneath the shallow waters of the southern basin of the Dead Sea. If the biblical traditions find roots going back as far as the Early Bronze Age, the sites reported here may be of some importance. The problem of the relation will be taken up in a future article which will consider literary evidence along with the archaeological. Secondly, the discoveries of the survey may also challenge the popularly held geological theory that the south basin of the Dead Sea has filled up only in recent times. Given the location of a string of important sites right down the southeast plain, the question must be raised whether the level of the Dead Sea and its fluctuations as observed in recent times were appreciably different as long ago as the Early Bronze Age.

Pottery Comparisons

- 1-6 Aro'er VIb (Fig. 1:3); Ai Ph. VI (Fig. 60:18); Arad St. I (Pl. 52:18); Jericho 1932, Tomb A (Pl. IV:20); cf. Amuq Ph. H (Fig. 269:4).
- 7 Ader (Fig. 13:15).
- 8 Aro'er (Fig. 1:5, 4:1); Ader (Fig. 14:23,15:13).
- 9 Jericho 1935, Tomb 351 (Pl. XXXIV:5); Jericho I, Tomb D12 (Fig. 36:12, 38:21, 22), Tomb F4 (Fig. 57:32); Kh. Iskander (Fig. 1:9).
- 10-12 Ader (Fig. 13:1, 15:10); Jebel Qa'aqir (Fig. 3:9).
- 13 Ader (Fig. 14:6, 24); Amuq, Ph. H (Fig. 272:2), Ph. G. (Fig. 216).
- 14 Ader (Fig. 14:6, 24); Aro'er (Fig. 1:4).
- 15 Ai Ph. 4 (Fig. 44:23); Arab St. II (Pl. 23:12); Jericho II, Tomb D12 (Fig. 33:20).
- 16 Ai Ph. V (Fig. 44:19-20); Jericho II, Tomb F4 (Fig. 43:3).
- 17 Jericho 1932, Tomb A (Pl. IV:19); Jericho II, Tomb A127 (Fig. 25:4), Tomb F4 (Fig. 43:9), Tomb D12 (Fig. 38:13); Ai Ph. III following (Fig. 26:24, 45:4, 56:15, 67:5, 80:5).
- 18 Arad, St. IV (Fig. 8:10), St. III (Fig. 13:34), St. II (Fig. 23:9-17); Ai Ph. IV (Fig. 36:1-3), Ph. VI (Fig. 60:18), Ph. VIII (Fig. 75:6).
- 19-22 Aro'er VIa (Fig. 4:4, 8, 12); Ader (Fig. 13:4, 14:26, 15:9); Kh. Iskander (Fig. 1:10-11).
- 23-25 Ader (Fig. 13:7, 14:5, 7, 15:7); Aro'er (Fig. 1:18-21); Ai (Fig. 78:3); Tell Ajjul (Fig. 7:2); EEP III (Pl. 147:7, 154:8); Amuq Ph. H (Fig. 271:3), Ph. J (Fig. 336:11, 12), Beth Shan (Pl. VIII:14).
- 26-27 Ader (Fig. 14:1); Aro'er VIb (Fig. 3:1); Lachish IV (Fig. 65:381, 66:449).
- 28 Ader (Fig. 13:13), 14:6, 15:15); Jericho 1932 (Pl. I:8); Ai Ph. V (Fig. 46:13), Ph. VI (Fig. 61:13); Arad St. II (Pl. 29:13); EEP IV (Pl. 154:11-24).
- 29 Tell Ajjul (Fig. 8:6-9); Lachish IV (Fig. 67:458, 462, 468-69, 471-72).
- 30 Arad St. II (Fig. 40:9); EEP IV (Pl. 154:23); Amuq Ph. J (Fig. 336:26).
- 32 Amuq (Fig. 320:1, 2, 319:21, 345:5, 6, 347:10, 11).
- 33 Ader (Fig. 14:13); Aro'er (Fig. 4:14, 17); Kh. Iskander (Fig. 1:19); Jericho I (Fig. 57:12).
- 35 Ader (Fig. 14:4); Jericho I (Fig. 110:3); Jericho II (Fig. 72:5, 80:5); Bab edh-Dhra' 1973 (Fig. 6:5).
- 36 EEP III (Pl. 10:8, 12:8, 16:6, 17:1); Arad St. II (Fig. 46:7, 50:10-14).
- 37-43 Ai Ph. V (Fig. 50:8, 12, 51:12, 52:6); Ph. VI (Fig. 64:21, 65:1, 14).
- 44 Ader (Pl. 22B:2, 3); Aro'er (Fig. 3:3); Jericho 1932, Tomb A (Pl. VI:13).
- 45 EEP IV (Pl. 131:14-16, 19, 25-27, 145:1-3, 151:11, 14, 16, 153:1-13).
- 46 Aro'er (Pl. III:7).
- 47 Bab edh-Dhra' 1944 (Pl. 3:10); Bab edh-Dhra' 1973b (Fig. 6:5).
- 48 Ader (Pl. 22A:7, 24A:11); Bab edh-Dhra' 1944 (Pl. 3:41).
- 49 EEP IV (Pl. 122:6-10, 155:6); Ader (Pl. 23B:2, 6, 23A:1, 6); Bab edh-Dhra' 1944 (Pl. 3:3, 13, 34, 40).
- 50 EEP IV (Pl. 155:9, 14, 16-17, 20-22); Aro'er (Pl. IV:1-6, 9); Ader (Pl. 22A:2-4).
- 51 Aro'er (Pl. III:10-11, 13-14); cf. TBM Ia (Pl. 3:2-3, 21:6-7).

- 52 Hennessey (Pl. VI:60, VIII:78); Ai Ph. VI (Fig. 60:17), Ph. IV (Fig. 35:34-35), Ph. V (Fig. 44:19), Ph. VIII (Fig. 80:1, 2); Arad St. II (Fig. 23:13, 15, 18), St. I (Fig. 52:20); Lachish IV (Pl. 64:344); Jericho 1936 (Pl. XXXVIII:18).
- 53 Hennessey (Pl. IX:87); Jericho I, Tomb 114B (Fig. 67:1, 2); Jericho 1932 (Pl. I:14); Ai Ph. VI (Fig. 61:8).
- 54 Lachish IV, Cave 6013 (Pl. 64:351); Ai Ph. V (Fig. 56:14).
- 55 Lachish IV (Pl. 59:142); Ai Ph. VI (Fig. 67:4).
- 56 Ai Ph. V (Fig. 45:3), Ph. VI (Fig. 67:5, 7); Lachish IV (Pl. 58:91, 59:154, 64:348, 65:376-77); Jericho 1932, Tomb A (Pl. IV:19).
- 57 Ai Ph. IV (Fig. 36:5), Ph. V (Fig. 44:25, 45:1, 2), Ph. VI (Fig. 60:2); Arad St. III (Fig. 13:41), St. I (Fig. 52:18); Lachish IV (Pl. 64:346); Jericho 1932, Tomb A (Pl. IV:18); Jericho 1935 (Pl. XXVIII:34).
- 58 Jericho 1932, Tomb A (Pl. IV:23).
- 59 Ader (Fig. 13:8); Lachish IV (Pl. 65:373, 58:90); Jericho 1932 (Pl. IV:15); Jericho 1935 (Pl. XXVIII:33).
- 60 Arad St. II (Pl. 23:22); EEP IV (Pl. 153:21, 156:4); Aro'er (Fig. 5:10).
- 61 Meg. Stages (Chart 12a); Arad St. III (Pl. 21:31, 18:26).
- 62 Ader (Fig. 15:15).
- 63 Ai, Ph. V (Fig. 46:13).
- 64 Jericho I (Fig. 23:9, 45:1, 59:11); Hennessey (Pl. XXXIX, *passim*).
- 65 Ader (Pl. 24A:2); EEP III (Pl. 1:4, 8, 3:5).
- 66 Ader (Pl. 23B:2); EEP IV (Pl. 155:4, 6).
- 67 Jericho I, Tomb 114A (Fig. 17:3); Ai Ph. VI (Fig. 59:17), Ph. V (Fig. 56:6); Ader (Fig. 15:23); Jericho 1935 (Pl. XXVII:7).
- 68 See Nos. 1-5; Ai, Ph. VI (Fig. 67:7); Arad, St. I (Pl. 52:18); Jericho 1935 (Pl. XXVII:34).
- 69 Ai, Ph. VI (Fig. 60:7, 9, 12), Ph. V (Fig. 44:19); Arad, St. II (Fig. 52:19, 20).
- 70 Hennessey (Pl. IX:87); Bab edh-Dhra' 1944 (Pl. 1:27).
- 71 Aro'er (Fig. 4:3).
- 72 Aro'er (Fig. 4:8).
- 73 Ader (Fig. 15:12); Arad, St. II (Pl. 28:1, 4, 8, 12, 41:6).
- 74 Ai, Ph. VII (Fig. 68:10-11); Jericho I, Tomb F4 (Fig. 47:4); Jericho 1932, Tomb A (Pl. VI:16-17); Arad, St. II (Pl. 28-29, 30:1-4, 31-34).
- 75 Jericho 1932, Tomb A (Pl. V:9-19).
- 76 Arad, St. II (Pl. 41:1, 12, 40:1-10).
- 77 Arad, St. I (Pl. 53:1).
- 78 Jericho 1935 (Pl. XXX:11).
- 79 Jericho I, Tomb D12 (Fig. 34:13), Tomb F (Fig. 45:4, 5).
- 80 Ai, Ph. VI (Fig. 64:37, 65:5, 11).
- 81 Ai, Ph. VI (Fig. 65:14-16).
- 83 Ai, Ph. VI (Fig. 65:14).
- 84 Ai, Ph. VI (Fig. 64:24, 27, 29).
- 85 Ai, Ph. VI (Fig. 65:7, 13, 64:31, 33, 40), Ph. V (Fig. 51:8); EEP IV (Pl. 146:12).
- 86 Jericho 1935 (Pl. XXXV:8, 9); Lachish IV (p. 151, Form 10); Ai, Ph. VIII (Fig. 76:17), Ph. VI (Fig. 65:23), Ph. V (Fig. 53:3-5).
- 87 Jericho 1935 (Pl. XXXV:9; Ai, Ph. VII (Fig. 68:25).
- 88 Lapp, PCC (Type 11.1).
- 89 SS III (Fig. 68:9, 67:10).
- 90 Dhiban (Fig. 3:21, 4:76).

- 92 Ai, Ph. VI (Fig. 59:5, 17); Arad, St. III (Pl. 13:22); Jericho 1935 (Pl. XXVII:7).
- 93 Ai, Ph. II (Fig. 16:1).
- 95 Lachish IV (Fig. 64:346); Hennessey (Pl. X:97).
- 96 See Nos. 10-14.
- 97 Bab edh-Dhra' 1973a (Fig. 21:0106b).
- 98-99 Bab edh-Dhra' 1973a (Fig. 21:0106a); Arqub edh-Dhahr (Fig. 14:124).
- 100 Bab edh-Dhra' 1973a (Fig. 25:0150); Jericho II, Tomb K2 (Fig. 10:4).
- 102 Bab edh-Dhra' 1973a (Fig. 30:0261).
- 103 Bab edh-Dhra' 1965 (Fig. 21:4); Bab edh-Dhra' 1973a (Fig. 39:0562b).
- 104 Bab edh-Dhra' 1973a (Fig. 31:0408).
- 105 Bab edh-Dhra' 1973a (Fig. 25:0200c).
- 106 Bab edh-Dhra' 1973a (Fig. 23:0123b).
- 107 Bab edh-Dhra' 1973a (Fig. 20:0104a); Jericho II (Fig. 14:10).
- 108 Bab edh-Dhra' 1973a (Fig. 20:0102); Arad, St. V (P. 6:9).
- 110 Bab edh-Dhra' 1973a (Fig. 25:0180).
- 113 Jebelch (Pl. VII, fig. VIII); Bab edh-Dhra' 1965 (Fig. 28:8); Jericho 1932 (Pl. VI:3); Jericho I, Tomb D12 (Fig. 36:22), Tomb F2 (Fig. 58:7).
- 114 Amuq (Fig. 171:12-18, 172:1).
- 117-121 Bab edh-Dhra' 1973a (Fig. 26:0214c); Jericho I, Tomb A94 (Fig. 12-13).
- 123 Bab edh-Dhra' 1973a (Fig. 25:0180, 26:0220); Jericho II (Fig. 14:5, 6) for base.
- 125-126 Bab edh-Dhra' 1973a (p. 107:6); Jericho II (Fig. 10:3) for base.
- 127 Arad, St. II (Pl. 31-41, passim).
- 128-129 Arad, St. IV (Pl. 12:18), St. III (Pl. 15:26), St. II (Pl. 31:41).
- 130 Arad, St. III (Pl. 15:1), St. II (Pl. 31-41).
- 132 Arad, St. II (Pl. 40:9).
- 133 Bab edh-Dhra' 1973a (Fig. 52:1211); Amiran, p. 49, photo 41.
- 134 Bab edh-Dhra' 1973a (Fig. 43:0750, 0754).
- 135 Bab edh-Dhra' 1973a (Fig. 30:0402a).
- 136 Bab edh-Dhra' 1973a (Fig. 25:0200b).
- 138 Bab edh-Dhra' 1973a (Fig. 21:0106a).
- 139 Bab edh-Dhra' 1973a (Fig. 21:0106b).
- 140 Bab edh-Dhra' 1973a (Fig. 20:0104c, 21:0106b).
- 141 Bab edh-Dhra' 1973a (p. 108:St. 1).
- 143 Bab edh-Dhra' 1973a (Fig. 39:0561).
- 144 Amiran (Pl. 11:8).
- 145 Deir Alla (Fig. 59:32, 66:73, 75:19); Madeba (Fig. 13:44); Balu'ah (Fig. 1:4).
- 146 Dhiban (Fig. 1:46); SS III (Fig. 11:20, 12:5); Heshbon I (Pl. X:531).
- 147 Heshbon I (Pl. IX:469).
- 148 Heshbon I (Pl. IX:476, 477).
- 150 Dhiban (Fig. 11:14); Tarsus I (Fig. 207:818).
- 151 Dhiban (Fig. 11:13); Tarsus I (Fig. 207A).
- 153 Dhiban (Fig. 11:7); Tarsus I (Fig. 208M); Nessana (Pl. XLVIII:14C2).

- 154 Dhiban (Fig. 11:8); Tarsus I (Fig. 208N).
- 155 Tarsus I (Fig. 208A).
- 156 Tarsus (Fig. 208F); Nessana (Pl. XLVIII:11B3).
- 157 Tarsus I (Fig. 208D).
- 158 Nessana (Pl. XLIX:24, 3).
- 159 Dhiban (Fig. 9:20); Nessana (Pl. LVI:134, 17).
- 160 Dhiban (Fig. 11:20-25).
- 161 Dhiban (Fig. 9:28); Nessana (Pl. LII:74B16).
- 162 Nessana (Pl. L:35A3); Jerusalem N. Wall (Fig. 8:11).
- 163 Pella (Pl. 32:1278); Jerusalem N. Wall (Fig. 7:3).
- 165 Ai, Ph. VIII (Fig. 79:2-12, 74:3).
- 166 Bab edh-Dhra' 1965 (Fig. 21:2).
- 167 Ai, Ph. V (Fig. 56:5).
- 168 Ai, Ph. VI (Fig. 62:27), Ph. IV (Fig. 39:17).
- 169 See Nos. 8-9.
- 170 Ai, Ph. VI (Fig. 67:5, 6).
- 173 Ai, Ph. V (Fig. 46:9).
- 174 Ai, Ph. IV (Fig. 43:4).
- 176 Ai, Ph. IV (Fig. 37:3).
- 177 Ai, Ph. VI (Fig. 61:12, 16), Ph. IV (Fig. 37:8).
- 178 Ai, Ph. VII (Fig. 68:11).
- 179 Ai, Ph. IV (Fig. 39:15), Ph. V (Fig. 47:21, 23), Ph. VI (Fig. 63:16-18).
- 180 Ai, Ph. VI (Fig. 62:8).
- 181 Bab edh-Dhra' 1973a (Fig. 25:0180, 27:0227).
- 182 Bab edh-Dhra' 1973a (Fig. 30:0404a).
- 184 Bab edh-Dhra' 1973a (Fig. 20:0104c).
- 187-188 Bab edh-Dhra' 1973a (Fig. 21:0106a).
- 189 Bab edh-Dhra' 1973a (Fig. 20:0104c, 21:0106b).
- 190-191 Bab edh-Dhra' 1973a (Fig. 24:0130b).
- 196 Bab edh-Dhra' 1973a (Fig. 22:0122a).
- 197 Bab edh-Dhra' 1973a (Fig. 21:0120a, 23:0123a).
- 198-201 Bab edh-Dhra' 1973a (Fig. 22:0120b, 23:0122b).
- 203 Bab edh-Dhra' 1973a (Fig. 23:0122b).
- 204 Bab edh-Dhra' 1973a (Fig. 25:0180).
- 206 TBM la (Pl. 1:4, 5).
- 207 Bab edh-Dhra' 1973a (Fig. 20:0104c).
- 212 Bab edh-Dhra' 1973a (Fig. 20:0102).
- 213 Bab edh-Dhra' 1973a (Fig. 22:0120b); Bab edh-Dhra' 1965 (Fig. 15:1).
- 214-215 Bab edh-Dhra' 1973a (Fig. 24:0130b).
- 217-218 Bab edh-Dhra' 1973a (Fig. 26:0214a, c); Jericho II (Fig. 10:5).
- 219 Bab edh-Dhra' 1973a (Fig. 29:0260a-d).
- 220 Bab edh-Dhra' 1973a (Fig. 27:0226-7); Jericho II, Tomb K2 (Fig. 7:7); Jericho I, Tomb A114A (Fig. 18:23), Tomb A127 (Fig. 26:4).
- 221 Bab edh-Dhra' 1973a (Fig. 27:0226).
- 222-226 Bab edh-Dhra' 1973a (Fig. 26:0214c).
- 227 Bab edh-Dhra' 1973a (Fig. 26:0210a).
- 228-229 Bab edh-Dhra' 1973a (Fig. 26:0220).
- 230 Bab edh-Dhra' 1973a (Fig. 21:0106a).
- 231 Bab edh-Dhra' 1973a (Fig. 25:0200c).
- 232-233 Bab edh-Dhra' 1973a (Fig. 25:0200d).

234	Bab edh-Dhra' 1973a (Fig. 28:0243, 29:0260c).	275	Kh. Mefjer (Fig. 12:4).
235	Bab edh-Dhra' 1973a (Fig. 27:0242b).	276	Kh. Mefjer (Fig. 10:2), Ramat Rahel (Fig. 3:4, 5); Nebo III (P. 118, Pl. 156:11, 12).
237-240	Bab edh-Dhra' 1973a (Fig. 20-24 passim).	277	Dhiban (Fig. 12:35-42).
241	Bab edh-Dhaa' 1973a (Fig. 23:0123b).	278	Dhiban (Fig. 7:43).
244-245	Bab edh-Dhra' 1973a (Fig. 25:0180, 38:0556b); Far'ah (N) (Fig. 1:7); Lachish IV (Pl. 58:110-11, 113, 130, 60:227, 61:265); Jericho I, Tomb A94 (Fig. 15:4, 14:11).	280	Dhiban (Fig. 8:21).
248	Nasbeh II (Pl. 60:1378).	281	Kh. Mefjer (Fig. 12:1, 3, 4).
249	Nasbeh II (Pl. 57:1319).	282	Dhiban (Fig. 8:8, 6) for decoration.
250	Nasbeh II (Pl. 20:340).	285	Dhiban (Fig. 8:15-18) for decoration.
251	SS III (Fig. 3:34, 6:8); Nasbeh II (Pl. 17:284).	286	Kh. Mefjer (Fig. 12:20, 22).
252	Meg. I (Pl. 3:74).	287	Kh. Mefjer (Fig. 7:4, 5).
253	Umm el-Biyara (Fig. 2:11); Nasbeh II (Pl. 48:1026).	288	Dhiban (Fig. 7:35).
255-256	Dhiban (Fig. 1:41-45); Tell Goren (Fig. 16:6).	291	Kh. Mefjer (Fig. 7:3); Dhiban (Fig. 8:2).
257	Heshbon I (Pl. V:281, 282).	292	Dhiban (Fig. 8:3).
260	Heshbon I (Pl. VI:357, VII:359).	295	Dhiban (Fig. 8:4), similar but pierced; SS III (Fig. 84a:12).
261	Nasbeh II (Pl. 23:366).	298	Heshbon II (Fig. 4:143); Dhiban (Fig. 8:9, 11).
262	See 217.	299	Dhiban (Fig. 8:14).
263	Petra (Fig. 8:128, 130).	300	Arad, St. IV (Pl. 8:25, 26).
264	Jud. Desert Caves (Fig. 2:6-8).	306	Lachish IV (Pl. 67:477, 480).
265	Heshbon II (Fig. 2:56); Jerusalem N. Wall (Fig. 6:6).	308	Ma'ayan Barukh (Fig. 6:8).
266	Petra (Fig. 7:101).	309	Nebo III (Fig. 20:3); Nasbeh II (Pl. 69:1572, 1584).
267	Heshbon II (Fig. 1:44); Tarsus I (Fig. 208U); Dhiban (Fig. 11:21).	310	Nasbeh II (Pl. 15:258).
268	Dhiban (Fig. 11:14).	311	Nasbeh II (Pl. 16:275).
269	Tarsus I (Fig. 207:818).	312	Heshbon I (Pl. VIII:409).
270	Jerusalem N. Wall (Fig. 8:5).	313	Tell Goren (Fig. 14:3, 4, 6).
271	Nebo III (p. 77); Nassana (Pl. LII:72, 1); Jerusalem N. Wall (Fig. 10:11).	317	Umm el-Biyara (Fig. 3:2, 4).
272	Heshbon II (Fig. 2:89).	318	Tell Goren (Fig. 14:3); Nasbeh II (Pl. 58:1329).
		319	Nasbeh II (Pl. 47:995, 997).
		320	Nasbeh II (Pl. 63:1437).
		321	Dhiban (Fig. 4:40); Petra (Fig. 5:68, 69).
		323	SS III (Fig. 72:3).
		327	Dhiban (Fig. 12:35, 38); Jerusalem N. Wall (Fig. 14:5, 6).
		328	Jerusalem N. Wall (Fig. 21:6).
		330	Pella (p. 237).

### Abbreviations of Works Cited in the Text

- Albright 1924 W.F. Albright, "The Archaeological Results of an Expedition to Moab and the Dead Sea," **BASOR 14** (1924), 2-12.
- 1926 W.F. Albright, "The Jordan Valley in the Bronze Age," **AASOR 6** (1926), 13-74.
- 1944 W.F. Albright, "Early Bronze Pottery from Bâb ed-Drâ in Moab," **BASOR 95** (1944), 3-10.
- Avi-Yonah 1954 M. Avi-Yonah, **The Madeba Mosaic Map**. Jerusalem: Israel Exploration Society, 1954.
- Dever 1970 William G. Dever, "Vestigial Features in MB I: An Illustration of Some Principles of Ceramic Typology", **BASOR 200** (1970), 19-30.
- 1973 William G. Dever, "The EB IV-MB I Horizon in Transjordan and Southern Palestine," **BASOR 210** (1973), 37-63.
- Ehrich 1939 Ann M.H. Ehrich, **Early Pottery of the Jebelch Region**. "Memoirs of the American Philosophical Society, Vol. XIII"; Philadelphia, 1939.
- Frank 1934 Fritz Frank, "Aus der Araba I: Reiseberichte," **ZDPV 57** (1934), 191-280.
- Glueck 1935 Nelson Glueck, "Explorations in Eastern Palestine, II," **AASOR 15** (1935).
- Glueck 1937 Nelson Glueck, "An Aerial Reconnaissance in Southern Transjordan," **BASOR 67** (1937), 19-26.
- Glueck 1939 Nelson Glueck, "Exploration in Eastern Palestine, III," **AASOR 18-19** (1939).
- Horsfield 1939 G. and A. Horsfield, "Sela-Petra, the Rock, of Edom and Nabataean," **QDAP 9** (1939-40), 105-204.
- Kraeling 1956 Emil G. Kraeling, **Rand McNally Bible Atlas**. New York: Rand McNally and Company, 1956.
- Kyle 1924 M.G. Kyle, "The Story of Ancient Sodom in the Light of Modern Science," **Bibliotheca Sacra 81** (1924), 262-291.
- Kyle 1928 M.G. Kyle, **Explorations at Sodom**. New York: Fleming H. Revell Company, 1928.
- Lapp 1968a P.W. Lapp, "Bâb edh-Drâ', Perizzites and Emim," in **Jerusalem through the Ages**. Jerusalem: The Israel Exploration Society, 1968, 1-25.
- Lapp 1968b Paul W. Lapp, "Bâb edh-Dhrâ' Tomb A 76 and Early Bronze I in Palestine," **BASOR 189** (1968), 12-40.
- Lapp 1970 Paul W. Lapp, "Palestine in the Early Bronze Age," in James A. Sanders (ed.), **Near Eastern Archaeology in the Twentieth Century**. Garden City, New York: Doubleday and Company, 1970, 101-131.
- Mallon 1924 A. Mallon, "Voyage d'exploration au sud-est de la Mer Morte," **Biblica 5** (1924), 413-455.
- Schaub 1973 R. Thomas Schaub, "An Early Bronze IV Tomb from Bâb edh-Dhrâ'," **BASOR 210** (1973), 2-19.

### Abbreviations of Works Cited for Pottery Parallels

- Ader R.L. Cleveland, "The Excavation of the Conway Hig Place (Petra) and Soundings at Khirbet Ader," **AASOR 34-35** (1960), 79-97.
- Ai J.A. Callaway, **The Early Bronze Age Sanctuary at Ai (Et-Tell)**. London: Bernard Quaritch, Ltd., 1973.

- Amiran** Ruth Amiran, **Ancient Pottery of the Holy Land**. Jerusalem: Masada Press, 1969.
- Amuq** R.J. and L.S. Braidwood, **Excavations in the Plain of Antioch**. "Oriental Institute Publications, LXI"; Chicago: University of Chicago Press, 1960.
- Arad** Ruth Amiran, et al., **Early Arad. The Chalcolithic Settlement and the Early Bronze City**. Jerusalem: The Israel Exploration Society (forthcoming).
- Aro'er** E. Olávarri, "Fouilles à 'Arô'er sur l'Arnon," **RB** 76 (1969), 230-259.
- Arqub edh-Dhahr** P.J. Parr, "A Cave at Arqub edh-Dhahr," **ADAJ** 3 (1956), 61-73.
- Bab edh-Dhra' 1944** W.F. Albright, "Early Bronze Pottery from Bâb ed-Drâ in Moab," **BASOR** 95 (1944), 3-10.
- Bab edh-Dhra' 1965** S. Saller, "Bab edh-Dhra'," **Liber Annus** 15 (1964-65), 137-219.
- Bab edh-Dhra' 1973a** R.T. Schaub, **The Early Bronze IA-IB Pottery of the Bâb edh-Dhrâ Cemetery, Jordan** Ann Arbor: University Microfilms. 1973.
- Bab edh-Dhra' 1973b** R.T. Schaub, "An Early Bronze IV Tomb from Bâb edh-Dhrâ," **BASOR** 210 (1973), 2-19.
- Balu'ah** J.W. Crowfoot, "An Expedition to Balu'ah," **PEQ** (1934), 76-84.
- Beth Shan** G.M. Fitzgerald, "The Earliest Pottery of Beth-Shan," **Museum Journal** 24 (1935), 5-32.
- Deir Alla** J.J. Franken and J. Kalsbeck, **Excavations at Tell Deir Alla, Vol. I: A Stratigraphical and Analytical Study of the Early Iron Age Pottery**. "Documenta et Monumenta Orientis Antiqui"; Leiden: E.J. Brill, 1969.
- Dhiban** A.D. Tushingham, "The Excavations at Dibun (Dhîbân) in Moab," **AASOR** 40 (1972).
- EEP (I-IV)** Nelson Glueck, "Explorations in Eastern Palestine, I-IV," **AASOR** 14 (1934), 15 (1935), 18-19 (1939), 25-28 (1951).
- Far'ah (N)** R. deVaux, "Les Fouilles de Tell el-Far'ah, Près Naplouse, Cinquième Campagne," **RB** 62 (1955), 541-589.
- Hennessey** Basil J. Hennessey, **The Foreign Relations of Palestine during the Early Bronze Age**. London: Colt Archaeological Publications, 1967.
- Heshbon I** E.N. Lugenbeal and J.A. Sauer, "Seventh-sixth Century B.C. Pottery from Area B at Heshbon," **Andrews University Seminary Studies** 10 (1972), 21-69.
- Heshbon II** J.A. Sauer, **Heshbon Pottery 1971**. "Andrews University Monographs, Vol. VII"; Berrien Springs, Michigan: Andrews University Press, 1973.
- Jebeleh** Ann M.H. Ehrich, **Early Pottery of the Jebeleh Region**. "Memoris of the American Philosophical Society, Vol. XIII"; Philadelphia, 1939.
- Jebel Qa'aqir** William G. Dever, "The EB IV - MB I Horizon in Transjordan and Southern Palestine," **BASOR** 210 (1973), 37-63.
- Jericho I, II** K. Kenyon, et al., **Excavations at Jericho, Vol. I: The Tombs Excavated in 1952-4**, London: Harrison, 1960. **Vol. II: The Tombs Excavated in 1955-8**, London: Harrison, 1965.
- Jericho 1932, 1935, 1936** John Garstang, et al., "Jericho: City and Necropolis," **Annals of Archaeology and Anthropology** 19 (1932), 8ff., 19ff., 38ff.; 22 (1935), 143-184; 23 (1936), 67-100.

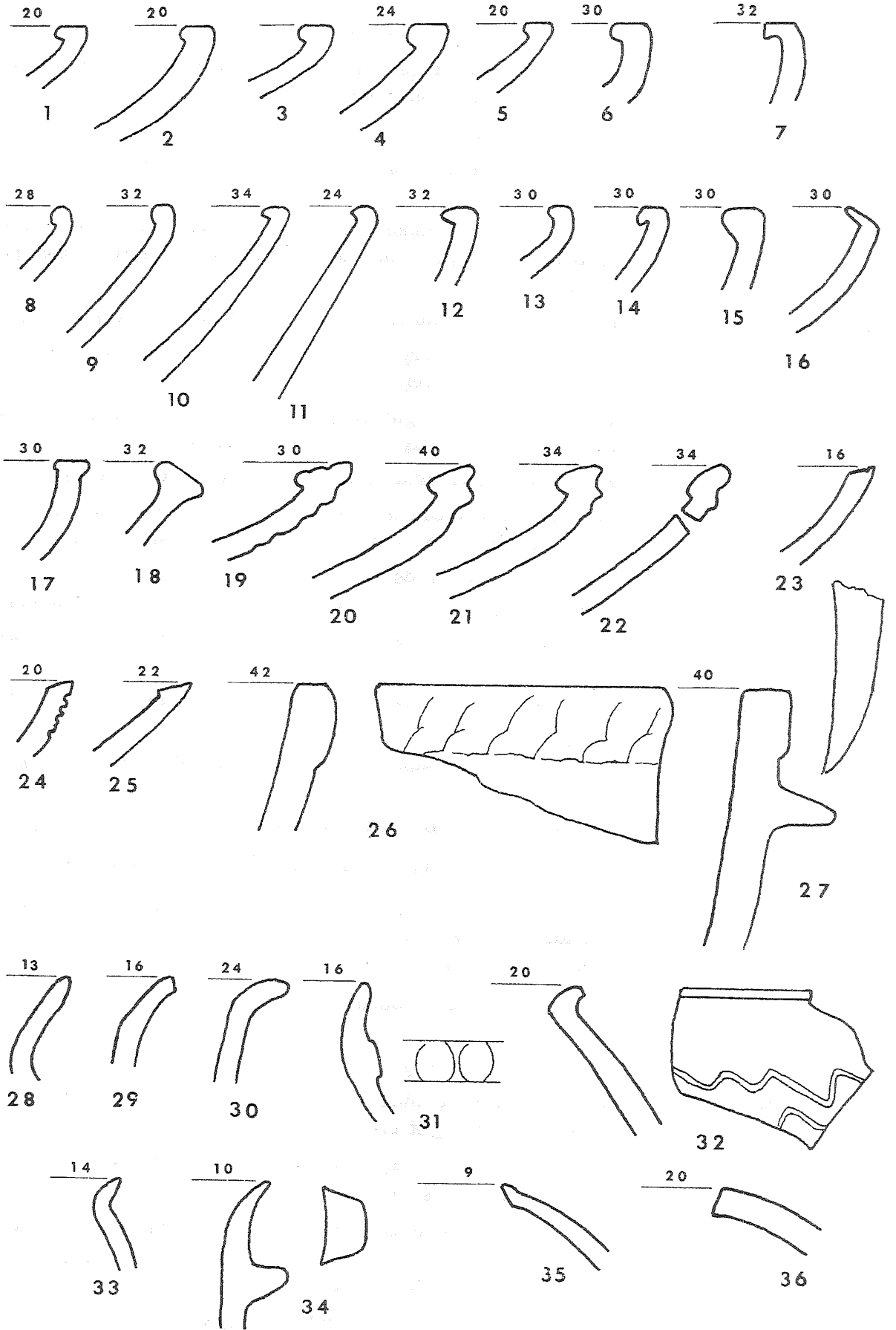


- Jerusalem N. Wall R.W. Hamilton, "Excavations against the North Wall of Jerusalem, 1937-8," **QDAP 10** (1940-42), 1-54.
- Jud. Desert Caves N. Avigad, et al., **Judean Desert Caves. Vol. I - Survey and Excavations, 1960; Vol. II - Survey and Excavations, 1961.** Jerusalem: Israel Exploration Society.
- Kh. Iskander P.J.Parr, "Excavations at Khirbet Iskander," **ADAJ 4-5** (1960), 128-33.
- Kh. Mefjer D. Baramki, "The Pottery from Khirbet el-Mefjer," **QDAP 10** (1940-42), 65-103.
- Lachish IV Olga Tufnell, **Lachish IV: The Bronze Age.** London: Oxford University Press, 1958.
- Lapp, PCC P.W. Lapp, **Palestine Ceramic Chronology 200 B.C. - A.D. 70** New Haven: American Schools of Oriental Research, 1961.
- Madeba G.L. Harding and B.S.J. Isserlin, "An Early Iron Age Tomb at Madeba," **PEFA VI** (1953), 27-41.
- Ma'ayan Barukh Ruth Amiran, "Tombs of the Middle Bronze Age I at Ma'ayan Barukh," **Atiqot 3** (1961), 84-92.
- Meg. Stages R.M. Engberg and G.M. Shipton, **Notes on the Chalcolithic and Early Bronze Age Pottery of Megiddo.** "Studies in Ancient Oriental Civilization. No. X"; Chicago, 1934.
- Meg. I R.S. Lamon & G.M. Shipton, **Megiddo I.** "Oriental Institute Publications, Vol. 42"; Chicago: University of Chicago Press, 1939.
- Nasbeh II J.C. Wampler, **Excavations at Tell en-Nasbeh. Vol. 11 - The Pottery.** Berkeley and New Haven, 1947.
- Nebo III H. Schneider, **The Memorial of Moses on Mt. Nebo. Part III.** "Studium Biblicum Franciscanum, No. I"; Jerusalem: Franciscan Printing Press, 1950.
- Nessana T.J.C. Baly, "The Pottery." **Excavations at Nessana. Vol. I.** Ed. by H. Dunscombe Colt. London: Colt Archaeological Institute, 1962.
- Pella R.H. Smith, **Pella of the Decapolis, I.** London: William Clowes & Sons, 1973.
- Petra P. Parr, "A Sequence of Pottery from Petra," in **Near Eastern Archaeology in the Twentieth Century**, ed. James A. Sanders. Garden City, New York: Doubleday & Company, 1970, 348-381.
- Ramat Rahel Y. Aharoni, et al. **Excavations at Ramat Rahel. Vols I, II.** Rome: Centro de Studi Semitici, 1962.
- SS III J.W. Crowfoot, G.M. Crowfoot, K.M. Kenyon. **The Objects from Samaria. Vol. III: Samaria Sebaste.** London: Palestine Exploration Fund, 1957.
- Tarsus I H. Goldman, et. al. **The Hellenistic and Roman Periods. Vol. I of Excavations at Gözlu Küle, Tarsus.** Princeton: Princeton University Press, 1950.
- Tell Ajjul K.M. Kenyon, "Tombs of the Intermediate Early Bronze-Middle Bronze Age at Tell-Ajjul," **ADAJ 3** (1956), 41-55.
- TBM Ia W.F. Albright, "The Excavation of Tell Beit Mirsim," **AASOR 13** (1931-32), 55-128.
- Tell Goren B. Mazar, T. Dothan, I. Dunayevsky, "En-Gedi Excavations in 1961-62," **Atiqot 5** (1966) (English Series).
- Umm el-Biyara C. Bennett, "Fouilles d'Umm el-Biyara," **RB 73** (1966), 372-403.

Fig. 1. Bab edhDhra', East Area

No.	Reg. No.	Color and Description
1	B-D 63	Ext. 5 YR 7/6 (reddish yellow); int. 2.5 YR 6/6(Light red); traces or red slip ext. 10R 5/6 (red).
2	B-D 4	Ext. 7.5YR 7/4 (pink); int. 10YR 5/3 (brown); traces or red slip ext., 7.5YR 8/6 (reddish yellow).
3	B-D 32	Ext. 7.5YR 7/6 (reddish yellow); int. 5YR 6/6 (reddish yellow); very worn.
4	B-D 17	Ext. 10YR 6/8 (light red); int. 5YR 6/3 (light reddish brown).
5	B-D 38	Ext. 7.5YR 6/4 (light brown) to 5YR 6/4 (light reddish brown); int. 5YR 5/4 (reddish brown); very worn.
6	B-D 30	Ext. 7.5YR 7/4 (pink); int. 7.5YR 6/4 (light brown) to 7.5YR 6/2 (pinkish grey); traces of red slip ext. and int., 10R 5/6 (red).
7	B-D 22	Ext. 10YR 8/4 (very pale brown) in patches; int. 5YR 6/6 (reddish yellow); slip int. and ext., 2.5YR 5/8.
8	B-D 64	Ext. 5YR 6/8 (reddish yellow); int. 5YR 6/8 (reddish yellow).
9	B-D 28	Ext. 5YR 6/6 (reddish yellow) to 7.5YR 8/4 (pink); int. 5YR 5/8 (yellowish red).
10	B-D 6	Ext. 5YR 6/6 (reddish yellow); int. 5YR 6/6 (reddish yellow).
11	B-D 8	Ext. 5.7YR 7/4 (pink) to 7.5YR 6/4 (light brown); int. 7.5YR 6/6 (reddish yellow).
12	B-D 13	Ext. 7.5YR 6/4 (light brown); int 5YR 6/6 (reddish yellow); traces of red slip ext., 10R 5/6 (red).
13	B-D 24	Ext. 5YR 7.4 (pink); int. core, 5YR 6/1 (gray).
14	B-D 19	Ext. 7.5YR 7/4 (pink); int. 7.5YR 7/6 (reddish yellow) traces of slip ext., 10R 5/6 (red).
15	B-D 40	Ext. 7.5YR 7/4 (pink) to 7.5YR 6/4 (light brown); int. same with reddish spots.
16	B-D 2	Ext. 10YR 8/3 (very pale brown) to 2.5YR 6/6 (light red); int. 5YR 6/8 (reddish yellow).
17	B-D 25	Ext. 7.5YR 6/4 (light brown); int. 5YR 7/4 (pink).
18	B-D 36	Ext. 5YR 6/6 (reddish yellow); int. 5YR 6/4 (ling red brown).
19	B-D 1	Ext. 5YR 6/8 (reddish yellow); int. 5YR 5/8 (yellowish red).
20	B-D 23	Ext. 5YR 6/6 (reddish yellow); int. 5YR 5/4 (reddish brown); ext. slip 2.5YR 4/8 (red); burnished.
21	B-D 5	Ext. 5YR 6/6 (reddish yellow); int. 5YR 5/6 (yellow red).
22	B-D 3	Ext. 5YR 6/6 (reddish yellow); int. 5YR 6/6 (reddish yellow).
23	B-D 12	Ext. 7.5YR 7/4 (pink); int 7.5YR 6/4 (light brown); slip int. and ext., 2.5YR 6/6 (light red); continuously burnished.

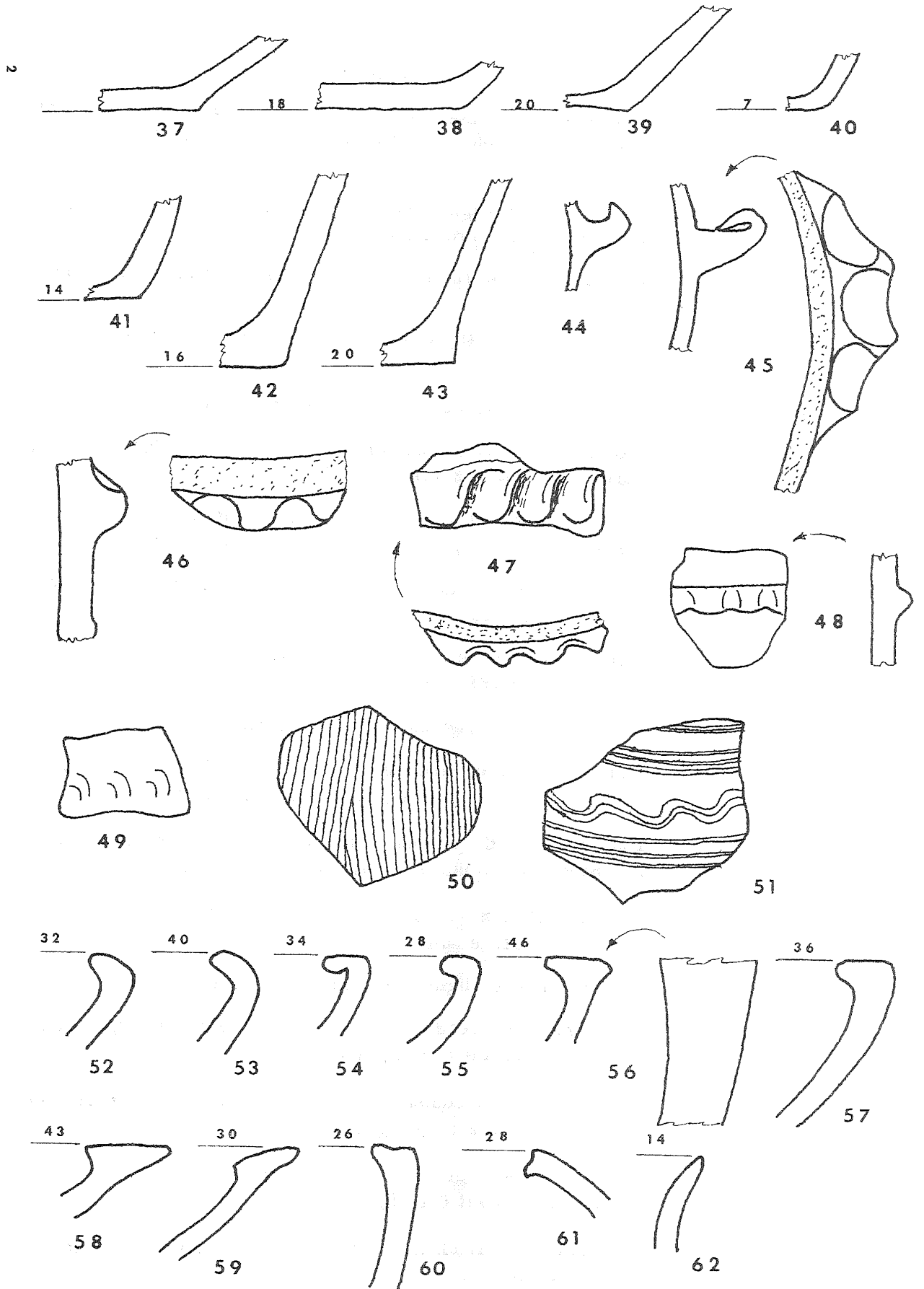
Fig. 1



No.	Reg. No.	Color and Description
24	B-D 26	Ext. 5YR 7/6 (reddish yellow); int. 5YR 6/8 (reddish yellow); continuously burnished int. and ext.
25	B-D 27	Ext. 5YR 6/6 (reddish yellow); int. 5YR 5/1 (gray).
26	B-D 7	Ext. 7.5YR 7/6 (reddish yellow); int. 5YR 7/6 (reddish yellow).
27	B-D 18	Ext. 5YR 7/6 (reddish yellow); int. 7.5YR 7/4 (pink) surface to 10YR 6/4 (light yellowish brown); burn marks upper part of ext. rim.
28	B-D 14	Ext. 5YR 6/8 (reddish yellow); int. 2.5YR 6/8 (light red).
29	B-D 34	Ext. 10YR 7/4 (very pale brown) to 10YR 7/6 (yellow); int. 10YR 6/4 (light yellow brown); tool marks on rim.
30	B-D 35	Ext. 2.5YR 6/6 (light red); int. 5YR 6/6 (reddish yellow); sand and quartz particles near ext. surface.
31	B-D 15	Ext. 5YR 7/6 (reddish yellow); int. 5YR 6/6 (reddish yellow).
32	B-D 11	Ext. 5YR 7/6 (reddish yellow); int. 5YR 5/6 (yellowish red); ext. wash 10R 4/8 (red); many granules, rim wheel-made.
33	B-D 9	Ext. 5YR 7/6 (reddish yellow); int. same with light core 5YR 7/3 (pink); tool marks on rim, light wheel combing.
34	B-D 10	Ext. 5YR 7/6 (reddish yellow); int. 7.5YR 6/4 (light brown); int. surface same.
35	B-D 29	Ext. 7.5YR 7/4 (pink); int. 7.5YR 7/6 (reddish yellow); very worn.
36	B-D 39	Ext. 5YR 7/6 (reddish yellow); int. 5YR 6/6 (reddish yellow).

**Fig. 2. Bab edh-Dhra', East Area (37-51), South Area (52-62)**

37	B-D 42	Ext. 2.5YR 6/6 (light red); int. 5YR 6/6 (reddish yellow).
38	B-D 43	Ext. 7.5YR 7/4 (pink); int. 2.5YR 6/8 (light red) to 5YR 6/8 (reddish yellow) near int. surface; traces of red slip, 10R 5/6 on int. surface.
39	B-D 46	Ext. 7.5YR 7/6 (reddish yellow); int. same; ext. slip 2.5YR 4/6 (red).
40	B-D 45	Ext. 2.5YR 6/6 (light red); int. 2.5YR 6/8 (light red).
41	B-D 49	Ext. 5YR 6/6 (reddish yellow); int. surface 7.5YR 7/4 (pink) to 7.5YR 6/4 (light brown).
42	B-D 48	Ext. 10YR 8/4 (very pale brown); int. 7.5YR 7/4 (pink); light red patching on ext. with combing.
43	B-D 50	Ext. 5YR 6/6 (reddish yellow); int. 5YR 6/6 (reddish yellow); int. surface 5YR 7/4 (pink) to 5YR 6/8 (reddish yellow); large burn patch ext. surface.
44	B-D 54	Ext. 10R 6/6 (light red); int. core, gray.



No.	Reg. No.	Color and Description
45	B-D 45	Ext. 10YR 7/4 (pale brown) to 7.5YR 7/4 (pink); int. 5YR 6/4 (light reddish brown); int. surface 5YR 6/6 (reddish yellow); vertical combing below handle.
46	B-D 53	Ext. 5YR 6/4 (light reddish brown); int. gray; int. surface 10YR 6/2 (light brownish gray).
47	B-D 58	Ext. 2.5YR 6/6 (light red); int. surface 5YR 7/6 (reddish yellow).
48	B-D 65	Ext. 2.5YR 6/6 (light red); int. 5YR 6/6 (reddish yellow); thin gray core.
49	B-D 67	Ext. 7.5YR 7/6 (reddish yellow); int. 5YR 6/6 (reddish yellow).
50	B-D 61	Ext. 10YR 7/3 (very pale brown) with spots of 10R 6/3 (weak red); int 10YR 7/3 (very pale brown).
51	B-D 51	Ext. 7.5YR 6/4 (light brown); int. 7.5YR 5/4 (brown); int. surface 5YR 7/3 (pink) to 5YR 6/3 (light reddish brown).
52	B-D 74	Ext. 5YR 7/6 (reddish yellow); int. 5YR 6/6 (reddish yellow); slip 10R 5/6 (red) int. and ext.
53	B-D 78	Ext. 2.5YR 6/6 (light red); int. 2.5YR 5/8 (red), gray core; int. surface 2.5YR 5/6 (red) slip.
54	B-D 76	Ext. 7.5YR 7/6 (reddish yellow); int. same.
55	B-D 77	Ext. 7.5YR 7/6 (reddish yellow); int. 5YR 6/6 (reddish yellow); traces of red slip int.; sand, quartz temper.
56	B-D 70	Ext. 7.5YR 7/6 (reddish yellow) to 2.5YR 6/6 (light red); int. 5YR 5/6 (yellowish red); int. slip 2.5YR 5/6.
57	B-D 73	Ext. 7.5YR 6/8 (reddish yellow); int. 5YR 5/8 (yellowish red); int. surface same.
58	B-D 69	Ext. 2.5YR 6/6 (light red); int. 5YR 4/1 (dark gray).
59	B-D 75	Ext. 5YR 7/6 (reddish yellow); int. 2.5YR 6/6 (light red); int. surface 2.5YR 6/8 (light red).
60	B-D 68	Ext. 5YR 6/6 (reddish yellow); int. 2.5YR 5/8 (red); int. surface 10YR 7/2 (light gray).
61	B-D 71	Ext. 5YR 6/4 (light red brown); int. 5YR 5/1 (gray); ext. and int. slip 2.5YR 6/8 (light red).
62	B-D 72	Ext. 5YR 6/6 (reddish yellow); int same; ext. slip 10YR 8/4 (very pale brown).

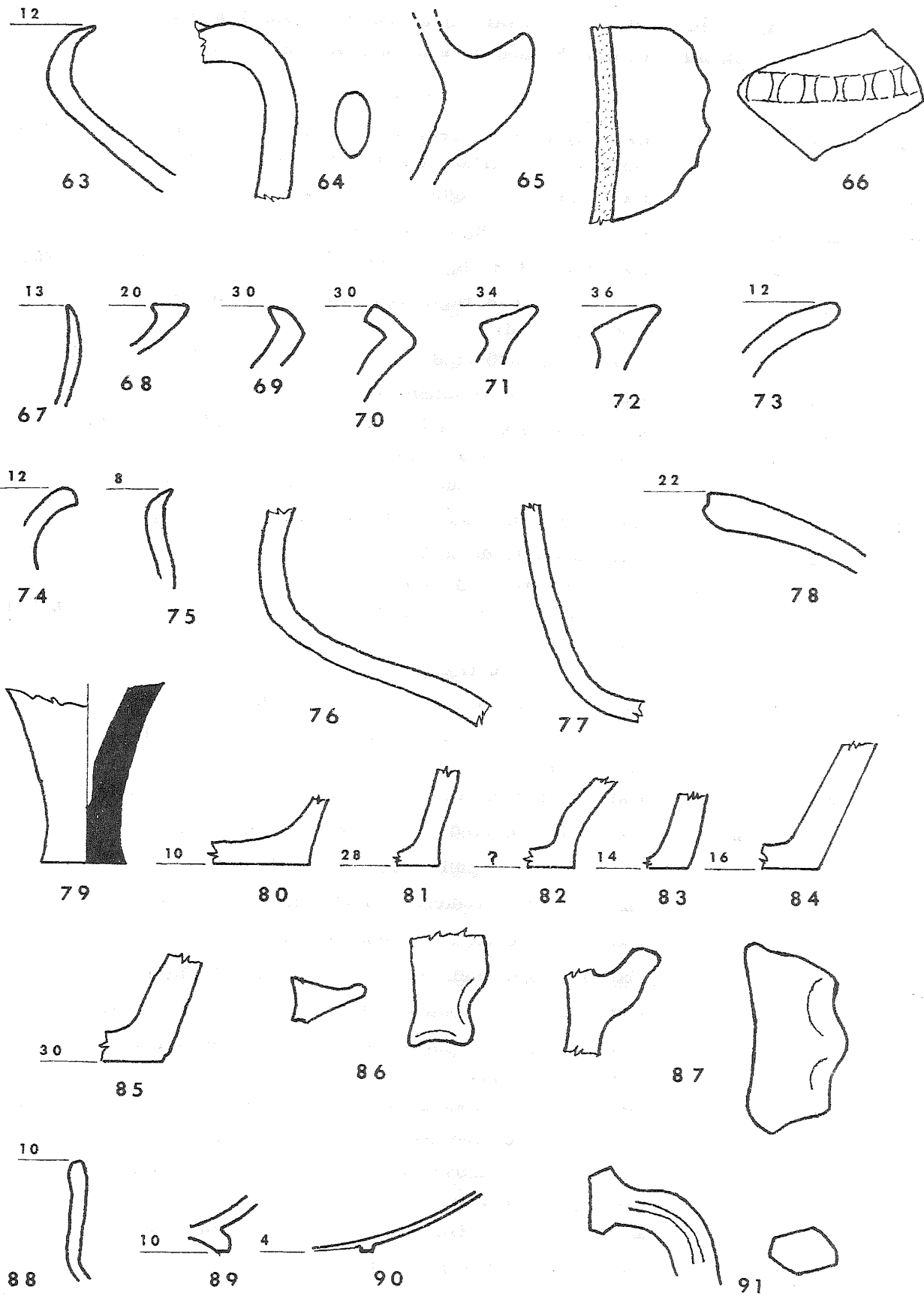


Fig. 3. Bab edh-Dhra', South Area (63-66), Numeirah, Early  
Bronze (67-87), Numeirah, Roman-Byzantine (88-91)

No.	Reg. No.	Color and Description
63	B-D 79	Ext. 10YR 7/3 (very pale brown); int. 5YR 6/6 (reddish yellow); int. surface 7.5YR 7/6 (reddish yellow).
64	B-D 82	Ext. 2.5YR 6/6 (light red); int. same.
65	B-D 81	Ext. 10R 6/6 (light red); int. 2.5YR 5/4 (reddish brown).
66	B-D 80	Ext. 2.5YR 6/4 (light reddish brown); int. 2.5YR 4/0 (gray).
67	Nu 9	Ext. 2.5YR 6/8 (light red) with blackened areas; int. 2.5YR 6/8 (light red).
68	Nu 17	Ext. 2.5YR 5/6 (red); int. 2.5YR 5/8 (red); very worn.
69	Nu 11	Ext. 5YR 6/8 (reddish yellow); int. same.
70	Nu 18	Ext. 5YR 6/6 (reddish yellow); int. 5YR 5/1 (gray); tool marks below inner ledge.
71	Nu 5	Ext. 7.5YR 7/6 (reddish yellow); int. 5YR 6/6 (reddish yellow).
72	Nu 25	Ext. 5YR 6/6 (reddish yellow); int. 5YR 5/1 (gray).
73	Nu 33	Ext. 7.5YR (reddish yellow); int. 7.5YR 6/6 (reddish yellow); numerous white, gray grits.
74	Nu 8	Ext. 5YR 7/6 (reddish yellow); int. 10YR 6/2 (light brown gray).
75	Nu 6	Ext. 2.5YR 6/6 (light red); int. 5YR 6/8 (reddish yellow).
76	Nu 35	Ext. 7.5YR 7/4 (pink); int. 7.5YR 7/6 (reddish yellow); gritty.
77	Nu 12	Ext. 5YR 7/4 (pink) to 5YR 6/4 (light reddish brown); int. same to gray.
78	Nu 1	Ext. 2.5YR 5/6 (red); int. 7.5YR 6/6 (reddish yellow).
79	Nu 29, 30	Ext. 10R 5/6 (red); int. 10R 6/4 (pale red).
80	Nu 3	Ext. 5YR 6/2 (pink gray); int. 10R 6/4 (pale red).
81	Nu 20	Ext. 5YR 6/8 (reddish yellow); int. same to light gray.
82	Nu 23	Ext. 5YR 6/6 (reddish yellow); int. gray.
83	Nu 31	Ext. 10R 6/6 (light red) to 2.5YR 6/6 (light red) int. same.
84	Nu 27	Ext. 7.5YR 7/4 (pink); int. 7.5YR 6/2 (pinkish gray).
85	Nu 22	Ext. 7.5YR 7/4 (pink); int. surface 5YR 6/4 (light reddish brown) with gray core.
86	Nu 2	Ext. 5YR 6/8 (reddish yellow); int. 5YR 6/2 (pinkish gray).
87	Nu 28	Ext. 5YR 6/6 (reddish yellow); int. 5YR 7/3 (pink).
88	Nu 43	Ext. and int. 2.5YR 6/6 (light red); ext. slip. 10YR 8/4 (very pale brown).
89	Nu 38	Ext. 2.5YR 5/4 (reddish brown); int. 10R 5/6 (red).
90	Nu 52	Ext. 2.5YR 6/8 (light red); int. same.
91	Nu 45	Ext. and int. 7.5YR 7/6 (reddish yellow); ext. slip 10YR 8/3 (very pale brown).



Fig. 4

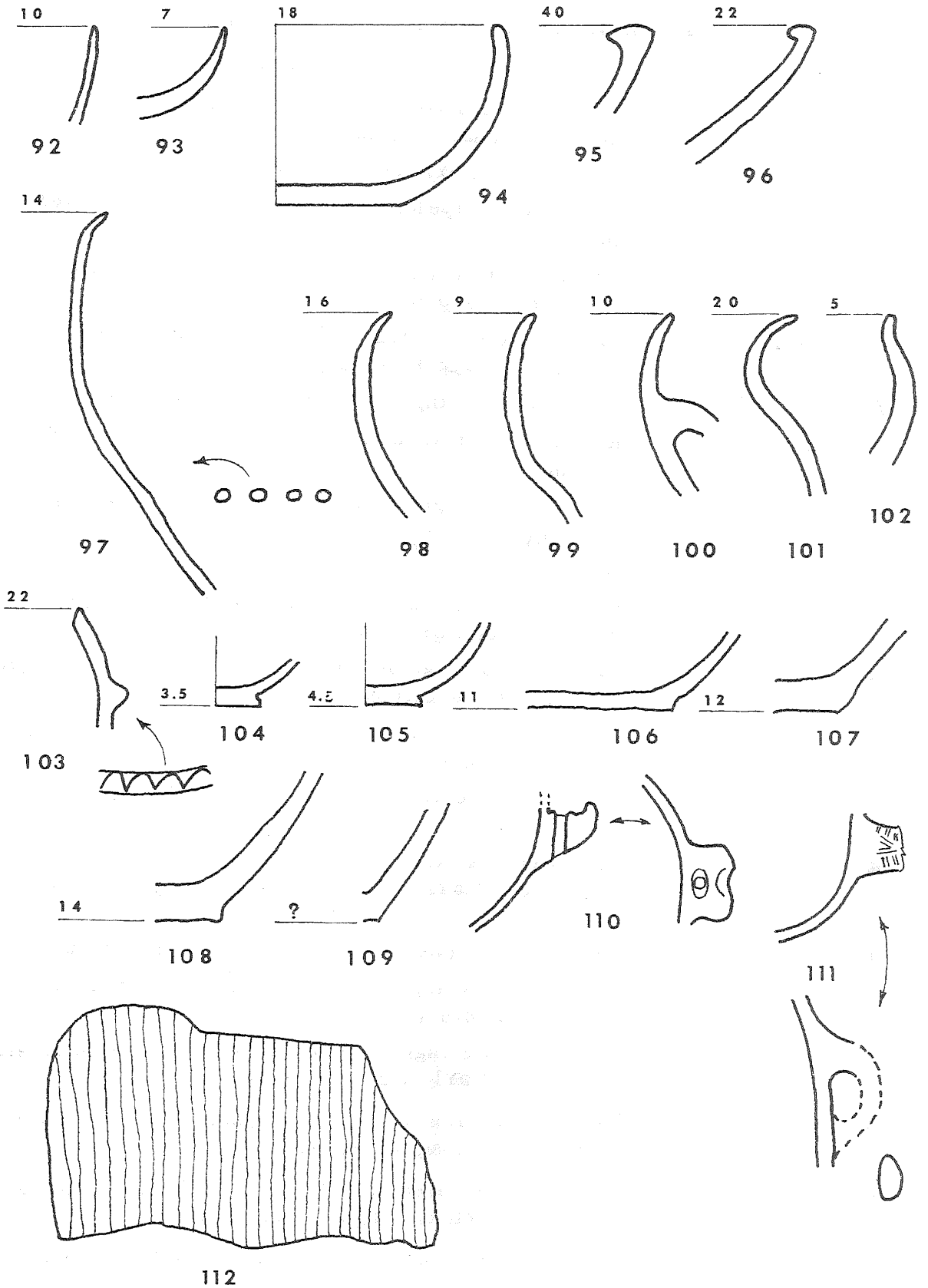
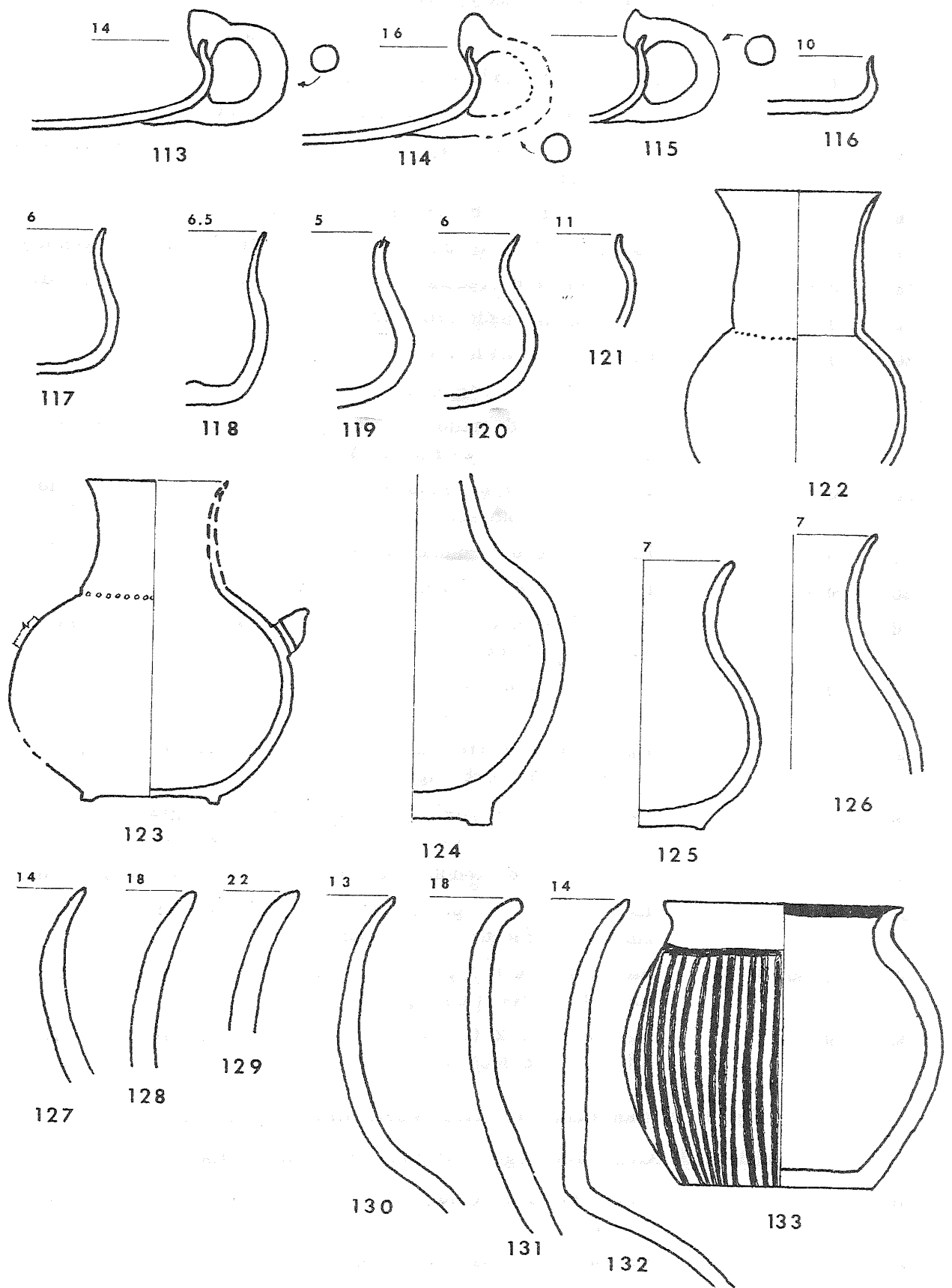


Fig 4. Es-Safi Settlement Area, Early Bronze

No.	Reg. No.	Color and Description
92	Sf 41	Ext. 2.5YR 5/6 (red); int. 2.5YR 6/8 (light red); ext. thin slip, continuously burnished.
93	Sf 44	Ext and int. 7.5YR 7/6 (reddish yellow); gritty.
94	Sf 97, 98	Ext. 5YR 5/6 (yellow red); int. 5YR 4/8 (yellow red); fine, flint-like paste.
95	Sf 34	Ext. 5YR 6/6 (reddish yellow); int. 5YR 7/6 (reddish yellow); traces of red slip 10R 5/8 (red).
96	Sf 45	Ext. 5YR 6/6 (reddish yellow); int. 5YR 5/6 (yellow red); vertically stroked burnishing int.
97	Sf 112, 114	Ext. 2.5YR 6/8 (light red); int. 5YR 6/8 (reddish yellow).
98	Sf 101	Ext. 2.5YR 6/8 (light red); int. same to 2.5YR 5/0 (gray) near int. surface.
99	Sf 51	Ext. 10R 6/8 (light red); int. 2.5R N3 (very dark gray).
100	Sf 33	Ext. 2.5YR 6/8 (light red); int. same to 2.5YR N5/ (gray) near int. surface.
101	Sf 8	Ext. 7.5YR 7/4 (pink); int. 5YR 5/2 (reddish gray); near both surfaces 2.5YR 6/8 (light red).
102	Sf 110	Ext. 10YR 5/2 (grayish brown) to 10YR 4/1 (dark gray); int. same, burnt surface.
103	Sf 29	Ext. 7.5YR 7/4 (pink); int. 7.5YR 6/4 (light brown); ext. slip 2.5YR 5/6 (red).
104	Sf 48	Ext. 7.5YR 7/6 (reddish yellow); int. thin gray core, 7.5YR N5/.
105	Sf 99	Ext. 10YR 8/4 (very pale brown); int. 2.5YR 6/8 (light red); int. surface 2.5YR N3/ (dark gray); finger marks on int. surface.
106	Sf 12, 26	Ext. 10YR 8/4 (very pale brown); int. 10YR 4/1 (dark gray).
107	Sf 6	Ext. 2.5YR 6/6 (light red); int 2.5YR N4/ (dark gray); int. surface 5YR 6/6 (reddish yellow).
108	Sf 50	Ext. 2.5YR 6/8 (light red); int. 2.5YR N3/ (very dark gray); int. surface 2.5YR 5/2 (weak red).
109	Sf 36	Ext. and int. 5YR 7/6 (reddish yellow); ext. slip 2.5YR 5/6 (red); continuously burnished.
110	Sf 100	Ext. 5YR 7/6 (reddish yellow); int. 5YR 4/1 (dark gray); int. surface 5YR 6/4 (light reddish brown).
111	Sf 32	Ext. 5YR 7/6 (reddish yellow); int. 7.5YR N4/ (gray); int. surface 7.5YR 7/2 (pinkish gray).
112	Sf 47	Ext. 2.5YR 6/8 (light red) to 7.5YR 7/6 (reddish yellow); int. 7.5YR N3/ (very dark gray); combing on ext. surface.



**Fig. 5. Es-Safi Cemetery Area, Early Bronze**

No.	Reg. No.	Color and Description
113	Sf 60	Ext. and int. 5YR 7/8 (reddish yellow).
114	Sf 65	Ext. 7.5YR 7/6 (reddish yellow); int. same.
115	Sf 66	Ext. 10YR 8/3 (very pale brown); int. surface 2.5YR 6/8 (light red).
116	Sf 86	Ext. and int. 5YR 7/6 (reddish yellow).
117	Sf 62	Ext. 7.5YR 7/6 (reddish yellow); int. 5YR 7/6 (reddish yellow).
118	Sf 63	Ext. 5YR 7/6 (reddish yellow); int. 2.5YR 6/8 (light red).
119	Sf 77	Ext. and int. 5YR 7/6 (reddish yellow).
120	Sf 64	Ext. and int. 5YR 7/6 (reddish yellow).
121	Sf 78	Ext. and int. 2.5YR 6/6 (light red).
122	Sf 115	Ext. 5YR 7/6 (reddish yellow); int. core, 2.5YR N3 (very dark gray); int. surface 2.5YR 6/8 (light red).
123	Sf 91	Ext. 7.5YR 7/6 (reddish yellow); int. 5YR 6/6 (reddish yellow); int. surface 5YR 5/1 (gray).
124	Sf 87	Ext. 5YR 6/6 (reddish yellow); int. 5YR 5/6 (yellow red).
125	Sf 67	Ext. 5YR 7/6 (reddish yellow); int. same.
126	Sf 89	Ext. 2.5YR 6/8 (light red); int. 7.5YR N4/0 (dark gray); Ext. wash 10YR 8/3 (very pale brown).
127	Sf 81	Ext. 5YR 7/6 (reddish yellow); int. 7.5YR N3 (very dark gray); ext. wash 10YR 8/3 (very pale brown).
128	Sf 72	Ext. 5YR 6/8 (reddish yellow); int. 5YR 5/1 (gray); int. surface 2.5YR 6/8 (light red).
129	Sf 73	Ext. 2.5YR 6/8 (light red); int. same with gray core, 10YR 5/1 (gray); ext. wash 10YR 7/3 (very pale brown).
130	Sf 111	Ext. 5YR 6/6 (reddish yellow); int. 2.5YR 5/8 (light red).
131	Sf 83	Ext. 7.5YR 7/4 (pink); int. 5YR 6/6 (reddish yellow); int. surface 2.5YR 6/8 (light red).
132	Sf 69, 70, 74	Ext. 2.5YR 6/8 (light red) to 10YR 8/4 (very pale brown); int. 2.5YR N4 (dark gray).
133	Sf 68	Ext. 10YR 8/2 (white) slip with red paint, 10R 5/6 (red); int. 5YR 7/6 (reddish yellow).

**Fig. 6. Es-Safi Cemetery Area, Early Bronze (134-144),**

**Settlement Area, Iron Age (145-149), Byzantine (150-164)**

134	Sf 71	Ext. 5YR 6/6 (reddish yellow); int. 5YR 6/4 (light reddish brown).
135	Sf 43	Ext. and int. 2.5YR 6/6 (light red).
136	Sf 79	Ext. 7.5YR 7/6 (reddish yellow); int. 7.5YR 6/4 (light brown).

No.	Reg. No.	Color and Description
137	Sf 76	Ext. 2.5YR 6/6 (light red); int. 5YR 6/4 (light reddish brown).
138	Sf 85	Ext. and int. 7.5YR 7/6 (reddish yellow); int. core 7.5YR 7/6 (light brown); ext. slip 10YR 8/2 (white).
139	Sf 61	Ext. 7.5YR 7/6 (reddish yellow); int. 7.5YR 6/4 (light brown).
140	Sf 80	Ext. 10R 6/8 (light red); int. 5YR 5/2 (reddish gray).
141	Sf 95	Basalt.
142	Sf 88	Ext. and int. 5YR 6/4 (light reddish brown).
143	Sf 92	Ext. 5YR 7/6 (reddish yellow); int. 5YR 6/1 (gray).
144	Sf 126	Ext. and int. 10YR 7/4 (very pale brown); painted decoration 10R 5/8 (red).
145	Sf 11	Ext. and int. 5YR 7/3 (pink); ext. burnished slip 10R 5/6 (red).
146	Sf 53	Ext. 2.5YR 6/8 (light red); int. same to 2.5YR 4/4 (reddish brown); ext. surface 10YR 8/3 (very pale brown) slip.
147	Sf 55	Ext. 2.5YR 7/4 (pale yellow); int. 10YR 4.3 (brown).
148	Sf 121	Ext. 7.5YR 7/4 (pink); int. same; ext. slip 7.5YR 5/4 (brown).
149	Sf 40	Ext. 2.5YR 6/6 (light red); int. same; traces of slip ext. 2.5YR 4/6 (red).
150	Sf 15	Ext. 10R 5/8 (red) polished slip; int. 2.5YR 6/6 (light red).
151	Sf 119	Ext. and int. 2.5YR 6/6 (light red).
152	Sf 120	Ext. 10R 5/8 (red) polished slip; int. 10R 6/8 (light red).
153	Sf 104	Ext. 2.5R 5/8 (red) polished slip; int. 10R 5/8 (red).
154	Sf 3	Ext. 10R 5/6 (red) polished slip; int. 2.5R 5/4 (reddish brown).
155	Sf 105	Ext. 10R 5/8 (red) polished slip; int. 10R 5/6 (red).
156	Sf 106	Ext. 10R 4/8 (red) polished slip; int. 10R 5/8 (red).
157	Sf 39	Ext. 2.5YR 6/6 (light red); int. 2.5YR 5/4 (reddish brown); ext. slip 2.5YR 5/6 (red).
158	Sf 7	Ext. 10YR 8/4 (very pale brown); int. core 10YR 6/6 (brownish yellow), near surface 7.5YR 6/6 (reddish yellow).
159	Sf 57	Ext. and int. 10R 4/6.
160	Sf 2	Ext. 5YR 5/6 (yellow red); int. 5YR 5/4 (reddish brown).
161	Sf 30	Ext. 2.5YR 5/4 (reddish brown); int. 10R 5/6 (red).
162	Sf 10	Ext. 2.5YR 6/6 (light red); int. 2.5YR 5/8 (red).
163	Sf 124	Ext. 10YR 8/3 (very pale brown); int. 2.5YR 6/8 (light red); int. surface 5YR 6/8 (reddish yellow).
164	Sf 49	Ext. 5YR 7/6 (reddish yellow); int. 7.5YR N3/ (very dark gray); int. surface 7.5YR 7/4 (pink); traces of slip ext. surface, 2.5YR 5/6 (red); chaff and grit temper.

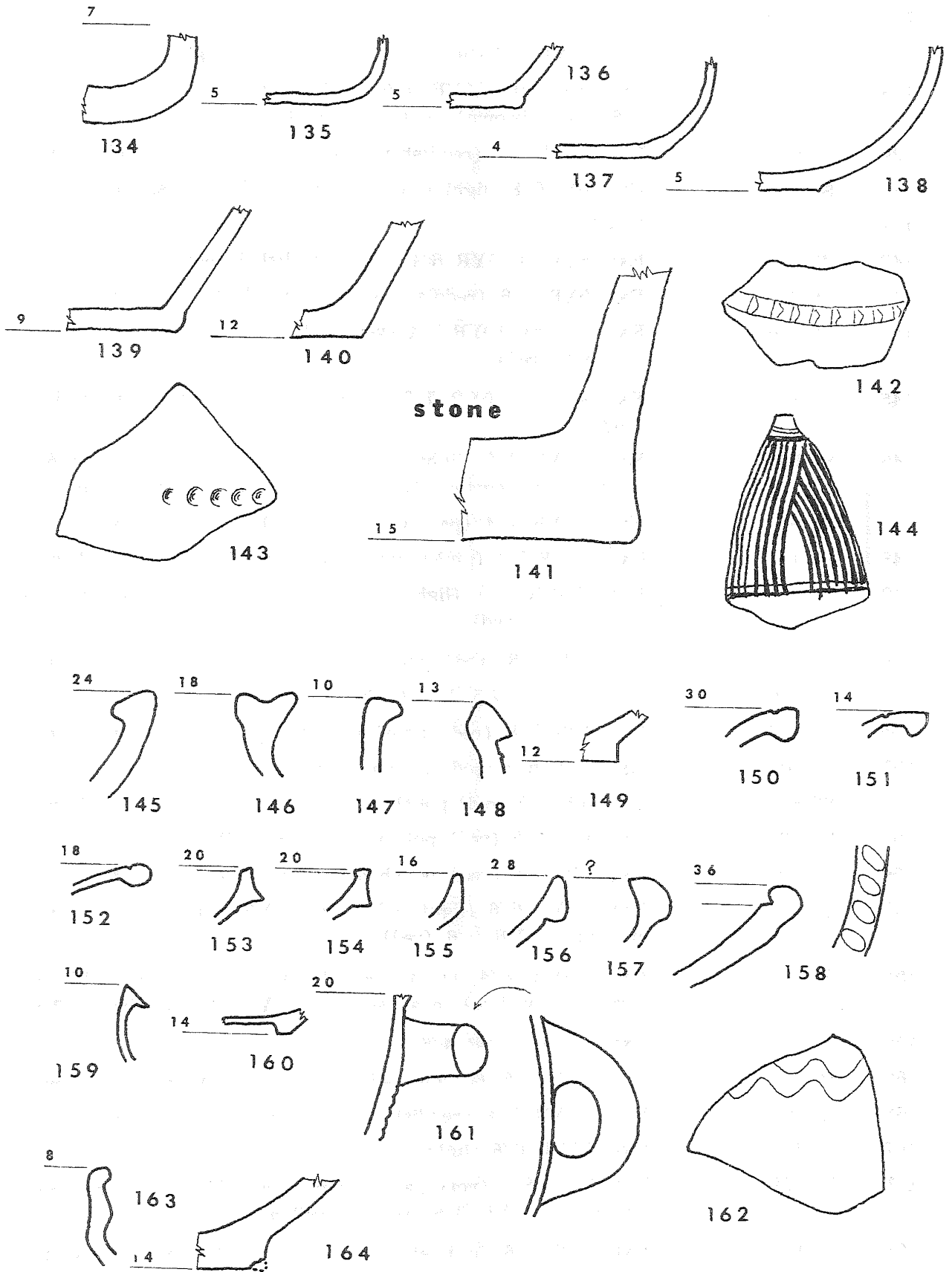
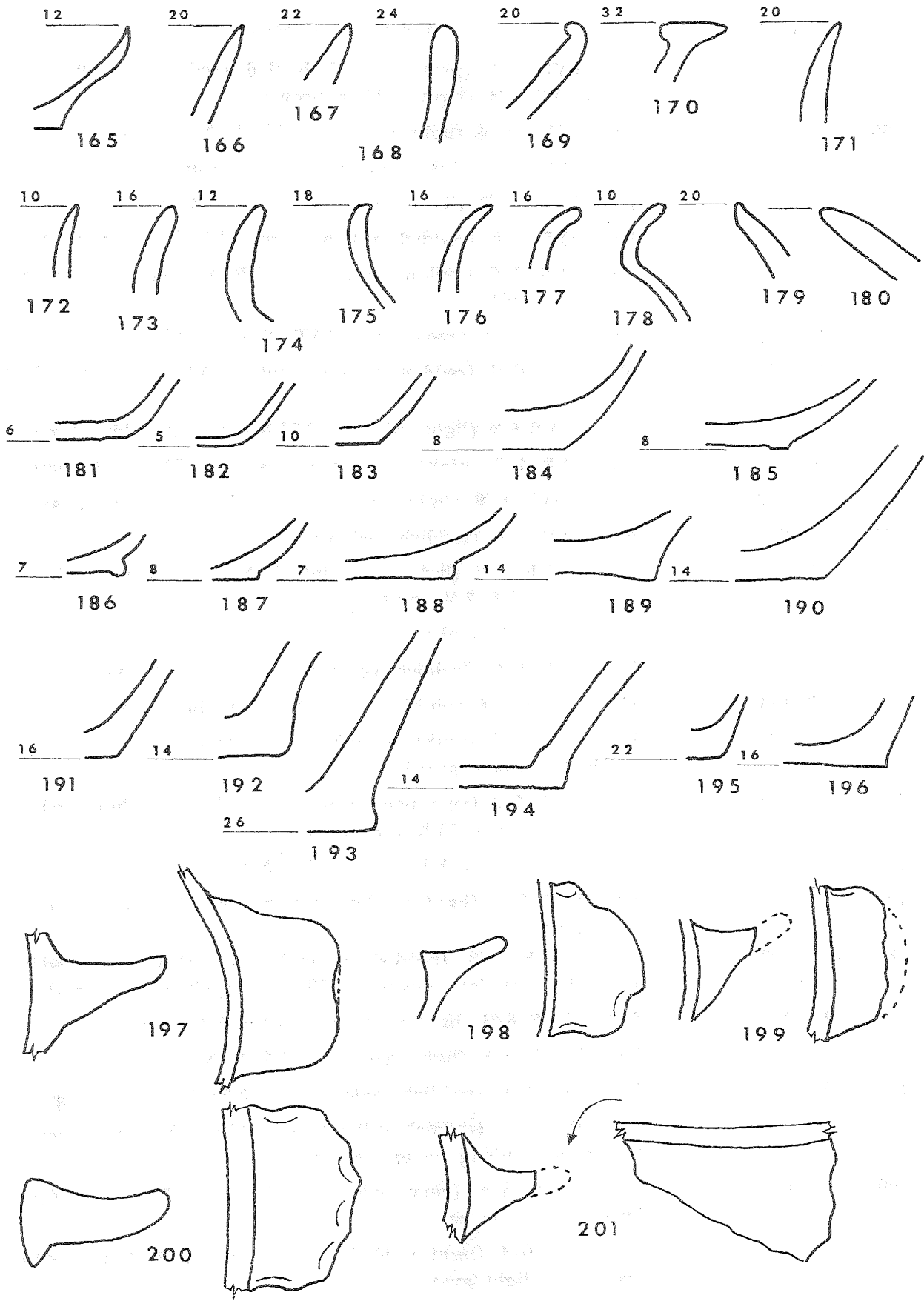


Fig. 7. Feifeh Settlement Area, Early Bronze

No.	Reg. No.	Color and Description
165	Ff 84	Ext. 5YR 7/4 (pink); int. 5YR 6/6 (reddish yellow); ext. slip 2.5YR 6/4 (light reddish brown).
166	Ff 85	Ext. 2.5YR 6/6 (light red); int. 2.5YR N5 (gray).
167	Ff 86	Ext. 5YR 7/4 (pink); int. same; numerous large grits.
168	Ff 6	Ext. 2.5YR 6/6 (light red); int. 7.5YR 5/4 (brown).
169	Ff 83	Ext. 5YR 7/6 (reddish yellow); int. 5YR 5/6 (yellow red).
170	Ff 178	Ext. 5YR 5/6 (yellow red); int. 5YR 4/1 (gray); int. slip 10R 5/6 (red).
171	Ff 156	Ext. 2.5YR 5/8 (red); int. 2.5YR N3/ (gray).
172	Ff 96	Ext. 5YR 6/6 (reddish yellow); int. 2.5YR N3/ (very dark gray).
173	Ff 123	Ext. 2.5YR 6/6 (light red); int. 2.5YR 6/4 light reddish brown).
174	Ff 135	Ext. 5YR 7/3 (pink); int. same; ext. slip 5YR 7/4 (pink).
175	Ff 132	Ext. 2.5YR 6/6 (light red); int. 2.5YR N4/ (dark gray).
176	Ff 87	Ext. 5YR 6/6 (reddish yellow).
177	Ff 136	Ext. 2.5YR 6/6 (light red); int. 2.5YR N5 (gray); slip int. and ext. 7.5YR 7/4 (pink).
178	Ff 154	Ext. 5YR 7/4 (pink).
179	Ff 130	Ext. 5YR 6/6 (reddish yellow); int. 5YR 5/6 (yellow red).
180	Ff 144	Ext. 7.5YR 7/4 (pink); int. 7.5YR 6/4 (light brown).
181	Ff 192	Ext. 5YR 7/4 (pink) to 10YR 7/3 (very pale brown); int. 10YR 4/1 (dark gray).
182	Ff 158	Ext. 10YR 7/4 (very pale brown); int. 5YR 6/4 (light reddish brown); int. slip 5YR 7/3 (pink).
183	Ff 165	Ext. 7.5YR 7/4 (pink); int. 2.5YR 5/8 (red).
184	Ff 106	Ext. 5YR 6/4 (light reddish brown); int. 2.5YR N3/ (very dark gray).
185	Ff 196	Ext. 7.5YR 7/6 (reddish yellow); int. 5YR 6/6 (reddish yellow); near int. surface 10YR 5/6 (yellowish brown).
186	Ff 37	Ext. 2.5YR 6/8 (light red); int. 2.5YR 5/6 (red).
187	Ff 90	Ext. 2.5YR 6/8 (light red); int. 2.5YR N5/ (gray).
188	Ff 167	Ext. 5YR 7/6 (reddish yellow); int. 2.5YR N4 (dark gray).
189	Ff 7	Ext. 5YR 7/6 (reddish yellow); int. 2.5YR N3 (dark gray); traces of combing on ext. surface.
190	Ff 141	Ext. 10YR 8/4 (very pale brown); int. 7.5YR 6/4 (light brown); slip on ext.
191	Ff 116	Ext. 5YR 6/4 (light reddish brown); int. 5YR 5/4 (reddish brown) to light gray.

Fig. 7



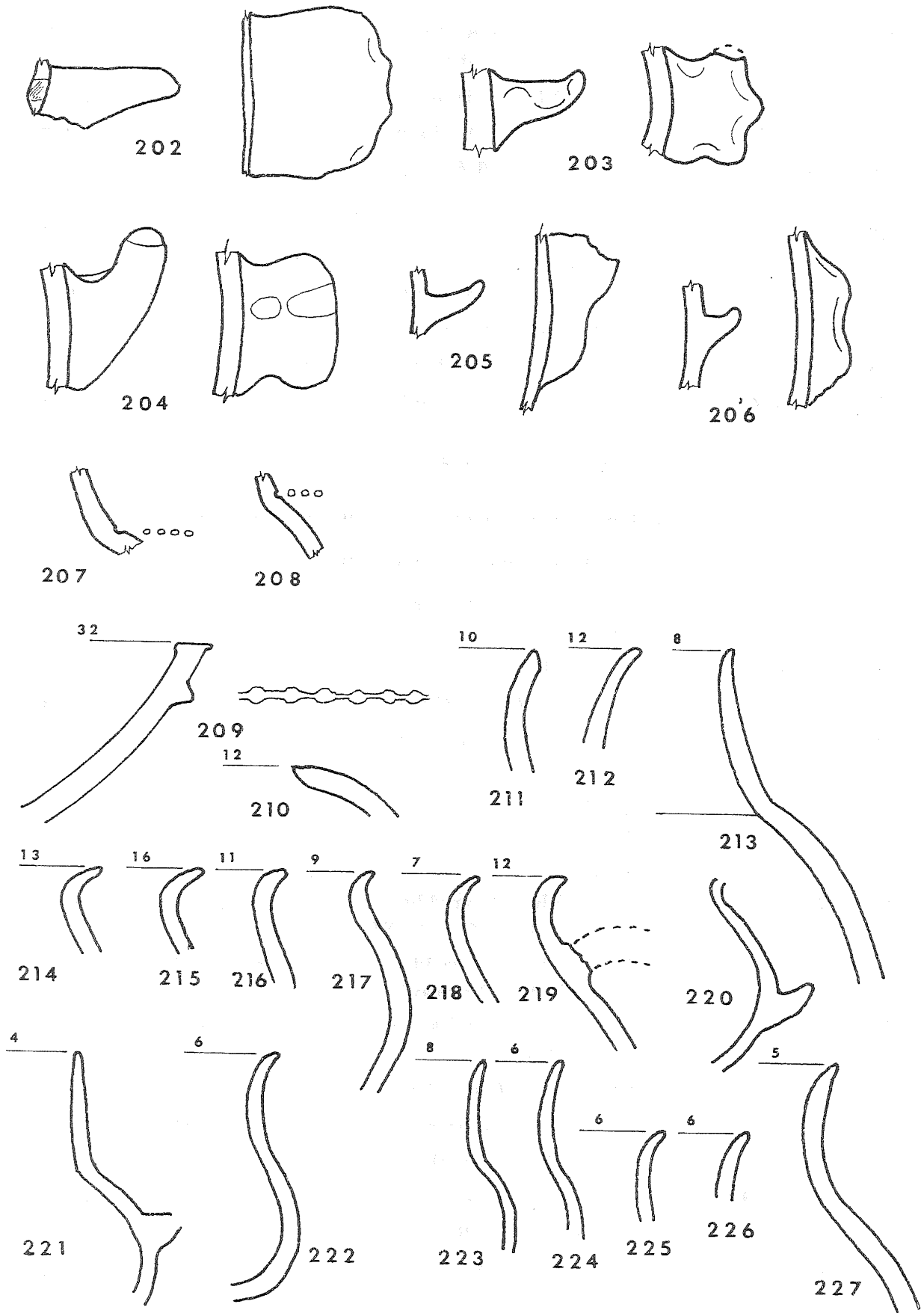


No.	Reg. No.	Color and Description
192	Ff 1	Ext. 2.5YR 6/6 (light red); int. 2.5YR N4/ (gray); ext. slip 7.5YR 7/4 (pink).
193	Ff 174	Ext. 5YR 6/6 (reddish yellow); int. 2.5YR N4/ (dark gray).
194	Ff 42	Ext. 2.5YR 6/8 (light red); int. 2.5YR N4/ (dark gray).
195	Ff 5	Ext. 2.5YR 6/6 (light red); int. 5YR 6/3 (light reddish brown).
196	Ff 93	Ext. 10YR 7/3 (very pale brown) slip; int. 5YR 5/3 (reddish brown).
197	Ff 139	Ext. 7.5YR 7/4 (pink); int. 7.5YR 7/6 (reddish yellow).
198	Ff 78	Ext. 10R 5/4 (weak red); int. 10R 5/6 (red).
199	Ff 137	Ext. and int. 2.5YR 6/6 (light red).
200	Ff 164	Ext. 2.5YR 6/6 (light red); int. 2.5YR 6/4 (light reddish brown).
201	Ff 94	Ext. 5YR 7/6 (reddish yellow); int. 5YR 6/6 (reddish yellow).

**Fig. 8. Feifeh Settlement Area (202-208), Cemetery**

**Area (209-227), Early Bronze**

202	Ff 184	Ext. 2.5YR 6/6 (light red); int. 2.5YR 6/4 (light reddish brown).
203	Ff 88	Ext. 5YR 7/6 (reddish yellow); int. same with gray core.
204	Ff 4	Ext. 5YR 6/8 (reddish yellow); int. 5YR 6/2 (pinkish gray).
205	Ff 89	Ext. 7.5YR 7/6 (reddish yellow); int. 5YR 7/6 reddish yellow).
206	Ff 115	Ext. 5YR 6/6 (reddish yellow); int. 2.5YR N3/ (very dark gray).
207	Ff 2	Ext. 5YR 7/6 (reddish yellow); int. 2.5YR N3/ (very dark gray).
208	Ff 3	Ext. 5YR 7/6 (reddish yellow); int. 2.5YR N3/ (very dark gray); int. surface 2.5YR 6/8 (light red).
209	Ff 74	Ext. 5YR 6/8 (reddish yellow); int. 2.5YR 5/8 (red); int. core 2.5YR 5/1 (gray).
210	Ff 35	Ext. 5YR 7/4 (pink); int. 5YR 7/1 (light gray); ext. surface 5YR 7/4 (pink).
211	Ff 147	Ext. 5YR 7/6 (reddish yellow); int. 5YR 6/2 (pinkish gray).
212	Ff 46	Ext. 10YR 7/3 (very pale brown); int. 5YR 5/1 (gray).
213	Ff 53	Ext. 5YR 7/4 (pink); int. 5YR 7/6 (reddish yellow).
214	Ff 48, 49	Ext. 10YR 8/4 (very pale brown); int. 2.5YR 6/6 (light red).
215	Ff 23	Ext. and int. 5YR 6/8 (reddish yellow).
216	Ff 20	Ext. 10YR 7/4 (very pale brown); int. 5YR 6/6 (reddish yellow).

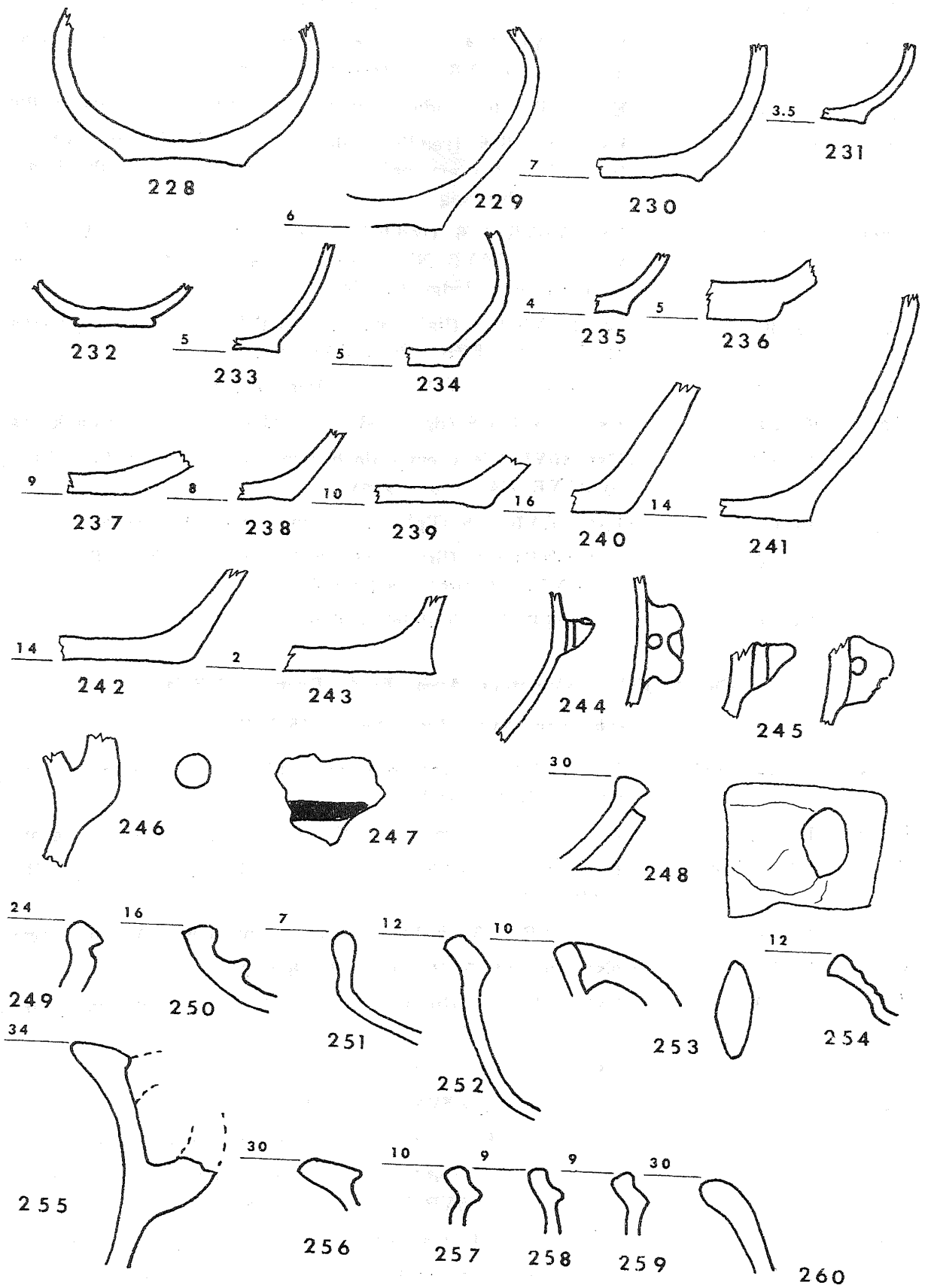


No.	Reg. No.	Color and Description
217	Ff 31	Ext. 10YR 8/4 (very pale brown); int. 5YR 5/1 (gray), near surface 5YR 6/6 (reddish yellow).
218	Ff 33	Ext. 5YR 7/6 (reddish yellow); int. 5YR 6/6 (reddish yellow).
219	Ff 64	Ext. 5YR 6/6 (reddish yellow); int. 2.5YR 6/6 (light red) to 10YR 8/4 (very pale brown); raised nob on shoulder not shown on drawing.
220	Ff 14	Ext. 7.5YR 8/6 (reddish yellow); int. 7.5YR 7/6 (reddish yellow) to 7.5YR N5/ (gray); small raised "horn" near rim in addition to ledge handle.
221	Ff 30	Ext. 2.5YR 6/8 (light red); int. 2.5YR N4 (dark gray); traces of slip ext. 7.5YR 7/6 (reddish yellow).
222	Ff 22	Ext. and int. 7.5YR 7/6 (reddish yellow).
223	Ff 34	Ext. 2.5YR 6/8 (light red); int. 2.5YR N3/ (very dark gray).
224	Ff 149	Ext. 10YR 8/4 (very pale brown); int. 2.5YR 6/6 (light red) to 2.5YR N4/ (dark gray).
225	Ff 67	Ext. 2.5YR 5/6 (light red); int. 2.5YR N5/ (gray).
226	Ff 32	Ext. 5YR 6/4 (light reddish brown) to 7.5YR 8/4 (pink); int. 5YR 6/4 (light reddish brown).
227	Ff 11	Ext. 5YR 6/8 (reddish yellow); int. 5YR 5/1 (gray).

**Fig. 9. Feifeh Cemetery Area, Early Bronze (228-247),  
Settlement Area, Iron Age (248-260)**

228	Ff 148, 153	Ext. 10R 6/8 (light red); int. 7.5YR 6/2 (pinkish gray); ext. slip 10YR 8/2 (white).
229	Ff 145	Ext. 5YR 6/6 (reddish yellow); int. core 5YR 5/1 (gray).
230	Ff 46, 150	Ext. and int. 2.5YR 6/6 (light red); ext. wash 2.5YR 8/4 (pale yellow).
231	Ff 52	Ext. 5YR 7/6 (reddish yellow); int. core 5YR 5/1 (gray).
232	Ff 51	Ext. and int. 5YR 7/6 (reddish yellow).
233	Ff 50	Ext. 10R 6/8 (light red); int. 5YR 7/6 (reddish yellow); int. core 5YR 5/1 (gray).
234	Ff 13	Ext. 5YR 6/6 (reddish yellow); int. same.
235	Ff 17	Ext. and int. 2.5YR 6/6 (light red).
236	Ff 29	Ext. 7.5YR 8/4 (pink); int. 2.5YR 6/6 (light red).
237	Ff 27	Ext. 5YR 7/6 (reddish yellow); int. surface 2.5YR 6/6 (light red); int. core 5YR 6/3 (pinkish gray).
238	Ff 26	Ext. 10YR 8/4 (very pale brown); int. 2.5YR 6/6 (light red).
239	Ff 24	Ext. 7.5YR 7/4 (pink); int. 2.5YR 6/6 (light red).
240	Ff 152	Ext. and int. 2.5YR 6/4 (light reddish brown).

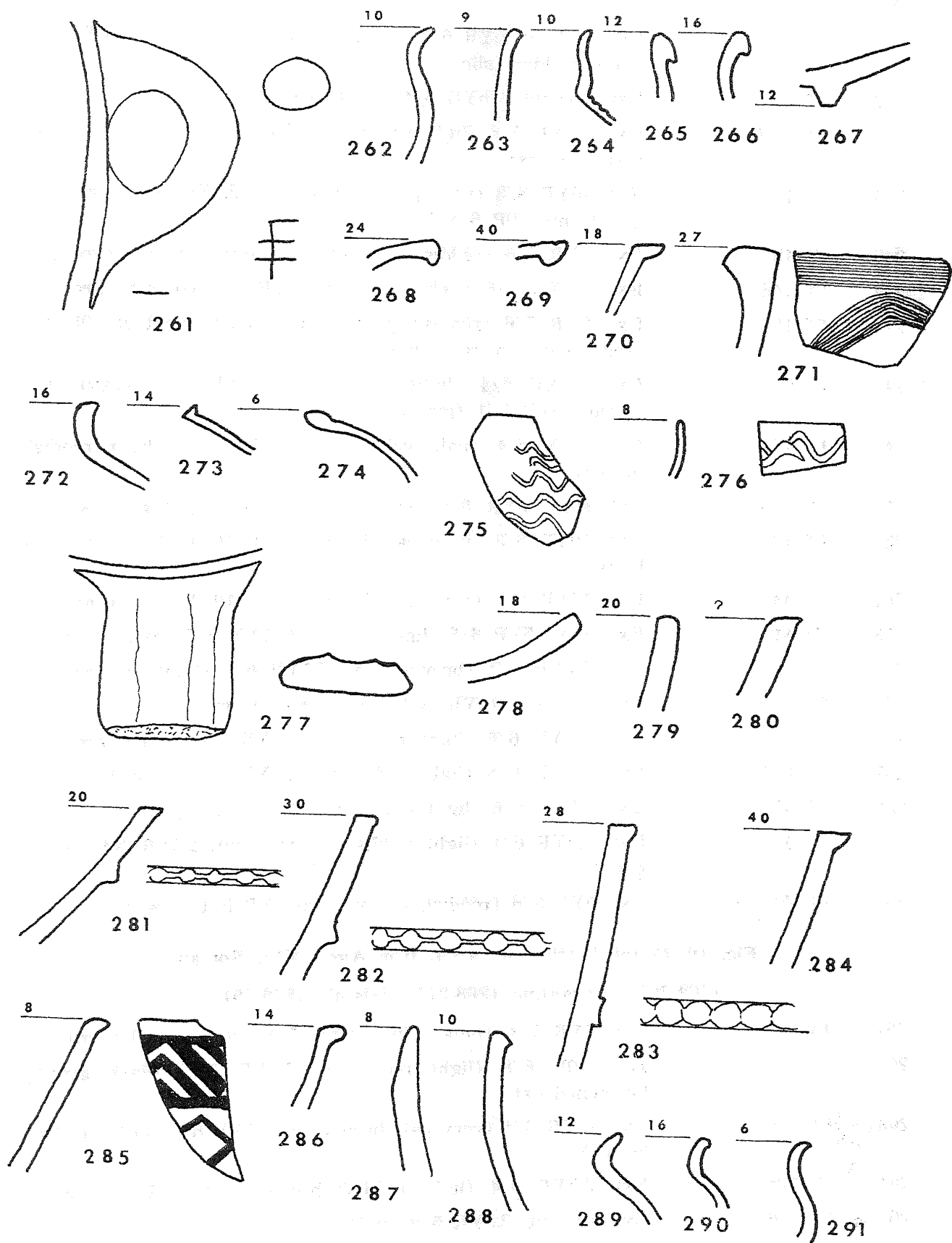
Fig. 9



No.	Reg. No.	Color and Description
241	Ff 21	Ext. and int. 5YR 6/6 (reddish yellow); traces of 2.5YR 6/6 (light reddish slip)..
242	Ff 25	Ext. and int. 7.5YR 6/4 (light brown).
243	Ff 9, 10	Ext. 2.5YR 6/6 (light red); int. 2.5YR 6/8 (light red); burn marks on ext.
244	Ff 15	Ext. 10YR 8/3 (very pale brown); int. 2.5YR N3/(very dark gray); int. 10R 6/4 (pale red).
245	Ff 151	Ext. 5YR 7/6 (reddish yellow); int. core 5YR 6/1 (gray).
246	Ff 146	Ext. 2.5YR 6/6 (light red); int. 5YR 6/2 (pinkish gray).
247	Ff 18	Ext. 5YR 7/6 (reddish yellow); int. same; band of 10R 4/8 (red) paint on ext. surface.
248	Ff 91	Ext. 7.5YR 6/4 (light brown); int. 5YR 5/1 (gray); int. surface 5YR 5/1 (gray).
249	Ff 179	Ext. 2.5Y 8/4 (pale yellow); int. 5YR 6/4 (light reddish brown).
250	Ff 129	Ext. slip 7.5YR 8/4 (pink); int. 2.5YR 6/8 (light red).
251	Ff 40	Ext. 10YR 8/3 (very pale brown); int. 10YR 7/4 (very pale brown).
252	Ff 44	Ext. 10YR 8/3 (very pale brown); int. 10YR 5/1 (gray).
253	Ff 41	Ext. slip 2.5YR 6/8 (light red); int. 5YR 5/2 (reddish gray).
254	Ff 59	Ext. 7.5YR 5/4 (brown); int. 7.5YR 6/4 (light brown).
255	Ff 38	Ext. and int. 10YR 8/4 (very pale brown).
256	Ff 159	Ext. 2.5YR 6/6 (light red); int. 2.5YR N4/ (dark gray).
257	Ff 169	Ext. 2.5YR 6/8 (light red); int. 2.5YR N5/ (gray).
258	Ff 57	Ext. 2.5YR 6/6 (light red); int. 2.5YR N4/ (gray).
259	Ff 55	Ext. 2.5YR 6/4 (light reddish brown); int. 2.5YR N4/ (dark gray).
260	Ff 79	Ext. 5YR 6/6 (reddish yellow); int 5YR 5/1 (gray).

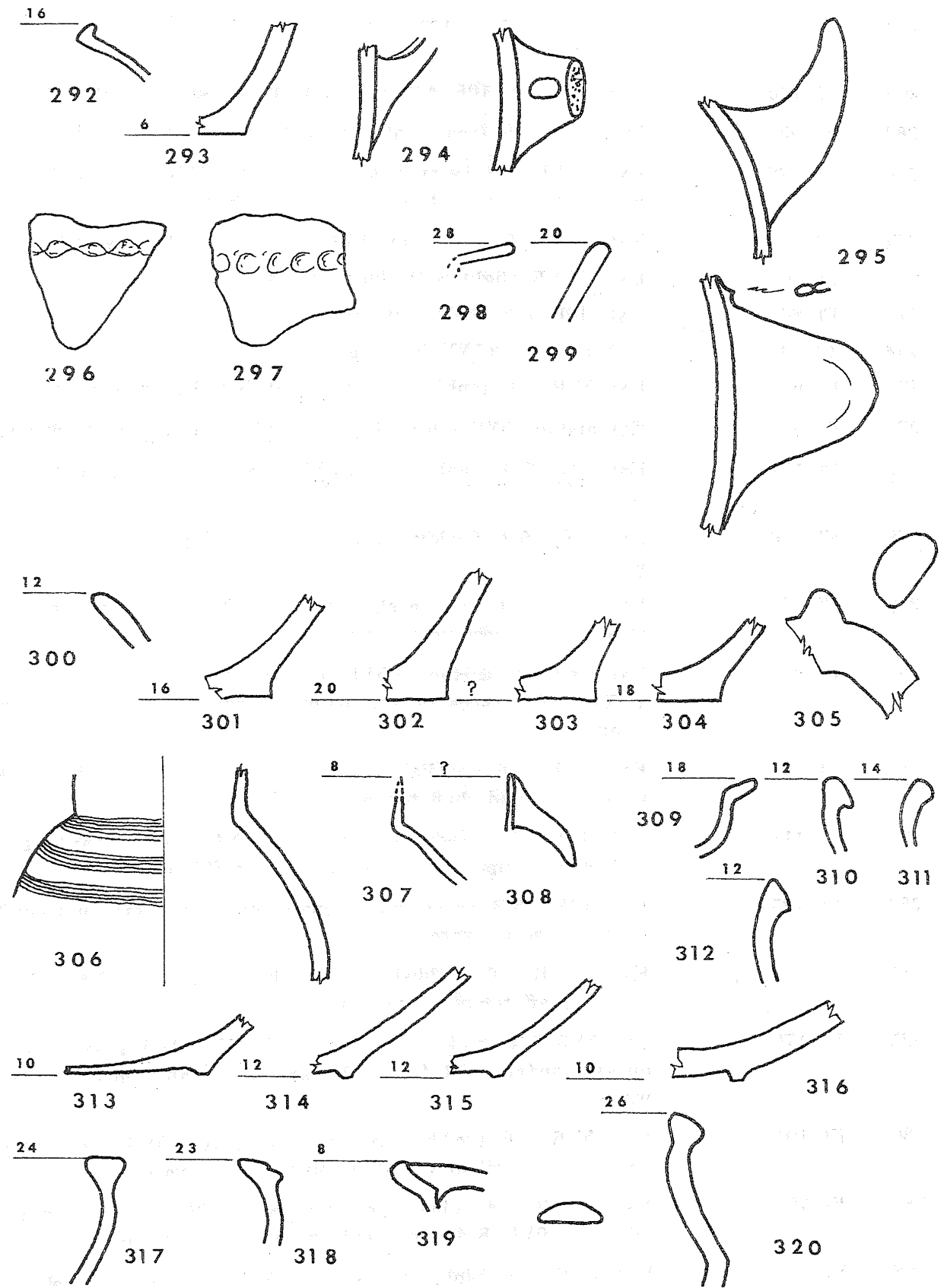
**Fig. 10. Feifeh Settlement Area, Iron Age (261), Roman (262-267), Byzantine (268-277), Islamic (278-291)**

261	Ff 82	Ext. 5YR 7/4 (pink); int. 10YR 7/4 (very pale brown).
262	Ff 36	Ext. 10R 6/8 (light red); int. 2.5YR N4/ (dark gray); blackened ext.
263	Ff 120	Ext. 10YR 8/4 (very pale brown); int. 5YR 6/3 (light reddish brown).
264	Ff 124	Ext. 2.5YR 6/4 (light reddish brown); int. 10R 5/6 (red).
265	Ff 166	Ext. and int. 2.5YR 5/8 (red).
266	Ff 171	Ext. and int. 10R 4/4 (weak red).



No.	Reg. No.	Color and Description
267	Ff 157	Ext. 2.5YR 4/8 (red) polished slip; int. 5YR 5/5 (reddish brown).
268	Ff 125	Ext. and int. 10R 4/8 (red); polished slip ext. and int.
269	Ff 95	Ext. 10R 5/8 (red); int. 10R 5/8 (red); polished slip.
270	Ff 128	Ext. 10YR 7/3 (very pale brown); int. 10R 6/8 (light red) with gray core; int. surface 10R 5/8 (red).
271	Ff 173	Ext. 10R 4/6 (red); int. 10R 3/1 (dark reddish gray).
272	Ff 101	Ext. 2.5YR (light red); burnt areas.
273	Ff 80	Ext. 10R 4/8 (red); int. same.
274	Ff 142	Ext. and int. 2.5YR 6/6 (light red).
275	Ff 63	Ext. 5YR 7/4 (pink); int. surface 10YR 8/3 (very pale brown).
276	Ff 8	Ext. and int. 5YR 7/6 (reddish yellow); continuously burnished.
277	Ff 134	Ext. 5YR 7/4 (pink); int. 2.5YR 6/8 (light red); light gray core.
278	Ff 170	Ext. 5YR 6/6 (reddish yellow); int. 2.5YR N3/ (very dark gray)
279	Ff 77	Ext. 5YR 6/6 (yellowish red); int. 5YR 4/1 (dark gray); straw and limestone temper.
280	Ff 97	Ext. and int. surface 7.5YR 7/6 (reddish yellow); int. core 7.5YR 2/0; traces of red paint on ext., 2.5YR 5/6; straw temper.
281	Ff 111	Ext. 5YR 7/6 (reddish yellow); int. core 2.5YR N3/ (dark gray); grit and chaff temper; "soft" ware.
282	Ff 113	Ext. 10YR 8/2 (white); int. 7.5YR N4/ (dark gray); grit and chaff temper; cracked surface; "soft" ware.
283	Ff 185	Ext. 10YR 8/4 (very pale brown); int. same; grit and chaff temper; "soft" ware.
284	Ff 112	Ext. 7.5YR 7/6 (reddish yellow); int. core 7.5YR N4/ (dark gray); chaff temper; "soft" ware.
285	Ff 175	Ext. 5YR 7/4 (pink); int. core 2.5YR N3/ (dark gray); paint on ext. surface 10R 4/8 (red); grit and chaff temper; "soft" ware.
286	Ff 191	Ext. 5YR 6/6 (reddish yellow); int. core 2.5YR N2/ (very dark gray); grit and chaff temper; "soft" ware.
287	Ff 16	Ext. 7.5YR 7/4 (pink); int. surface 2.5YR 6/8 (light red); int. slip 10YR 8/4 (very pale brown); grit temper.
288	Ff 197	Ext. 5YR 8/3 (pink); int. surface 5YR 7/6 (reddish yellow) to 5YR 7/4 (pink).

Fig. 11



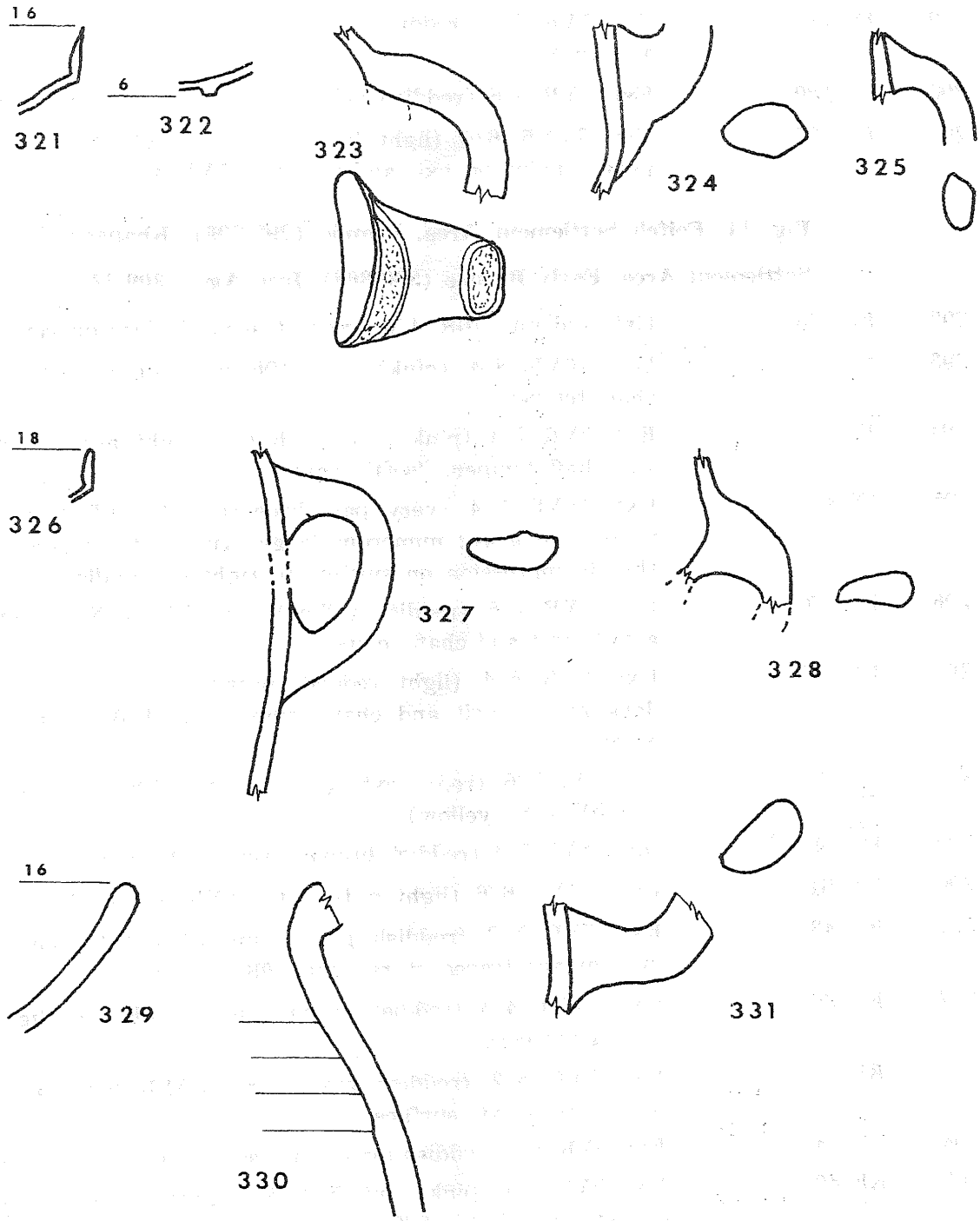


No.	Reg. No.	Color and Description
289	Ff 183	Ext. 5YR 7/6 (reddish yellow); traces of reddish paint 10R 4/6 (red).
290	Ff 180	Ext. 5YR 6/6 (reddish yellow); int. core 5YR 5/1 (gray).
291	Ff 102	Ext. 7.5YR 6/4 (light brown); int. 2.5YR N3/ (very dark gray); paint on ext. and int. lip 2.5YR 4/4 (reddish brown).

Fig. 11. Feifeh Settlement Area, Islamic (292-299), Khanazir  
Settlement Area, Early Bronze (300-308), Iron Age, (309-320)

292	Ff 195	Ext. and int 10R 4/6 (red); traces of glaze on rim.
293	Ff 119	Ext. 10YR 8/4 (pink); int. 10R 6/6 (light red); grit and chaff temper.
294	Ff 28	Ext. 5YR 7/4 (pink); int. 5YR 6/1 (light gray); small grit and chaff temper; "soft" ware.
295	Ff 45	Ext. 10YR 7/4 (very pale brown); int. 5YR 6/8 (reddish yellow) to gray; numerous large grits; ext. surface cracked; thumb impression on surface to right of handle.
296	Ff 176	Ext. 5YR 7/6 (reddish yellow); int. 2.5YR N3/ (very dark gray); grit and chaff temper.
297	Ff 172	Ext. 5YR 6/4 (light reddish brown); int. 5YR 3/1 (very dark gray); grit and chaff temper; cracked surface; "soft" ware.
298	Ff 76	Int. 10R 5/6 (red); ext. glaze painted 10R 3/6 (dark red) and 5Y 7/8 (yellow).
299	Ff 99	Int. 2.5YR 5/4 (reddish brown); traces of glaze 5Y 6/4 (olive).
300	Kh 51	Ext. 2.5YR 6/6 (light red); int. 2.5YR 5/4 (reddish brown).
301	Kh 43	Ext. 5YR 5/2 (reddish gray); int. 5YR 4/1 (dark gray); int. surface traces of red slip 10R 4/6 (red).
302	Kh 36	Ext. 2.5YR 4/4 (reddish brown); int. 2.5YR 6/6 (light red); light gary core.
303	Kh 35	Ext. 5YR 5/2 (reddish gray); int. 2.5YR 6/6 (light red); burnt areas ext. surface.
304	Kh 34	Ext. 5YR 5/2 (reddish gray); int. surface slip 2.5YR 5/8 (red).
305	Kh 49	Ext. 5YR 7/4 (pink); int. 5YR 5/1 (gray); traces of red slip on ext. surf. 2.5YR 5/8 (red).
306	Kh 62	Ext. 2.5Y 8/4 (pale yellow); int. 5YR 6/4 (light reddish brown); 3 series of incised lines on shoulder.
307	Kh 63	Ext. 2.5Y 8/4 (pale yellow); int. 5YR 6/4 (light reddish brown).
308	Kh 46	Ext. 10YR 8/4 (very pale brown).
309	Kh 23	Ext. 5YR 6/6 (reddish yellow); int. 5YR 5/4 (reddish brown).
310	Kh 16	Ext. 10YR 6/2 (light brownish gray); int; 10YR 5/1 (gray).

Fig. 12



No.	Reg. No.	Color and Description
311	Kh 20	Ext. 2.5YR 5/6 (red); int. 2.5YR 5/2 (weak red).
312	Kh 7	Ext. 2.5YR 6/6 (light red); int. 2.5YR 5/4 (reddish brown); slip ext. and int. 10YR 8/4 (very pale brown).
313	Kh 2	Ext. 5YR 6/6 (reddish yellow); int. 5YR 5/1 (gray); pitted surface.
314	Kh 27	Ext. 5YR 6/4 (light reddish brown); int. 5YR 5/1 (gray); pitted surface.
315	Kh 17	Ext. 5YR 6/4 (light reddish brown); int. surface 7.5YR 7/4 (pink); int. core 5YR 5/2 (reddish gray); pitted surface.
316	Kh 15	Ext. 10YR 8/3 (very pale brown); int. 5YR 6/4 (light reddish brown); few pit marks on surface.
317	Kh 11	Ext. 7.5YR 7/6 (reddish yellow); int. 7.5YR 6/2 (pinkish gray); pitted surface.
318	Kh 6	Ext. 2.5YR 6/6 (light red); int. 5YR N4/ (dark gray); tool marks on int. lip; pitted surface.
319	Kh 29	Ext. 2.5YR 5/6 (red); int. 10YR 6/3 (pale brown).
320	Kh 4	Ext. 10YR 7/4 (very pale brown); int. surface 2.5YR 6/6 (light red); int. core 10YR 4/1 (dark gray).

**Fig. 12. Khanazir Settlement Area, Roman (321-325), Byzantine (326-328), Islamic (329-331)**

321	Kh 10	Ext. 10YR 8/4 (very pale brown); int. 2.5YR 6/6 (light red).
322	Kh 13	Ext. 5YR 6/2 (pinkish gray); int. 5YR 6/6 (reddish yellow); thin gray core.
323	Kh 25	Ext. 5YR 6/4 (light reddish brown); int. 2.5YR 6/6 (light red); thick gray core 5YR 5/1 (gray).
324	Kh 24	Ext. and int. 2.5YR 6/6 (light red); int. core 7.5YR 7/2 (pinkish gray); ext. slip 7.5YR 8/4 (pink).
325	Kh 21	Ext. and int. 2.5YR 3/6 (dark red).
326	Kh 19	Ext. 10YR 7/4 (very pale brown); int. surface 7.5YR 6/4 (light brown); int. core 2.5YR 6/6 (light red).
327	Kh 1	Ext. 5YR 8/4 (pink); int. 2.5YR 6/6 (light red); ext. wash 7.5YR 8/2 (pinkish white).
328	Kh 12	Ext. 5YR 7/4 (pink); int. surface 2.5YR 6/6 (light red); int. core 5YR 6/3 (light reddish brown).
329	Kh 8	Ext. 5YR 6/6 (reddish yellow); int. surface 5YR 6/1 (light gray); int. core 2.5YR N3/ (very dark gray); chaff and grit temper; "soft" ware.
330	Kh 5	Ext. 2.5YR 8/4 (pale yellow) to 2.5Y 8/2 (white); int. 2.5Y 8/4 (pale yellow); thin tool marks ext. surface below rim.
331	Kh 9	Ext. 5YR 7/3 (pink); int. core 7.5YR 6/4 (light brown).

Walter E. Rast and R. Thomas Schaub



## Second Season of Excavation at Sahab, 1973\*

( Preliminary Report )

by

Moawiyah M. Ibrahim

The Department of Antiquities completed the second season of excavations at Sahab, 12 km. south-east of Amman (Pl. XII). The work continued through the months May and June of 1973, under the supervision of the author. The team members of the Department were: Sabri Abbadi, Lina es-Sa'di, Abdul-Sami' Abu Diyeh, Mohammad Murshed Khadijeh, Isma'il Hazaz, Kurt Langer de Polacky, and Omar Dawoud. Four volunteers of the Society of Friends of Archaeology: John Udeland, Barbara 'Atalla, Hazel Plummer and Dan Shak, in addition to two technical men trained at Tell es Sultan, provided the dig with a considerable assistance. 30-35 workers from Sahab and its vicinity were employed.

The members of the dig are thankful for the interest shown by the public in Jordan and abroad. Special thanks are due to HRH Ra'd bin Zeid, who assisted the dig, not only in visiting the site and explaining its importance to the authorities, but also in attending the excavations on a part-time basis.

We also appreciate the continuous support of Mr. G. Barakat, Minister of Tourism and Antiquities, Mr. Y. Oweis, Director General of Antiquities, and all colleagues of the Department as well as other archaeologists, who joined us in solving the stratigraphical and dating problems.

The work took place in four major areas (Pl. XIII), designated as: B, D, E,

F, which were chosen in different parts of Sahab. It was decided to excavate in some of these spots, as archaeological strata were partly exposed by modern constructions, such as houses, streets and drainage pits. To prevent further damage, any undertakings which may effect the ancient site require permission from the Department of Antiquities with the cooperation of the Municipality of Sahab.

Two excavation areas (E and F) were opened at the beginning of the 1973 season, whereas the work in Areas B and D is a continuation of the 1972 investigations. Because of the location of Areas A and C among modern houses, the work could not be extended in any direction. We hope in coming seasons to be able to make a few soundings in the courtyards of the surrounding houses.

### Area B

Two more squares (3 and 4) were laid out to the south of the area excavated in 1972. Clear evidence of three major periods was revealed. Debris of the three periods in Sq. 3 was disturbed by a large modern pit which extended to Squares 1 and 4.

The latest dates from the Early Iron Age. (Pl. XV) shows a ground plan of a house from this period. The major part of the house was excavated during the 1972 season and briefly described in the first preliminary report (*ADAJ XVII*, 23 ff). The rooms of the house were

\*See: Ibrahim, M. M., Excavations at Sahab, 1972, *ADAJ XVII* (1972) p. 23 ff.

paved with medium sized stones except that plastered floor around the cave opening. This floor was renewed several times as indicated by a series of thin layers of plaster. Part of the cave, under the plastered floor seemed to have been reused by the owners of the house as a store room; this is indicated by the stratigraphy and by a plastered wall built inside the cave by the users of the building. The foundation trench for this secondary wall was traced through the fill of the Chalco-EB cave habitation.

A more complete ground plan of the Iron I house can probably be achieved by extending the trenches to the west, which we hope to do in a coming season. Nevertheless this was the first house from the Early Iron Age, as far as the writer is aware, yet excavated in central East Jordan. The suggested date is based on the pottery types and wares, including collared-rims and cooking pots with ribbed rims, in addition to bowls with thickened rims.

A tunnel built of one row of small stones set upright and covered by a small stones layer horizontally (Pl. XIV) was uncovered in Sq. 4. The date of this tunnel, which was interrupted by a large modern pit, could not be determined during the 1973 season. Stratigraphically it is earlier than the Iron I walls, since the foundation trench of the southern wall was cut through the debris covering the tunnel.

The second period is represented by two 'Hocker' burials from the MB period (Pl. XVII, 1). Each burial was placed above a rounded stone-pavement, similar to the MB tomb of Area A. The pavements were accessible from a shaft (Pl. XV, 1) which was cut through the Chalco-EB debris. The shaft and the northern edges of the burials were disturbed by a

modern pit. It seems that the objects related to the burial were stolen by the people who dug this modern pit. A bronze needle and many sherds of the MB II period, including piriform juglets with button bases and carinated bowls, were found in association with the burials.

A third period (Pl. XIV) in this area dates from the late IVth millennium B.C. and designated as Chalco-EB. This designation is preliminary. A detailed study of the pottery and its relations is necessary. Material from this early period was found in all open areas, and in Areas A, B, C, and D in association with cave habitation. In Area E, evidence of walls and floors of domestic buildings was uncovered. The pottery is hand-made coarse ware. Thumb indented bands and ledge handles are common. Painted bands of red and brown appear. Hole-mouth jars and bowls with flat bases and plain rims are common forms.

The chronological situation is not very clear yet. The pottery repertoire shows characteristics of Late Chalcolithic and the very beginning of the Early Bronze Age. Some types and wares correspond with Kenyon's Proto Urban. Thumb indentations and thick coarse pottery may well be compared with the late Ghassul Culture, though the typical Ghassul shapes do not occur in Sahab.

The situation in Area B (Pl. XIV) is interesting. The excavated part of this period shows that people lived in a large cave-complex, which was divided by well built stone-walls, possibly indicating that it was inhabited by a large family. But a complete plan of this complex needs further excavation. A hard packed floor mixed with pebbles (Pl. XVII, 2) with thin stone-walls above were found overlying the cave. Pottery from this level is the same as that from inside the cave. The same material was found in Area

A, which indicates that people lived above as well as inside the cave. The cave has rounded corners, and opens to the south-east direction. The cave, although not deep, was enlarged by the building of walls extending from it. The author has no doubt that these caves were at least seasonally inhabited, and not merely temporary shelters.

A wall, five courses high, stretches to the SW, meeting the cave in its SW corner. It appears to be separated from another wall extending towards the NW, forming an entrance(?). The first wall meets a third wall in the SW corner, forming a 90 degree angle. This third wall overlies the cave. A fourth wall in poor condition apparently rebuilt, was found south of the Iron Age wall within the cave. A floor of hard packed dark soil, and a fire place lying above, were found in association with the inner cave and related walls. Sherds of 2 - 3 hole-mouth jars, tabun fragments, flint tools, and animal bones were found directly above the floor of the cave. This floor was partially disturbed by the pavements of the MB burials.

#### Area D (Pl. XVIII)

About 30 m. north of Cave 1, referred to in the 1972 report (*ADAJ* XVII, p. 34), the shaft of another cave (Pl. XIX) was accidentally found. Discovering the nature of the cave constituted the first phase of the work. For this purpose a square (Sq. 1), 4x4 m, was laid out above the shaft. A corner of a stone room appeared in the north-eastern part of the square, about 40 cm. below the surface. Three other squares (2, 3, 4) were opened thereby allowing us to determine the dimensions of this unexpected structure.

The rounded shaft was cut through virgin soil and bed-rock and covered with two stone slabs, the spaces being filled

with small stones. Directly above the slabs, a large number of small stones were set down, forming a circle, probably to mark the shaft. Another cave entrance was found on bedrock in the baulk between Squares 1 and 2 towards the western section, through which the cave became filled in. This entrance seemed to have been known to the builders of the structure, at least during its early phase.

The cave itself became cluttered with fill to a height of over two meters, which made it difficult to trace its limits and to complete investigations within it. The foundation of a modern house to the south were to be seen from inside the cave. However a trial trench, 2 x 2 m, was cut down into the cave fill to a depth of about two meters, to an uneven lime layer, covering a black layer of ash and charcoal. Under these two layers, a layer of packed red soil mixed with 'huwwar, chips was uncovered above bed rock. The ashy layer seemed to be an occupation level, but no dating evidence was found. The shaft and its cover remind one of the Iron Age rock tombs found in Sahab and elsewhere, though no bones were found.

The building (Pl. XX, 1), which was partially uncovered, was not expected in this relatively flat part of the site. The pottery associated with it suggest an Iron I dating and shows the widest variations from stratified context yet found in Sahab. It is not yet clear whether this building was constructed before or after the major Iron I settlement on the mound. Some of the pottery types suggest an eleventh century date. The pots and cooking facilities indicate a domestic building.

There are two architectural phases to be identified. The first and earlier one

is represented by a large rectangular room (1) with a stone pavement, covered by an ashy occupation layer, and walls of large stones. The room seems to have been reused during the second phase. The entrance of the room was on the long side, to the west. The southern continuation of the western wall seems to have been destroyed by a modern pit. The height of the southern wall was preserved to about 80 cm. (4 - 6 courses). Another entrance on the long side, to the east, leads to another small Room 2 which was rebuilt during the later phase of the building. The northern part of Room 1 is not yet excavated. Further excavations will hopefully provide a clear ground plan. Some of the floors belonging to the earlier phase were identified below the walls of the second phase.

The second and later architectural phase also dates from the Iron I period. The two phases can not as yet be divided in terms of the pottery, but they can be recognized stratigraphically, as well as by the use of different stone materials. The stones used in the walls of the second phase are much smaller than those of the earlier phase. Two walls built of such small stones form, together with the southern wall of Room 1, a small rectangular Room 3. The long wall runs W-E, meeting a shorter N-S wall, and thus forming the south-eastern corner of Room 3. The height of the long wall measures to about 80 cm. above the room floor. 8 courses (80 cm. high) of the short wall were preserved. A bench, 50 cm. wide, consisting of a single course of small stones, was built against the long wall, directly above the floor of Room 3. The bench begins at the western edge of the long wall, ending about 60 cm. before hitting the short wall. The floor itself was of hard packed dark brown soil covered by a thin ashy layer of occupation. The short wall of Room 3 meets another, poorly preserved wall,

which is an extent of the southern wall of Room 1.

The walls of the second phase were partly built above the floors of the earlier phase and partly on virgin soil (Pl. XXI, 1). The E-W wall of Room 3 was partly cut into the virgin soil. The virgin soil outside the wall was left undisturbed, providing support for the wall.

Room 2 is narrow and seems to have been poorly rebuilt during the second phase. An irregular line of larger stones separates Room 2 from the 'tabun' group in Sq. 3. One large 'tabun' (Pl. XX, 2) is situated in the southern part of the room, while the other part was paved with small stones.

Several 'tabuns' and one ash-pit, causing a heavy ashy burnt level, were excavated in Sq. 3. The 'tabuns' were set above a hard packed red plastered floor, into which the ash-pit was sunk. Another ash-pit was partly uncovered in Sq. 4. The 'tabuns' may indicate a collective cooking area.

#### Area E

During the 1973 season, the work in Area E was carried out in a deep and complicated bulldozer-cut in the southern edge of the moundcentre. This cut, which is surrounded on the west and east by modern houses, was made by the owner of the land in preparation for building a house. On the top of its north face, to the west, there are remains of a building, probably dating to the medieval or late Arab period. Several years ago, a street was opened to the south of the bulldozer-cut, joining the main street in the middle of the settlement. As a result, the Iron Age strata on this side of the mound were further disturbed. The three faces exposed by the bulldozer measure approximately 9 m. (west), 21 m (north)



and 10 m (east). The maximum height of the cut towards the north-west corner is about 6 m. The archaeological strata and structures (stone and brick) were easily recognizable on all faces.

It was decided to first clear the floor of debris and then trim back the north face of the cut for drawing and general interpretation. However, several problems were encountered: the large size of the cut; protruding stone and brick structures which were in some cases undermined by the bulldozer; the possibility that the medieval ruins, on the north face and the loose walls inside the exceedingly dry and crumbly section, would fall; and the difficult task of separating debris from the preserved material. In addition, the bulldozer had cut more deeply into the centre of the north face than at either end, thus making it impossible to trim back the cut to the same depth across its length, without destroying even more material.

After removing the debris from above the floor of the cut, it was decided to trim at 80 degree angle and to leave ledges below phase B 'lime kiln complex' to prevent its caving in and to avoid undermining the structure above.

To draw and describe such a long section without excavating stratigraphically was a toilsome job. A description of the phases and the related features follows:

Four main building phases (Pl. XXIII) were identified below the top-surface, which begins to slope downward to the east, where it was tilled by the present day inhabitants. The maximum height of this dark brown surface in the western side of the north face ranges from 50 - 150 cm. A modern floor, cemented with concrete, was preserved on the surface in the middle of the section. Above the walls of Phase A (W1, W2) there is a deserted building with vaults, designated

as 'medieval and late Arabic' probably from the 14 - 18th century. Part of the foundations of this building are sitting above Iron Age walls.

#### Phase A

This is the latest phase to be identified in the section; related to Phase A are two walls (W1, W2). The walls are at the same level, and built of large partially hewn stones, which were preserved to a height of approximately 1.50 m. At the west end of the face we have several fill loci above wash and drift layers. Against the bottom of the walls is a long horizontal floor which could be traced, although occasionally with interruptions, not only here but also in the east and west faces. A line of paved stones belonging to this floor could clearly be seen against W2, but it is disturbed at both ends of the section. The space between the two walls had been plastered.

#### Phase B

Below Phase A is what we have called the 'lime kiln complex', which presumably indicates the function of this structure. The entire complex appears to be cut into a thick series of wash levels and parts of the earlier Phase C. The foundation trench (W4T, W12T) can be easily recognized at both ends of the complex, alongside walls (W4 and W12), cutting through the wash levels. An occupation floor, running against walls W4, W6, W8, W10, W11, and W12, could be partly traced. Fallen roof structure, immediately above ash and black charcoal, shows heavy burning. This evidence, in addition to burnt, 'huw-war' and bricks within the debris, is an indication for its function as a lime-kiln. Soil analysis of these strata ought to be made. The extension of the walls and the interior arrangement of the complex remain to be investigated. There are two standing large stones (W6, W8) in the

middle of the complex which may have served as an entrance. One wall (W11), partly built above the wall (W16) of an earlier Phase C, appears horizontally alongside the section and meets walls W10, W12 in two corners.

Between walls W13 -W14 and W3 - W4, the accumulation of the wash levels, cut by the intrusive kiln complex, must be earlier than Phase B and later than C. It seems from the stratigraphy that these levels, appearing right and left of the kiln, were formed when the buildings of Phase C were no longer in use.

#### Phase C

(Walls W3, W13, W14, W15, K16, W17, W18).

All structures appear to have been constructed in a similar way. The stratigraphy shows several walls, W3, W13. One was able to identify occupation floors abutting against them. It was difficult to trace these floors in the middle of the section. It appears difficult to relate walls W18, W15 to the rest of the structure, since they could not be traced in the ledges below the lime-kiln. The time relationship between Phase C and D is not clear.

#### Phase D

It was only identified below walls W16, W17. The extension of wall W19 could not be clarified. Its relation to the LB building is also uncertain.

The dates of these phases and various related architectural features, visible in the north face of the cut, cannot be established until further evidence is available from Area E-N and other sections. They must be later than the LB building in front of the trimmed cut (north face). The pottery from the upper levels of Area E-N (Sq. 1) and the meager evidence picked up from the loci of the cut indicate that they belong to the Iron Age. There were no typical Iron

II sherds among the small pottery collection, and the time relationship between these phases is as yet unsettled.

#### Square 1 - 3

After trimming back the north face of the bulldozer-cut, it was decided to sink a trench (4 x 4 m.) in the new floor of the cut, right against the north face. Later two other squares (6 x 6) were laid out to the east of Sq. 1. As a result two main phases could be identified.

#### LB building (Pl. XXII,2)

Part of a large stone building was uncovered in Sq. 1, and continued to appear alongside all squares. There are three excavated walls to be seen in association with this building. One of the walls runs East-West and measures approximately 17 meters in the trenches; the western end of the wall was not found, which seems to continue below a large modern house. The excavated width of this wall is over 1 m, and runs below the deposit of the north face. Its height was preserved to about 1.20 m. (5 - 7 courses) in the west. This wall meets two other walls running north-south. The eastern wall is wider and built of larger stones than the inner one. The massive construction of the first one may indicate that it was an outer wall (Pl. XXII, 1) of the building.

All the walls were similarly constructed of fairly large hewnstones, wedged with smaller ones. They seem to have been plastered from the inside with a red brick-like material. The same material covered the walls and their interior faces. The foundation trenches are very sharply slanted close to the walls and are filled at the bottom with loose rubble. The Chalco-EB deposits were cut by the foundation trenches. Quantities of stratified LB sherds were obtained from the foundation trenches and above the floor between the two sidewalls, as well as other loci in

association with the building. A few MB sherds were found in the fill among the walls.

The occupation floor of the building could be traced, although disturbed to the west of the interior wall. The floor itself is of hard packed reddish soil covered by an ashy layer of occupation. The loci to the east of the outer side-wall, including a part of a wall and a related stone-pavement, seem to be earlier than the LB building, since the foundation trench of the latter wall was cut through these loci. All these features seem to extend beyond the southern baulk. No definite date can be given to these features, which were uncovered during the last days of the excavation. It is too early to come to a conclusion about the nature and extent of the LB building. Further excavations will hopefully throw more light on the associated walls and their relationship to the other structures.

#### Chalco.-EB Phase

These are the first walls of domestic poor houses excavated in the Chalco-EB period at Sahab. The walls were found only east of the LB interior wall. These were interrupted by the LB building. Hard packed pebbly floors and hearths were related to these walls. One floor seemed to continue below the walls. A good number of sherds of a handmade coarse gritty ware, sherds with red-painted bands, and hole-mouth jars very similar to those from cave dwellings excavated in Area A, B, and C, were found. All these areas yielded red-burnished pottery, thumb-indented bands and ledge-handles. The range of this early phase and its pottery repertoire in relation to other sites will be discussed at a later time.

#### Area F

A long trial trench (30 x 2 m.) was sunk in the western slope of the mound,

seeking the outer limits of the settlement and a fortification structure. The western edge of the trench reached the foot of the tell, but no signs of fortifications were found.

Wash loci (3 major levels), ranging from 1.50 - 2.00 m, lies on bed-rock. Sherds from the upper two levels were mixed and show specimens of the Chalco-EB, MB, Iron I - II periods. The lowest floor-like level yielded typical sherds of the Chalco-EB period.

#### Summary

During this season more evidence from the Chalco-EB period was found, in association with cave-dwellings (Area B) and probably with poor domestic houses, of which walls and floors were uncovered in Area E (Sq. 1-2). In Area B, two MB burials were excavated, each above a rounded stone-pavement. MB sherds were also found in fill loci. This may indicate the presence of a settlement from this period. The LB building in Area E seemed to have been a large one and it does not look like an ordinary domestic dwelling. Sherds of painted craters, jugs and bowls may go back to the 14 - 13th centuries, but a more definite date must await a study of the pottery and further stratigraphical information. The site seems to have been extensively populated during the Early Iron Age. Evidence of domestic structures dating to this period was found in various excavated areas (A, B, D). Two houses with paved stone-rooms were partially uncovered in Areas B and D. Bricks seem to have been used in the upper courses and roofs of the rooms, as for example in Area B. The pottery suggests a 12-11th century dating. Four architectural phases in Area E appear to belong to Iron I, insofar as could be identified from the meager pottery evidence. A definite answer must await further work.

M. M. Ibrahim

The Department of Antiquities



# Observations on the Bronze Age in Jordan<sup>1</sup>

by

Thomas L. Thompson

In the writing of the history of Jordan in the Bronze Age, one most serious and fundamental problem is determining the basic sociological structure of the people of this period. The difficulty of this historical task, however, is made even more acute by the added burden that any adequate reconstruction of the history must first deal with the problems which historians themselves have created and which prevent any fundamental re-examination of our sources for history. This burden for the early history of Jordan is the well-worn problem which William Albright and Nelson Glueck helped to create with their historical evaluation of the surveys of the Jordan Valley and the East Jordan plateau.<sup>2</sup> This was the theory that the Jordan

Valley and the entire region south of the Wadi Zerqa was depopulated during the Middle Bronze II and the Late Bronze periods, that is, throughout most of the second millennium, B.C. This theory held that the earlier settlements of the Early Bronze and Middle Bronze I periods had been succeeded in this region until about the thirteenth century, B.C. by semi-nomadic tribes, which had left no archaeological trace whatever. This picture which Glueck gave of the settlement of Eastern Jordan, which is still held by many, was that of a relatively dense agricultural settlement during Middle Bronze I throughout the whole of Eastern Jordan. This, according to Glueck, was followed by a period of nomadic control and total lack of agricultural settlements

(1) This paper was first presented as a lecture sponsored by the American Center for Oriental Research at the British Council in Amman on April 6th, 1974. It is presented here unchanged except for the addition of the footnotes. This historical interpretation has been developed during research on maps of the Bronze Age for Palestine and Syria to be published in the new interdisciplinary *Tübingen Atlas des vorderen Orients* (TAVO) being prepared at Tübingen University in West Germany.

(2) W. F. Albright, "The Jordan Valley in the Bronze Age", *AASOR*, 6 (1926) p. 13-74; *idem*, Note to Nelson Glueck, "Three Israelite Towns in the Jordan Valley," *BASOR*, 90 (1943) p. 17-18; Nelson Glueck, "The Archaeological Exploration of El-Hammeh on the Yarmuk", *BASOR*, 49 (1933) p. 22f.; *idem*, "Further Explorations in Eastern Palestine", *BASOR*, 51 (1933) p. 9-18; *idem*, *Explorations in Eastern Palestine I*, *AASOR*, 14 (1934); *idem*, "Explora-

tions in Eastern Palestine and the Negev", *BASOR*, 55 (1934) p. 3-21; *idem*, *Explorations in Eastern Palestine II*, *AASOR* 15 (1935); *idem*, "Explorations in Eastern Palestine III", *BASOR* 64 (1936) p. 9-10, 65 (1937) p. 8-29; *idem*, "An Aerial Reconnaissance in Southern Transjordan", *BASOR* 66 (1937) p. 27f., 67 (1937) p. 19-26; *idem*, "Explorations in the Land of Ammon", *BASOR*, 68 (1937) p. 13-21; *idem*, *Explorations in Eastern Palestine III*, *AASOR*, 18-19 (1939); *idem*, "The Earliest History of Jerash", *BASOR*, 75 (1939) p. 22-30; *idem*, *The Other Side of the Jordan* (1940); *idem*, "Further Explorations in Eastern Palestine", *BASOR*, 86 (1942) p. 14-24; *idem*, "Three Israelite Towns in the Jordan Valley: Zarethan, Succoth, Zaphon", *BASOR*, 90 (1943) p. 2-23; *idem*, "Some Ancient Towns in the Plains of Moab", *BASOR*, 91 (1943) p. 7-26; *idem*, *The River Jordan* (1946); *idem*, *Explorations in Eastern Palestine IV*, *AASOR*, 25-28 (1955).

south of the Wadi Zerqa from the Middle Bronze II period onwards.<sup>3</sup> Glueck's interpretation is based on the fact that he had found little pottery from the Middle and Late Bronze Age in this region.

This "nomad" hypothesis, used to explain the lack of finds in his survey, is very interestingly paralleled by the still almost universally accepted understanding of the Middle Bronze I period in the region to the west of the Jordan.<sup>4</sup> This understanding of the Middle Bronze I in Palestine, based primarily on the lack of major architectural structures from this period at sites such as Tell es-Sultan (Jericho)<sup>5</sup> and Tell Beit Mirsim,<sup>6</sup> but also at other important Bronze Age sites as well,<sup>7</sup> tries to explain the distressing lack of material finds by

(3) Nelson Glueck, "Transjordan" in *Archaeology and Old Testament Study*, D. W. Thomas, ed., (1967) p. 445; *idem*, *The Other Side of the Jordan* (1940) p. 15f. 114f.; *idem*, "The Age of Abraham in the Negev", *EA*, 18 (1955) p. 7f.; *idem*, "The Seventh Season of Archaeological Exploration in the Negev", *BASOR*, 152 (1958) p. 20; W. F. Albright, *BASOR*, 163 (1961) p. 36f. For a more detailed criticism of Glueck's survey results, cf. Th. L. Thompson, *The Historicity of the Patriarchal Narratives: The Quest for the Historical Abraham*, *BZAW* 133 (1974) p. 192-95.

(4) Thompson, *Historicity of the Patriarchal Narratives*, 144-71.

(5) Cf. E. Sellin and C. Watzinger *Jericho: Die Ergebnisse der Ausgrabungen* (1913) p. 14f. 46f. 108-12; K. Kenyon, "Some Notes on the History of Jericho in the Second Millennium, B.C.", *PEQ*, (1951) p. 106-13; *idem*, "British School of Archaeology in Jerusalem Excavations at Jericho, 1952: Interim Report", *PEQ*, (1952) p. 4-6; *idem*, "Excavations at Jericho, 1952", *PEQ*, (1952) p. 65-68, p. 74-80, *idem*, "Excavations at Jericho, 1953", *PEQ*, (1953) p. 90-93; *idem* "Excavations at Jericho, 1954" *PEQ*, 1954) p. 56-58; *idem*, *Digging up Jericho* (1957) p. 186 209; *idem*, *Archaeology in the Holy Land* (1960) p. 135-61; *idem*, *Jericho I* (1960) p. 180-262; *idem*, *Jericho II* (1964) p. 33-166, 551, 565;

relating them to a few scattered literary texts from Sumer, which deal with the threat of nomadic incursions there,<sup>8</sup> drawing the conclusion that Palestine hosted a semi-nomadic population, whose archaeological remains consisted mostly of quite elaborate shaft tombs found throughout the hill country of the West Bank.

Since we are dealing here with a survey of archaeological finds, I will only point out that these Sumerian literary texts, dealing with people whom scholars often refer to as "Amorites", not only had nothing to do with Palestine, but they are specifically described in the literary texts as *not* burying their dead at all,<sup>9</sup> while, if the present literature on the period in Palestine is to be believed, the

*idem*, "Syria and Palestine, c. 2160-1780 B.C.", *CAH*, fascicle 29 (1965) p. 38-6; *idem*, "Palestine in the Middle Bronze Age", *CAH*, fascicle 48 (1966) p. 3-13; *idem*, *Amorites and Canaanites* (1966); *idem*, "Jericho" in *Archaeology and Old Testament Study*, D. W. Thomas, ed. (1967) p. 267-69.

(6) W.F. Albright, *The Excavation of Tell Beit Mirsim I: The Pottery of the First Three Campaigns*, *AASOR*, 12 (1932) p. 8-14; *idem*, *I A: The Bronze Age Pottery of the Fourth Campaign*, *AASOR*, 13 (1933) p. 62-67; *idem*, "Palestine in the Earliest Historical Period", *JPOS*, 15 (1935) p. 220; *idem*, *TBM II: The Bronze Age*, *AASOR*, 17 (1938) p. 12-16; *idem*, *From the Stone Age to Christianity* (1957) p. 163f.; *Archaeology of Palestine* (1949) p. 80-82.

(7) See further on the history of this question, W. G. Dever, "The 'Middle Bronze I' Period in Syria and Palestine", in *Near Eastern Archaeology in the Twentieth Century*, Essays in Honor of N. Glueck, J. A. Sanders, ed., (1970) p. 134f.

(8) Especially, K. Kenyon, *CAH*, fascicle 29, pp. 34f.; W. G. Dever, "The People of Palestine in the Middle Bronze Period", *HThR*, 64 (1971) p. 218.

(9) Cf. Thompson, *Historicity of the Patriarchal Narratives*, pp. 67-88, 157f.

people of the Middle Bronze I period are known almost *exclusively* from their tombs. 10

It is baffling to try to correlate the received opinions about the state of settlement in both East and West Palestine together. One is presented with the quite remarkable picture that during the transition period of Early Bronze IV and Middle Bronze I, both eastern Jordan and the arid central Negev, south of Palestine, were settled extensively by an agricultural population, while the rich farmland of western Palestine was controlled by sheep and goatherding seminomads. We are asked to believe that during the succeeding period, Middle Bronze II, when Palestine flourished with the most intensive agricultural settlement of the whole Bronze Age, those previously preferable regions for farming, the East-Jordanian plateau south of the Wadi Zerqa, as well as the whole of the central Negev, were now abandoned to wandering seminomadic shepherds. While this is a very *interesting* configuration — indeed, it has fascinated a whole generation of scholars — it is hardly *understandable*.

I am not suggesting, however, that the historian can abandon the — necessarily arbitrary — piecemeal gathering of data, nor can he give up constructing hypotheses to interpret his arbitrarily gathered data. *Events* — categorically — do *not* have their own logic ! Nor is their interpretation amenable to any pre-set

patterns furnished by the historian. Nevertheless, before an historical theory, based on limited and fragmented knowledge, can be accepted as expressive of what once took place, that is, as *history*, it must have a minimal coherence, not only with what we know, but with what we know to be possible and likely.

Simple common sense and an awareness of the incoherence of the generally accepted interpretation has led a few scholars to the unfortunately extreme position of denying the existence of that part of the evidence which most embarrassed the orthodox. Thanks primarily to the confirmatory survey of Siegfried Mittmann in the northern Transjordan, carried out in the middle sixties, the agricultural nature of the settlements of Eastern Jordan during the EB IV/MB I period, as embarrassing as it is to the interpretations of Palestinian archaeologists, has proven unassailable. 11 The over 300 known EB IV/MB I sites of the central Negev mountains, 12 however, are now being written off as nomadic camping sites. It is argued that since the Beer-sheba Basin, which in an absolute sense is unquestionably better suited to agriculture than the central Negev, was for the most part not settled at this period, the arid regions to the south could not have been settled with farmers. 13 Although this would dismiss one of the most embarrassing obstacles in the path of interpretation, we are still left with the also illogical description of this period as

(10) I am presently preparing a collection of the EB IV/MB I remains in Palestine which will be included in the monograph: **The Bronze Age Settlements of Syria and Palestine**, being prepared for TAVO. A useful list of some of the EB IV/MB I sites can now be found in K. Prag, "The Intermediate Early Bronze - Middle Bronze Age: An Interpretation of the Evidence from Transjordan, Syria and Lebanon", *Levant*, 6 (1974) p. 112-16.

(11) *Beiträge zur Siedlung- und Territorialgeschichte des nördlichen Ostjordanlandes*, ADPV, (1970).

(12) A list of these sites will be published by the author in the monograph: **The Bronze Age Settlements of Sinai and the Negev**, to be published as a supplement to TAVO.

(13) So, M. Kochavi in his unpublished dissertation: **The Settlement of the Negev in the Middle Bronze I Period** (Jerusalem, 1967).

primarily a curiosity, with intensive farming of the East-Jordanian plateau alongside of the empty fertile valleys of Palestine. The Amorites mentioned above, and the biblical patriarchs, because of attitudes toward their place in Jewish and Christian faith, tend to distract the reader from any too critical examination of details.<sup>14</sup>

In spite of this, the hopes of interpreting the settlement patterns of the Bronze Age are not nearly so bleak as the foregoing recital perhaps seems to suggest, for we have only so far discussed the central attempt to put together an interpretation of the archaeological remains of the region of Palestine and Jordan, and in this synthesis, the surveys of Glueck, and the excavations of Kenyon and Albright have determined the course of all the subsequent discussion of the history of the Bronze Age. Whatever subsequent material was found has either been fitted into their hypothesis, changing the form of the argument only in detail, or the material has been left to the side, uninterpreted and by and large ignored.

The late Dr. Dajani of the Department of Antiquities,<sup>15</sup> Dr. Dornemann of the American Center,<sup>16</sup> my colleague Dr. Mittmann of Tübingen,<sup>17</sup> as well as many other scholars of the archaeological his-

tory of Jordan, over the years have continuously been pointing out to us that Glueck's gaps in settlement in the Jordan Valley and the area south of the Wadi Zerqa during the Middle and Late Bronze Ages never in fact really existed, and that our map of the known settlements in these regions is progressively being filled out. The gap in Glueck's surveys is not to be explained as a historical curiosity, but rather as having been caused by the limited nature of the survey itself. The present plans and activities of the Department of Antiquities make it happily clear that the work of these scholars is being continued and expanded by the department, and that the coming years will show us the true state of affairs in the region south of the Wadi Zerqa.

The real curiosity is that Glueck's hypothesis was ever taken so seriously — as literally true — in the first place. Not only had his theory been based on the very shaky grounds of what he had *not* found, but his own survey itself, and not just subsequent discoveries, shows a significant number of settlements from both the Middle Bronze II and the Late Bronze periods,<sup>18</sup> though it must be admitted that fewer such sites were found in his later surveying once he had published

---

(14) That neither the Amorites nor the biblical patriarchs have anything to do with this period is argued in detail in my *Historicity of the Patriarchal Narratives*, pp. 17-171.

(15) A. Dajani, "A Hyksos Tomb at Kalandia", *ADAJ*, 2 (1953).

(16) R. H. Dornemann, *The Cultural and Archaeological History of the Transjordan in the Bronze and Iron Age* (unpubl. Chicago Diss. 1970).

(17) S. Mittmann, *Beiträge*, esp. p. 221; cf. also, G. Lankaster Harding, "Excavations in Jordan, 1951-1952", *ADAJ*, 2 (1953) p. 82-88; *idem*, "Four Tomb Groups from Jordan", *PEFA*, 6 (1953); F. Ma'ayah, "Recent Archaeological Discoveries in Jordan" *ADAJ*, 4-5 (1960) p.

114-16; *idem*, "Recent Discoveries in Jordan", *ADAJ*, 8-9 (1964) p. 47-55; G. R. H. Wright, "The Bronze Age Temple at Amman", *ZAW*, 78 (1966) p. 351-57; J. B. Hennessy, "Excavation of a Late Bronze Age Temple at Amman", *PEQ*, 98 (1966) p. 155-62; D. Gilead "Burial Customs and the Dolmen Problem", *PEQ*, 100 (1968) p. 18; V. Hankey, "A Late Bronze Age Temple at Amman", *Levant*, 6 (1974) p. 131-78.

(18) N. Glueck, "The Archaeological Exploration of El-Hammeh on the Yarmuk", *BASOR*, 49 (1933) p. 23, *BASOR*, 51 (1933) p. 9-18; *idem*, "The Earliest History of Jerash", *BASOR*, 90 (1943) p. 22; *idem*, "Some Ancient Towns in the Plains of Moab", *BASOR*, 19 (1943) p. 7-26; and the *AASOR*, volumes, *passim*.



his Wadi Zerqa hypothesis. Moreover, perhaps because Glueck never gave us maps of his Middle and Late Bronze finds, it has not been noticed that the number of sites from these periods north of the Wadi Zerqa is also not large, and, moreover, no period is represented by a large number of sites to the south of the wadi. Apparently the south had not received a very thorough survey, and this resulted in fewer sites being found here, especially since the Transjordanian plateau becomes more arid the further south one goes. Finally, it must be suspected, on the basis of Mittmann's survey of the north, that Glueck was not sufficiently familiar with Middle Bronze and Late Bronze pottery, with the result that his survey shows the distorted picture that throughout eastern Jordan there was a disproportionately low number of sites of the Middle and Late Bronze Age. This disproportion is not found in Mittmann's survey.

This does not and is not meant to discredit Glueck's surveys. The inadequacies of Glueck's surveys are stressed, rather, to emphasize an important rule in interpreting any surface survey: not only must all that has been found be taken seriously, but all negative evidence (that is, what was not found), and any conclusions drawn from such lack of evidence, have to be always treated with severe scepticism.

Glueck's southern boundary for his Middle Bronze II culture in eastern Jordan — the north bank of the Wadi Zerqa — is furthermore unacceptably arbitrary, and should have been rejected on principle from the very beginning, for it pays no attention to the real causes which separate unsettled desert regions and semi-arid steppelands from the traditional agricultural regions. As all who live in

Amman are aware, the Zerqa can hardly be seen as forming a boundary of this type since its rich supply of water supports farming on both the north and the south banks of the river. This is of course not in itself an argument for settlement south of the river, but it does point out the potentialities for settlement that were also then available, and it should prevent us from dismissing too lightly the positive archaeological evidence for settlement that we do have with strange theories about nomadic shrines with Mycenaean pottery and the like.

The striking contrast between the lack of Middle Bronze I archaeological remains in the Beersheba region south of the northern branch of the Wadi Gaza, and the very large number of sites in the much more arid region of the central Negev mountains raises similar questions. Of course, we ought not to assume the existence of extensive agricultural settlement in regions of relatively barren mountains and steppeland, such as the mountains of the central Negev and Sinai, when agriculturally more promising regions — such as the Beersheba Basin — are obviously lacking such settlement. We ought to ask, however, whether the people of the Bronze Age considered the Beersheba Basin more preferable for the kind of farming they pursued; or perhaps better put: since the sites in the Negev do after all exist, why didn't people at this time find the Beersheba region also suitable for farming, when they settled over such large regions of the more arid central mountains only twenty kilometres to the south of Beersheba?

The answer lies not so much in the relative amount of rainfall in the two regions, but in the amount of water which the crops in fact

receive.<sup>19</sup> The Beersheba Basin is a large flat plain with less than 200 mm. of rainfall, and has a rich agricultural potentiality only with the support of a developed technology in both water storage and irrigation. Such a technology, alongside of widespread agricultural settlement in this region, was not common until towards the end of Middle Bronze II, and was never fully exploited in this region before the sixteenth century, A.D. No such knowledge in the conservation of water resources necessary to farm this rich region is known to have existed in Palestine during the Middle Bronze I period. The small number of MB I sites that there were in the region lay along the banks of the larger tributaries of the Wadi Gaza, and apparently exploited the naturally irrigated fields there.<sup>20</sup> On the other hand, the large flat plains of the Beersheba region offer admirable grazing range, and with a relatively high

---

(19) Indeed, too often, totally untenable hypotheses are made on the basis of rainfall patterns alone. So K. Prag, in her *Levant* article argues that the 100 mm. Isohyet both coincides with the continuation of the Indo-Turanian vegetation types and marks the border of the region of most dense settlement in the Negev. She presents the principle that the 100 mm. Isohyet in general marks the limits of the EB IV/MB I settlement in the Near East. Not only is Indo-Turanian vegetation found in patches south of the 100 mm. Isohyes line but the majority of the EB IV/MB I sites lie in areas which receive less than 100 mm. mean annual rainfall! (Cf. M. Evenari et alii, *The Negev*, 1971, p. 30: Sde Boker 76mm; Avdat: 83mm; Shivta: 86mm; cf. also, P. Mayerson, *The Ancient Agricultural Regime of Nessana and the Central Negeb*, 1960, p. 10: Bir Asluj: 86mm; Auja: 65mm). Moreover, the southern part of the Beersheba basin receives an annual rainfall of nearly 200mm (Evenari, p. 30: 195 mm; Mayerson, p. 10: 192mm), though it appears to be unsettled at this time. When taken alone, rainfall.

Isohyets are only indicative of agricultural potentialities in areas where large flat fertile plains are found. In the few areas of Palestine

water table accessible to shallow wells, is extraordinarily suited for a non-agricultural people.

The situation in the central Negev mountains is quite different. Here we find an annual rainfall of less than 100mm, not even half that of Beersheba. Nevertheless, in contrast to the sparsely settled Beersheba region, there are hundreds of EB IV/MB I sites scattered alongside narrow terraced fields in the small but fertile wadis which run down from the mountains between the barren rocky hills.<sup>21</sup> Though the amount of water from rainfall at first appears prohibitively limited, water running down off areas of many square kilometres is trapped by the terraces constructed in the wadis which hold back the soil and allow the water slowly to percolate into the rich loess. The floods in the Negev bring to these agricultural patches an abundance of water, on the average equivalent to

and Syria which fit such a description, the limits of agricultural feasibility, without compensating factors such as the development of irrigation technology and storage, probably lies somewhere between the 200-300mm Isohyet rather than the 100mm line.

(20) Far more important than absolute rainfall for the displacement of agricultural settlements in the fringe areas of the Near East is the drainage network which presumably brought supplemental water to the fields. It is along the banks of these wadis that most settlements in the semi-arid regions are found during these early periods. This settlement pattern changes radically during the MB II period. I hope to demonstrate this in detail in the *TAVO* volumes now in preparation.

(21) The fertility of these wadis has long been known (Cf. P. Mayerson, *The Ancient Agricultural Regime*), but now is beyond cavil after the extensive experimentation of M. Evenari's team (*The Negev - passim*). It is also apparent from widespread Arab settlement of this region prior to 1948. The description of these people as "beduin" is more related to cultural heritage than indicative of nomadism. (Cf. E. Marx, *Beduin of the Negev*, 1967).

about 600 mm. of annual rainfall,<sup>22</sup> an amount similar to the better regions of Palestine. In dry seasons it has been found that even a single flood caused by at least 10 mm. of rain is sufficient to produce a minimal crop. During the Iron Age, and especially during the Nabatean, Byzantine, and early Islamic periods, the technology of terracing and water control was expanded to include most of the major waterways in the central Negev as well, from Nissana to Subeita and the Wadi Abda'. Before the 1948 war, approximately 25,000 Arabs settled this region — many in year-round settlements. Run-off agriculture — not counting the raising of feed crops for their sheep and goats — furnished some 60% of their income. Wheat and barley, grapes, dates, and figs, fruit trees and winter vegetables were their basic crops.

A further important difference between the MB I sites here and the few that have been found in the Beersheba Basin is that the sites near Beersheba, as much as can be determined from what we know of the sites today — several of which have been excavated — were relatively compact villages, next to good water sources, very similar to what we find throughout Palestine and Transjordan during most periods of their settlement. Most of the Negev sites, however, give

rather the appearance of widely scattered homesteads, with individual dwelling units and corrals for flocks.<sup>23</sup> Larger sites, still maintaining however the appearance of a conglomeration of homestead-like structures, occur only in a few extraordinarily fertile and relatively well watered regions, such as near a major spring. The architecture of the Negev sites, with their round stone foundations, courtyards and corrals, is strikingly different from anything found in Palestine or northern Transjordan.<sup>24</sup> Even the burial practices of the MB I people in the Negev, characterised by a shallow cist, covered by a mound of stones, is in stark contrast to the shaft tombs and the cave burials which are the more typical burial places of the regions to the north.

The overall picture that we now have of the MB I sites in the central Negev, extending from the north-central Sinai, differentiates them from the MB I sites of eastern Jordan. Geographically and ecologically, there is nothing in the central Negev which resembles the fertile regions of eastern Jordan. Jordan can, by no stretch of the imagination, be understood as an agricultural "fringe" area. The central Jordanian plateau is *sui generis*, and the hill country, even far to the south of Karak, has more in

(22) There is an abundance of evidence for this; the estimate here is taken from the experimentations carried out by the above-mentioned Evenari team.

(23) Descriptions of these sites can be found in the publications of Nelson Glueck: "Explorations in Western Palestine", *BASOR*, 131 (1953) p. 6-15; "Further Explorations in the Negev", *BASOR*, 137 (1955) p. 10-22; "The Age of Abraham in the Negev", *BA*, 18 (1955) p. 2-9; "The Third Season of Exploration in the Negev", *BASOR*, 138 (1955) p. 7-29; "The Fourth Season of Exploration in the Negev", *BASOR*, 142 (1956) p. 17 - 35; "The Fifth Season of Exploration in the Negev", *BASOR*, 152 (1958) p. 18-38; *Rivers in the Desert* (1959); "An

Aerial Reconnaissance of the Negev", *BASOR*, 155 (1959) p. 2-13; "The Negev", *BA*, 22 (1959) p. 82-97; "Archaeological Exploration of the Negev in 1959", *BASOR*, 159 (1960) p. 3-14; "Further Explorations in the Negev", *BASOR*, 179 (1965) p. 6-29. See also Y. Aharoni, "The Land of Gerar", *IEJ*, 6 (1956) p. 26-32; *idem*, "The Negev of Judah", *IEJ*, 8 (1958) p. 26-38; *idem*, "The Ancient Desert Agriculture of the Negev: Early Beginnings", *IEJ*, 8 (1958) p. 231-268; "The Negev" in *Archaeology and Old Testament Study*, D. W. Thomas, ed., (1967) p. 384-401; and also B. Rothenberg, *God's Wilderness* (1961); *idem*, *Timna* (1973).

(24) M. Kochavi, "The Excavation at Tell Yeruham", *BIES*, 27 (1963) p. 284-92.

common with the hill country of Palestine than it does with the Negev and Sinai.

The EB IV/MB I sites of eastern Jordan continue the tradition of village agriculture common to both Palestine and Jordan during the whole of the Bronze Age. Changes in settlement patterns are only regional and local changes, and in no way reflect the sweeping historical disruptions one is asked to believe in most of the literature on this period.

This is also true of the EB IV/MB I period on the West Bank of Jordan. Kenyon's and Albright's claims that this transition period somehow reflects a conquest of Palestine by semi-nomadic Amorites, who are known mostly by their tombs, pastoral wanderers in the hill country, who buried their dead after their return from seasonal migrations, is not even born out by their own excavations at Tell Beit Mirsim and Jericho. Both these sites show extensive, though shallow, occupation from this period.

Continued excavation and especially surface exploration throughout Palestine have brought to light numerous occupation sites from the EB IV/MB I period. Furthermore, when it is remembered that most burials during this period were in single interments, the proportion of known burials to settlements seems to be about the same as during the Late Bronze Age, when the custom of multiple burials with a single tomb — thus the use of fewer tombs — was widely practiced. Also the EB IV/MB I settlements are not usually found in the traditional grazing regions where one would expect to find them if the people had really been semi-nomadic shepherds. Most of the EB IV/MB I sites are located near the rich

agricultural fields of the Plain of Esdraelon, the Beisan Valley, along the rich alluvial stretches of the Wadi el-Far'ah, and especially in the Jordan Valley, on both sides of the river. In the hill country, however, except for a few cave dwellings, the MB I settlements are found next to the small fertile valleys scattered among the hills.<sup>25</sup> As already mentioned above, in the wide grazing plains of the Beersheba region, such sites are found only in very limited numbers, and there only where a minimal unirrigated farming seems possible. They are totally absent in the bedouin lands of the great Judaeac Desert.

Judging from such evidence — the evidence we now have — the culture of this period can be described as a typical village farming culture, in every way confirming the results of Glueck's and Mitmann's surveys of the northern Transjordan.

To summarize very briefly: the typical Bronze Age settlement of both Palestine and eastern Jordan can be characterized as that of small village agriculture. This type of settlement seems to be continuous throughout this entire area from the Late Chalcolithic period through the Late Bronze period. The heaviest concentration of settlements seems to be in those areas where rich and extensive fields are combined with plentiful water, especially the northern Jordan and Beisan Valleys. The settlements of the central Negev and northcentral Sinai form a separate fringe culture with its own regional history, is independent of the richer and more populous regions of the north.

Thomas L. Thompson  
June 19, 1974

---

(25) A detailed presentation of this material will be given in the above mentioned **TAVO**, volume.

# The Excavation of the Roman Forum at Amman (Philadelphia), 1964 - 1967

by

Adnan Hadidi

## Introduction

Little excavation has been carried out at Amman and that was confined to some soundings and removal of debris in and around the acropolis hill, the Qal'a (Fig. 1), and to the clearance of a few tombs of the Bronze Age, Iron Age, Roman and Byzantine periods which have been discovered in the course of building operations.<sup>1</sup> At intervals between 1929 and 1938, an Italian archaeological expedition under the direction of Renato Bartoccini conducted limited excavations on the acropolis. The results of these excavations are unfortunately as yet not fully published.<sup>2</sup> The Roman temple has been partly cleared, and many important architectural features brought to light. Among them was a frieze with the name of Marcus Aurelius on it.<sup>3</sup> Much evidence of the pre-Roman occupation of the acropolis hill was uncovered. The impressive Byzantino-Islamic building north of the temple was also cleared.

(1) *QDAP*, XI (1944) p. 67-74; XIII (1946) p. 58-62; XIV (1950) p. 81-94; *ADAJ*, I (1951) p. 30-33; IV-V (1960) p. 114; XV (1970) p. 37-38; XVII (1972) p. 81-83; *APEF*, VI (1953) p. 48-65.

(2) The following preliminary reports have been published by the excavator, R. Bartoccini, "Ricerchi e scoperte della missione italiana in Amman", *Bollettino dell'Associazione Internazionale degli Studi Mediterranei*, also under the title, *International Mediterranean Research Association*, 3 (1930) p. 15-17; "Scavi ad Amman della Missione Archeologica Italiana", *ibid.*, 2 (1932), p. 16-23; 4-5 (1933-34) p. 10-15; "La Rocca Sacra degli Ammoniti", *Atti del IV Congresso Nazionale di Studi Romani*, (1938) p. 3-8.

(3) Cf. C. R. Conder, *Survey of Eastern Pales-*

tin, (1889) p. 33; H. C. Butler, *Syria, Princeton University Archaeological Expeditions to Syria in 1904-5 and 1909*, Div. III, inscr. 4.

(4) *Reisen durch Syrien, Palästina, Phönicien, die Transjordanländer, Arabia Petraea und Unter-Aegypten (1806)* ed F. Kruse et al., Vol. I (1854) p. 396f.

(5) *Travels in Syria and the Holy Land (1812)* (1822) p. 357-360.

(6) *Travels in Palestine through the Countries of Bashan and Gilead, East of the River Jordan (1816)* (1821) p. 67-79.

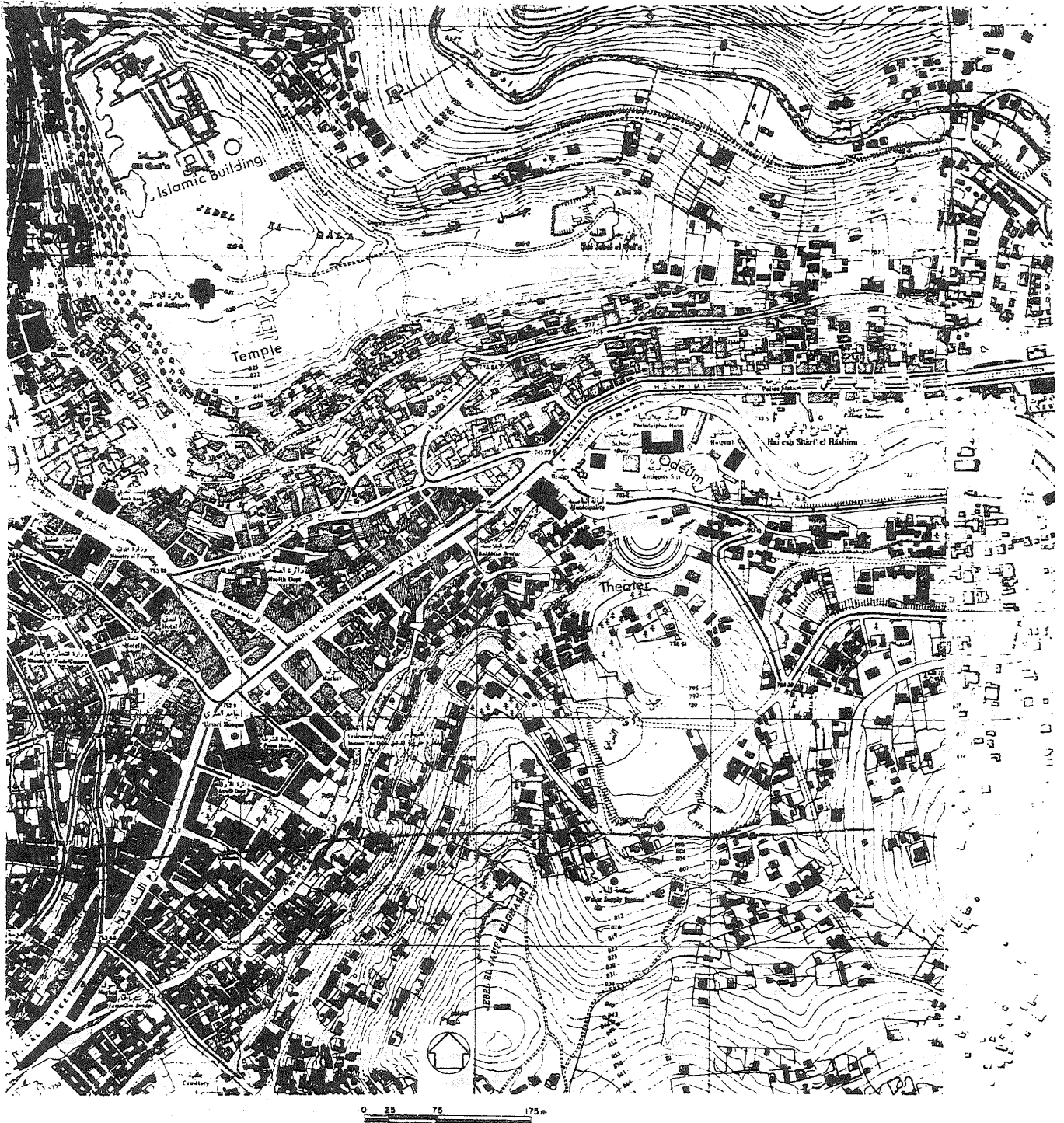
(7) C. R. Conder, *op. cit.*, p. 19-64.

(8) *Die Provincia Arabia*, Vol. II (1905) p. 216-221.

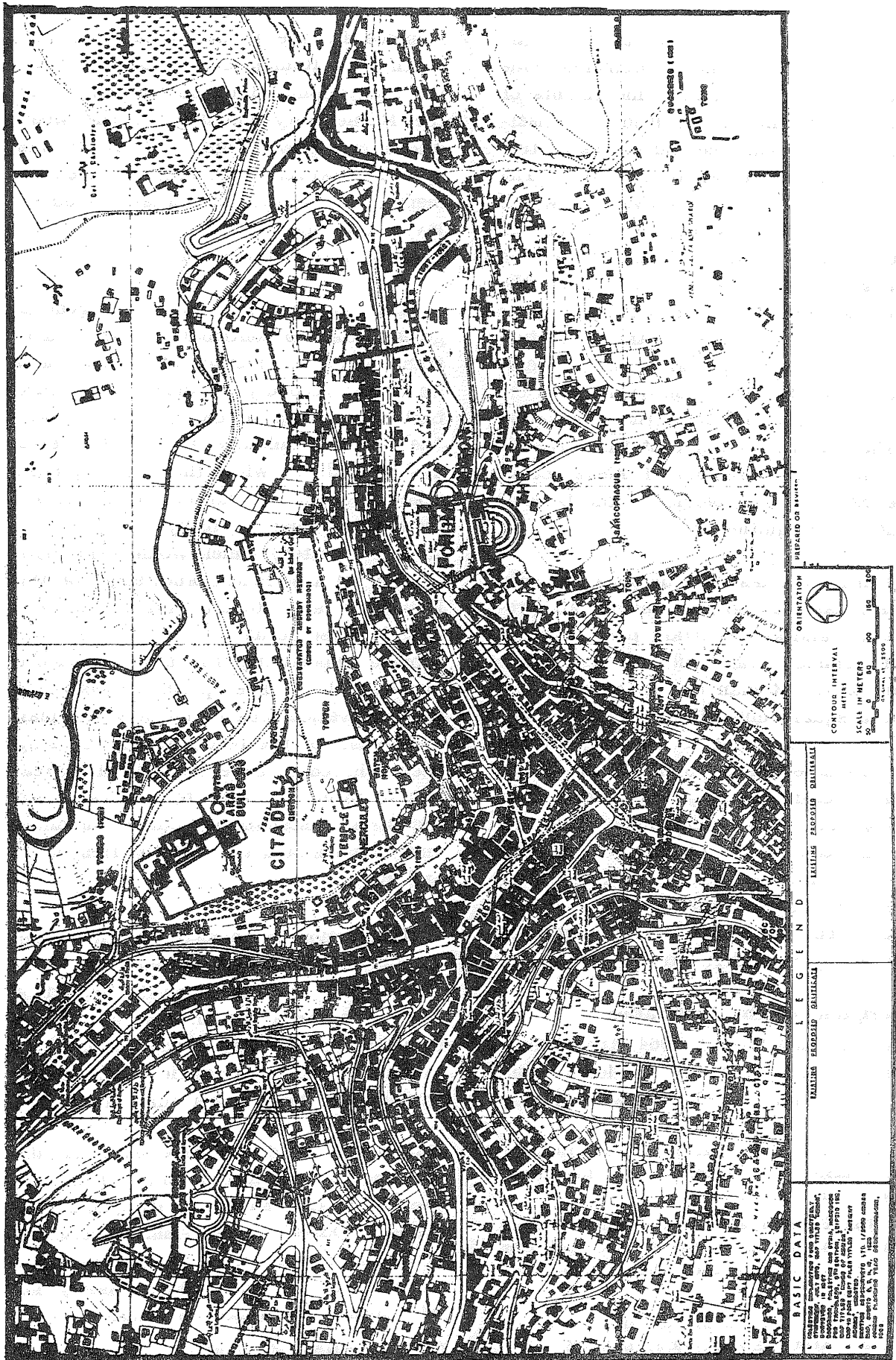
(9) *Op. cit.*, Div. II, Section A, Southern Syria, (1919) p. 34ff.

The Department of Antiquities of Jordan was established in 1928 and since then its activities have been devoted to

Fig. 1







the protection and conservation of archaeological sites and monuments. One of the most remarkable achievements of this Department in the field of conservation is the clearance and reconstruction of the Roman theater at Amman.<sup>10</sup> The first three systematic excavations which were undertaken by the Department of Antiquities of Jordan in Amman are the excavation of the Roman forum in the lower section of the ancient city under the direction of the writer, the excavation of the Roman temple area on the acropolis under the direction of R. H. Dornemann<sup>11</sup> and recently the excavation on the eastern rectangle of the acropolis hill under the direction of Fawzi Zayadine, Senior Archaeologist of the Department of Antiquities.<sup>12</sup>

During the last few decades, the city of Amman has grown out of all proportions, and an important part of downtown Amman was built on the major ruins of the Roman city in an area less than a square mile. The crucial area lies at the lowest point in the city, where the Philadelphians built their great forum, beside the *wadi*, or stream that drains the surrounding hills (Fig. 1). On the south side of the forum rises the great Roman theater, Amman's best landmark, and on the east side is the odeum. The forum area had long been overlaid by a modern street.

#### Description of the Excavation

In the summer of 1964, the Municipality of Amman finally decided to convert the area in downtown Amman

bounded by the Roman theater on the south, the Roman odeum on the east, the Philadelphia Hotel on the north and the Municipality building on the west, into a city park (Figs. 1, 2, 3). It was agreed, however, that first the Department of Antiquities of Jordan should be given the opportunity to excavate the site and record the results.<sup>13</sup>

The excavation had four general goals: First, to contribute to our understanding of the history of Amman and its times; secondly, to discover evidence that would help in dating more closely the Roman buildings around the area and to find out when the city had been taken over by the larger Roman architectural scheme; thirdly, to recover stratified pottery which would contribute to our yet insufficient knowledge of the Hellenistic and Roman ceramic chronology in East Jordan;<sup>14</sup> and fourthly, to provide opportunity for field experience in archaeology. The specific objective of this excavation was to uncover the plan and extent of the forum which has long been believed to have occupied this area, and to probe the area for domestic and industrial installations, public buildings and religious structures of the Hellenistic and Roman times.

Excavation commenced on November 14, 1964 and ended on January 1st, 1967. There were several intervals extending sometimes for a few months due either to delays in obtaining official permissions to shut off vehicular traffic which passed through the busy street that ran across

(10) The late Mr. Hassan Awwad, then technical assistant is credited with the supervision of the project.

(11) **The Cultural and Archaeological History of the Transjordan in the Bronze and Iron Ages**, Vol. I (Unpublished Dissertation), Chicago, 1970.

(12) "Recent Excavations on the Citadel of Amman", *ADAJ*, XVIII (1973) p. 17-35.

(13) Thanks are due to those who made the excavation at the Roman forum of Amman possible, the Lord Mayor and the Municipality engineers, Director of the Traffic Department, Director of the Department of Antiquities, and above all to the United States Agency for International Development to Jordan.

(14) See *ADAJ*, XV (1970) p. 11-15.



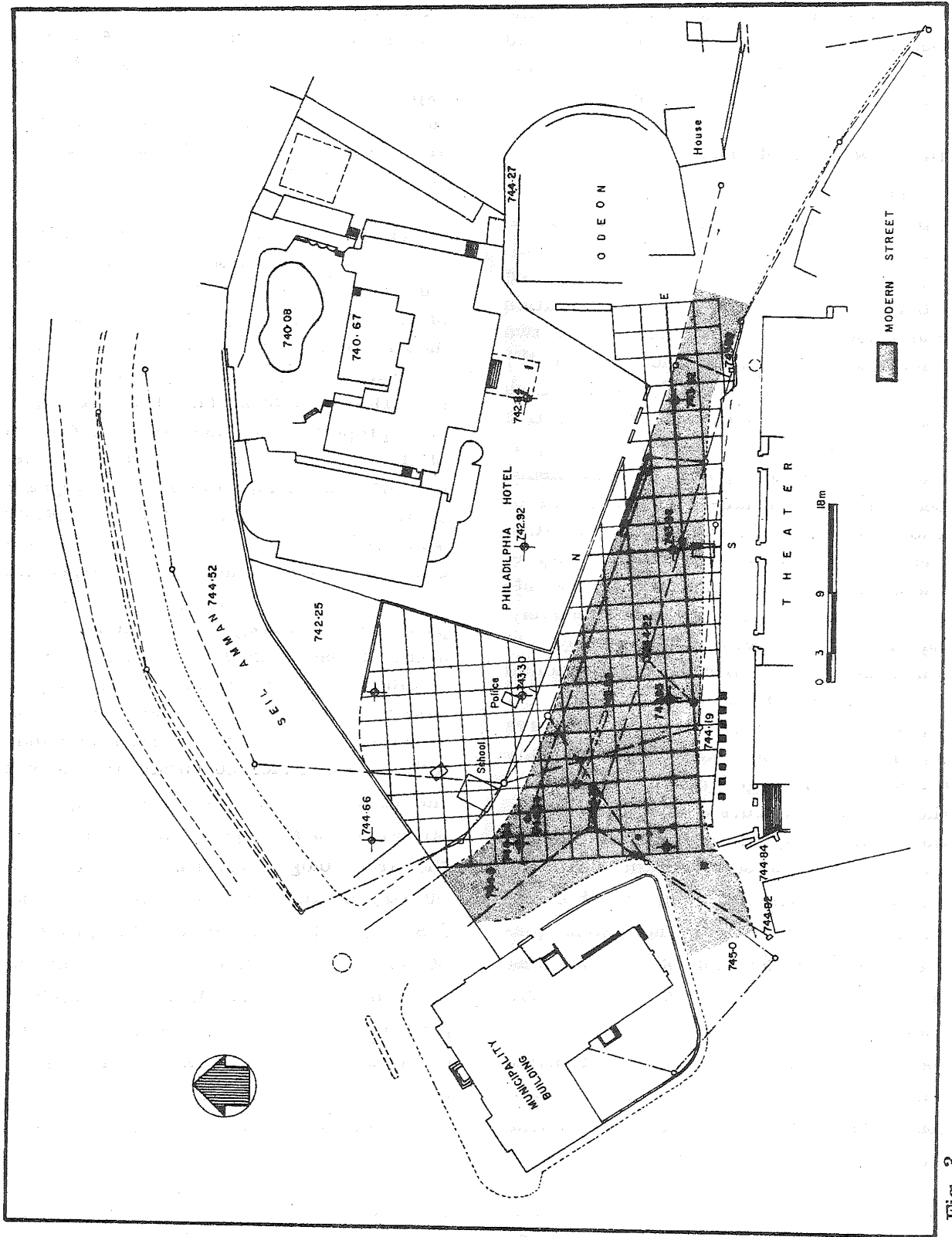


Fig. 3

the area, to alter water mains, telephone and electricity lines, sewers and etc., to rainy weather or to lack of fund. The excavation was a joint project of the Department of Antiquities of Jordan and the United States Agency for International Development in Jordan.<sup>15</sup>

### Description of Method

The method adopted for this excavation consisted of the following steps. First, the establishment of a three dimensional system for accurately and efficiently locating and relating excavation and conservation work. Secondly, a two dimensional horizontal grid of 5 (E-W) by 5 (N-S) meter was plotted for each assigned quarter of the site; the elevation of each major grid point above a permanent reference point or established bench mark. Permanent bench marks of known horizontal location and elevation were established in sufficient quantity to enable any area or find within the site to be located quickly and effectively. Squares on the grid are cited by (1) quadrant, (2) number on the horizontal axis, followed by a hyphen, and (3) number on the vertical axis. The area under excavation was conventionally divided into three geographical quadrants: the southwest quadrant near the theater, the northeast quadrant near the odeum, and the northwest quadrant near the Municipality building (Fig. 3). For example NW 11-6 is in the northwest quadrant between 50 and 55 meters west of the vertical axis and 25 to 30 meters north of the horizontal axis. Within the above grid system, one, meter wide balks centered on the grid lines were established. The 5 by 5 grid was chosen over the larger 6 by 6 or 6 by 8 grid to

provide a more scrutable working condition. This grid seems to have some disadvantage chiefly in that it does not allow space for more than a very few people to work in the square. A detailed evaluation, however, should await more experience in using it. It should be noted that the elevations in all plans and sections are in meters above Mediterranean Datum.

The excavation of the Roman forum at Amman was beset with difficulties. Difficulty arose out of the fact that most of the area had long been overlaid by a modern street (Pl. XXIV:A) and a few modern buildings, notably the Philadelphia Hotel complex. This Hotel is a private property and therefore exploration of the area is out of the question at least for the time being. Further, each phase of the salvage excavation was carefully scheduled, and any disruption of this schedule had far-reaching and expensive effects on the total program of the city park and sewerage construction. The archaeologist in such a program has to coordinate his efforts as closely as possible with the demolition and construction activities including the diversion of public utilities, for under no circumstances was the excavation allowed to hold up construction. Such cooperation requires that the archaeologist carefully evaluate his efforts, because in many instances, as past experience has shown, the progress of construction will not permit complete and thorough excavation by standard procedures. It was decided, therefore, to concentrate systematic excavation in three main areas (Fig. 3): the northeast quadrant between the back wall of the *scaenae frons* of the odeum and the

(15) Grateful acknowledgment is due Prof. Prescott H. Williams and the late Prof. Paul W. Lapp, Masters of archaeological methods, who during their assignment as archaeological ad-

visors with the U.S.-Jordan National Parks Planning Team (1964-1967) gave much of their knowledge and technical advice that helped bring the project to a successful end.

garden-wall of the Philadelphia Hotel, the southwest quadrant between the colonnade north of the back wall of the theater's stage building and the modern street that ran across the forum area, and finally the northwest quadrant adjacent to the side-walk of the Municipality Building.

The significance of the northeast quadrant is two-fold. First, to the west, Squares NE 8-1 and NE 8-2 cross the extension of the eastern colonnade of the forum and therefore would show whether the line of columns on this side of the forum continued northward in front of the odeum. Secondly, to the east, Squares NE 9-1 and NE 9-2 run to the line of the surviving portion of the back wall of the *scaenae frons* of the odeum and therefore would clarify the date as well as the relationship this building to the forum.

Roman and Hellenistic levels were reached in all squares that were opened in the forum area. In Squares NE 8-2, SW 5-1 and NW 11-6, excavation was carried further down to virgin soil. The objective of reaching virgin soil in these significantly located squares was to establish the sequence of occupation in the forum area from the earliest times.

#### Description of Loci 16

In the northeast quadrant, the lower part of the back wall of the *scaenae frons* of the odeum was uncovered to its foundation (Fig. 4; Pl. XXIV:F). A one by one meter trench was opened at right angle against this foundation wall to establish its date and composition (Pl. XXIV:D). It was found that this foundation wall was built of irregular blocks and chips of limestone of various sizes

with mortar to a height of about 1.60 m. and its bottom reached close to bedrock (Fig. 4). Locus 19 to which this wall belongs yielded Early Roman sherds which can be dated to the period between 50 B.C. and 70 A.D.<sup>17</sup> Thus, these sherds provide a date for the construction of the wall. At about two meters to the west and parallel to this wall, another wall was built on similar foundations (Fig. 4). This second wall provides a foundation for the stylobate of the eastern colonnade of the forum which ran in front of the odeum.

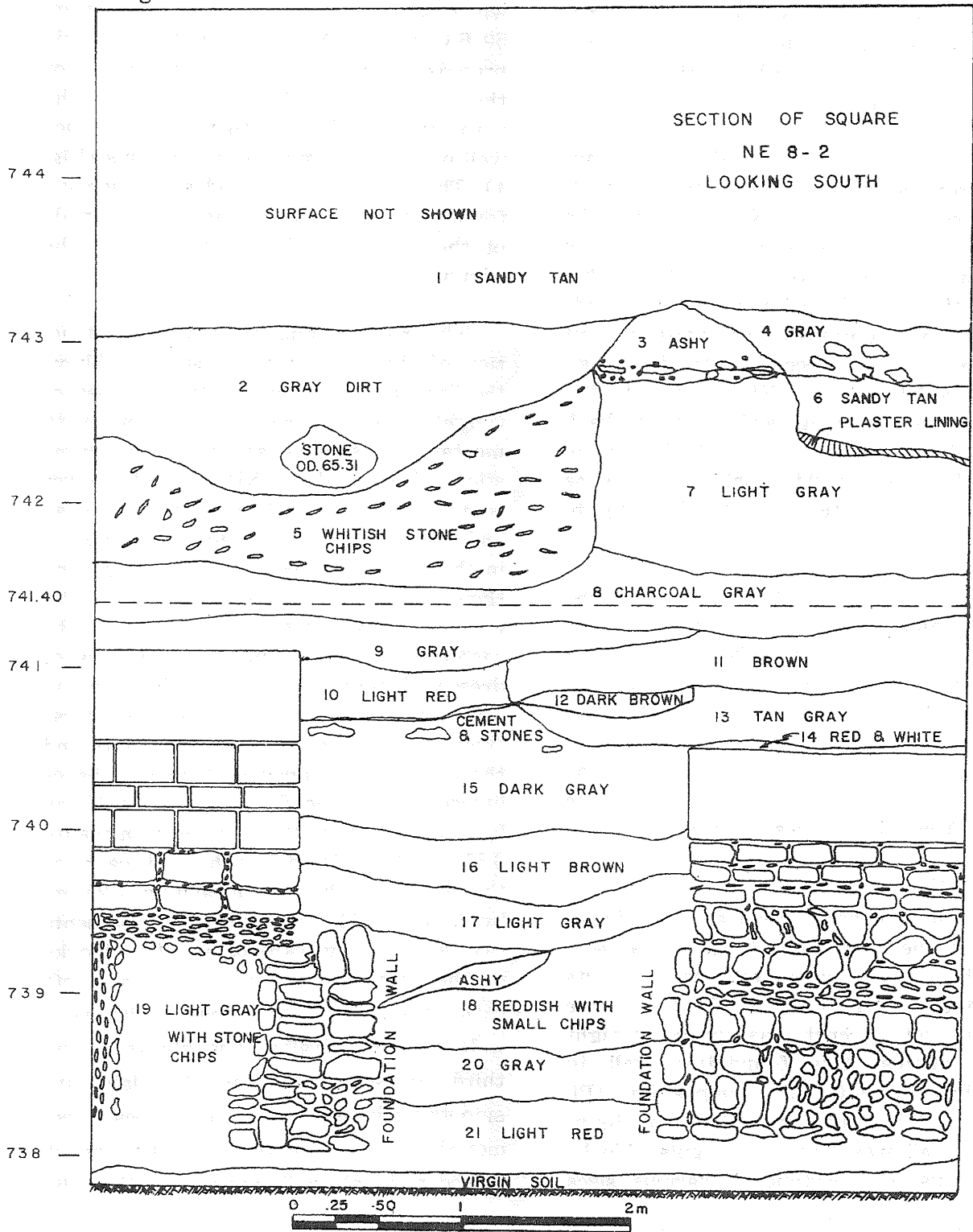
The material and method of construction of the two walls are similar. Above the foundations were laid two courses of roughly shaped blocks of limestone with mortar and smaller stones in the interstices (Fig. 4; Pl. XXIV:D). The lower course is laid on a thick layer of mortar and small chips of limestone. The stones in these two courses are well bonded and their sizes average about 0.40 m. by 0.15 m. Above these two courses in the eastern wall, were built three courses of dressed blocks of limestone laid out in alternating lines of headers and stretchers with mortar between the joints and the whole was topped with long slabs of limestone. The headers measure 0.40 m. by 0.25 m. each, the stretchers measure 0.35 m. by 0.18 m. each, and each of the slabs on the top measures 1.25 m. by 0.57 m. The masonry here presents two kinds of workmanship. The blocks in the first two lower courses are left with rough and heavy bosses with very wide marginal drafts. The blocks in the third course as well as the slabs are smoothly dressed and their bosses removed. One explanation for the use of bossed and unbossed masonry is that the

(16) The term "locus" is used in this report for expressing any coherent layer of earth or discernible architectural feature which can be meaningfully distinguished from features

around it; cf. H. D. Lance, *Excavation Manual for Area Supervisors*, (1967) p. 12, 32.

(17) ADAJ, XV (1970) p. 13.

Fig. 4



lower courses were not to be seen and thus the stones were left with their heavy unbossed faces. A closer examination, however, shows that the Roman builders intended to remove the bosses from all the stones as witnessed by the unfinished condition of a few blocks where the chisel marks are clearly seen. Moreover, the same process is obvious in the upper courses of the *scaenae frons* and in the superstructure of the odeum (Pls. XXIV: E; XXVIII: B, C, F). It is very likely, therefore, that the builders of the odeum were forced to leave the masonry of the building in this unfinished condition, perhaps either for lack of finances or in order to save time.<sup>18</sup> It should be noted in this connection that, although generally speaking the retention of smoothed bosses is characteristic of large Herodian masonry, exceptions do occur from time to time, as in the round tower at Herodium where the bosses of the smaller stones have all been removed.<sup>19</sup>

In the western wall, which runs parallel to the eastern wall, three courses of roughly shaped stones are directly topped with long slabs similar to those in the eastern wall both in size and appearance (Fig. 4). It is, however, lower than the eastern wall by about 0.30 m. The area between the two walls is covered with a layer of mortar and small irregular stones. The whole complex indicates that the odeum may have been originally approached by a wide entrance consisting of two or more wide steps.<sup>20</sup>

(18) A similar example is to be found in the building of Qasr at Araq el-Emir, about 17 km. west of Amman. Although this building is generally attributed to John Hyrcanus (187-175 B.C.) on the basis of literary evidence, its date is still disputed and by no means certain; cf. H. C. Butler, *op. cit.*, Div II, Section A, p. 9, Ill. 5:1 & p. 12, Ill. 6:1; V. Tchirikower, *Hellenistic Civilization and the Jews*, (1961) p. 458-459; Paul W. Lapp, "The Second and Third Campaigns at Araq el-Emir", *BASOR*, No. 171 (1963) p. 22, 24-25.

The fill above the two walls consists of wash and dump that had accumulated in a series of layers varying in color, thickness, texture and contents (Fig. 4). Loci 1 through 11 yielded mixed Roman, Byzantine and Islamic sherds and coins. Locus 5 is a large pit that contained debris of whitish stone chips and Umayyad sherds. Locus 6 had a Plaster lining which may have belonged to some sort of an Umayyad structure of a poor quality, although no other architectural elements were found associated with it. The stratigraphy of this fill indicate that the western wall and presumably the eastern wall and the odeum were still in use during at least part of the fourth century A.D. as shown by the ceramic and coin finds. The loci between 741.00 and 743.00 m. indicate that the area went out of use thereafter. A major earthquake in East Jordan is known to have knocked down walls and buildings in several sites in 365 A.D.<sup>21</sup> The same quake could have toppled the superstructure of the odeum, several columns in the forum and part of the theater. If this is so, the debris above the walls must be attributed to the period following 365 A.D.

The fill between the two walls i.e., between 740.75m. and 738.00m., consists of several layers varying in color, thickness, texture and contents. Locus 15 is made up of hard-packed dark gray earth ranging in thickness from 0.65 m. to 0.85 m. Its top was sealed with a layer of mortar

(19) Cf. V. Corbo in, *RB*, No. 2 (1964) p. 258-263, Pl. XIII.

(20) Most of the area where excavation may throw more light on this question lies within the private property of the Philadelphia Hotel. It is hoped that when the Municipality has acquired ownership of this area, further investigation would be undertaken in this section.

(21) D. H. Kallner-Amiran, "A Revised Earthquake-Catalogue of Palestine", *IEJ* I (1950-51) p. 225.

and small to medium size rough blocks of limestone. This indicates that the area between the two walls was paved and that this layer provided the subpavement. The sherds recovered in this locus were mixed Early Roman, Hellenistic and Iron Age. Locus 16 is about 0.40 m. thick in the middle and consists of loose light brown earth and mixed Early Roman, Hellenistic and Iron Age sherds. Locus 17 is about 0.30 m. thick and consists of loose light gray earth and the same mixture of sherds as in locus 16. Underneath, is a very thick layer, locus 18, which is about 0.80 m. deep and consists of loose reddish debris with small chips of limestone and mixed Early Roman, Hellenistic and Iron Age sherds. A narrow ash-pit was found dug in this locus but no sherds were found in it. Locus 20 is about 0.35 m. thick and consists of compact gray earth and mixed Early Roman, Hellenistic and Iron Age sherds. Locus 21 is about 0.40 m. thick and consists of hard-packed light red earth and mixed Early Roman, Hellenistic and Iron Age sherds. Thus, the stratigraphy of this fill show that the area was dug out in the course of building the walls and then thrown back in. The Early Roman sherds which can be dated to between 50 B.C. and 70 A.D., provide a date for this operation.

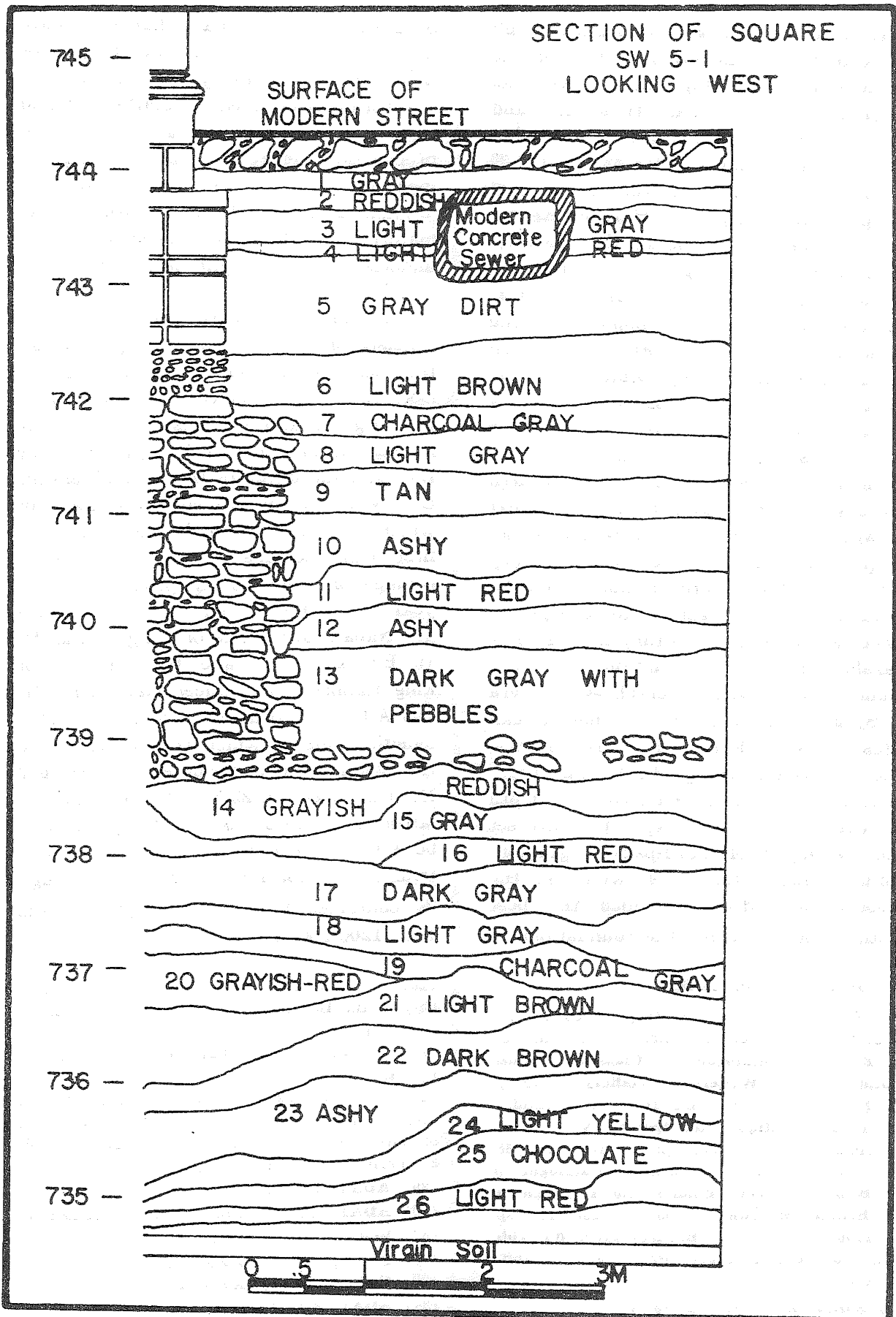
In the southwest quadrant which abuts the line of the columns north of the theater (Fig. 3), excavation began in Square SW 5-1, where virgin soil was reached (Fig. 5). This square was used as a control trench for the excavation of the other squares flanking it in this area to the east and west in order to allow speed with accuracy down through Roman and Hellenistic levels. It was found that the plinths of the columns are placed on a stylobate which consists of two parallel courses of smoothly dressed

quadrated blocks of limestone with perfect joints without mortar (Pl. XXV:A). Underneath the stylobate is laid the *euthynteria* or leveling course which consists of smoothly dressed flattish blocks of limestone well jointed and without mortar. The foundation wall underneath this course consists of two parts. The first immediately under the *euthynteria*, is made up of finely dressed blocks of limestone laid out in four alternating courses of headers and stretchers. Each of the headers measures 0.80 m. by 0.80 m. and each stretcher is 0.80 m. by 0.40 m. The second part of this foundation wall below, consists of a massive platform of roughly shaped limestone blocks averaging in size 0.40 m. by 0.25 m. and reinforced with smaller stones and mortar (Fig. 5; Pl. XXVI:E). The height of this platform is nearly 3.75 m.

Except for a disturbance caused by a modern sewer that ran across this pool in Square SW 3-1 (Fig. 5; Pl. XXV: pool in Square SW 3-1 (Fig. 5; Pl. XXV: C), a very similar stratigraphic picture is found in all squares of this quadrant. Loci 1-4 (Fig. 5) are disturbed layers which consist of debris differing in color and texture and contained mixed Roman, Byzantine, Umayyad, Abbasid, Mamluk, Ottoman and modern brick tiles. The latest coins recovered in these loci are of Constans II (641-668 A.D.) and an Umayyad coin of Damascus mint which can be dated to ca. 650 A.D.<sup>22</sup> Locus 5 is about 0.80 m. thick and consists of loose light brown earth associated with fallen columns, capitales and stones as well as second century A.D. Roman sherds. A coin dated in the fourth century A.D. provides a *terminus post quem* for the formation of this locus. The *terminus ante quem* for the collapse of the columns, capitals and stones is in all probability the earthquake of 365 A.D. (see above).

(22) ADAJ, XVIII (1973) p. 53, Pl. XXXIII, 3, 7.

Fig. 5



Loci 6 to 13 inclusive, constitute a fill associated with the lower section of the foundation wall (Fig. 5). These loci contained mixed Roman, Hellenistic and Iron Age I-II sherds. Locus 7 yielded a coin of Elagabalus (218-222 A.D.)<sup>23</sup> A bronze statuette of the infant god Harpocrates (Egyptian Haru-Pa-Khert) was recovered in Locus 13 (Pl. XXVII). This statuette belongs to the Egypto-Roman type of bronze figures of Harpocrates which became popular in the Hellenistic period and more so in Roman times especially among soldiers. Unfortunately, it is not possible to give a precise date to this statuette, as the type was in use for a long period of time from the third century B.C. to the fourth century A.D.<sup>24</sup> Judging from the context in which the statuette was found, it can be probably dated to the second century A.D. All Roman sherds found in this fill including a few Eastern terra sigillata pieces are of second century A.D. date.<sup>25</sup> Parallels for the foundation walls are found at neighboring Jerash,<sup>26</sup> Palmyra in Syria,<sup>27</sup> and a score of other Roman sites in Near East and North Africa. The remarkable thing about these foundations is that they extended to a depth of nearly 5 m. At this depth they are set upon a layer of hard-packed grayish-reddish gravel, Locus 14, which in the absence of bedrock, provided the best footing obtainable for the foundations.<sup>28</sup>

(23) *Ibid.*, p. 52, Pl. XXXII, 3.

(24) Bronze statuettes of Harpocrates are generally dated either Hellenistic or Roman: cf. D. K. Hill, *Catalogue of Classical Bronze Sculpture in the Walters Art Gallery*, (1949) p. XXIX, n. 89, & p. 36-39, pls. 16-19; A. de Ridder, *Les Bronze Antiques du Louvre*, Vol. I. *Les Figurines*. (1913) p. 53ff., pl. 29, Nos. 330-338, & pl. 44, No. 629; H. B. Walters, *Catalogue of the Bronzes, Greek, Roman and Etruscan in the British Museum*, (1899) p. 238-244 esp. No. 1496; P. Perdrizet, *Bronzes grecs d'Egypte de la Collection Fouquet* (Paris 1911) p. 46ff., Pl. XX.

(25) *ADAJ*, XV (1970) p. 13-14.

It is then obvious that what lay above this layer was a secondary deposit of earth. It is very likely that the site of the forum was filled in artificially and that an area of such size as this required preparation before it could be transformed into a plaza. The mixture of pre-Roman sherds and coins with Roman material in these loci become clearly understood in the light of this fact.

The fill underneath the foundations consists of several loci varying in color, thickness, texture and contents (Fig. 5). Loci 15 to 22 inclusive, contained mixed Iron Age II and Hellenistic sherds. The former can be dated to the eighth century B.C. and the latter to the second century B.C.<sup>29</sup> Locus 15 yielded seven coins of which only three could be identified. The first coin belongs to the autonomous coinage of Sidon dating probably to the year 60/59 B.C.<sup>30</sup> The other two coins are Nabataean, one is of King Aretas IV (9 B.C.-40 A.D.), and the other is of king Rabbel II and queen Gamelath (71-106 A.D.).<sup>31</sup> Locus 22 yielded three Hellenistic coins of which the earliest is of the type generally attributed to Antiochus III the Great (223-187 B.C.), and the latest is of Antiochus VIII Gryphus (125-96 B.C.).<sup>32</sup> The third coin is of Demetrius I (154/153 B.C.).<sup>33</sup> Loci 23 through 26 contained purely Iron Age I sherds (ca. 1200-900 B.C.).<sup>34</sup>

(26) C. S. Fisher, "The Forum" in, *Gerasa, City of the Decapolis*, edited by C. H. Kraeling, (1938) p. 154.

(27) K. Michalowski, *Palmyra*, (1962) p. 41, fig. 46.

(28) It is interesting to note that the whole process of building these foundations conforms to Vitruvius' description, cf. Book III, Ch. IV, 2 (Translated by F. Granger), 1931.

(29) *ADAJ*, XV (1970) p. 12, Pl. I-III.

(30) *ADAJ*, XVIII (1973) p. 51, Pl. XXXI, 6.

(31) *Ibid.*, p. 52, Pl. XXXI, 8, 9.

(32) *Ibid.*, p. 51, Pl. XXXI, 1, 3.

(33) *Ibid.*, p. 51, Pl. XXX, 2.

(34) *ADAJ*, XV (1970) p. 12, Pl. I-II.



On the basis of the archaeological evidence, there appears to have been at least three periods of occupation before the construction of the forum. The first period is in the Iron Age I, the second period is in the Iron Age II and the third period is during the Hellenistic and Nabataean times covering the last two centuries B.C. and at least the first three quarters of the first century A.D. There is no archaeological evidence to indicate that the site was occupied during the Persian period (550-331 B.C.). This may be explained by the fact that in 582 B.C., Nebuchadrezzar captured Amman and sent its population off into exile in Babylonia.<sup>35</sup>

In the northwest quadrant which abuts the western line of the colonnade of the forum next to the side-walk of the Municipality building, a very similar stratigraphic picture is found (Fig. 6). The first five loci consist of disturbed layers that contain mixed Roman, Byzantine, Islamic and modern sherds. Locus 6, in addition, yielded a Byzantine coin of Constans II (641-668 A.D.) and five Umayyad coins of mid-seventh century A.D. date.<sup>36</sup> Locus 8 is about 1.20 m. thick and consists of loose gray earth, pebbles and several fallen columns and other architectural members. To this locus also belongs a stairway which leads down to the central area of the forum (Pl. XXVI:A). The steps are built on sterile artificial fill of small irregular blocks of limestone and mortar. A terracotta pipe drain was laid alongside and slightly lower than the lowest step (Pl.

(35) Josephus, *Antiq.* X. 9, 7; Jeremiah 48, 76. It is significant to note that the excavations at Araq el-Emir (see fn. 18 above), show that there is a gap in occupation during this period on this site; cf. Paul W. Lapp, *op. cit.*, p. 20. According to Herodotus (III. 89.), Darius I (522-485 B. C.) reorganized the administration

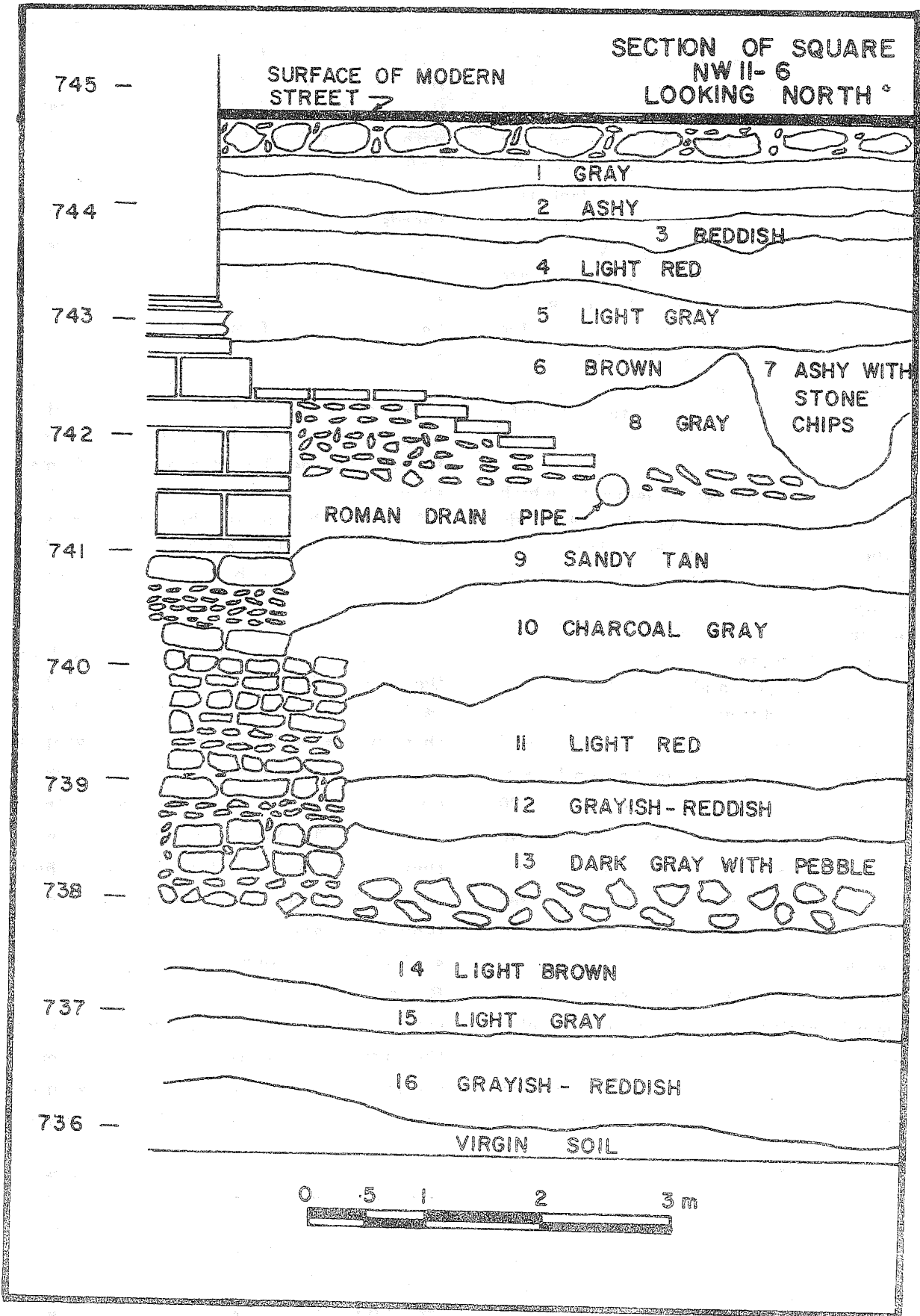
XXVI:B). Second century A.D. sherds associated with this drain make it contemporary with the Roman scheme for the construction of the forum. Loci 9 through 13, constitute a fill associated with the lower section of the foundation wall (Fig. 6). These loci contain mixed Roman, Hellenistic and Iron Age I-II sherds. No coins were recovered. The foundation wall itself is built of the same material and in the same way as in the southwest quadrant. The only difference here is that the footing was provided by a stratum made up of irregular blocks of limestone and mortar. Underneath the foundations, Loci 14 through 16 contain mixed Iron Age I-II, Hellenistic and Roman, sherds. The discovery of Roman sherds in these lower loci may be considered further proof that the area was filled and leveled artificially and thus explains the disturbance in the majority of the loci in the forum.

Several test trenches were opened on the north side of the street in the central part of the forum to find out whether there was a variation in the stratigraphy from that observed in the other areas, and to probe this part for architectural remains (Pl. XXIV:C). It was found that this section contained a fill which consisted mainly of disturbed and contaminated layers of wash and dump to a depth of about 2.25 m. above the Roman level. Further, there was no evidence of any architectural activity in the area. The sherds and coins recovered are predominantly late Roman, Byzantine and Islamic. It was decided, therefore,

of the Persian empire into twenty *satrapies* or provinces. Amman was placed under the fifth *satrapy* of Palestine. However, nothing is known of events here until the time of the conquests of Alexander in 331 B.C.

(36) ADAJ, XVIII (1973) p. 53, Pl. XXXIII.

Fig. 6



to employ a bulldozer for the removal of the street, the sub-pavement and the debris underneath. The fill, however, was carefully searched for coins and other significant material.

### Occupational History

The occupational history of the forum area as far as it has emerged from the excavation may be outlined as follows. The earliest occupation of the forum area was in the Iron Age I-II (Iron I: ca. 1200-900; Iron II: 900-600 B.C.).<sup>37</sup> to this period belong loci in the lowest levels which all but in the southwest quadrant were disturbed by the subsequent Roman building activity. In the areas where these loci were disturbed, it is not possible to differentiate Iron I levels from those of Iron II. The complete absence of archaeological material that can be attributed to the Persian period, make it almost certain that the site was not occupied during this time.<sup>38</sup> The area seems to have been reoccupied probably about the beginning of the third century B.C. after the division of Antigonus' kingdom between Ptolemy and Seleucus in 301 B.C.<sup>39</sup> This is indicated by the discovery of Hellenistic sherds and coins mixed with Iron Age sherds in the loci below the Roman foundations as well as in the fill associated with these founda-

tions. The Hellenistic coins recovered in the forum are all of the Seleucid mint. The absence of Ptolemaic coins is rather striking since we know that the city was founded by this dynasty and renamed Philadelphia after Ptolemy II Philadelphos. Coins of this monarch were, however., discovered at nearby Araq el-Emir and Jerash. The discovery of Nabataean sherds and coins of the first century A.D. may indicate that the city had come into closer ties with, if not under the direct control of the Nabataeans. During the second century A.D., the forum must have reached its highest development and prominence. The architectural elements were laid out and constructed in typical Roman style of the Antonine period, with at least two phases evident. The first style is manifestly dependent upon the "grand style" of the second century A.D. which we find especially represented in Jerash, Palmyra and Baalbek. Here, the east and south colonnades are built in this style. The capitals with their rich modelling are definitely in the Antonine tradition, but the treatment of the foliage is already somewhat dry, the spirals are quite plain and the *cauliculus* has almost disappeared (Fig. 7:A-B; Pl. XXIX).<sup>40</sup> Similar capitals, columns and bases in Jerash, Palmyra, Baalbek, Antioch-on-the-Orontes and Miletus, are dated to the middle of the

(37) Cf. W. F. Albright, *The Archaeology of Palestine*, (1961) p. 112.

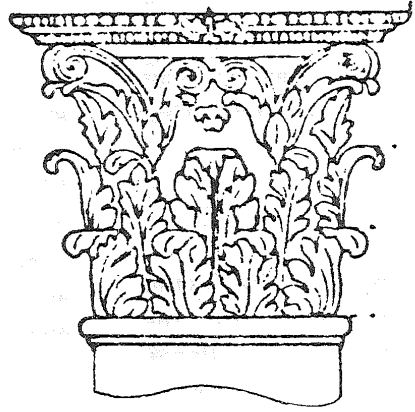
(38) See fn. 35.

(39) By right of possession Ptolemy obtained Palestine and southern Syria in the partition of Antigonus' kingdom after the battle of Ipsus in 301 B.C. He and his successors held these districts virtually intact up to 218 B.C., in spite of repeated Seleucid attempts to make good their rival claims. As a city of the administrative district of Ammanitis under Ptolemaic control, Amman was undoubtedly

exposed to Greek influence since early in the third century B.C.

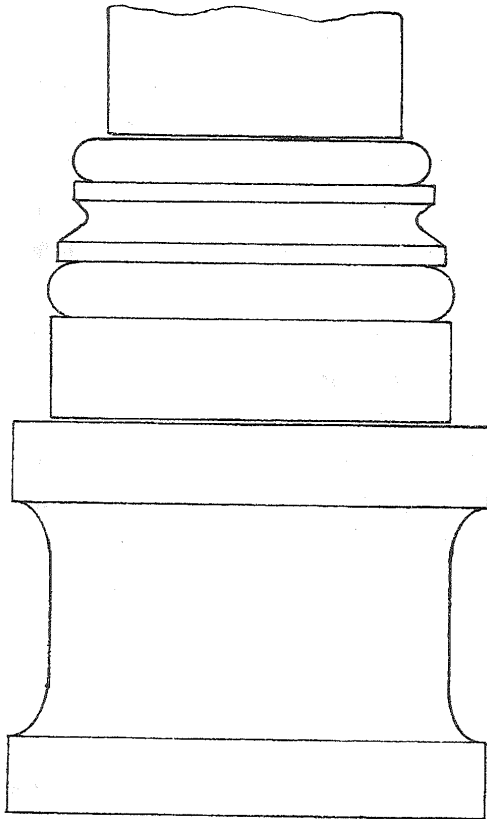
(40) For the development of the type, cf. Daniel Schlumberger, "Les formes anciennes du chapiteau corinthien en Syrie, en Palestine et en Arabie", *Syria*, 14 (1933) p. 283-317, especially p. 286, 306-308; E. Weigand, "Baalbek und Rom, die römische Reichskunst in ihrer Entwicklung und Differenzierung", *JdI*, 29 (1914) p. 37-91, especially p. 61-63, figs. 15, 25, 27, 30-31, & pls. 1: 2, 3: 2; K. Ronczewski, "Kapitelle des el Hasne in Petra", *JdI*, 47 (1932) p. 38-90, figs. 9, 10, 16.

Fig. 7



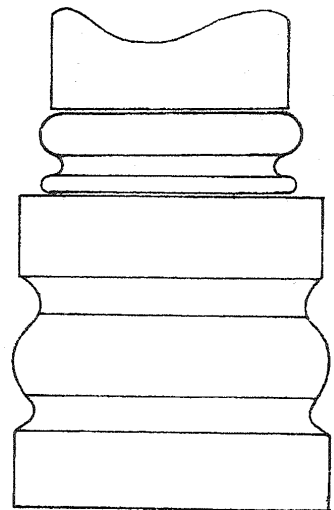
A

0 .25 .75 1.50 m



B

0 .20 .60 1.20 m



C

second century A.D.<sup>41</sup> Further, the decoration of the architrave finds parallels on friezes and cornices of gates and temples throughout Syria during the first and second centuries A.D. (Pl. XXIX).<sup>42</sup>

The west colonnade seems to be the product of a later period. This is attested by the use of a debased type of Corinthian column. The column-base and the plinth on this side find similar examples in those used in the Camp of Diocletian at Palmyra dated to the last quarter of the third century A.D. (Pl. XXX:D; Fig. 7:C).<sup>43</sup> Although no capitals were found in this side of the forum, one may assume that they were of the late squat Corinthian type used in Palmyra and elsewhere in the third and fourth centuries A.D.

#### The theater (Fig. 8; Pl. XXVIII:A)

This celebrated monument was noted and illustrated by many an archaeological visitor during the last century, and was first fully described by H. C. Butler in 1905.<sup>44</sup> The dates which have been given to this theater range from the beginning to the end of the second century A.D.

(41) Cf. C. H. Kraeling, *op. cit.*, pls. I: b, VI: a, VII, XVIII: b, & XXVII; Th. Wiegand, *Palmyra*, *Ergebnisse der Expeditionen von 1902, 1917, 1932*, p. 85-107, figs. 96, 176-182, Pl. 38; K. Michalowski, *op. cit.*, (1961) p. 19, fig. 16; A. Champdor, *Les ruines de Palmyre*, (1953) p. 81ff.; Th. Wiegand, *Baalbek*, *Ergebnisse der Ausgrabungen u. Untersuchungen, 1898-1905*, Vol. 2, (1923) p. 6-7, figs. 9-14; R. Stillwell, *Antioch on the Orontes*, Vol. III (1937-1939) p. 150ff, pls. 3-31; A von Gerkan, *Milet, Das Stadion*, (1921) p. 36ff., fig. 46.

(42) Cf. D. Krencker & W. Zschietzschmann, *Römische Tempel in Syria*, 1938, especially the frieze of the temple at Bziza, pl. 4 dated to the early first century A.D., and the cornice of the basilika at Burkush, pl. 104, dated to the middle of the second century A.D.; also the pediment of the temple of Bacchus in Baalbek dated somewhere in the second century A. D., cf. Th. Wiegand, *op. cit.*, figs. 12-14, pls.

D. S. Robertson dates it to 150 A.D. with a question mark.<sup>45</sup> The recent clearance of the stage-building and the excavation of the forum calls for a re-examination of the problem of its date and its relation to the forum.

The fill underneath the *pulpitum* (Pl. XXX:A) in front of the *scaenae frons* yielded sherds of the second century A.D. and a coin of Marcus Aurelius (169-177 A.D.) issued at the mint of Philadelphia or Amman.<sup>46</sup> A coin of Commodus (180-182 A.D.) was discovered in the upper passage on the west side of the auditorium.<sup>47</sup> These two coins are the earliest Roman coins discovered in the theater up to this date. The first coin was discovered at the bottom of the *scaenae frons* almost on bedrock. Since the stage-building must have been built after the *cavea* of the theater was excavated and built up, we are in a position to conclude that the theater was finished sometime between 169 and 177 A.D. This date is supported by the very close similarity between this theater and the North Theater at Jerash which is securely dated by inscriptions to ca. 162-166 A.D.<sup>48</sup> Thus the theater is anterior

7, 8, 9 etc., especially on the south cella wall, pl. 56; the cornice of the monumental gate of the Camp of Diocletian dated to the late third century A.D., cf. K. Michalowski, *op. cit.*, p. 76, figs. 93-94; an architrave in Jerash which carries a similar motif is dated to the fifth or sixth century A.D., cf. C. H. Kraeling, *op. cit.*, pl. CXXI: c.

(43) Cf. K. Michalowski, *op. cit.*, (1959) p. 57, fig. 59.

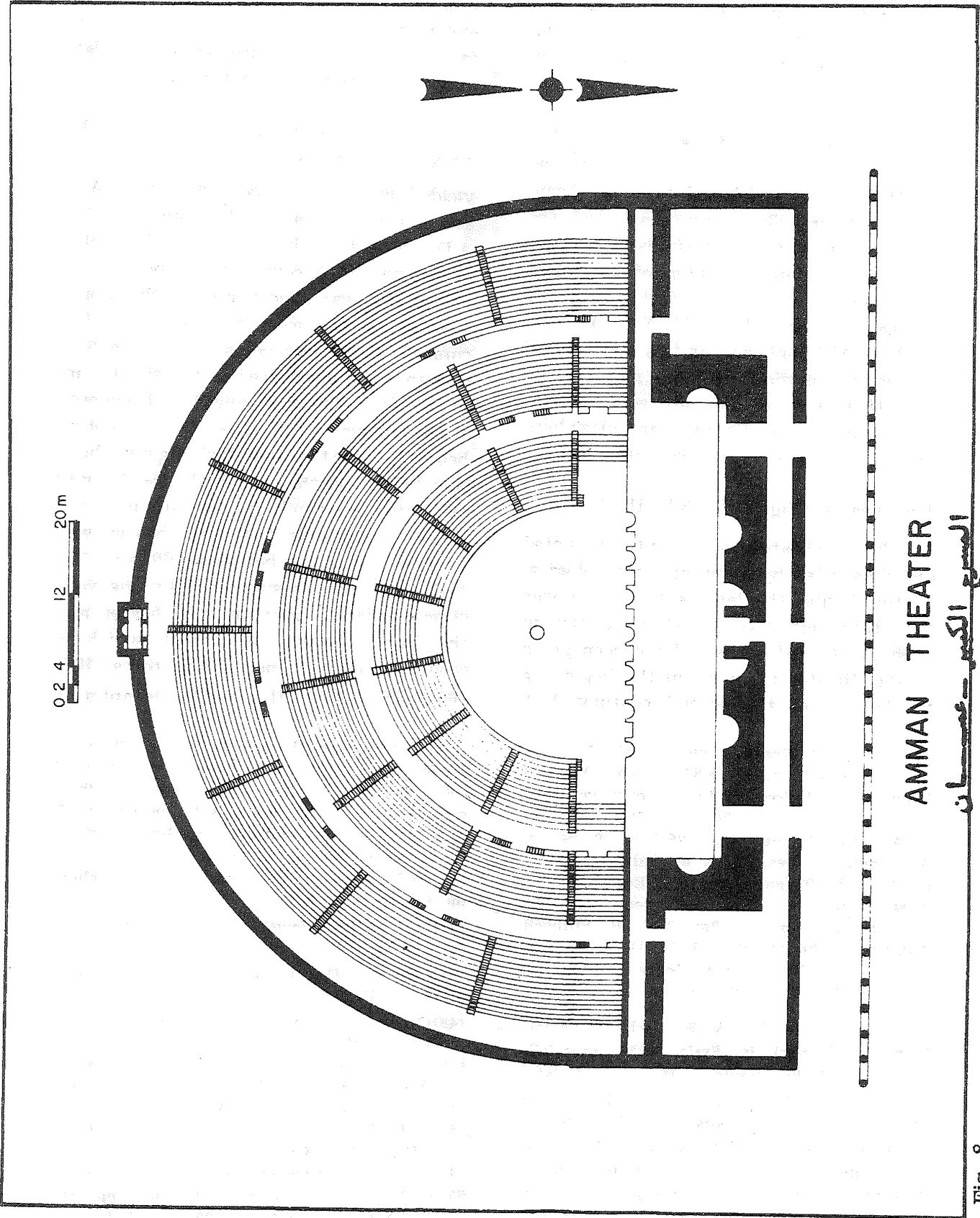
(44) *Op. cit.*, Div. II, Section A, p. 47-50, Ills. 31-33, pl. IV.

(45) Greek and Roman Architecture, 2nd ed., (1969) p. 343; Edmond Frézouls, "Recherches sur les théâtres de l'Orient Syrien", *Syria*, 36 (1959) p. 225, pl. XVII, dates it to the last part of the second century A.D.

(46) *ADAJ*, XVIII (1973) p. 52, Pl. XXXII, 2.

(47) *Ibid.*, Pl. XXXII, 1.

(48) Cf. C. H. Kraeling, *op. cit.*, p. 54, inscr. 65, p. 405, Pl. II: c; Edmond Frézouls, *op. cit.*, p. 223; *Syria*, 38 (1961) p. 80, Pl. VII:2.



AMMAN THEATER  
 المسرح الكبير - عمان

Fig. 8

to the forum as shown by inscriptional evidence. 49

### The odeum

Though there is scarcely a monument in ancient Amman which does not present some problem to the excavator, few indeed raise more problems than the small theater, commonly known the odeum on the east side of the forum (Figs. 2, 9; Pl. XXVIII:B). The first of these questions is whether it was originally roofed, and if it was, what was the shape of this roof? How was it approached from the forum? When was it constructed? More with the intention of discovering the date of its construction than of trying to answer the other questions, excavation was centered in front of the building (see above). The results were gratifying in themselves, but many questions will have to wait unanswered until the clearance of the site is completed. The first to describe the odeum, though inaccurately, was C. R. Conder.<sup>50</sup> A more accurate description than Conder's was published by H. C. Butler.<sup>51</sup> Extremely valuable in these publications are the illustrations showing the *scaenae frons* which is now almost completely robbed of its stones (Pl. XXIV: E).

Much of the plan of the odeum is restored (Fig. 9). It is semicircular with a stage-building that is connected with an outer wall by a barrel-vaulted passage with a corner tower at each end (Pls. XXVI:F; XXVIII:C, F). The *cavea* is oriented to the west and is built up entirely from ground level of well-dressed blocks of limestone sometimes bossed and drafted especially in the interior sections.<sup>52</sup> The external diameter of the *cavea* is 38 m. and its internal diameter is 22m. It consists of two divisions of seats separated by a *praecinctio*, 1.20 m. wide. The upper division has seven tiers of seats divided by five *scalaria* into five *cunei* and a balcony at the north end. The lower division has eleven tiers of seats divided by three *scalaria* into four *cunei*. There were additional *scalaria* at each end of the two divisions. There is a barrel-vaulted *parodos* at the south end of the *cavea*. The *scaenae frons* extends the whole width of the *cavea* and has five doorways with molded jambs and lintels and relieving arches over them. Only vestiges of these exist today (Pl. XXIV: F).<sup>53</sup> Decorative and functional portals of this shape and style were employed throughout Syria from the first to the sixth centuries A.D. and even later.<sup>54</sup> The base moldings of the *proscenium*

(49) Cf. F. Zayadine, "A Greek Inscription from the Forum of Amman — Philadelphia, A.D. 189" *ADAJ*, 14 (1969), pp. 34ff. Pls. XXI-XXIII.

(50) *Op. cit.*, p. 36.

(51) *Op. cit.*, Div II, Section A, p. 50-54, Ills 34-35.

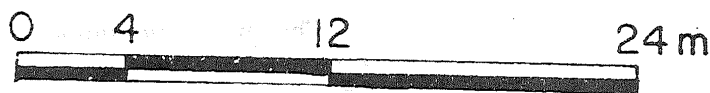
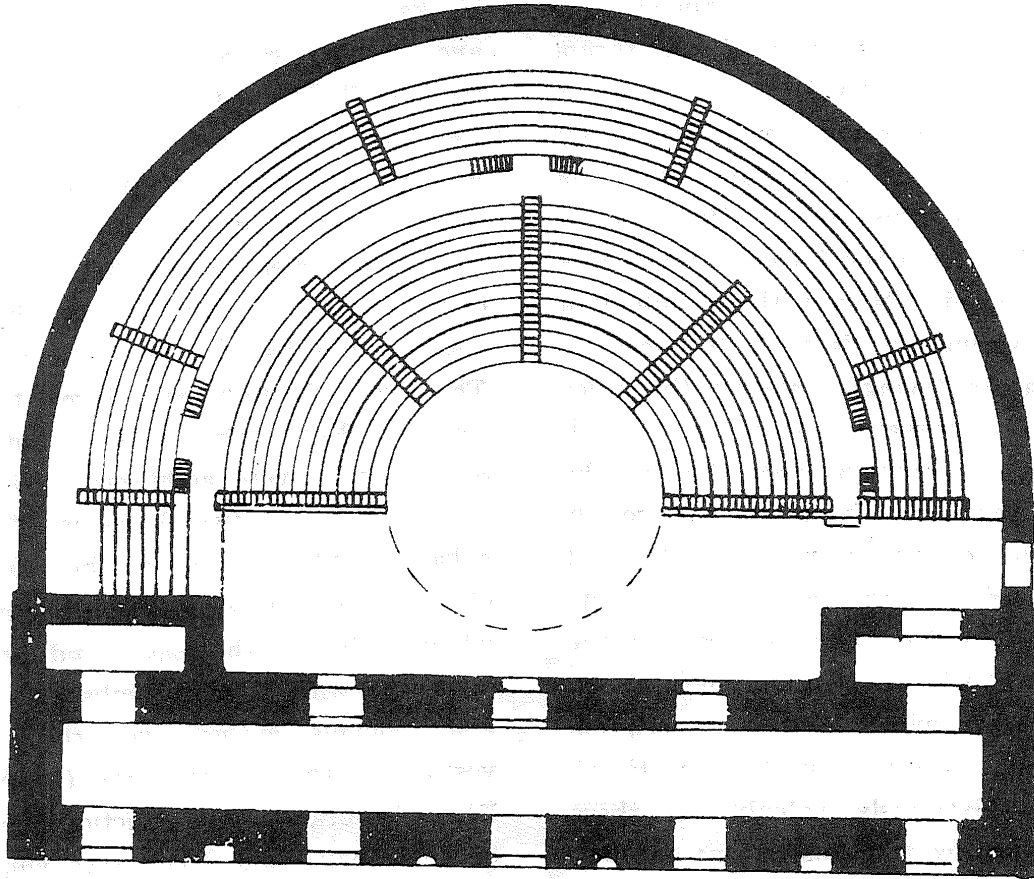
(52) Usually Roman theaters are oriented to the north but exceptions do occur from time to time as can be seen at Umm Qeis (Gadara) where the theater is oriented to the west, and

at Petra where the theater is oriented to the east.

(53) Cf. C. Butler, *op. cit.*, Div. II, Section A, Ill. 35, where three of these doorways were still preserved up to the first decade of this century.

(54) Cf. R. E. Brünnow and A.v. Domaszewski, *op. cit.*, Vol. III, 1909, p. 47, figs. 928, 932, 945, 946, 948, Pl. L (the theater at Bosra); H. C. Butler, *op. cit.*, Div. II, Section B (Northern Syria), Ill. 287-290 (Der Sima'an), Ill. 309 (the chapel at Kafr Lab); Div III, Section B, p. 208 (Doorway of a church).

Fig. 9



AMMAN ODEON  
الصحن الصغير اوقاعة الموسيقى  
عمان



are simple but very elegant (Pl. XXVIII: E). The back wall of the *scaenae frons* has corresponding portals and in addition two round and two square niches in the outer face of the wall. Architectural fragments discovered in the debris inside the stage-building indicate that it was originally decorated with friezes, cornices and niches.

In dating the odeum, we have two important considerations to guide us. First, the stratigraphic evidence from the foundation walls of the *scaenae frons* indicates a date in the early second century A.D. for the construction of these walls (see above). Secondly, the base moldings of the *scaenae frons* find parallels in those of the temple of Bacchus at Baalbek dated somewhere in the second century A.D.,<sup>55</sup> and at Jerash in the south theater dated by inscriptions

to the year 90-91 A.D.,<sup>56</sup> the south *tetrapylon* in its four *tetrakionia* dated to the middle of the second century A.D. and in the temple of Artemis dated by inscription to 150 A.D.<sup>57</sup> The moldings and shape of the portals in the back wall of the *scaenae frons* seem to be characteristic of Syrian architecture of this period. Parallels are found at Jerash in the temple of Zeus dated by inscription to 163 A.D., the *propylaea* of the temple of Artemis dated by inscription to between 161-169 A.D.,<sup>58</sup> at Palmyra, and on a stage-model in the *Terme Museum* at Rome dated to 150 A.D.<sup>59</sup> From these considerations, it is only reasonable to conclude that the foundation walls of the odeum were built early in the second century A.D. and its superstructure and the stage-building were finished some time close to the middle of the century.<sup>60</sup>

Adnan Hadidi  
Jordan University

(55) Th. Wiegand, *op. cit.*, pls. 7ff; D. S. Robertson, *op. cit.*, p. 432 dates this temple 120-200 A.D. with a question mark.

(56) C. H. Kraeling, *op. cit.*, p. 43, 134, 145, fig. 1, pls. V: b, XVIII, XIX, & plan XIV; Bastiaan Van Elderen, "New Tablets Unearthed at Jerash", *JORDAN*, A Quarterly Magazine of Tourism And Cultural Interest, Vol. V, No. 2, (1974) p. 14-15.

(57) C. H. Kraeling, *op. cit.*, p. 43, 134, 145.

(58) *Ibid.*, p. 52, 54, pls. IV: b, XXV: a.

(59) B. Schulz, "Bogenfries und Giebelreihe in der römischen Baukunst", *JdI*, XXI (1906) p. 224-225, fig. 3; M. Bieber, *The History of the Greek and Roman Theater*, 1961, p. 182, fig. 634.

(60) The general plan of the building is very similar to the plan of the odeum at Corinth dated to the late first century A.D., cf. Oscar Broneer, *Corinth*, the Odeum, Results of Excavations conducted by the American School of Classical Studies at Athens, Vol. X, p. 144, Pl. I; the theater at Bosra built shortly after 106 A. D., and the theater at Shuhba dated early second century A.D., furnish the closest parallels in Syria, cf. R. E. Brünnow & A. v. Domaszewski, *op. cit.*, Vol. III (1909) p. 47f., Figs. 928, 930, 932, 945, 948, Pls. L & LII; Edmond Frézouls, *op. cit.*, p. 225, 228, dates the odeum of Amman to the last decade of the second century A. D. which in the opinion of the writer is far too late and cannot be accepted in the light of the evidence at hand.



# An Examination of the Ruins of Qasr Burqu'

by

Heinz Gaube

1. Through the Kindness of the Director-General of the Department of Antiquities of Jordan, I had the opportunity to visit Qasr Burqu' and restudy the remains of the qasr. I was accompanied by two friends, M. Jean-Paul Pascual and Jelal Saad. The fourth member of our party was the inspector of the Department of Antiquities, Mr. Abed el-Jalil Amr, whose friendship we all equally esteemed.

Burqu' was visited first by the Field Museum Arabian Desert Expedition in 1928. In this connection an architectural report on the site was published by Eric Schroeder.<sup>1</sup> Schroeder's short report and sketch-plan of the ruin do not answer the question of the chronological sequence of the different parts of the building. The present purpose is to elucidate this question and to determine those parts of the structure which might be connected with the well-known inscription of al-Walid<sup>2</sup> (Pl. XXXI, 1). This inscription informs us that in the year 81 of the Hijra (700 A.D.) the "*Amīr al-Walīd, son of the Commander of the Faithful*", was responsible for construction-work on the site. The extent of this work, however, has not been clearly defined, although some theories concerning the Umayyad work have been published.<sup>3</sup>

Qasr Burqu' is situated about 25 kms NW of the pumping — station H 4, now a small village on the road from Mafraq

(1) Field, H. *North Arabian desert archeological Survey 1925-50*, Cambridge, Massachusetts (1960) (Peabody Museums Papers XLV, 2.) p. 94-99.

(2) Rocea, Nr. 12: additions: field. H. *op. cit.* 154-8.

to Baghdad. A harra-plain of about 650 m altitude surrounds the ruin which lies on the NE-bank of the Wadi Miqat. About 2 kms NW of Burqu', the wadi is blocked by a low dam forming a small lake which at the time of our visit (May 4th to May 7th 1974) reached the foundations of the SW-wall of the qasr. The exact alignment of the foundations of the western part of the enclosure with the limits of the water in the dammed-up wadi suggest that there existed a similar dam in the wadi at the time this part of the enclosure was first constructed.

The remains consist of a plain enclosure-wall at the NE-side and the SW-side and ranges of rooms at the SE- and NE-side enclosing a courtyard within which is a rectangular tower. Access to the courtyard is given by a door in the NW-enclosure-wall. The building was constructed on a slope. Thus the foundation stones of the S- and W-corner of the enclosure lay 3.27 m lower than the E-corner of the building (Pl. XXXI, 2).

2. Only the SW-part of the original doorway, which gives access to the courtyard (ca. 30 m x 30 m), is preserved (Pl. XXXII, 1). Most of the SW-part of the enclosure is crudely repaired. Only a stretch ca. 4.5 m to the SW of the doorway would appear to belong to an earlier stage of the construction. From the NE-half of the NW-enclosure, a wall which projects to the SE formed the SW-wall of a room (1) of

(3) Sauvaget, J. *Remarques sur les monuments Omeyyades*. In: *Journal Asiatique* CCXXI (1939) p. 23-24.

which some traces of a SE-wall are preserved. From this room a narrow and low door led to a small room (2). SE of room (2) lies room (3) which was connected with room (4) by an arch (now fallen (Pls. XXXII, 2, XXXIII, 1). In the NE-wall of room (4) is a small niche. Both rooms were connected with the courtyard by a door in the middle of the SW-wall of room (3). Adjacent but unconnected with these rooms was a complex formed by a rectangular room (5) and an apsidal room (6) with niches (Pls. XXXIII, 2, XXXIV, 1). This complex was entered from the courtyard (Pl. XXXIV, 2). The next room (7) is the longest room of the whole complex. It is entered from the courtyard by a door in its SW-wall. The lintel of this door bears the Walid-inscription, but this inscription is at present not in its original architectural context (Pl. XXXI, 1). This is proved by two holes in the NW-end of the stone. The more NW of the two was supposed to hold the door-post of the Walid-structure, the second to the SE of it took the door-post of the present day building (Pl. XXXV, 1). Within the SE-enclosure-wall we find a range of rooms (8) — (11) (Pl. XXXIV, 3). SW of room (11) there is an open space and in the S-angle of the enclosure is room (12). Room (8) is almost square. It is accessible by a door from the rectangular room (9) (Pl. XXXV, 2). This room is connected with the courtyard by a door in the SW-half of its NW-Wall. Room (10) SW of room (9) is bounded on the SW by an irregular, oval, towerlike structure (room 11). There are interior pilasters engaged in the SW and NE which carried the floor of an upper storey (Pl. XXXVI, 1). Entrance was given to the tower from the courtyard by a door the lintel of which is engraved carrying a cross and some Greek letters (Pl. XXXVI, 2). Room (12)

occupies the S-angle of the building (Pl. XXXVII, 2). The lower courses of the SW-enclosure belong to an early stage of the structure (Pl. XXXVII, 1). The unusual straightness of this wall merits notice.

3. The enclosure and the rooms to be found inside its NE and SE half show traces of repeated repairs, plan alterations and reconstruction. The masonry of the structure is of poor Hauranean style (i.e. an outer and an inner face formed of pyramidal basalt-stones set with their bases to the outside and the spaces between them filled with small stones and clay, with courses of bonding-stones running through the walls at different heights). This makes the task of determining the different stages of construction very difficult. However, a thorough examination of the bondings, construction-methods and irregularities in the plan permits the isolation of four stages of building activity, exclusive of the rectangular tower (B) in the western part of the complex:

Stage 1: Room (11)

Stage 2: Enclosure, room (2), (3), (5), (7), (9), (10) and (6) ?

Stage 3: Room (4) and (6) ?

Stage 4: Room (1), (8) and (12).

In addition to this, but not clearly to be connected with any of these stages of construction, repairs were undertaken on the enclosure walls and the courtyard wall of the range of rooms in the NE.

3. 1. The tower-room (11) is not bonded with the walls of the adjacent parts of the building. Its masonry differs from the masonry of the rest of the structure. The shape of the room makes no sense in the context of the whole building. The fact that the enclosure walls converge onto it together

with the other previously mentioned observations suggest that room (11) existed before any other of the present existing parts of the complex were erected.

3. 2. Next, the enclosure wall and the rooms inside its NE half were built. This building period is characterized by a homogeneous type of masonry with two courses of bonding-stones (fourth and tenth course). Several sections of the walls of this period were later repaired, namely the walls of room (2), the NW-half of the SW-wall of room (3), the NW-half of the SW-wall of room (5), the SE-half of the SW-wall of room (7), the SW-parts of the walls of room (10), the NE-half of the NW-enclosure, and the upper courses of the SW-enclosure.

3. 3. Room (4) was added in a subsequent period. This is shown both by the strange plan which the construction of the room produces and also by a distinct type of masonry with bonding-stones in the sixth course. This connects its construction with the SE-half of the SW-wall of room (3) and the partition-wall between room (3) and room (5). The apsidal annex to room (5) is probably earlier than room (4). It has no bondings with room (5) and shows a distinct style of masonry which has no parallels in the whole complex. However, this might be due to the peculiar shape of room (6), which does not permit the use of bonding-courses.

3. 4. The rooms (1), (8) and (12) are distinguished from the rest of the building by a more simple door construction and the use of lower and longer stones.

4. Some parts of the building possessed a ground-floor and an upper

floor. Distinct traces of an upper floor are preserved in the rooms (2), (8), (11) and (12), showing that in stage 4 the three corner-rooms in the N, E and S of the complex had an upper floor. The walls of the upper floor of room (8) rose above adjacent walls. Thus, at the highest point of the terrain on which the *qasr* is built, an upper floor room overtowered the rest of the structure. Next to room (8) the S-wall of room (9) rises five courses above the corbels which carried the roof. Since this part of the building did not have an upper floor (which is suggested by the dressing of the stones of the SW-side of the upper floor of room 3), it is hardly imaginable that any of the other long rooms (i.e. room 3, 4, 5, 7, 10) possessed an upper floor. As a consequence, a staircase on the courtyard facade between the doors leading to the rooms (3) and (5) (another staircase must have been on the courtyard-side of the rooms 9 or 10) can have led only to a roof-terrace. This terrace was surrounded by walls about 1 m high. The seemingly uneconomic a height of these walls had constructive reasons. The weight of the upper part of the walls had to counterbalance the pressure the stone roof exercised on the corbels which carried it.

5. The rectangular tower (B) in the SW-half of the complex must be treated separately (Pl. XXXVIII, 1). Its architectural conception, its technique of masonry and its quality of construction separate it from the other buildings to be found at *Burqu'*.

Its relation with the above described sections of the site is only a geographical and a functional one. The masonry of this structure is similar to that of the earlier buildings of

Umm el-Jimal<sup>4</sup> (to name the largest southern site with distinct Hauranean style of architecture). Its plan is similar to that of many structures which can be seen all over the eastern parts of Syria (i.e. in the Hauran, the Lejah, the eastern slopes of the Jebel el-'Arab, the 'Ala-region and the Jebel-Hass). In the north-western massif similar structures can be found.<sup>5</sup>

The ground floor of the tower is divided into three rectangular rooms of similar shape. It possessed originally a ground floor and two upper floors. The masonry is characterized by regular courses of well-dressed stones. The regular courses of bonding-stones (which are to be seen in the sixth, eleventh, sixteenth, twenty-first, twenty-sixth, thirty-first, and thirty-sixth course) and their intervals remind one of similar structures which can be found all over Syria.<sup>6</sup> The fourth bonding course projects on the exterior to form a string course. This string course is a very common feature on similar structures in the Hauran and adjacent regions (e.g. Umm el-Jimal, Melah, Busan, Burd 'Orman).<sup>7</sup> It can be seen in the Lejah (e.g. Haiyat),<sup>8</sup> and also in the 'Ala-region (e.g. tower of Temek).<sup>9</sup>

The walls of the tower are preserved up to a height of almost 9 m. Its SE-corner overtowers the rest of the remaining walls. It is more than 12 m high. The central part of the E-wall has collapsed and was crudely repaired.

Entrance to the tower was given by a very narrow and low (window-

like) door at its W-side. This door was the only opening of the whole building. Thus the defensive character of the structure is obvious. The door gave access to a long room. On the right (-south-) side this room was connected by an arch with a similar room. A door led to a third room north of the central room. The upper floors of the tower had only two rooms. Rooms which were almost square filled the southern two-thirds of the building. Rectangular rooms, similar to the room in the ground floor, were in the northern third. The ceiling of the upper floors must have been made of wood (at least in the southern part of the building). This is suggested by the lack of any remains in the southern part of the tower which could have carried stone-ceilings.

This tower was originally designed to stand isolated. With its small door (which was easy to block) it could resist any enemy who was to be expected in this region. The function of the building can not be the subject of any discussion. It was one among many Roman-Byzantine watch-towers to be found along the pre-Islamic roads of Bilad ash-Sham.

6. A relative chronology of the rooms (1) - (12) and the enclosure-walls was established above (cf. p. 94). The rectangular tower (B) is doubtless the earliest part of the whole complex. Thus five stages of building-activity can be isolated at Qasr Burqu'. The question is now, whether it is possible to connect some (or all) of them with con-

(4) Butler, H.C. *Ancient architecture in Syria. Section A.B.* Leyden (1907-1920) (Syria. Publications of the Princeton University archaeological expedition to Syria. Div. 2.) II, A: 150 ff.

(5) Tchalenko, G. *Villages antiques de la Syrie du nord.* I-III, Paris (1953-1958) (Bibliothèque archéologique et historique tome L.), I, 30,

161, 173, 433, II. pl. CLXXXVII, 4 and CLXXVIII, 2.

(6) Gaube, H. *Ein arabischer Palast in Südsyrien Hirbet el Baida.* Beirut (1974) (Beiruter Texte und Studien 16.) p. 63-65.

(7) Butler, H.C. *op. cit.* II, A, 150 ff. (Umm el-Jimal).

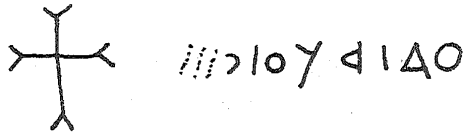
(8) Butler, H.C. *op. cit.* II, A, p. 362 f.

(9) Butler, H.C. *op. cit.* II, B, 1:12.

crete dates. Some dates are provided by the epigraphical material found at Burqu'. This consists of two Greek and three Arabic inscriptions.

6. 1. A Greek inscription, which was already the subject of several studies, comes from the tomb of a man whose name was probably Hani. It was dated by Dow<sup>10</sup> on palaeographic grounds to the III century A.D. This inscription is not *in situ* anymore but kept in the Chicago Natural History Museum (acq. no. 219461).

6. 2. A Greek inscription on the lintel of the door leading from the courtyard to room (11) was first published by Field as "the Safaitic letters and the cross"<sup>11</sup>. It fills the right half of the mentioned lintel which carries in its center an incised cross:



That this inscription is not Safaitic at all does not need to be discussed. It could possibly be read:

[KYP]IOY AIAO[Y]

'Respect the Lord!' The 'Safaitic' letters seen by Field below the lintel on the jambs of the door are nothing but wusum. Wusum are tribal marks which are used by the nomads to mark their cattle. They became some kind of heraldic sign and are engraved on stones in the desert, on ruins (e.g. Bel-temple of Palmyra) and on rocks.

6. 3. The Arabic inscription of al-Walid, the no. 12 of the RCEA, is now used as lintel of the door that

(10) Field, H. *op. cit.* p. 161 ff.

(11) Field, H. *op. cit.* p. 156 f.

leads from the courtyard to room (7). This, however, is not its original place (cf. above p. 94). The text published in the RCEA is not complete. The missing words were published by Field<sup>12</sup> who was advised by Sir Hamilton Gibb. Gibb suggests that the two last letters of the second line read HW and the first eight letters of third line read LAALBYWT. This is, in fact, the only possible transliteration here.

The inscription is to be read thus:

- 1 — اللهم بسم الله الرحمن الرحيم هذا ما
- 2 — بنا الامير الوليد بن أمير المؤمنين هو
- 3 — لاء البيوت سنة وحدة وثمانين

The translation would be (1) "O God! Bismillah. This is what (2) the Amir al-Walid, son of the Commander of the Faithful, built: (3) these rooms. In the year 81." This is the reading of Field/Gibb.

6. 4. Two other Arabic inscriptions are preserved above the Walid-inscription (Pl. XXXVI, 2).

- A. 1 — قرأ هذا الخط بالكوفي
- 2 — هارون ابن شماعة
- 3 — الزبيدي ولقاه [ في سنة ]
- 4 — سبع مائة واثني وثمانين

(1) It read this Kufi-script (2) Harun Ibn Šammā'a (3) az-Zubaidi. He saw it (4) [in the year] 782 (= A.D. 1380).

- B. 1 — سنة كتبي سنة ثاني عشر
- 2 — وثمان مائة

(12) Field, H. *op. cit.* p. 154 f.

(1) [The] year [this] was written [is the] year (2) 812 (= A.D. 1409).

The first of the two inscriptions gives a terminus ante quem for the restoration-work on the courtyard walls of the rooms (2), (3), (5) and (7). In the course of this work, the Walid-inscription most probably was transferred to the door of room (7).

7. The epigraphical material gives, therefore, four periods which are of relevance for the dating of the individual stages of construction or reconstruction at Qasr Burqu'.

7. 1. With the tomb-inscription (6.1.) which seems to be pre-Byzantine (that means III/beginning of the IV century A.D.) the watch-tower (B) is contemporary. Structures of this kind were built at the end of the Roman- and the beginning of the Byzantine period.<sup>13</sup> The birkeh S of the tower can well be of the same date. It certainly did not suffice to provide the men in the watch-tower with water.

Therefore the bigger birkeh N of the NW-enclosure must already have existed in this period. Observations on the SW-enclosure (cf. p. 94) suggest that the dam in the wadi was existing when this wall was built. It can well be contemporary with the watch-tower.

7. 2. The lintel of room (11) suggests a pre-Islamic date for this structure. This, however, is not as certain as the pre-Islamic dating of the rectangular tower. The surface dressing of this lintel with the cross and the Greek inscription as well as the holes for the door-posts give the impression that the lintel is *in situ*. Thus the

Greek inscription indicates a pre-Walid date (i.e. before A.H. 81/700 A.D.) for the door of room (11). Only the Greek inscription, the above mentioned observations on the masonry (cf. p. 94) and the bondings can be used as positive argument for a pre-Walid dating of room (11). The cross could be much later.

7. 3. The Walid-inscription is not *in situ*. The stone on which it is incised is not broken. It is most probable that the stone was used as a lintel of one of the doors leading from the courtyard to the rooms (3), (5), (7) or (10). The most likely place for the inscription would have been above the door of room (5). Intensive reconstruction-work was done in this room later (cf. p. 95), and in the course of this work the inscription could have been removed.

Since the size of the lintel with the inscription of Walid does not permit the supposition that it was used as a lintel of the main-entrance to the qasr in the NW-enclosure, one of Thus it can be supposed that the inscription was used as lintel of one of the doors leading from the courtyard to one of the rooms at its NE- or SE-side.

It must refer to the range of rooms along the east and south-side of the courtyard, except the rooms (1), (4), (6) ? and (11). The Walid-structure thus would have comprised all sections of the building with bonding-stones in the fourth and tenth course. If this conclusion is correct, it shows that in the time before Walid became caliph, considerable building-work was executed in his name at Burqu'. Burqu' is situated in the same harra-region

(13) Poidebard, A.: *La Trace de Rome dans le désert de Syrie*. Paris (1934) (Bibliothèque

archéologique et historique, tome XVIII.) p. 52056.



which another building of Walid own: the palace at Jebel Seis. 14 palace is situated a two days ey to the N of Burqu'.

s already mentioned above (cf. ), it is hard to determine whether (6) belongs to stage 3 (i.e. the l-structure), or is later. There are ondings between the east-wall of (5) and the walls of room (6). suggests a later date for room But why was there built an ap- annex to room (5) in the time Walid ? In Walid's time this al room would not have been un- ion. We know buildings from the of Walid with apsidal rooms. ng them are smaller structures as 'Amra. 15 Some of the larger es possess apsidal rooms in their 16 These rooms are generally red to as "throne"-rooms. A more ppropriate word would be madafa (re- on-room). Room (5) together with (6) could well have been a re- on-room in whose apsidal part the e was seated.

4. The post-Walid stages of the ing cannot be precisely dated. n (4) which was added to the buil- in the course of extensive res- ion work is older than the ear- of the two Arabic inscriptions e the Walid- inscription (i.e. in- tion 6.4 A). This means it was before 1380 A.D. The different ique of construction and the dif- it size of stones used for the s (2), (8) and (12) suggest that rooms were added after room

(4) (whether before or after 1380 A.D. is not determinable).

8. In the course of its centuries- long use Qasr Burqu' served different purposes. The nucleus of the site, the rectangular tower (B) was a Roman- Byzantine watch-tower. It was built along one of the main caravan-roads from Arabia to Syria. In the old days the traveller knew that he could find water at Burqu'. The installations to secure the water supply at the place date partly (if not entirely) back to the III/IV centuries A.D. when the watch-tower was built. They consist (A) of the small birkeh next to the rec- tangular tower (it never was covered as Schroeder supposed,<sup>17</sup> (B) a large birkeh north of Qasr Burqu', about 100 m x 150 m wide, and (C) the artificial lake on the west-side of Burqu' which was formed by a dam in the Wadi Miqat. The present dam is of recent date. But our above (p. 98) mentioned observations led to the con- clusion that there already existed a dam at the time the enclosure-wall was built (700 A.D.).

In the V and VI centuries, as many of the advanced posts were evacuated by the Byzantines, Burqu' probably was transformed into a monastic settlement. This was a common process in late- Byzantine Syria.<sup>18</sup> The Arab phylarchs controlled the eastern regions of Syria and monks (Arabs or Syrians) moved into the old military installations. The lintel of the tower-like structure (11) with the cross and the Greek letters suggests that Burqu' became a monas- tic settlement. The extent of such a

Brisch, K.: *Das Omayyadische Schloss in . Vorläufiger Bericht über die mit in der DFG unternommenen Grabungen. itteilungen des Deutschen Archaeologischen utes. Abteilung Kairo 19 (1963), p. 141-*

(15) Creswell, K. A. C.: *Early Muslim archi- tecture. Umayyades. A.D. 622-750. Oxford (1969) p. 390-449.*

(16) e.g. Jebel Seis, Minyeh

(17) Field, H. *op. cit.* p. 98.

(18) cf. Rubin, B.: *Das Zeitalter Iustinians. I. Berlin (1960) p. 274 f.*

cultural exploitation of the harrat around Burqu' would have been rather troublesome. There are some spots not far to the W of Burqu' where non-irrigation agriculture is practised today. They would have been more appropriate for an agricultural exploitation than the terrain around Burqu'. The *raison d'être* of the Walid-structure is the water in the wadi. It is not only provided man and animal with drinking water, but attracted wild animals who were easily to be hunted there. Thus Qasr Burqu' could well have been a 'badiya'<sup>19</sup> - a place where the Umayyad prince spent some weeks of the year to reaffirm his personal links with the tribes of the region, enjoy the fresh air of the desert and go hunting. The rather simple feature of the building, however, does not support this interpretation strongly. It does not contradict it, either, since we have to bear in mind that Burqu' was built when al-Walid was not yet caliph. The apsidal room gives weight to this interpretation. Room (6) is most probably part of the Walid-building. Its existence is explainable only if a residential character is attributed to the building. In such a context, the rooms (5) and (6) would have served as a reception-room.

If room (6) is later than room (5), the building could have been built as a han. Then, of course, the explanation of the function of room (6) becomes a rather troublesome task. The only possible conclusion would be to

(19) cf. Gaube, H. *op.cit.* p. cit. p. 119-128.

(20) Butler, H. C.: *Early Churches in Syria*. Amsterdam (1969) p. 51, 76 f. 137, 188.

(21) Gaube, H., *op. cit.*, pl. II, p. 3 and 4.

(22) Brisch, K., *op. cit.*, map.

(23) Rocea, Nrs. 3320, 3465, 3563, 3593, 3745,

the two rooms together reminds one of the plan of simple village-churches in Syria<sup>20</sup>. Convincing historical arguments for this interpretation can not be provided yet. This, however, is not due to the fact that historical material is lacking. The reason is that too little attention has been given to the Christian 'province' of Islamic Syria (i.e. the regional history of the eastern and the mountainous regions of Bilad ash-Sham in 'Abbasid and post-'Abbasid times). That Christian communities lived in the eastern desert parts of Greater Syria in post-Umayyad times is beyond any question. Next to Khirbet el-Baida we found crosses incised into the walls of post-Umayyad buildings.<sup>21</sup> The church at Jebel Seis<sup>22</sup> seems to be part of the post-Umayyad settlement there.

In medieval times (before and after 1380 A.D., a date provided by inscription 6.4. A) Burqu' was used as a han. From this period we have clear indications of 'colonization' activities in the eastern parts of Syria. Here it must suffice to refer to the statistical evidence the inscriptions of Salhad produce.<sup>23</sup>

Burqu' seems not to have lost its han-function earlier than the beginning of the age of the truck. This is suggested by present-day maps which show that desert roads coming from the south converge to Burqu' and diverge from Burqu' to the north.

Heinz Gaube

Beirut

3831, 3844, 3877, 4038, 4049, 4050, 4051, 4112, 4207, 4306, 4307, 4348, 4349, 4403, 4611. Additions: Gaube, H. *Arabische Inschriftenaus Syrien*. Beirut (1975) (Beiruter Texte und Studien 17.) Nrs. 162-168.

# Observations about the Roman Installations

## at Mukawer

by

August Strobel

1. The testimony of Josephus in the light of topographical observations.

In October 1965 an excursion of the German Evangelical Institute for Archaeology of the Holy Land was conducted by the late Prof. M. Noth and kindly supported by the Department of Antiquities. On a sunny afternoon we drove from Amman to Mukawer to visit the ruins of the Byzantine town and to walk later to the site of el-Mishnaqa, one and a half kilometer from the village. The conical hill contains the ruins of the ancient fortress of Machaerus, founded in the Late Hellenistic Period. While standing on this high top-flattened place (699/700 m above sea level), I discovered a line of stones, looking like a wall and encircling the whole area around the fortress. I then surmised, and now it is beyond all doubts, that these stones, artificially arranged, represent the remains of the Roman circumvallation, erected in 72 AD at the end of the Roman-Jewish war, still visible in the landscape of Mukawer. 1

The historian Josephus (Bell. Iud VII, 163 ff.) tells us that at that time the Roman troops threw together and built up installations for the siege of Machaerus. The commander-in-chief was Lucilius

Bassus who indeed succeeded in conquering this powerful Jewish fortress, second only to Jerusalem (see Plinius, hist. nat. 5, 16, 72). Josephus writes that the Roman General Lucilius Bassus was sent as a legate to Judaea after the City of Jerusalem had been captured in 70 A.D. At once he took over the command of the army, formerly led by Cerealis Vitellianus.<sup>2</sup> With part of it he first marched to Herodeion (djebel Freidis), Southeast of Bethlehem, where he easily defeated the Jewish garrison. Then he gathered his forces<sup>3</sup> and headed for Machaerus to conquer this fortress in the 'Arabic mountains'. He also united his army with the famous *legio X* (the tenth legion), called *fretensis*. With such enormous powers he reached the mighty bulwark, once erected by the Hasmoneans and later reinforced by Herod the Great.

The assumption that the still visible remnants are the parts of structures erected for the siege of Machaerus is based on the testimony of Josephus and on the witness of manifold objects, which can be clearly interpreted as military installations of the Romans. The archaeological remnants are in exact analogy to the famous structures erected for the siege of Masada. Evidently this site in

the important inscription of Urbisaglia (Italy), Sex. Lucilius Bassus became commander-in-chief not before the midst of 71 AD.

(3) See H.N.D. Parker, *The Roman Legions*, (Oxford, 1928), p. 268. Cf. also p. 145. It is possible that Bassus gathered some legions which were stationed in Syria (for example: III Gal., IV Scyth., VI Ferr., XII Fulm.).

(1) See A. Strobel, "Machaerus. Geschichte und Ende einer Festung im Lichte archaeologisch-topographischer Beobachtungen", in: *Bibel und Qumran*. Festschrift H. Bardtke (Berlin, 1968), pp. 198-225.

(2) For the exact data cf. W. Eck, "Die Eroberung von Masada und eine neue Inschrift des L. Flavius Silva Nonius Bassus", *ZNW* 60 (1969), pp. 282-289. According to this paper, respecting

the Hashemite Kingdom of Jordan is also a very singular one. The wall for the siege, once enclosing the fortress from all sides, still runs along the heights, cuts directly the deep valleys in the North and South, and is often interrupted by smaller or bigger camps, today typical rectangular accumulations of stones (see Fig. 1). In 1933 A. Schulten, the famous excavator of Numantia (Spain) and professor at the University of Erlangen, gave a complete and thorough analysis of the impressive installations at Masada,<sup>4</sup> where the Romans had gloriously demonstrated their overwhelming military power and technic. According to Josephus the siege of Masada happened after the conquest of Machaerus. It is therefore possible and necessary to compare both sites with their impressive installations.<sup>5</sup> Our most recent inquiries and measurements in the hills around Mukawer in March 1973 show that the following observations are not merely suggestions. A detailed report will be given as soon as the map resulting from our surveying is complete.

When A. Schulten wrote 40 years ago that he felt sorry for having no time to visit Machaerus, which he calls the 'sister of Masada', he was only considering historical and topographical items. Today, after my researches in March 1973, I am sure that the relationship between the two Roman sites is a very close and special one. A. Schulten, of course, knew

(4) A. Schulten, "Masada. Die Burg des Herodes und die römischen Lager", *ZDPV* 56 (1933), pp. 1-185; cf. also I.A. Richmond, "The Roman Siege-Works of Masada, Israel", *J. R. St.* 52, (1962), pp. 142ff.

(5) Neither the problems nor the archeological facts are sufficiently discussed until today. J. Vardaman, "Preliminary Report on the Results of the 1968 Excavations at Machaerus", (Louisville Ky., 1969), p. 20, only writes that "the circumulation (??) walls and seige ramp were not yet complete", when Eleazar was captured.

nothing about the still preserved circumvallation, even if he might have been convinced to discover some relics of it. He pointed out that, like Silva around Masada, Bassus too erected a dam to move the machines against the fortress. And indeed, we can find two such dams in the surroundings of Machaerus.

The first is clearly described by Josephus who reports that the Roman troops filled up the valley East of the cone once crowned by the citadel.<sup>6</sup> This is the place from where we can reach the top of el-Mishnaqa today, if we choose the path from the village of Mukawer. Formerly an aqueduct ran on this side, which was newly discovered by excavations of J. Vardaman in 1968<sup>7</sup> and which supplied the cisterns of the fortress with water. We can assume that this canal was destroyed already during the first attacks and that afterwards it was totally demolished when the stones were used for building the dam. In this area we find a lot of stones, which are not the result of annual erosion. We must also take into consideration that the lower fortifications, the so-called 'lower-city' (mentioned by Josephus), which covered the eastern slope of the hill, were the main aim of the attacks. It is very probable that the eastern parts of the fortress possessed strong outworks. Perhaps we still can detect some foundations of former walls on the low ridge, which connects the djebel Djumeidjme

(6) Another explanation of the eastern dam, mentioned by Josephus, gives J. Vardaman, *op. cit.* p. 20: "Thus, when Josephus says that Bassus decided to fill up the eastern ravine... he means the eastern part of the ridge where the slope rises up to the western side of the hump on which Machaerus is built". It is there that the agger is located and can be seen by visitors today". This solution of the problem is difficult to accept, because the more reliable Josephus Mss. talk of 'dams'.

(7) J. Vardaman, *op. cit.* pp. 9ff.

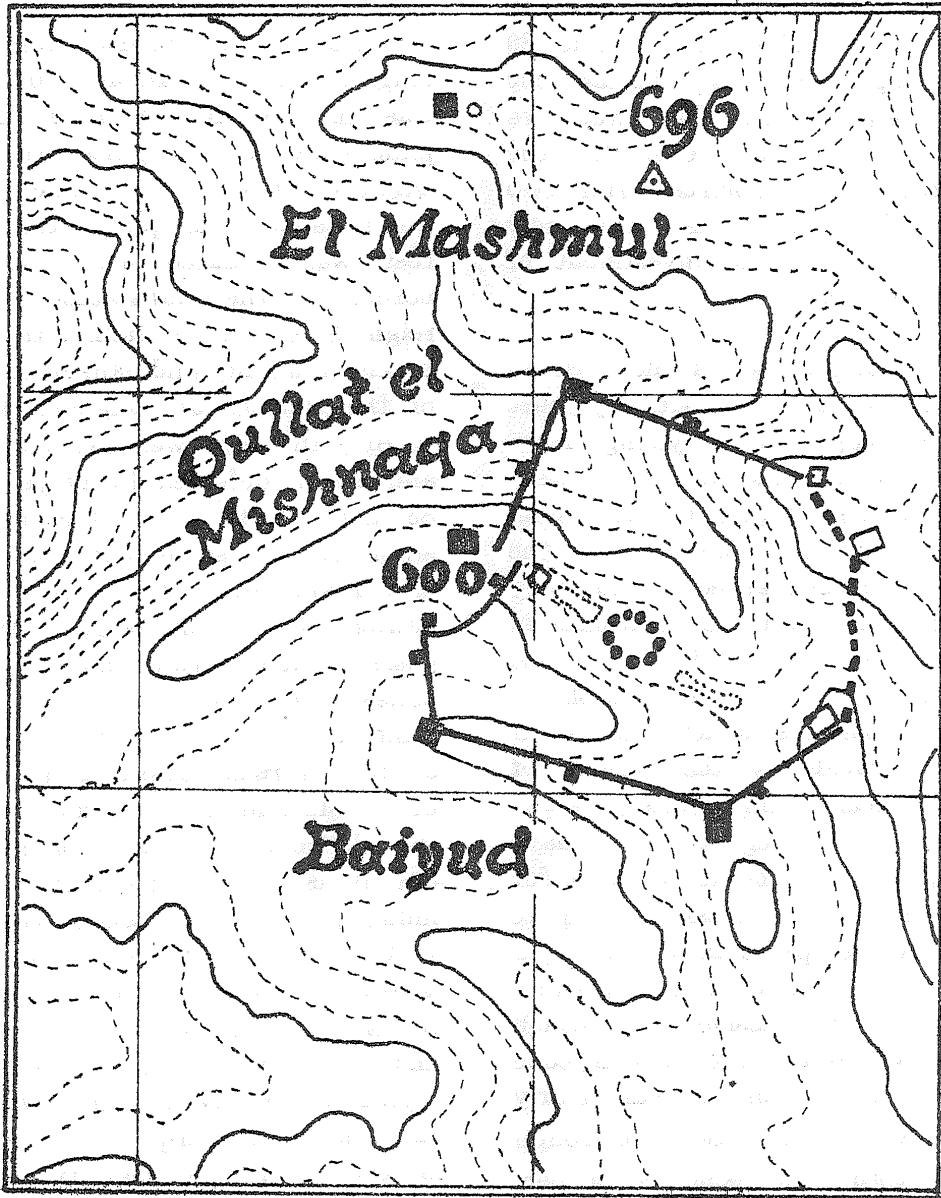


Fig. 1 : The Roman siege-works at Mukawer (scale 1 : 20 000)

with the mighty cone of el-Mishnaqa and which once formed the only access. Here, between the lower outworks and the eastern hill a dam was erected.

The second dam, Josephus actually speaks of 'dams', can be seen on the western ridge, on Qal'at Mishnaqa, where an immense heap of stones reaches 10 to 12 meters in height and extends 80 meters in length. We shall discuss this impressive object later. We want to mention here only that evidently the Romans attacked the fortress from two sides, from East and West. This may have been an enormous investment of troops and material.

Yet the besiegers seized the fortress without any decisive combat. By pure chance they captured a young man, named Eleazar, the member of a well-known and wealthy Jewish family, whom they threatened to crucify. When the Jews in the fortress learned of this, they were immediately ready to capitulate in order to stop this cruelty. But they also demanded free retreat of all Jewish inhabitants and soldiers, which was granted to them. Evidently the besiege of the fortress ceased immediately. Some installations for the siege may still have been incomplete, nevertheless the work for the circumvallation had already been quite extensive. The ramparts in the western and eastern area of Machaerus, especially the line of the impressive wall, which we can follow around the central cone for two and a half kilometers, can clearly be located. Big accumulations of rough stones still testify the existence of perhaps ten or eleven camps with various extensions, all constructed at important tactical places. They illustrate and supplant the report given by the well-in-

formed historiographer Josephus. Before I briefly describe these numerous installations around the hill of Machaerus some historical details concerning the history of the citadel may prove useful.

## 2. Machaerus in the light of its history. <sup>8</sup>

Evidently the Jewish high-priest and king Alexander Jannai (103 - 76 BC) was the founder of the fortress. Josephus says: 'He recognized the favorable situation of the place'. The purpose of the foundation is quite clear: the fortress was situated near the southern border to the Nabateans. During the reign of Alexander Jannai their country became a mighty and dangerous neighbour of the Hasmonean kingdom. From time to time the Jews were seriously attacked and bitterly defeated. In the years between 83 and 80 BC., the Jewish rule was stabilized by some military campaigns into Transjordan. This strengthened the Jewish power considerably. It is quite possible that during this period of expansion the fortress was enlarged and reinforced to become the main citadel of the extreme southeastern area. The name Machaerus does not only affirm the Hellenistic interests of its founder, but it is also a document of massive military intentions, Machaerus had the task and the function of a drawn 'sword'. Situated in the most endangered southeastern district of the country and lying transverse to the Moabite highlands between the Wadi Mojib and the Wadi Zerqa Ma'in on the edge of the mountains near the Dead Sea, it had to shelter the border. The natural inaccessibility of the place, surrounded by deep valleys, and the work of men, who shaped and fortified its steep and conical hill, made the Has-

(8) Cf. A. Stöckel, "Machaerus", pp. 206ff.; and O. Ploeger, "Die makkabäischen Burgen", in:

ZDPV 71, (1955), pp. 141ff.

monean citadel a bulwark, which secured the possession of the whole district beyond the Dead Sea.

If we follow the history of Machaerus, we must pay attention to the rule of Alexandra, the widow of Alexander Jannai (76-67 BC). She took hold of the fortress as well as of Alexandreion (qarn sartaba) in the Jordan valley and of Hyrcania (khirbet el mird) near the Western shore of the Dead Sea. Josephus writes that she had hidden her treasures in Machaerus. The question arises whether the fortress belonged to the private property of the dynasty or whether it was a citadel of the country. Some arguments support the first possibility, but we do not want to discuss this problem at this point.

Strabo mentions that Pompeius, the Roman consul, destroyed Machaerus, after he had occupied Syria and Palestine in order to enlarge the Imperium Romanum. In these years there were quarrels among the members of the Jewish dynasty. Therefore, it was easy for Pompeius, the successful Roman general and diplomat, to dispose of the rivaling Jewish kings. He also destroyed all Jewish fortresses and conquered Jerusalem. Strabo gives this report (XVI, 2, 40): 'After this he ordered to pull down' all the walls of the city and demolished — as much as he could — the burglary-fortresses and also the houses of treasures belonging to the Jewish tyrants'. Besides the two forts Threx and Taurus near Jericho, he mentions Alexandreion, Hyrcania, Lysias, and also Machaerus. The consequences of these internal and external struggles were disastrous for the Jewish kingdom, because the Roman Empire gained pre-dominance in Palestine. Especially in

(9) Cf. M. Lindner, "Die Geschichte der Nabatäer", in: *Petra und das Koenigreich der*

the North, West, and East of the country the Hasmoneans lost many non-Jewish towns, won in former years by military activities. They were all added to the Roman province of Syria, ruled by the Proconsul Scaurus. From this time on the Jewish state could only exist through collaboration.

During the controversies between Hyrcan II and his brother's son Alexander the fortress Alexandreion was besieged which the latter had occupied. The two other fortresses, Hyrcania and Machaerus however, were immediately surrendered to the Roman Governor Gabinius. Soon afterwards, Alexandreion was lost too by the Jews. According to Josephus all the fortresses were finally demolished by Gabinius in order that they could never again become centers and points of supporting for the war. Perhaps the Jewish dynasty, compelled by Roman authorities, had to consent to this decision.

Aristobul II later rebelled against Rome and he made attempts to rebuild Machaerus. After him a new Period began with Herod the Great, who gained through his wife Mariamne the Hasmonean heritage and who also ruled as a royal vassal of the Roman Cesar. Being an excellent diplomat, he succeeded in reinforcing the Hasmonean fortresses. Yet until the battle of Actium (31 BC) Machaerus was inhabited by a sister of Antigonus. After this event Herod was able to lay hold of the fortress. Perhaps this was achieved through special permission, since we know that he was lobbying in Rome at the court of Emperor Augustus. It may have been that he magnified in Rome the Arabian danger in the South.<sup>9</sup> We remember that the Naba-

Nabatäer", (Muenchen, 1970), pp. 71ff. 95ff. ('Herod the Great').

teans conserved their freedom until to the beginning of the second century AD. In short, Herod the Great turned Machaerus into a powerful bulwark with a special architectural value. It became a fortress as well as a marvellous palace, similar to Herodeion, the famous and now excavated showplace of Herod South of Bethlehem.<sup>10</sup> Evidently both places were generously planned and built in the same years of Herod's rule. Moreover, the king was anxious to strengthen Machaerus in its difficult geographical isolation. It is likely that he made efforts to improve the roads in this area and to promote the traffic on the Dead Sea. For example, there is no doubt about the fact that small harbours existed on the northern and eastern shore (for Jericho and Kallirrhoe).<sup>11</sup>

After the death of Herod the Great, Galilee and Peraea, the northern and the eastern districts of his kingdom, were separated from the rest and combined to a special tetrarchy.<sup>12</sup> For this reason, Herod Antipas, the ruler of Galilee in the time of Jesus, could throw John the Baptist into the remote prison of the citadel, where he was beheaded. He did so in order to avoid a rebellion of the baptist's followers. Josephus also informs us of unrest among the people caused by the amoral behaviour of Herod Antipas. Some of these troubles are important for the history of Machaerus. We hear that the sovereign was first married to a daughter of the Nabatean king Aretas. Yet he betrayed her, after he had fallen in love with his brother's wife Herodias. Secretly he had decided to

marry her too. When the daughter of Aretas, the proud princess, heard of his intentions, she was willing to leave her unloyal husband. According to Josephus she wanted 'to be brought to Machaerus, a citadel situated in the borderland of Herod and Aretas'. Meanwhile, she had sent a message by which some higher persons of her confidence, especially the commander of the fortress, also an Arab, were informed of her plans. Arriving at Machaerus, she found everything prepared so that during the night she could cross the border at the other side of which her father expected her. The result of this very intimate quarrel was a war between the two countries, in which Herod Antipas was seriously defeated. If we may trust upon Josephus, the execution of John the Baptist happened after this affair. Finally, in 39 AD, Herod Antipas was accused of conspiracy against the Roman Empire and exiled to Trier, Germany. In his arsenals, probably in Machaerus too, he had collected a lot of weapons.

Agrippa I, his successor, also ruled over Machaerus. After his death, the country was occupied by the Romans. In 68 AD, at the beginning of the Jewish-Roman war, a Roman garrison, stationed in the citadel, was forced by the Jewish zealots to give up the place. It seems that the detachment had only been a small one. Josephus writes: 'When the Romans had gone, the Jews of Machaerus — a town founded by Herod — left the settlement and took hold of the fortress'. This occupation remained undisputed until the Roman troops of Lucilius Bassus arrived in the

(10) Cf. V. Corbo, 'L' Herodion di Gebal Fureidis', in: *Studia Biblica Franciscana, Liber Annus* 13, (Jerusalem, 1963), pp. 219ff.; id. op. cit. 17, (1967), pp. 65ff.

(11) Cf. A. Strobel, "Zur Ortslage von Kallirrhoe", in: *ZDPV* 82, (1966), pp. 149-162;

and H. Schult, "Zwei Häfen aus römischer Zeit am Toten Meer", in: *ZDPV* 82, (1966), pp. 139-148.

(12) Cf. A.H.M. Jones, *The Herods of Judaea*, (Oxford, 1967), pp. 156ff. and 184ff.



area of Machaerus and began the siege of the mighty fortress. This military action signifies the end of the short History of Machaerus, a history of only 150 years, but a period important and decisive for mankind up to the present.

### 3. Archeological remnants in West and North of Machaerus.

Around Machaerus we discover many Roman installations which remained unnoticed until now. But the site is unique, because there are only two or three places (Numantia, Masada and Bet-tir) where we can study the Roman siege tactics in such an illustrative and convincing way. In no other area of the ancient world - Masada included - can we find so many Roman camps forming one military object. Machaerus is by no means less interesting and less significant than Masada. In 1965, when I first was fascinated by the immense artificial accumulations of stones, I was uncertain about some items. Many sentences in my first paper,<sup>13</sup> written after a stay of only two or three hours, contain very cautious utterings and considerations. Today, after my second stay in March 1973,<sup>14</sup> I must say that all important suggestions I had formerly made are confirmed. The observations are based on data we can measure and analyse. We may walk along the wall of the circumvallation which can clearly be traced for two and a half kilo-

meters. Moreover, We can study the walls and many items of the camps which interrupt the wall at certain places of military importance around the central cone of Machaerus.<sup>15</sup> Indeed, the remains are often not so high and not so evident as at Masada, but they can still be identified as military installations, erected by the Roman pioneers and soldiers.

As mentioned above, there is the characteristic ridge leading from the West to the cone of el-Mishnaqa (nearly 700 m above sea-level), where the citadel was situated (Pl. XXXIX, 1). This long flat ridge with the summit of el-Mishnaqa extends between the northern and the southern Wadi el-Mishnaqa. If we climb down from here to the small plateau we stand before an enormous ramp of stones of about 12 m in height (Pl. XXXIX, 2). It was built by the soldiers so that the siege-machines could be transported to the walls of the fortress. Immediately behind the dam, going to the West, we may enter upon a smaller construction of stones surrounding a flattened place of the ride (20 m long, 11 to 17 m wide). It is the camp where the machines were constructed and where the preparations were started to erect the dam. In German it is called the 'Baulager' (s. Fig. 2).<sup>16</sup> This is in exact analogy to the installations at Masada where there was built a gigantic dam for taking the fortress by assault.<sup>17</sup> At Machaerus

(13) Cf. Annot. 1.

(14) For the successful performance of the survey-work I am much indebted to Ingen. E. Kuehner (Karlsruhe) and to the leading officials of the Department of Antiquities. Director General Y. Uweis, Techn. Dir. Y. Alami, Dir. of Excav. Dr. M. Ibrahim, and Insp. A. Musa. We also were kindly supported by the Schneller-School at Amman, esp. by Mrs. Ehmann and Mrs. Lohmann. Worthful technical instruments were granted by the following German institutions: Fachhochschule

Karlsruhe (Mr. Garner), Fa. Quelle Fürth (Mr. Dr. G. Schickedanz), Fa. Luft (Stuttgart), Vermessungsamt Hof/Saale (Oberregierungsrat Gesierich).

(15) The object is misinterpreted by H.B. Tristram, *The Land of Moab*, (London, 1874), pp. 257ff.: 'the carefully collected material of the once formidable fortress'.

(16) See A. Schulten, "Masada", p. 162.

(17) See A. Schulten, "Masada", pp. 167ff. (by Lammerer).

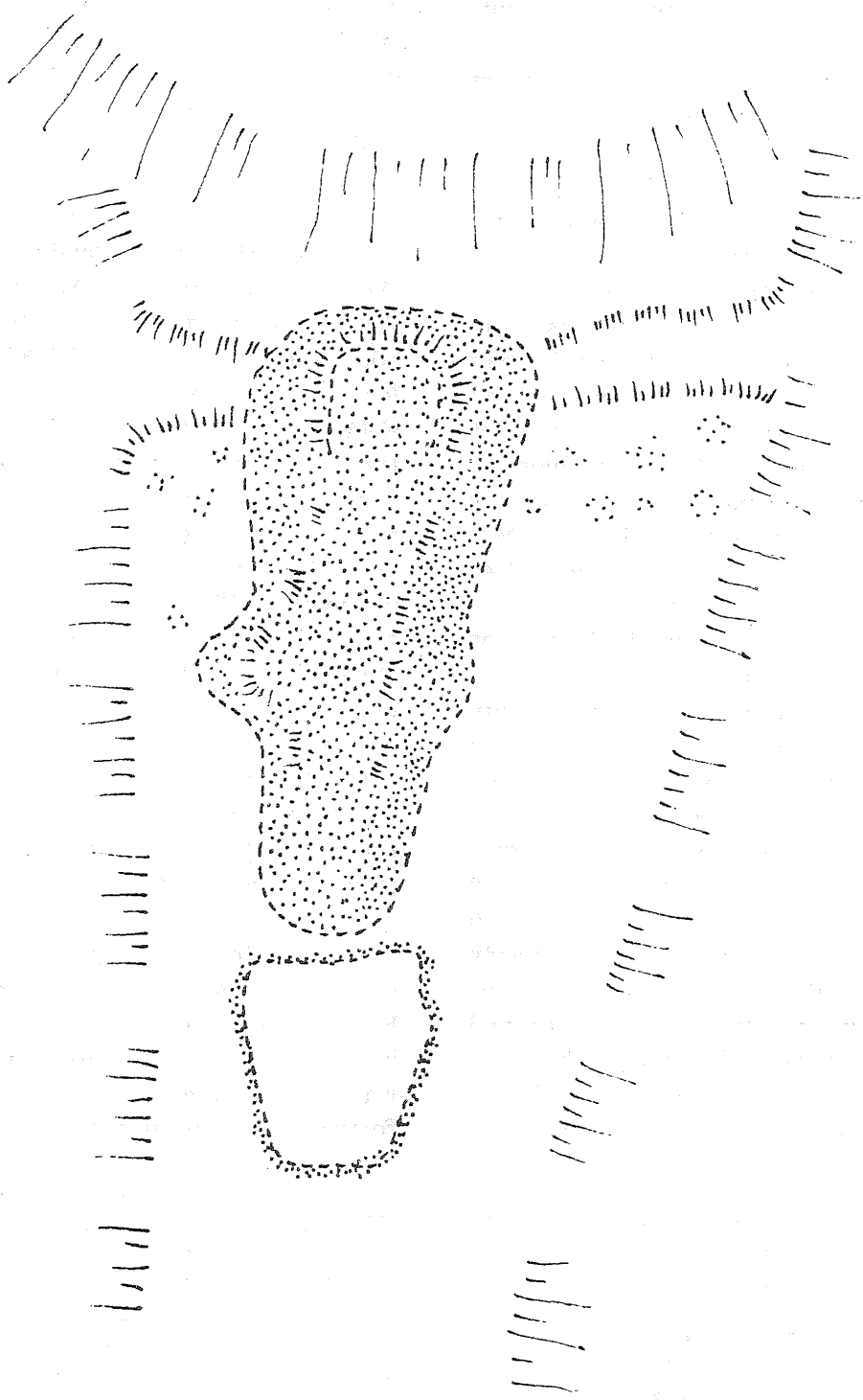


Fig. 2 : Siege-dam building plot on the western ridge (scale 1 : 1 000)

from this point onward the ridge grows more and more narrow. Walking on it, where it bends to the Southwest, we arrive at another large rectangular construction of stones, doubtless a camp of 59 by 29 m with a rocky elevation in the midst of it. The walls with three or four layers of stones (Pl. XL, 1), mined from near-by beds of limestone, are well - preserved so that we may try a reconstruction (Fig. 3). The Building-plot for the dam, like at Masada, is immediately behind it, but beyond the range of heavy ballistic weapons. The last-mentioned bigger camps, still revealing some of the walls for lodgings, had the task to shelter the building-plot, which was especially vulnerable to attacks by the defenders of Machaerus. It also blocked the ridge on the utmost western side of the circumvallation. From here the troops could supply and strengthen the front-line.

55 m before this camp a line of stones leads down directly to the northern Wadi el-Mishnaqa (Pl. XL, 2), where it unites with the Wadi Seqara (500 m above sea-level). It is the wall of the circumvallation, in which we find, roughly 50 m above the bed of the ravine on an elevation projecting from the slope towards the valley, another quadrilateral constructing 12 x 24 x 14 x 25 m containing a striking heap of stones (Pl. XLI, 1), evidently a camp to protect the middle part of the wall and to observe possible movements of assailants or refugees com-

(18) See A. Schulten, "Masada", pp. 81ff. and 93ff.

(19) Cf. D. Baatz, *Zur Geschützbewaffnung römischer Auxiliärtruppen in der frühen und mittleren Kaiserzeit*, in: *Bonner Jahrbuch* 166, (1966), pp. 194ff. During the siege of Jotapata 160 ballistic weapons were used by the Roman army consisting of three legions and 23 auxiliary cohorts. This means that each legion had 50 catapults. At that time of the first century A.D. the Roman auxiliary

ing through the Wadi (Fig. 4). The wall, which permanently has a width of 1,8 to 2 m (Pl. XLII, 1),<sup>18</sup> continues on the long opposite slope (Pl. XLII, 2) which leads up to the height of Arqub (720 to 730 m above sea-level). Near its beginning in the Wadi, perhaps 15 m above the ground on a small hill (Pl. XLIII, 1) we detect again a heap of stones, the relics of another post necessary for closing the valley (Fig. 5). Within short distance I found a big ballistic stoneball 40 cm in diameter. The question arises if we have to reckon here with onagers used by the besiegers.<sup>19</sup>

If we follow the wall going upward for nearly 350 m we recognise again the foundations of a camp 14 x 28 x 18 x 24 m, also favorably situated in the middle part of the slope (Pl. XLIII, 2), the extension of which is considerable. A path, leading down to the shore of ez-Zara, runs through the quadrilateral construction built upon a rocky declivity (Fig. 6). After 130 m the upper line of the wall disappears, but probably from here the wall went up or respectively was planned to go up the height of Arqub. The flat plateau, today the place of the village Mukawer, was most certainly chosen for stationing troops behind the wall. Yet we could find no remains of a large camp for a legion. At any rate we might suggest that in this area the Romans had concentrated their reserves and their auxiliary troops.<sup>20</sup> Later-on, there may

troops still possessed no siege instruments. According to D. Baatz it is probable that one cohort was equipped with one stone catapult and one centurio with one gun for arrows. From this considerations it is possible to draw conclusions for the number of troops brought to Machaerus. The 'stands' or 'platforms' of the instruments are still to be seen.

(20) It is necessary to compare the distribution of the troops at Masada.

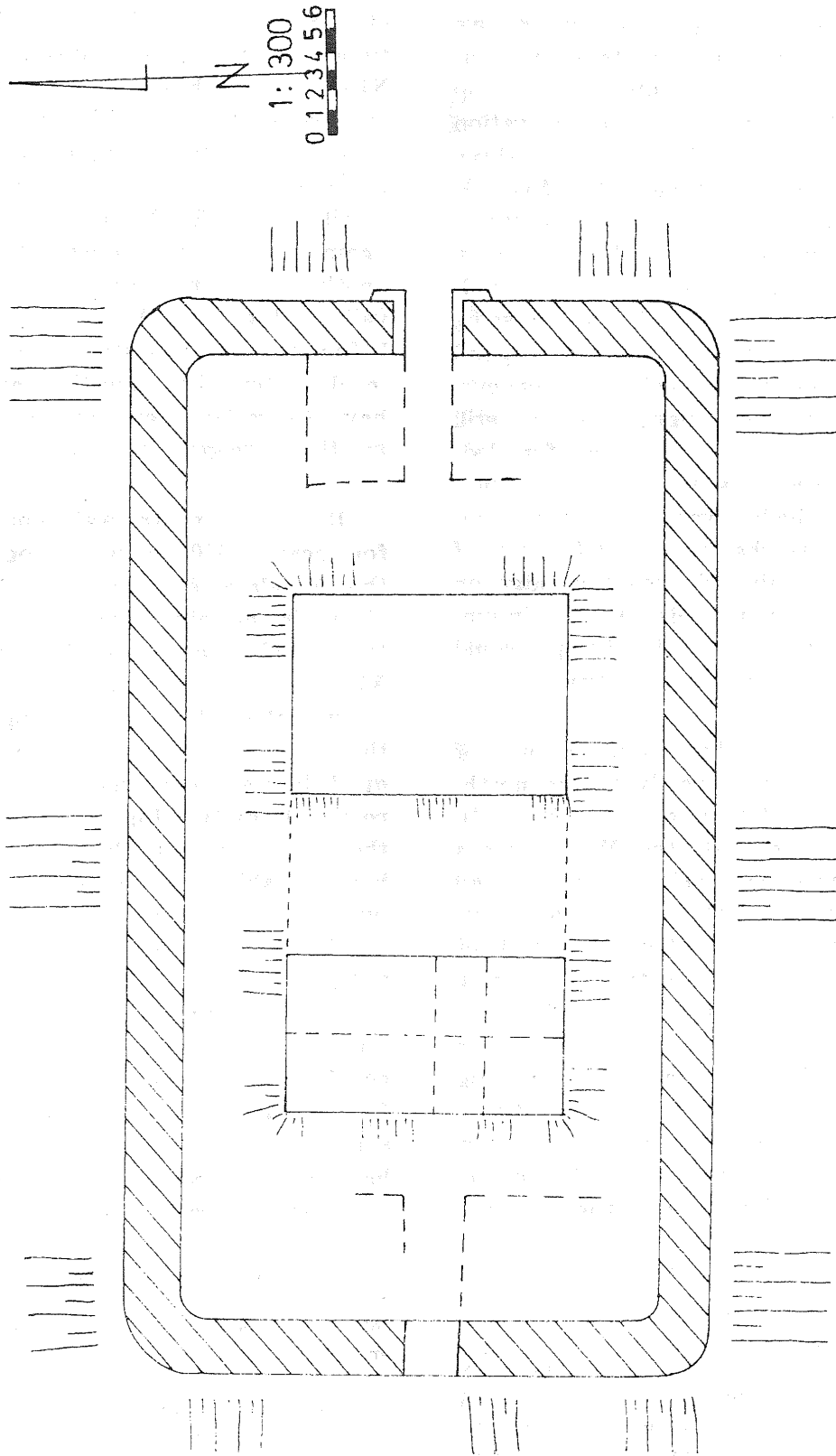


Fig. 3 : Camp on the western central ridge (Qullat Mishneqa)

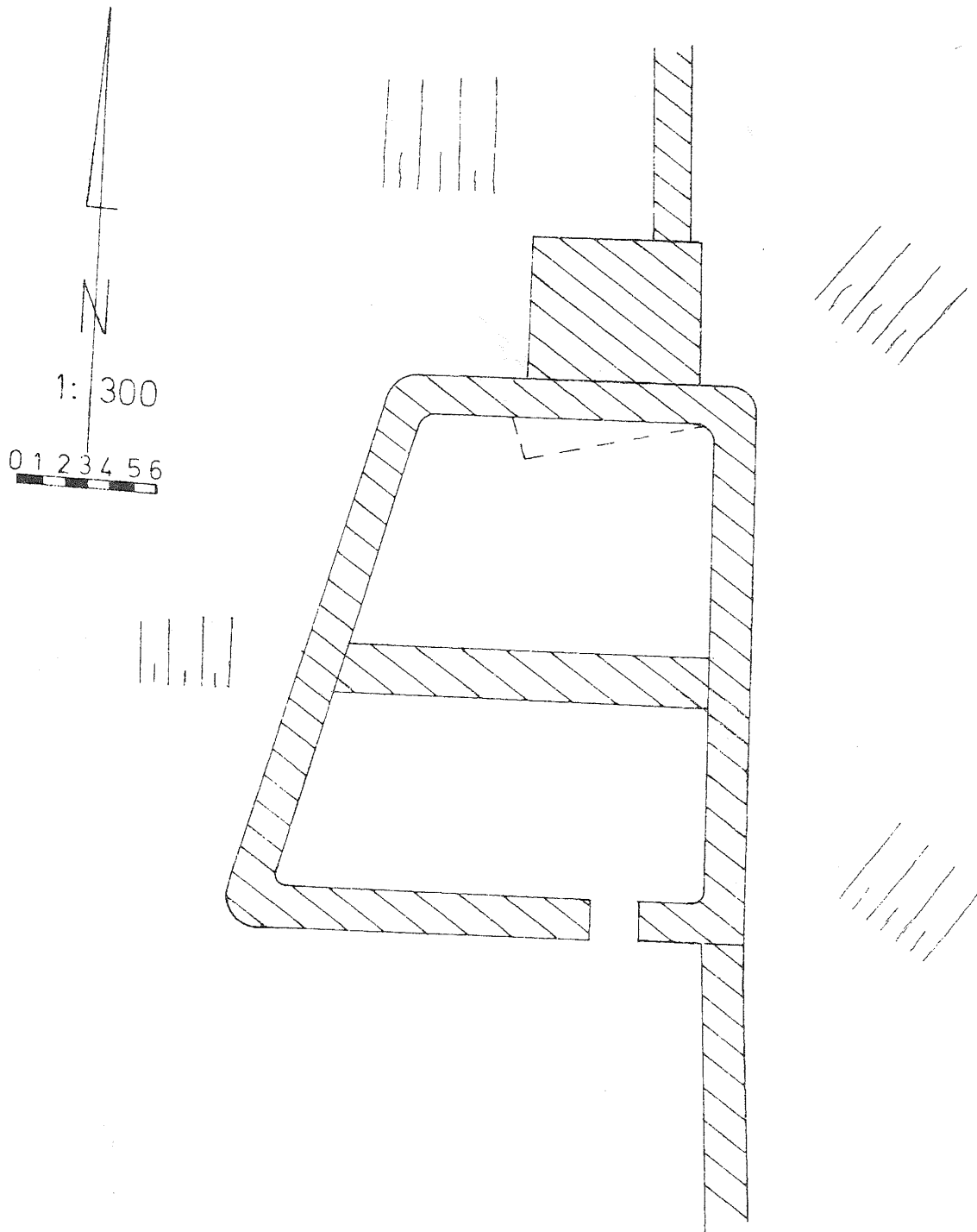


Fig. 4 : Camp on the northern slope of the Qullat Mishneqa above the Wadi el-Mishneqa.



Fig. 5 : Post or camp above the bed of the northern Wadi el-Mishneqa, where it meets with the Wadi Seqara; nearby the circumvallation-wall; x = place of the ballistic stone ball.

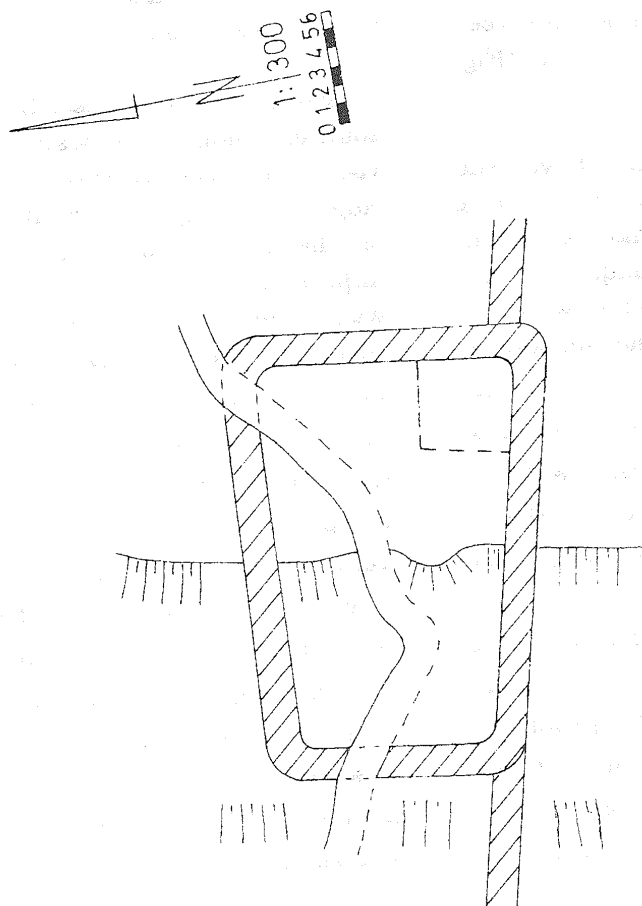


Fig. 6 : Camp in the middle part of the wall ascending to the height of Arqub.

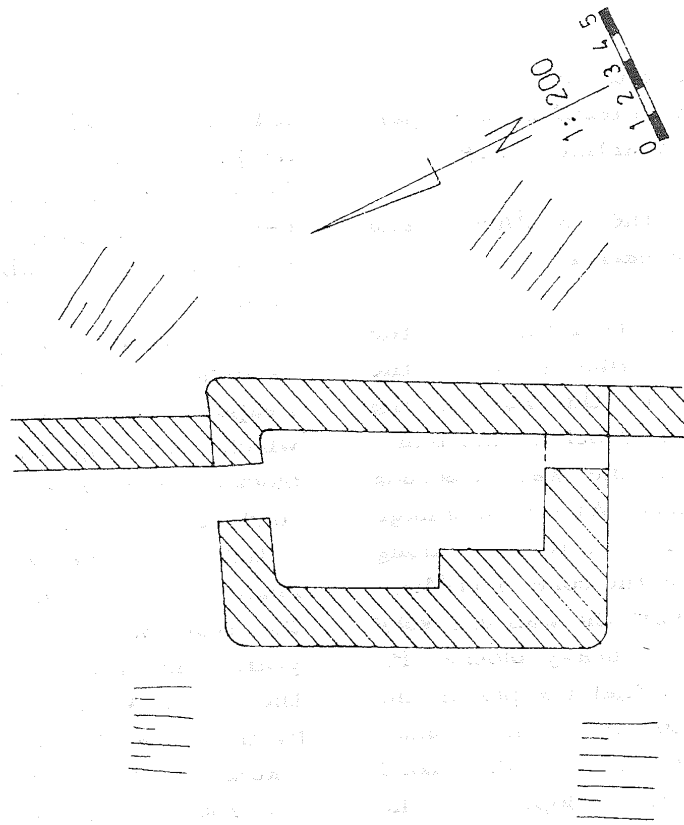


Fig. 7 : Camp in the middle part of the wall descending from the Qullat Mishneqa to the southern Wadi el-Mishneqa.

have originated a settlement, the predecessor of the well-testified and partially excavated Byzantine village.

#### 4. Relics in the southern and eastern area of Machaerus.

It is necessary to return to the Qal'at Mishnaqa in order to trace the southern semicircle of the wall of the circumvallation. Shortly behind the building-plot ('Baulager') the wall descends down to the southern Wad el-Mishnaqa (Pl. XLIV, 1), which stretches along the southern flank of the cone of el-Mishnaqa. In the upper part the wall is a very strong construction of heavy blocks (Pl. XLIV, 2). It is likely that the permanent threat of attacks compelled the Roman pioneers to resort to a more solid construction. On the slope, in the middle part of the line, nearly 170 m apart from the highest point of the western ridge, the wall again is reinforced by a camp 10 x 14 x 9 x 14 m (Fig. 7; Pl. XLV, 1.).

A post, roughly 20 m above the valley and 180 m away from this camp and protected by a natural ditch, blocked the Wadi el-Mishnaqa on the northern side (Fig. 8). The walls of the Camp are destroyed and dispersed, but a big heap of stones in one of the corners of the flattened field and also the characteristic line of the wall of the circumvallation, which partially formed the border of this camp, are good arguments for a camp at this point (Pl. XLVI, 1). Especially for this place I would recommend some excavations, which cause no problems, but could clarify the significance of the typical stone-accumulations of rectangular arrangement (10 by 10 m).

Opposite to this post on the other side of the valley is a second one of irregular quadrilateral appearance 23 x 12 x 27 x 21 m (Fig. 9). It is erected on a nose projecting from the slope, more than 20 m above the bed of the Wadi (Pl. XLVI, 2). Two considerable accumulations of rough stones prove the existence of foundations for ballistic weapons. Today between the two camps, which are significant guard-posts for blockading the relatively broad valley, the road leads down from ed-Deir to the Wadi Attun and to the Wadi Abu-es-suhun and finally to the shore of ez-Zara. When the road was improved in the recent years, the foundation of the wall of the circumvallation was cut through by the workmen. But one can still detect traces of it on the northern talus of the road, where some stones are still in situ. Evidently the Wadi was closed by the wall additionally strengthened by the two camps.

From the last-described camp on the southern slope the wall climbs up for 150 m to the western top of the long ridge, forming the Southern boundary of the Wadi el-Mishnaqa, where a very impressive camp 40 x 31 x 37 x 34 was built in order to form a strong corner of the circumvallation (Pl. XLVII, 1). The breadth of the walls is 1,8 to 2 m, the height in various places is from 1 to 2 m (Pl. XLVII, 2). The camp is nearly a quadratic one and very well adapted to the natural elevation of the ridge (Fig. 10).<sup>21</sup> In the midst of it we notice numerous stones dispersed and now seemingly without order. One wall in the southeastern corner has been inserted in modern times. There are also some destructions of the original shape

(21) It is similar to camp A and camp Dat Masada. Cf. A. Schulten.



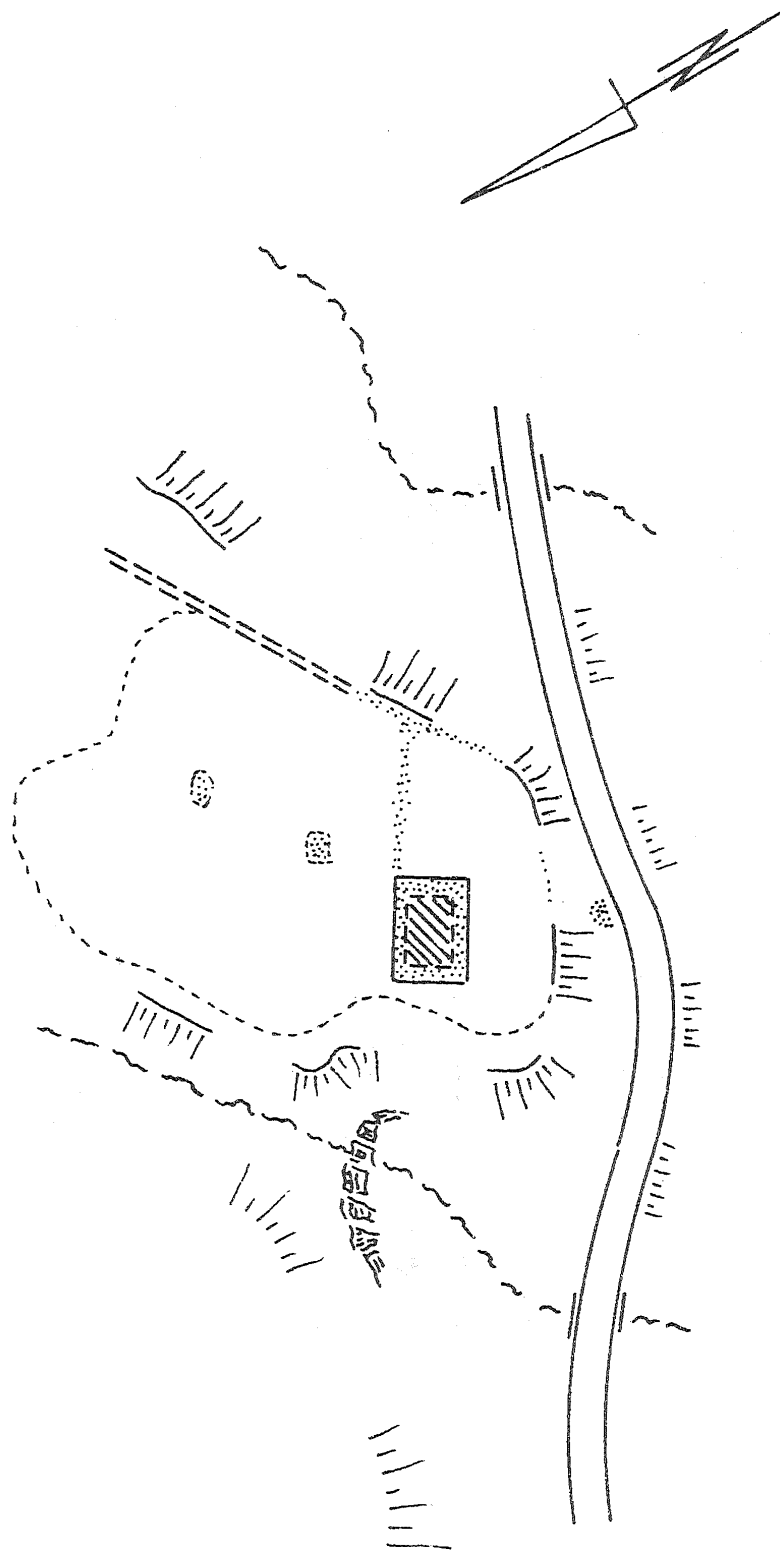


Fig. 8 : Camp or post with circumvallation-wall above the southern Wadi el-Mishneqa; the points mark stone arrangements. scale 1 : 1000

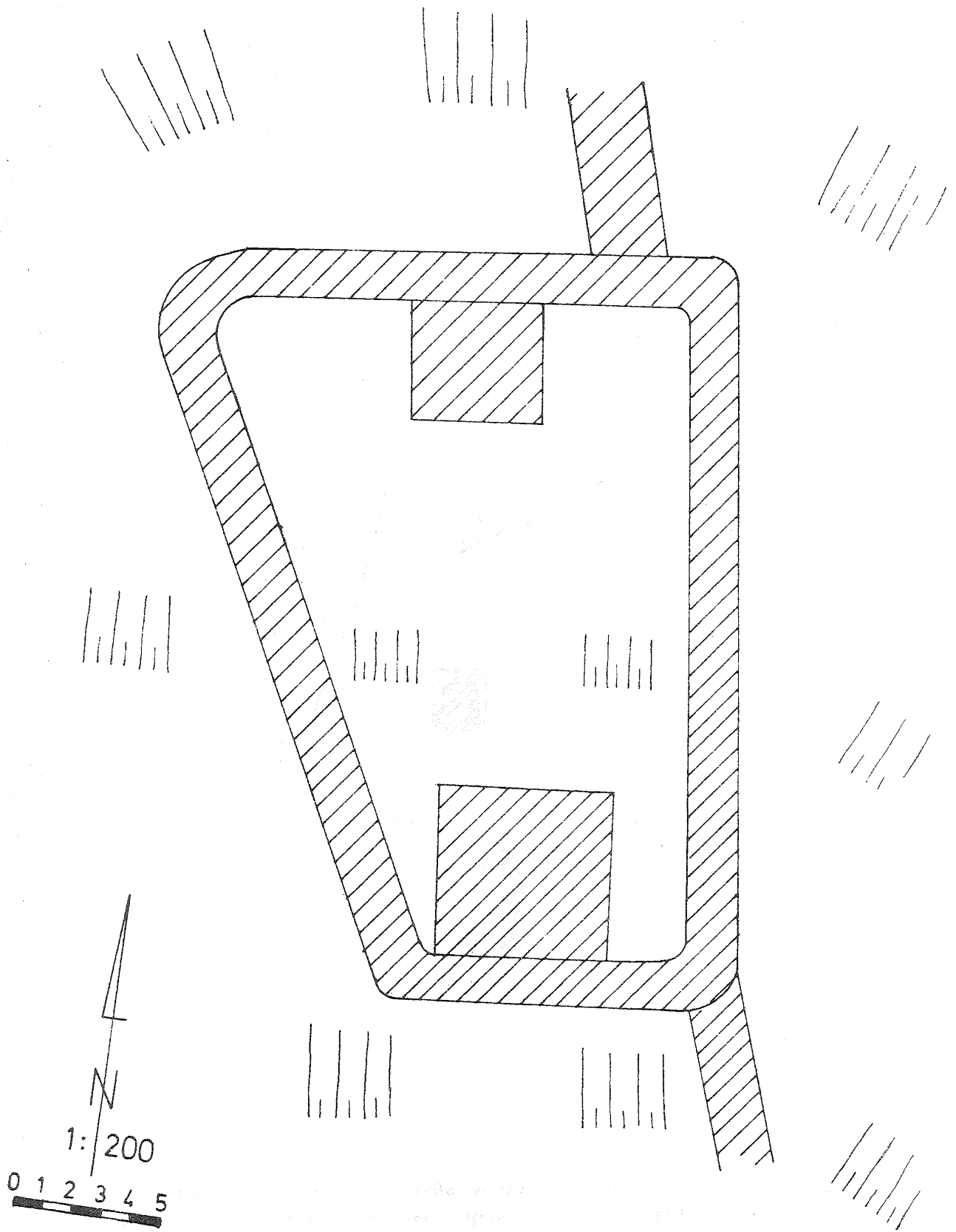


Fig. 9 : Camp above the southern Wadi el-Mishneqa in the southwestern section of the wall.

caused by modern military activities. Yet it is not impossible to reconstruct some arrangements within the camp. In front of the eastern entrance we were also happy to find a small ancient playstone decorated with a carved rosette (Pl. XLV, 2).

From this camp the wall turns to the East and continues on the long ridge extending parallel to the central ridge of Machaerus. After nearly 350 m we come across another rectangular camp of 12 x 16 m (Fig. 11). The round corners are preserved for 1 m and show three layers of stones. The place of this camp is very informative, because it was erected exactly opposite the fortress and reinforced the very vulnerable southern side of the wall (Pl. XLVIII, 2). The height of the ridge (638 m) is relatively low compared with that of the fortress (699/700 m). For this reason the besiegers established within the line several rectangular annexes to the wall (of 2 to 4 m), the average distance between them is 25 to 30 m (Fig. 12). Eight of these objects (towers or "plat forms") may be detected without any complications (Pl. XLVIII, 2).

From our camp the continuation of the wall with three or four further annexes can be traced for another 350 m to the southeastern camp on djebel ez-Zaniya (721 m above sea-level), representing the southeastern corner of the circumvallation (Pl. XLVIX, 2). Concerning the stone-annexes of the wall, we remember that A. Schulten verified similar objects in the eastern wall of Masada.<sup>22</sup> Their purpose is evident if we follow the landscape from the cone of the fortress down to this section of the wall. With the excep-

tion of the valleys the ridge on which it is erected represents the lowest elevation of the whole circuit. The Romans, well acquainted with the tactic of surprise attacks must have been afraid of attempts to break the siege especially in this area. Naturally, the camp on the southeastern height belongs to the larger ones. The proportions of the rhombic construction, also well-adapted to the nature of the hill, are 30 to 60 m (Fig. 13).<sup>23</sup> The walls can clearly be discerned (Pl. L, 1, 2) and the stone-bounded lodgings of the soldiers (*contuberniae*) can approximately be determined. There existed an access to the camp from the East leading to the commanders's tent (*praetorium*), which was inserted into the excavated rocky ground.

From this camp the stone-line goes down to the upper valley of the southern Wadi el-Mishnaqa and again cuts the road to ed-Deir directly (Pl. LI, 1). We cannot affirm with certainty whether there was also a guard-post above or near the valley. The northern declension of the slope of ez-Zaniya in its lower part, approximately 120 m away from the rhombic camp, is considerable. Before this section we find a relatively flat field, the border of which is formed by the circumvallation wall (Pl. LI, 2). If in this place the Romans had stationed a guard, he could have controlled the bottom of the valley. Unfortunately the enlargement of the road has destroyed the lower sections of the wall, which I could still see in 1965. On the opposite slope, ascending the djebel Djumeidjme, which is also very steep, for the same reason the wall has disappeared too. Years ago, I could still recognise a dark-coloured line in the late after-

towers of the circumvallation of Numantia".

(23) It is similar to camp H at Masada.

(22) See A. Schulten, "Masada", p. 93: "The towers were used for stationing guards, perhaps too for locating catapults, as testified for the

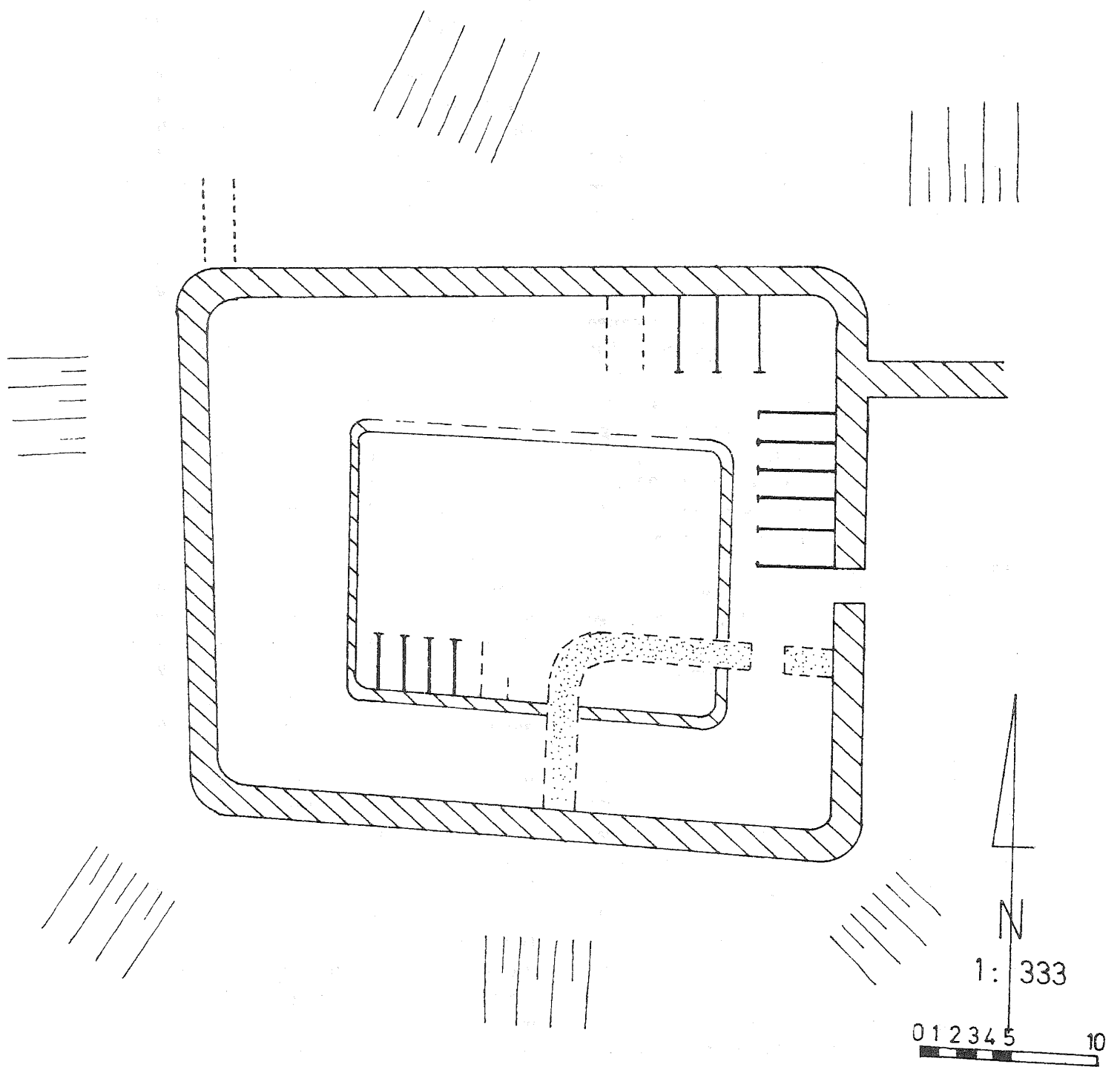


Fig. 10 : Southwestern camp on the southern ridge; in the corner a secondary wall.

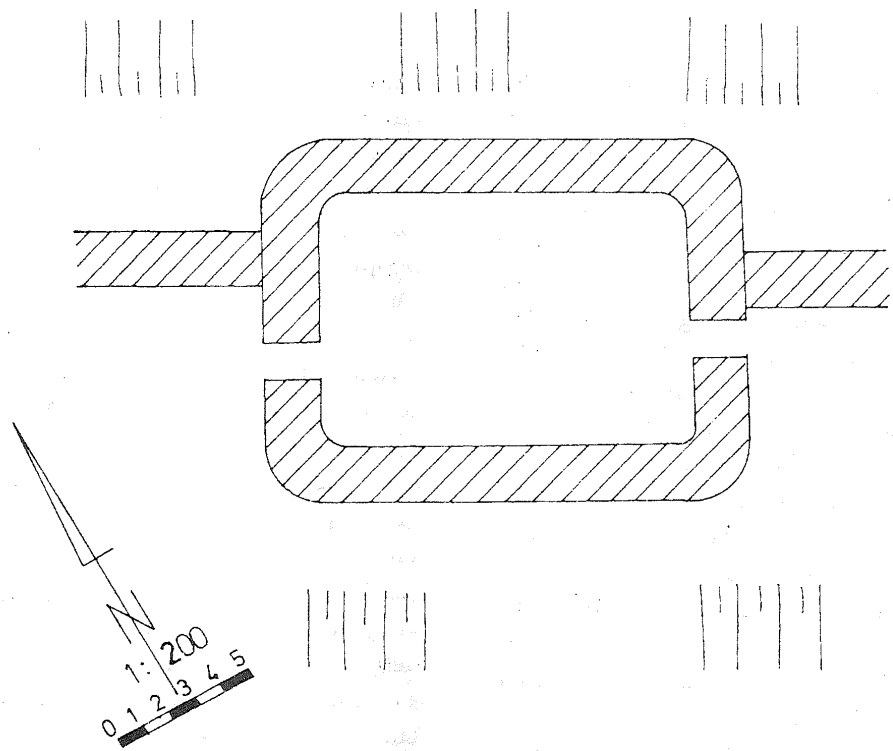


Fig. 11 : Camp in the middle part of the circumvallation-wall on the southern ridge.

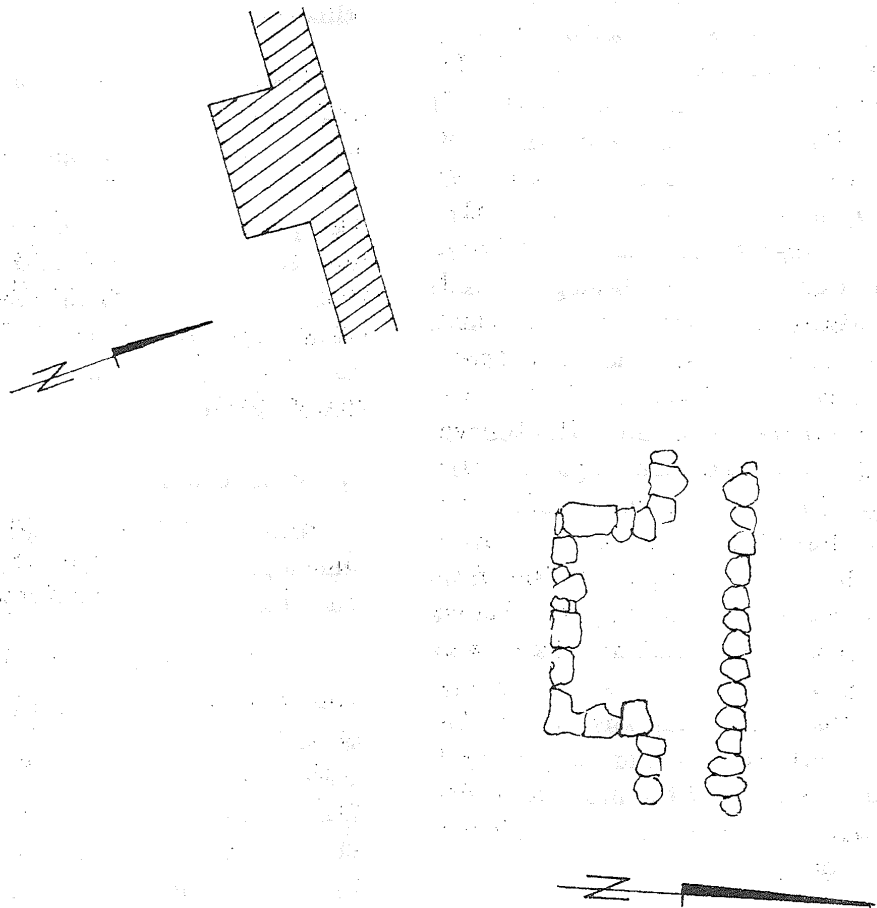


Fig. 12 : Rectangular annexes to the wall in the southern section (scale 1 : 100).

noon, perhaps the only trace of the once impressive wall. Today it is very difficult to state its exact location.

We are only able to do it because of the upper continuation of the wall (Pl. LII, 1), leading to the area of another camp, perhaps originally a very extensive one. Its central part has been partially destroyed by trenches, dug in the years after 1967 by fedayin ? soldiers. We can discern some lines of stone, but it is impossible to make precise observations (Fig. 14). The spacious top was undoubtedly convenient for a large construction, and we must assume that, in any case, a camp was built on this dominating place East of the fortress (Pl. LII, 2). The central spot of the hill is marked by many accumulated stones. A cave nearby, the entrance of which faces North, would be worth an investigation. Unfortunately it seems impossible to determine the stone-lines of the outside walls, though there may be traces of them. All things considered there is sufficient evidence to assume, that the djebel Djumeidjme once was the location of significant camp, perhaps the main camp of the besiegers, and we are inclined to believe that Bassus might have commanded his army from this ideal spot (721/722 m above sea-level). From here he could well observe and direct the attacks against the 'lower city', into which he could even peek from this place (Pl. LII, 1). From here too the water-supply of the fortress may have been interrupted. Above all, from here the western dam was built to separate the forces of the defenders. Hither the support of material, men and food could be brought without unnecessary difficulties and delays caused by the natural wicker-work of valleys.

Yet the problem remains how to determine the continuation of the cir-

cumvallation-wall. It seems to me that there are no further remnants. We cannot expect them either, since this section of the circumvallation-line has undergone much change through the people of the village living not far away on the other side of the Wadi Mukawer. The Wadi finally narrows down at the northern Djumeidjme to a crooked savage ravine (Pl. LII, 1). In the vicinity of this area there are also some fields of the fellahin, an apparent proof of agricultural activities and possible alterations of the terrain. Thus we can only guess that very likely the wall did not cross the deep ravine in the Northeast but made a short detour towards the village (to the North). We can expect that it crossed the Wadi at the beginning of the ravine (contrary to my former suggestion I am now inclined to prefer this solution).

From the bottom of the valley the wall again climbed up to the height of Arqub. With respect to our description we must therefore assume that the complete wall extended over the immense circuit of nearly 3,5 km. For this place the supposition of another camp, perhaps also a more extensive one (a legion-camp ?), has been already given.

## 5. Conclusions

Analyzing the topographical and archaeological facts, we are able to draw the following conclusions:

- 1) The width of the circumvallation-wall at all sections and all places is between 1,8 to 2 m. Comparing it with the measures of the analogous installations of Masada we notice that these dimensions are the same. There are only differences in the height of the preserved remnants (Pl. LII, 2). Normally the wall around Machaerus

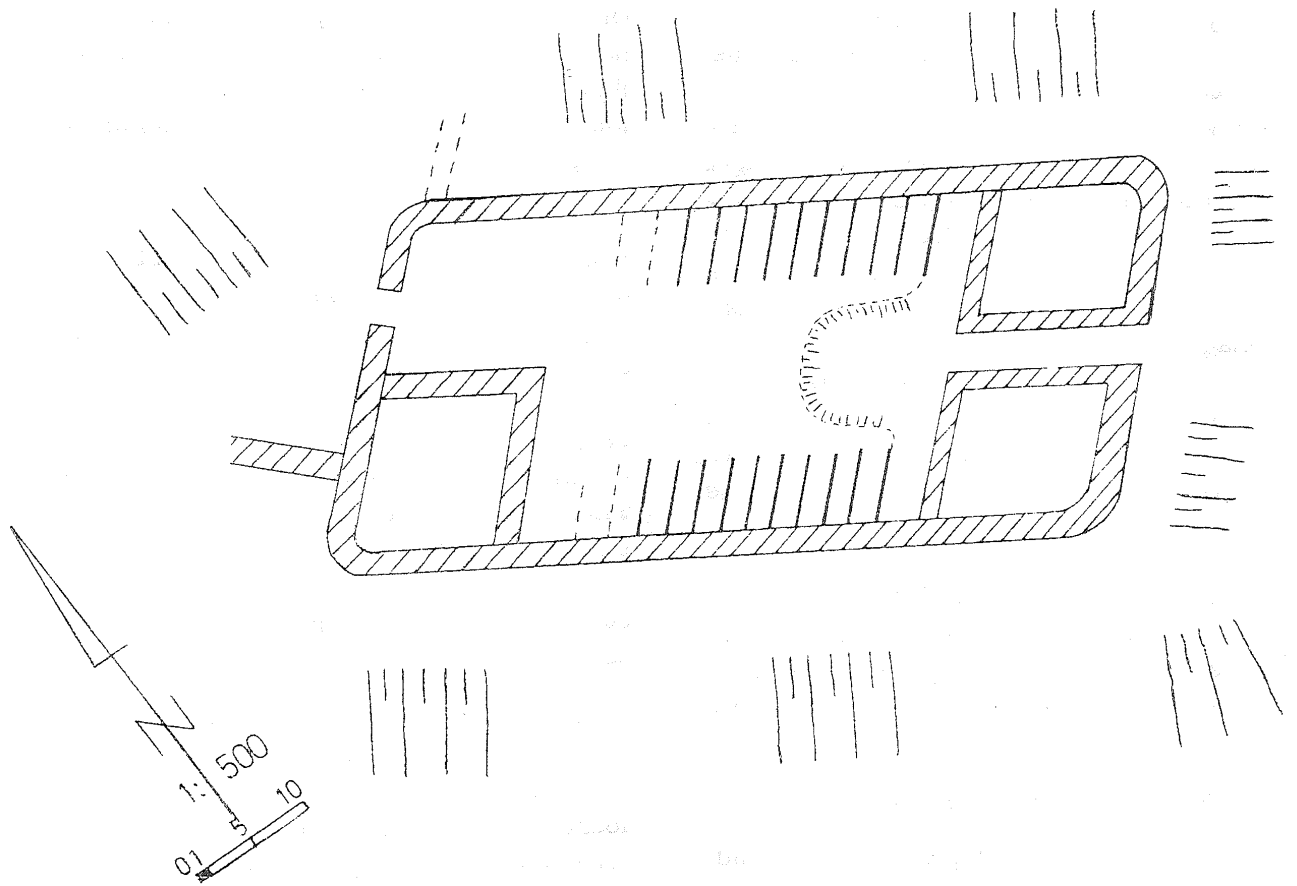


Fig. 13 : Southeastern camp on the djabel ez-Zaniya

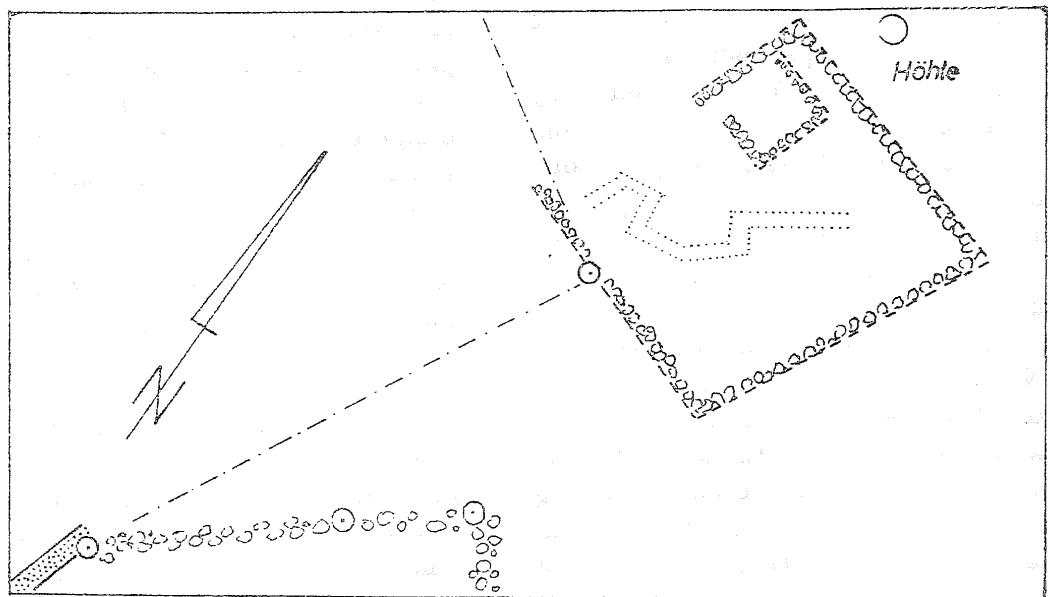


Fig. 14 : Walls and stone arrangements on the top of the dj. Djumeidjme; nearby a cave; the dotted lines mark the modern military trench, after 1967.

today is, 0,2 to 1 m high (Pl. LIII, 1, 2), but there are many blocks dispersed all over the line which we can follow for 2,5 km. Especially the basic walls can be clearly traced. The ridges and the ribs of the slopes were always preferred for building the wall (Pl. LV, 1, 2). In various places, primarily in the western sections up to Qal'at Mishnaqa, the wall attains a height of 1 to 1.2 m. It is possible that the unforeseen surrender of the citadel stopped the completion of the work before it was as perfectly established as at Masada.

2) It is a peculiarity of the circumvallation of Machaerus that there are evidently many camps, each of them directly connected with the enclosure-wall. We may discern:

- a) camps at the heights and ridges,
- b) camps on the slopes in their middle parts, and
- c) camps or guard-posts near the floors of the valleys.

Totally seen we are confronted with a lot of camps, but there is a very simple reason for the relatively large number of them. It is my contention that the terrain simply compelled the Romans to act very cautiously. They constantly had to reckon with the possibility of massive escape attempts from the area of the fortress. The long slopes of the cone in the West and South invited to such efforts. The deep northern valley, surely was attractive for refugees who could choose this way for escaping during night. For this reasons it was a real necessity to fortify these sections of

(24) Design and arrangement of the circumvallation wall should also be compared with the installations of Bet-tir, because the geological terrain around the fortress is strikingly

the wall as well as possible. The number of the smaller camps which we find testify to the fact that the Romans were aware of the imminent danger.<sup>24</sup>

3) The plateau of Masada has a height of 300 m and is surrounded by deep valleys and clefts. It was in no way favorable for escape attempts. In an emergency the troops of the legion-camps could simply hurry to the endangered places. Logically they preferred to station their troops behind the wall. Thus each attack could easily be countered. Yet not so in Machaerus where it was necessary to fortify the wall by additional camps in regular and relatively short intervals of 200 to 300 m.

4) As already mentioned, the corners of the enclosure-wall are marked by larger camps. All are favorably located on higher elevations of the area, either on ridges or on the plateau of Mukawer, separated from the cone of the fortress by deep valleys. Only one larger camp, the one on the western ridge, lies behind the enclosure wall. Its location may be explained from the fact that it had to shelter the building-plot and had to house additional troops for the protection of the most endangered line of the circumvallation. Finally we should also assume the existence of one or two legion-camps in the neighbourhood of the siege-works we have described. But today it is no longer possible to find traces of them.

5) Some accumulations of stones in the smaller camps, above all in the posts near the beds of the valleys, may have used as substructions or platforms (towers ?) for siege instruments from where ballistic missiles could be hurled

similar to Machaerus. Cf. A. Schulten, "Masada", pp. 180ff. ("Anhang: Beth-ter"). See map XII,



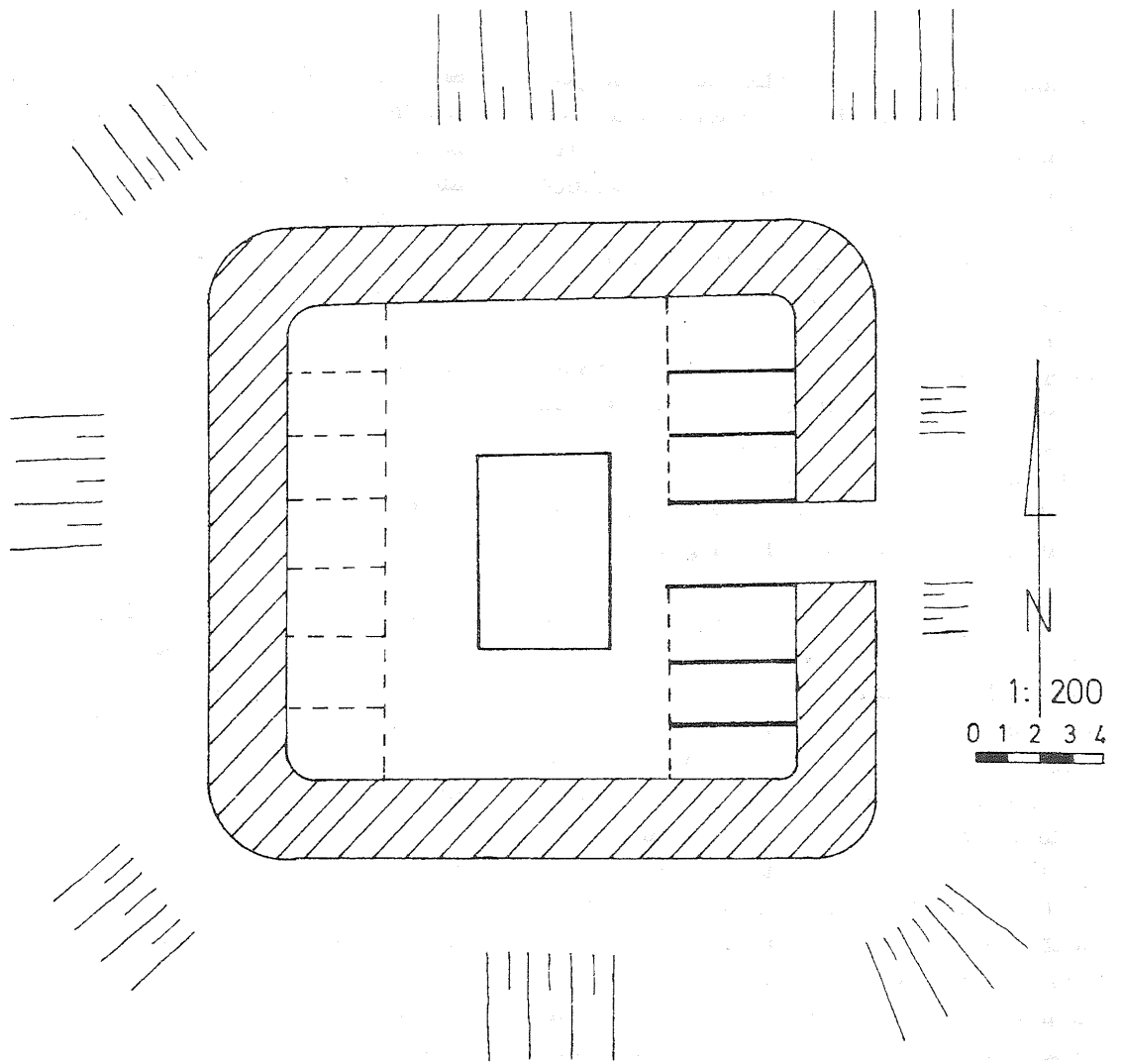


Fig. 15 : Camp on the spur of el-Mashmul

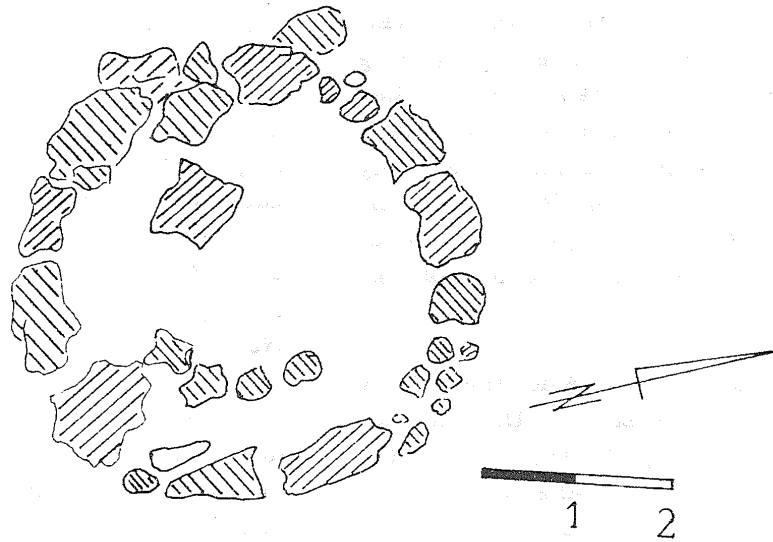


Fig. 16 : Signal-station near the camp on the ridge of el-Mashmul

against the enemies. The stone projectile I found in the northern Wadi el-Mishneqa, where it meets with the Wadi Seqara not far from the described post (or camp) on the northern side of the slope leading to the height of Arqub, may be a good proof that siege weapons were used by the Roman troops. Over 20 stone ballistic missiles were also discovered in the 1968 season of excavations on Machaerus itself.<sup>25</sup> But in respect to these findings the question remains open whether they are of Roman or of Jewish origin.

6) Concerning the eastern section of the circumvallation we should see that the wall was built farther away from the fortress than on the western side. This fact is not only conditioned by the natural character of the terrain around Machaerus, but possibly also by the outworks on the eastern side of the fortified cone where we must locate the so-called 'lower city', explicitly mentioned by Josephus. We may assume that the causeway to the fortress was protected by some additional outworks. The Roman troops had to conquer them. But after their arrival they first erected the enclosure wall in safe distance of their out works. Later they captured these projecting installations of the citadel. Then they were able to construct the eastern dam for promoting siege machines. At any rate the eastern continuation of the circumvallation wall is a good argument for the problem of the location of the "lower city".

7) On the western side there may have been no access to the citadel. The cone, 40 m higher than the ridge and once fortified by walls and towers of 30 m in height, was additionally

(25) Cf. J. Vardaman, "Preliminary Report", pp. 20f.

sheltered by a ditch, the traces of which can be detected. Today it has been filled by erosion with earth and also with the rough stones of the long siege-dam, which ends here rather abruptly. It is unlikely that the two towers, already noted by Tristram,<sup>26</sup> erected on the western and south-western ridge in a distance of 1 and 1,5 km from the cone, may be explained as outworks of the fortress.

6. Final reflexions about the conquest of Machaerus.

For a second time I want to return to the fascinating fact of the citadel's conquest reported by the historian Josephus. If we follow his trustworthy description Machaerus was surrendered by the Jews before the Roman siege-works were completed. The Jews wanted to save the life of the prisoner Eleazar who was allegedly sentenced to death through crucifixion by the Roman commander-in-chief. Yet the defenders of the fortress did not act in military unity. The citadel and the 'lower city' were each fighting their own battle. We know the reasons. The citadel on the high elevated mountain top, occupied by Jews, was separately attacked by the Roman troops approaching from the western ridge. The lower located city, covering primarily the eastern slope of the cone and forming the causeway to the fortress, was defended by natives, presumably of Arabian origin. Josephus tells of 'allied foreigners' and probably means native Arabs or Nabateans.

Daily attacks and outbreaks of the defenders were undertaken to disturb or to hinder the completion of the siege-works. Sometimes they were suc-

(26) Cf. H. B. Tristram, *The Land of Moab*, pp. 260f.

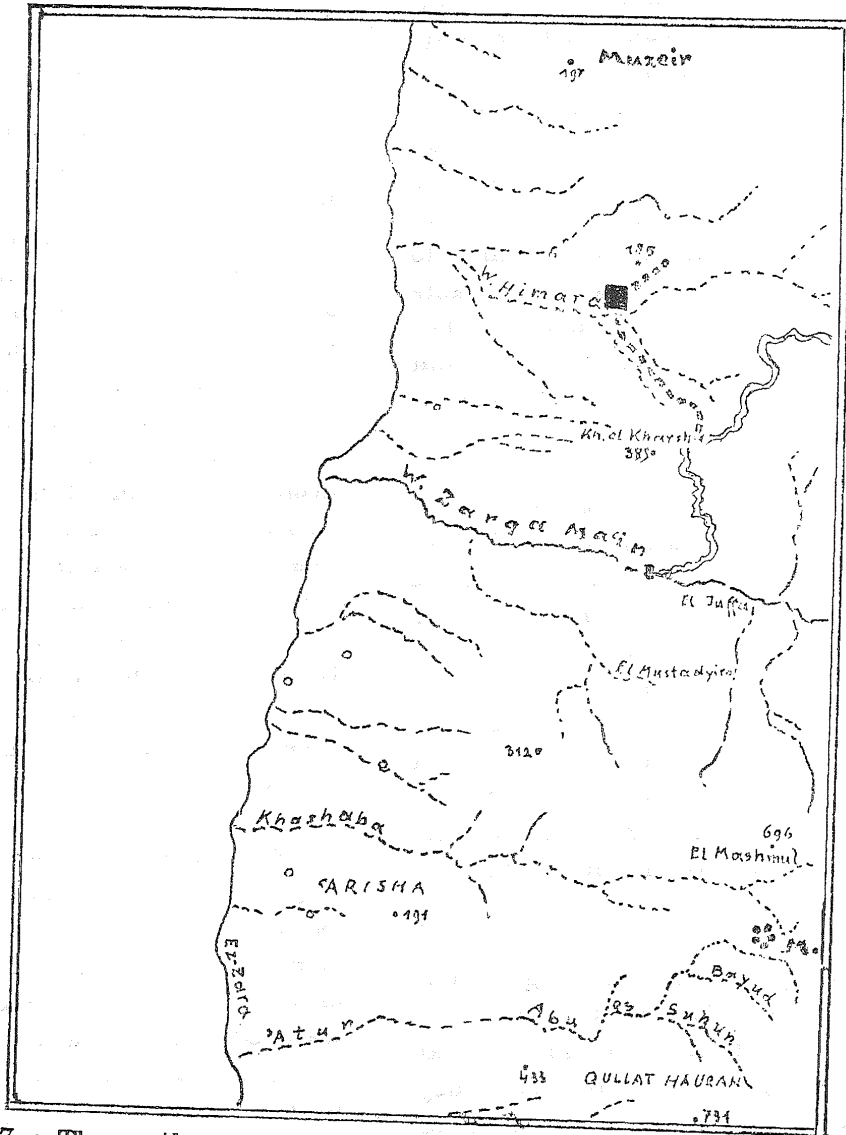


Fig. 17 : The northern area of Mukawer (M. = the fortress of Machaerus); the large dotted line represents the course of a pre-Roman road). Scale 1 : 100 000.

cessful, especially when there was the element of surprise in the raid. The defenders also had started an attack that very black day on which the Romans got hold of Eleazar. While the youngster stood outside the gate and incautiously talked with some defenders on the city wall, a legionary, an Egyptian soldier called Rufus, captured him. On his back he carried the surprised man away from his comrades. For minutes the spectators on the wall were paralyzed by the terror of this action. Afterwards Bassus ordered to undress Eleazar and to whip him 'in front of the eyes of the inhabitants of the city'. Josephus remarks: 'The whole town showed violent grief, but it was in no relation to the misfortune of only one man'.

Calculating with the depressed mood of the defenders, Bassus pretended to crucify the prisoner. Now the Jews sent a delegation to offer the surrender of the citadel, a plan about which the 'lower city' was not informed. Finally this special contract was negotiated: Eleazar should regain his freedom and the Jews of the fortress should not be punished. Yet the fortune of the defenders of the 'lower city' was different, because they were left to fend for themselves. They tried to escape secretly during the night, but did not succeed. The Jews, willing to surrender the fortress, were afraid that it might endanger the agreement they had achieved, and sent a dispatch to the Romans informing them about the planned escape, which necessarily failed. Only the bravest succeeded in breaking through the Roman enclosure. From the inhabitants of the 'lower city' 1700 men were killed and the women and children were sold into slavery. So the end of the fight was a real tragedy. It

does not reveal much bravery and courage on the side of the Jewish defenders, who evidently had no illusions about their hopeless situation. Concerning combativeness, Macherus is the total counterpart of Masada. In this respect Machaerus is not the 'sister', but the 'step-sister' of Masada. It shows that bravery is not a matter of nations but of individuals.

The end of the fight gives cause to think about some special problems. For both sides the siege ended suddenly and unexpectedly. It is likely therefore that the field works remained unfinished to a certain degree in some sections less important. Josephus may be right when he emphasises that both groups, the one in the citadel and the other in the 'lower city', were in a terrible and desperate mood. Indeed at this point there was no hope in defending Machaerus successfully. When the final attack would come was only a question of time. The Romans demonstrating their overwhelming power had given a good example of tenacity and strategy. When we remember the immense field-works we get a good impression of the despair that had arisen in the hearts of the defenders. All details of the siege-works underline the fact that Bassus never had underestimated his enemies. The camps are well situated on the ridges, the valleys were attentively watched and guarded. The question emerges how many soldiers were brought to this battle-field.

The enclosure stretched for 3,5 km around the fortress.<sup>27</sup> We may assume that the Romans at least needed one legion of 4000 or 5000 men in order to hold and to protect the line of circumvallation. In respect to their enemies we also have to reckon with 3000 or 4000 men in the fortress and

(27) The circumvallation wall of Bet-tir has a length of 4 km.

in the 'lower city' This means that the forces were at least equal. Yet it seems more plausible that the Romans had far greater numbers. According to Josephus, the tenth legion and moreover another 'army' were brought to Machaerus. In no way should it be excluded that 10 to 12000 Roman soldiers were camping and fighting around the circumvallation line. But we should also take into account the necessity of auxiliary troops that procured supplies for the fighting powers. 28

How could it be achieved to bring to this lonely area, seemingly far away from the important routes, soldiers and weapons from the west bank of the Jordan river? How was it possible to provide them with food and water? To answer these questions I must refer to an important observation I made on the mighty northern ridge of the height of Mashmul (696 m) (Fig. 1). On the western spur, from where one has a marvellous view over the whole Dead Sea, the northern plains, and also over the Wadi Zerqa Ma'in, I found another Roman camp of 16 to 18 m, wonderfully situated 29 and also well preserved (Fig. 15). In front of this camp is the stone arrangement of a signal station which belonged to it (Fig. 16). I am convinced that the camp served as a guard post (Pl. LIV, 1, 2) and I suggest that it also had the function of establishing a connection between the troops of Machaerus and the northern districts. Moreover, it was necessary to control

(28) For Masada see A. Schulten, *loc. cit.*, pp. 84ff.

(29) Schulten's map of the installations at Masada shows a similar guard-post on one of the heights.

(30) For the problem see M. Harel "Israelite and Roman Roads in the Judean Desert", in: *I.E.J.* 17, (1967), pp. 18ff.

(31) The German Ulrich Jasper Seetzen, visitor

the road which led from Jericho to the Wadi Zerqa Ma'in, Kallirrhoe, and Machaerus. Such a road existed and we still can find its traces in the northern plains, peculiarly between the Wadi Himara and the Wadi Mukheiris (Fig. 17). I am convinced that on this very important pre-Roman road, 30 the width of which occasionally extends to 14 m, the Roman troops marched to Machaerus. It guaranteed the next connection between the Jordan river and the distant fortress. We might even assume that after the fortress had surrendered portions of the Roman troops were transported by sea from Kallirrhoe (ez-Zara) to Masada. But it is not very likely that the mass of the Roman forces took the sea way at the beginning of the military operation against Machaerus. It was undoubtedly easier to lead them by land to the area of Machaerus, since there existed a very good road on the first plateau of the eastern shore. Often mentioned by visitors of the 19th century this road can still be traced for kilometers. 31

I may close my report in the hope that these important Roman installations — significant remnants of a unique place in Roman and Biblical History — may be protected by the Hashemite Kingdom of Jordan. They are attractive for people with historical interests and surely shall be visited more and more by touristic groups who also will be fascinated by the wonderful landscape high above the glittering waves of the Dead Sea.

August Strobel

of the area of Wadi Zerqa Ma'in on the 18th of January 1807, was the first European, who could identify the ancient fortress Machaerus with the site of Mukawer (spoken by the Beduins "Mtschauer"). He also reports about a road or path, which the natives called "derb el Szultan", i.e. "road of the Cesar". See U. J. Seetzen's *Reisen et.*, edited by F. Kruse, vol. 1, (Berlin, 1854), pp. 408ff.



# City Planning of Tell el 'Ajjul

## Reconstructed Plan (Fig 1)

by

Khair N. Yassine

In order to analyze the city planning and social concepts of the ancient Palestinian cities, it is necessary to involve ourselves with the following aspects:

- a - The significance of town planning (which involves analysis of the location of its administrative and commercial centers.
- b - The location of the market place:
  - 1 - its sociological functions.
  - 2 - its relation to the shrine or palace.
- c - The streets and their position in relation to the residential units.
- d - The groups of these units (grouped themselves inwards or quarters):
  - 1 - the front entrance of the compounds facing the roads and the back abutting either on land not yet built up, or the city wall.
  - 2 - the backs of the compounds which might be linked by foot-paths which often formed the boundaries between quarters.
- e - The contrast between what might be called, the "radial and chess-

---

(1) The sequence of events at 'Ajjul was very different from that of the northern cities. Situated not far from the Sinai desert and only a mile or two from the Mediterranean coast, its position was doubly important. It lay at the junction of vital land routes and was well placed for maritime trade. The city

board pattern", or insular vs blocks pattern such analysis should indicate the extent to which we can speak of Palestine's city planning as opposed to haphazard accretion.

Before proceeding in our investigation, we must, curiously enough, remark that each of the towns of ancient Palestine sprang from contemporary conditions, economical, political (historical events), stratigraphical, typographical and technological achievement, each one almost having its own conditions.

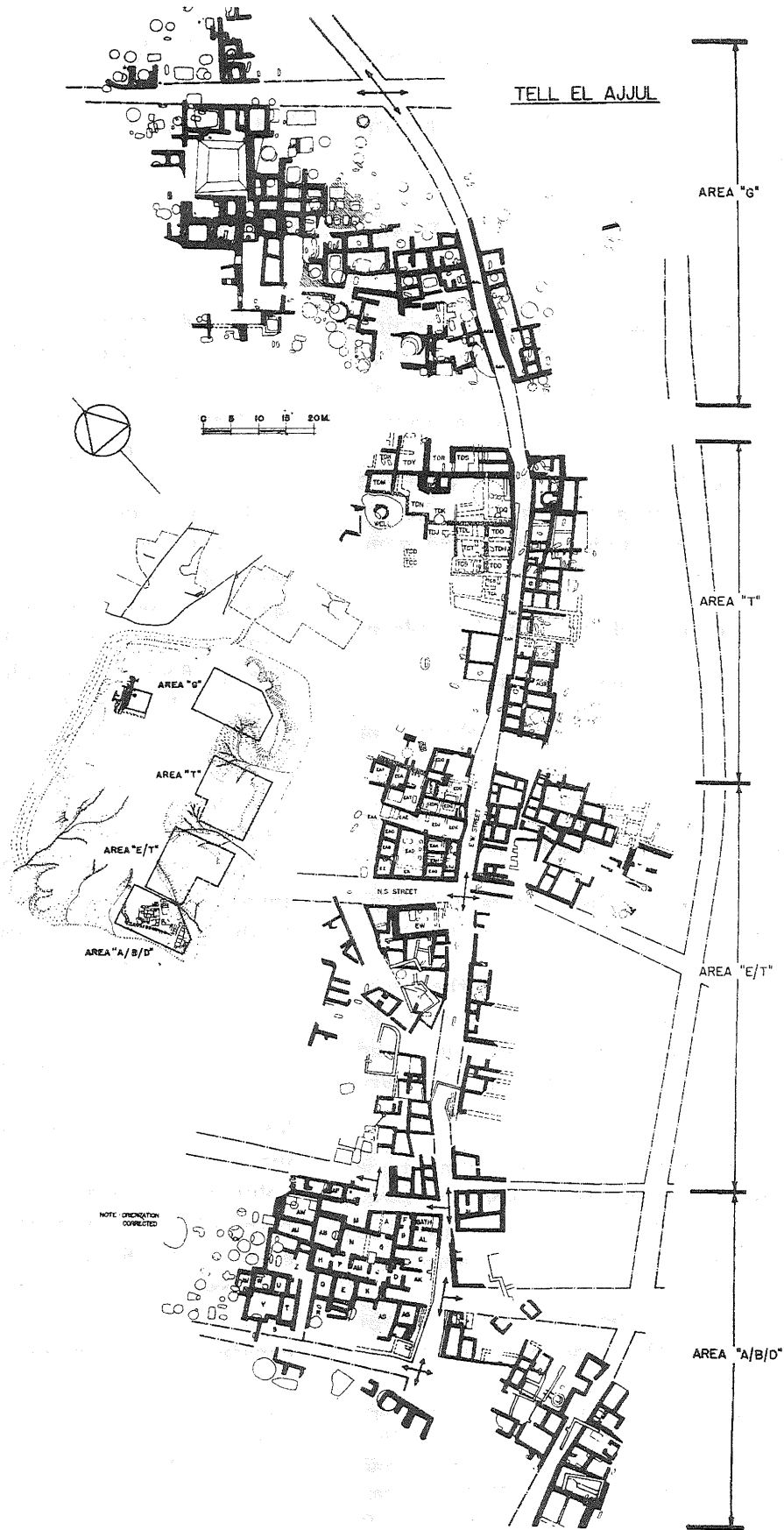
When we speak of the Palestinian cities and those of her neighbors, we must interject that Palestine was not involved in stylistic form and rigid tradition. This always fluctuated, but generally kept the formation of the architectural principle of organic order.

I have been very careful in utilizing the Tell el 'Ajjul<sup>1</sup> architectural complex because of the sketchy and often inaccurate plans published in the five volumes of Gaza. No comprehensive plan of the excavations is produced, even in the fifth volume which followed topographical grid. As a result, it is hard to get a clear idea of the excavation as a whole.<sup>2</sup>

formed part of a province which was closely allied to Egypt during the Hyksos period. W.C. Hayes, *CHA* 2, fasc. 6, p. 21.

(2) The excavated loci are distributed into arbitrarily selected regions marked by the letters of the alphabet A-T, leaving U-Z for regions not yet touched.

Fig. 1





Petrie mistakenly indicated the north direction toward the west in Gaza I (Pl. LIV), and compared it with the detailed plans, particularly in Vol. III, Pl. LI. The carelessness with which orientations are used, adds considerably to the difficulty of understanding just what is referred to.<sup>3</sup>

The excavation report did not mention when the excavations were resumed in the successive campaign of 1938 and it is questioned whether they had, in fact, started from the point at which the previous one stopped, or if they had left an area untouched and separated between the two.

The divergence between Petrie's chronology of Palestinian pottery and what is known, is very great. Albright examined Petrie's four volumes and arrived at the conclusion that the "Copper Age" <sup>4</sup> described by Petrie is MBI <sup>5</sup> (or EB-MB, Kenyon). <sup>6</sup>

Petrie attributed the two strata to the twelfth and fifteenth dynasties, respectively. Albright's examinations indicated nothing of an occupation, after ca. 1450 B.C., <sup>7</sup> and not a single characteristic painted sherd of developed LB type is recorded by Petrie as coming from the houses of the Hyksos level (equivalent to Tell Beit Mirsim D) <sup>8</sup> and belongs mainly to the late 17th and 16th centuries B.C.

(3) It is only indicated by saying, "the dig was resumed to the east of the previous campaign".

(4) Gaza I, p. 3; Gaza V. p. 10.

(5) W.F. Albright: "The Chronology of a South Palestinian City, Tell el 'Ajjul," *The American Journal of Semitic Language and Literatures* 55 (1938), pp. 145.

(6) K. Kenyon: *AHL* (1970) p. 145.

(7) Gaza I, pp. 2, 4. The Gaza upper level equals

So the Middle Bronze Age town probably dates only from the end of this period, and continued to the early part of L.B.

In the course of the second and third seasons, a series of superimposed buildings were excavated which Petrie considered to be palaces, between the earliest and second of which was a considerable layer of ash.<sup>9</sup> Professor Albright demonstrated that the occupation level which lay beneath the burnt layer (that is, Palace I) and city III were contemporary,<sup>10</sup> it seems clear that the destruction of both occurred at the same time, either during or shortly after the final defeat of the Hyksos, when the city of Ajjul was razed to the ground and houses and public buildings alike were covered by a thick layer of debris.

Fig. 1 illustrates the result of our attempt to reconstruct and correlate the areas dug (these areas were plotted on the map published in Gaza III (Pl. LI).<sup>11</sup> From the practical and hypothetical extension to the unexcavated portion (very badly denuded, between areas E,T, and G) of our reconstructed plan, there is a coherent city layout from which we draw conclusions.

To the west/south corner (drawn in open line) is the first phase of the lower level, the second phase probably

Megiddo, Stratum IX; Tuthmoses III equals TBM, Stratum C.

(8) W.F. Albright: *AJSL* 55, p. 345.

(9) *Gaza II*, pp. 4, 17.

(10) W.F. Albright: *AJSL* 55, p. 348-49. The date given for the construction of Palace I is in the late 17th century B.C.

(11) F. Petrie: *Ancient Gaza I* (1931) *II* (1932) *III* (1933) *IV* (1934) F. Petrie et al: *Ancient Gaza V* (1952).

is denuded because of the steep slope. In Area "A", the top big complex of the second phase was uncovered,<sup>12</sup> and described by Petrie as a main house of square blocks A, AB, H, J, which will hereafter be referred to as the civic complex. The whole complex seems to form a unified unit, containing many rooms, bathrooms, shrine and many silos to the west of the building. This unit might served as a civic building, housing officials. The shrine (AF) is of an Egyptian style, where it has three rooms at the rear.<sup>13</sup> Egyptian alabaster vases were found in Rooms F.C. W and N. the pottery registered comes from this complex, and was probably used as a living quarter of the (officer) in charge of the whole civic building.

South of this building, an E/W street runs all the way to the east end of mound in radial form, running parallel to the city wall and follows the configuration of the mound. There is another street south of this one running parallel to it, but not traceable beyond area B/D's lower level. Dwelling complexes bordering the E/W street on both sides, were found.

In Area E, complex EW,<sup>14</sup> stands a very noticeable building, situated overlooking three streets. The distinction of this building in having thick walls forming a big hall (8.50 x 4. m.) and its location on an intersection are indicative of a special function. Palestinian temples found in Shechem of MB and Megiddo (Stratum VIII) are almost the same as this one, with only

(12) Gaza, I, Plate LIV.

(13) Like the mortuary chapel of Sunkh-Khare Mentuhutep at Qurna and the Middle Kingdom temple at Medinet Madi, etc.

(14) Gaza IV, p. 15, Plate LXII.

(15) Gaza IV, Plate LXIII.

minor differences. Unfortunately, the material remains found in it were not abundant and of no help for identification of special use. East of the (temple) and at the north side of the E/W street, a big house is found, house "EAD". East of it is an alley with two houses. Area T at the north side of the E/W street has a big unified complex partially built of rough stones, (T.D.N. complexes).<sup>15</sup>

This big stone building is built on a rigid plan with a straight wall and mostly unified in thickness. Two large sized wells were found to the west of Room TDM and one north of TDQ. Rooms TCS, TCT, TDL, TDD, TDH and TDO are long and narrow, all built of stones and possibly used as storage rooms. The special material and spaciousness of the west hall (TDK/TDN) and the wells, all show a distinction of function different from most of the other complexes thus far described.<sup>16</sup> All indicate the complex to have been a public function. On the southern side of the E/W street, a group of houses appear on a contiguous uniform plan, set on the southern side of the street, smaller than those on the north side. All built side to side, no pathways were left between them. They all seem to be uniform in plan, with minor differences in size and shape.

The excavation in Area G revealed two levels of occupation, the same as those dug in the previous seasons.<sup>17</sup> The E/W street (GAW/GAM/GAL) continued, turning north. The complexes uncovered in Area G were less elabo-

(16) The arrangement of the different parts are also different from the civic building described before. We may assume this from the civic building used to store government provisions.

(17) Gaza V, Plates XXXIII and XXXI.

rate, but all were in alignment with the main E/W street.

To summarize the Tell el 'Ajjul town planning, we see that the layout seems to have a regular planning based on the pattern of the street layout, directed E/W, and meeting other ones running N/S. The city was divided into big sections, unlike Tell Beit Mirsim and Megiddo, where blocks were smaller. Each section seems to have consisted of many houses attached side and then, back to back.

The N/S street of Tell el 'Ajjul, linking the center city with its outer configurations are wide and straight, providing an easy to the center city, and probably makes a straight ravine between the temple (EW) and the Palace, located at the north edge of the city.<sup>18</sup>

This phenomenon is unique in Tell el 'Ajjul, unlike the Palestinian cities, where transverse ravines are narrow and winding.

The zoning seems to be also a little different, with the inner area of the city grouping of official buildings, temple, administrative units and civic center, as well as huge mansions forming blocks arranged according to a loss scheme all along the north side of the E/N street. The small dwellings are arranged on the southern side of the street and are themselves an indication of an adequate organization.

---

(18) Very little is found apart from the stone substructure of the walls. The upper wall courses were undoubtedly built of mud brick. "It has been suggested that this complex was intended as a stronghold, the ranges of rather

## Conclusions

The street system divided the city into slightly irregular blocks, each having its own individuality. In some cases (such as Megiddo, Tell el 'Ajjul, Tell Abu Hawam and Ta'annek) each row consists of buildings belonging to a certain type, (they are grouped according to types, into quarters, conforming to a system of zoning). A house of different plan and larger size set in a part of a quarter could have been intended for the governor or official in charge, or could possibly have been the mansion of a wealthy owner. The public building, civic building, and temple are generally located inside the city, along the inner periphery of the second main street.

It is clear that city planning and zonal patterns represent responses to a number of different kinds of factors that influence them in different ways and degrees on different levels; i.e., ecology, warfare, religion. These are general factors, but seem to have affected the layout of Megiddo, Tell el 'Ajjul and Ta'annek in the different phases.

The excavated area, however, has not been large enough to permit valid generalizations. Our attempt to reconstruct a total town plan of Tell el 'Ajjul, must rely very largely upon the hypothetical extension to the unexcavated portions of the site.

Khair N. Yassine  
Jordan University.

small-sized rooms surrounding a large open courtyard conforming more to the requirements of a fort than those of the residence of a governor," Claire Epstein: *Palestinian Bichrome Ware* (1966) p. 175.



# Excavations at Petra ( 1973 - 1974 )

by

Fawzi Zayadine

A short campaign of excavations at Petra was financed by the Naturhistorische Gesellschaft of Nurnberg, thanks to the initiative of its President, Dr. Dr. Manfred Lindner and to the generosity of its members, especially of Mr. G. Kerscher. This active society, involved in many archaeological researches in Germany, has sponsored the publication of a book on Petra and the Nabataeans. <sup>1</sup>

The excavation was directed by the author, assisted by Mr. Bassim Rihani and Mr. Muhammed Murshed from the Department of Antiquities. Members of the German Society supervised some of the excavated areas and Elisabeth Gunsam and Toni Schmid from Austria were responsible for the drawings.

The field selected for the dig was the western slope of the Khubtha cliff, carved with some of the largest tombs of Petra, usually described as the "Royal Nabataean Necropolis" <sup>2</sup> (Pl. LVII). The main object of the campaign was to improve our knowledge of the sequence of occupation in that area and to secure new dating evidence for some of the carved tombs.

Work started in April 14 to April 28th, with a labor force of 20 men from the Bedul tribe. Another season was initiated in October 1974 but was concentrated on tomb 813 (see below). Though very short, this campaign proved to be fruitful in revealing a lot

of material, dating from the 1st century B.C., up to the beginning of the Byzantine period and especially in identifying tomb 813. Four sites were investigated :

Area A : (Figs. 1 - 2 and Pl. LVIII).

A small cave situated at the start of the modern stairway leading up to the Urn Tomb and almost buried by wind-blown sand and rain-wash, attracted our attention. It was decided to dig it in two operations : 1) the courtyard; 2) the cave.

A 4 by 4m trench was first plotted in the courtyard, extended later to six metres to the south-west. The dump which covered the area was sloping westwards and consisted of 5 layers (Fig. 1): when the surface soil was removed, a hard yellowish clay appeared. This clay was called *samaga* by the Bedouins and was said to have been brought from the limey hills north of Petra. They pretended it was used to make pottery and cover roofs. In the same layer were found tumbled stones, a fragment of a basalt mortar (No. 12, Pl. LX) and fragments of white plaster. Sherds were Nabataean, Roman and Byzantine. Layer 2 was a greyish soil over wall 3 which was built on the south-eastern side of the courtyard. In the reddish sand of layer 4 were found three stones dressed for a door-jamb built at the cave's entrance. Below the reddish and tumbled stones was the red-brown layer 5 in which appeared

(1) *Petra und das Königreich der Nabatäer*. München, 1974.

(2) J. Starcky, "Pétra et la Nabatène", in *Dict. de la Bible*, Sup. VII col. 962ff.

N-S SECTION, M:10

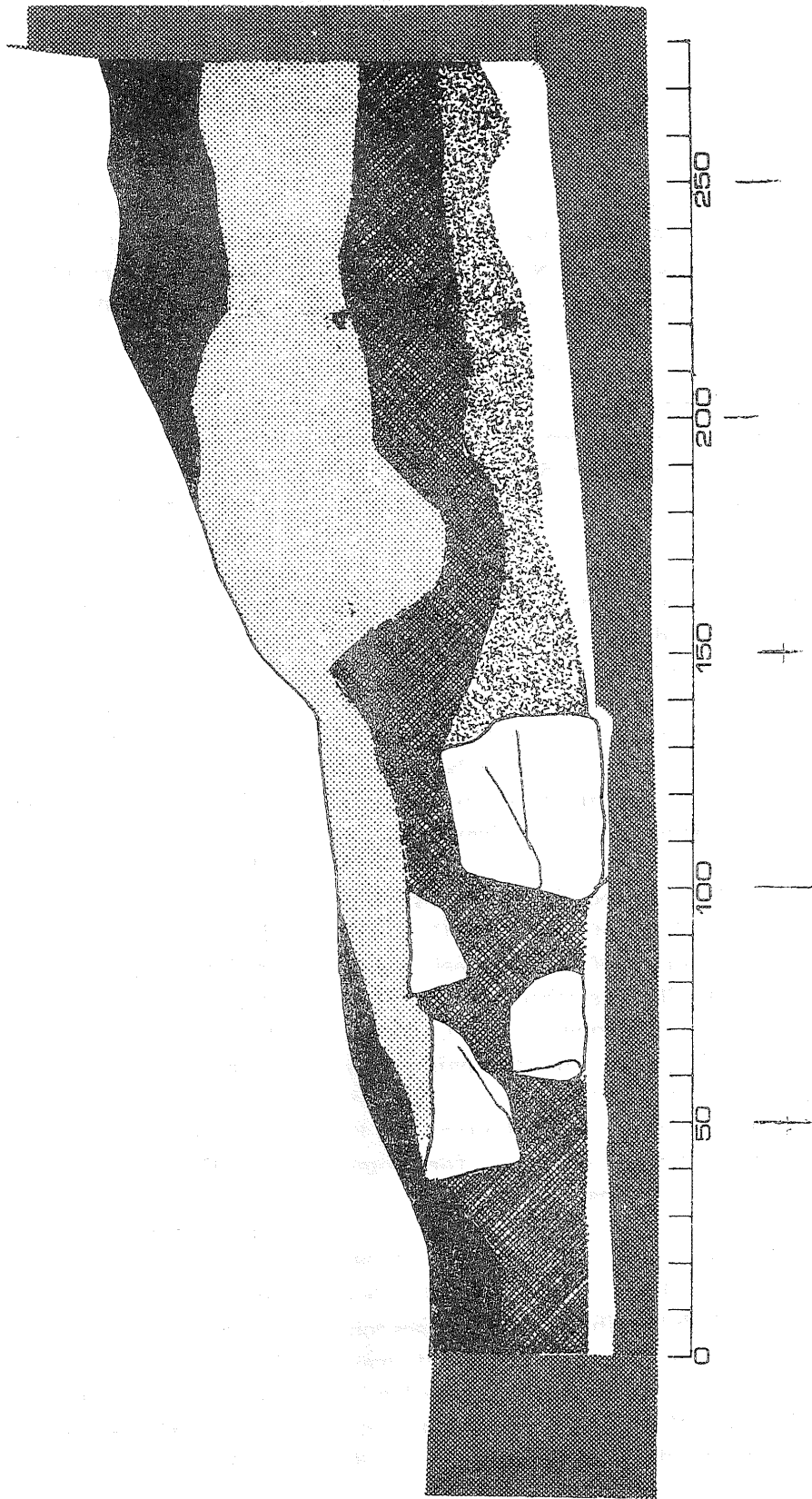


Fig. 1 : Area A. Courtyard; N-S section

**PETRA 1973**  
**AREA A**

INTERIOR OF THE CAVE 1:10

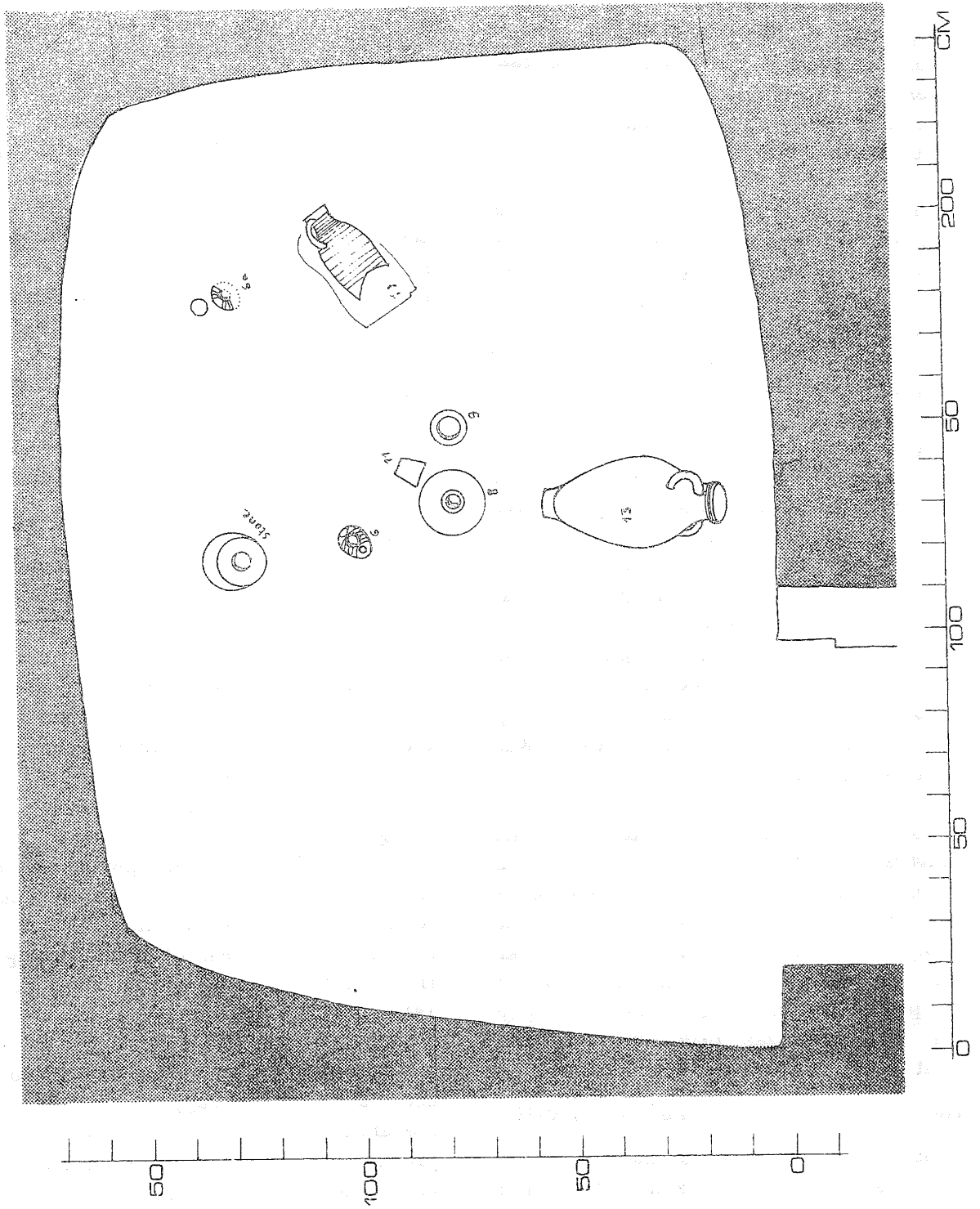


Fig. 2 : Area A. Cave

the alabaster idol (No. 3, Pl. LIX, 1), decorated with a schematic human figure. The last layer (6) consisted of dark soil mixed with reddish sand, probably the remains of burned wood or reed. Fragments of tiles were also recovered from the same layer. When this last layer was removed, bedrock was met, smoothed and slightly sloping to the south-west.

To the south-east, the courtyard was limited by the hewn rock, but since it was not high enough, it was built over by a wall of roughly dressed stones, except for one which was dressed in the oblique Nabataean way and which was obviously reused. The wall was about 0,60m wide, with a preserved height of about 0,90m. Parallel to this wall, a stairway about 0,80m wide was cut in the rock, leading up to the cave's roof. Five worn steps were still visible, but the start of the stairway was built with roughly squared stones. The courtyard terminated with two steps hewn in the rock. At about 0,65m from its end, a dressed stone was fixed at the base of wall 3, suggesting that a partition wall or a doorway was standing at that place (Pl. LVIII, 1).

On the north-western side of the courtyard, there was a wall which fell down in the courtyard, but part of it was fitted into an incision made in the rocky facade of the cave. A niche was also carved on the same side and it is probable that the alabaster idol (Pl. LIX, 1) was originally exhibited in it.

**The cave:** (Fig. 1, 2 and Pl. LVIII).

Except for 25cm, the mouth of the cave was filled with washed sand and mud mixed with tumbled stones. On the south-eastern side of the entrance,

a doorjamb, one metre high, was *in situ*, leaning inward and gouged with two socket-holes and a double hole for a tethering cord. The north-western jamb of the door was built with dressed stones, which tumbled down in the courtyard.

It was decided to clean out the cave into two halves, so that the layers could be easily observed and drawn. These consisted of wind-blown sand, separated by thin layers of mud. Many Byzantine pot-sherds were collected from the 8 layers. When the whole chamber was cleaned out, it appeared that the cave was roughly rectangular, measuring about 1,50 by 1,80m with a height of about 1,75m. The cave's ceiling slopes down from the entrance to the back. Traces of the metal picks are distinguishable, but no doubt the walls were covered with plaster as remains are still visible. A tethering hole was cut in the centre of the ceiling, probably to hold a lantern.

On the bed-rock, which was covered with a thin layer of plaster, were scattered many household objects. These included a big complete wine jar two broken jugs, two lamps, one of them being fragmentary; a decorated small mortar with its basalt pestle, a smashed glass bottle and a round stone with a central shallow hole (Pl. LVIII, 2) (see below). All of them belong to the beginning of the Byzantine period (4th century A.D.).

The household objects discovered on the cave's floor suggest that it was abandoned hastily, probably at the approach of a catastrophe which may have been an earthquake as indicated by the way the door-jamb tumbled in and out to the cave.<sup>3</sup>

(3) An earthquake rocked Palestine and Trans-Jordan in A.D. 365, *IEJ*, 1 (1950-51) p. 225.



At any rate, the alabaster idol clearly means that Christianity was slow in penetrating the capital of the Nabataeans. Such a conclusion is supported by the biography of a Syrian monk called Barsauma who visited Petra in the 5th century A.D. and attempted to christianize the pagan inhabitants by producing a miraculous rain over the thirsty city.<sup>4</sup>

The other conclusion which could be drawn is that the western slope of the Khubtha was converted to a dwelling area in the 4th century A.D. But this was not the case over the long history of the site. Our excavations in area B and C proved that a necropolis existed in the same area, in earlier times.

Dwelling caves are well known at Petra. In 1937 M.A. Murray and J. Ellis<sup>5</sup> excavated caves and shaft tombs in the area overlooking Wadi Abu-Olleqah. Other dwelling caves were cleaned and planned by G. and A. Horsfield<sup>6</sup> at the entrance of Wadi es-Siyagh, but they are not well dated.

Area B: (Pl. LXII).

North-west of area B is a flat rocky area, overlooking the Wadi Musa, where traces of walls sticking out from the ground attracted our attention. A square 5 by 5 m was plotted in that spot. Little work revealed a room, 3 by 2,70m whose walls were preserved to the height of 0,70m. The building material was poor indeed, for it consisted of roughly squared stones fixed with mortar. But they were covered, at least from the inside with a coloured plaster. The thickness of the walls was not homogeneous, the eastern wall being

0,60m thick, while the northern one was only 0,40m thick. But the latter was probably a partition wall, for traces of other walls are visible to the north. A doorway, without doorjambs, and about 1m wide was opened through it. As the cave in area A, the chamber utilized bed-rock as floor, covered with a thin layer of plaster.

When the house was demolished, a channel was built through its southern side, cutting the eastern and western walls. This was about 15cm wide with its sides being lined with rectangular slabs (Pl. LXII, 1) and running into a rock-cut reservoir which is no longer serviceable since its western wall has been broken away. A group of complete cooking-pots and plates were found on the southern side of the channel (Pl. LXII,2).

A shaft tomb:

When the debris from inside the chamber was removed, a rectangular shaft, 2,50 by 0,72m, appeared with a depressed ledge about 20cm wide. It was clear that this was the entrance for a shaft tomb, originally covered by large slabs which rested on the depressed rim, but not one of them was *in situ*. Judging from the potsherds inside the shaft, one may conclude that the burial was plundered in the Byzantine period.

On each long side of the shaft, to the north, were four teo-holes to help descend and ascend in and out of the tomb. The shaft led to a large rectangular chamber. We excavated only half of it since time was lacking.

Two graves, measuring 2,25 by 0,60 situated on the western side of the

(4) F. Nau, *Revue des Etudes Juives*, LXXXIII (1972) p. 188ff.

(5) *A Street in Petra*, London (1940) p. 3ff.

(6) *QDAP*, VII (1938) p. 15ff.

cave were investigated, but both of them have been looted and two covering slabs out of six were missing. Over the remaining slabs of the grave lay a decayed skeleton, of which only few long bones, and a smashed skull were recognisable. Near the skull lay 6 bronze bells, two gold ear-rings and a silver drachma of king Obodas II (30-9 B.C.) (Pl. LXIV, 2). The traces of a decayed bronze object was also noticed but it was impossible to restore it.

The presence of the skeletal remains over the grave's covering slabs is puzzling. One could imagine that the corpse was extracted from the tomb before its desintegration. But a tomb robber, who was able to pull out a corpse would not likely forget to steal the gold objects. It is more probable that the skeleton was a later burial at a time when no room was found inside the grave.

In this grave, which was about 1,10m deep, a femur and a pelvis fragment were found along with two bells, iron nails and many fragments of coloured plaster. It was obvious that the plaster was brought in, from the fore mentioned structure, when the tomb was robbed.

The second grave had the same dimensions as the first one. No bones were discovered or were possibly completely disintegrated. A small cooking-pot, an unguentarium and an alabaster pixis with some iron nails and green beads were collected.

#### Dating:

At least three main phases are distinguished in area B: the earliest one was the shaft tomb. The coin of Obodas II with fragments of decorated

Nabataean plates prove that the first burial was put in the second half of the first century B.C. This burial was laid over a grave which was earlier. Objects from grave 2 suggest that the original tomb was dug in the beginning of the 1st century B.C.

The second phase is represented by the superimposed house. A coin of Aretas IV, found close to the floor level is good evidence that the house was in use in the 1st century A.D.; it was abandoned in the late 2d or early 3d century A.D. as indicated by the pottery deposited in a destruction layer, above the floor. The last phase was the channel construction through the walls of the house. This phase dates to the Byzantine period (4th or 5th century A.D.) as indicated by a bronze coin, unfortunately corroded, but related to the Byzantine mint. More excavations in the area may confirm or alter these conclusions.

#### Area C (Pl. LXVIII, 1 and Fig. 3-4).

About 50m south-east of area B, a shaft tomb was excavated. The shaft, which was previously opened, led to a rectangular chamber, measuring 2,60m by 3,53m. In the floor of the chamber were cut four graves, measuring 0,60-0,65m in width and 2,10m in length. Each grave was covered by five slabs, all of them in situ. The graves contained desintegrated human bones. In grave 1, were uncovered the remains of two skeletons and two skulls, one of them deposited to the east and the other to the west. Only a fragmentary spindle bottle was recovered which dates the burial to the 1st century B.C. With the finds of the area B shaft tomb, we may conclude that the occupation of the western slopes of Khubtha goes back to the 1st century B.C.

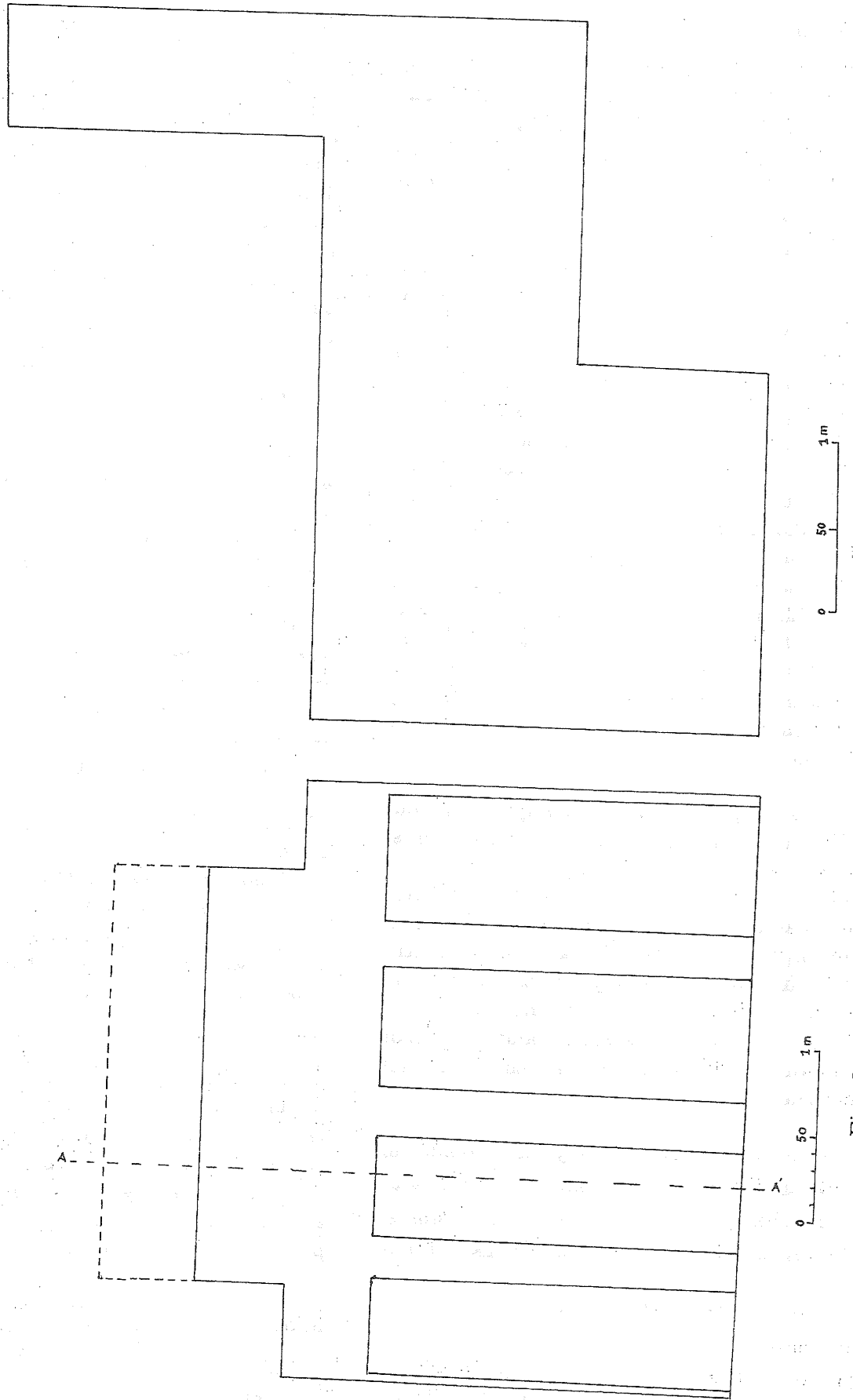


Fig. 3 - 4 : Area C; shaft tomb. Plan and section

**Tomb 813: (Uneishu Tomb)**

In the western facade of the Khubtha cliff, at the end of the Siq, exist many Nabataean tombs, standing in two superimposed rows and decorated with two bands of crow-steps or half crow-steps, Egyptian cavetto cornice and pilasters (Hegra type). Tomb 813, which is one of the most noticeable monument, in the upper row, faces the theater and exhibits a relatively well preserved architectural decoration of the Hegra type (Pl. LXV, 1, 2). The doorway, badly drawn by Brunnow and von Domaszewski<sup>7</sup> is adorned with two frames: the outer one consists of two pilasters, doubled by half columns and surmounted by Nabataean capitals supporting a Greek pediment; the inner frame consists of pilasters, spanned by an architrave and a frieze (Pl. LXV, 2). The actual height of the monument is about 20 metres and its maximum width is 12 metres, a proportion rarely reached at Petra for this type of tomb.

A large stairway, partly hewn out of the rock and partly built with dressed stones, was leading to the monument, starting near tomb 824. It terminates in a platform, from which a ramp cut in the rock slopes southwards to the courtyard of the tomb. On the eastern side of the ramp, are cut a water reservoir and a small chamber in which are carved small idol niches.

A rectangular courtyard extends in front of the tomb, limited on its southern side by a portico of four columns, originally resting on square bases fitted

(7) *Provincia Arabia*, I, fig. 167.

(8) *Ibid.* fig. 223 and 444.

(9) At least three triclinia of Petra contain graves or loculi for burial. These are: the

in the hewn rock. Only one drum of column was in situ. Though no capitals were found, it is almost certain that the portico was of the Doric style similar to the portico of tomb No. 4 (The Rest House) and of the Urn Tomb.<sup>8</sup> On the northern side of the courtyard, there are traces of two bases, for the rest of the space is occupied by a rock-cut triclinium, measuring 9,90 by 6,90 m. Its rear wall is carved with three loculi for burial, a feature which is common in the funeral triclinia of Petra.<sup>9</sup>

The funeral chamber of Tomb 813 is well carved and is almost square (7,90 by 7,60m) (Plan Fig. 5). Into the southern and northern walls are cut four loculi, but only three of them are dug in the rear wall, facing the entrance. Most of the loculi measure 1,30 by 2,90m and in each of them is dug a grave about 2m by 0,90m and about 1,20m deep, covered with slabs and a thick layer of mortar (Pl. LVX, 3 and Fig. 5).

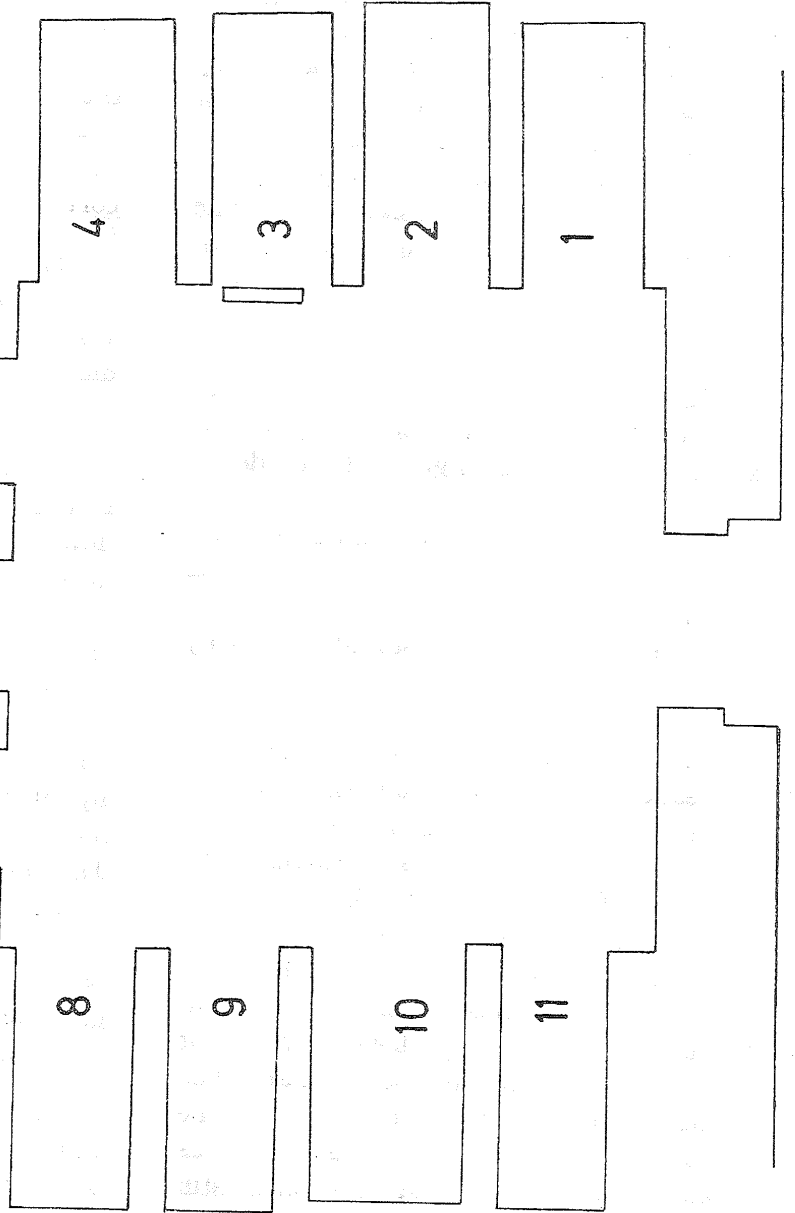
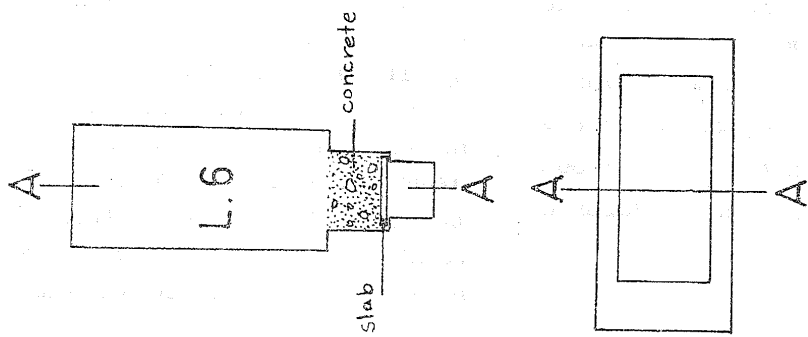
As a result of our investigations, it could be proved that Tomb 813, and not 808 as stated by Brunnow and von Domaszewski, was the find-spot of the Uneishu inscription which was discovered by Gray Hill<sup>10</sup> in April 1896. Here is his report:

“In a tomb in the east cliff of the main valley, just at the point where it first widens out, after debouching from the Sik, and about 100 feet below the bottom, I found a stone with half-obliterated writing on it. This tomb has a very high facade, plain, but with pilasters at the corners and cornices.

triclinium of the Obelisks Tomb (*Provincia Arabia*, Fig. 197), the triclinium of Tomb 813 (see below) and the one in wadi Khurrubat, on the way to the Deir (Nr. 455).

(10) *PEFQS* (1897) p. 136.

PETRA TOMB 813



*Handwritten signature or initials.*

Within, opposite the door, and on each side are rock-cut recesses opening out of the main hall. The floor of one recess opposite the door had very recently been opened, and 28 inches of concrete (which was however, not very hard) had been broken through ... The tombs in the other recesses which had not been disturbed will probably be found to contain similar stones with writing”.

The inscription, engraved on a slab of 0,78 by 0,48m was later copied by Musil and P. Lagrange.<sup>11</sup> It reads:

“Uneishu, brother of Shuqailat, son of (space)”. Originally, the slab was a grave cover, since concrete was stuck to its back, as stated by Gray Hill.

From Strabo's report on the Nabataeans,<sup>12</sup> we learn that the minister of the king was called his brother. In this case, Uneishu was probably the minister of Shuqailat II who ruled the Nabataean kingdom from 71 to 76 A.D., during the minority of her son Rabel II. The inscription is not unfinished as one may believe since it was continued on an other slab. The loculus facing the entrance of the tomb (No. 6 of plan Fig. 5) was lacking three slabs and the ones still in situ are almost of the same dimensions of the inscribed stone. It is now obvious that Brunnow visited none of the two tombs (808 and 813) since the drawing of the doorways is faulty. At any rate, the description of Gray Hill fits very well tomb 813 and not 808 whose funeral chamber is unfinished and whose loculi have no graves covered with slabs and concrete.

In April 1973, when we started the excavation of the tomb, all of the loculi were robbed and some of their slabs removed. But I had the conviction that tomb robbers did not care about inscriptions and that they left some objects. This conviction proved to be correct.

The tomb cleaning was entrusted to Dr. Erich Wieters and Dr. Manfred Lindner. The first day, Dr. Lindner discovered the fragmentary inscription (Pl. LXVI, 2) in the tomb.

Work started in loculus 10. In this loculus a rectangular grave is cut down to the depth of 1,25m. At 0,75m deep, a ridge about 7cm wide project out on the two long sides to support the covering slabs. Four of them, measuring between 0,69 and 0,79m long were still in situ. Over the slabs there was a thick layer of rubble covered by 0,25m of concrete in which were included fragments of Nabataean plates. The debris inside the grave were separated into 3 layers; the first one included a dressed stone and a drum of column. The second layer was a greenish fine soil followed by a white gray soil (3d layer).

Loculus 3, carved in the southern wall, was partly opened by tomb robbers. Over the slabs and the thick layer of concrete was about 0,65m of quicklime mixed with gravel. At 0,40m, calcinated human bones appeared. A similar burial with quicklime was found by Horsfield in the “Triple Dushara” tomb.<sup>13</sup> What was striking is that the burial was deposited over the grave itself which means it was intended to be isolated from the other dead. The reason for such treatment remains a mystery. Horsfield states that burning

(11) *Corpus Insc. Semit.* II No. 351.

(12) *Geography*, XVI, 21. See also Clermont-

Ganneau, *RAO*, II, p. 380.

(13) *QDAP*, VIII (1939) p. 108ff

into lime was used in Moab as could be deduced from Amos II, 1 which he translates: "... he burnt the bones of the King of Edom into lime".<sup>14</sup> But the Bible of Jerusalem translates the verse: "because they have burnt the bones of the king of Edom for lime".<sup>15</sup> The Hebrew text is confusing and a burning by quicklime is not well attested in ancient times. One could suggest that an epidemic disease like plague or leprosy necessitated burning by lime as it is done in modern times.

From inside the grave which was partly covered by slabs and concrete, no objects were recovered, but in front of the loculus, about 10cm above the floor level, two fragments of plaster bearing inscriptions in a red-brown ink were collected (Pl. LXVI, 3) (see below p. 148). In the chamber's floor, a trough 85 by 0,20m and about 0,25m deep, was dug out in front of the loculus' opening (see plan Fig. 5). Its function remains obscure unless it is the foundation trench of a wall blocking the loculus; but no traces of mortar were found in it.

In October 1974 four more loculi were excavated. In loculus 6, a fragmentary skull was discovered with few beads and small gold jewelry (Pl. LVII, 1). One of them represents a scorpion, while the other is crescent shaped. The scorpion is well attested as an apotropaic amulet<sup>16</sup> in the ancient world and the crescent as a divine symbol which occurs many times at Petra,

(14) *Ibid.* p. 110.

(15) The Hebrew text reads: **LSD** (for lime) and not **BSD** (with lime).

especially in the gorge called Sid el-Ma'agen<sup>17</sup> and near the High Place of Djebal el-Madhbah.

In loculus 9 a fragmentary inscription painted on stucco with a red-brown ink was found at the bottom of the grave (Pl. LXVI, 1) (see p. 148). These fragments, with the ones from loculus 3, suggest that there was a wall blocking the loculi and covered with inscribed stucco. An illegible bronze coin was also in the grave with fragmentary bones.

### Conclusions

Our limited excavations at Petra demonstrate that important informations could be gained from tomb clearances when it is undertaken carefully. The result of the dig could be summarized as follows:

In the 1st century B.C. shaft tombs were dug in the western slopes of Khubtha but they were covered by houses in the first century A.D. The area continued to be occupied in the Byzantine period as demonstrated by the cave of area A. On the other hand, it is well known that the nearby Urn Tomb was converted into a church by Bishop Jasonos of Petra in A.D. 447.

Tomb 813, facing the theater, is probably the burial of Uneishu, minister of queen Shuqailat II and his family, as demonstrated by the inscription discovered by Gray Hill in 1896 and confirmed by our investigations.

(16) See for example: D. Levi, *Antioch III* (1941) p. 220 and Fig. 101, a II, pl. IV, c.

(17) Dalman, *Petra*, Leipzig (1908) fig. 259.

## The Finds

### Nabataean Period (1st century B.C.)

The finds dating to the first century B.C. came out from the shaft tombs of area B and C. In area B, a silver drachma of Obodas II (30-9 B.C.) which was found with a skeleton overlying grave loc. 21, is a good evidence for an early date of this grave.

The cooking-pot No. 18 deposited in the grave loc. 21 has thin reddish ware, a straight neck and a bevelled rim; the lower attach of the handle is thumb pressed. The best parallel to it was discovered at Qumran<sup>18</sup> and dated 50-31 B.C. The cooking-pot No. 19, though found in a disturbed layer (loc. 14), inside the shaft tomb of area B, belongs to the same type, except for a groove below the neck. The painted Nabataean sherd No. 32 is richly decorated with a floral and geometric design of brown colour on a red-orange background: it shows a central palmette, treillis, and lozanges with dots. The small unguentarium was found in grave loc. 21 with the cooking-pot No. 18; its body is irregular with a flat base, which is rather uncommon but occurs at Petra.<sup>19</sup> From the same locus came the alabaster pixis No. 26 which is unparalleled at Petra.

The silver drachma of Obodes II<sup>20</sup> is badly corroded but the heads of king and queen are recognisable. Obodas II was king of Petra at the time of the expedition of Aelius Gallus to

Southern Arabia. He was described as an inefficient ruler by Strabo<sup>21</sup> when compared with his ambitious minister Syllaeus. The coin, which appeared mixed with the skeletal remains was probably a viaticum. The gold crescent shaped ear-rings from the same deposit (Nos. 23-24) are a common type in the Nabataean world as proved by the finds of Mampsis.<sup>22</sup>

### Nabataean Period: 1st century A.D.

This group of objects dating to the second half of the 1st century A.D. came from tomb 813. In the loculi, no significant pottery objects were found but jewelry and fragmentary inscriptions were collected. The gold scorpion (No. 41) is not known from other Nabataean sites but its apotropaic value is well attested as I noticed above (p. 145). A red plate fragment, decorated with a cross,<sup>23</sup> appeared in loculus 5 (No. 38) which suggests that the tomb was occupied in the Byzantine period. The rest of the objects were discovered in the portico, in front of the chamber. In the south-eastern corner of the portico, an accumulation of debris yielded fragmentary and complete pots. These came probably from the chamber or the loculi and were cleared out in the Byzantine period. A bronze coin of Rabel II, the last king of Petra (No. 45), was found in the dump on the North-western side of the portico but was not related to any clear stratification.

(18) P. Lapp, *Palestine Ceramic Chronology*, p. 187 No. 1.

(19) M. Murray, *A Street at Petra*, Pl. XXX, No. 112 (74 M3); *QDAP*, IX (1940-41) Pl. XXI, 155 (1st century B.C. - A.D.).

(20) J. Starcky, *Petra in: Dic. de la Bible*, Sup. VII, fig. 695, 5.

(21) *Geography*, 16, 4, 24.

(22) *Die Nabatäer* (München Exhibition). München, 1970, Pls. 17, a, c; 18, d.

(23) Similar plates have been found at Cafarnaum, Lofreda, *Cafarnao*, Jerusalem, 1974, Fig. 26 and Foto 21-22.



A decorated bone spoon (No. 37) <sup>24</sup> and the pot (No. 40) appeared in a disturbed layer on the south-eastern corner of the portico. The pot is known from Petra <sup>25</sup> and Amman environs. <sup>26</sup> The upper part of the lamp (No. 45) from the same layer is very common at Petra and elsewhere and should be dated to the 1st century A.D. Painted sherds (Pl. LXVII, 3) show a dark brown design on a red-orange background, except for sherd (No. 57) which has a pinkish design on a light creamy background and may be dated to the 1st century B.C. <sup>27</sup>

#### The second century A.D.

Three of the cooking-pots (No. 16, 17, 33) were found in area B and belong to the phase of abandonment of the house. The ware is clearly different from that of the cooking-pots recovered from the shaft tomb (No. 18 and 19); it is thick, of buff colour with a ridge under the rim <sup>28</sup> With the same group was the decorated plate No. 21. Its ware is thick and gritty and the floral design is black on a red-brown background. This type is described as the beginning of the decline of the fine painted Nabataean pottery. <sup>29</sup> A fragment of lamp decorated with two gladiators (No. 15)

(24) See a similar bone spoon from Petra in *QDAP*, IX (1940-41) Pl. XVI, 116.

(25) Murray, *A Street*, Pl. XXVII, No. 50; *QDAP*, IX (1940-41) Pl. XXI, 156.

(26) *ADAJ*, XVIII (1973) Pl. XXI, 156.

(27) For a classification of painted Nabataean pottery see K. Schmitt-Korte, *ADAJ*, XVI, (1971) p. 53; P. Parr, *A Sequence of Pottery from Petra*, in *Near Eastern Archaeology in the Twentieth Century*, ed. by Sanders (1970) p. 348-381.

(28) see P. Parr, *A Sequence*, fig. 7, 104, 106, 116 (Phase X-XII) 1st century A.D.

came from area C and may be attributed to the same period. Fragment 15a was found by a Bedouin of Petra. Lamps of the same type have been recovered from the site, <sup>30</sup> and should be related to a Roman prototype.

#### The Early Byzantine Period

Byzantine pottery of Petra is badly documented though the city was heavily occupied at that period. This pottery group, which came from one place in area A is homogeneous. The most significant objects for dating purposes are the two lamps (Nos. 6 and 7). They belong to a type very common in Palestine and Transjordan <sup>31</sup> in the 4th and 5th century A.D. The jar (No. 13) has a good parallel from Ain Yabrud <sup>32</sup> dated to the 4th century. The jug (No. 10) is comparable to a pot discovered at New Testament Jericho <sup>33</sup> (Early Byzantine) and to another one from a tomb in Amman <sup>34</sup> (Late Roman). The lid (No. 4) is similar to one published by P. Parr <sup>35</sup> but of earlier date. It probably belonged to jar (No. 13) though it was found in the courtyard, in front of the cave.

The alabaster figurine (No. 3) depicts a schematic human face with square eyes and a rectangular nose.

(29) Parr, *A Sequence*, Fig. 7, 107-113.

(30) *QDAP*, IX Pl. XLVI, 433.

(31) *QDAP*, III (1934) p. 86, fig. 12 (4th c.A.D.); VI (1937), Pls. VII, 11, VII, 9; *ADAJ*, XVIII (1972) Pl. XLII, 2.

(32) *QDAP*, VI (1937) Pl. IV, 16.

(33) *AASOR* 29-30, Pl. 27, 1.

(34) *QDAP*, XIV (1950) Pl. XXVI, 162.

(35) Parr, *A Sequence*, Fig. 1, 22. (Phase V, 100 B.C.).

(36) J. Starcky, *Pétra*, *Dict. de la Bible*, Sup. VII, Fig. 705, 4.

This type of idol belongs to the Nabataean period as indicated by a bas-relief carved on the rocks of Medain Salih (Hegra) <sup>36</sup> and representing the goddess al-Uzza, one of the main goddesses of the Nabataeans and Pre-Islamic Arabia. Other figurines of the same type were recovered from Petra.<sup>37</sup>

#### The Inscriptions :

No. 1 (Pl. LXVI, 2). This is a fragmentary inscription discovered inside tomb 813. The stone was probably part of a slab, covering one of the 11 graves of the chamber (see above p. 144ff). In line 1, one can read a *mem* but the other letters are difficult to interpret since they are badly worn. The stems of three letters are engraved and I suggested (ADAJ, XVIII, p. 81) that this word is to be read as MNKU. Thus the whole inscription may be completed: ( BŠNT LMNKU MLK' MLK NBTU ): in the year... of Malichos, the king, king of the Nabataeans. But there is no traces of a *lamed* before the *mem*. In the second line the word NBT is clear, but the letters are larger than those of the first line, a feature uncommon in Nabataean inscriptions. At any rate, the inscription seems to be an official dedication, terminating with a royal name, since NBTU appears most frequently with the name of a king or queen of Petra. It is the first Nabataean inscription to be uncovered in a tomb since the inscription published by Gray Hill.

No. 2 (Pl. LXVI, 1). These inscribed plaster fragments were recovered from loculus 9 of tomb 813. On the upper fragment the faint traces of a *mem* are recognizable. The second fragment 15 x 10cm is the end of an inscription as indicated by the edges. In the first line is a *tet*; in the second one is a *shin* and *qof* whose triangular head is visible in the upper fragment. The word would be restored as Shuqailat, a queen of Petra who reigned from 70 to 76 A.D. The Uneishu inscription (p. 144) mentions the name of the queen and our fragmentary inscription might be conclusive for the identification of the burial and its dating.

No. 3: (Pl. LXVI, 3). These fragments were found in front of loculus 3 of the tomb. A *resh* and *tet* are painted in dark brown on the plaster fragment to the right. A *lamed* is probably painted on the second fragment.

The plaster inscriptions probably covered stones or slabs closing the loculi. It is also probable that the whole tomb was covered with painted plaster. With the Uneishu inscription, they represent an interesting evidence for the dating of the tomb in the second half of the 1st century A.D. This date may also be deduced from the architectural decoration of the tomb whose door is adorned with two frames (Pl. LXV, 2).

(37) N. Glueck, *Deities and Dolphins* (1960) Pl. 199, c.

## Description of finds

### Nabataean: 1st century B.C.

No.	Provenance	Description	Plate
14	C, 1, 4 (grave)	Unguentarium. Neck missing. Rosy clay.	LXVIII
18	B, 1, 21 (grave)	Cooking-pot, globular body, bevelled rim, thin reddish to gray ware. Restored.	LXIII
19	B, 1, 14	Cooking-pot, globular body bevelled rim. Reddish thin ware. Lime deposit on base.	LXIII
22	B, 1, 21	Small unguentarium. Flat disk base. Irregular oval body. Brownish ware, lime deposit.	LXVIII
23-24	B, 1, 17	Two gold ear-rings.	
25	B, 1, 17	Silver drachma of Obodas II; ob. Head of Obodas II and queen; rev. Head of Obodas II.	LXIV, 2
26	B, 1, 22 (grave)	Small alabaster pixis.	
32	B, 1, 15	Fragment of a fine decorated plate. Brown on red-orange ware.	LXIV, 1

### Nabataean: 1st century A.D.

37	T. 813 (Portico)	Decorated bone spoon.	LXI, 4
39	T. 813 (Portico)	Plate. Gray ware.	LXIX
40	T. 813 (Portico)	Small pot. Light creamy ware.	LXIX
41	T. 813 L. 5	Gold scorpion.	LXI, 3
42	T. 813 L. 5	Gold crescent.	LXVII, 1
43	T. 813 L. 5	Two cornaline beads.	LXVII, 1
44	T. 813 (Portico)	Upper part of a moulded lamp. Red brown ware.	LXVII, 3
45	T. 813 (Portico)	Bronze coin of Rabel II; ob. Head of king Rabel and Gamulat. rev. Cornucopia and inscription: RB 'L GMLT	LXVII, 2

No.	Provenance	Description	Plate
15	C (Dump)	Fragment of a lamp decorated with two gladiators.	LXIII
15a	Not stratified	Fragment of a lamp; same decoration.	LXIII
16	B, 1, 1	Cooking-pot. Buff gritty ware.	LXVIII LXIII
17	B, 1, 1	Cooking-pot. Same type than 16.	LXIII, LXVIII
20	B, 1, 1	Plate. Light orange ware. Restored.	LXIII
21	B, 1, 1	Painted plate. Black on reddish gritty ware.	LXIII LXIV, 3
30	B, 1, 2	Lion's foreleg. Yellow sand stone.	LXIII
33	B, 1, 1	Cooking-pot. Same type than 16.	LXIII

## Early Byzantine Period:

3	A, 1, 5	Fragment of an alabaster idol decorated with schematic figure.	LIX, 1 LXIII
4	A, 1, 5	Pottery lid. Tan ware.	LIX, 2 LX
6	A, 2 (Cave floor)	Moulded lamp. Grayish clay	LIX, 2 LX
7	A, 2 (Cave floor)	Fragment of a moulded lamp.	LX
8	A, 2 (Cave floor)	Jug. Handle and base missing. Grayish clay outside, red-brown inside.	LX, LIX, 3
9	A, 2 (Cave floor)	Decorated mortar. Yellowish sand stone.	LX LXI, 1
10	A, 2 (Cave floor)	Jug. Buff ware. Base missing.	LIX, 3 LX
11	A, 2 (Cave floor)	Basalt pistol.	LX, LXI, 1
12	A, 2 (Cave floor)	Spouted basalt mortar.	LX
13	A, 2 (Cave floor)	Jar with a pointed base Creamy ware.	LXIII LXVIII
35	Tomb 813	Foot of a stone mortar.	LIX, 3 LX
38	T. 813, L. 5	Fragment of a plate. Pinkish ware red slip.	LXI, 2; LXIX

Fawzi Zayadine

The Department of Antiquities

# The 1973 Season of Excavations at Tell Hesbân

by

Siegfried H. Horn

The first two seasons of excavations at *Tell Hesbân* were carried out in the summers of 1968 and 1971. They were briefly reported in *ADAJ*, XII - XIII (1967-1968), p. 51-52 and XVII (1972), p. 15-22.<sup>1</sup> The third campaign took place from June 20 to August 14, 1973. The staff consisted of 48 overseas members - of whom about 20 were graduate students - and nine Jordanians. Three of them, Mohammad Murshed Khadija, Ali Moussa Saleh and Ibrahim Hajj-Hassan, all officials of the Department of Antiquities, served the expedition respectively as foreman and representatives of the department.<sup>2</sup> Approximately 150 other Jordanians were employed for field labor and for other duties connected with the expedition.

The expedition was again sponsored by Andrews University, Berrien Springs, Michigan, and was supported by the American Center of Oriental Research in Amman, Calvin Theological Seminary, Grand Rapids, Michigan, and private donors. As in previous seasons Siegfried H. Horn served as director and Roger S. Boraas as chief archaeologist.

This campaign was planned to be the last of three projected seasons of excavations. It had been expected that during the 1973 season the excavation of the remains of the Byzantine church on the summit of the tell would be completed, and that bedrock in most of the areas excavated previously would be reached. It was also planned to make soundings at various sites in the lower parts of the tell and carry out an archaeological survey of the areas surrounding Hesban with the dual purpose of tracing the Roman road from Esbus (*Tell Hesbân*) to Livias (*Tell er-Rame*) and thoroughly explore the *Wadi Hesbân*. Since no ancient remains of consequence earlier than the 7th century B. C. had turned up on the tell during the first two seasons it was not expected that this archaeological picture would drastically be changed.

At the outset it can be said that we did not succeed to carry out all

University Monographs," vol. VII (1973). A geological survey of the Heshbon area was published by R. G. Bullard in *AUSS*, X (1972), 129-141.

(1) Full preliminary reports of the first two seasons were published in the *Andrews University Seminary Studies (AUSS)*, VII (1969), 97-239; XI (1973), 1-144. Other reports of these seasons have appeared in *The Biblical Archaeologist*, XXXII (1969), 25-41, and the *Revue Biblique*, LXXVI (1969), 395-398, LXXIX (1972), 422-426. The coins found were published by A. Terian in *AUSS*, IX (1971), 147-160; XII (1974), 35-46; and the pottery by E. N. Lugenbeal and J. A. Sauer in *AUSS*, X (1972), 21-69, and by Sauer, *Heshbon Pottery 1971*, "Andrews

(2) Thanks is herewith expressed to Mr. Yacoub Oweis, Director-general of the Department of Antiquities, for having granted the excavation permit, for having loaned Mohammad Murshed Khadija to the expedition, and for a multitude of courtesies extended to the expedition's staff in general and to the director in particular.

our plans. For example, we were unable to complete the excavation of all remains of the church. Furthermore, during the 1973 excavations several new and completely unexpected features came to light, such as remains of the Iron I period consisting of strata of that period in Area C and architectural features in Area B. Also architectural remains of the Iron II/Persian period and the Hellenistic times were found as well as some remains of the Abbasid period which had previously eluded us in the excavations. The survey team was able to trace the course of the Roman road by means of numerous mile stones and by means of ruins of both ancient road stations and guard towers. Some anciently occupied sites not mentioned by previous explorers were discovered and their occupational history established on the basis of ceramic surface finds. Also several Roman and Byzantine tombs were discovered in the southwestern ancient cemetery of Hesban. Since they had been partially robbed in medieval times, though not recently, they contained, as expected, disturbed contents.

To describe the various accomplishments of this season I will start from the earliest times of occupational evidence at Hesban and proceed to more recent periods.

The survey team picked up some Early Bronze sherds on the western slope of *Tell Hesban* as well as on *Gourmeyet Hesban* which is the hill west of the tell, separated from it only by the *Wadi Majjar*. However, no Early Bronze age pottery has so far

been found in the excavations on the tell.

In fact the earliest strata (or layers) of occupation attested on *Tell Hesban* date back to the Iron I age (12th-11th century B.C.). Aside from Iron I sherds that came to light in various areas of the mound during the previous two seasons, pure Iron I layers were found for the first time this past summer in Squares C. 1 and B. 3. In the latter Square it was associated with a rock fall and the remains of a possible wall. However, the excavated sector was too small to obtain definite architectural data with regard to this earliest occupation of the site.

The Iron II/Persian age is now well represented on the tell, not only by pottery coming from fills as found during previous seasons, but also by formidable architectural structures. In Square C. 3 on the western slope of the mound, an Iron II/Persian wall was laid on a rock ledge against a higher shelf of the rock, and another buttress wall was placed against it at a right angle. Not enough has been uncovered in the space excavated to be certain of its function, but I consider it possible that these wall fragments are part of the Iron II/Persian period city wall and of an adjoining tower structure.

A very intriguing Iron age structure came to light in Square B. 1 at a depth of about ten meters underneath a five-meter-deep fill. This fill contained masses of Iron II/Persian pottery and was put down in Hellenistic times as

indicated by a few Hellenistic sherds found in it. First it was thought that bedrock was reached when a flat, rock-like, hard surface appeared (Pl. LXX). But when later on a potsherd was observed to be embedded in the supposed bedrock, a probe was made. It revealed to our great surprise that the supposed rock actually was a layer of plaster, 30 cm. thick. In fact there were three layers of plaster, one upon the other, each about 10 cm. thick (Pl. LXXI, 1). The uppermost of the three layers was almost as hard as modern concrete. Potsherds embedded in it showed that these layers of water-proof plaster had been laid on bedrock during the Iron age, and may have been the bottom of a water reservoir. Pieces of straw and other plant material embedded in the plaster were so fresh as if they had been cut from a living plant only a day or so ago. One cannot help but be reminded that the Biblical Heshbon was famous for its "fishpools at the gate of Bethrabbim," as attested in Canticles 7:4.

It is also possible that we have uncovered parts of the upper portion of the eastern retaining wall of this water basin. First a wall constructed in header-stretcher fashion of well-cut blocks of stone was excavated in Square B. 2. In its southern part its west face was covered by a thick layer of plaster. Later it was discovered that the continuation of this wall was a bedrock scarp, also plastered on its western face (Pl. LXXI, 2). In the adjacent Square B. 4, two more por-

tions of rock scarp were found, plus a huge rock, now tilted out of place by an earthquake. Its western face had evidently once formed part of the plastered rock scarp already mentioned. The various portions of rock scarp in Squares B. 2 and B. 4 and the plastered header-stretcher wall in B. 2, the western faces of which formed one straight line, had evidently once been a continuous waterproof retaining wall of a water reservoir. Only future excavations will show whether it is correct to connect the thick layer of plaster at the bottom of Square B. 1 with the plastered wall and bedrock scarps in B. 2 and B. 4, of which a sector of about 14 meters in length has so far been uncovered.

From the fill of Squares B. 1 and B. 2 came four ostraca, one containing 11 lines of writing in a good sixth-century-B.C. Aramaic script. It is a list of rations for the king and other high individuals (Pl. LXXII, 1). Another ostrakon has in its preserved part five characters scratched in lapidary style into the vessel before firing. The script on the other two Iron age ostraca is practically illegible.

During the Hellenistic period, when the city was in the hands of the Maccabees the possible water reservoir, already discussed, had probably become leaky - perhaps as the result of an earthquake - and was therefore filled in with debris that contained a great amount of earlier pottery. Evidence of Hellenistic building activity appeared also in other places. The most conspicuous

Hellenistic structure so far unearthed is the perimeter wall, excavated in Square D. 1, which surrounded the acropolis. It was founded on bedrock and remained in use almost to the end of Hesban's history. A Hellenistic/Early Roman context produced an ostrakon which contains some Greek letters and several circles. The writing does not seem to make sense and may be no more than a schoolboy's doodling.

During the Roman period when the city was known as Esbus and was a district capital a great building activity must have been carried out as is attested by the extant ruins. Most structures built by the people of Esbus at that time were founded on bedrock as the excavations in several areas revealed. It seems that most remains of earlier structures were removed and new buildings erected on the natural rock. The summit of the mound was during that time crowned by an important public building, perhaps a temple. In Square D. 3 the lowest three steps of a monumental stairway with parts of a stone balustrade were found (Pl. LXXII, 2). Although most of the remainder of this stairway was later destroyed and was therefore missing, another section of this stairway was found closer to the existing Hellenistic perimeter wall which was still in use in Roman times. Some parts of the foundation walls of the public structure on the summit were later incorporated into the Byzantine church, but the remaining fragments of these Roman walls are not extensive and clear

enough to reveal the nature of the original building.

During the Roman period also an L-shaped wall was built on bedrock on the western slope of the mound - our Square C. 1 - which appears to be part of the Roman defense system of the city, perhaps a tower (Pl. LXXIII, 1). The appearance of the surface features of the surrounding area supports this suggestion. Only future excavations at the south and west of Square C. 1 can confirm or correct this interpretation.

One of the large projects carried out during the Roman period was a new road built by the Emperor Trajan to connect the Bosra-Philadelphia-Petra road which passed Esbus, with the already existing Livias-Jericho-Jerusalem road. The tracing of its course was one of the aims of our topographical survey team which was in the field throughout the dig's duration. The team succeeded in reaching its objectives. On the mound of Hesban the remains of the termination of this road were probably found in the form of thick plaster layers which have already been described in the 1968 and 1971 preliminary reports. These layers forming a thick road bed had been found throughout the four Squares of Area B. They seem to have ended at the ascent to the acropolis. This roadbed was frequently repaired and resurfaced by the addition of new plaster layers throughout the Late Roman and Byzantine periods.



Of the finds of the Roman period a mint-new Elagabalus coin minted in Esbus deserves mention. Esbus was an imperial mint only during a very short time during the brief reign of Elagabalus (218-222). Only a few such coins, of which the British Museum Catalogue lists six, are known to exist.

The major witness of the Byzantine period is the Christian church on the summit, a basilica containing ten columns in two rows of five each. The remains of this church had been partially excavated during the previous two seasons, but the western end covered by debris, several meters thick, remained unexplored. We found the remains of this western portion of the church buried under a thick accumulation of Islamic ruins. We opened one new Square at the west end and believe to have exposed parts of the narthex and side annex at the northwest corner of the church. A large part of the Square, however, was filled with an Ayyubid/Mamluk bath installation which because of its well preserved condition was not dismantled and may be restored by the Department of Antiquities. The church experienced several rebuildings during its history, but because of its badly destroyed condition the exact nature and extent of the various phases of building activity is difficult to unravel. The stone-paved courtyard between the church and the acropolis perimeter wall, which we had previously considered to have been of Umayyad origin, is now known to have been constructed in Byzantine times with possible Umayyad repairs.

The picture of the Islamic occupation of Hesban as it was described in previous reports has not greatly changed as the result of the new excavations. However, evidence of an Abbasid occupation has now been found in layers in Square C. 2 and in a stone-lined pit in B. 6. The most interesting new Islamic structure excavated this season is the Ayyubid-Mamluk bath already mentioned. It consists of a furnace room, warm and cold water tanks located above the furnace, a heated tile-floored bath room containing a stone basin into which the warm and cold water ran through pipes in the wall, and a small entrance hall ( Fig. 1 and Pl. LXXIII, 2). The chimney ran through the wall between the entrance hall and the heated bath room. This bath installation is probably the best preserved Mamluk bath that has so far been found in Palestine.

Probes were also laid against the outside and inside faces of the wall of a large ruined structure which had always been above ground and which has usually been considered to be of Umayyad origin. The excavations showed that the visible wall rests on substructures of Ayyubid/Mamluk times which make it certain that the ruined upper wall cannot be earlier.

In the Roman-Byzantine cemetery on the southwestern slope of *Tell Hesban* several tombs were excavated (Pl. LXXIV - LXXV). The history of their use and robbing in medieval times and consequent resealing was studied through careful stratigraphic excavations of their fill.

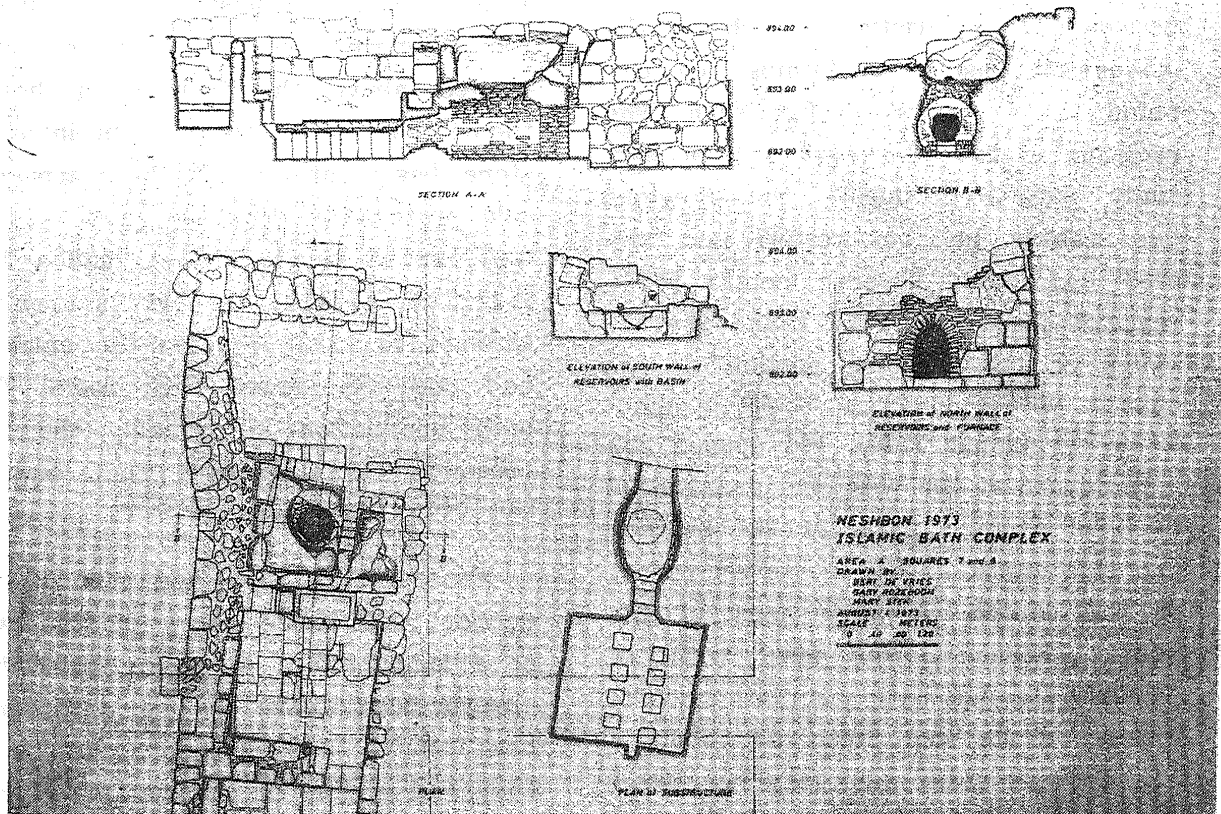


Fig. 1.: Architectural drawings of the Islamic bath installation discovered in Square A. 7.

Because of the many unexpected discoveries made during the third season of excavations and because many problems arisen from this last summer's work must be solved by further dig-

ging, at least two more seasons of excavations are needed at *Tell Hesban*. The next expedition is planned for the summer of 1974.

Siegfried H. Horn

# Beit Zar'a Tombs (1974)

by

Muhammad Murshed A. Khadija

The site of Beit Zar'a<sup>1</sup> (Pl. LXXVI) was reported to the director of Antiquities by the owner of the Land, Mr. Nabulsi. He mentioned that people were digging tombs illegally on his land. Ibrahim H. Hasan Inspector of Antiquities and the writer were asked to check the site. Later we decided to explore two of the robbed tombs.

The tomb area lies about 3Km. east of the main Na'ur-Madaba road, 1Km. west of Umm el-Birak and Umm el-Basatin. It is a rocky area which slopes down towards the east, and it is surrounded by terraces and cultivated fields. There are many tomb openings to be seen on the surface. A large number of them were robbed out a few years ago as well as recently.

Sherds and fragments of glass scattered on the surface and near the robbed tombs reflect the Early Roman, Byzantine, and Islamic periods. In addition to the tombs there are remains of a wall built of well dressed stones and a cistern.

The tombs are cut in the soft lime stone and have different shapes of loculi inside. Two of the tombs (Fig. 1)<sup>2</sup> were chosen to be dug, located south of the track which leads to Umm el-Birak from the Na'ur-Madaba road. Mr. Rusan, the Madaba Inspector of Antiquities, very kindly supplied the dig with five workers and a technical man. He also helped from time to time in digging.

(1) Major C.R. Conder, *the Survey of Eastern Palestine*, Vol. I, p. 91.

Tomb 1 (Pl. LXXVII, 1, LXXVII, 2). Fig. 1.

This tomb lies 10m. south of the road and was opened recently by robbers. It is cut in the soft lime stone and has a small entrance on its eastern side. The entrance measures 0.50 wide x 0.80m. high and it slopes down towards the inside of the tomb.

On April 21, 1974 we started clearing the entrance of the tomb so that we could enter it. Then we concentrated taking out the dug soil from the eastern and southern parts. A large number of medium size flint stone mixed with soil (locus No. 1) filled the tomb almost from the floor to the ceiling. Part of this locus was left for stratigraphic analysis in the south-west corner of the tomb, but someone destroyed it one night and therefore no stratification was drawn.

Locus No. 1, is on the eastern side, and loculi Nos. 2, 3, 4, 5 are on the northern side. Nos. 6, 7, 8, 9 are on the western side. Loculi Nos. 10, 11, 12, 14 are on the southern side, and locus 15 on the eastern side south of the entrance. To the left loculi 12, 13 were blocked with flat rectangular slabs and chinked with very small stones. These were the only two loculi which were prepared for use and not opened by robbers. Three other slabs of the same size were found in the center of the cave, and they were probably used to block other loculi. No objects were found in the 15 loculi

(2) Thanks to Dr. B. Devries for helping in drawing the tombs.

except a small bead and a small bracelet (Pl. LXXVIII 3, 20) in locus 7. A piece of rock from the ceiling was found fallen on the western side and it left an opening measuring 1.5 x 1.2 m. Remains of the two legs of a skeleton and a small complete glass bottle (Fig. 2:10) were found under it. The 15 upper loculi were partly filled with soft red soil which came in by water from upper opening. There is also a small opening measuring 0.7 x 0.5 m. in the south west corner of the tomb.

In the center of the bedrock floor (locus 2), is an almost rectangular rock-cut pit 2.15 m N-S, and 2.00 m. E-W, and 1.10 m deep. There are two loculi (Pl. LXXVII, 1) on each side of this cut, loculi Nos. 16-23. In front of those loculi was a limey soil with big stones (locus 3), in which a small complete pottery unguentarium, a broken incomplete jug and a small green glazed thick sherd were found.<sup>3</sup>

Under (locus 3), was (locus 4), a mixture of lime and dark brown soil. Two spindle-whorls (Pl. LXXVIII, 1: 4, 5), were found in it, probably left from the robbing of loculus 17. An oil lamp (6) and a broken unguentarium (7) were found 70. cm. deep in the north east corner.

Loculus 20, the richest one of all, was used to bury a woman. The skeleton was laid with the head out-side and the legs inside the loculus. The necklace and other objects (No. 11-19) found proved that the dead was a woman. The spindle-whorls were probably re-used in the necklace, and they could be earlier than other objects found in the tomb. Such spindle whorls were common in the Iron Age, and continued to be used in later periods.

Another interesting objects (Fig. 3; Pl. LXXVIII, 2, LXXVIII, 3) of an earlier date and reused in the necklace is a cylinder seal made of steatite. The seal shows a standing human figure wearing a short skirt and holding a spear (?) pointed downwards. The human figure is facing two animals above each other (probably a gazelle above a small goat). A third animal also with long horns running away to the opposite direction is difficult to identify. Dots are cut to point out the feet of this last animal, while other dots are just for decorative purpose. Two triangles with dots below the two large animals and facing the small one may indicate mountains. No direct parallels were found to this cylinder seal. The hunting scene and other elements (the way of treatment, the short skirt, and the dots) remind of the seals with Mitanian influence from the second half of the second millenium (14th to 13th century B.C.). Cylinder seals with similar treatment and scenes were found in North Syrian and East Anatolian sites.

Loculus 21 had a huge skeleton of a man, since on jewelry was found with it. The body was laid on the right side facing west and the head was at the entrance of the loculus.

Loculus 22 contained a few stones, sherds and three objects (No. 15 a complete lamp, No. 16 a broken bowl and No. 17 a lower part of a globular juglet) (Fig. 2: 17).

Loculi 17, 18 were robbed recently, and the bones were mixed with stones and soil. Objects 4, 5, 8, 9, and 21. (Pl. LXXVIII, 1) were found in front of them, probably scattered during the robbing.

**Tomb No. 2 (Fig 1).**

This tomb is located about 30 meters east of Tomb 1, also cut deep

(3) This sherd came in probably while robbers entered the tomb.

in the rock. In front of the entrance is a long cut 2 m long, one meter wide and 0.8 m deep. This leads to the entrance which measures 0.65 m high and 0.50 m wide. Two high steps inside lead to the floor of the tomb. The first step is 40 cm. high from the floor and the second is 65 cm.

The tomb is almost square (2.60 m E-W x 2.55 m N-S). In the center there is a shallow rock-cut pit 15 cm. deep and measuring 1.85 m E-W x 1.78 m N-S.

This tomb has seven loculi cut into the sides and a small square cut in the eastern wall north of the steps. Its measurements are 0.60 m S-N, 0.65 m E-W, 1.33 m from bottom to ceiling and 0.40 m deep in the rock. The loculi in this tomb differ in shape from the loculi in Tomb 1. The floor of each locus (Pl. LXXIX) has a long cut

in the center and two benches 18 cm. high on both sides of it, and the locus ceiling also has a concave cut. The approximate measurements of each locus are 1.60 m deep in the rock, 1.05 m wide and 0.65 m high, its entrance width is 0.37 m and height 1.00 m.

The tomb was completely robbed and nothing was left untouched. Some medium size stones, fragments of bones and soil were in it, but it was cleared and drawn to show its plan.

### Conclusion

The site of Beit Zar'a was used as a burial area in the Early Roman period, between the first century B.C. and the second century A.D. Further diggings and investigations may produce more historical evidence to give an exact date to the site and its structures.

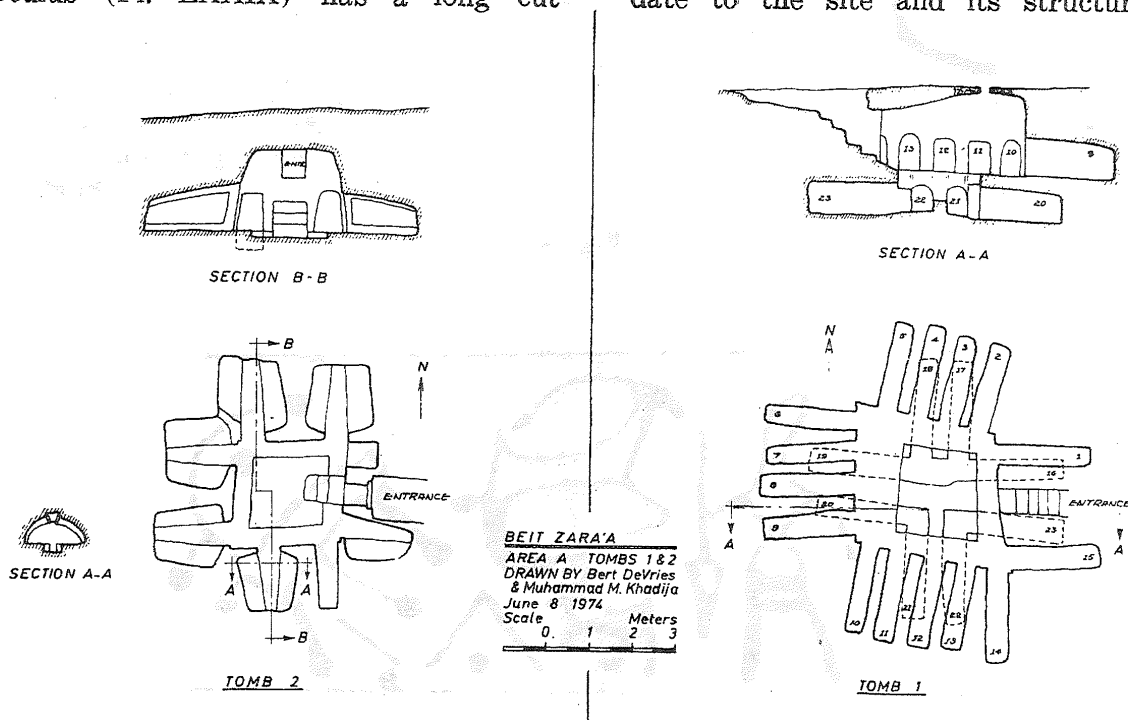


Fig. 1

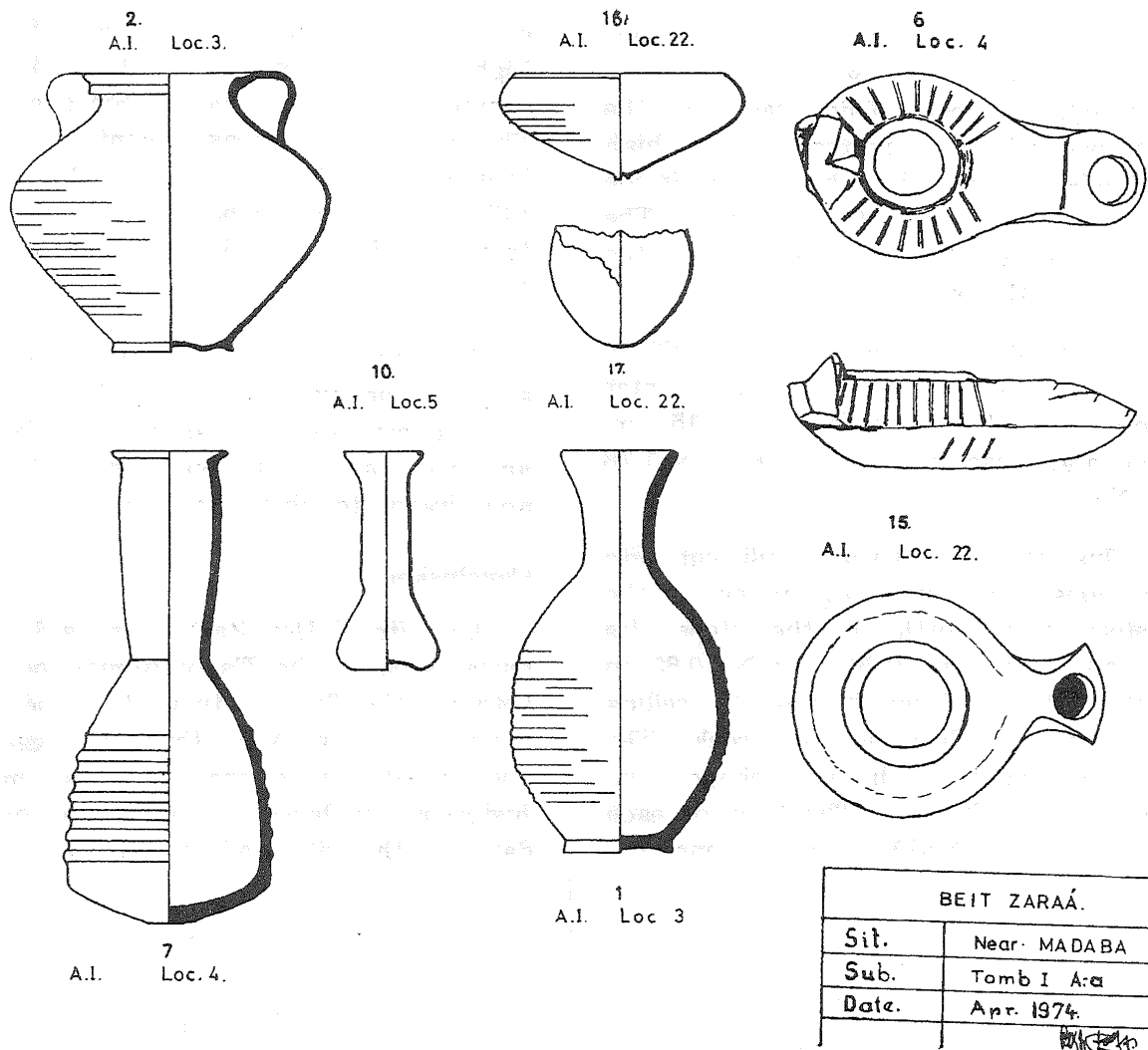


Fig. 2

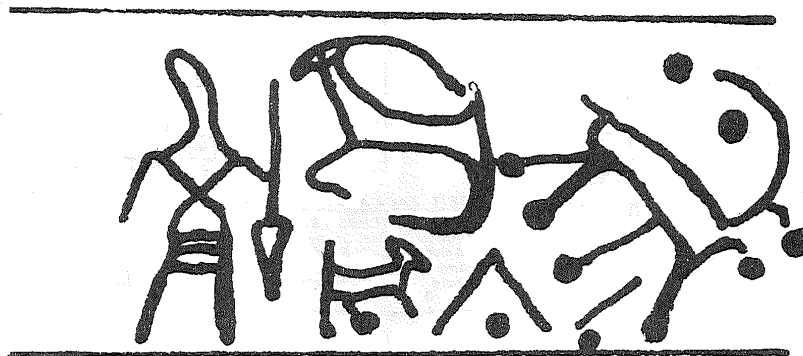


Fig. 3

## List of Objects

Ex. No.	Provenance	Description and parallels	Plate No.
1	B. Z. A. I Locus 3	Pottery unguentarium, complete except a small hole in body, wide body, short neck, rim everted, low string cut base, ribbing on lower part of body and neck, height 11 cm. Color SY 6/2 Light Olive grey. Date: Early Roman.	Pl. LXXX, 2 Fig. 2:1
2	A. I Locus 3	Two handled jug, pottery, incomplete, one handle and body parts missing, mended. Ring base, everted rim, ribbing on body, medium size, short neck, buff ware height 17 cm. mouth opening 11.5 cm. Color: SYR 6/8 light red.  Dated: Early Roman. P. Lapp, POC (1961 p. 170, 45.3; R. De Vaux, Les Grottes de Murabba'at et leurs documents, RB LX (1953), fig. 4:17; Fouilles au Khirbet Qumran, RB LXI (1961) fig. 4:17.	Fig. 2:1 Pl. LXXX, 1
3	A. I Locus 7	Glass bead, blue color, hole in the middle, vertical lines on body. Lachish III (1953), Pl. 38: 2; 66; 66.	Pl. LXXVIII, 1
4	A. I Locus 4	Stone spindle - whorl, greenish grey color, with a hole in the middle, small. Lachish III (1953), Pl. 45: 42; N. Tsori, A spindle Whorl with Hebrew Inscription, IEJ, (1959), p. 191, Fig. 1.	Pl. LXXVIII, 1 No. 4
5	A. I Locus 4	Medium size stone spindle-whorl, black color, with a hole in the middle. See No. 4.	Pl. LXXVIII, 1 No. 5
6	A. I Locus 4	Pottery lamp, handle missing and added secondarily, vertical incisions on upper part, flat base, long nozzle, blackened. Lapp, PPC (1961) p. 194: D. R. Smith, The Household lamps of Palestine in New Testament Time, BiAr XXIX (1966), p. 4.	Pl. LXXX, 2 No. 6 Fig. 2:6
7	A. I Locus 4	Pottery unguentarium, incomplete, mended, long neck, everted rim, ribbing on body, flat string cut base, height 13.5 cm. Color 2.5 YR 6/8 light red. Date: Early Roman. F. Zayadine, Syria	Pl. LXXX, 2 No. 7 Fig. 2:7

Ex. No.	Provenance	Description and parallels	Plate No.
		XLVII (1970), p. 134, Fig. 11.217, Fig. 13: right.	
8	A. I Loculus 16	Stone spindle-whorl, black, small size, two horizontal lines on edge with a hole in center.	Pl. LXXVIII, 1 No. 8
9	A. I Loculus 16	Stone spindle-whorl, thick black, one horizontal line on edge with a hole.	Pl. LXXVIII, 1 No. 9
10	A. L Locus 5	Small glass bottle, complete, rim everted concave base. D. Baramki, An Ancient Tomb chamber at Wa'r Abu Es-Safa Near Jerusalem, QDAP IV (1934), Pl. LXXX: 8.	Pl. LXXX, 2 No. 10 Fig. 2:10
11	A. I Loculus 20	Bronze spatula, complete. 15.5 cm. long.	Pl. LXXVIII, 1 No. 11
12	A. I Loculus 20	Bronze bracelet, twisted, complete, almost broken.	Pl. LXXVIII, 1 No. 12
13	A. I Loculus 20	Stone spindle-whorls of black color (9 pieces of different sizes, small, medium and large). Some with horizontal lines and other with vertical lines and each with a hole in the middle. See No. 4.	Pl. LXXVIII, 1 No. 13
14	A. I Loculus 20	Group of shells, beads and stones which were used as a necklace.	Pl. LXXVIII, 1 No. 14
15	A. I Loculus 22	Herodian lamp 30 BC - 70 AD. small size, wheel made complete, flat rounded base, large opening, color 5 YR 7/6 reddish yellow. P. Lapp PCC (1961) p. 193, fig. 82.1. J. Pritchard, The excavation at Herodian Jericho, (1951), AASOR XXXII-XXXIII (1958), pl. 59: 33.	Pl. LXXX, 2 No. 15 Fig. 2:15
16	A. I Loculus 22	Pottery bowl almost complete, mended, low string cut base, wheel made. Grooved rim on out-side, thin ware ribbing, red slipped. Diam. 11.5 cm, depth 5 cm. color 2.5 YR 6/8 light red. Date: Early Roman. P. Lapp, PCC (1961), p. 172: fig. 1.	Pl. LXXX, 1 No. 16
17	A. I Loculus 22	Globular juglet, lower part only, white slip, ribbing. Color 10 YR 8/3 very pale brown. Date: Early Roman.	Pl. LXXX, 1 No. 17 Fig. 2:17



Ex. No.	Provenance	Description and parallels	Plate No.
18	A. I Loculus 20	Cylinder seal of black stone (steatite) with animals and human representations, and a hole in the middle. 3 cm. long.	Pl. LXXVIII, 2, 3 Fig. 3
19	A. I Loculus 20	Die, made of bone large hole cut secondarily, decorated with small circles and shallow holes in them to show the number 1-6. size 1.5 x 1.5 cm.	Pl. LXXVIII, 1 No. 19
20	A. I Loculus 7	Very small bronze bracelet which was covered probably by silver. Diam 2.5 cm.	Pl. LXXVIII, 1 No. 20
21	A. I Loculus 16	Small stone spindle-whorl with a hole in the middle.	Pl. LXXVIII, 1 No. 21

Muhammad Murshed A. Khadija





# Archaeological Notes

## Grain from the Tell Siran Bronze Bottle\*

It is not easy to account for the present condition of the grain found in the inscribed Ammonite bronze bottle from Tell Siran. Grain shells and husks are not carbonized, some shell-less grains are lightly carbonized while large particles and even almost whole bodies (endosperms) seem to be preserved in the form of undecayed starch. Attempting to explain this most unusual condition the following stages may be suggested:

Threshed spikelets of fresh wheat and barley were put into the bottle and sealed with the metal stopper secured with a rivet. At some time the bottle was exposed to mild heat whereby a few of the endosperms got lightly roasted although the cellulose-lignin grain shells and husks were not affected to any visible degree. Later the bottle was placed in humid surroundings (underground?) and the metal began to corrode. Copper carbonate was formed and saturated the moisture which in turn permeated the plant material and, acting as a disinfectant, prevented attack by micro organisms and consequent decay.

Three domesticated grasses (cereals) can be identified:

Emmer wheat (*Triticum dicoccum*).

Bread wheat (*Triticum aestivum*).

Hulled six-row barley (*Hordeum vulgare*).

Beside these, a third wheat species, Einkorn (*Triticum monococcum*), may be present, but the state of the specimens does not permit certain identification.

Two common Oriental weed grasses are suggested by some fragmentary remains but cannot be proven. One is the Poisonous rye-grass, *Lolium temulentum* (Ar. zuwan), probably the 'Tares' known from the biblical parable. The other is the wild progenitor of the domesticated varieties of barley, the two-row *Hordeum spontaneum* (Ar. sha'ir-barri). Both are common in present-day fields all over the Near East, also occurring in the wild.

Emmer, together with Einkorn, was the first wheat species to be subjected to cultivation, and it preserved its position as the principal wheat in most places in the Near East and Europe up to the Roman era and locally even later.

Bread wheat is a hybrid derivative of Emmer that seems to have emerged in consequence of the artificial growth conditions created by irrigation. As far as is now known, the latter technique took its first steps about 6000 B.C. or slightly later.

Six-row hulled barley is a mutative offshoot of the above-mentioned wild

\* See Berytus, XXII (1973) p. 115 ff. BA, 37 (1974) p. 13 ff. ADAJ, XVIII (1973) p. 5 ff. BASOR, 212 (1973) p. 5 ff.

two-row barley. Like Bread wheat it first appears at the time when irrigation made its impact on Near Eastern agriculture. According to the evidence at present available, two-row barley was mostly grown in mountainous environment, whereas the six-row variety occurred in areas with a dry climate, but with irrigation water at hand in rivers and lakes. It is emphasized that domesticated two-row barley may well be present in the

Siran grain, but this point can only be settled on the evidence of spike internodes, and such are not present.

The state of preservation of the grain does not allow an estimate of the ratios with which the various cereals are represented in the bottle deposit.

Hans Helbaek

Copenhagen, July 1973.

## Book Review

**PELLA OF THE DECAPOLIS, VOL. I**, by Robert Houston Smith. Pp. xxx+250, figs. 69, plans 3, plates 94 (black-and-white 86, color 8), table of symbols. The College of Wooster, Wooster, Ohio, 1973. \$ 30.00.

Pella (*Tabaqat Fahl*) is one of the major archaeological sites located on the east side of the Jordan Valley. Robert H. Smith directed a first season of excavations at the site in the spring of 1967, and the present volume is the final report on that season of work. The volume is certainly a very significant contribution to Palestinian archaeology, especially to the archaeology of Transjordan.

In the introductory Chapter I (pp. 1-22), the concise "History of Exploration" (pp. 2-14) is marred only by the sometimes condescending tone of the author. The Wooster Expedition had a broadly conceived aim and was well organized (v-vii, pp. 14-22, 137-138), but several terminological criticisms should be made. The "Area I, Plot A" terminology could better have been replaced with "Area A, Plot 1" terminology, to avoid confusion of roman I with letter I (p. 217, pls. 9-16), arabic 1 with roman I (p. 182, pl. 18), and arabic 11 with roman II (pp. 140, 151, pl. 16D), as well as to avoid plot identification difficulties after Plot Z (AA?). Several key terms (pp. 18, 138) are not used consistently throughout the volume, especially "elevation and level" (pp. 140, 182; pp. 155, 159, plan 1), "elevation and section" (pp. 139, 153; pp. 150, 152), and "level and locus" (pp. 151, 177). Most of this confusion is caused by the use of the term "level" for what could better have been termed a "locus."

In Chapter II (pp. 23-82), Smith presents with annotations the texts and maps which relate to Pella from ca. 1800 B.C. to ca. A.D. 1800. This is a useful collection of primary sources, but a critical synthesis, which would take into account these and other sources, could also have been expected. For example, it is striking that while the literary evidence for the A.D. 635 Battle of (*Fihl*) is very strong (pp. 69-74), this event receives far less attention in the interpretation of the Area I West Church than do the A.D. 610 Persian invasion and the A.D. 660, 717 earthquakes (pp. 158, 164-165).

Chapter III (pp. 83-136) presents an unusually thorough study of the environment of modern Pella, including precise observations about the topography, geology, hydrology, meteorology, botany, and zoology of the site. Despite the fact that the study is able only occasionally to relate the observations to the environment of ancient Pella (pp. 83-90, 106-107, 126, 134-136), this is a highly valuable chapter. With such a groundwork laid, further sampling through excavation should permit significant conclusions to be drawn about the environmental history of the site.

In Chapter IV (pp. 137-167) is discussed the excavation of the Area I West Church, including the areas of the sanctuary, the atrium, and the "north dependency".

The descriptive portion of the chapter (pp. 139-164) is quite clear, but several methodological weaknesses should be noted. First, the discussion is organized primarily on architectural (horizontal) lines, rather than on strati-

graphic (vertical) lines, which makes it difficult to reconstruct the exact stratigraphic sequence of the individual plots and the area as a whole. Second, the discussion includes a great deal of interpretation (pp. 139, 153), which hinders independent evaluation of the description. Third, walls and soil layers are seldom identified by number, which sometimes makes reference to them unclear (p. 143). Finally, while Plans 1-3 are excellent, the accompanying sections (figs. 48, 49, plans 2, 3) are, like the discussion, weak in their presentation of stratification.

The interpretative portion of the chapter (pp. 164-167) presents a five-phase provisional history of the Area I West Church (ca. A.D. 530-610, 610-660, 660-717, 717-746, 746-1967). While this history is an admirable attempt at precision, much of it is little more than that. There is virtually no hard archaeological evidence (stratification, pottery, coins, inscriptions) for the proposed A.D. 610 Persian invasion, the A.D. 660 earthquake, or the A.D. 717 earthquake (note that the fallen column in Plot U is cited as evidence both for the A.D. 717 earthquake [p. 165] and for the A.D. 746 earthquake [p. 142, pl. 12]). The church would probably have been built sometime during the Late Byzantine period (pp. 154-157, 164), and it would probably have required some repairs and modifications during its history (pp. 141, 153, 164-165). Sometime after the A.D. 635 Battle of *Fihl* (pp. 69-74), in the Pre-Umayyad or Umayyad period, the church would have been robbed of stones (pp. 140, 143, 151, 156, 165) for some kind of occupational use of the area (pp. 142-143, 151, 153-156, 158, 165-166). This Umayyad occupation would have come to an end with the A.D. 746 earthquake (pp. 139, 142,

143, 154, 158, 166), and after that earthquake the area would have remained virtually untouched to the present day (pp. 137, 166).

In Chapter V (pp. 168-195) the excavation of the Area II East Cemetery, including Tombs 1-8 in Plots A-H, is discussed. The discussion is clear, and it is well illustrated with plans and sections, but it would have been helpful to have had Plots A-H (especially Plots D and F) located on Plate 1.

Chapter VI (pp. 196-243) presents the pottery and other artifacts from the excavation of the Area I West Church and the Area II East Cemetery.

Technically, the chapter presents the pottery very well. The description of the pottery includes Wentworth, Mohs', and Munsell notations, evidence of Shepard's recent influence on Palestinian archaeology. The observations on pottery construction techniques are a reflection of the new approach of Franken and Kalsbeek. The system of symbols utilized on the pottery plates is original and efficient, although it could only be used with drawings of whole pots (pl. 51) or diameter-reconstructed sherds (pl. 28). Because the pottery plates are organized by area, and because the pottery numbers are not sequential on the plates, it is often cumbersome, while reading the text of the chapter, to locate pottery drawings on the plates. The drawings are accurate and they are presented at the best scale (1:4), but the fact that the stance lines are drawn to touch the sherd sections sometimes obscures details (cf. 1165 on pls. 31 and 92B; 1130 on pls. 32 and 91A). The color plates (87-94) illustrate details of ware better than any other method of ware description.



The chapter includes discussions on pottery from the following periods: "Chalcolithic, Intermediate Bronze, Middle Bronze I, Middle Bronze II, Late Bronze I-II, Iron I, Hellenistic, Roman, Byzantine, Umayyad, Mediaeval". Although some of these periods are better represented than others, the chapter makes an important contribution to the published ceramic sequence of Transjordan. Selected notes follow below.

**Chalcolithic:** The three sherds published as "Middle Chalcolithic" (p. 196, pl. 34) should probably be dated earlier than Ghassul, in the Early Chalcolithic period.

**Middle Bronze II:** The pottery from Tomb 1 (pp. 170, 198, pls. 46-57) could tentatively be dated somewhat later than Smith's ca. 1600-1550 B.C. date, probably ca. 1550-1500 B.C. This period, termed (early) Late Bronze IA by Albright, but possibly included in the late Middle Bronze by Wright, would be a period of transition between the Middle Bronze Age and the Late Bronze Age. While some of the forms are most closely related to the late Middle Bronze Age (goblets pl. 48, lamps pl. 49, dipper juglets pl. 51), others are typologically closer to Late Bronze I (dipper juglets pls. 46 and 50, bowls pl. 47, cooking pots pl. 48, jars pls. 52-56). The appearance of the bichrome jar (pl. 46) together with the cream-ware bowls (pl. 46) would also support a post-1550 B.C. date for the pottery (cf. also the notes by Tufnell on the two scarabs found in Tomb 1 [pp. 209-210]).

**Roman:** Aside from several probable Late Roman sherds included with the Byzantine pottery (1327, 1292 on pl. 43), the Roman pottery from Pella consists entirely of lamps from Tombs 2, 6, and 8. These tombs were used

for long periods of time, and they attested no coins or relevant vertical stratification, but the lamps could tentatively be dated by reference to dated parallels, and by typological comparison of the tomb groups. There would not seem to be any Early Roman lamps (cf. p. 217), and the Late Roman ones could be divided into three typological categories. The first, perhaps Late Roman I (A.D. 135-193) in date, would be Lamp 19 on Pl. 79 (cf. p. 213). The second, like Lamp 312 on Pl. 78, could be dated to the Late Roman II-III (A.D. 193-284) period (cf. pp. 213-214, 216). The third, like Lamp 288 on Pl. 78, would be Late Roman IV (A.D. 284-324) in date, possibly extending into the Early Byzantine I (A.D. 324-363) period (cf. p. 215). Lamps like 54 and 90 on Pl. 60 should probably be dated to the Early Byzantine I ff. (A.D. 324 ff.) period, rather than to the Roman period (cf. p. 216).

**Byzantine:** Byzantine pottery is published from Tombs 2, 5, 6, and 7, from Plots D, E, F, and S (313 on pl. 29; cf. p. 217) in Area I, and from Plots A, C?, and H in Area II. The earliest Byzantine lamps would seem to be those like 54 and 90 on Pl. 60, from Tomb 2 (cf. p. 216). The lamps from the chamber of Tomb 6 (pl. 65) and from Tomb 5 (pl. 63) could perhaps be dated primarily to the Early Byzantine II-IV (A.D. 363-491) period (cf. pp. 218-219). Tomb 7 could possibly contain some Early Byzantine forms (cf. coins p. 192), but most of the lamps (pls. 66-67) would belong to the Late Byzantine ff. (A.D. 491-635 ff.) period (cf. pp. 188-192, 219-220). Also from the Late Byzantine period would be most of the pottery from Plots D, E, F, and S in Area I (pls. 28-29; cf. coins p. 163; p. 217), and Plots A and H in Area II (pls.

42-44; cf. pp. 217-218). The pottery from Plot A in Area II includes some probable Late Roman (1327 on pl. 43) and Early Byzantine (1326 on pl. 43) forms, while most of the pottery from Plot C in Area II (pl. 45) would seem to be Umayyad in date (cf. p. 218).

**Umayyad:** Umayyad (A.D. 661-750) pottery came from most of the plots in Area I (pls. 30-33; cf. p. 229), and from Plot C in Area II (pl. 45; cf. pp. 218, 229). Like the Umayyad pottery from Amman Citadel, Heshbon, and Tell Siran, the Pella corpus attests unribbed red-painted ware (492 on pl. 30; cf. p. 234), ribbed white-painted ware (495 on pl. 31; cf. pp. 233-234), and combed ware (504 on pl. 33; cf. pp. 231-232), while glazed wares (p. 229) and red wares (p. 235) are essentially unattested. The evidence for dating this pottery at Pella includes five post-reform Umayyad coins (pp. 158, 163) and an arabic-inscribed jar (p. 231) from Plots B, D, E, M, and R in Area I. On the basis of this evidence, Smith very correctly dates the pottery to the Umayyad period, and he distinguishes it from the site's Byzantine pottery (pp. 235-236). He also correctly distinguishes it from Abbasid (A.D. 750 ff.) pottery (pp. 229-230), although his A.D. 750-1100 date for the Abbasid period (p. 237) is much too broad (Fatimid control of Palestine began in A.D. 969).

**Mediaeval:** Smith designates the ca. A.D. 630-1516 period as "Mediaeval" (p. 236), but the term apparently is not meant to include the already discussed A.D. 661-750 Umayyad period. The Mediaeval pottery from Pella was concentrated in the upper layers of Tombs 2 and 7 (pls. 58-59, 69-77). The pottery was not associated with coins, and Smith suggests dates on the basis of typological analysis and paral-

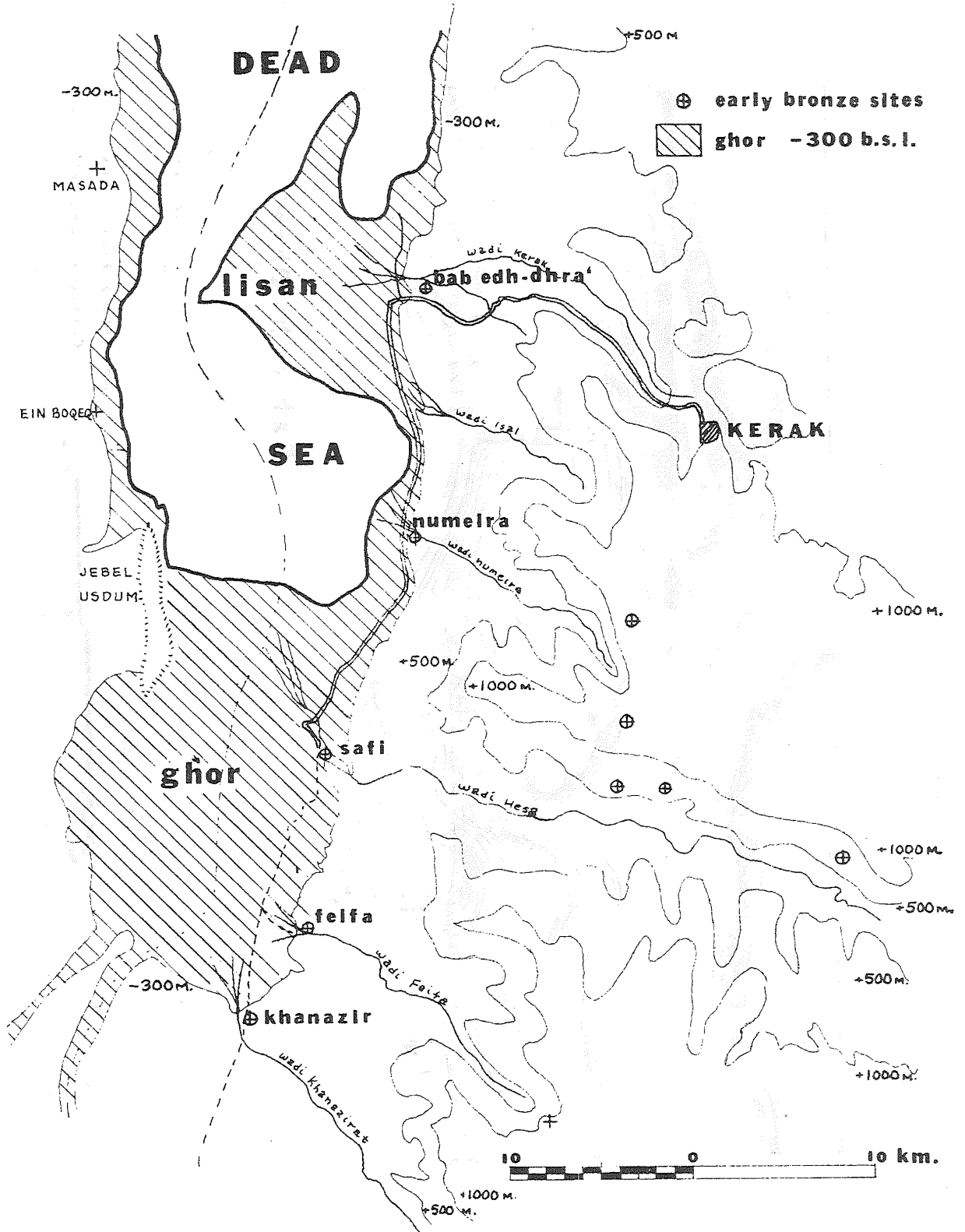
els, which in this case leads to very inaccurate results. Smith divides the pottery into five rather natural typological groups (A-E), and he dates each of the groups independently. The Group A "sugar pots" (pl. 70) and the Group B brown-painted jars (pl. 71) are dated to the Abbasid (ca. A.D. 750-1100) period (pp. 236-238). The Group C glazed wares (pls. 58, 72) are dated to the pre-Mamluk Crusader period, ca. 12th-13th c. A.D. (pp. 238-239). The Group D handmade painted wares (pls. 58, 73-75) are dated to the post-Crusader Mamluk period, ca. 14th-15th c. A.D. (pp. 239-242). And the Group E cooking pots (pls. 59, 76-77) are dated to the late Mamluk ff. period, ca. 15th-16th c. A.D. (pp. 242-243). In fact, these five groups do not form independent, complete assemblages. Rather, they make up a single diversified assemblage, and they are contemporary in date. A very similar assemblage was found in Cistern D.5:5 at Heshbon in 1971, dated by coins to the ca. A.D. 1260-1400 Early Mamluk period, and the Pella Mediaeval pottery could probably be dated to the same period.

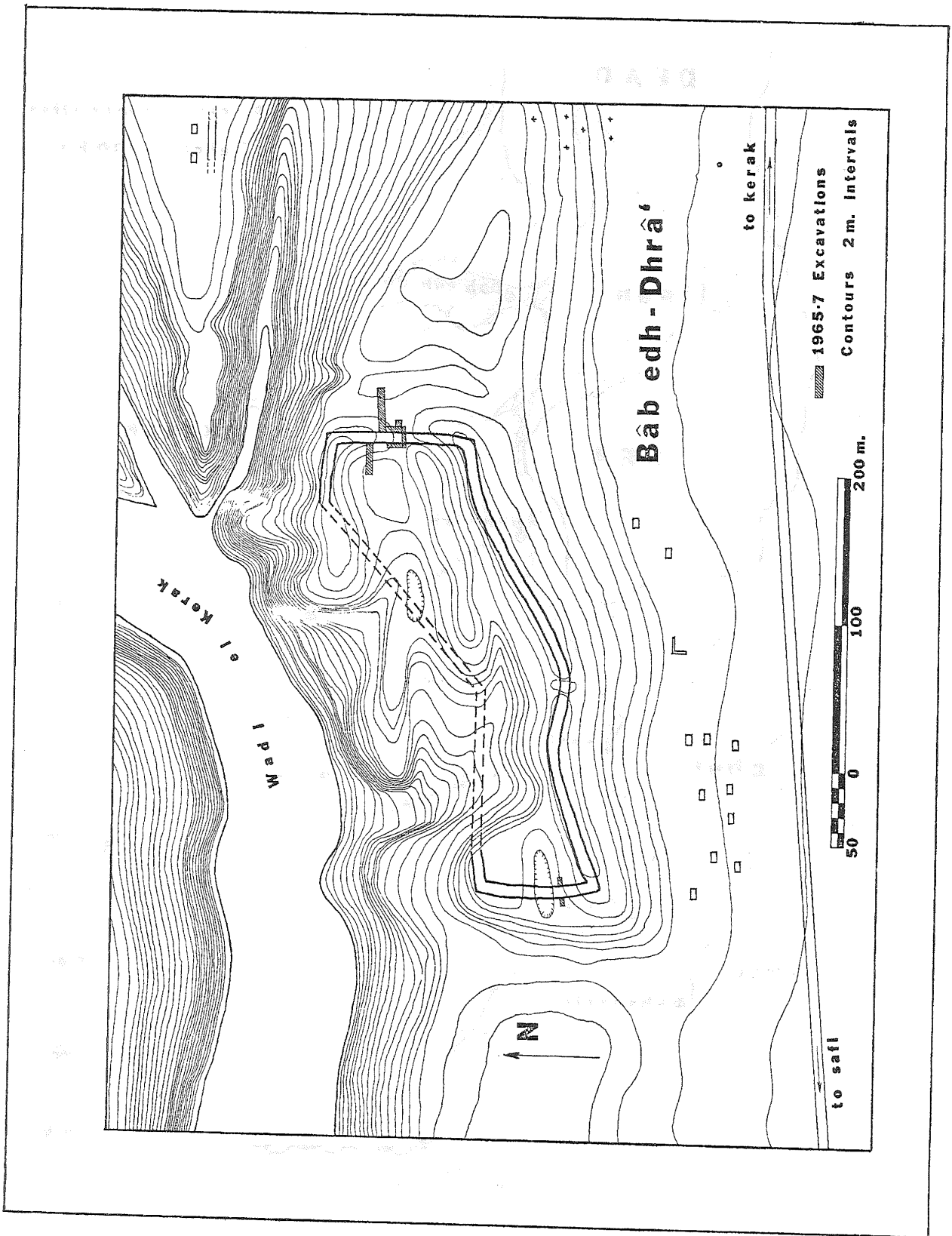
The volume is handsomely printed and illustrated, and the following list of errata is minor in comparison with the overall quality of the volume: northwest (xvii); Section of I (pp. 150, 152); .77 (p. 153); debris contained (p. 153); Plot A (p. 155); completed. (p. 183); and the contents (p. 187); it may (p. 211); fill). (p. 217); contexts (p. 233); base (p. 235); noting (p. 237); -53.88m. (pl. 1); 1221 (color ref. pl. 28 from pl. 29); Grave 10 (1:4; Wo); beads from graves 1, 2, and 10 (1:1; Wo) (pl. 79); 966 (pl. 93).

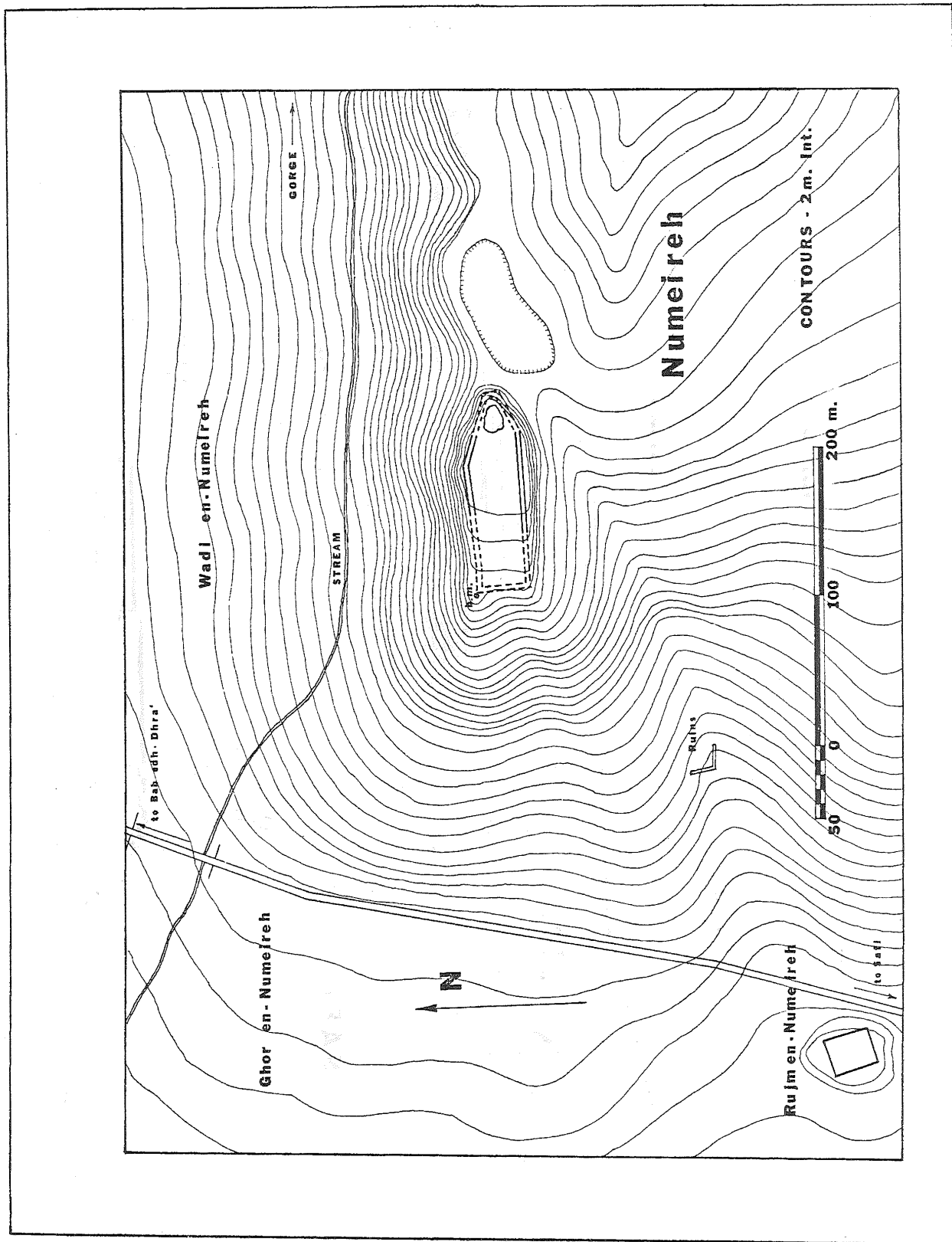
James Abbott Sauer  
American Center of Oriental Research  
Amman

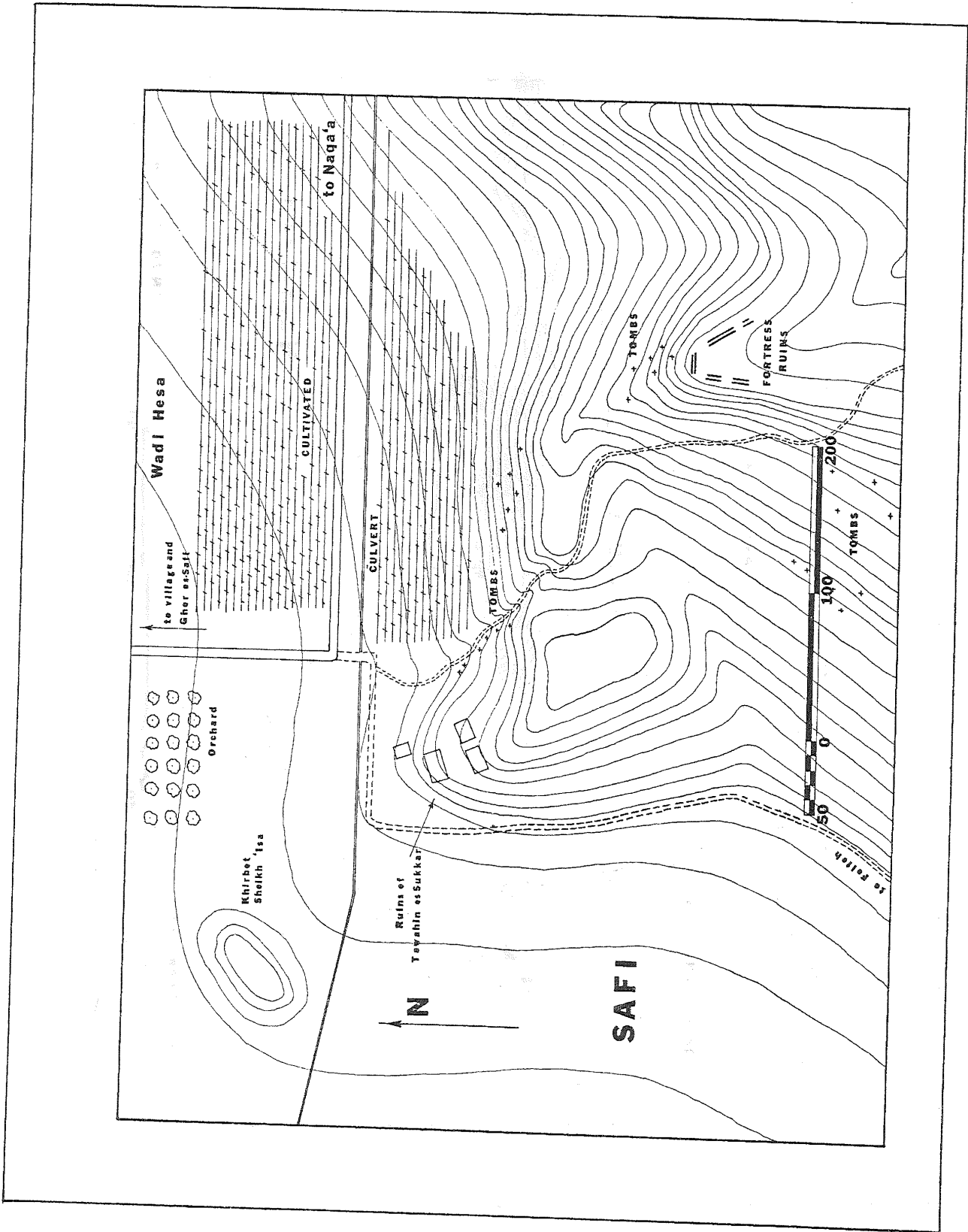
# PLATES



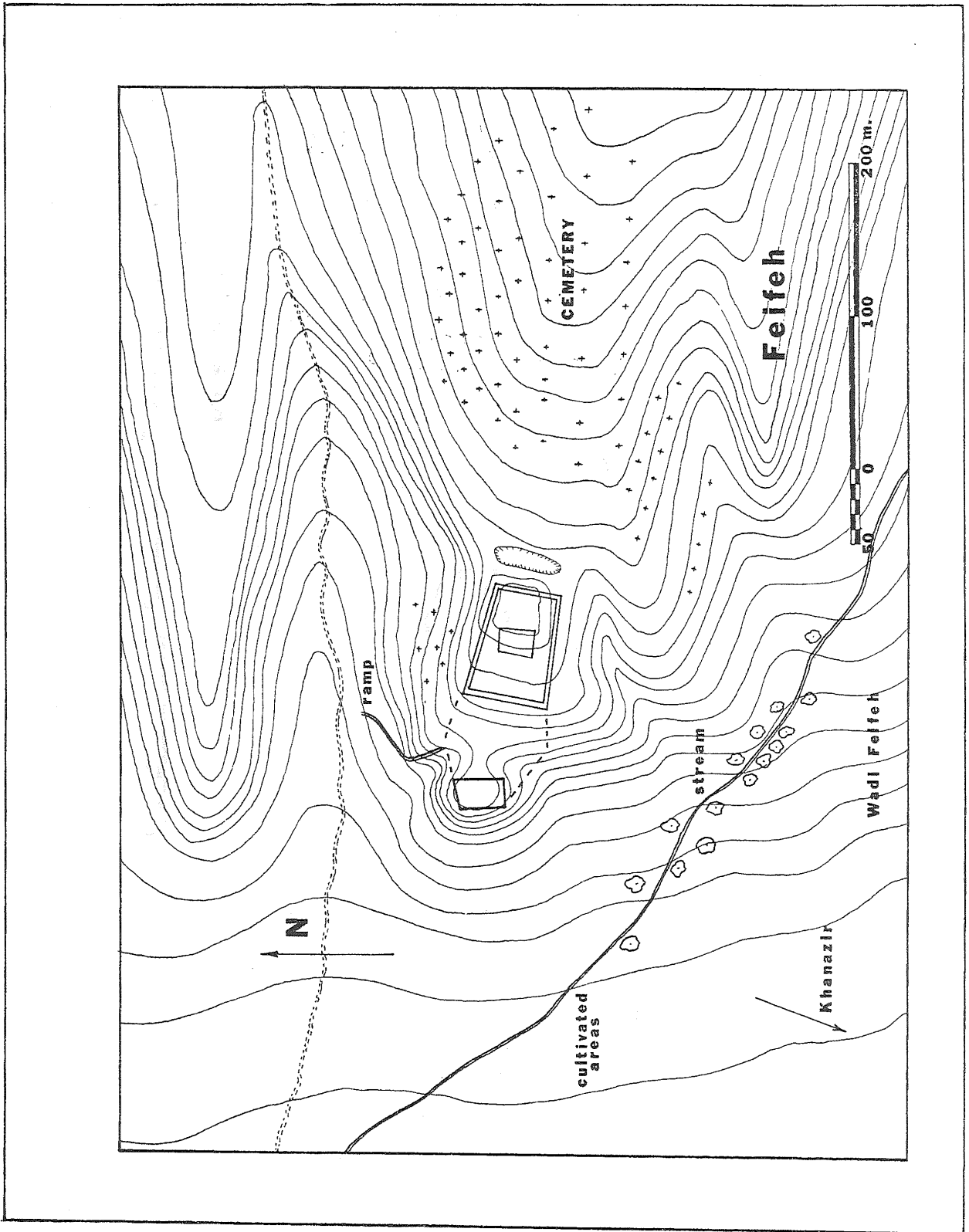


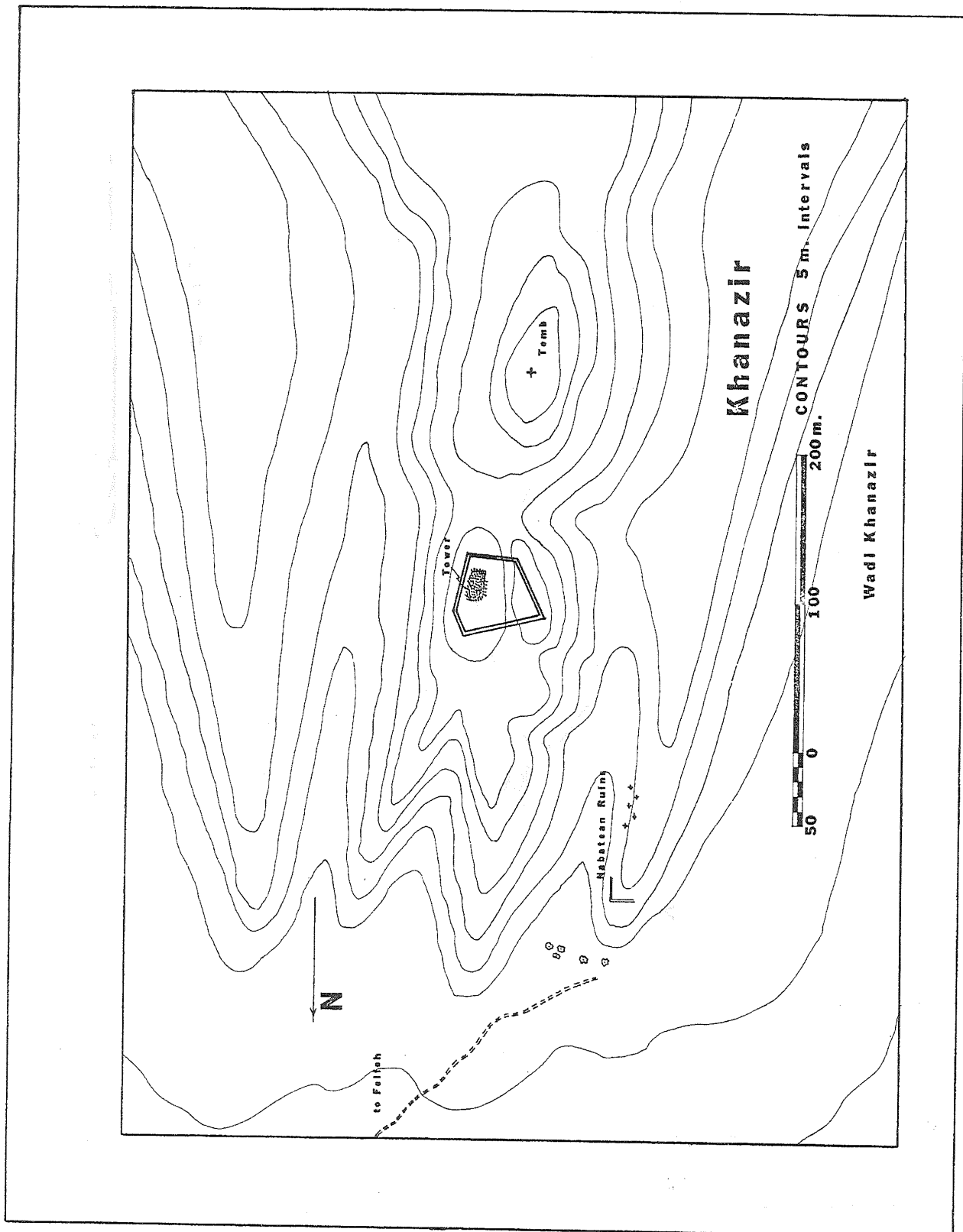


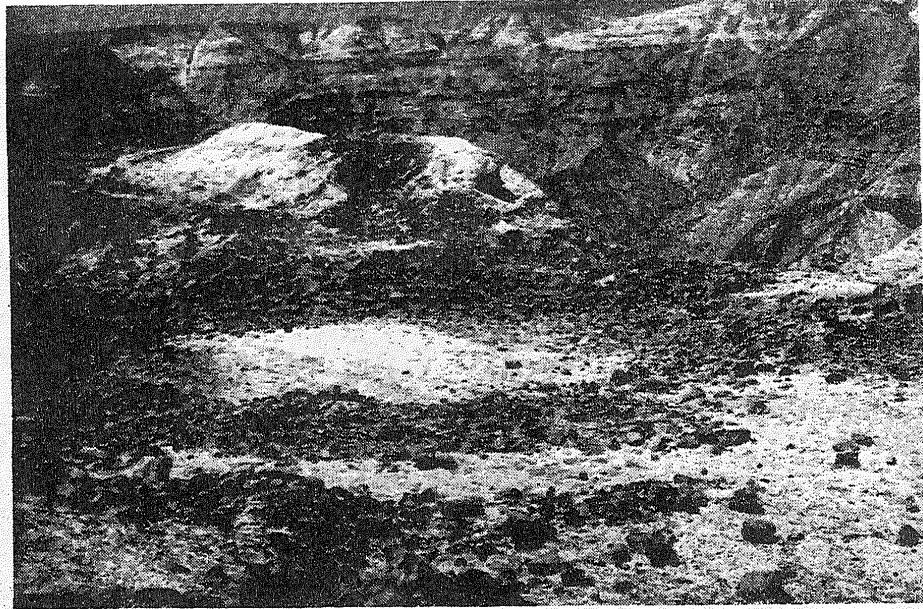




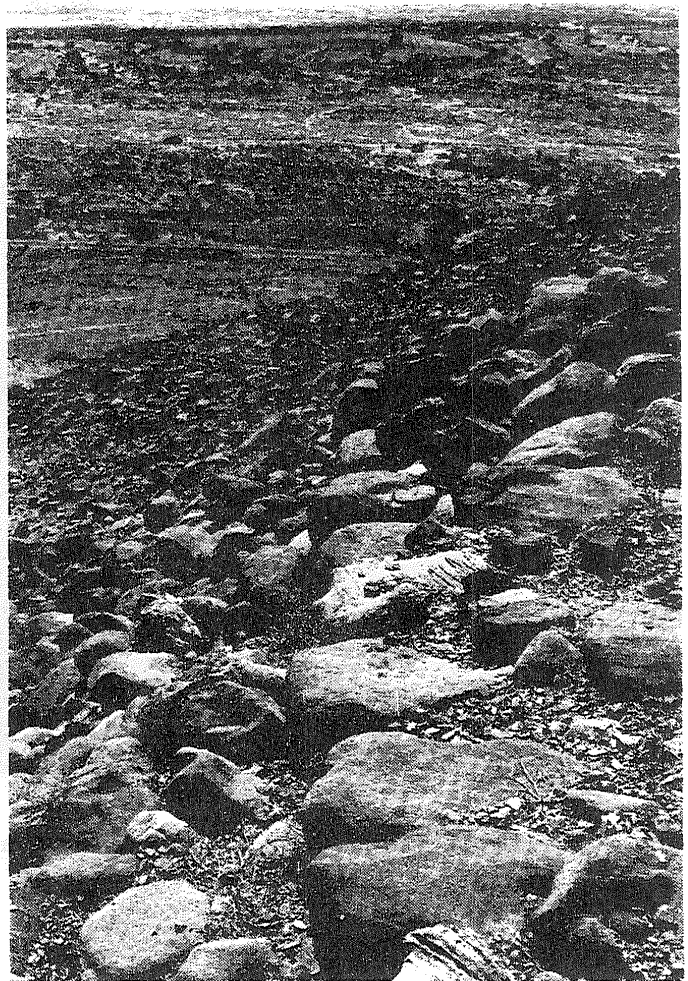




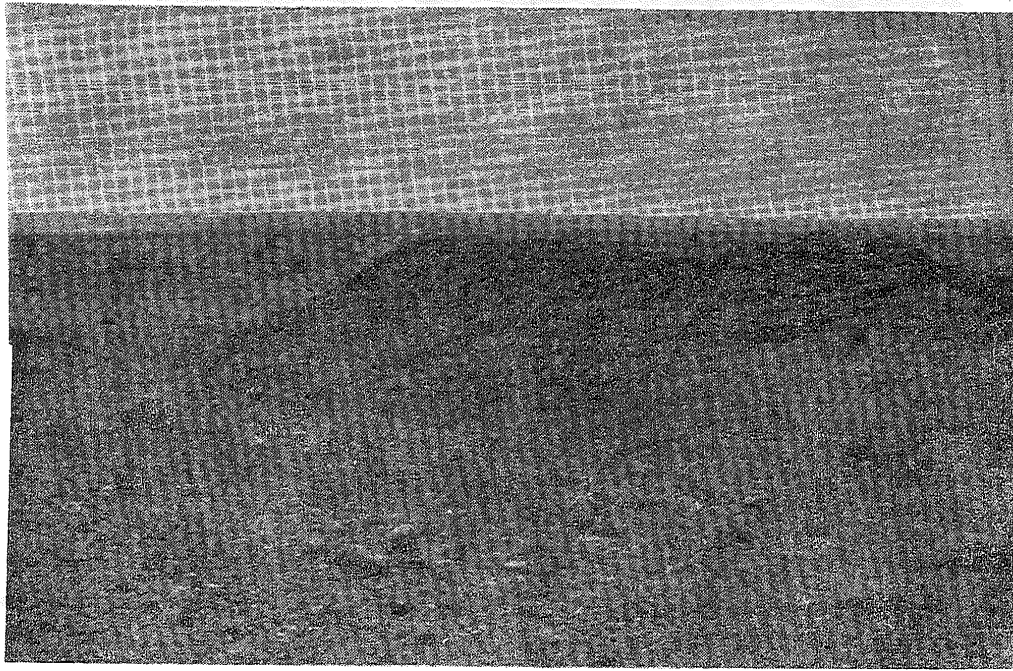




1. Remains of walls inside of town site at Bab edh-Dra', looking northwest across Wadi Karak to bluffs behind.



2. Outer face of wall around Numeirah, on the southwest. Fallen stones from wall on slope below.



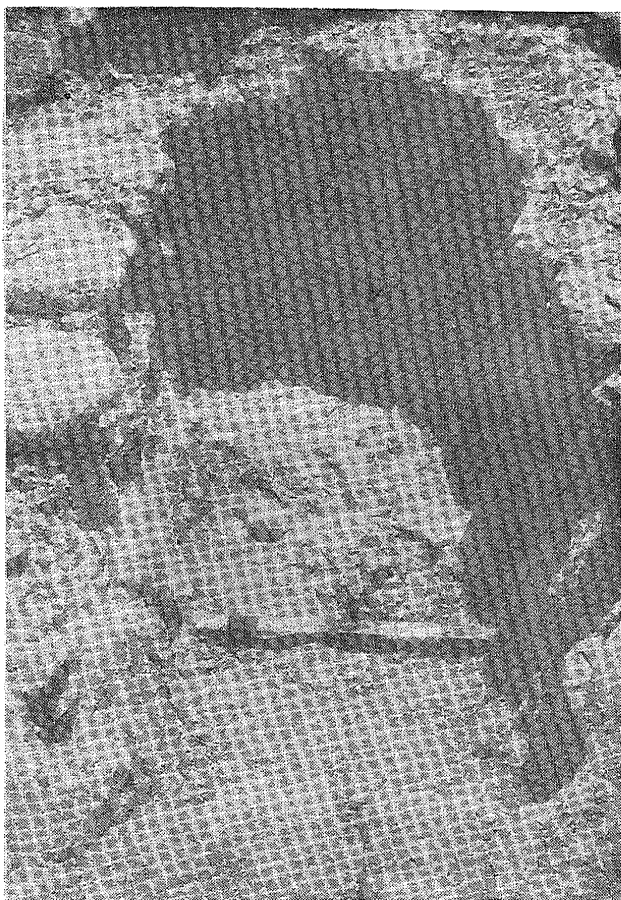
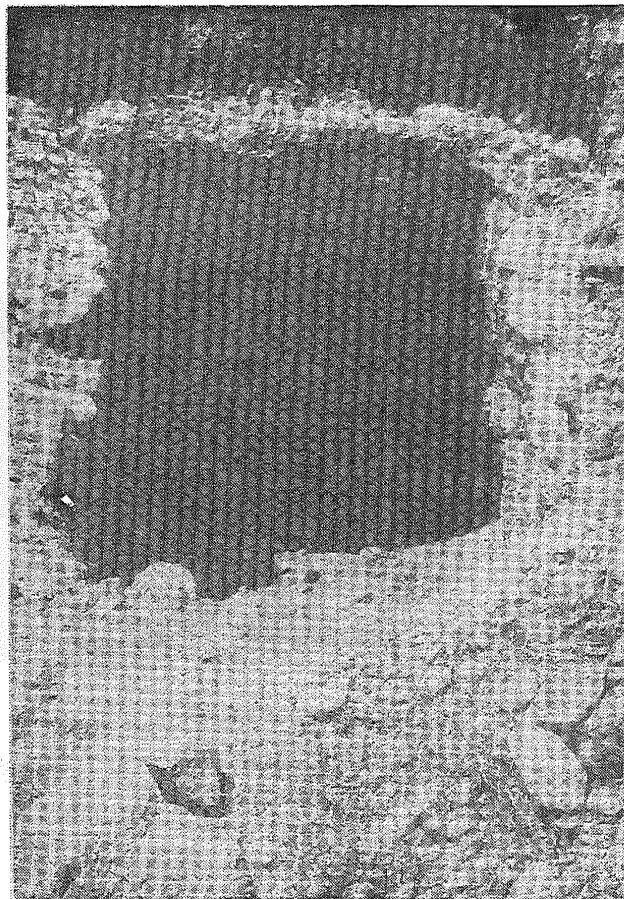
1. Town site of Numeirah, looking west across Ghor en-Numeirah and Dead Sea in background.



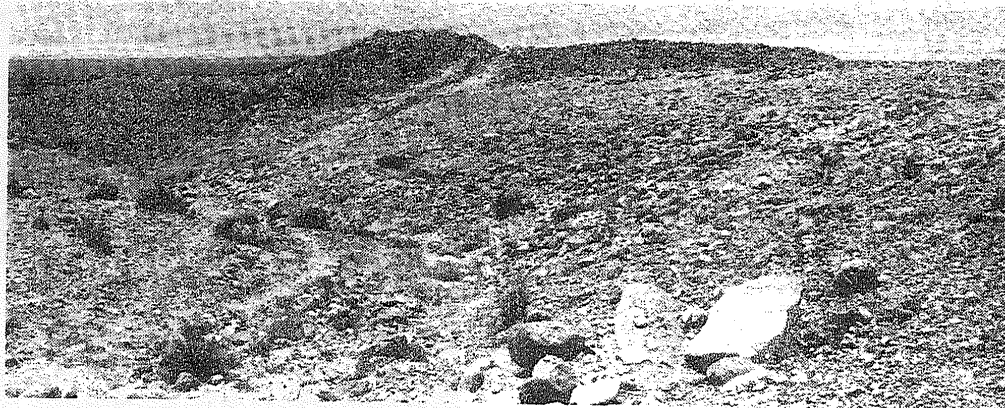
2. Door socket found in situ at Numeirah in the enclosure wall on the north.



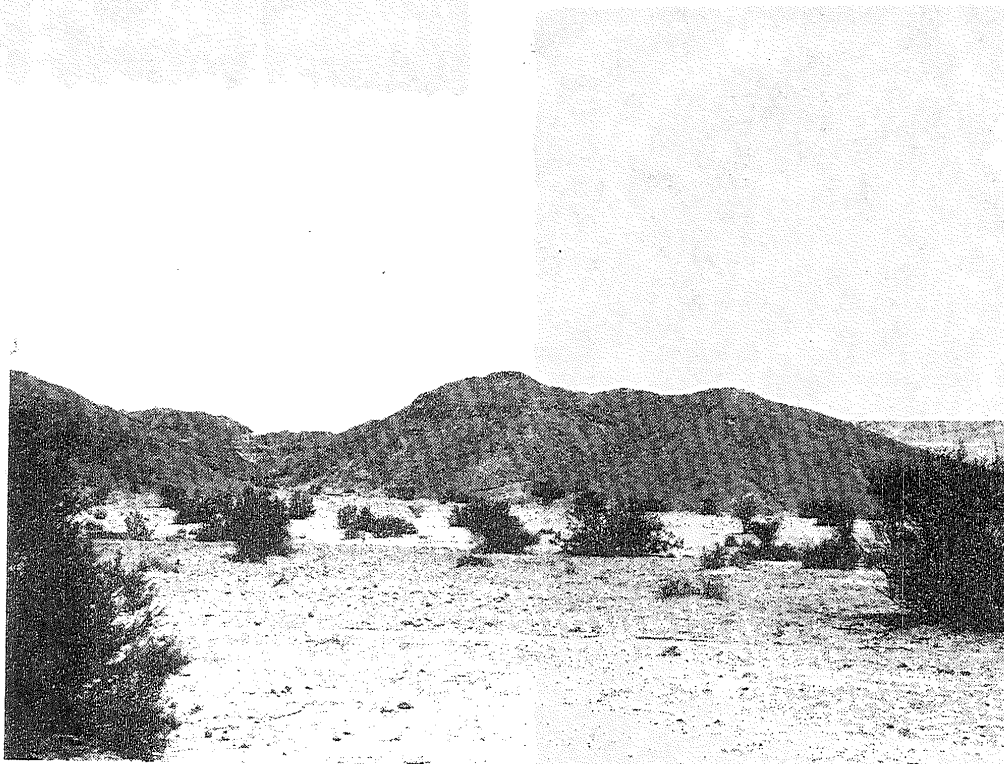
1. Cist tomb at es-Safi, probably unnecessarily broken through to lower levels by tomb robbers.



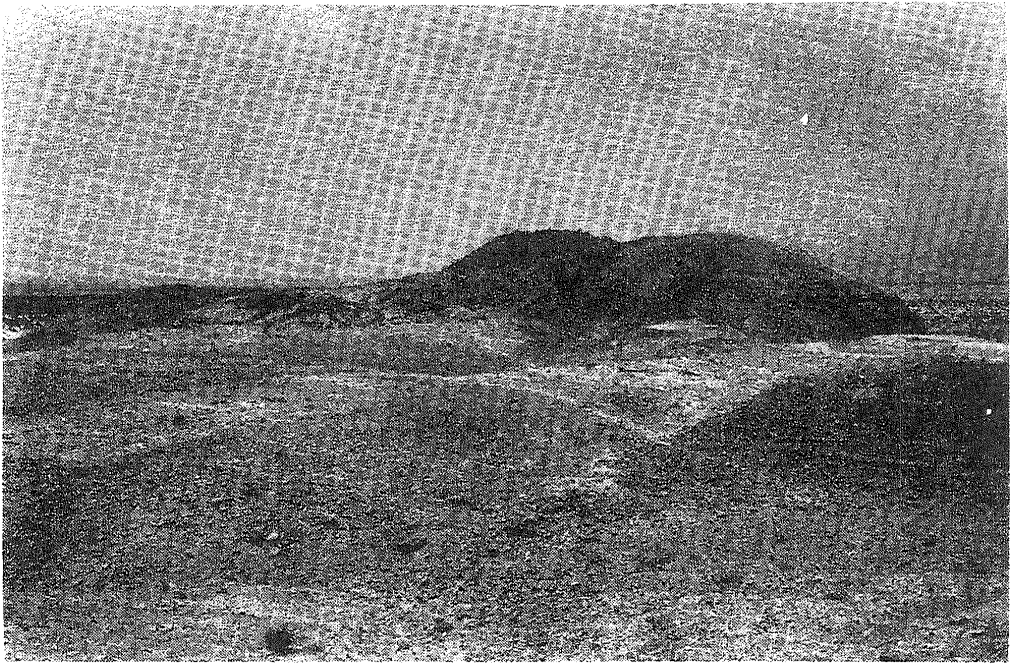
2. Stone-lined cist tomb at Feifeh, with bone pile partly preserved.



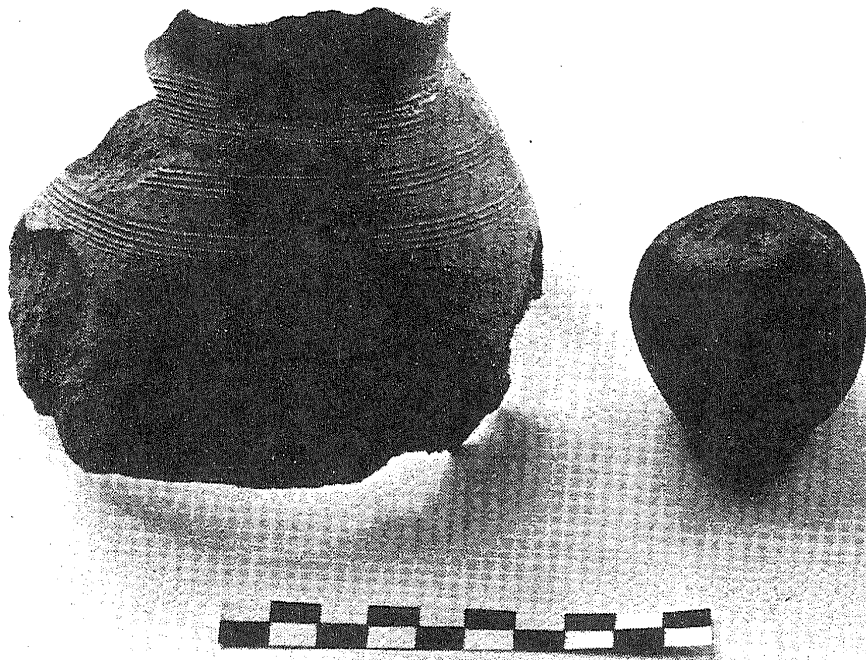
1. Town site of Feifeh looking west-northwest across Ghor el-Feifeh. Jebel Usdum is toward the right of the picture in the hills behind.



2. Promontory on which site of Khanazir is located, looking south with tower visible on left. Wadi Khanazir is to extreme right.



1. Town site of Khanazir looking north, with tower in center of picture. Entire southern Ghor lies before site.

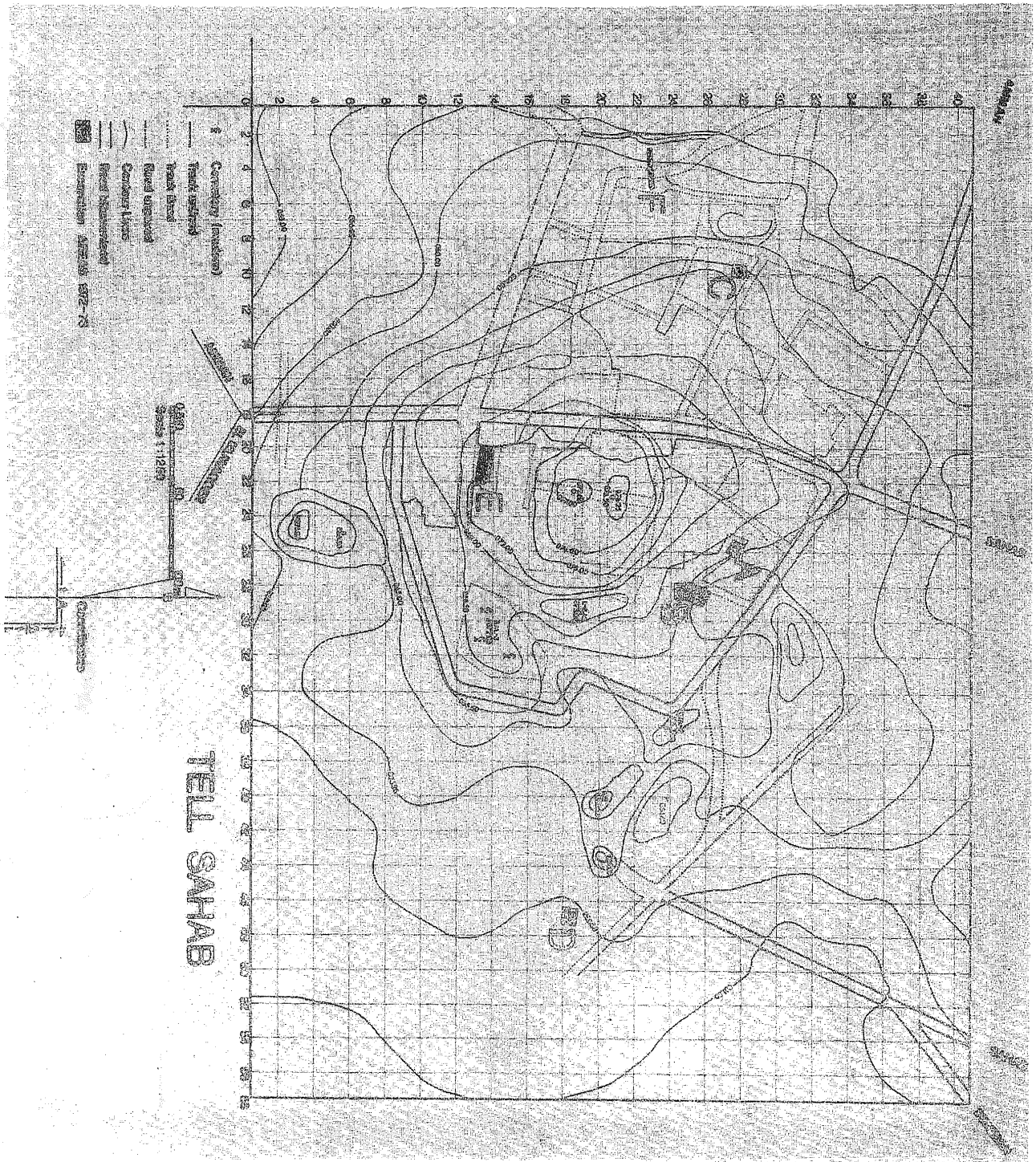


2. Objects from Khanazir. Combed jar came from tomb to south of site, and macehead from south slope of the town.

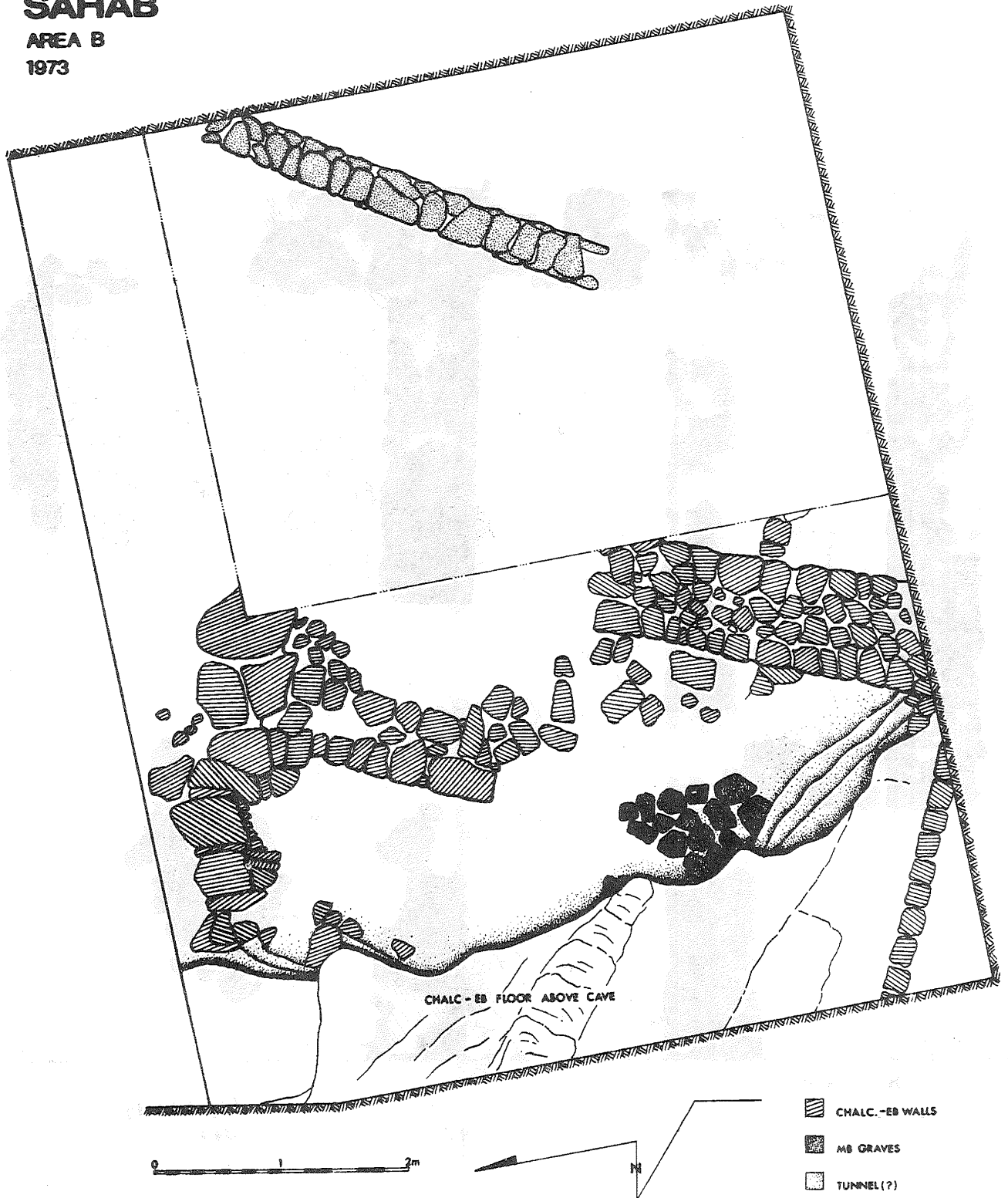




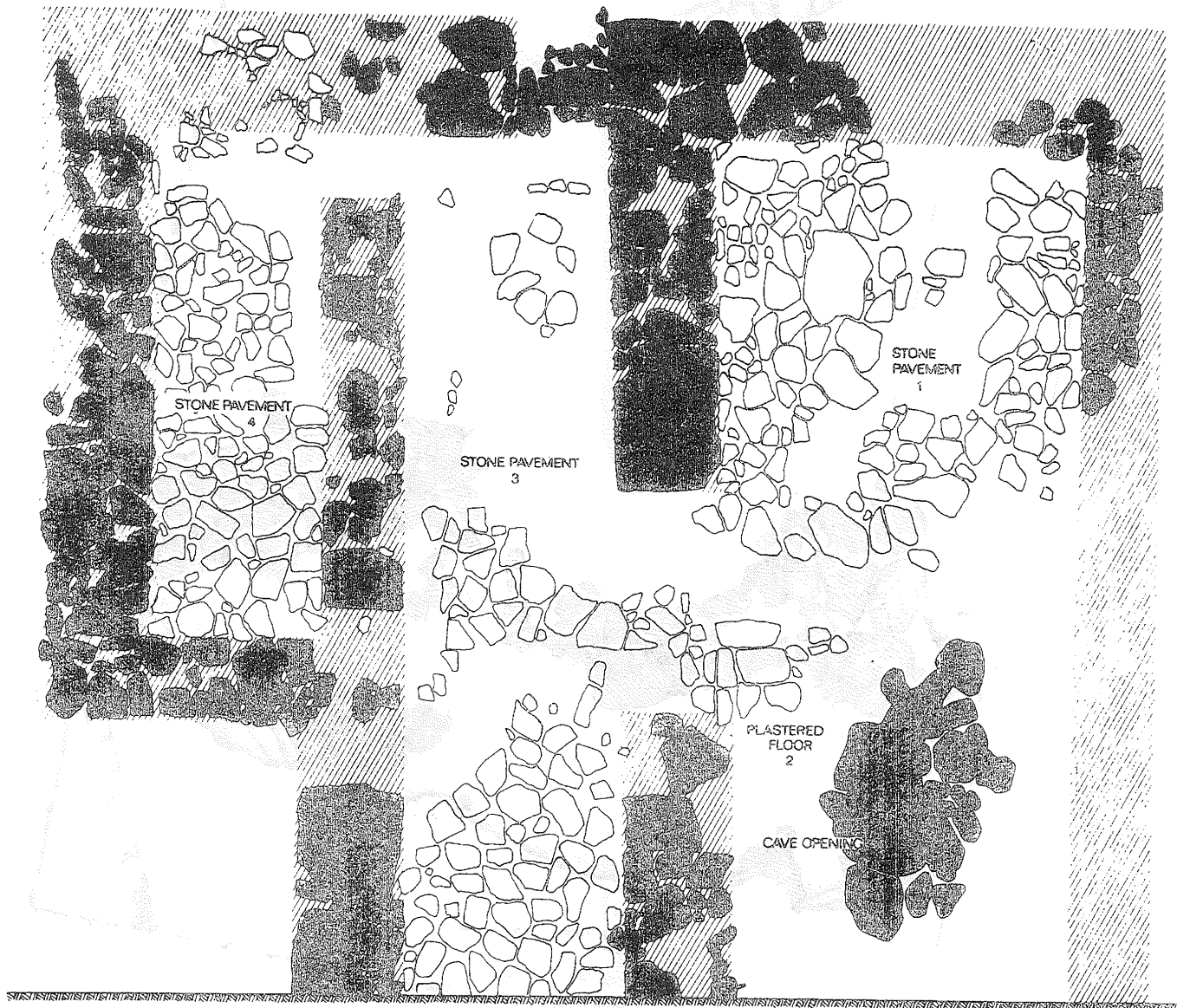




**SAHAB**  
AREA B  
1973



SAHAB



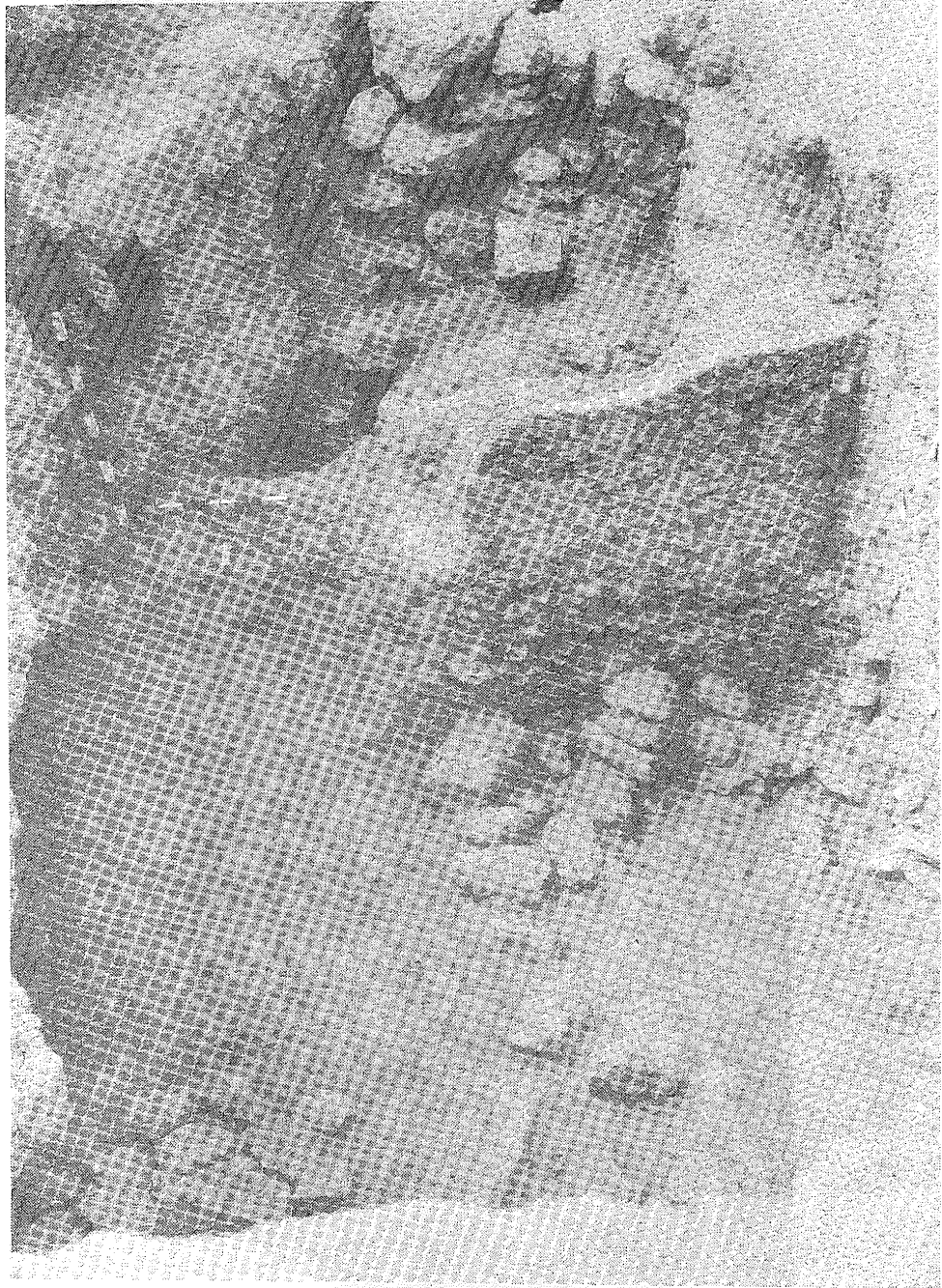
EARLY IRON AGE BUILDING

0 1m 2m

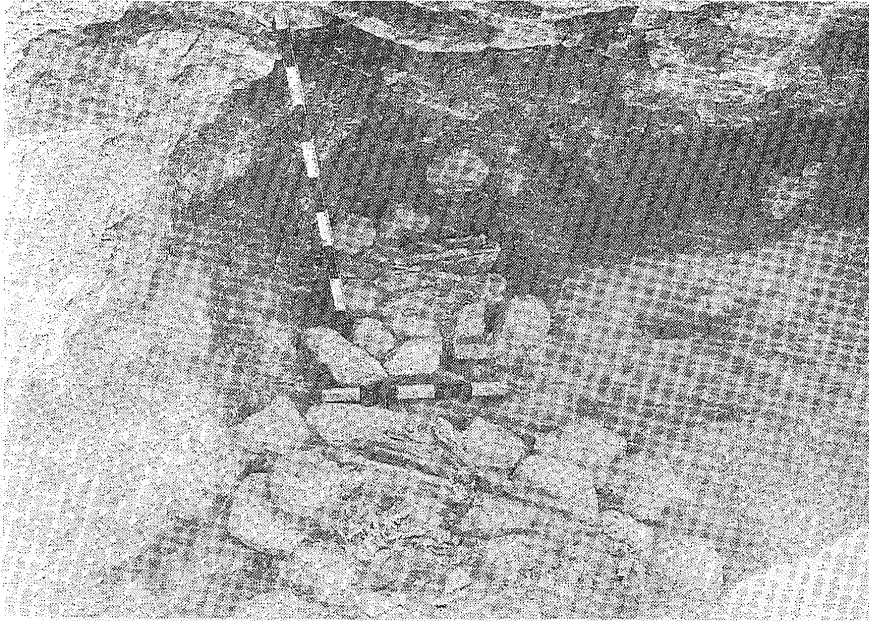
SAHAB

AREA B  
1972 - 73

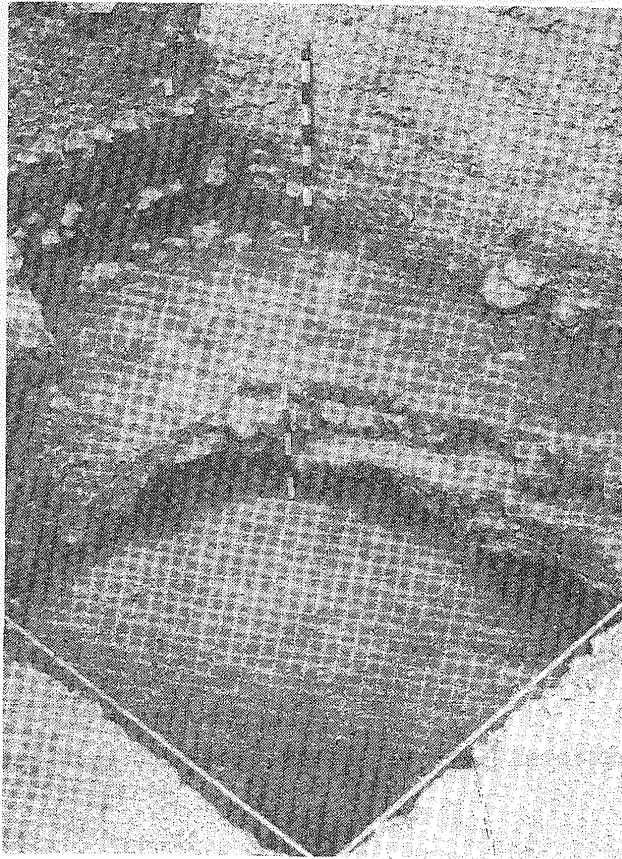




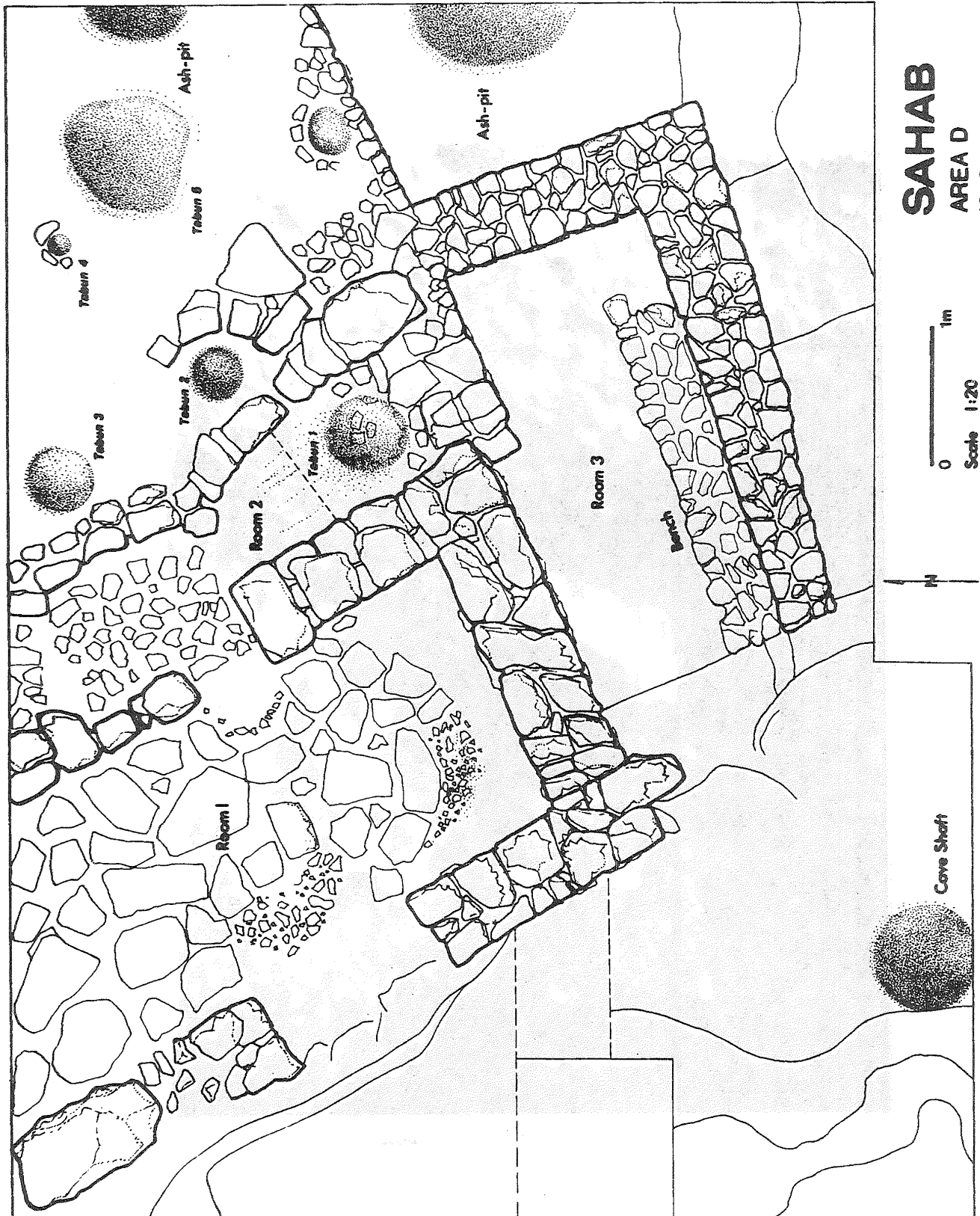
Area B : Preserved parts of MB shaft tomb and burial platform



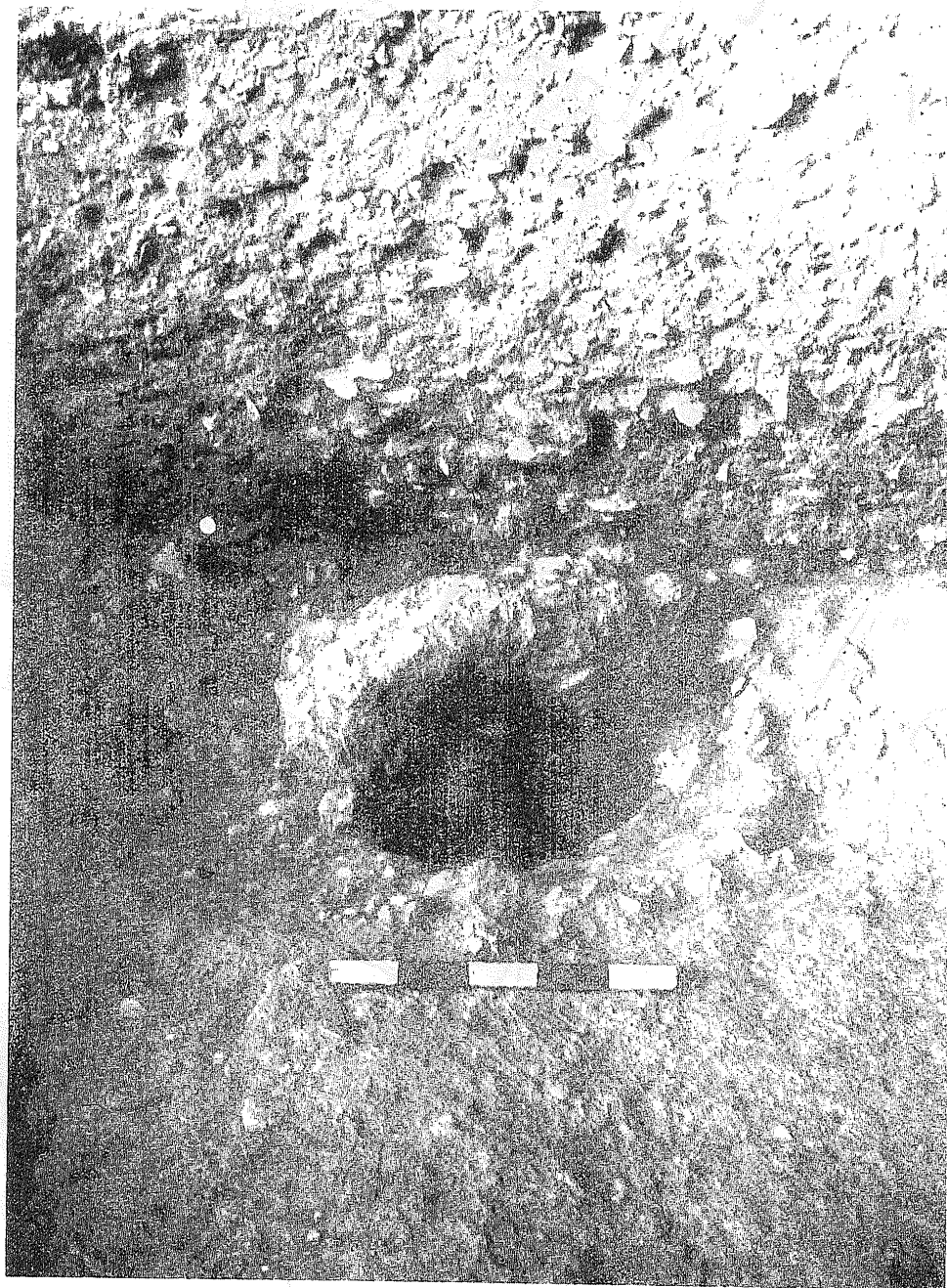
1. Area B : Two MB burials in shaft tomb



2. Area B : Chalc.-EB floor above cave

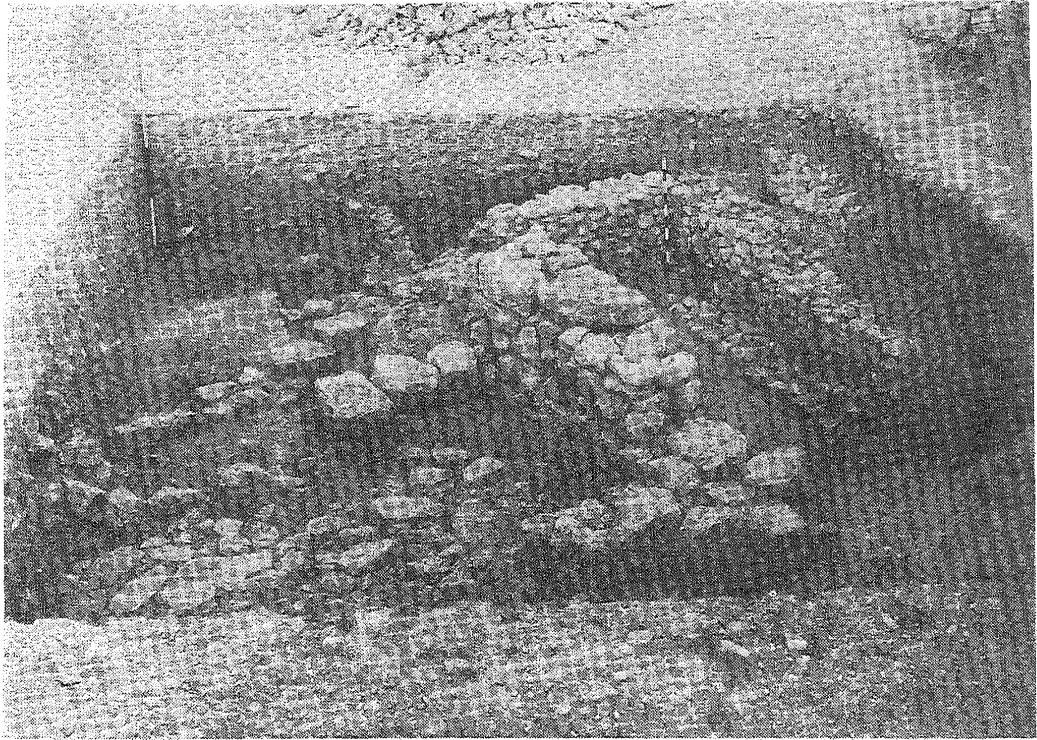




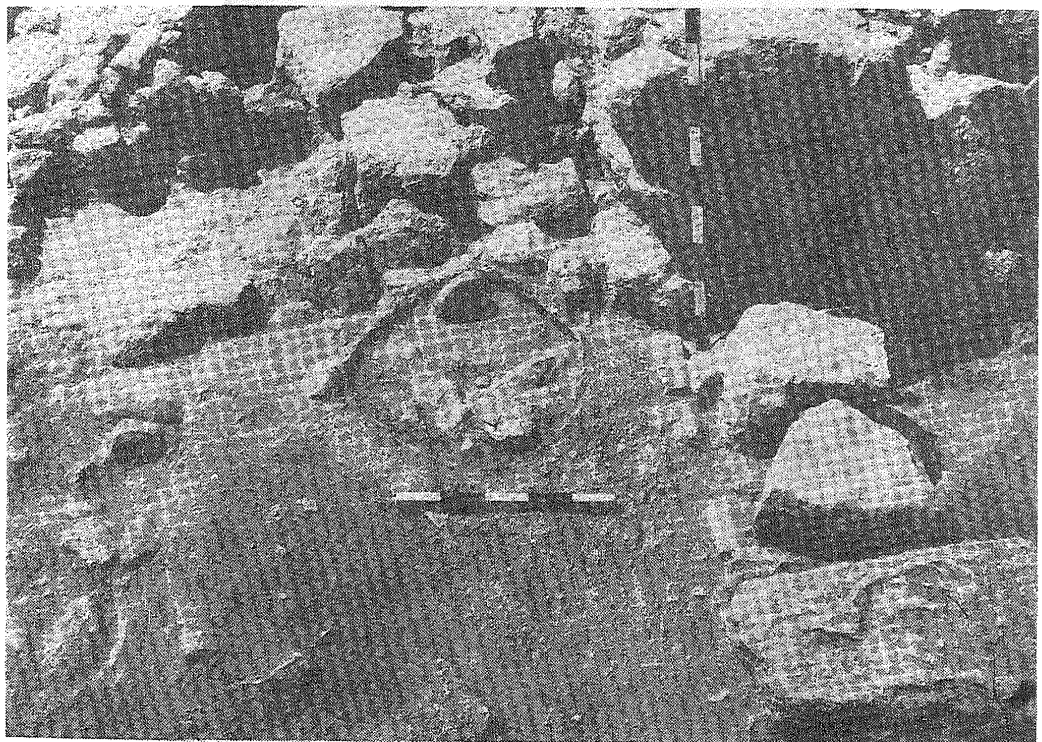


Area D : Shaft covered by stone

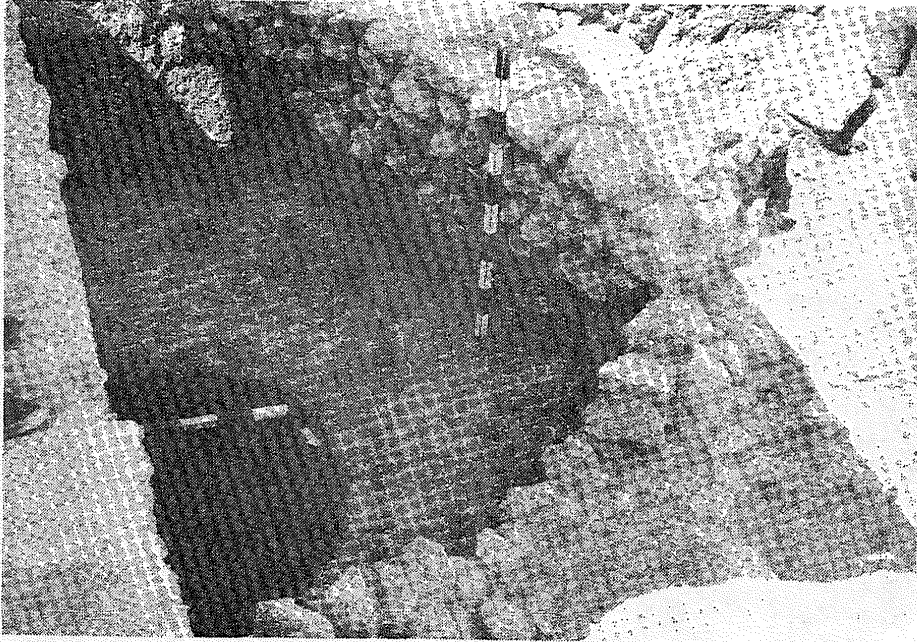




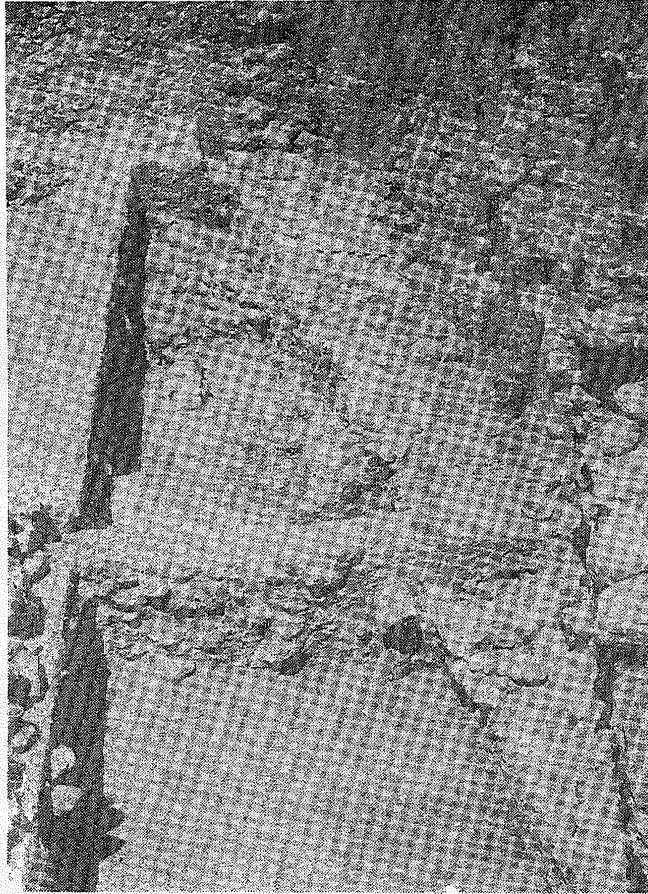
1. Area D : Iron I building



2. Area D : Iron I tabun.



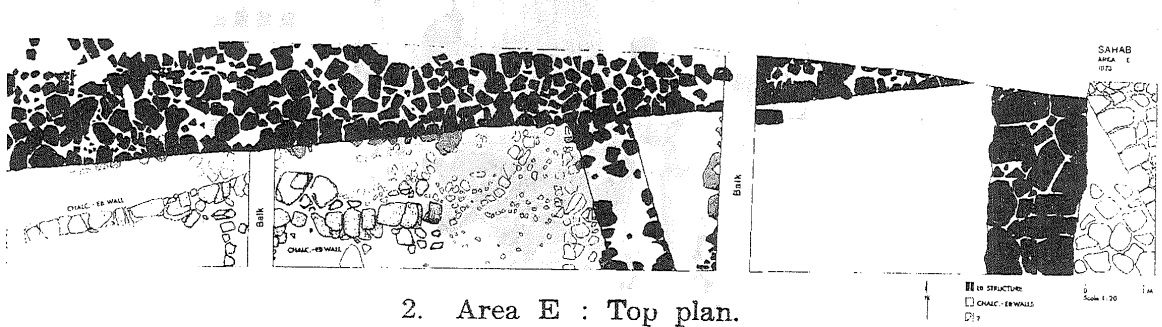
1. Area D : Iron I walls



2. Area E : the meter stick lies on LB wall superimposing Chalc.-EB walls.

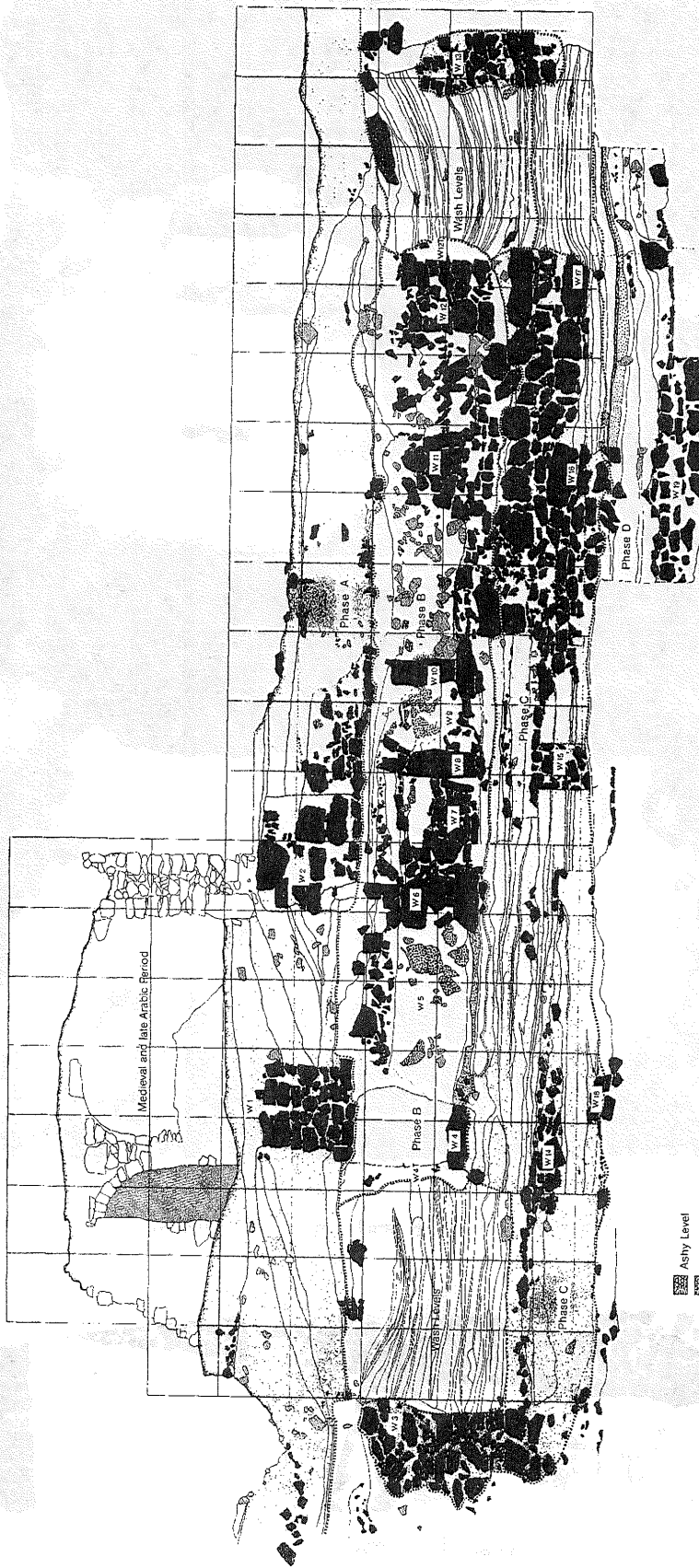


1. Area E : Outer wall of LB building



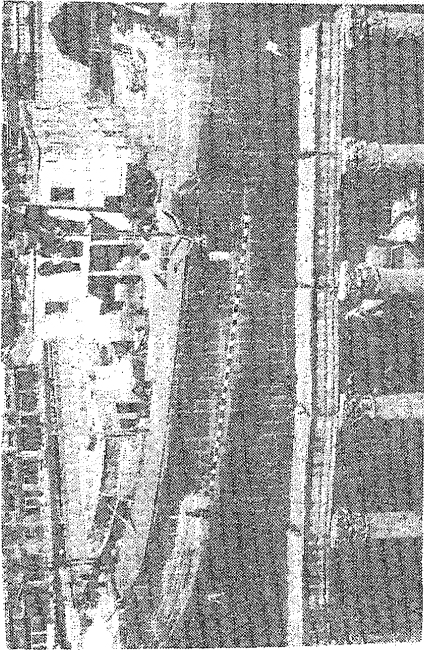
2. Area E : Top plan.



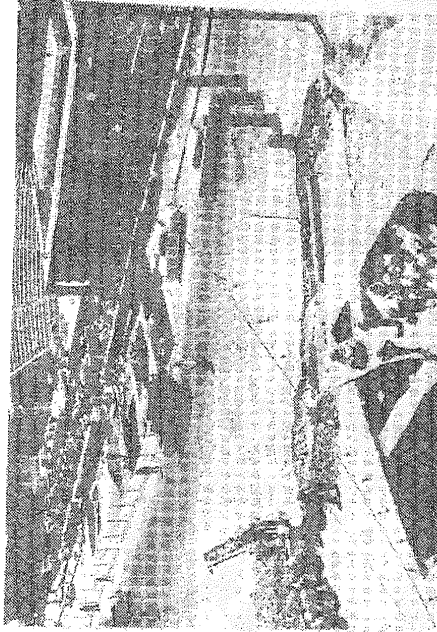


SAHAB 1973  
Area E (West-East Section) Buildozer-Cut NORTH FACE

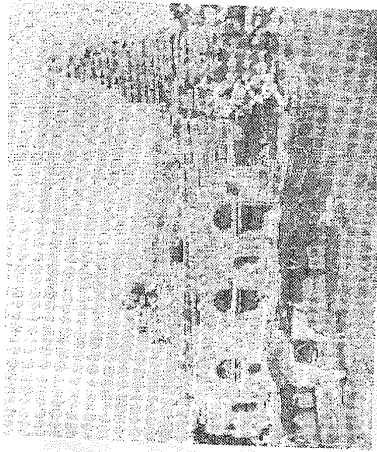
0 1M  
Scale 1:50  
Department of Antiquities - Amman



A. THE FORUM AREA BEFORE EXCAVATION, VIEWED FROM THE SOUTH.



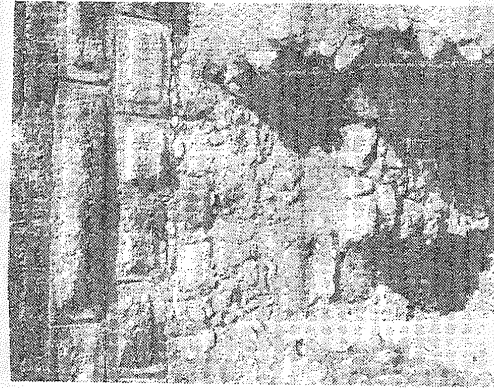
B. THE FORUM AREA AT THE BEGINNING OF EXCAVATION, VIEWED FROM THE NORTHWEST.



E. BACK WALL OF THE SCAENAE OF THE ODEUM, PHOTOGRAPHED IN 1900.



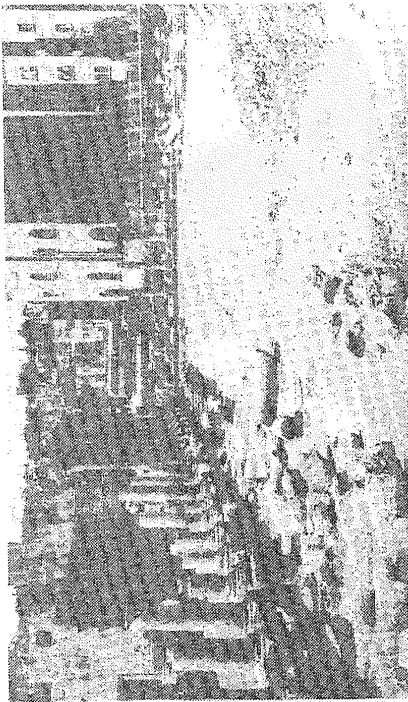
C. TEST TRENCHES ALONG THE NORTH SIDE OF MODERN STREET IN THE CENTRAL PART OF THE FORUM, VIEWED FROM THE NORTHWEST.



D. TEST TRENCH AT RIGHT ANGLE TO THE FOUNDATION WALL OF THE BACK WALL OF THE SCAENAE OF THE ODEUM, VIEWED FROM THE WEST.



F. BACK WALL OF THE SCAENAE OF THE ODEUM WITH REMAINS OF PORTALS, VIEWED FROM THE WEST.



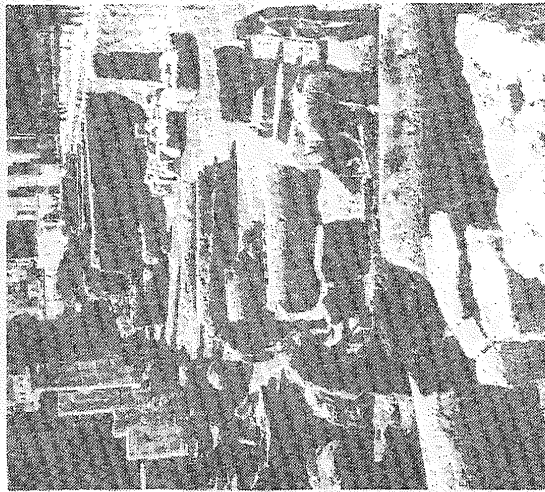
A. PAVEMENT LEVEL OF THE FORUM, VIEWED FROM THE EAST.



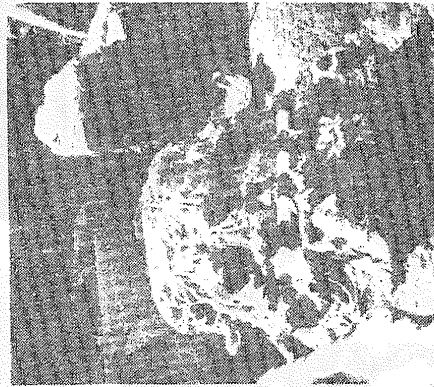
B. FALLEN COLUMN SHAFTS IN SQUARES SW 3-1, SW 4-1 AND SW 5-1, VIEWED FROM THE EAST.



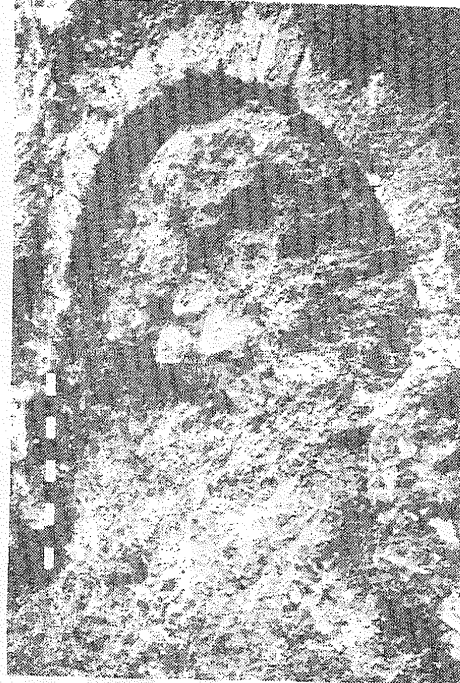
C. MODERN CESS POOL IN SQUARE SW 3-1, VIEWED FROM THE NORTHEAST: SUCH LATER INSTALLATIONS CAUSED DISTURBANCE OF THE LOCI IN SEVERAL PARTS OF THE FORUM.



D. VIEW FROM THE EAST ACROSS THE SOUTHWEST QUADRANT SHOWING FALLEN COLUMNS AT PAVEMENT LEVEL.

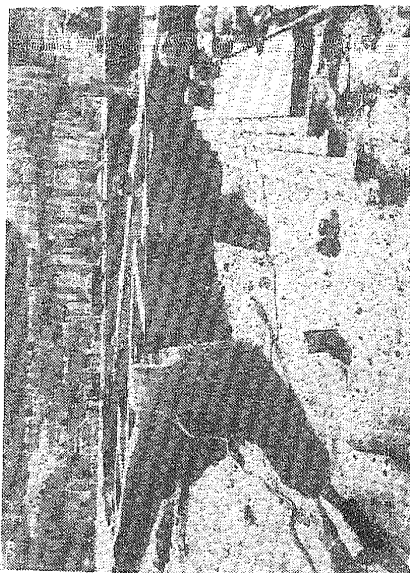


E. FALLEN CORINTHIAN CAPITAL IN SQUARE SW 2-1, VIEWED FROM THE EAST.

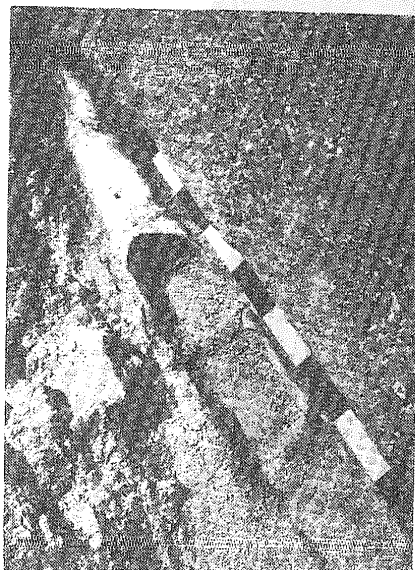


F. FOUNDATIONS OF THE APSE OF A BYZANTINE CHURCH ADJACENT TO THE SOUTHWEST CORNER OF THE FORUM, VIEWED FROM THE WEST.

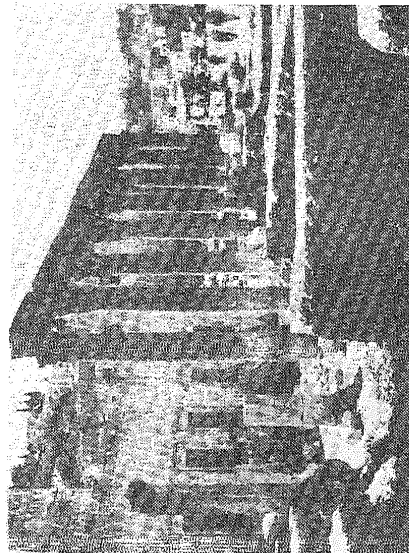




A. THE WEST COLONNADE AND STAIRWAY, VIEWED FROM THE NORTH.



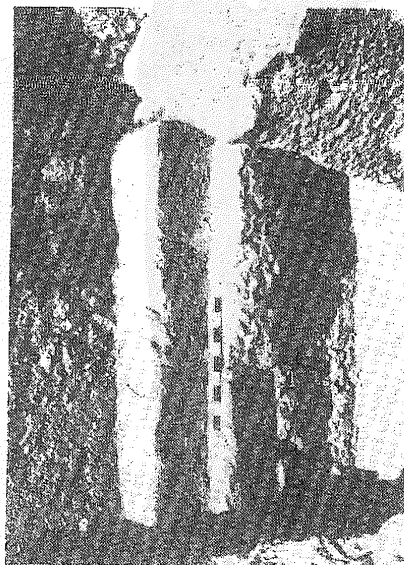
B. TERRACOTTA DRAIN PIPE BELOW PAVEMENT LEVEL ALONG THE LOWEST STEP OF THE STAIRWAY OF THE SOUTH COLONNADE.



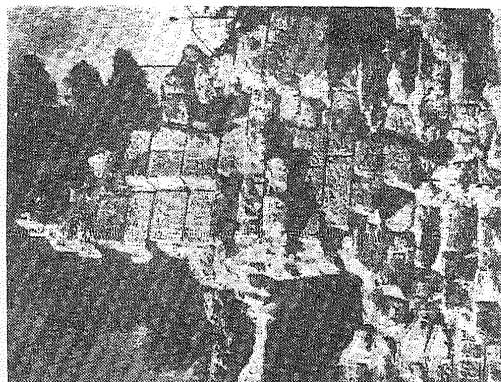
C. SOUTHWEST CORNER OF THE FORUM BEFORE REMOVAL OF THE BALKS, VIEWED FROM THE EAST.



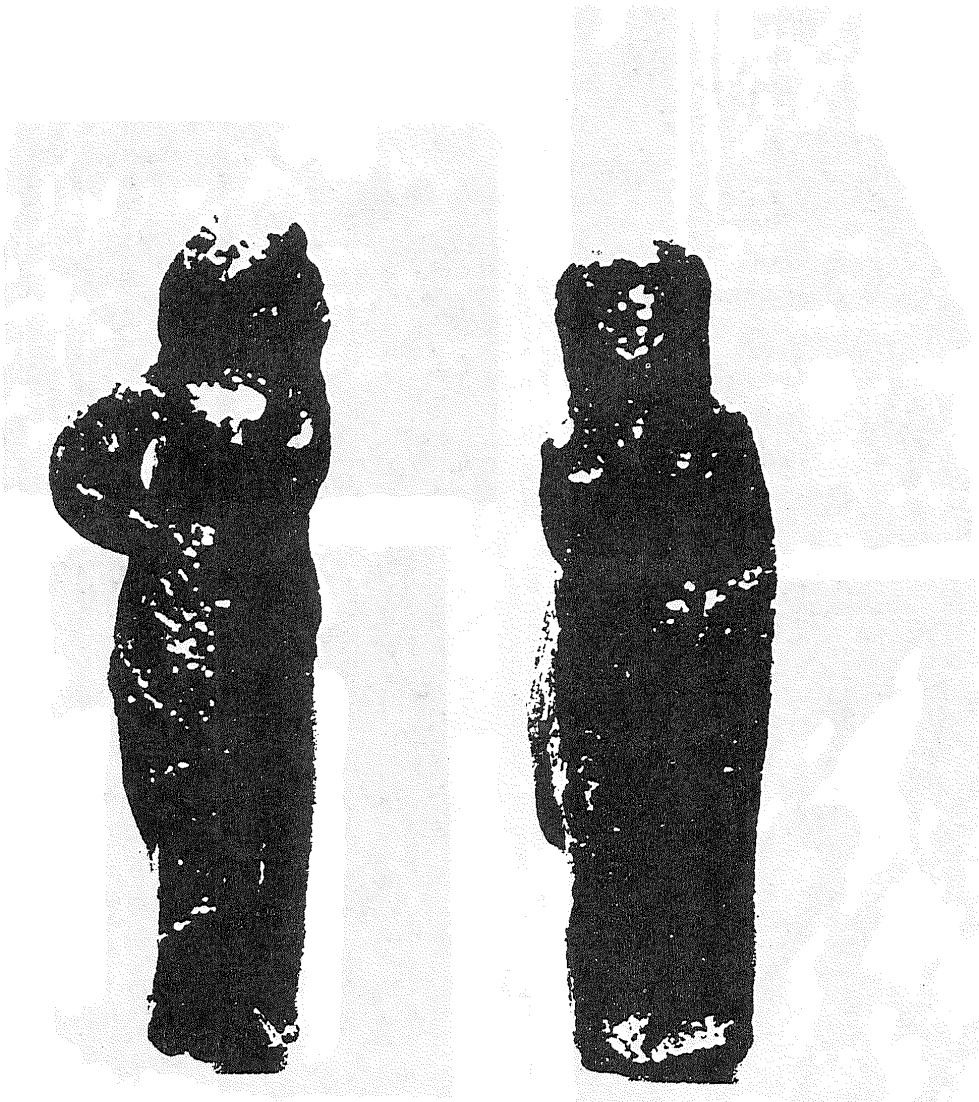
D. INNER PAVEMENT AT THE OUTER SIDE OF THE WEST COLONNADE, VIEWED FROM THE SOUTHEAST.



E. STEPS IN THE SOUTH COLONNADE SHOWING HOW ORIGINALLY THE PAVEMENT SLABS OF THE FORUM WERE DOVETAILED INTO THEM, VIEWED FROM THE NORTH.

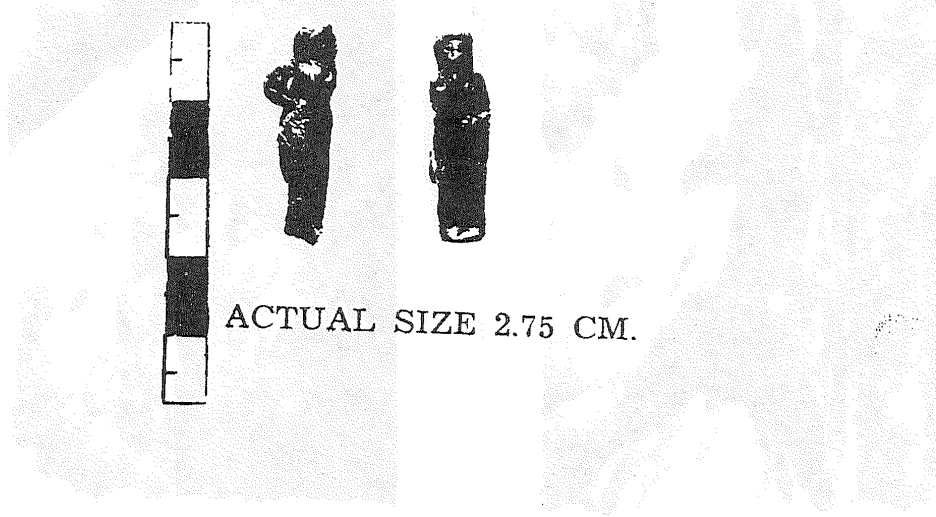


F. NORTHWEST CORNER OF THE ODEUM SHOWING THE USE OF UNSCATTERED MASONRY, VIEWED FROM THE SOUTH.



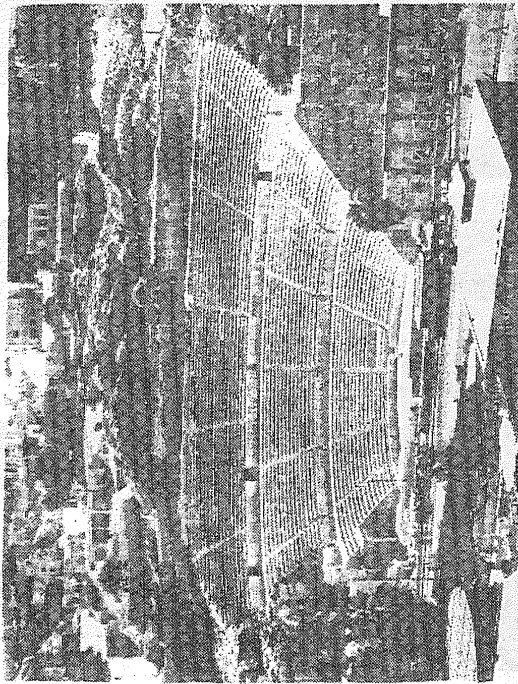
A BRONZE AMULET OF THE INFANT GOD HARPOCRATES.

(ENLARGED 3 TIMES ITS ACTUAL SIZE)



ACTUAL SIZE 2.75 CM.

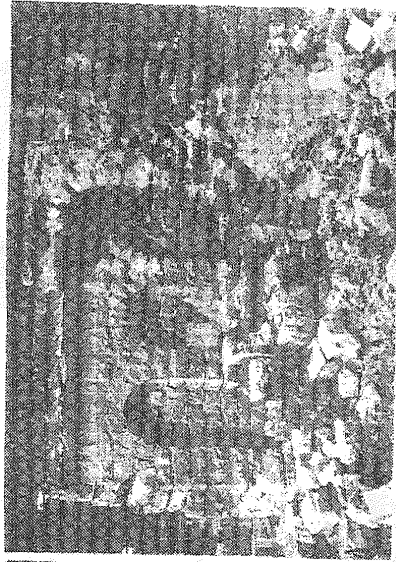




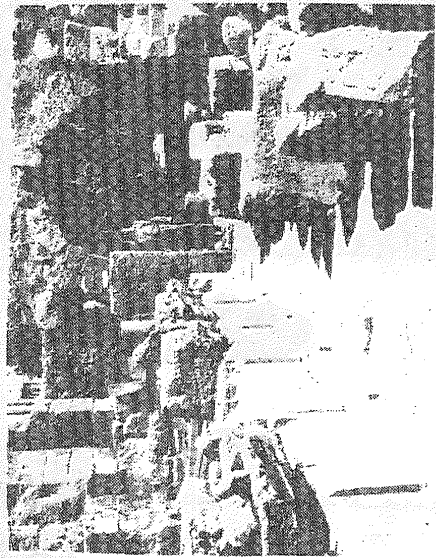
A. THE THEATER, VIEWED FROM THE NORTH.



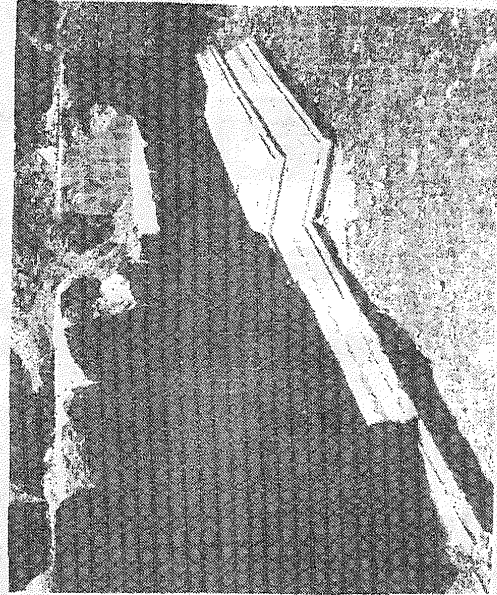
B. THE ODEUM, VIEWED FROM THE SOUTHWEST.



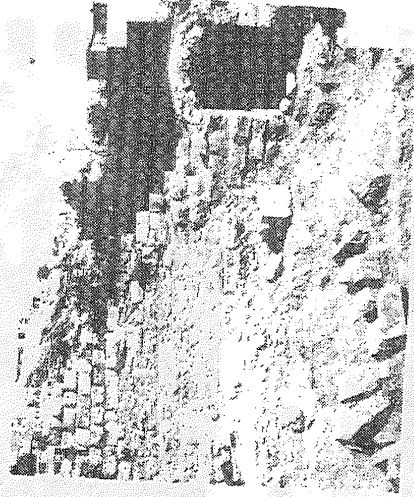
C. BARREL-VAULTED LOWER SIDE PASSAGE OF THE ODEUM, VIEWED FROM THE SOUTH.



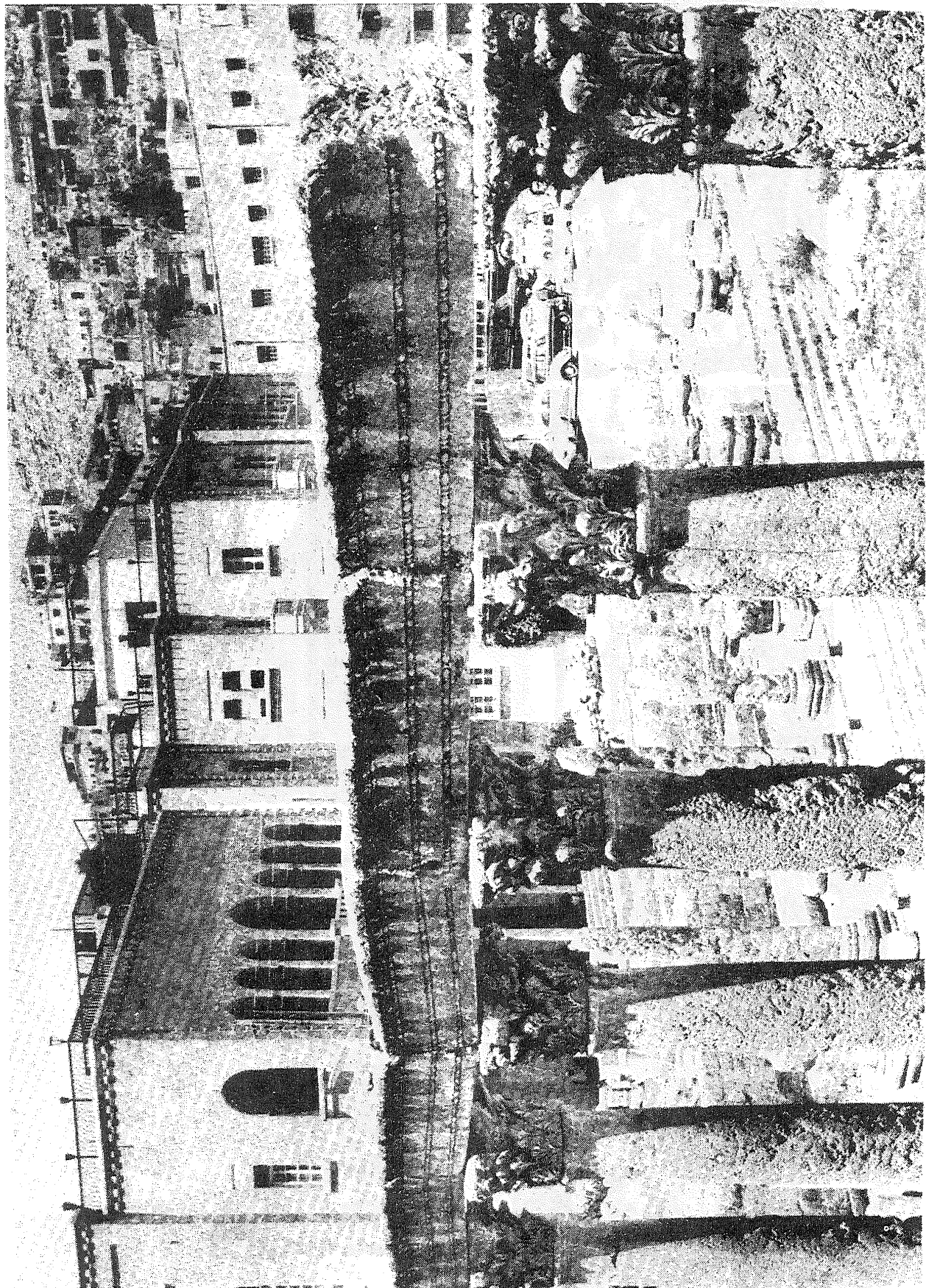
D. PROCAENIUM AND SOUTH PARADOS OF THE ODEUM, VIEWED FROM THE NORTH.



E. BASE MOLDING OF THE PROCAENIUM OF THE ODEUM, CLOSE VIEW FROM THE NORTHWEST.



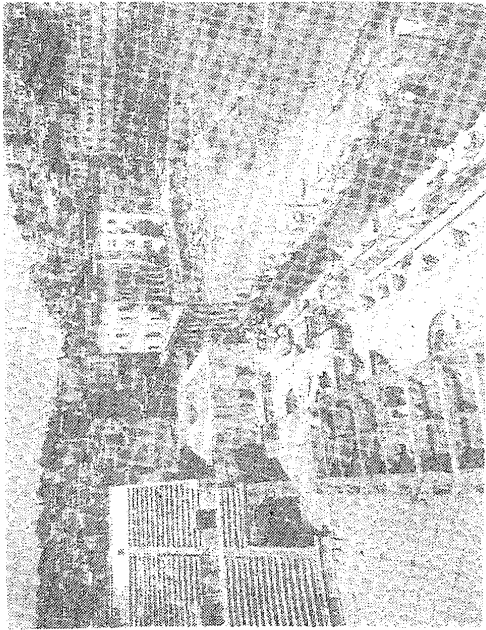
F. UPPER CAVEA AND BARREL-VAULTED PASSAGE OF THE ODEUM, VIEWED FROM THE SOUTHWEST.



Capitals and architraves of the South Colonnade







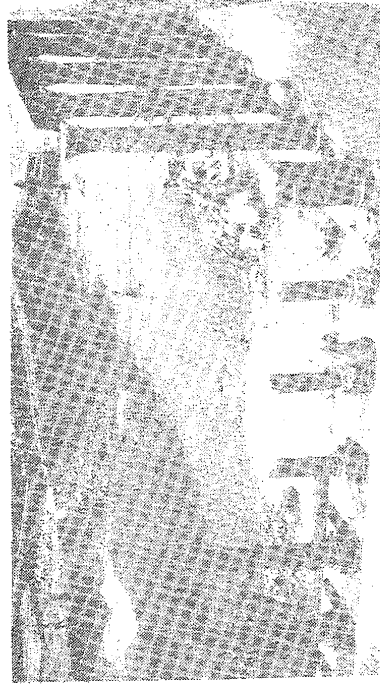
A. GENERAL VIEW FROM THE SOUTHEAST SHOWING THE STAGE BUILDING OF THE THEATER, THE SOUTH AND THE WEST COLONNADES.



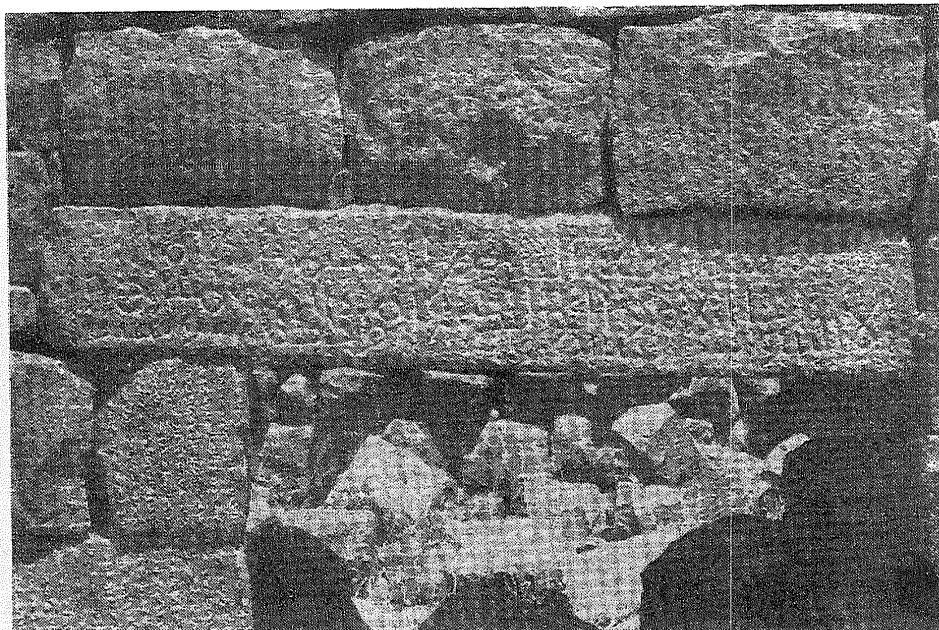
B. SOUTH AND WEST COLONNADES, CLOSE VIEW FROM THE SOUTHEAST.



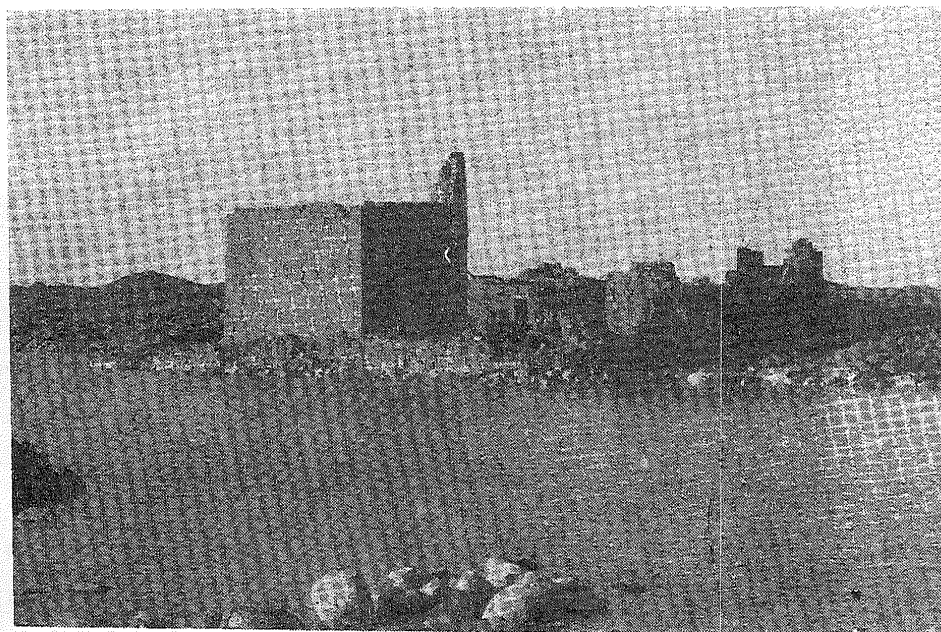
C. THE FORUM AREA AFTER THE REMOVAL OF THE BALKS IN THE SOUTHWEST AND NORTHEAST QUADRANT AND BEFORE THE REMOVAL OF THE EAST-WEST STREET THAT RAN ACROSS THE AREA, VIEWED FROM THE SOUTHWEST UPPER CAVEA OF THE THEATER.



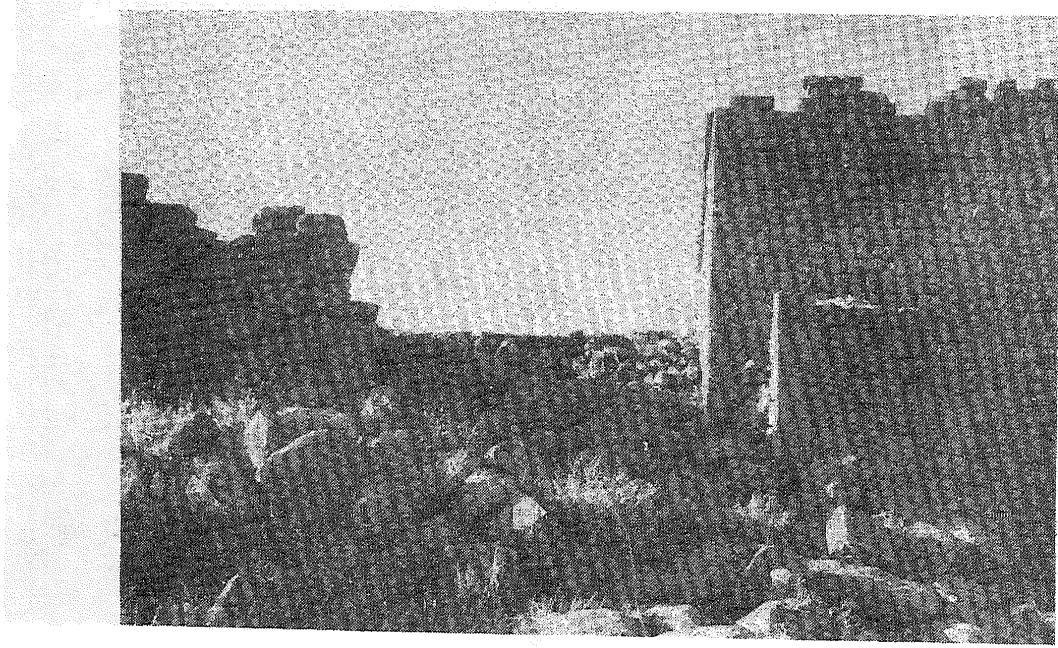
D. SOUTHWEST CORNER OF THE FORUM, VIEWED FROM THE SOUTHWEST.



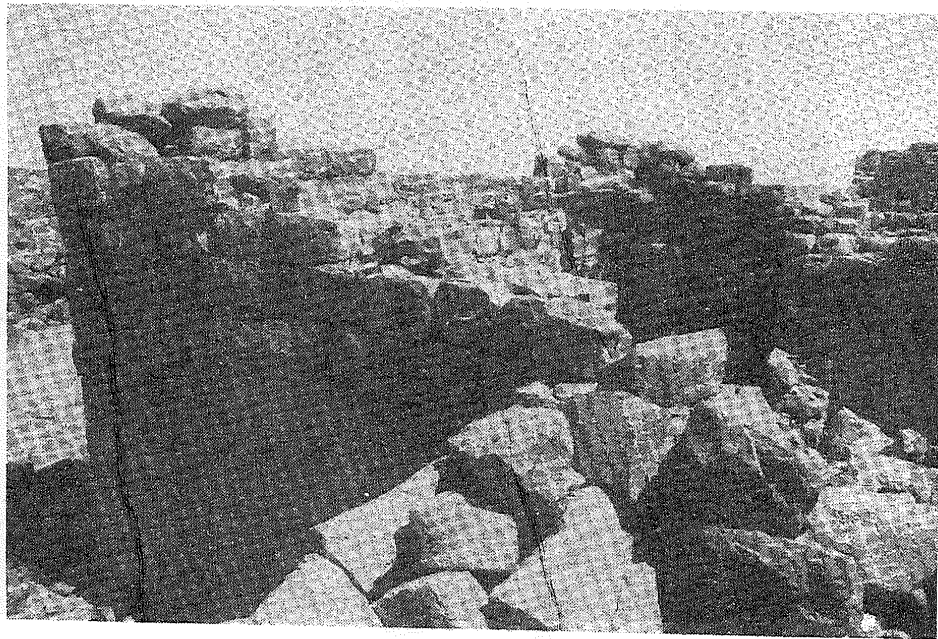
1. Inscription of Al-Walid (A.H. 81); lintel of room 7



2. The Qasr seen from the South

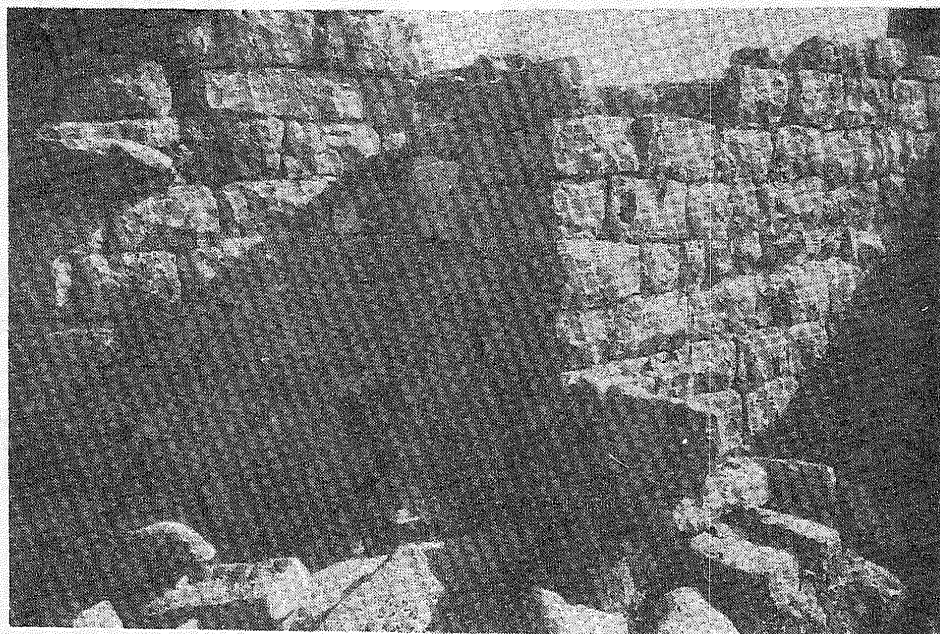


1. The entrance to the Qasr

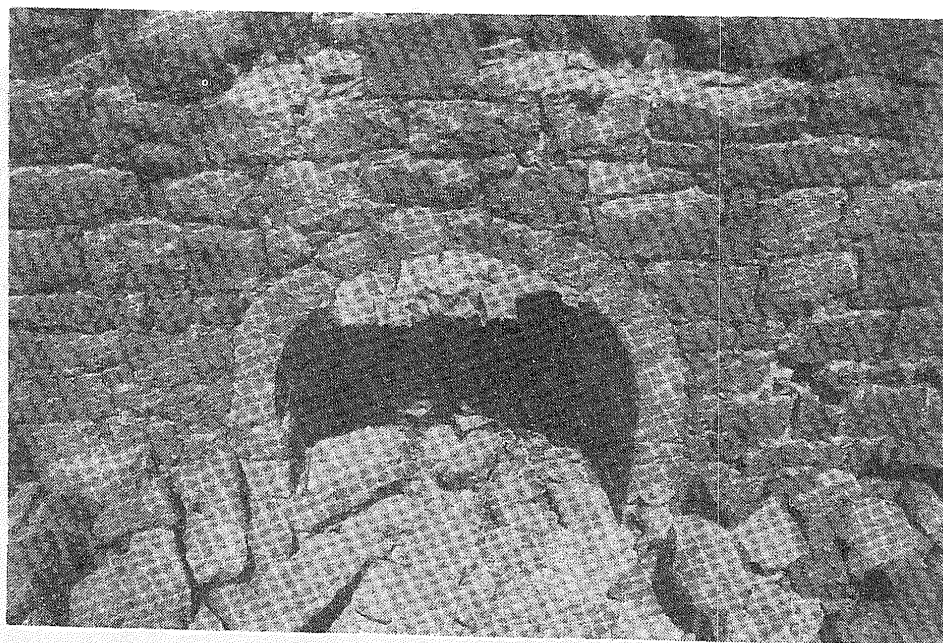


2. Room 3 (looking North)

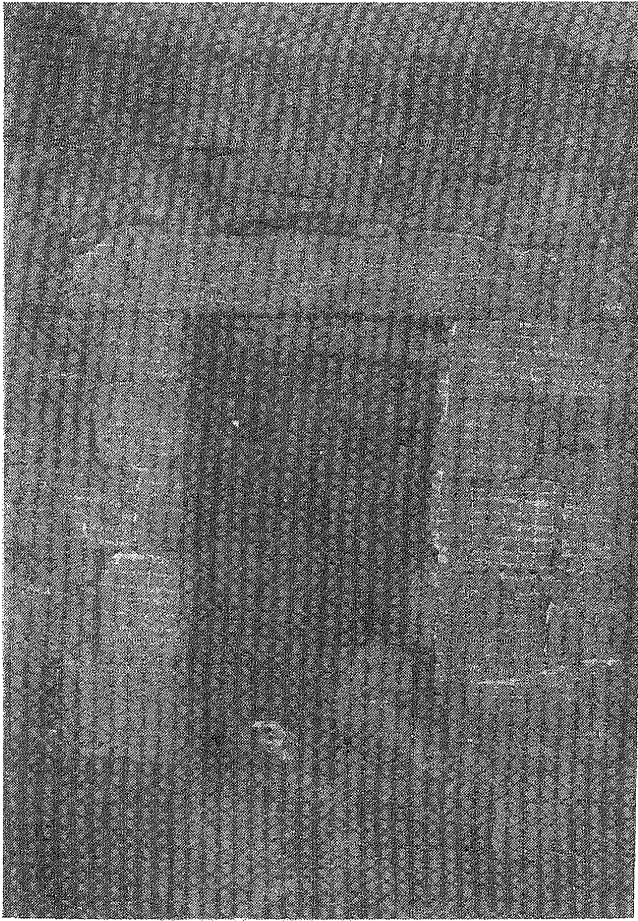




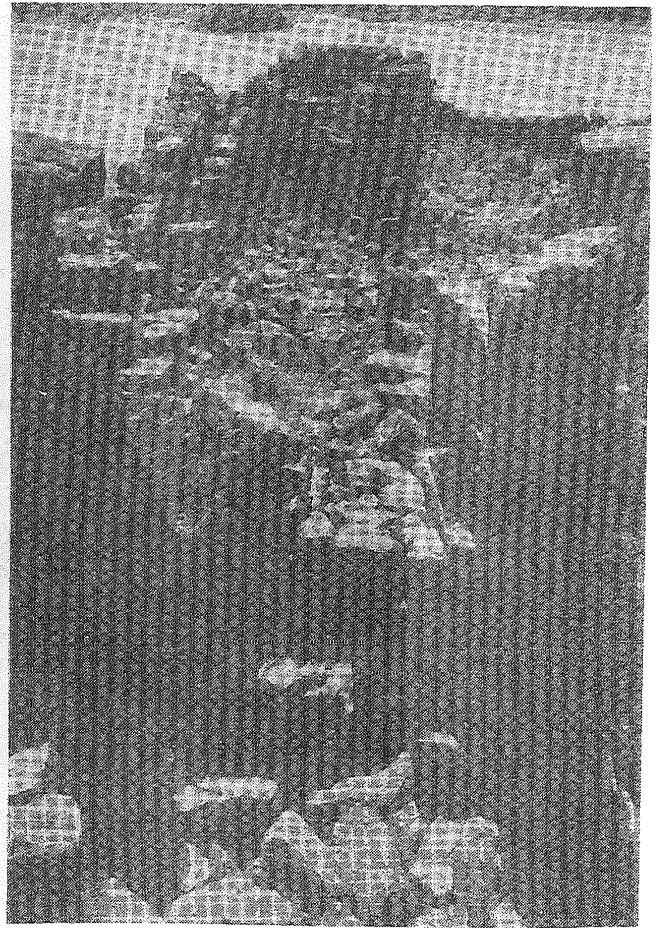
1. North side of room 3



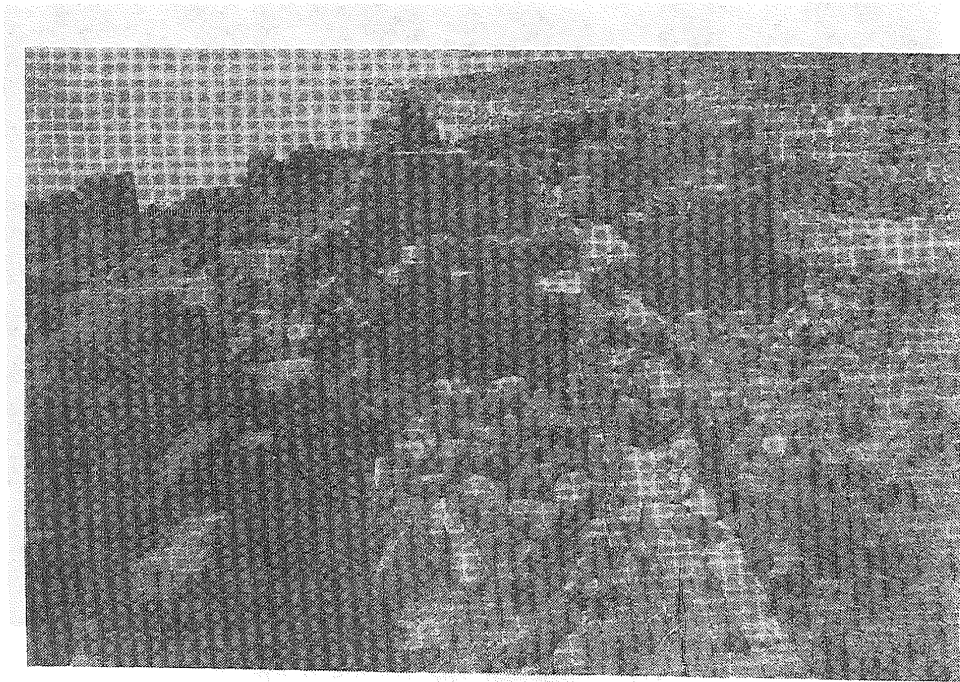
2. Arch between the rooms 5 and 6



1. Door leading to room 5

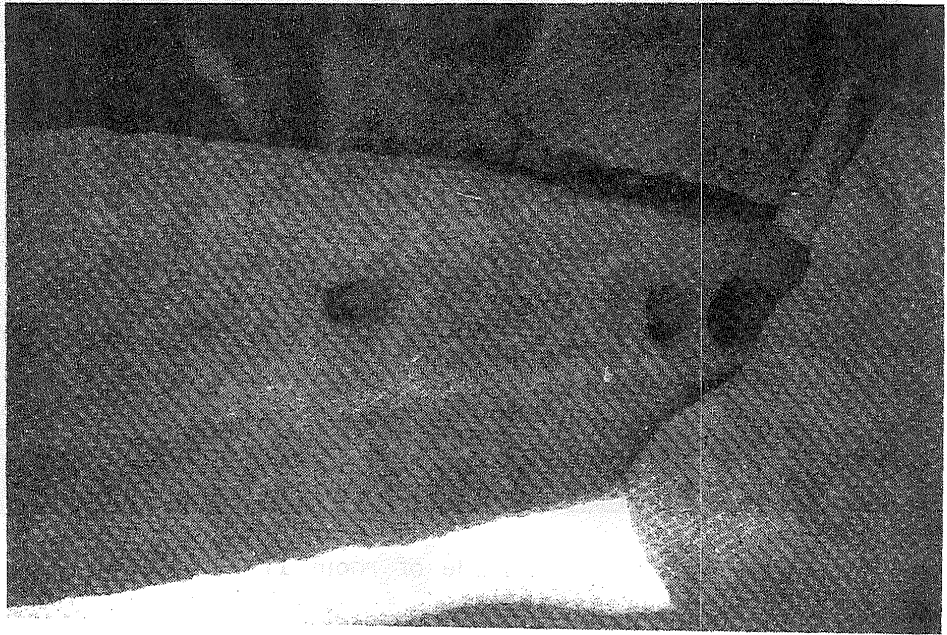


2. Rooms 9-11 seen from 8

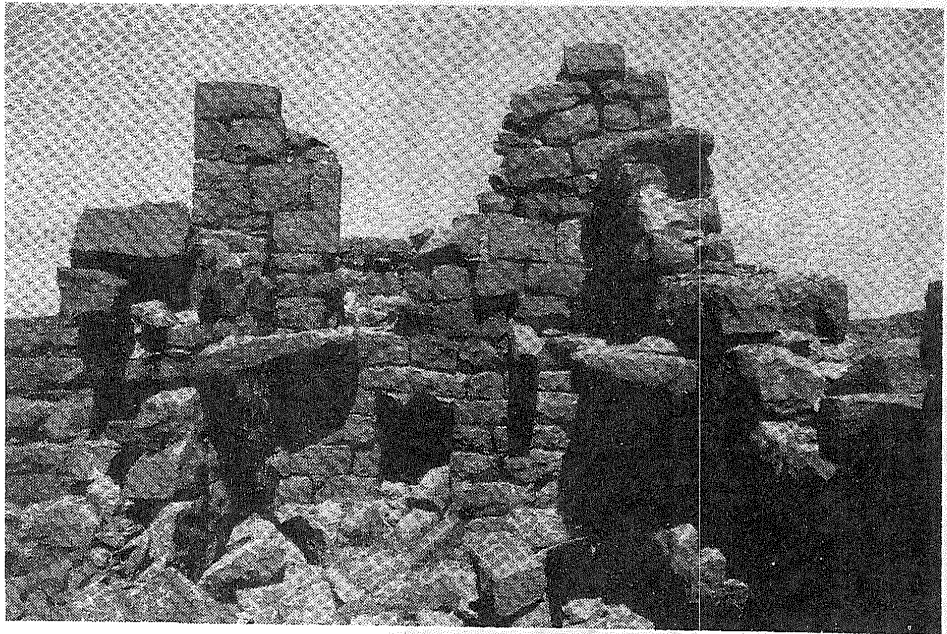


3. Rooms 3-7 seen from room 8





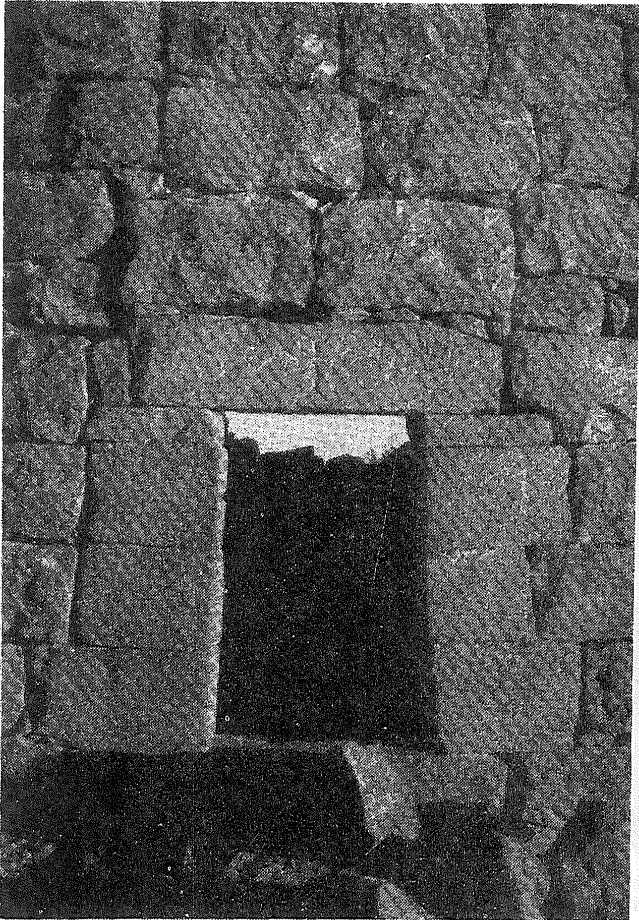
1. S-E part of the lintel of room 7



2. Rooms 8 and 9 seen from room 10

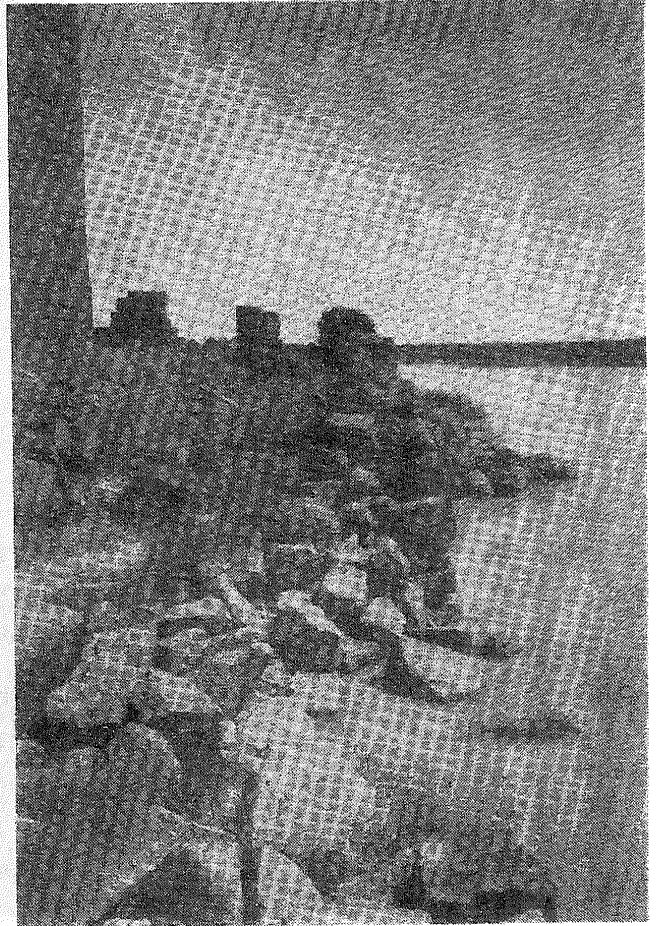


1. Inside of room 11



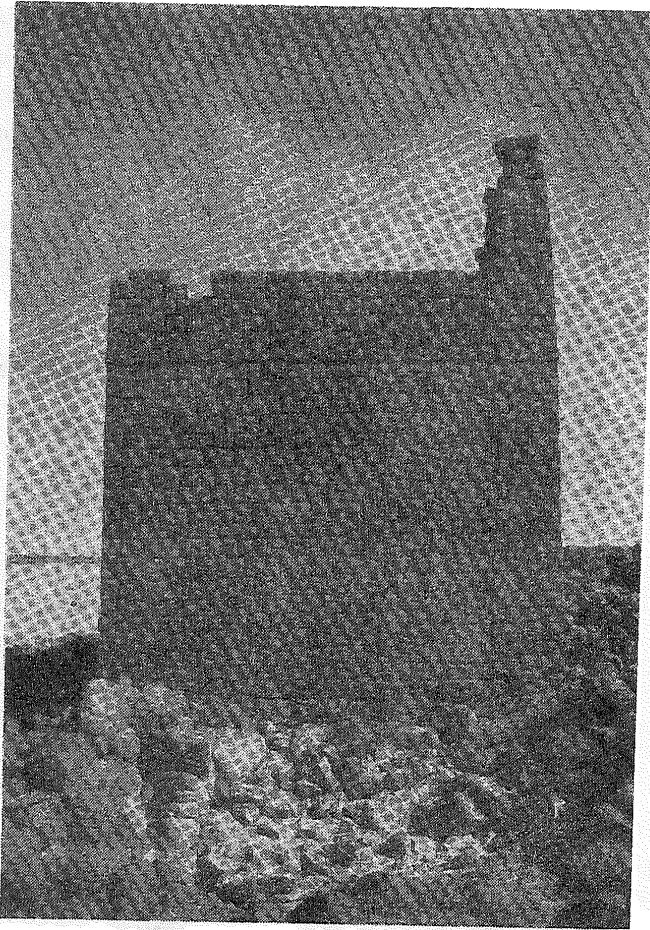
2. The door of room 11

1. S-W side of the Qasr seen from the western corner.

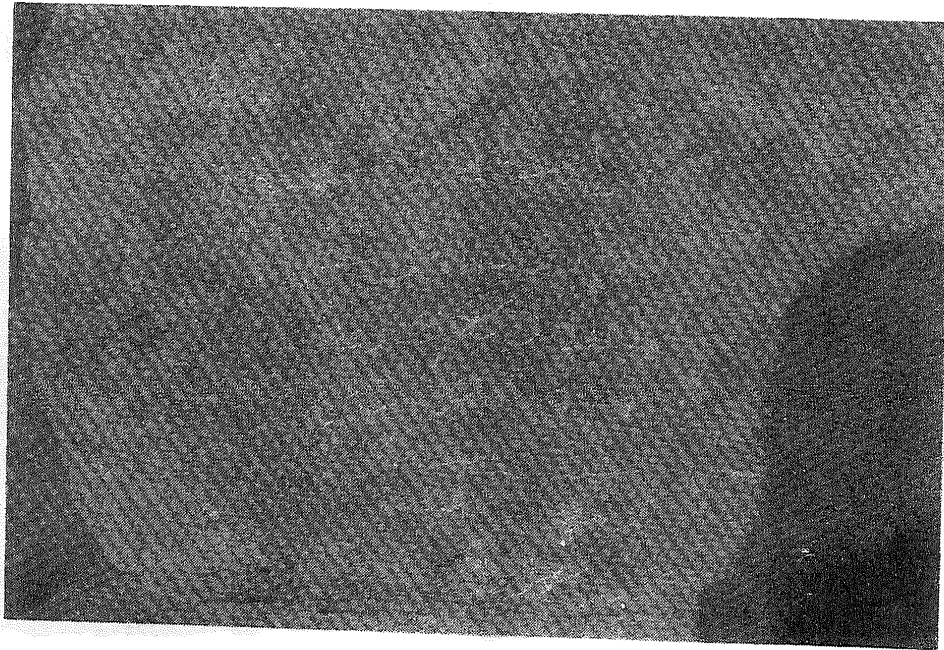


2. Southern corner of the Qasr seen from the southern corner of structure B.

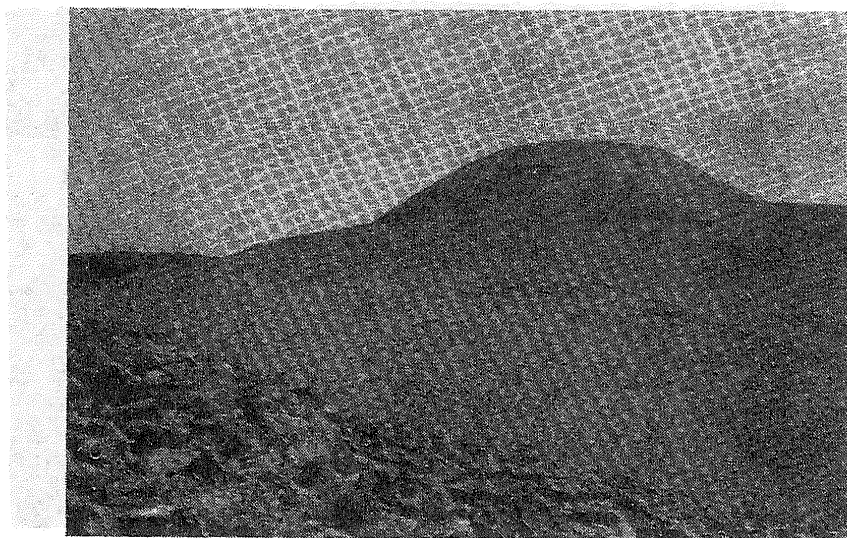




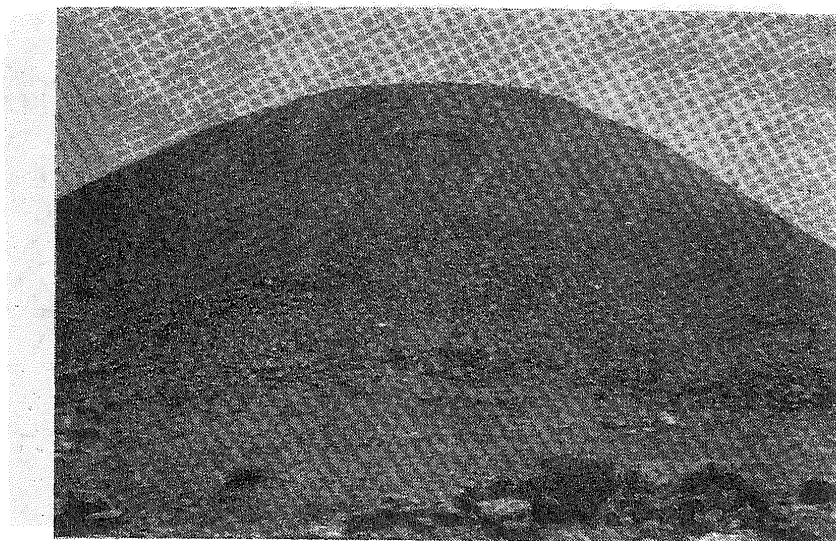
1. Southern side of structure B.



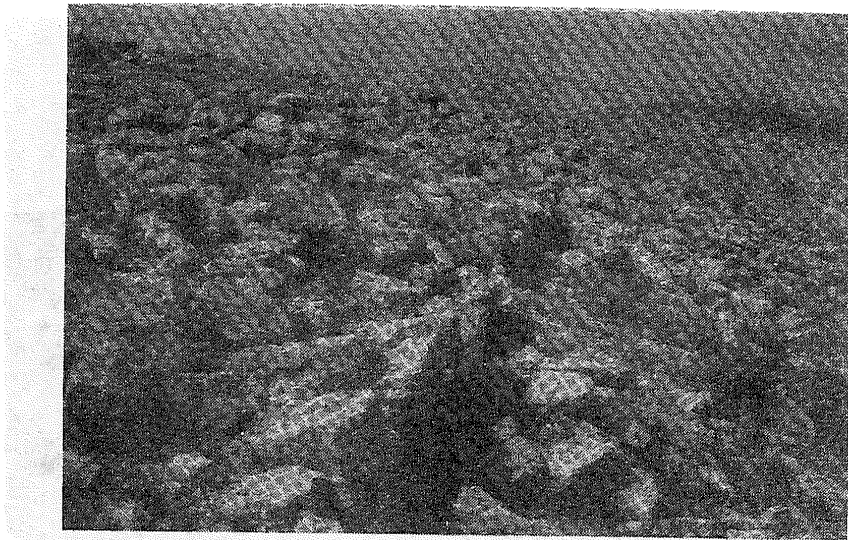
2. Inscriptions next to the al-Walid inscription



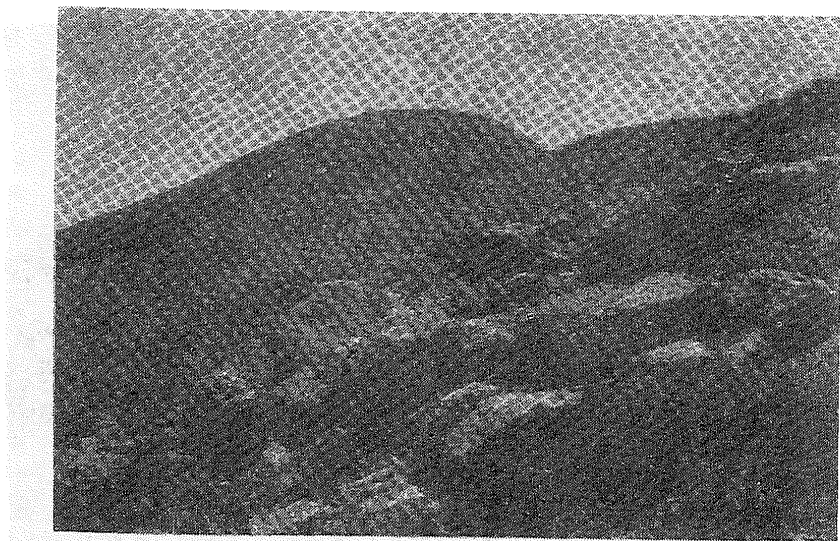
1. The cone of el-Mishneqa from the West. In the foreground the eastern wall of the camp, blockading the western ridge.



2. The western dam and the building-plot



1. The wall of the western camp on the Qullat Mishneqa (see Pl. XXXIX, 1).



2. The circumvallation wall, leading down from the western ridge to the northern Wadi el-Mishneqa.



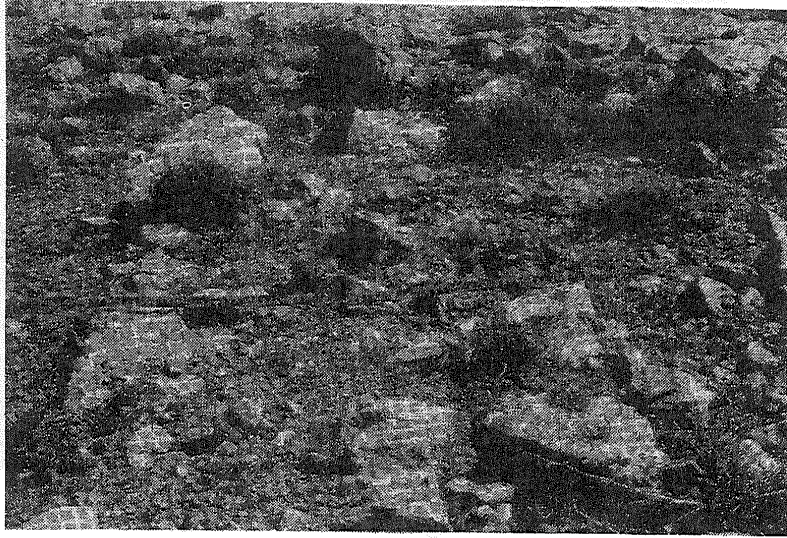
1. Camp with accumulation of stones above the northern Wadi el-Mishneqa.



2. The circumvallation wall on long slope leading up to the height of Arqub.



The circumvallation wall between the Qullat Misneqa and the northern Wadi el-Mishneqa.

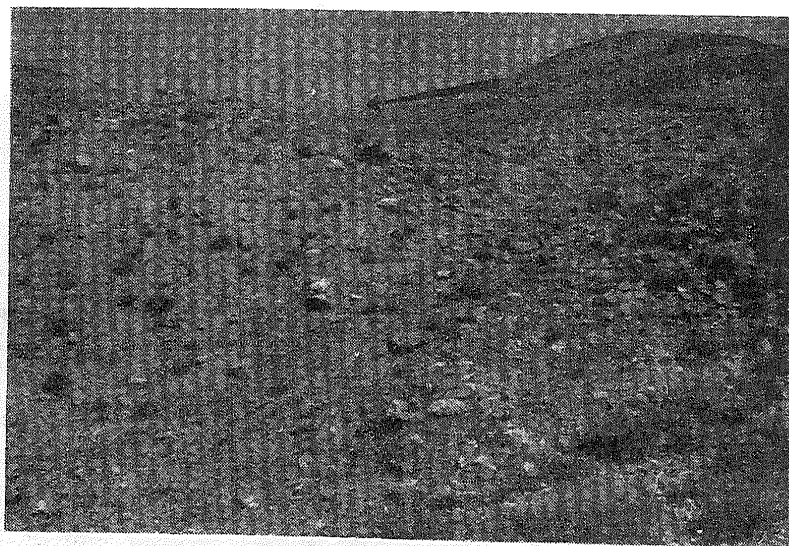


1. Lower section



2. Upper section

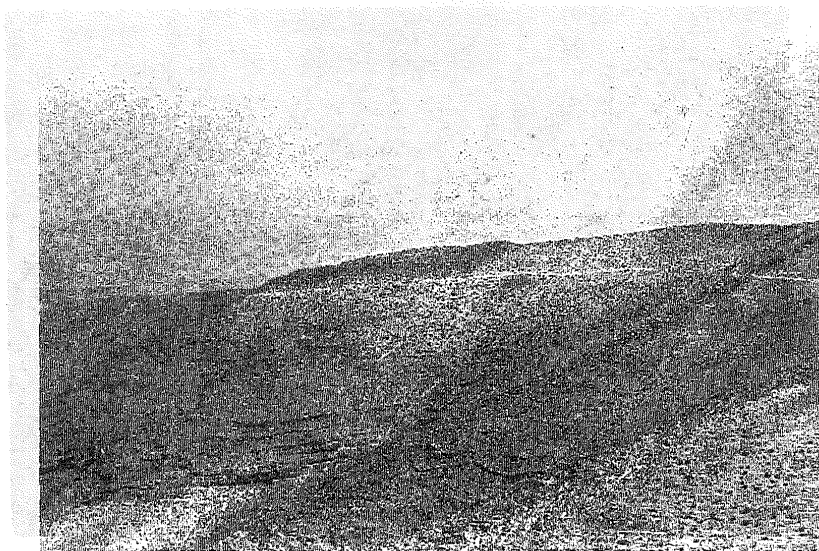




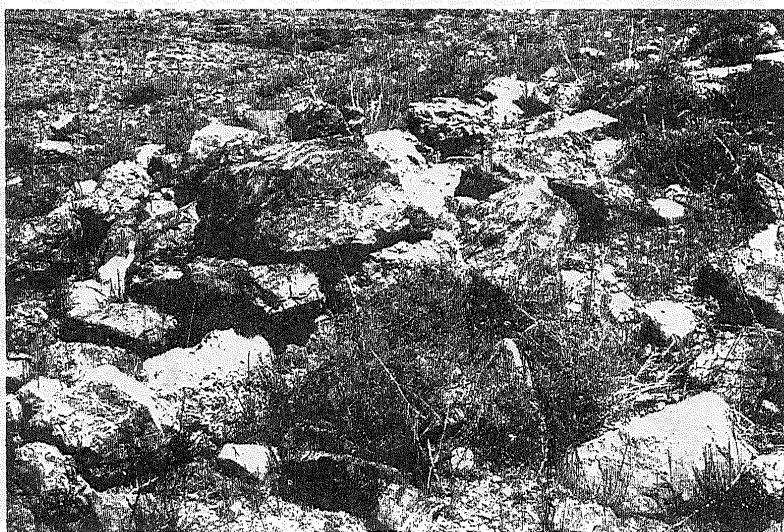
1. Post above the bed of the northern Wadi el-Mishneqa



2. Camp in the middle part of the line ascending to the height of Arqub

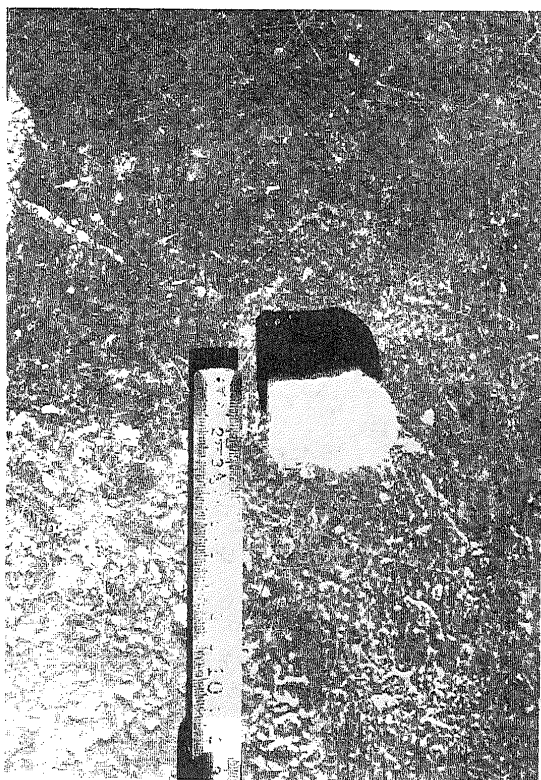


1. The circumvallation wall descending to the southern Wadi el-Mishneqa; on the ridge notice the contours of the western camp.

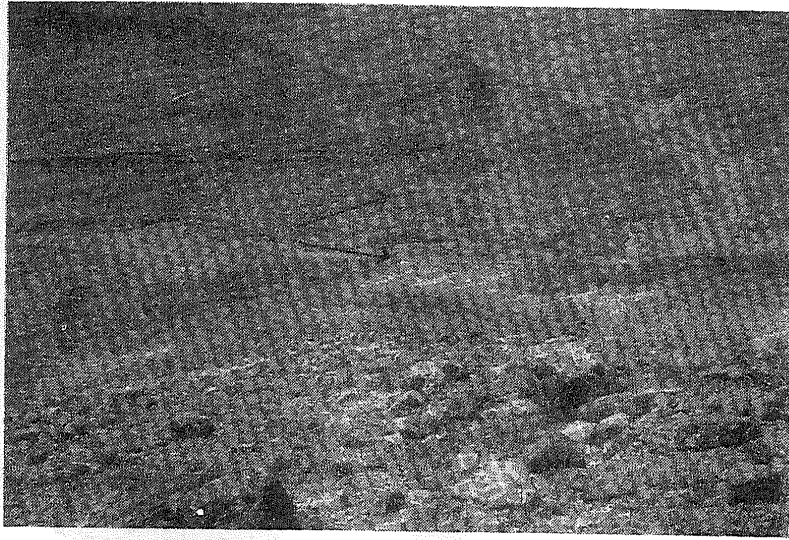


2. Layers of stones in the same section of the wall

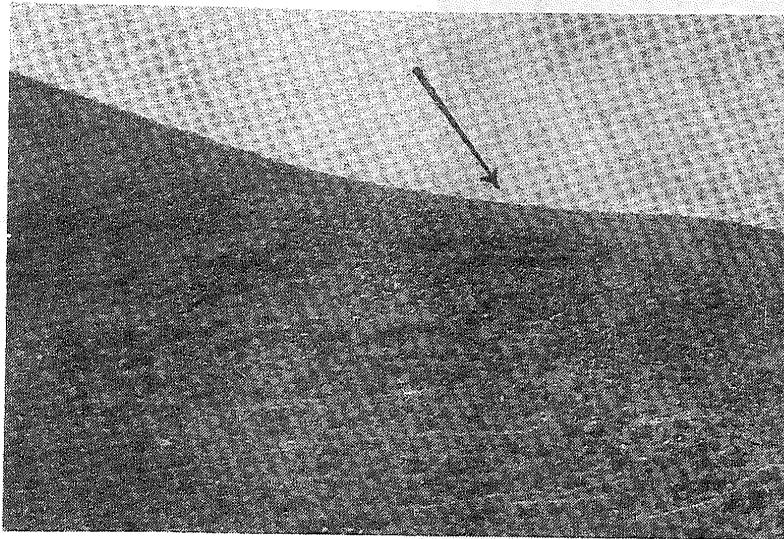
1. Camp in the middle part of the circumvallation wall descending from the Quallat Mishneqa to the southern Wadi el-Mishneqa.



2. Play-stone, found before the entrance of the southeastern camp

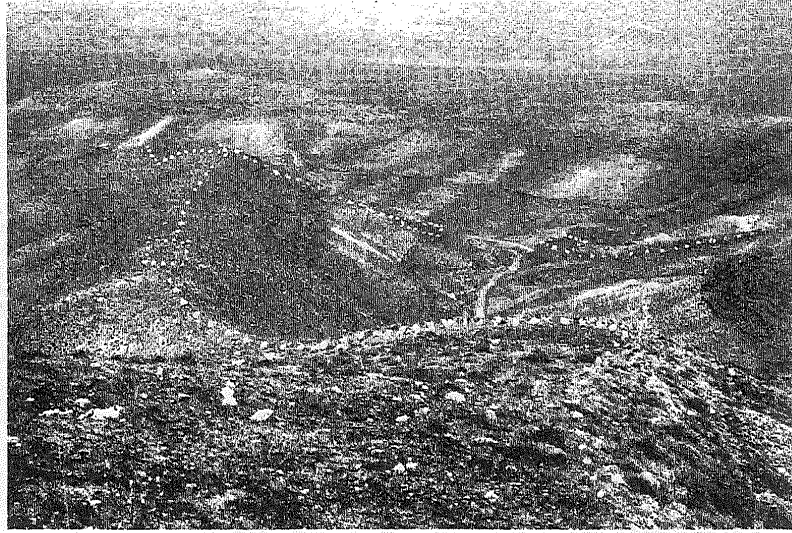


1. Two camps of the southeastern section above the southern Wadi el-Mishneqa, blockading the valley.

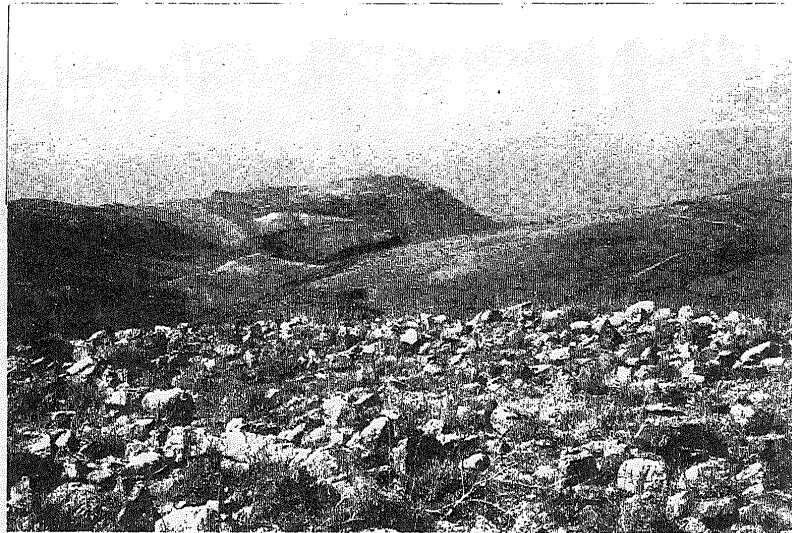


2. The camp on the slope of the southern ridge

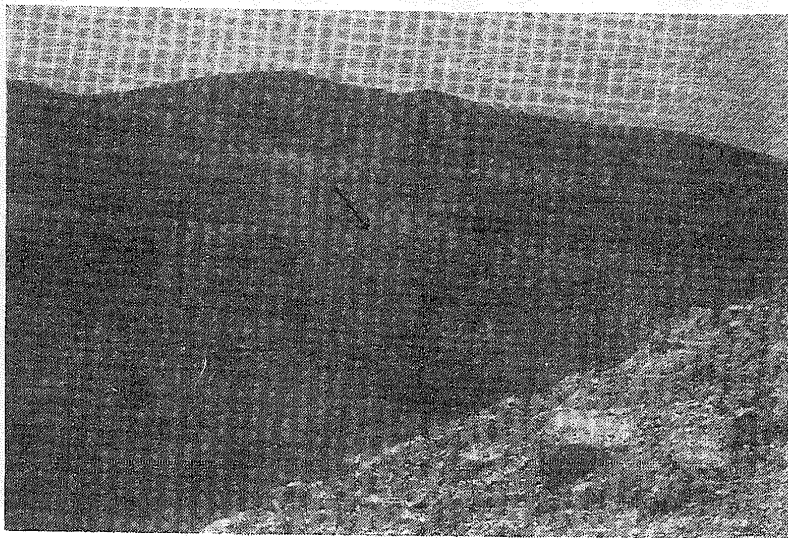




1. The southern ridge from the East. On the edge of the slope the wall winds down to the camp situated in the middle part and beyond that also to the southeastern camp.



2. The southeastern camp; in the background the Wadi Attun and the Dead Sea.



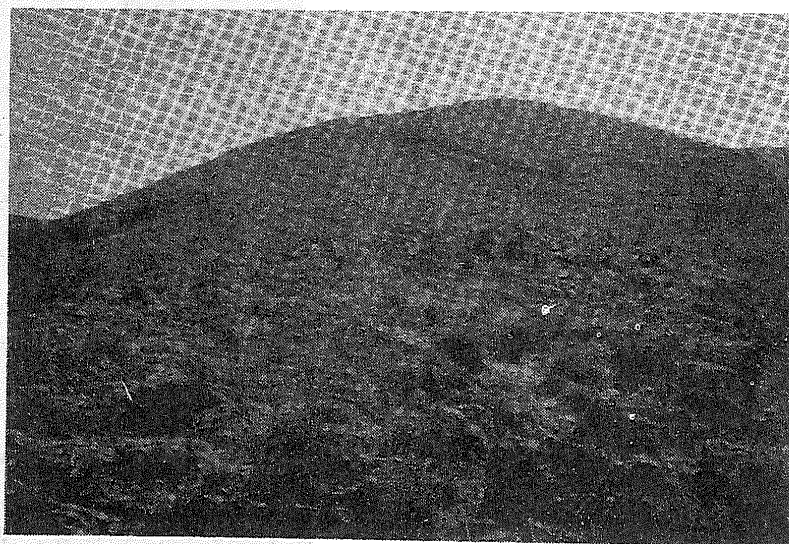
1. The lower southern ridge; in the middle section a camp



2. One of the annexes (towers?) to the wall on the southern ridge

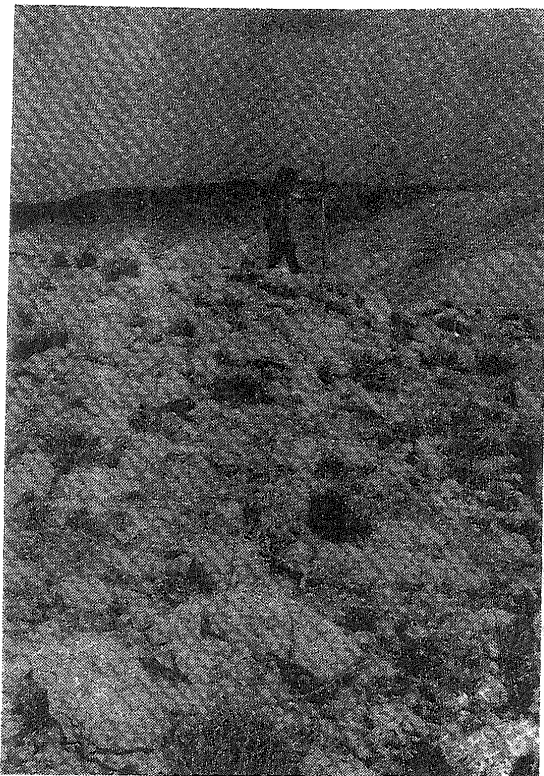


1. Another rectangular arrangement of stones, inserted into the southern wall.



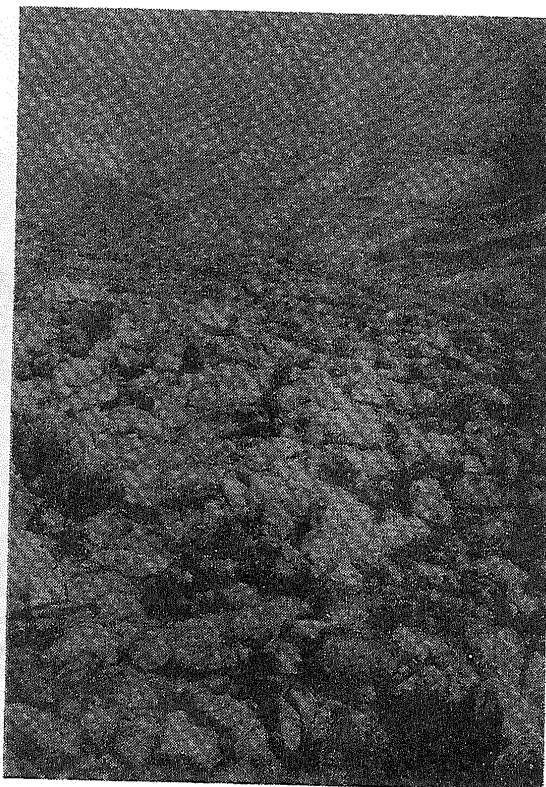
2. View towards dj. ez-Zaniya (to the East); in the foreground a camp in the middle part of the southern section of the wall.





1. Wall of the southeastern camp  
on dj. ez-Zaniya.

2. The circumvallation wall leading  
from the southeastern camp to  
the West.

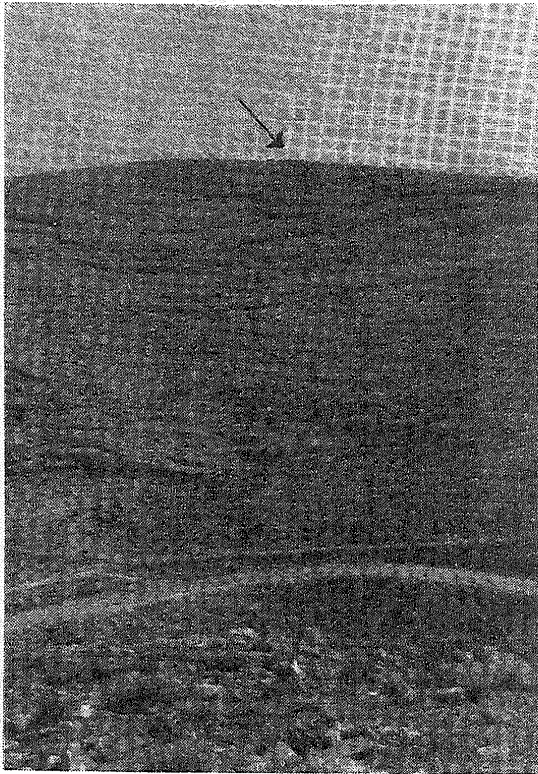


Eastern line of the wall leading down to the southern Wadi el-Mishneqa.

1. Upper section

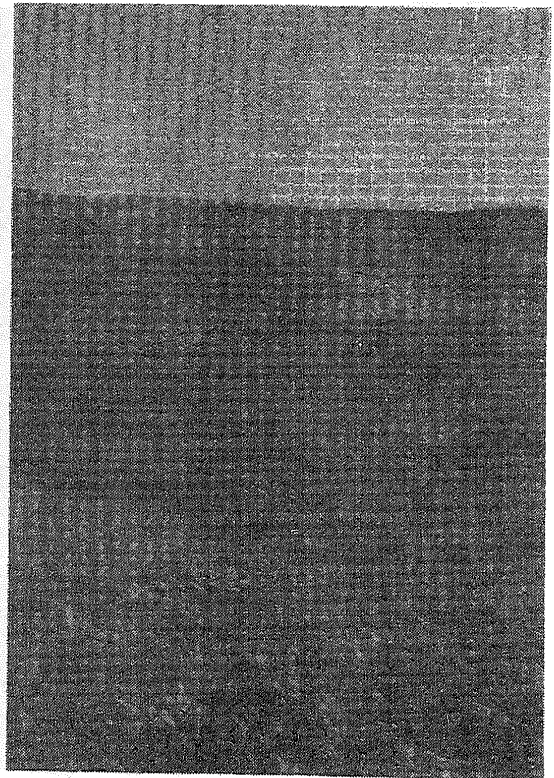


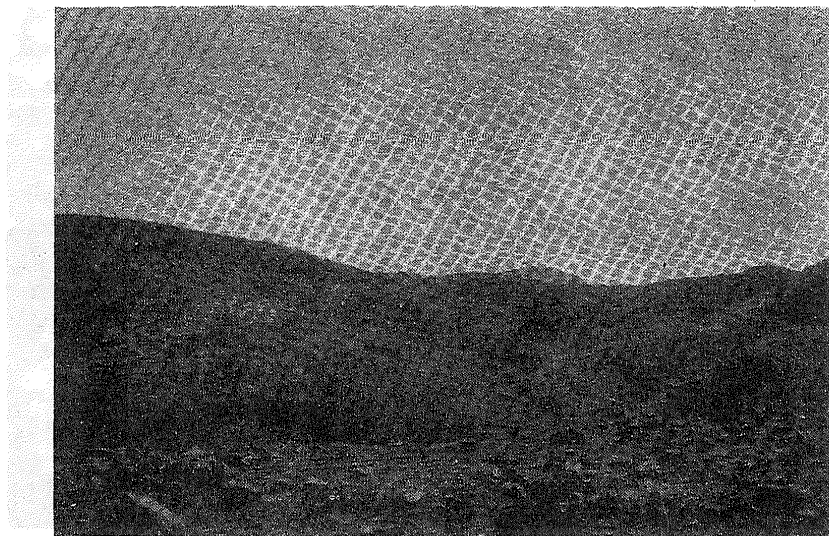
2. Lower section



1. View towards dj. Djumeidjme from the south; beneath the top the wall is still visible.

2. View towards dj. Djumeidjme from the North.





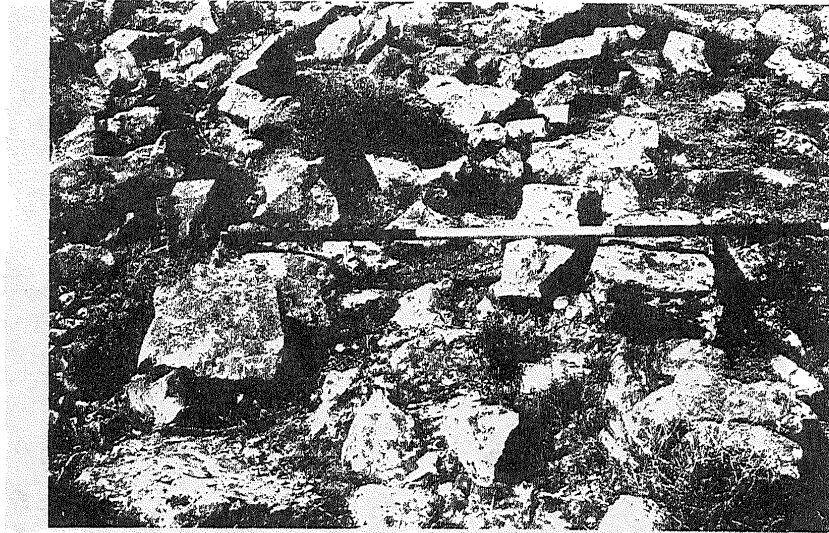
1. View to the western nose of dj. Djumeidjme and to the causeway of the cone of el-Mishneqa.



2. Huge blocks for strengthening the circumvallation wall near Qullat Mishneqa.



The width of the circumvallation-wall



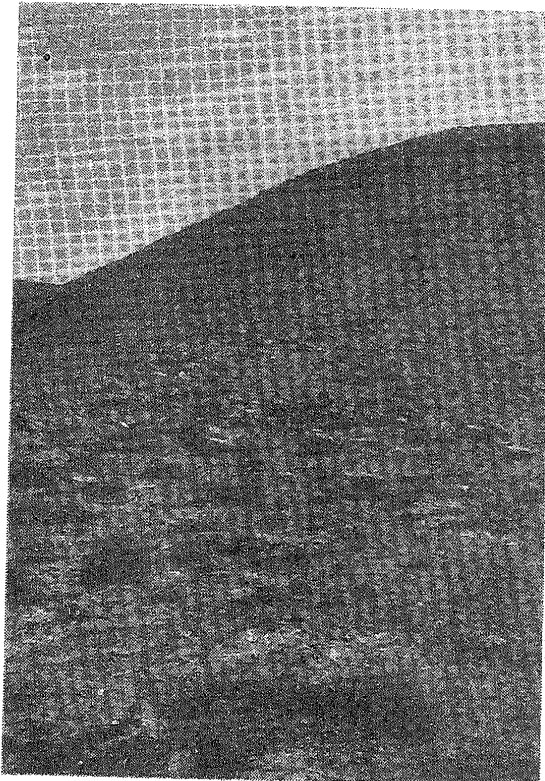
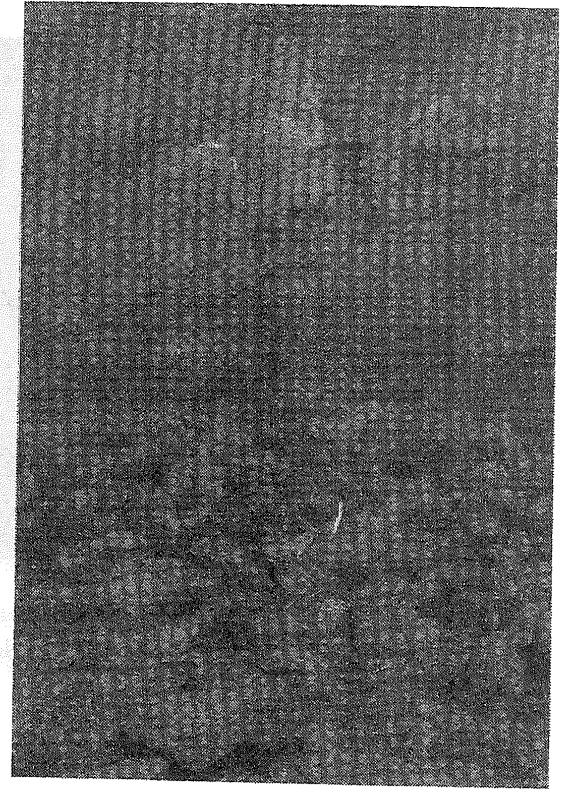
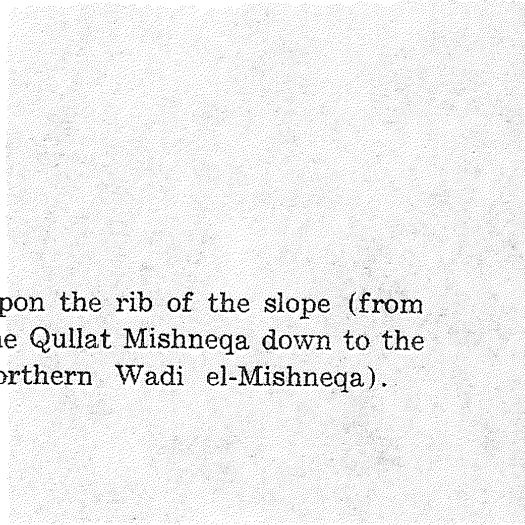
1. On the foot of dj. ez-Zaniya



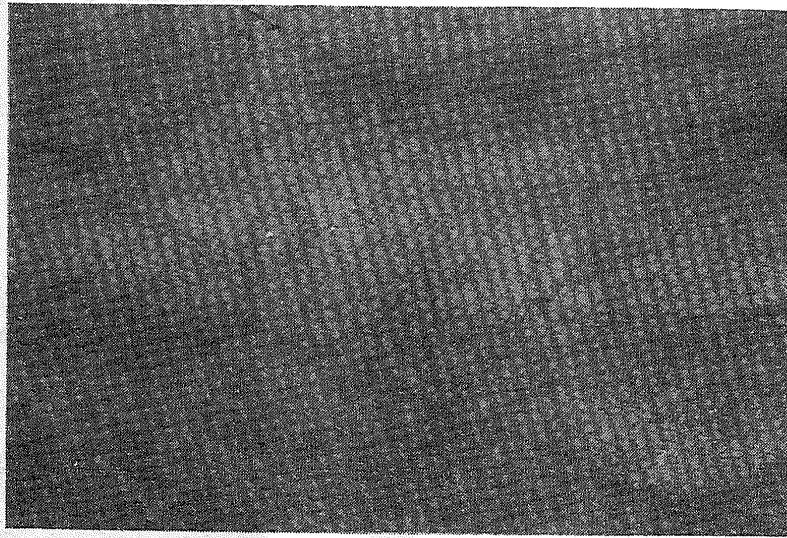
2. Near the bed of the northern Wadi el-Mishneqa

The course of the circumvallation-wall

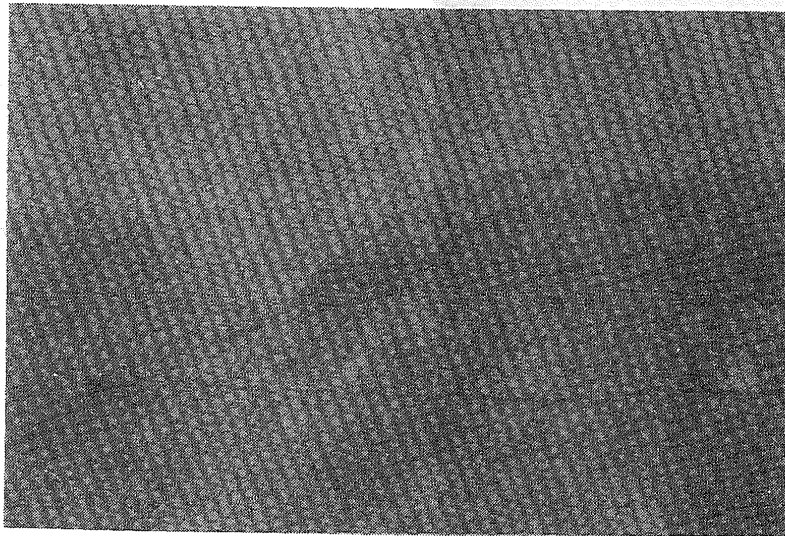
1. Upon the rib of the slope (from the Qullat Mishneqa down to the northern Wadi el-Mishneqa).



2. At the edge of the ridge (up to the southeastern camp on the dj. ez-Zaniya).

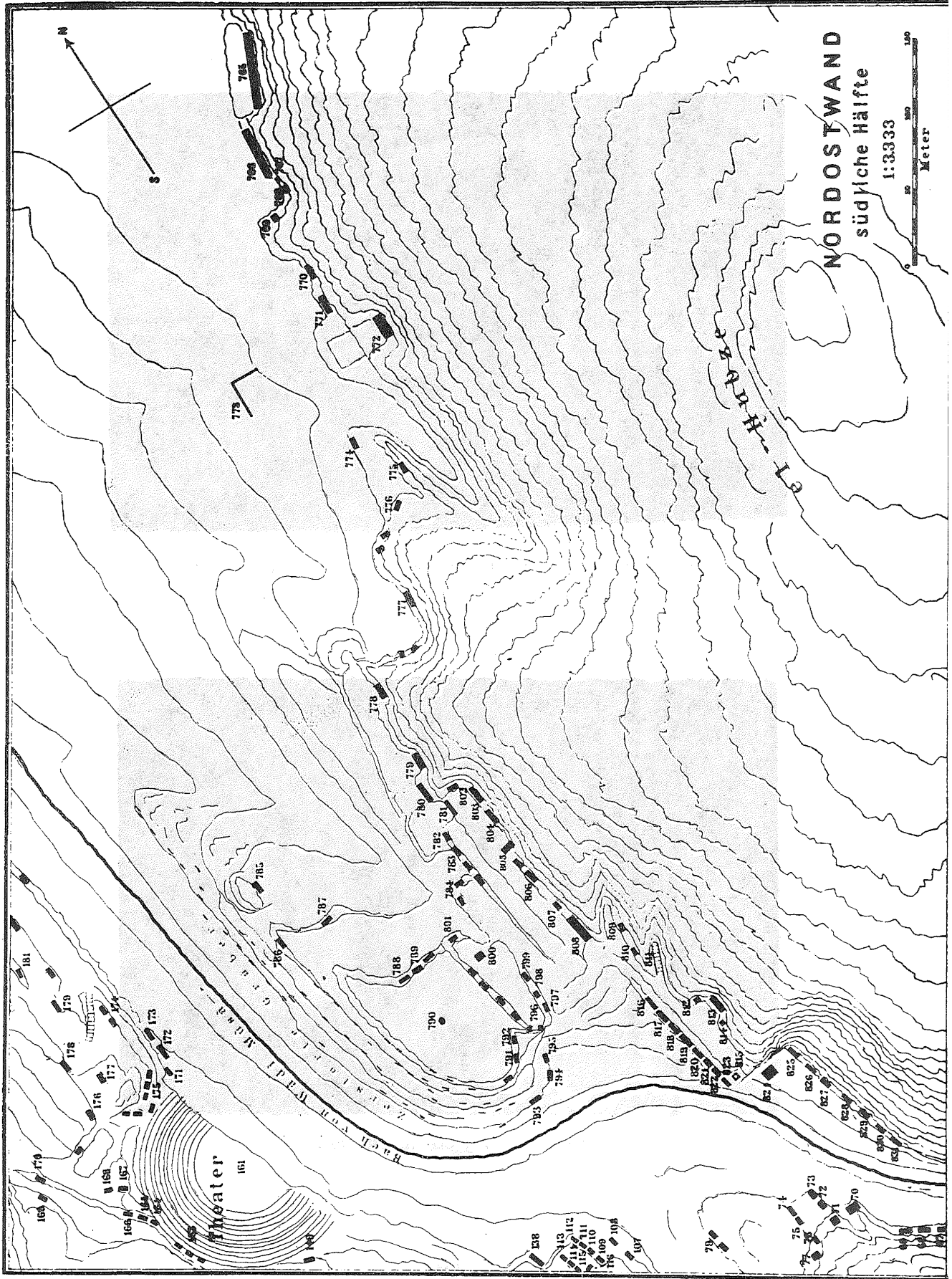


1. The northern Wadi el-Mishneqa opening to the West. On the ridge of Mashmul in the background a Roman camp.



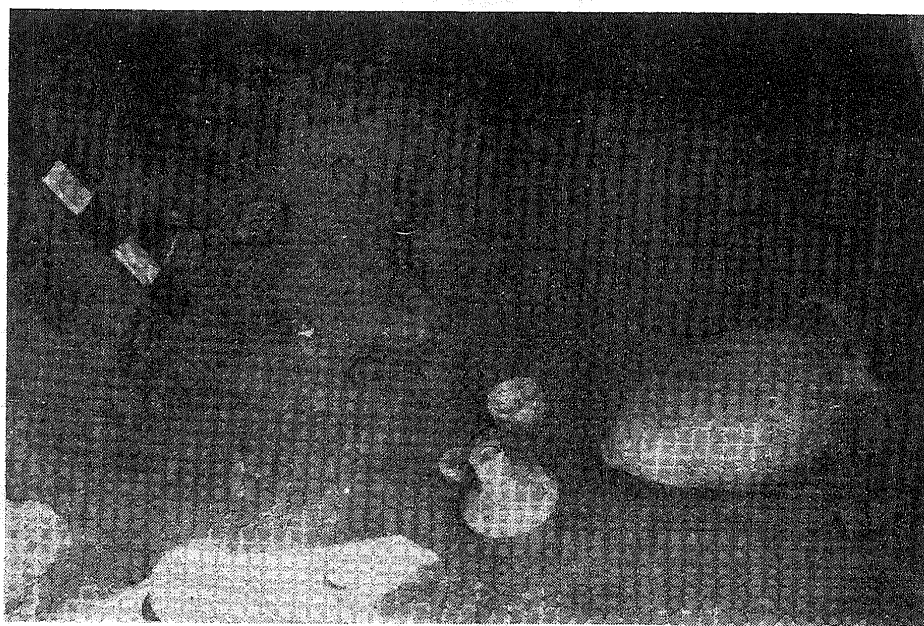
2. The same camp on the ridge (taken with a telephoto lens)



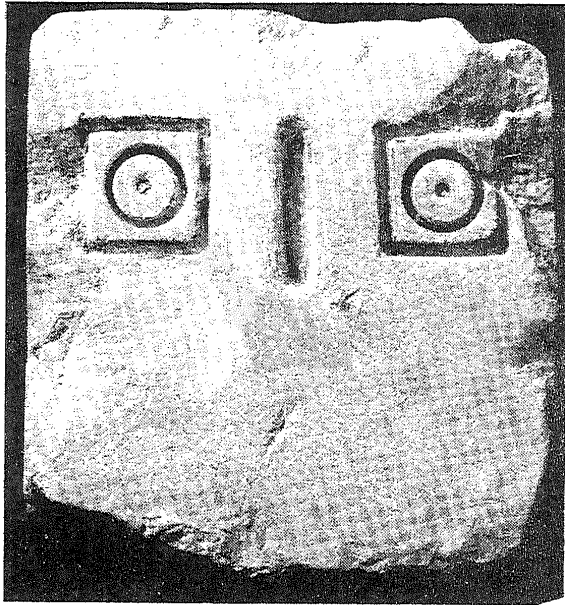




1. Area A; entrance of the cave; to the right, stairway



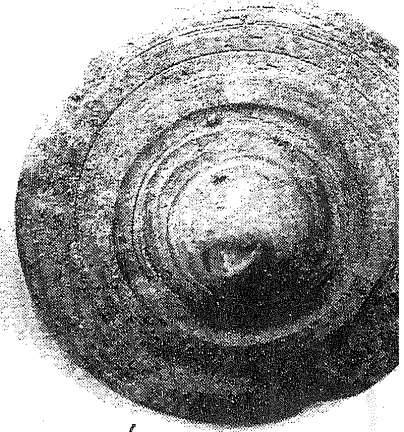
2. Area A; objects in the cave



1. Alabaster figurine

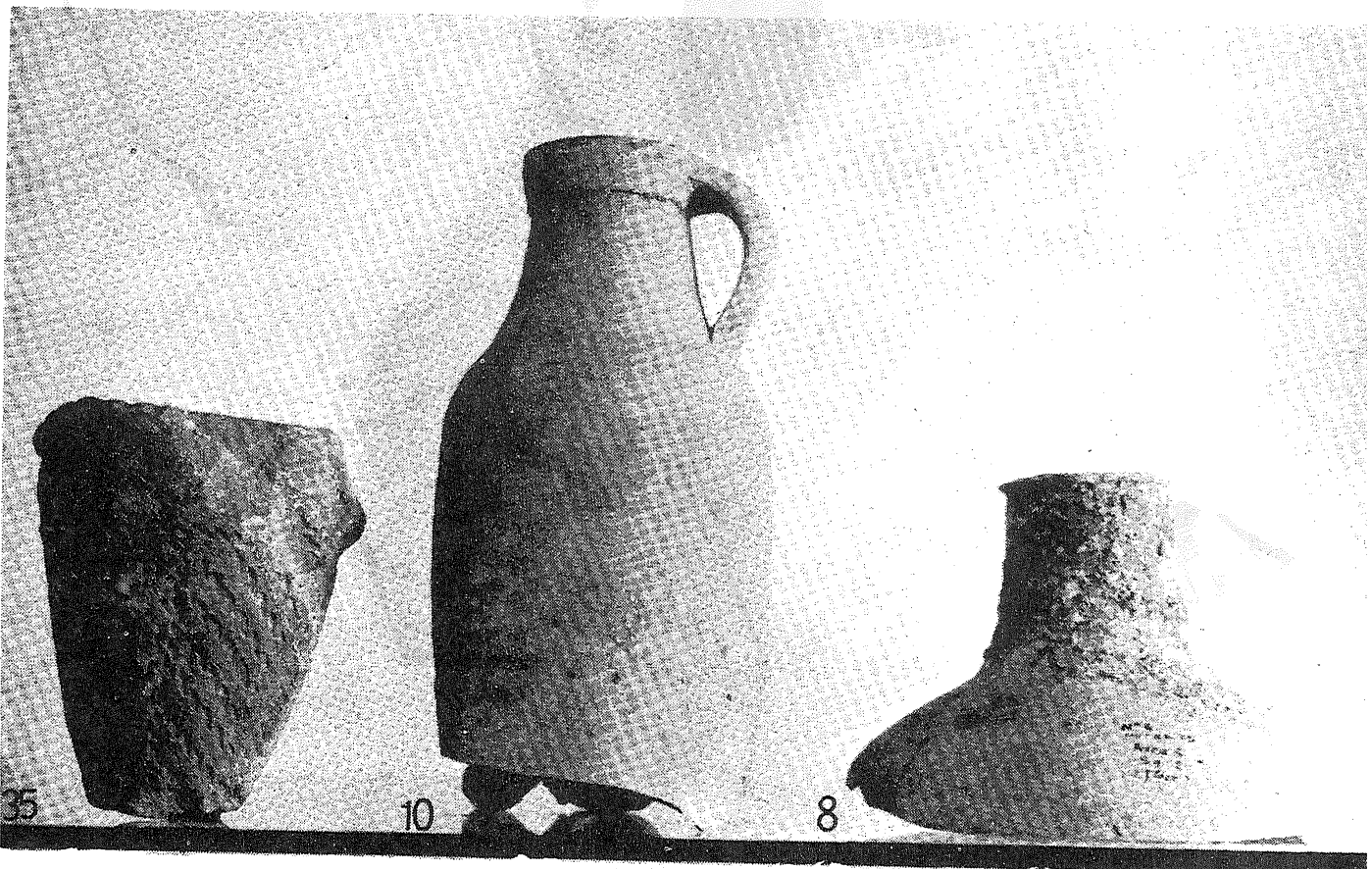


6



4

2. Lamp and lid from Area A

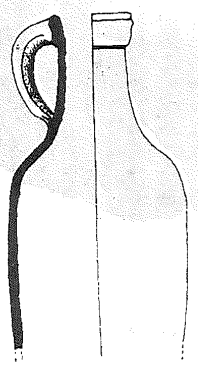


35

10

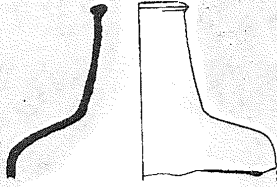
8

3. Objects from Area A



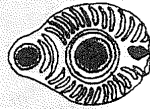
10

Scale 1:2



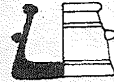
8

Scale 1:2



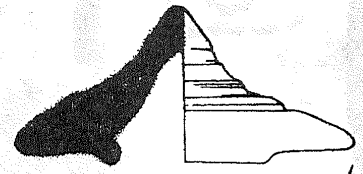
6

Scale 1:2

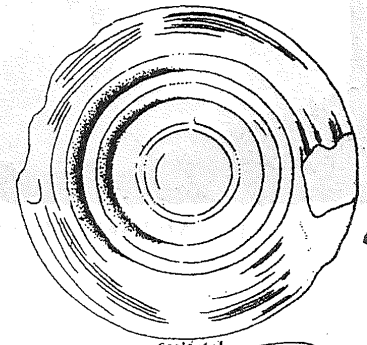
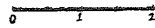


26.

Scale 1:2

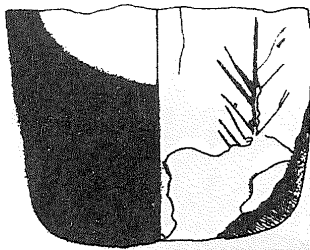


4



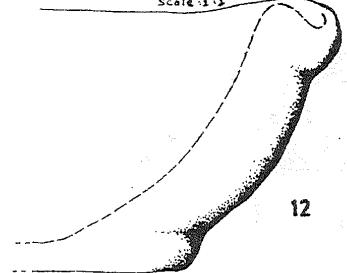
4

Scale 1:1



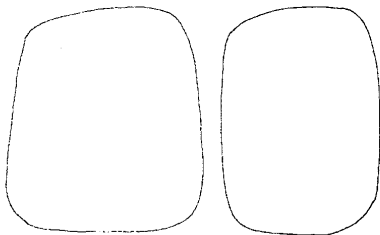
9

Scale 1:1



12

Scale 1:1



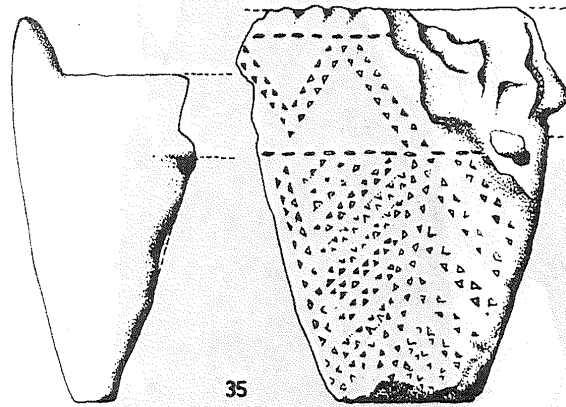
Scale 1:1

11



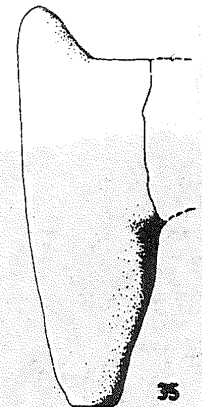
Scale 1:1

7



35

Scale 1:1

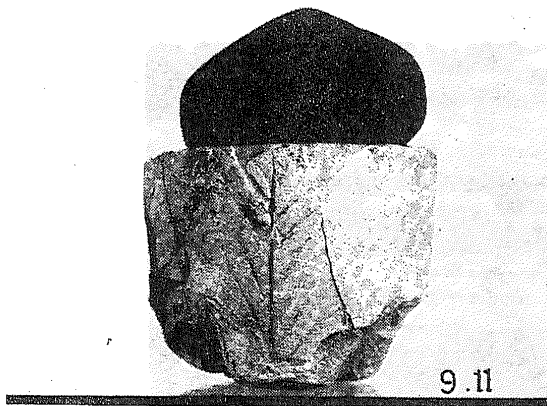


35

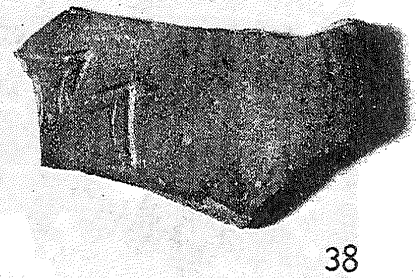


Early Byzantine objects from Area A

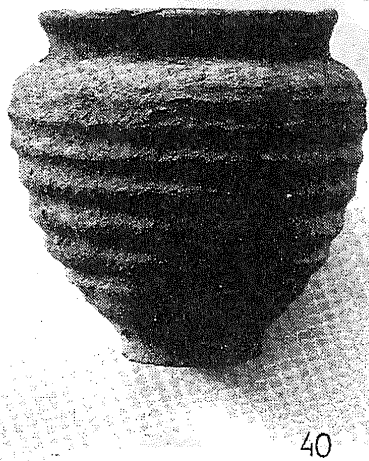




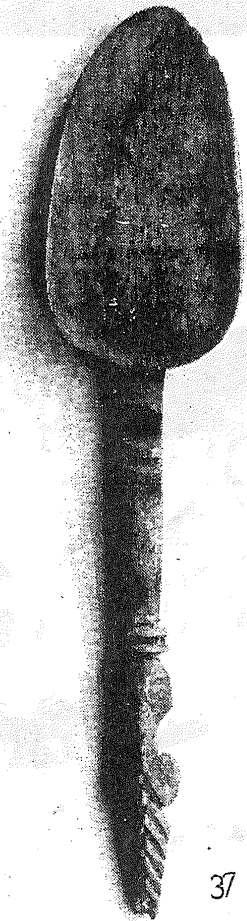
1. Mortar and pestle (Area A)



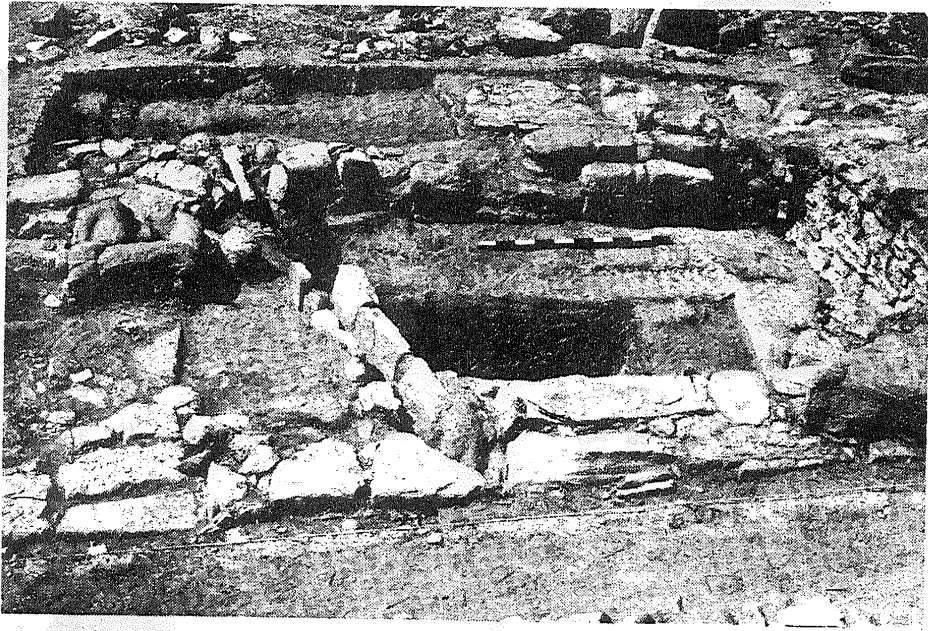
2. Byzantine sherd with a cross (Tomb 813)



3. Pot from tomb 813



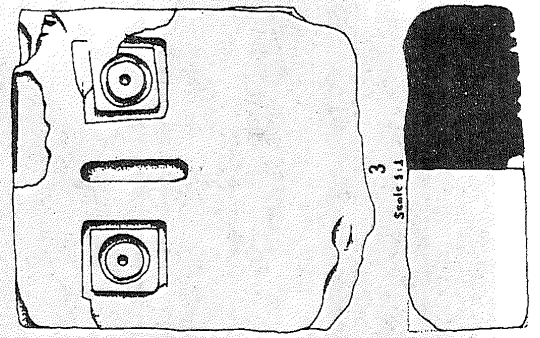
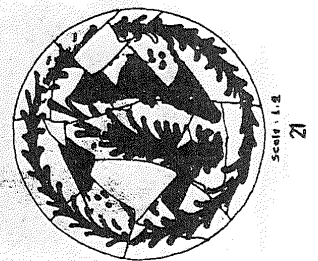
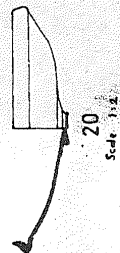
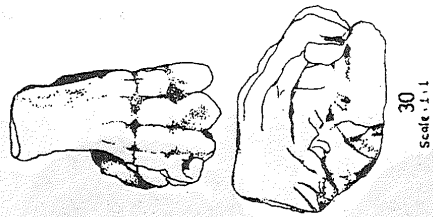
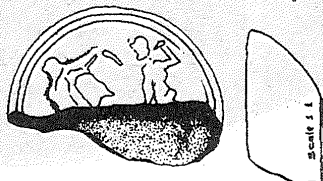
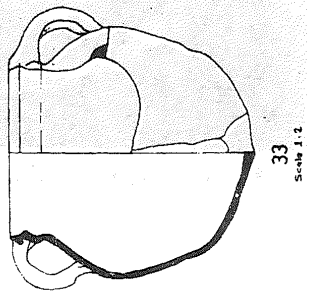
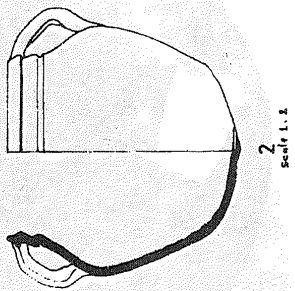
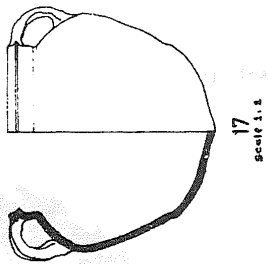
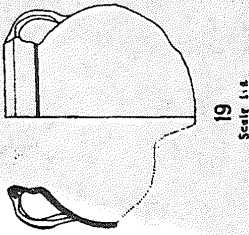
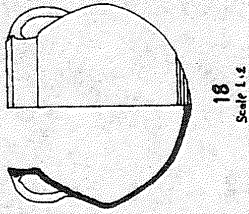
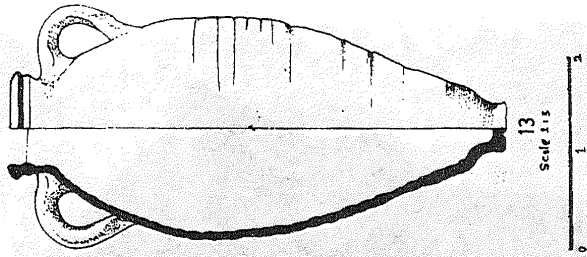
4. Bone spoon (Tomb 813)



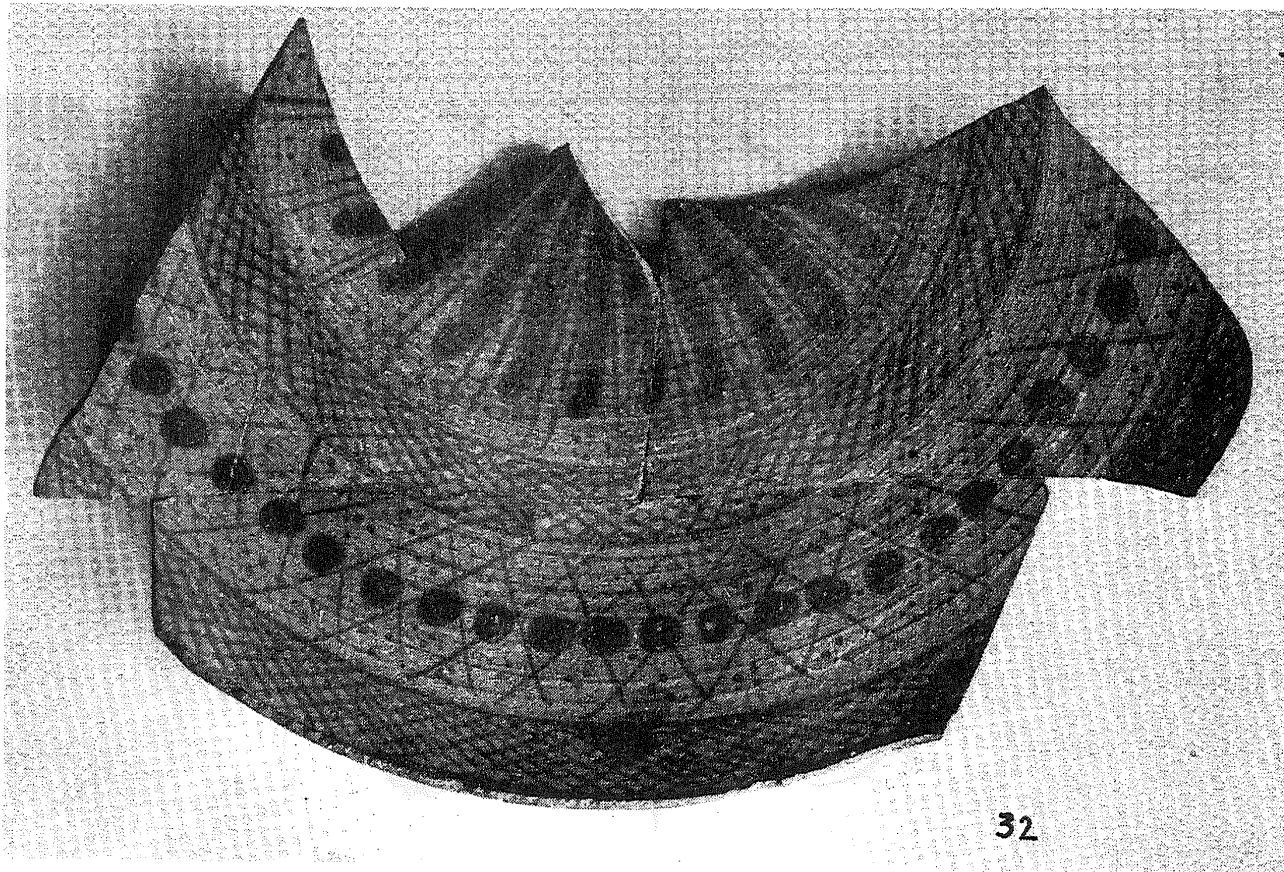
1. Area B : house and shaft tomb



2. Pottery in Area B

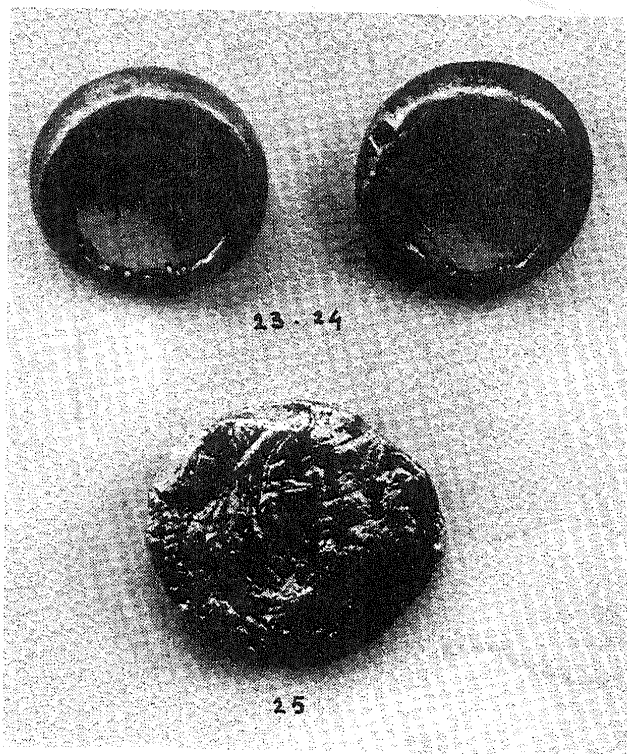






32

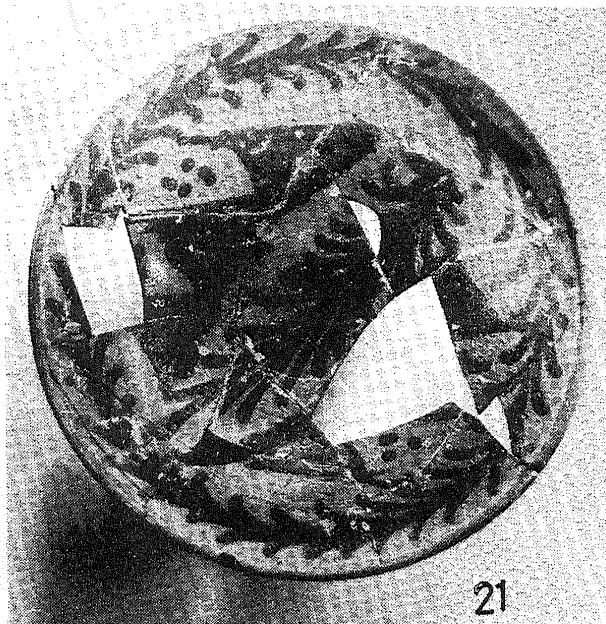
1. Nabataean decorated plate (Area B)



23 - 24

25

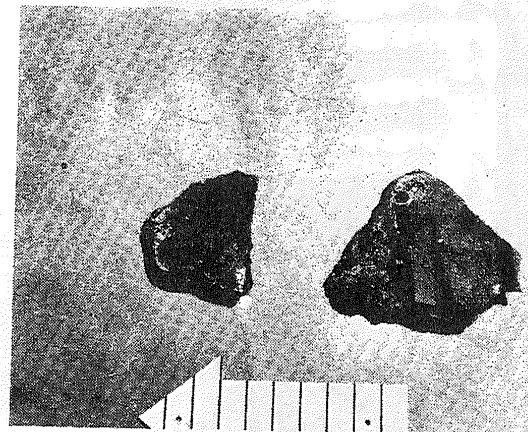
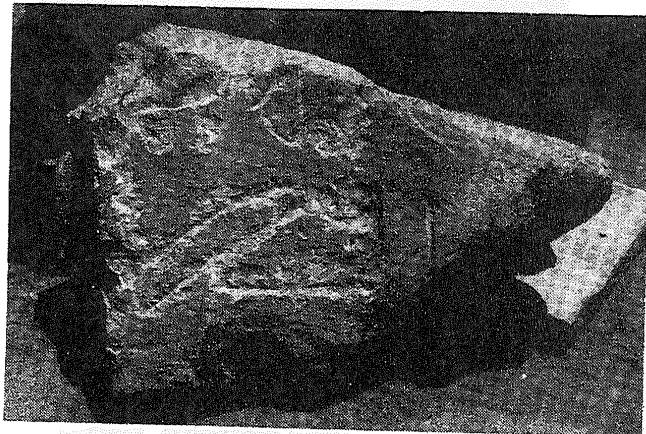
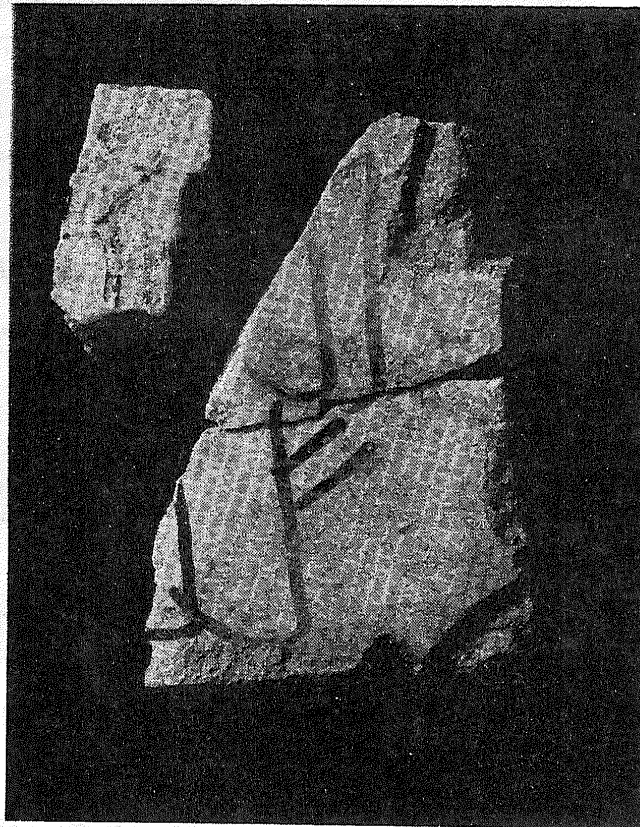
2. Gold ear-rings and Nabataean drachma



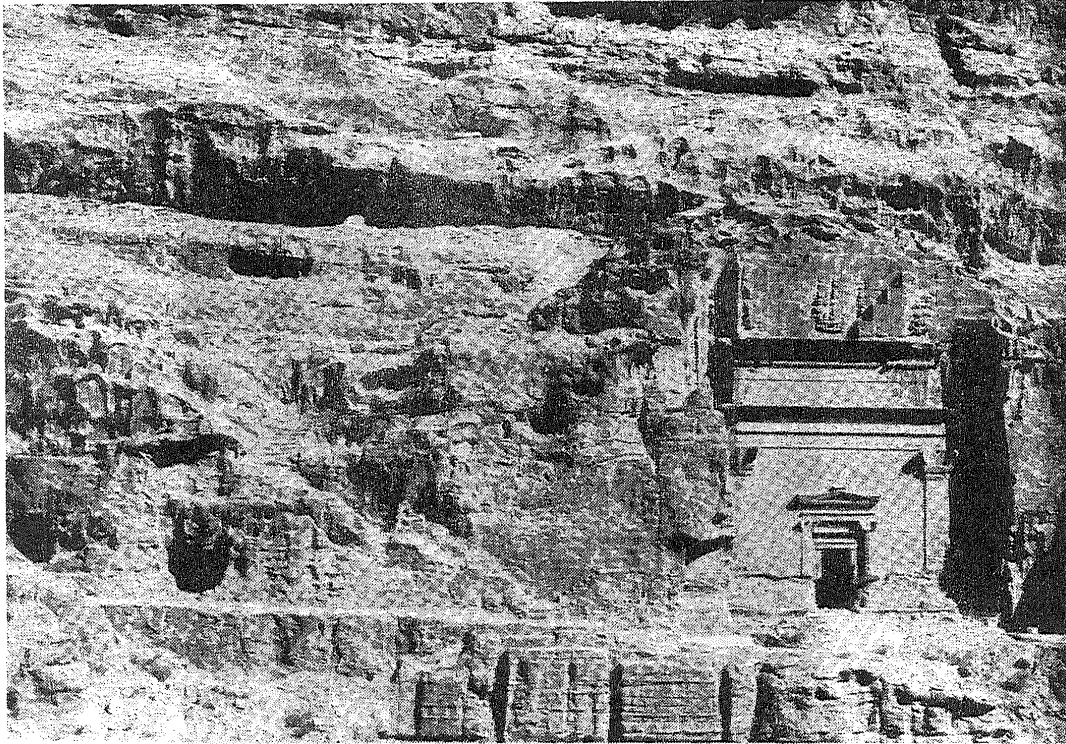
21

3. Decorated plate from Area B

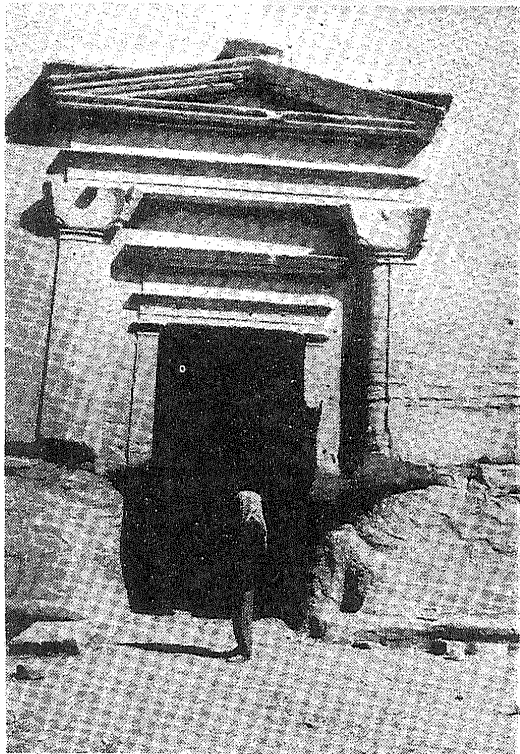
1.2.3. Inscriptions from tomb 813



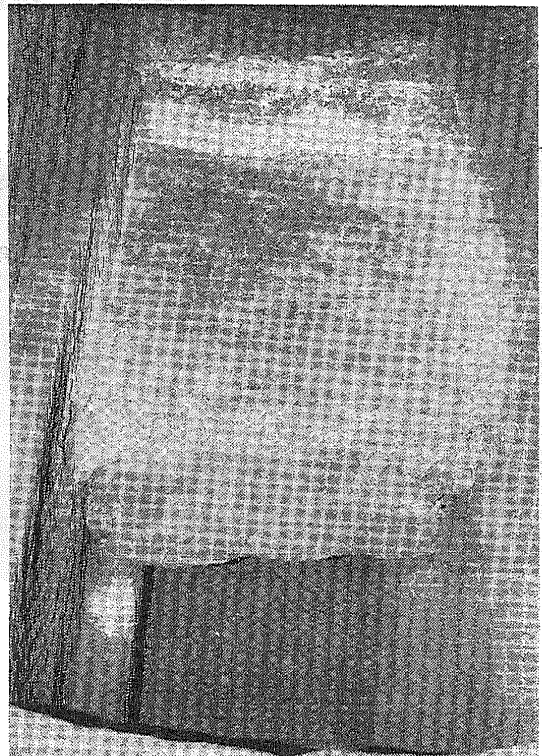




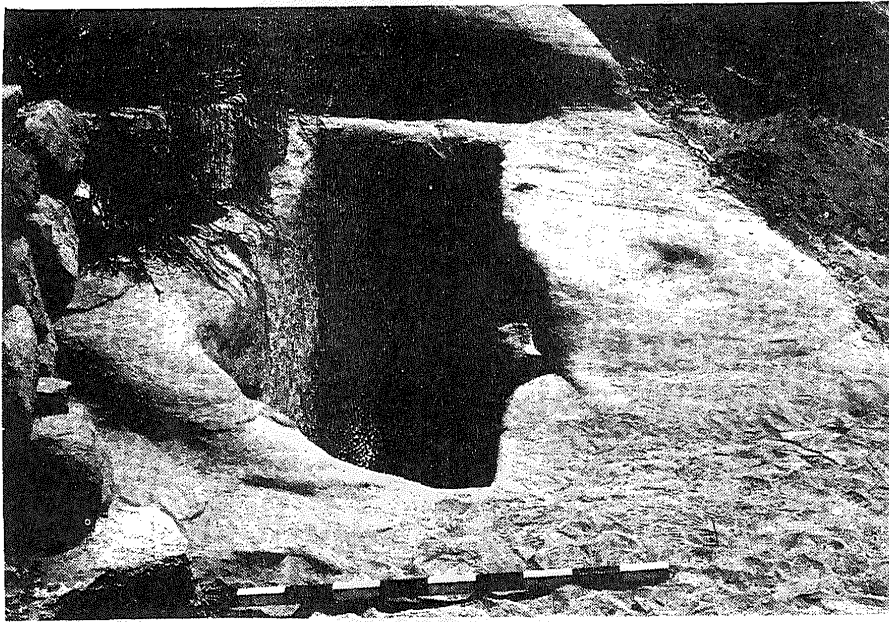
1. Tomb 813. To the left stairway leading to the top of tomb



3. Loculus 3 in tomb 813



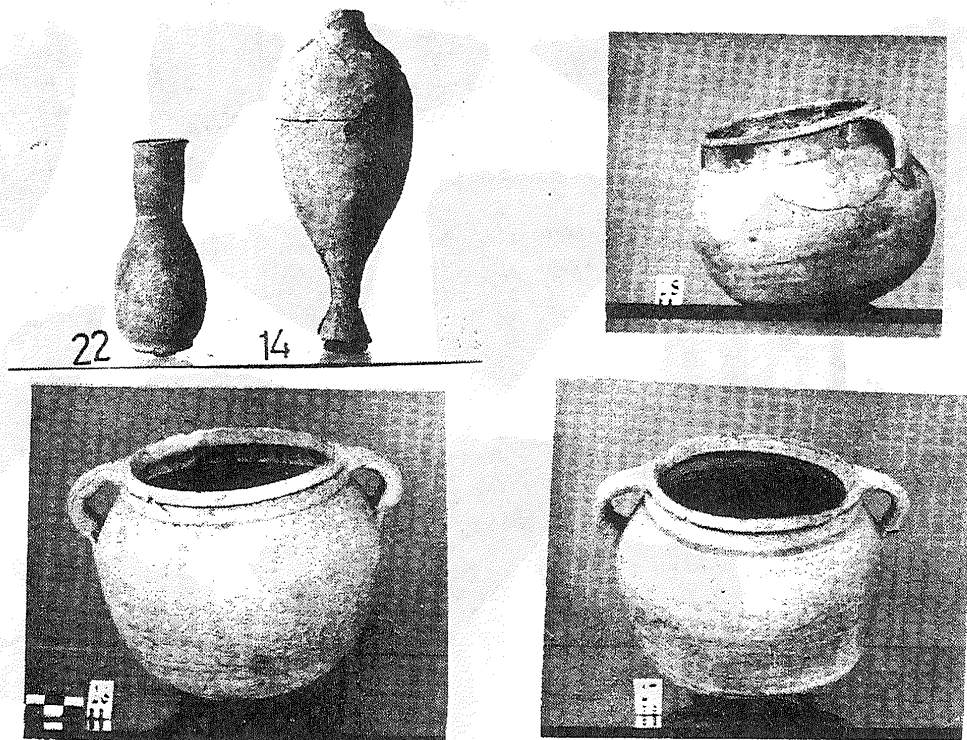
2. Doorway of tomb 813



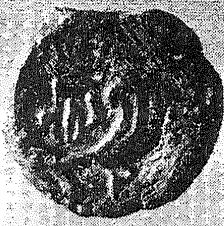
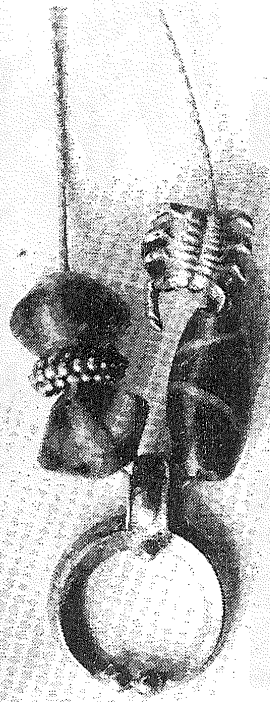
1. Area C : Shaft tomb



2. Byzantine jar from cave

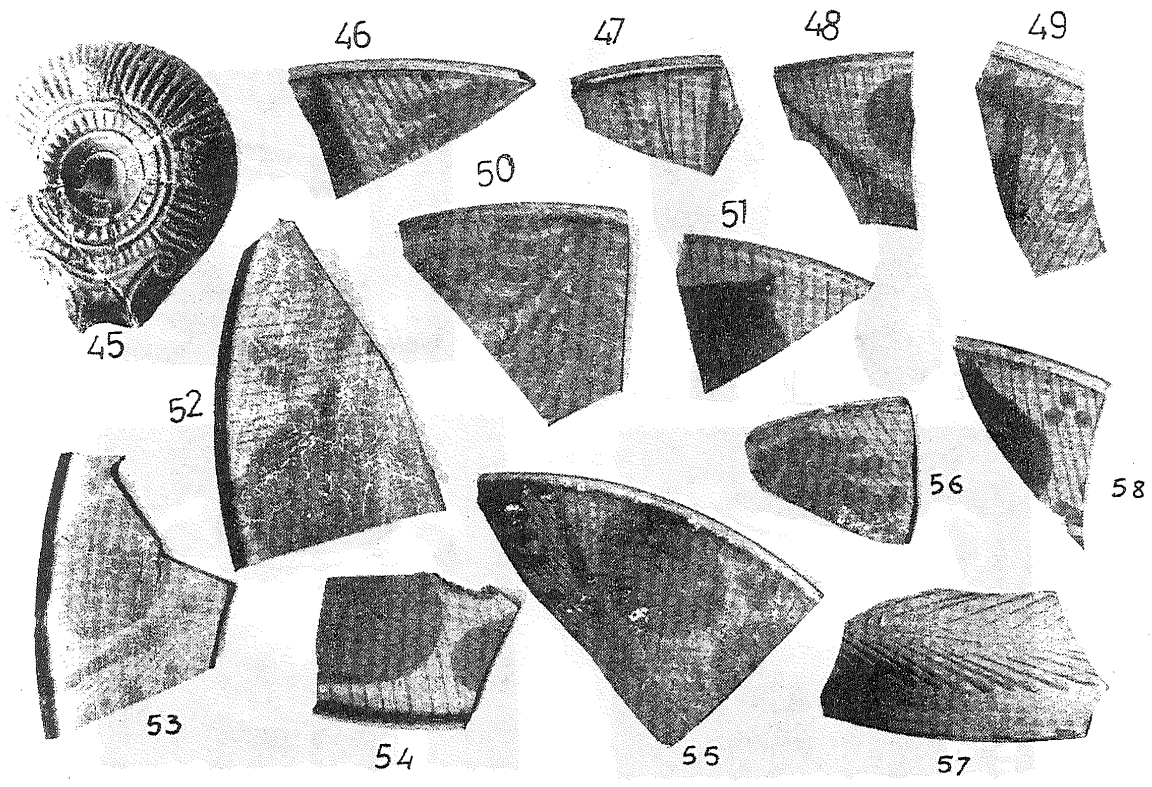


3. Objects from area B and C



1. Gold objects and beads from tomb 813

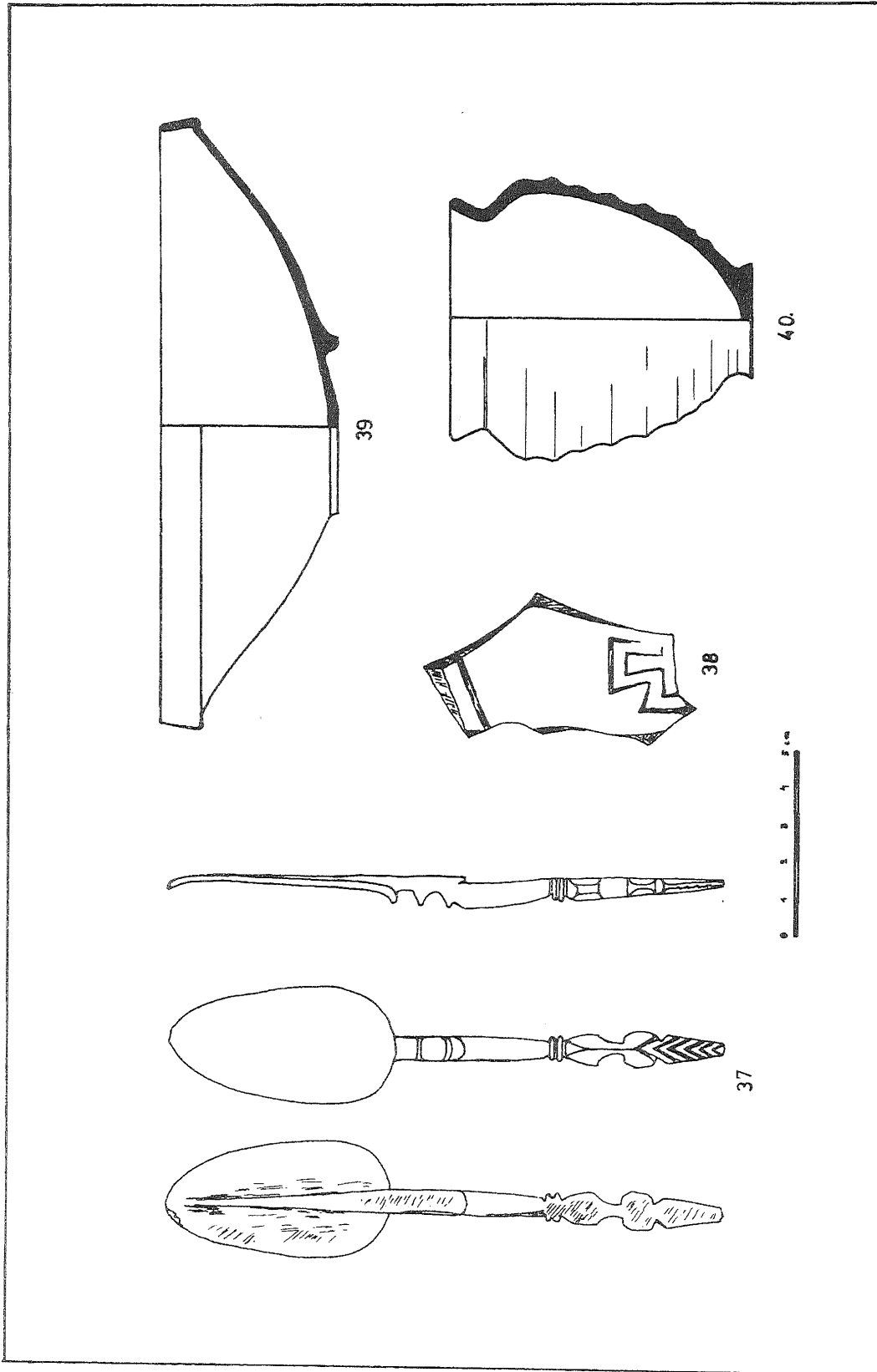
2. Bronze coin of Rabel II



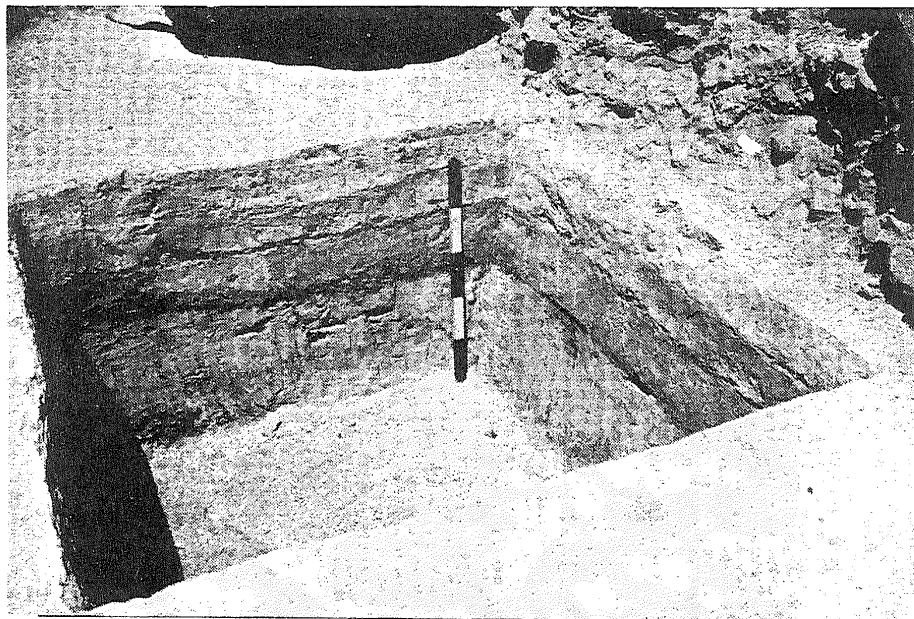
3. Sherds from the courtyard of tomb 813



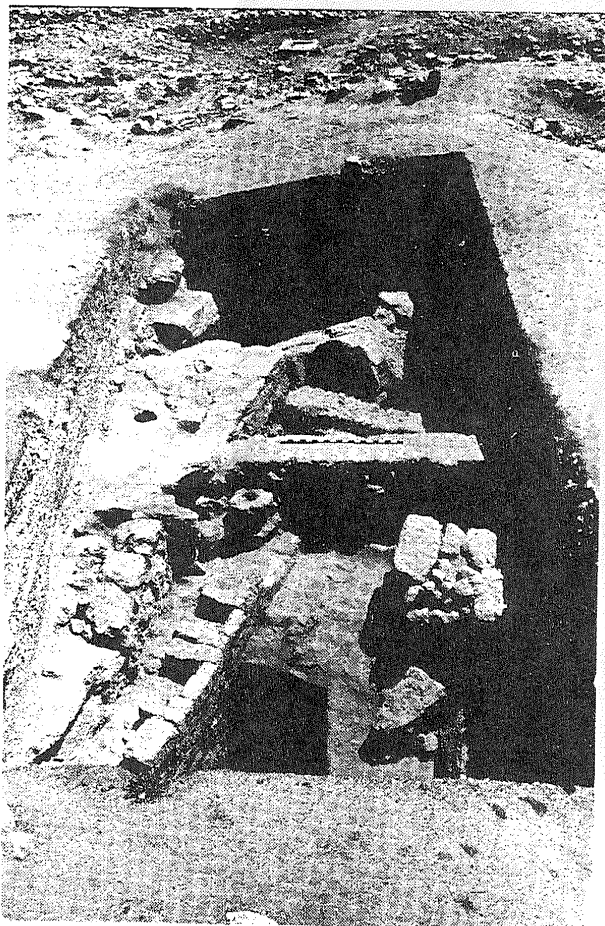




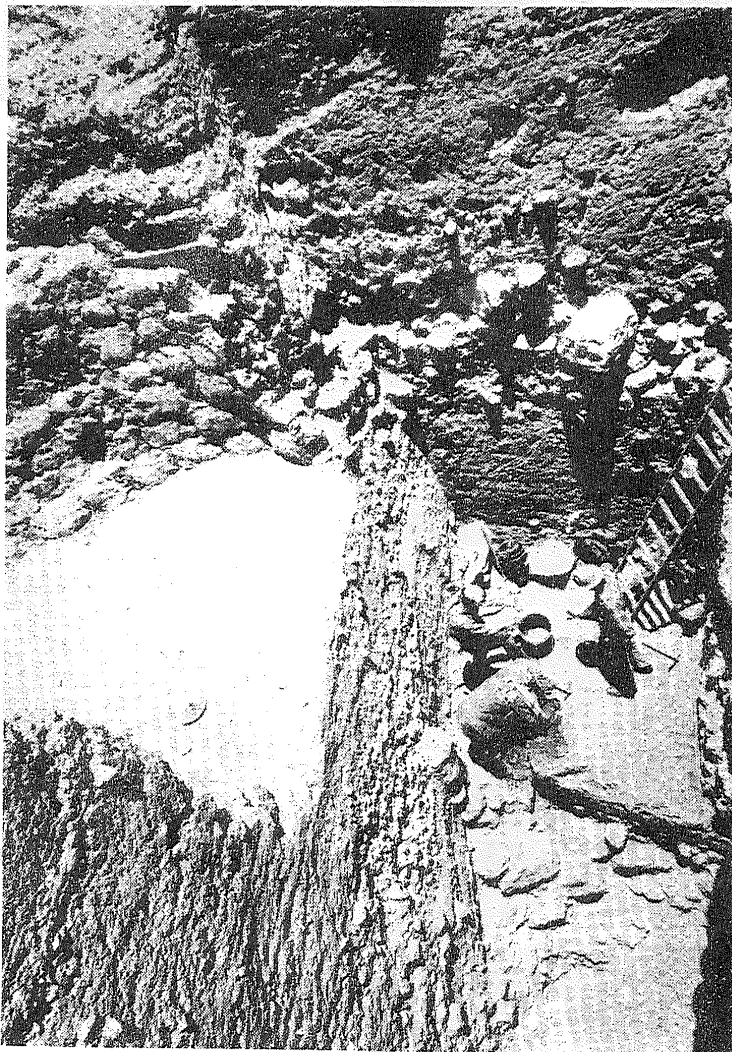




1. A probe cut through the three layers of plaster at the bottom of the water reservoir in Square B.1. Below these plaster layers is bedrock, penetrated for 25 cm. to ascertain its real nature.



2. Squares B.2 and B.4. The meter stick rests on the balk. Running in a diagonal direction in the foreground is the plastered Iron-age header-stretcher wall built against bedrock (to the left of it ). The wall is probably part of the retaining wall of a water reservoir of which the other two pictures of Pls. LXX and LXXI, 1 show the bottom.



Looking to the bottom of Square B.1, ten meters below the surface. The men in the picture stand on the plaster layer which was probably the bottom of a water reservoir. At the left is the base of a Byzantine lime kiln.

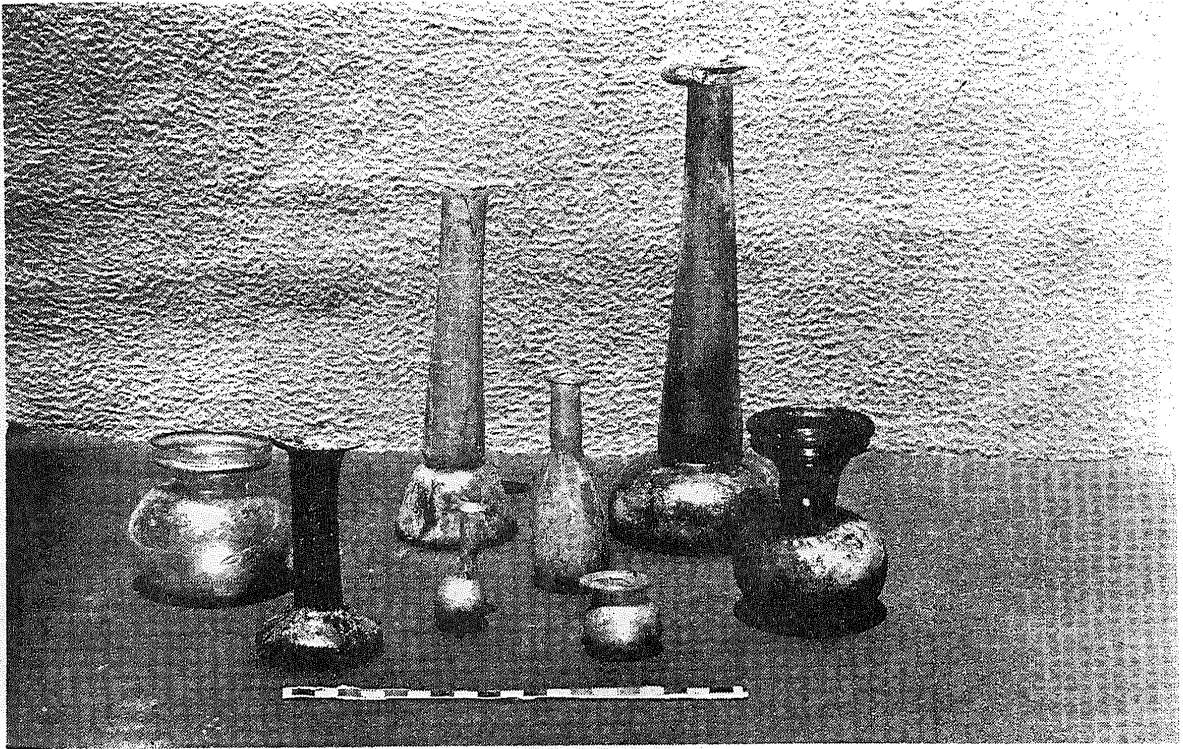


1. Roman pottery from the tombs of Hesban



2. Byzantine pottery from the tombs of Hesban



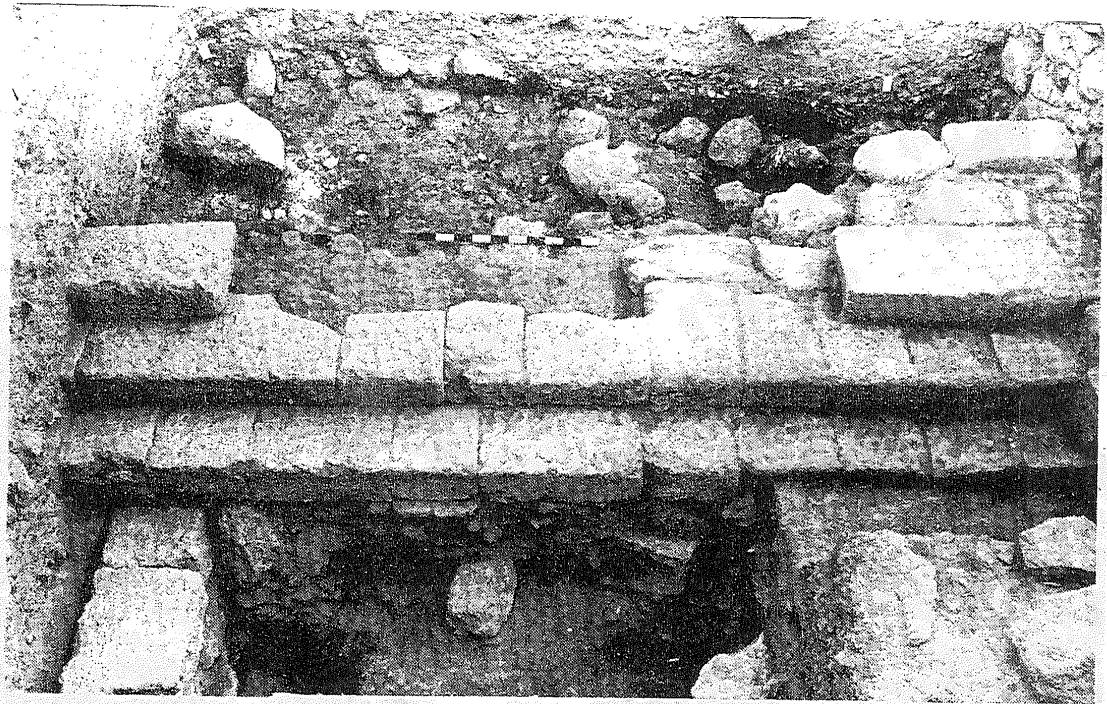
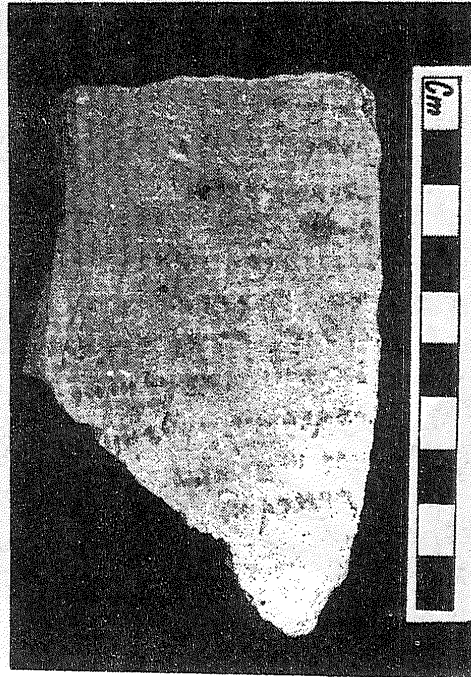


1. Roman and Byzantine glass vessels from the tombs of Hesban

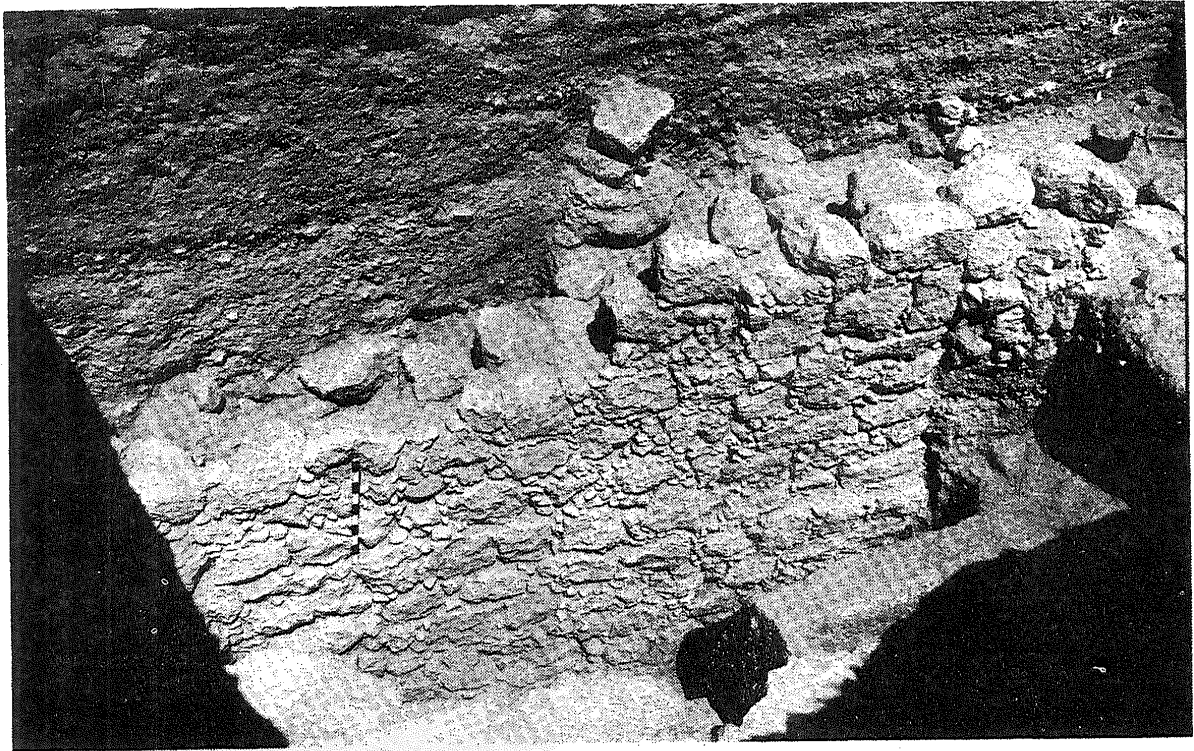


2. Mamluk pottery from Tell Hes

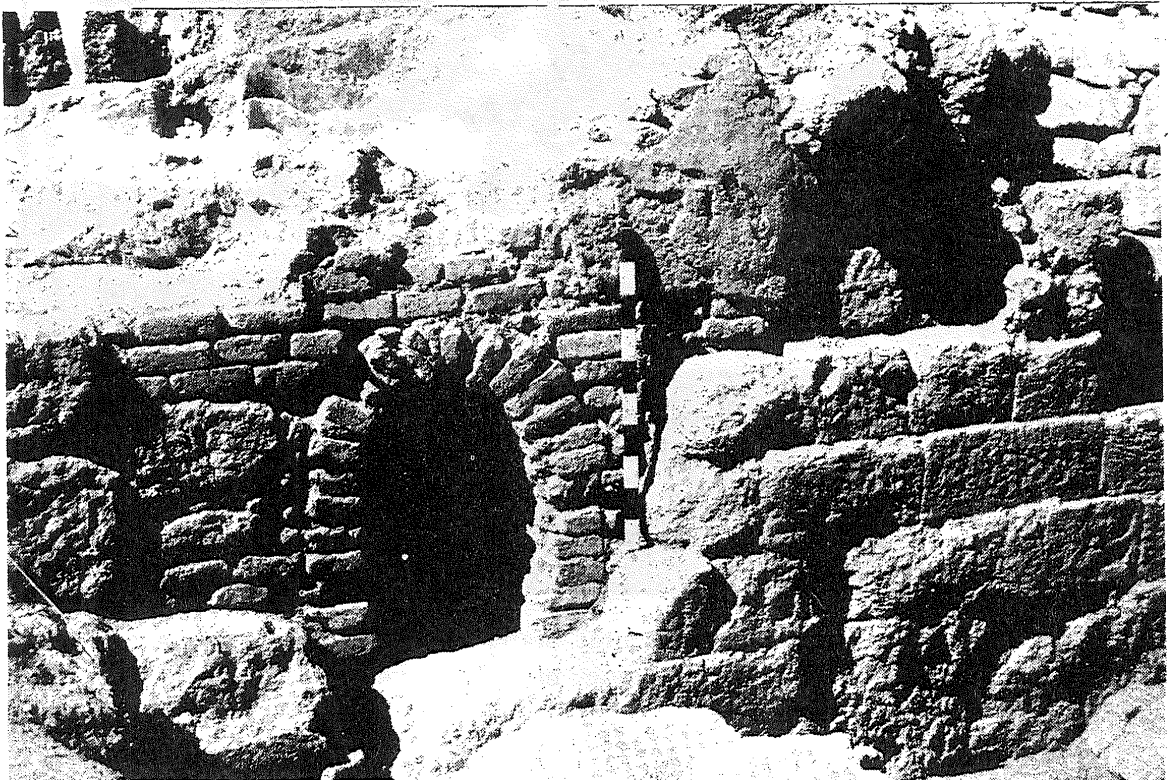
1. An ostrakon found in Square B.1 of the 6th century B.C. The text contains a list of commodities for the king and other high individuals.



2. Part of a Roman monumental stairway discovered in Square D.3 leading up to a public building, now destroyed, on the acropolis.

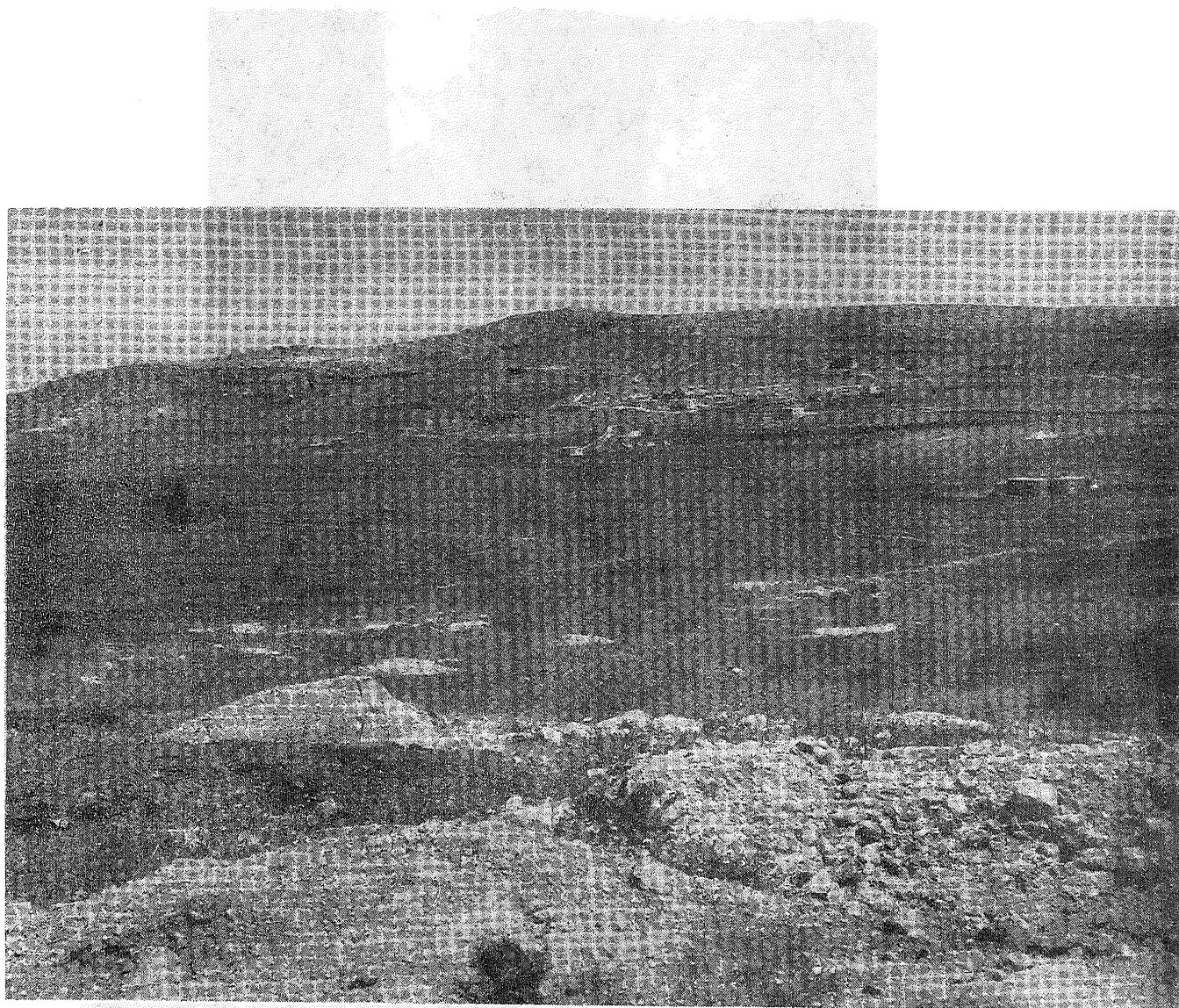


1. L-shaped Roman wall, probably part of a tower of the defense system of Ebus.



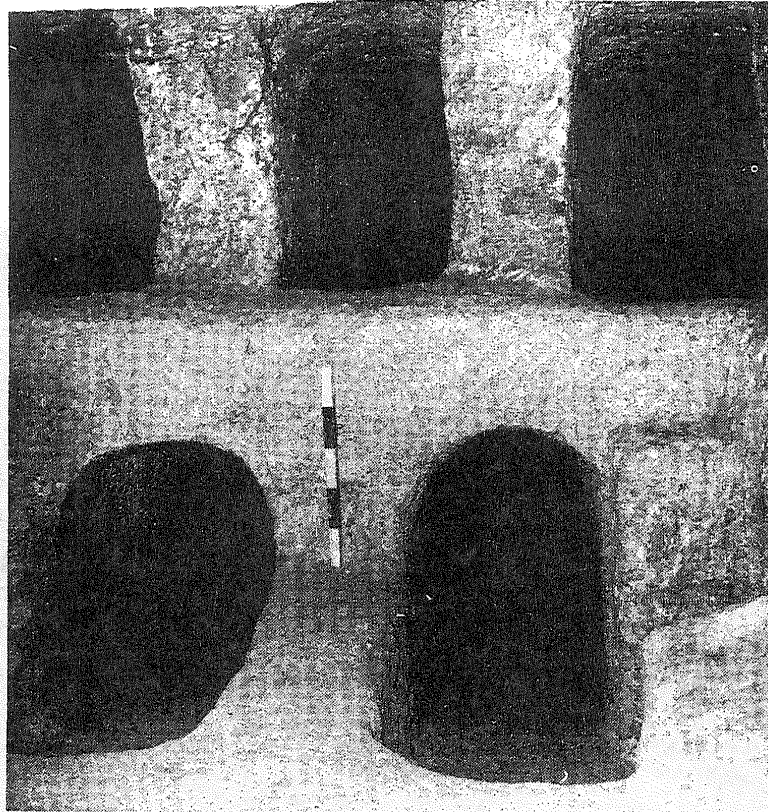
2. Furnace of the Islamic bath installation discovered in Square A. 7



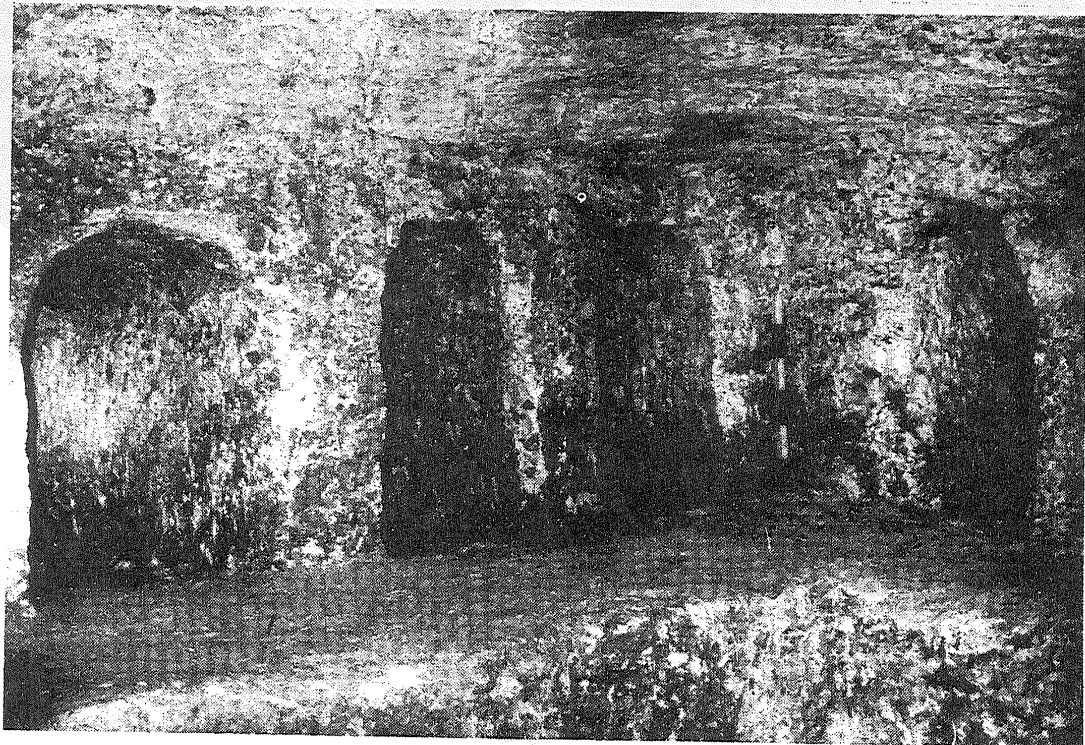


General view of toms at Beit Zar'a. (Looking East)

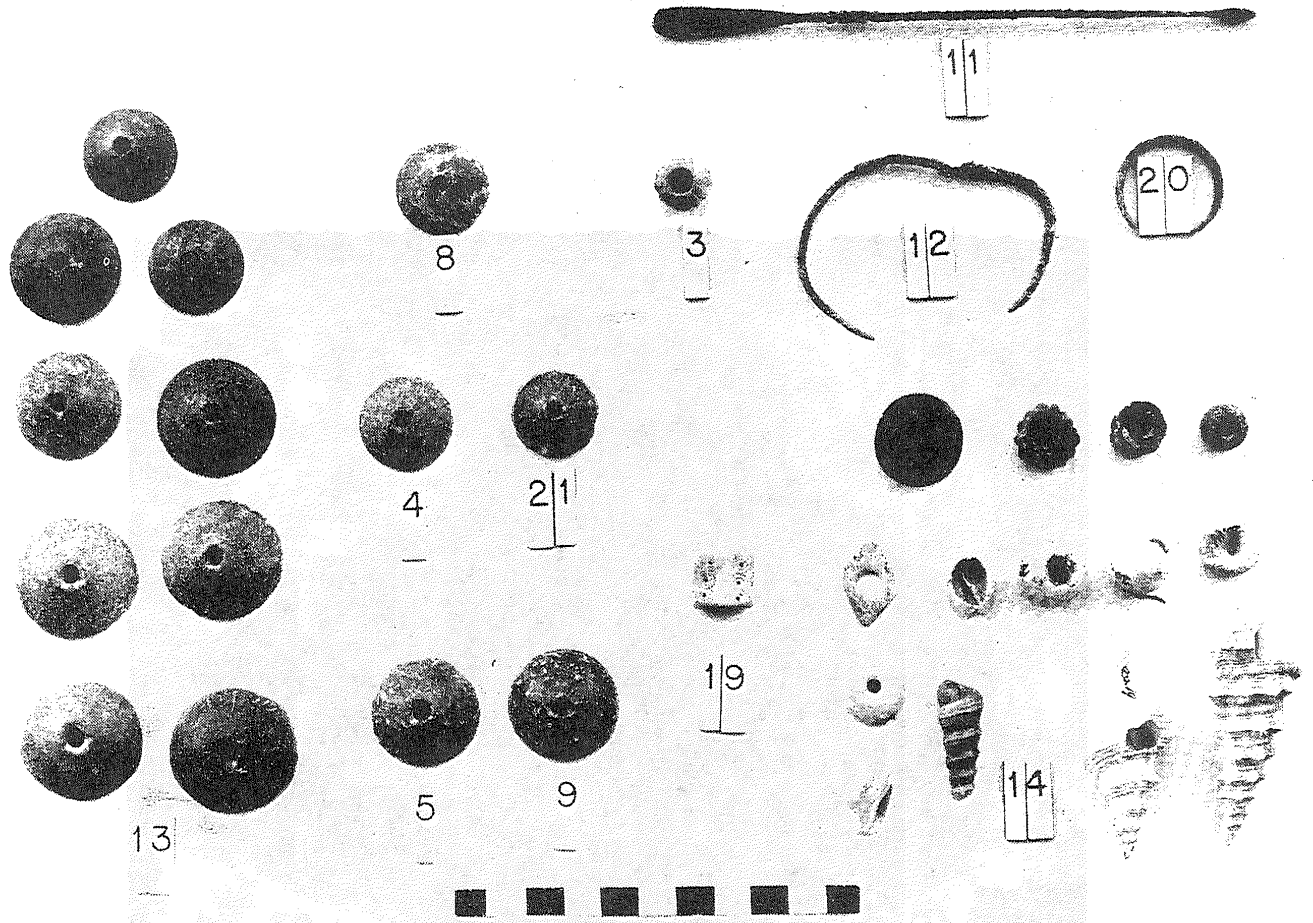




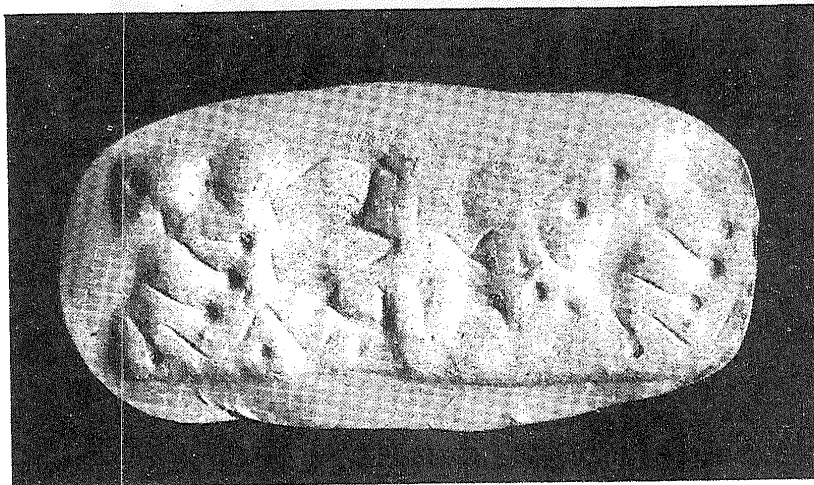
1. Western side of tomb 1



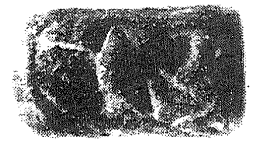
2. South-western corner of tomb 1



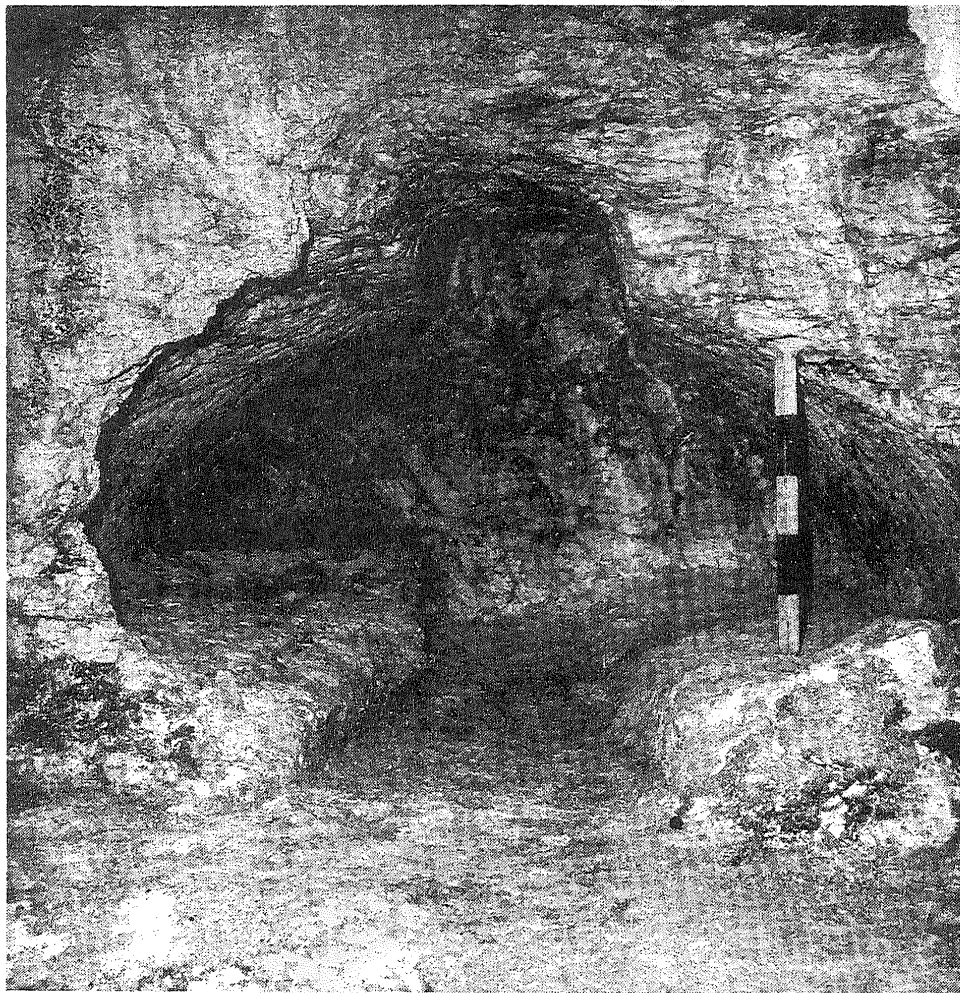
1. Objects from tomb 1



2. Cast of cylinder seal



3. Cylinder seal



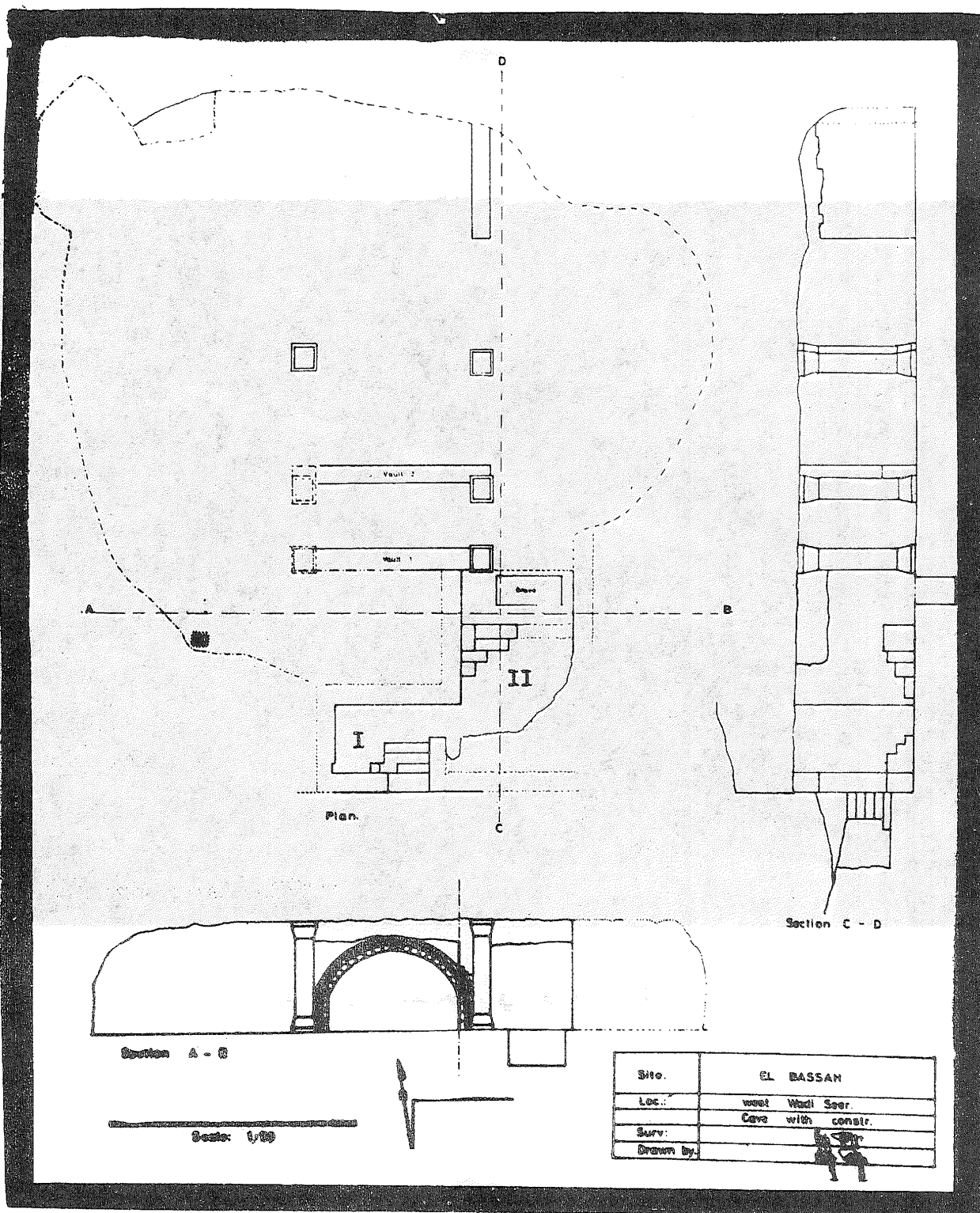
Southern side of tomb 2



Objects from tomb 1 and 2



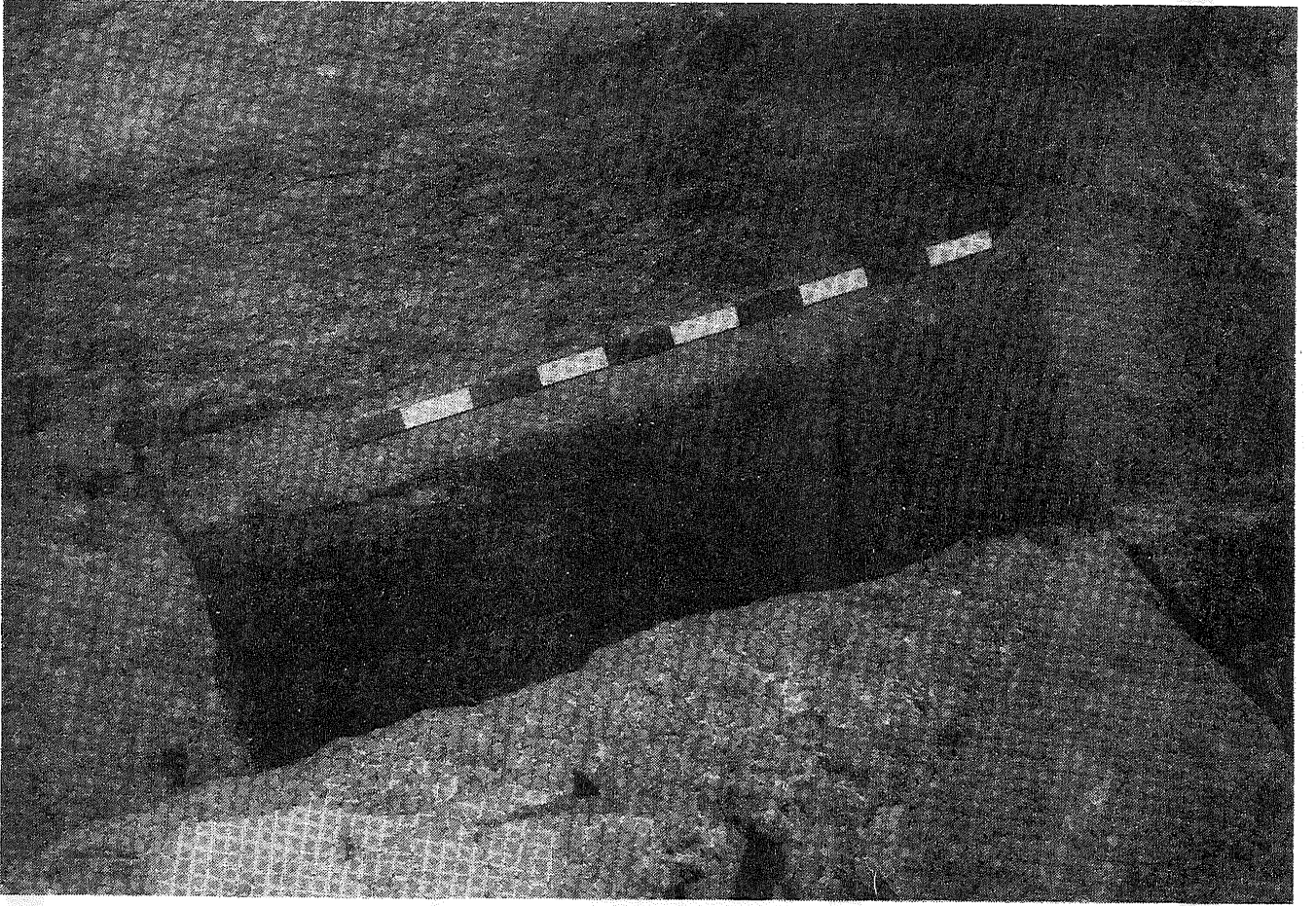




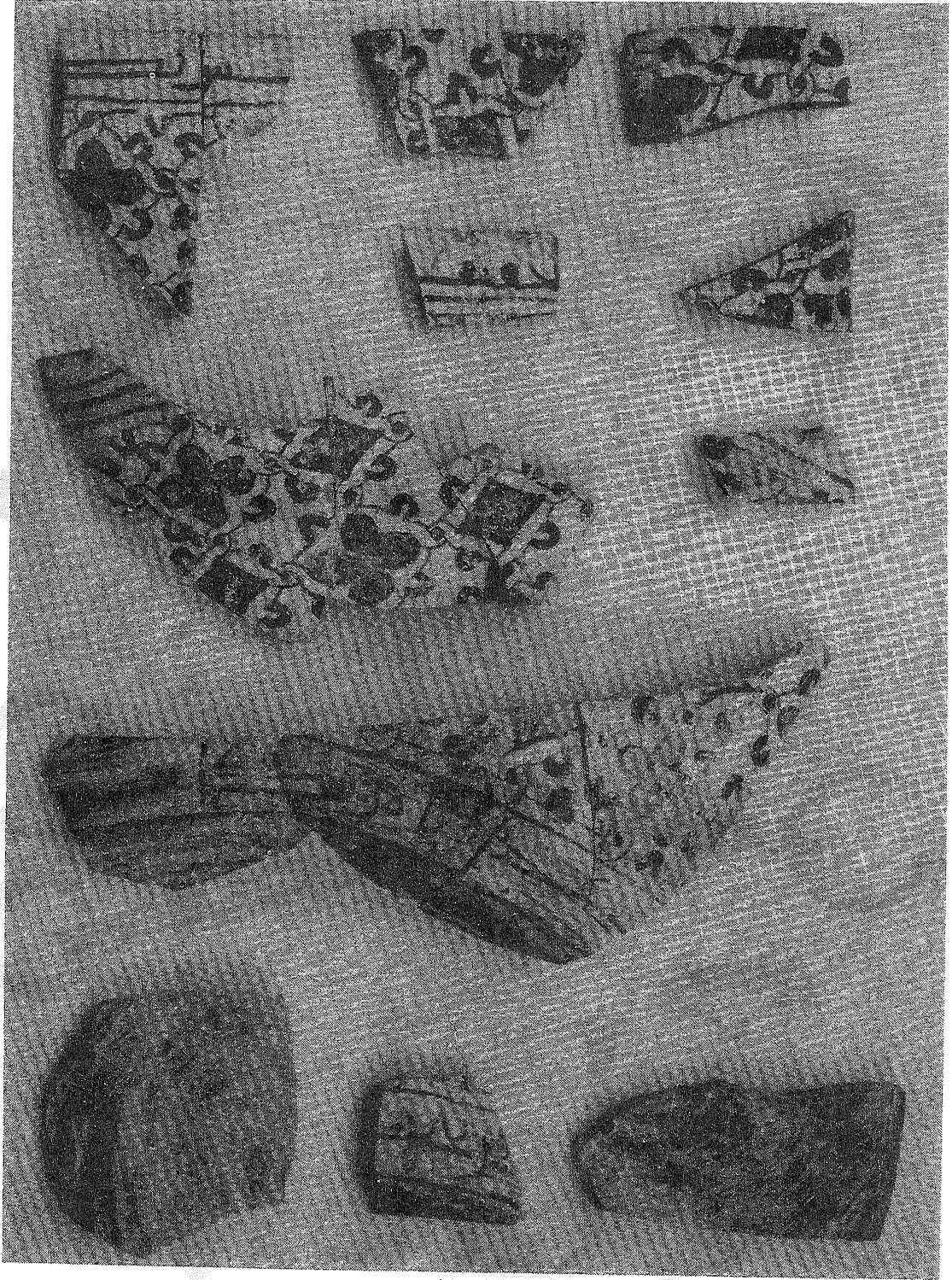
مخطط كهف البصة







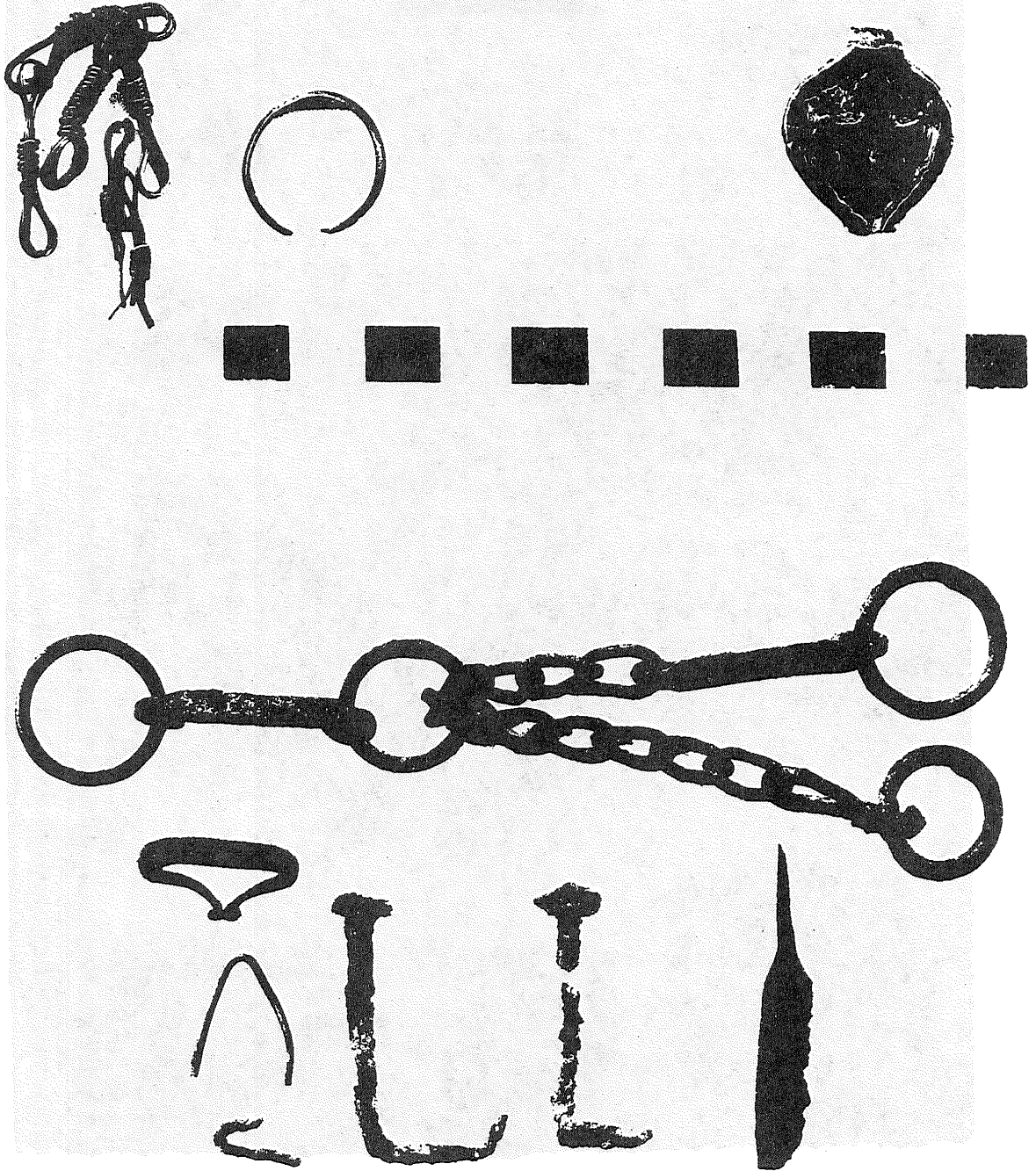
قبر حفر في الصخر ، في الغرفة الثانية



كسر فخارية اسلامية اموية عليها كتابة باللغة العربية وزخارف بالدهان الاحمر

البصّة - وادي السير  
١٩٧٤

البصّة - وادي السير  
١٩٧٤



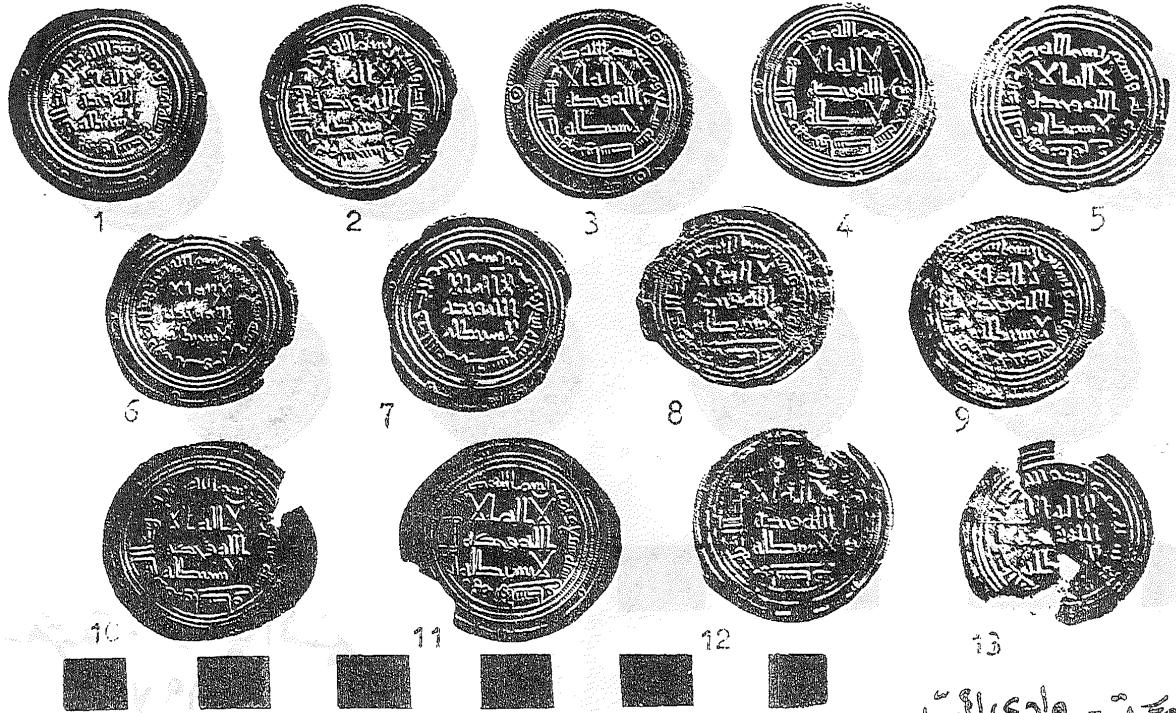
البصّة - وادي السير  
١٩٧٤

مكتشفات معدنية في كلا الغرفتين الاولى والثانية



نقود فضية اموية من فئة الدرهم

زاهده - لوحة ٤



البصرة - وادي السير  
١٩٧٤

١ - وجه

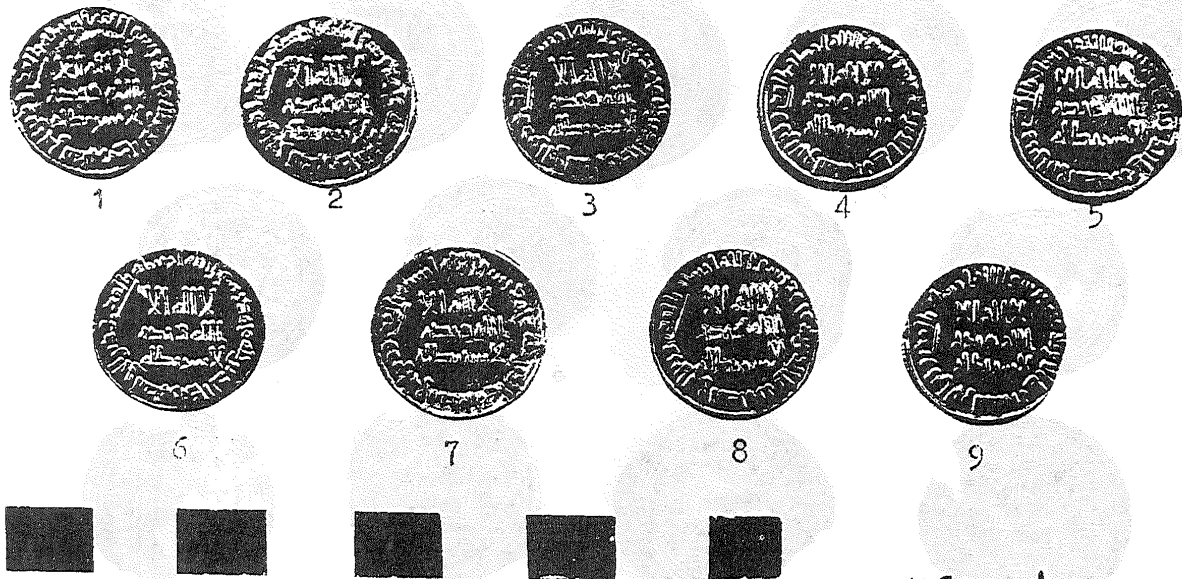
نقود فضية اموية من فئة الدرهم



البصرة - وادي السير  
١٩٧٤

٢ - ظهر

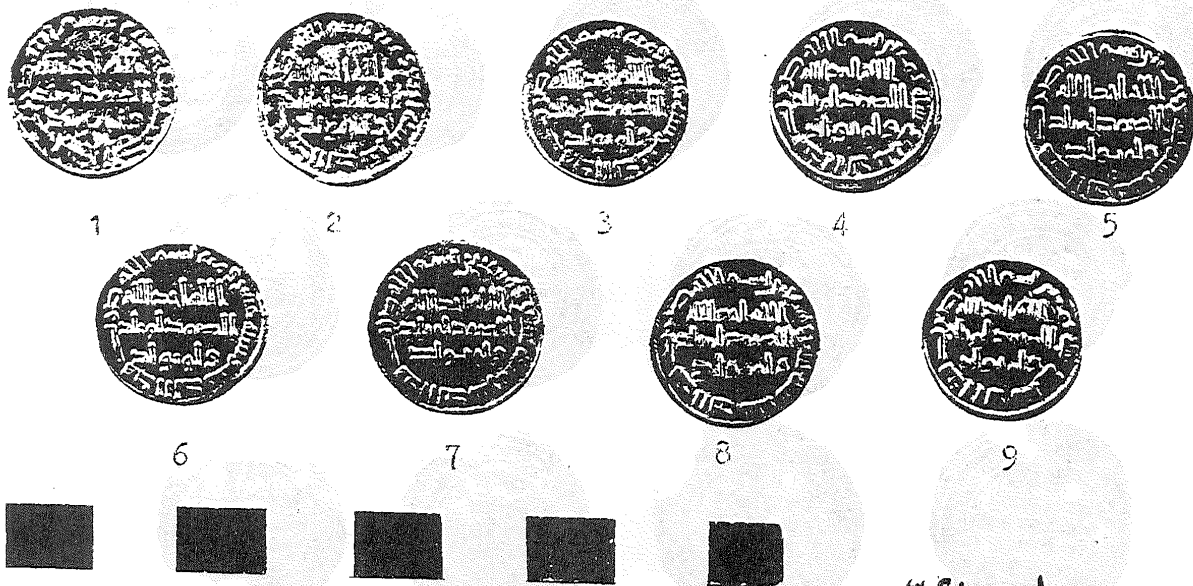
# نقود ذہبیۃ امویۃ من فنۃ الیاء



البصرۃ - وادی السیر  
۱۹۷۴

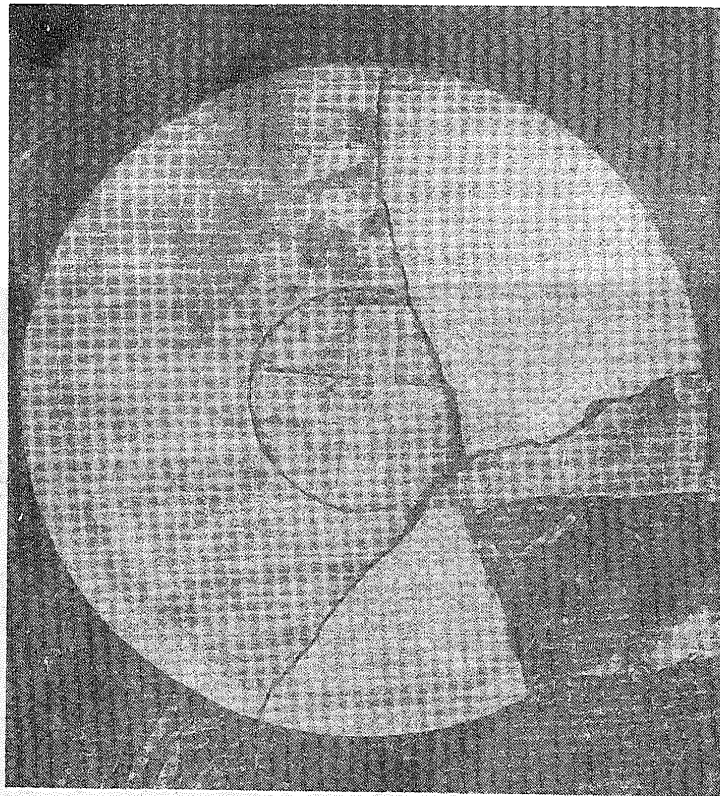
۱ - وجہ

# نقود ذہبیۃ امویۃ من فنۃ الیاء

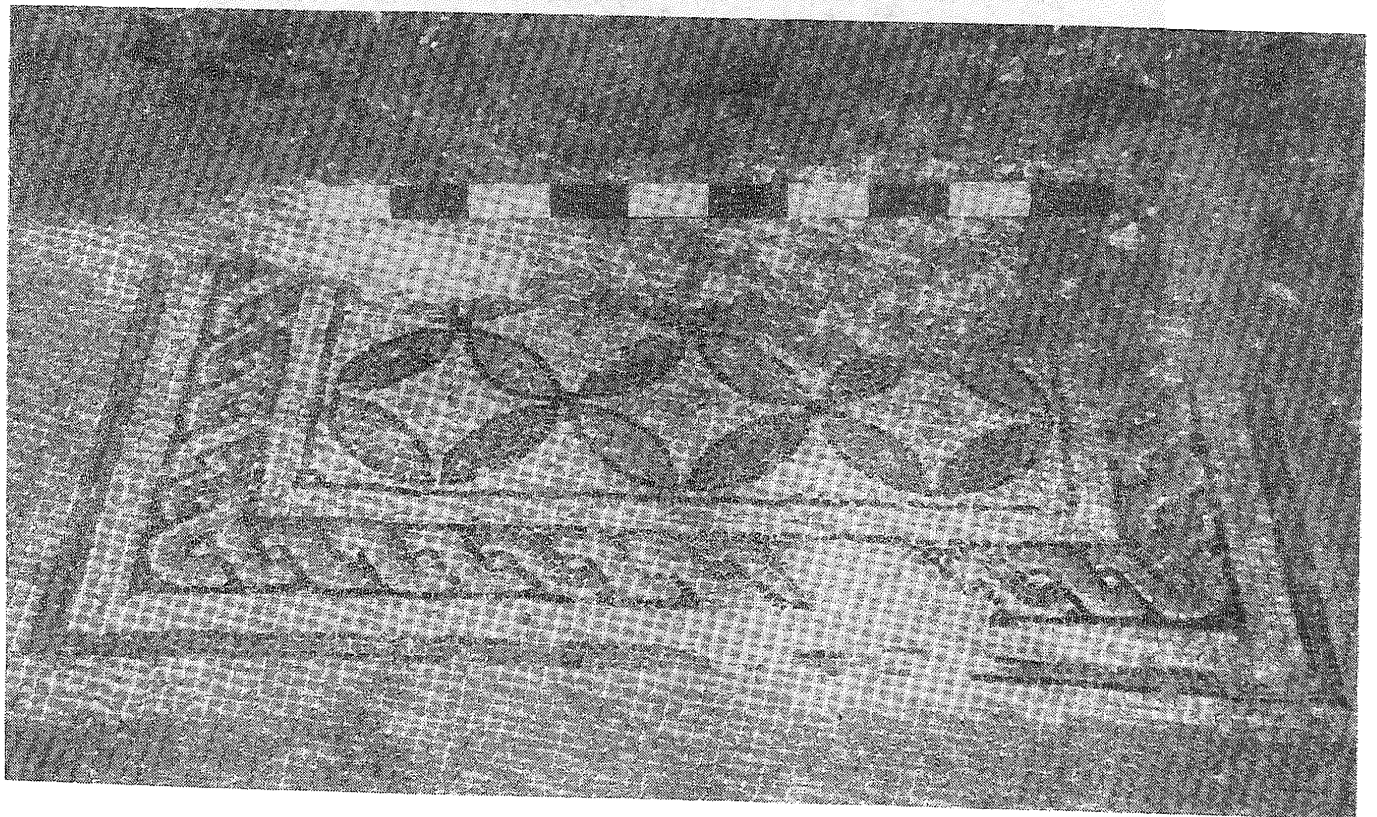


البصرۃ - وادی السیر  
۱۹۷۴

۲ - ظہر



١ - اللوحة الحجرية التي وجدت عند مدخل الكهف



٢ - الارضية الفسيفسائية الملونة في الغرفة الاولى





واجهه الكهف

# اللوحات



## الكرك/الغور :

سنة ١٩٧٣ اشرف كل من الدكتورين فالتر راست وتوماس شاوب على دراسة سطحية للمواقع الاثرية في منطقة أغوار الكرك والوديان المتصلة بها استمرارا للدراسات عن حفريات منطقة باب الذراع التي اجريت في سنوات ١٩٦٥ - ١٩٦٧ .  
باشراف الدكتور بول لاب .

## منطقة حسبان :

تابع فريق من بعثة جامعة اندروز الاميركية في حسان أعمال المسح الاثري في سنتي ١٩٧٣ -

١٩٧٤ في وادي حسبان والمنطقة المحيطة به الى أن يتصل بغور الاردن لمعرفة المواقع الاثرية والطرق القديمة الموصلة بالموقع .

## منطقة سحاب ١٩٧٣ :

قام فريق حفريات سحاب الذي نظمته دائرة الآثار العامة باشراف الدكتور معاوية ابراهيم بدراسة سطحية لعدد من المواقع الاثرية المحيطة ببلدة سحاب مع وصف طبوغرافي لهذه المواقع والمنطقة المتواجدة فيها ، وسيواصل هذا الفريق اعماله في السنة القادمة .

معاوية ابراهيم

دائرة الآثار العامة

أم الجبال ١٩٧٢ - ١٩٧٤ :

باشراف الدكتور بيرت ديفريس والذي تركزت أعماله على المسح المعماري والصور الجوية لمعرفة أطوار العمارة في الموقع وتفصيلات عن مخطط المدينة ومن أجل اجراء عمليات ترميم في المعالم الهامة .

مكاور - ١٩٧٢ :

باشراف البروفسور أوغسط شتروبل الالماني الذي قام باعداد مخطط طوبوغرافي للموقع مع مخطط للتحصينات والمعسكرات الرومانية . كخطوة لمتابعة أعمال الحفر والاستقصاء الاثري والتاريخي في المنطقة .

البتراء - ١٩٧٣ :

قام فريق اميركي من جامعة يوتا باشراف الدكتور فيليب هاموند باجراء مسح مغناطيسي لمنطقة البتراء ، الغرض منها اجراء تجارب على المخلفات المعمارية المطمورة . الا ان مثل هذه التجارب لم تعط ثمارها بعد . كما وقام فريق آخر فرنسي على حساب الحكومة الفرنسية باجراء مسح جوي مع تصوير فوتوغرامتري لمنطقة البتراء ومعالمها عامي ١٩٦٨ و ١٩٧١ وانضم الى الفريق العالمان الاثريان الاب جان ستاركي وميليك والدكتور فوزي زيادين من دائرة الآثار العامة بقصد تشييت الكتابات والقبور النبطية على هذه الصور . وسيصدر عن هذه النتائج تقرير مفصل .

معان - ١٩٧٣ :

قام فريق من دائرة الآثار العامة باشراف مفتش الآثار السيد غازي بيشه بدراسات سطحية للمواقع الاثرية في منطقتي معان والبتراء وتسم توثيق نتائجها الاولية في ملفات قسم التسجيل .

منها توسيع الساحة الامامية للكنيسة ، واستعمال الغرف كمرافق وبيوت سكن للكهنة .

منطقة الجمنازيوم :

اجرت جامعة اوتا الاميريكية سنة ١٩٧٤ باشراف الدكتور فيليب هاموند حفريات اثرية في البتراء كان الغرض منها الكشف عن بعض المباني القديمة المطموسة ، بعد ان اجري مسح الكترولونيا للمنطقة .

تم التنقيب في مكان يشرف على شارع الاعمدة شمالي قوس النصر فوق المبنى المسمى بالمجنازيوم وقد ظهر بناء مستطيل الشكل يتقدمة درج الى الجنوب وبداخله عدة صفوف من الاعمدة الكورنثية .

واغلب الظن ان البناء المكتشف قاعة استقبال تابعة لاحد القصور وسيعود الدكتور هموند لمواصلة الحفريات في الموقع خلال العام القادم .

## عمليات المسح الاثري

قامت مجموعات من دائرة الآثار العامة مع بعض الفرق الاجنبية بالتعاون مع مفتشي آثار المناطق باعمال مسح اثرية في المناطق التالية والدائرة بصدد اعداد تقارير مفصلة عن نتائج هذه التحريات بعد أن تم توثيقها في قسم تسجيل الآثار .

ام قيس - ١٩٧٤ :

باشراف الدكتور اوتو لوكس من معهد الآثار الالماني في القدس ، الغرض منها الاعداد لاجراء حفريات واسعة النطاق في الموقع المذكور . وقد أعدت البعثة مخططا يبين طوبوغرافية الموقع وجميع معالمه الأثرية الظاهرة .

الصخر استعمل للسكن اذ وجدت فيه ادوات عديدة منها جرة كبيرة وابريقان وسراجان من الفخار تعود الى اوائل العصر البيزنطي وتمتد أمام الكهف ساحة مستطيلة الشكل كما ان هناك درج نحت من الصخر يصعد الى سطح الكهف .

أما في المنطقة (ب) فقد ظهرت حجرة صغيرة ٢٧٠ × ٣ م في أرضها حفرة مستطيلة الشكل هي مدخل لقبر منحوت في الصخر . ومن الواضح ان القبر كان قد نحت قبل بناء الحجرة اذ دلت المكتشفات الاثرية في داخله انه يرجع الى اوائل القرن الاول ق م . بينما الحجرة الى القرن الاول الميلادي ، في القرن الثالث للميلاد بعد تهدم المنزل بنيت قناة عبر جداريه الشرقي والغربي كانت تصب في خزان للماء .

#### المدفن رقم ٨١٣ :

عند مخرج السيق في الجهة المقابلة للمدرج تقع عدة مدافن ضخمة من الطراز النبطي منها الضريح رقم ٨١٣ وكانت قد وجدت بداخله كتابة نبطية عام ١٨٩٦ تحمل اسم أحد وزراء الانباط .

بداخل المدفن (١١) خزانة في أرض كل واحدة منها حفرة مستطيلة يبلغ عمقها متر ونصف وطولها ثلاثة أمتار تقريبا . ومع أن هذه القبور كانت قد تعرضت للنهب قديما الا انه وجد بداخلها كتابات نبطية على الحجر أو على الجص وقطع عملة نحاسية واجزاء من عقد ذهبي تشير جميعها الى أن صاحب المدفن كان أحد الوجهاء .

تمتد أمام المدفن ساحة كانت تزينها الاروقة وعلى جانبيها الشمالي قاعة للضيافة .

#### ضريح الجرة ( المحكمة ) :

هو أحد الأضرحة من الطراز اليوناني - الروماني الذي تمتد أمامه ساحة ذات أروقة . وقد تحول هذا المدفن الى كنيسة بيزنطية في القرن الخامس . و في نفس الفترة بنيت أمام الساحة عدة أقواس ترتفع على ثلاثة أدوار . كان الهدف

في عام ١٩٧٤ جرت حفريات تجريبية في موقع ام الجمال على بعد حوالي ١٢ كم شمال شرقي مدينة المفرق بأشراف الدكتور بيرت ديفريس والدكتور جيمس ساور وتبين في هذه الاختبارات بأن الموقع قد مر بالمراحل : الرومانية المبكرة والمتأخرة ، البيزنطية المبكرة والمتأخرة وكذلك الاموية .

#### حمام الصراح :

سنة ١٩٧٤ قامت دائرة الآثار بأشراف السيد غازي بيشة باعمال حفر وترميم في حمام الصراح الاموي نظير عمره ، والذي كان متداعيا ومعرضا للزوال . فظهرت « قاعة العرش » والحمام بعرفه الثلاثة كما تم الكشف عن الاقنية الي تتوزع فيها المياه من الخزان الرئيسي الى الحمام والى الحديقة .

واظهرت الحفريات جامعا صغيرا كان يقوم الى الجهة الشمالية الشرقية من البناء وسارعت الدائرة الى ترميم جدران الحمام القائمة لثلاث تنداعي .

#### منطقة البتراء

تبرعت جمعية الطبيعة والتاريخ في نورنبرغ بواسطة رئيسها الدكتور مانفرد ليندنر بمبلغ من المال لاجراء تنقيبات في البتراء عام ١٩٧٣ بأشراف الدكتور فوزي زيادين من دائرة الآثار العامة . والذي زودنا بالمعلومات أدناه .

وقع الاختيار على السطح الغربي لجبل خبته لاجراء بعض التنقيبات والمعروف ان المدافن الضخمة التي يشتبه انها تخص ملوك الانباط تقع في تلك المنطقة .

في المنطقة ( أ ) الواقعة غربي ضريح الجرة ( المحكمة ) كشف النقب عن كهف منحوت في



زينت جدران هذا المدفن برسومات ملونة  
ظهر في احداها اخيل البطل اليوناني لحرب  
طرواده وهو يطارد عدوه هكتور بن بريام ملك  
طرواده خارج اسوار المدينة التي ظهرت احدى  
بواباتها في الصورة وقد كتب اسماهما باللون  
الاحمر ، وسبق أن عثر في منطقة اربد على قبور  
مزينة بالرسومات وهي غالبا ما ترجع للقرنين  
الثاني والثالث الميلادي وتدل على ما وصلت اليه  
هذه المنطقة من تقدم حضاري وفني .

## منطقة المفرق

### جاوه :

قامت بعثه من المدرسه البريطانية للآثار باجراء  
حفريات في موقع جاوه الى الشرق من المفرق على  
موسمين ١٩٧٣-١٩٧٤ باشراف السيد سفند  
هيلمز وتم كشف النقب عن مدينة محصنة محاطة  
باسوار يعود تاريخها الى اواخر الالف الرابع  
ق.م وحتى اوائل الالف الثالث ق.م أي في المرحلة  
المبكرة للعصر البرونزي القديم .

ولهذا الموقع اهمية خاصة بالنسبة لتاريخ  
العمارة والحياة الاجتماعية التي سادت في اوائل  
العصر البرونزي القديم في هذه المنطقة اذ ساد  
الاعتقاد بأن السكان في هذه المرحلة الزمنية كانوا  
يعيشون حياة البداوة أو انصاف البداوة وبانهم  
نبذوا حياة المدينة أو القرية الذي اخذ مفهومها  
يتضح في المراحل الزمنية السابقة وقد بنى اصحاب  
هذه النظرية اعتقادهم بسبب قلة المناطق السكنية  
في المواقع التي تم الحفر فيها . واقتصرت مخلفات  
هذا العصر على عدد كبير من المقابر ومحتوياتها .  
واذا بتحسينات جاوه ومنازلها تظهر الى الوجود  
وتجعل هؤلاء يعيدون النظر في الفرضية السالفة  
الذكر .

وميزه اخرى لهذه المدينة هو موقعها الجغرافي  
الذي يربط المنطقة مع أواسط سوريا وبلاد ما  
بين النهرين وستواصل البعثه المذكوره اعمالها  
 بالتعاون مع دائرة الآثار في موسم اخرى قادمة .

البعض بواسطة سراديب مقسمة من الداخل وتؤدي  
الى غرف مقصورة . ويوجد داخل هذه الكهوف  
ادراج وبوابات وعقود مبنية من الحجر لدعم  
السقف من الانهيار .

وكشفت الحفريات عن عدد من الغرف مبنية  
من الاحجار الصوانية تعود في عهدها الى العصرين  
البيزنطي المتأخر والعربي الاول . ويستدل من  
القطع الفخارية المبعثرة أن الموقع كان مأهولا  
بالسكان من العصر البرونزي القديم عبر العصور  
الحديدية والرومانية والبيزنطية والعربية .

ويحيط بالموقع مجموعات كبيرة من سلاسل  
حجرية لحفظ الاتربة من الانجراف في الوديان  
المحيطة بالموقع مما يدل على أن الحياة الزراعية  
كانت تمارس بشكل متطور ، كما توجد آبار  
عديدة وينبوعان من الماء في الجهتين الشمالية  
والجنوبية من الموقع .

ستواصل دائرة الآثار اعمال الحفر والاستقصاء  
الاثري في الموقع والمنطقة المجاورة .

## منطقة اربد

### المغير :

قامت دائرة الآثار سنة ١٩٧٤ باجراء حفريات  
في موقع المغير الى الجنوب الشرقي من مدينة اربد  
وقد كشف النقب عن مخلفات من العصر البرونزي  
القديم والمتأخر والعصر الحديدي والروماني  
وستواصل الدائرة الحفريات في موسم قادمة .

### بيت رأس :

في سنة ١٩٧٣ اكتشفت دائرة الآثار العامة  
مدفنا مزينا برسومات جدارية في قرية بيت رأس  
شمال غربي اربد والتي كانت تعرف قديما باسم  
كابيتولياس احدى مدن الديكابوليس العشر .  
والمدفن محفور في الصخر وكان يتألف من باحة  
وسطى وعلى جانبيها الشرقي والجنوبي قوسان  
فيهما قبور ثلاثة .

الانتقاد ويشك الكثير من علماء الآثار في صحته الموضوعية .

#### مابين :

استمكت دائرة الآثار العامة منزل السيد عارف حدادين حيث اكتشف الفسيفساء الشهيرة عام ١٩٣٤ . ولهذه الفسيفساء أهمية خاصة لأنها تصور ٢٥ كنيسة من شرقي الأردن وفلسطين في العصر البيزنطي وهي تعتبر مكمله لخارطه مادبا القديمة . وتنوي دائرة الآثار العامة ترميم الفسيفساء والمحافظة عليها وفتح المكان للزائرين .

وفي الموقع المسمى الدير الى الجنوب من مابين قام السيد محمود الروسان بمقتس اثار مادبا بالكشف عن كنيسة بينزنطية في شهر تشرين الثاني ١٩٧٣ وقدم عنها تقريرا اقتبست عنه هذه المعلومات .

لهذه الكنيسة حنية في الجهة الشرقية كانت مزينة برسومات الفرسكو كما وأن ارضيتها مزينة بالفسيفساء الملونة ذات الاشكال الهندسية والنباتية وقرب الهيكل ظهرت كتابة يونانية تشير الى أن احد الاثرياء واسمة ثيود وروس تبرع ببناء الكنيسة التي كانت تضم قبره . وكان هذا القبر في قبو داخل حجرة ملاصقة الى الجنوب من الكنيسة وقد وجد بداخله هياكل عظمية واساور نحاسية وبعض الخرز .

دلت المكتشفات على أن الكنيسة هدمت مرة واحدة من جراء زلزال . وكانت جميع اجزائها كاملة . ووجد هيكل عظمي لشخص قرب الباب الشمالي وفوقه حجر ويظهر أنه حاول الهرب من الكارثة .

أن طراز الفسيفساء التي تزين الكنيسة تدل على انها بنيت في اواخر القرن السادس او اوائل القرن السابع للميلاد ، اذ انها لا تحتوى على رسومات حية مطلقا .

وتعود هذه المقبرة الى القرن الاول ق.م وحتى الثالث الميلادي والمنطقة كبقية المناطق المحيطة بها غنية جدا بالقبور المنحوتة في الصخر وبحاجة الى المزيد من أعمال التنقيب .

#### حسبان :

تابعت جامعة اندروز الاميركية حفرياتها في موقع تل حسبان جنوبي مدينة عمان وقد بدأت عام ١٩٦٩ واستمرت حتى ١٩٧٤ بإشراف الدكتور سيففورد هورن ومن ثم الدكتور لارى جاراتي وقد تركز الحفر في وسط التل ( الاكروبوليس ) وعلى المنحدرين الجنوبي والغربي وكشفت البعثة عن المزيد من المقابر الرومانية والبيزنطية الواقعة الى الغرب والجنوب الغربي من التل ( راجع حولية دائرة الآثار العامة مجلد ١٦ (١٩٧١) ص ٥٠ .

توبع العمل في طبقات وابنية العصر الايوبي / المملوكي حيث كشف عن المزيد من الغرف المعقودة في منطقة ( Area A ) والتي عثر فيها على حمام وفرن يعودان الى الفترة نفسها ومن المحتمل أن تكون قد بنيت في العهد الاموي .

وتم الكشف عن بقية ارضيات وتوابع الكنيسة البيزنطية على وسط التل . وظهر في المنحدر الجنوبي ( Area B ) خزان ماء وجدت فيه كسر فخارية من العصر الحديدي الثاني بعضها مكتوب بالارامية كما وعثر على جره مختومه من العصر نفسه .

لم يوفق الحفاريون الى الان في العثور على اسوار وتحصينات الموقع وكان هذا محور اهتمامهم في موسم ١٩٧٣ وفي موسمي ١٩٧٣-٧٤ ظهرت بعض الكسر الفخارية من العصر الحديدي الاول ( حوالى القرن الثاني عشر ق.م ) مرتبطة ببعض الجدران المتقطعة . يعول القائمون على البعثة أهمية كبرى على هذا الاكتشاف ويحاولون ربطه بما جاء في التوراه عن مدينة حسبان القديمة ، مما سيدفعهم لمتابعة أعمال الحفر . ان هذا الاسلوب في التنقيب الاثرى هو في الواقع عرضة لكثير من

## منطقة السلط

ذات رأس :

يوجد في هذه البلدة الاثرية الواقعة جنوبي الكرك بناء روماني الطراز ، لا يزال في حالة جيدة .

وقد وصف قديماً بأنه معبد ، ولكن دائرة الآثار اجرت تنقيبات تحت البناء وكشفت عن عدة مدافن منحوتة في الصخر ، وجد بداخل احداها اساور ذهبية مما يدل على أن البناء كان مدفنا لاحدى العائلات الثرية في المنطقة وقد اشرف على الحفريات السيد سامي الرضي مفتش اثار الكرك .

## منطقة الطفيلة

بصريه :

واصلت المدرسه البريطانية للآثار باشراف السيدة كريستال بينت حفرياتها في بصيره (راجع حولية دائرة الآثار مجلد ١٦ (١٩٧١) ص ٥) . وكشفت مواسم ١٩٧٣-١٩٧٤ عن العلاقة ما بين جدار المدينة بابنية الاكروبوليس ، وعثر في المنحدر الشمالي على مجموعه من الابنية السكنية واذا ما قيست بالاكروبوليس فهي بسيطة للغاية . وقد تمكنت السيدة بنيت في الاونه الاخيره من تقسيم المخلفات المعمارية الضخمة التابعة للاكروبوليس الى فترتين رئيسيتين نسبتهما الى الفترة الاشورية الحديثة لتقارب مخططات ابنية بصيره مع القصور والمعابد الاشورية ، وهذه اول مرة تلاحظ فيها مثل هذه التأثيرات على عمارة العصر الحديدي في جنوبي الاردن .

مجادل :

انهت دائرة الآثار موسما من أعمال التنقيب في خربة مجادل التي تقع على بعد ١٢ كم الى الشمال من الطفيلة باشراف الدكتور معاوية ابراهيم والسيد صبري عبادي ومحمد مرشد خديجة . واسفرت الحفريات عن اكتشاف حصن عسكري بيزنطي متأخر تحت الارض ، وهو عبارة عن كهوف منحوتة في الصخر تتصل ببعضها

حفريه زي الغربي :

تقع زي الغربي حوالي ١٢ كم الى الشمال الغربي من مدينة السلط ، على اثر قيام اصحاب الارض باعمال الحرث ، عثر على ارضية فسيفسائية لكنيسة بيزنطية تعود للقرن الخامس أو السادس الميلادي .

وجرت سنة ١٩٧٤ بعض الحفر التجريبية باشراف السيد محمد مرشد من دائرة الآثار ، الغاية منها معرفة تاريخ الكنيسة والكشف عن معالمها ومن خلال اعمال الحفر ظهر أن الجزء الشمالي من الكنيسة ذو ارضية فسيفسائية كاملة ذات اشكال ورسومات هندسية وادمية وحيوانية مع تسعة حروف يونانية تعني جورجوس . اما الجزء الاوسط من الكنيسة فلم يبق منه سوى جزء بسيط من الفسيفساء وقواعد الاعمدة وقامت الدائرة بالكشف عن بقية الجدران التابعة للكنيسة .

وقد ظهر اثناء الحفريات مجموعة من الفخاريات والحلي البيزنطية والاسلامية مع ابريق برونزي . كما وكشف عن قبر قرب الكنيسة ومعصره للزيتون أو النبيذ .

## منطقة الكرك

المدينة :

قام فريق اسباني باشراف الأب الفاري بمسح لخربة المدينة القديمة الواقعة شمالي الكرك بالقرب من بلدة السّماكيه وذلك تمهيدا لاجراء تنقيبات اثريه في الموقع . والخربة عبارة عن قلعة على قمة جبل تشرف على وادي الموجب وهي محاطة بالاسوار ولا تزال ابراجها واضحة المعالم ويعتقد انها ترجع الى العصر الحديدي الثاني .

مدينة مادبا وهي كنيسة السلايطة ، كنيسة العذراء مريم والقديس يانوس . وكنيسة غيشان وبذلك يكون عدد الكنائس البيزنطية التي تم الكشف عنها في مدينة مادبا اربعة عشر كنيسة وهناك كنائس اخرى في قرية كفير ابو سربوط على بعد ٢ كم الى الشمال من مادبا وتتراوح تواريخ هذه الكنائس المبنية على شكل باسيليك بين القرنين السابع والسادس ب.م . وقد رصفت ارضيتها بالفسيفساء الملونة .

### الشارع الروماني :

كما وكشفت الدائرة باشراف السيد محمود الروسان على مساحة كبيرة من شارع المدينة في العهدين الروماني والبيزنطي على غرار الشوارع الرومانية المبلطة والمحاطة بالاعمدة كما هو الحال في مدينة جرش وغيرها من المدن الرومانية المعروفة .

وستؤخذ هذه المكتشفات بعين الاعتبار في تنظيم المدينة المكتظة بالمساكن لمعرفة مخططها القديم وللكشف عن معالمها الأثرية الهامة .

### بيت زرعاً :

على اثر قيام مجهولين بحفر مجموعة من المقابر في موقع بيت زرعاً شمال مادبا قررت الدائرة اجراء دراسة لهذه المقابر وقد انتدب للاشراف على اعمال التنقيب السيد محمد مرشد خديجه واستمر العمل حوالي ثلاثة اسابيع من شهر أيار سنة ١٩٧٤ . وتم الكشف عن مقبرتين فيها خزانات للدفن ، وأحد هذه المقابر تتألف من طابقين وفيها ٢٣ فتحة عثر بداخل اثنتين منها على هيكلين عظيمين لرجل واخر لامرأة ، حيث وجد معها مجموعة من الخرز استعملت عقوداً لتلك المرأة ومن بين الخرزات وجد ختم اسطواني يعود الى الفترة ما بين القرن الرابع عشر والثاني عشر ق.م كما عثر على مجموعة من الاسرجه والقطع الفخارية وقارورة زجاجية صغيرة ( راجع ص ١٥٧ ) .

تتضمن عددا كبيرا من اللقى المعدنية من البرونز والحديد ومنها مجموعة من الخناجر ورؤوس سهام واساور وغير ذلك وبعض الحلى والقلائد بالاضافة الى اواني فخارية ورخاميه . وهناك رأس لتمثال مصري صغير وبعض الجعران ومما يلفت النظر ثمان جرار تقابل الواحد الاخرى ورتبت بحيث تشكل حرف (M) وكانت تستعمل لدفن الموتى وهناك تابوت خشبي لمحارب واخر لطفل وجد تحت احد الجرار . ولهذه المكتشفات التي يرجع تأريخها الى بداية العصر الحديدي اهمية خاصة بالنسبة لتاريخ العمونيين والمنطقة الوسطى للاردن .

يلي ذلك العصر البرونزي المتأخر حيث تم الكشف عن جزء من بناء كبير هام يعود الى القرن الرابع عشر/ القرن الثالث عشر ق.م . وارضيات تتبع هذا البناء (Area E) وهناك قبر من العصر البرونزي المتوسط (القرن الثامن عشر ق.م) وجد في (Area A) كهف صخري يضم مجموعة من الاواني الفخارية والهياكل العظمية .

واقدم مخلفات مدينة سحاب كهوف صخرية يتصل بها جدران من الحجر وتضم ارضيات متعاقبة كانت تستعمل للسكن لفترات طويلة . ويظهر أن سكان الكهوف كانوا يمارسون حياة الزراعة بدليل وجود بعض الادوات الزراعية والحبوب ، ووجد بداخلها بعض الاواني والكسر الفخارية التي تعود الى الالف الرابع ق.م . كما وعثر على هذا الفخار في ارضيات متصله بجدران حجرية بدائية لم تتوضح ماهيتها وقد اعيد استعمال عدد من هذه الكهوف كمقابر من عصور لاحقه : البرونزي القديم والبرونزي المتوسط والحديدي الاول وستواصل دائرة الآثار اعمار التنقيب والبحث عبر السنوات القادمة في هذا الموقع الهام والمنطقة المحيطة به .

### منطقة مادبا

الكنائس البيزنطية : قامت دائرة الآثار بالكشف عن مجموعة من الكنائس البيزنطية في

درجات ٠ ويوجد في الجهة الشرقية تابوت حجري بفضاء كان قد وضع بداخل الكهف ٠

الكهف الثالث : يحتوى على اربعة عشر مدفنا وله ارضية محاطة بمقاعد ٠ يعود تاريخ هذه المدافن الى العصر الروماني ( القرن الثالث بعد الميلاد ) وقد وجد بها اسرجه فخارية وعدد من الاواني الزجاجية وحلق وبعض الكسر الفخارية ٠

#### ناعور :

اكتشفت مقبرة في بلدة ناعور التي تبعد خمسة عشر كم غربي مدينة عمان وهذه المقبرة منحوتة في الصخر ومغطاه بحجر مستطيل الشكل كما هو الحال في عدد من قبور المنطقة ، وفي وسطها وتحت المدخل مباشرة توجد ساحة صغيرة ٠ وتتألف هذه المقبرة من خمسة مدافن وضع في كل واحد منها اكثر من شخص وذلك لوجود اكثر من جمجمة في القبر الواحد ٠ وقد اكتشف بها بعض الاسرجه والاساور البرونزية والخرز التي يعود عهدها الى العصر الروماني والبيزنطى ٠

وقد تم حفرها سنة ١٩٧٣ باشراف السيد صبري عبادي من دائرة الاثار العامة ٠

#### سحاب :

انهى فريق دائرة الاثار موسما ثانيا (١٩٧٢-١٩٧٣) باشراف الدكتور معاوية ابراهيم في موقع سحاب ١٢ كم الى الجنوب الشرقي من عمان ( راجع حولية دائرة الاثار مجلد ١٧ (١٩٧٢) ص-٢٣-٣٦ ) وقد كشف النقب عن مدينة من العصر الحديدي ٠ غالبا ما كانت محاطة بتحصينات دفاعية ويظهر أن المدينة مبنية من الحجر والطوب يعود تاريخها الى القرن الثاني عشر ق.م ٠ وعثر في احد هذه الابنية على مجموعة من الاواني الفخارية كبيرة الحجم التي كانت تستعمل لخزن الحبوب أو السوائل وبعضها مختوم باشكال انسانية أو حيوانية أو زخرفية ٠ وفي الفترة نفسها وجد قبر كبير في السطح الغربي للموقع غني بموجوداته التي

واربعة كهوف تم العمل باحداها ٠ وقد اشرف على الحفريات في الموقع السيد عبد الجليل عمرو من دائرة الاثار العامة والذي نشر تقريرا اوليا عن نتائج التنقيبات ( حولية دائرة الاثار الاردنية عدد ١٨ ص ٧٣ ) ٠ وجد داخل الكهف اقواس وحنايا مبنية من الحجارة والطين وذلك لدعم السقف ، وتعود هذه الاقواس الى فترة متأخرة من تاريخ الكهف ٠ وعلى مدخل الكهف وجدت حجارة مختلفة الاحجام مغطاه بقصارة بيضاء استخدمت فيما بعد كتسوية لارضية مسجد مملوكي تم الكشف عنه مع محرابه ٠

ومن المعروف أن المنطقة كانت مأهولة بالسكان من العصر الحديدي وحتى القرن الرابع ق.م ومن ثم العصر المملوكي على نطاق واسع وستقوم دائرة الاثار مستقبلا بمتابعة الحفريات في الموقع المذكور ٠

#### مدافن الرجيب :

تقع هذه المدافن على بعد حوالي ١ كم شرقي « كهف الرجيب » وقد عثر عليها سنة ١٩٧٣ اثناء شق طريق الحزام الاخضر الذي يحيط بمدينة عمان ٠ ولا شك انها امتداد للكثير من المدافن الاخرى المتواجده في المنطقة نفسها ٠

وقد اشرف السيد غازي بيشه من دائرة الاثار العامة على حفر ثلاثة من هذه المدافن والتي هي عبارة عن كهوف مقطوعة في الصخر ( راجع حولية دائرة الاثار عدد ١٨ ص ٦٣ ) ٠

الكهف الاول : له بوابه مسدودة بحجر مستطيل الشكل تتخلله حجارة صغيرة وبداخله ثلاثة عشر حنية مقطوعة في جدران الكهف ، ووجد في كل حنية اكثر من جثة ٠ في الجهة الجنوبية الشرقية وفي وسط الكهف بثران يغطى كل واحد منهما حجر مستطيل الشكل ولم يعثر بداخلهما على شيء ٠

الكهف الثاني : منحوت في الصخر بطريقة غير منظمة وله بوابه تؤدي الى المدخل بواسطة اربع

بعض القطع الفخارية وتمثال فخاري صغير  
لعشترت من العصر الحديدي الاول .

وهكذا فقد أصبح لدينا معلومات كافية تدل  
على أن مدينة ربة عمون كانت تمتد على المصطبة  
السفلى من القلعة .

وفي الجهة الشرقية وعلى بعد مئتي متر من  
المنطقة ( أ ) بوشر العمل في موقع جديد (ب)  
لاختبار بعض الجدران التي كانت ظاهرة  
للعيان . وقد تم اكتشاف سور ضخيم عرضه  
حوالي ستة أمتار ويرجع الى فترتين مختلفتين ،  
ففي الفترة الاولى بني جدار عرضه ثلاثة أمتار  
وذلك في زمن البطالسة ( القرن الثالث ق م )  
ثم أضيف اليه في عصر السلوقيين ( القرن الثاني  
ق م ) جدار بنفس العرض . وقد وجدت قطع  
نقدية برونزية وقطع فخارية من كلا العصرين .

والى الغرب من الاسوار ظهر جزء من بناء  
مستدير الشكل واجهته من الحجر المنحوت على  
الطريقة الرومانية وداخله ملئ بالحجارة الغشيمة  
ويعود الى أوائل القرن الاول للميلاد . وربما كان  
هذا البناء برجاً ونأمل بالكشف عنه في موسم  
لاحق .

ان هذه المعالم الجديدة لمدينة عمان -  
فيلادلفيا في العصر الهلنستي وبداية العصر  
الروماني لهي بالغة الأهمية اذا عرفنا ان هذه  
الفترات هي مظلمة في تاريخ المدينة .

#### البصة :

في منطقة البصة وعلى بعد ٣ كم الى الغرب من  
وادي السير تم اكتشاف كهف زينت واجهته  
الصخرية بمثلت وقوس وخمسة صلبان . فتحرك  
فريق من دائرة الآثار العامة باشراف ثلاثة من  
مفتشي الآثار : السيد صبري عبادي والآنسة  
رحاب الحديد والآنسة زاهدة صفر التي اعدت  
تقريراً عن نتائج العمل في الموقع ( ص ٥ من هذا  
العدد ) .

أن من اهم ما تم اكتشافه في هذا الكهف  
مجموعه من الدنانير الذهبية والدرهم الفضية التي  
تعود تواريخها الي العصر الاموي من زمن الخليفة  
عبد الملك بن مروان وابنائة الوليد وسليمان  
ويزيد الثاني ، وهشام وهناك نقود اخرى تحمل  
اسم الخليفة عمر بن عبد العزيز . كما وعثر على  
مجموعة من الاواني والكسر الفخارية من العصرين  
الاموي والمملوكي تحمل زخارف والوانا ، وبعضها  
يحمل كتابات بالخط الكوفي .

#### خلده :

تقع خلده على بعد ٢ كم جنوبي شرقي صويلح  
(شمال غربي عمان) وفي الموقع برج مربع الشكل  
بقي منه ظاهراً ثمانية مداميك من الحجارة الضخمة  
وفي عام ١٩٧٤ قامت الجامعة الاردنية باجراء  
حفريات غرضها الرئيسي تدريب عدد من طلاب  
قسم التاريخ والاثار باشراف الدكتور جيمس  
ساور وبالتعاون مع دائرة الآثار العامة .

وقد تبين نتيجة التنقيبات بان البرج بني في  
العصر الحديدي الثاني (٧٠٠-٥٠٠ ق م) وأعيد  
استعماله في العصر الروماني المتأخر حتى  
البيزنطي المبكر (٢٥٠-٣٦٥ م) ومن المحتمل  
أنه تهدم من جراء هزة أرضية سنة ٣٦٥ م .  
أعيد استعمال البرج ثانية أثناء حكم الماليك  
للمنطقة في الفترة الواقعة ما بين (١٢٦٠-١٥١٦ م)  
ومن المحتمل أنه بقي مستعملاً بعد هذا التاريخ .  
وقد عثر على قطع فخارية تمثل جميع هذه الفترات  
الزمنية .

هناك ثمانية ابراج أخرى في منطقة خلده لم  
تشمّلها التنقيبات الاثرية بعد . وتتواجد هذه  
الابراج حول طريق قديمة تم الكشف عنها على  
طول الجانب الشمالي للموقع والتي غالباً ما كانت  
توصل صويلح بعمان .

#### مقابلين :

سنة ١٩٧٣ اكتشف في مقابلين التي تقع على  
بعد ٤ كم جنوبي عمان مجموعة من الابنية القديمة



# الحفريات الأثرية في الأردن

١٩٧٣ - ١٩٧٤

بقلم : الدكتور معاوية ابراهيم

أما حفريات دائرة الآثار الأردنية لعام ١٩٧٤ بإشراف السيد أحمد عوده فقد أظهرت بان البرج كان قد انشيء في العصر الحديدي كبقية الابراج العمونية حول مدينة عمان ، وأعيد استعماله مع اضافات داخلية في العهدين الروماني والبيزنطي .

## حفريات القلعة لعام ١٩٧٣ :

استؤنفت التنقيبات الأثرية في جبل القلعة بعمان خلال شهر تشرين الأول عام ١٩٧٣ بإشراف الدكتور فوزي زيادين الذي زدنا بهذه المعلومات بالاشتراك مع السيدة حنان الكردي والآنسة رحاب الحديد والسيد عمر يونس ، وقد تركزت الحفريات في منطقتين من المصطبة السفلى .

في المنطقة ( أ ) التي أجريت فيها التنقيبات منذ عام ١٩٦٨ (١) استمرت الحفريات في نفس الموقع . وبالإضافة الى الطبقات السابقة التي شملت العصر الروماني والهلنستي والحديدي تم اكتشاف طبقة جديدة من الأبنية تعود الى القرن الثامن قبل الميلاد . ولهذه الأبنية أرضية من الحور المرصوص وجدرانها مطلية بالجص من الداخل . والى الجنوب وجدت طبقة حريق سميكة ربما لها صلة بالحملات الآشورية - البابلية على البلاد . وتحت هذه الأبنية العمونية دلت الحفريات على وجود طبقات ترجع الى القرنين التاسع والعاشر ق.م دون ظهور معالم عمرانية . كما اكتشفت

ركزت دائرة الآثار الأردنية أعمال التنقيب في المواقع المهددة بالخطر نتيجة لتوسع الحركة العمرانية والمشاريع الانشائية وكذلك أعمال الري والزراعة في مناطق متعددة ، فقامت بعدد من الحفريات في مثل هذه المواقع وساهمت بحفريات أخرى مع مؤسسات ومعاهد أثرية محلية وأجنبية . وقامت مجموعات من دائرة الآثار العامة مع بعض الفرق الأجنبية بالتعاون مع مفتشي الآثار في المحافظات بأعمال مسح في مناطق متعددة ، والمشرفون عليها بضدد اعداد تقارير مفصلة عن نتائج هذه التحريات بعد أن تم توثيقها مع الصور والرسومات في قسم تسجيل الآثار التابع لدائرة الآثار العامة .

## منطقة عمان

### رجم الملفوف الشمالي :

يقع هذا الرجم غربي الدوار الرابع في جبل عمان وهو أحد الابراج العمونية التي كانت تحيط بعمان « ربة عمون » من الجهة الشمالية الغربية . وقد قامت جامعة اوبسالا الاميركية بإشراف الدكتور روجر بوراس سنة ١٩٦٩ باجراء حفريات تجريبية بهذا البرج الذي بني من الحجارة الصوانية وذلك بفتح مربعين احدهما من الخارج وآخر من الداخل ، وتبين بأن البرج يتألف من طابقين أو ثلاثة طوابق . كشف عن المدخل الرئيسي للبرج وعن اربع غرف بدون سقف وقد اقترح الدكتور بوراس بأن تاريخ البرج روماني .

(١) راجع حولية دائرة الآثار - عدد ١٨ (١٩٧٣) ص ١٧ - ٣٥ .

المحتويات	الموضع		الرقم
	الغرفة	الطبقة	
قطعة نقدية ذهبية أموية من فئة الدينار تعود الى عام ١٠٤ هـ (٧٢٣-٧٢٢ م) . قطرها ٢٢ مم ، ووزنها ٤٢٠ غم .	الاولى	VI	٢٠
قطعة نقدية ذهبية أموية من فئة الدينار تعود الى عام ١١٠ هـ (٧٢٩-٧٢٨ م) . قطرها ١٩ مم ، ووزنها ٤٢٠ غم .	الاولى	VI	٢١
قطعة نقدية فضية أموية من فئة الدرهم ضربت في دمشق وتعود الى عام ١٧ هـ (٧٠٦-٧٠٥ م) . قطرها ٢٨ مم ، ووزنها ٢٥٠ غم . متآكلة حوافها .	الاولى	VI	٢٢
قطعة نقدية فضية أموية من فئة الدرهم ، ضربت في سجستان وتعود الى عام ٩١ هـ (٧٠٩-٧١٠ م) . قطرها ٢٧ مم ، ووزنها ٢٥٠ غم .	الاولى	VI	٢٣
قطعة نقدية فضية من فئة الدرهم ، أموية ، ضربت في واسط ، وتعود الى عام ٩٣ هـ (٧١٢-٧١١ م) . قطرها ٢٦ مم ، ووزنها ٢٢٠ غم .	الاولى	VI	٢٤
قطعة نقدية أموية من فئة الدرهم ، ضربت في السوس وتعود الى عام ٩٩ هـ (٧١٧-٧١٨ م) . قطرها ٢٦ مم ، ووزنها ٢٥٠ غم .	الاولى	VI	٢٥
زند حديدي .	الاولى	V	٢٦
قطعة معدنية صغيرة .	الاولى	V	٢٧
قطعة معدنية صغيرة .	الاولى	V	٢٨
مسمار حديدي متآكل .	الاولى	V	٢٩
مسمار حديدي متآكل ، مكسور ، قطعتين .	الاولى	V	٣٠
سلسلة معدنية .	الثانية	I	٣١
خاتم فضي ، غير مزخرف ، مكسور .	الثانية	I	٣٢
قطعة نقدية برونزية أموية من فئة الفلوس (لوحة ٨ - ٢) .	الثانية	II	٣٣
قطعة نقدية بيزنطية .	الثانية		٣٤

زاهدة صفر

دائرة الآثار العامة

المحتويات	الموضع		الرقم
	الطبعة	الغرفة	
شعار برونزي ، تتوسطه زخرفة ، وله ثلاث نتوءات في الخلف .	V	الاولى	٧
قطعة نقدية ذهبية أموية من فئة الدينار ، تعود الى عام ٩٦ هـ (٧١٤-٧١٥ م) . قطرها ٢٠ مم ، ووزنها ٤٢٠ غم .	VI	الاولى	٨
قطعة نقدية ذهبية أموية من فئة الدينار ، تعود الى عام ٩٧ هـ (٧١٥-٧١٦ م) . قطرها ٢٠ مم ، ووزنها ٤٢٠ غم .	VI	الاولى	٩
قطعة نقدية ذهبية أموية من فئة الدينار ، تعود الى عام ١٠٠ هـ (٧١٨-٧١٩ م) . قطرها ١٩ مم ، ووزنها ٤٢٠ غم .	VI	الاولى	١٠
قطعة نقدية ذهبية أموية من فئة الدينار ، تعود الى عام ٨٧ هـ (٧٠٥-٧٠٦ م) . قطرها ٢٠ مم ، ووزنها ٤٢٠ غم .	VI	الاولى	١١
قطعة نقدية ذهبية أموية من فئة الدينار ، تعود الى عام ٨٠ هـ (٦٦٩-٧٠٠ م) . قطرها ١٩ مم ، ووزنها ٤٢٠ غم .	VI	الاولى	١٢
قطعة نقدية فضية أموية من فئة الدرهم ضربت في واسط ، وتعود الى عام ١٥٠ هـ (٧٢٣-٧٢٤ م) . قطرها ٢٦ مم ، ووزنها ٢٥٠ غم .	VI	الاولى	١٣
قطعة نقدية فضية أموية من فئة الدرهم ضربت في واسط وتعود الى عام ٨٧ هـ (٧٠٥-٧٠٦ م) . مكسورة قطرها ٢٢ مم ، ووزنها ٢٦٣ غم .	VI	الاولى	١٤
قطعة نقدية فضية أموية من فئة الدرهم ضربت في ماهي وتعود الى ٩٣ هـ (٧١١ - ٧٢١ م) . قطرها ٢٧ مم ووزنها ٢٦٣ غم .	VI	الاولى	١٥
قطعة نقدية فضية أموية من فئة الدرهم ضربت في واسط وتعود الى عام ٨٧ هـ (٧٠٥-٧٠٦ م) . مكسورة وممرمه قطرها ٢٩ مم ، ووزنها ٢٦٠ غم .	VI	الاولى	١٦
قطعة نقدية فضية أموية من فئة الدرهم ضربت في الكوفة ؟ وتعود الى عام ٩٣ هـ (٧١١-٧١٢ م) . قطرها ٢٧ مم ، ووزنها ٢٣٠ غم . مكسورة وممرمه .	VI	الاولى	١٧
قطعة نقدية فضية أموية من فئة الدرهم ضربت في واسط والتاريخ الذي تعود اليه غير واضح ، قطرها ٢٧ مم ، ووزنها ٢ غم .	VI	الاولى	١٨
قطعة نقدية ذهبية أموية من فئة الدينار تعود الى عام ١١٠ هـ (٧٢٨-٧٢٩ م) . قطرها ١٩ مم ، ووزنها ٤٢٠ غم .	VI	الاولى	١٩

### الظهر

الوسط : الله احد الله  
الصمد لم يلد  
ولم يولد ولم يكن  
له كفوا أحد

الطوق : محمد رسول الله ارسله بالهدى ودين  
الحق ليظهره على الدين كله ولو  
كره المشركون

بالاضافة الى مكان الضرب والتاريخ ، الا انها  
لا تحمل أسماء الخليفة أو الولاة الذين أمروا  
بضربها . وجميع هذه القطع النقدية - الذهبية  
والفضية - تعود الى فترة حكم الخليفة عبد الملك  
بن مروان وأولاده .

والقائمة التالية تحتوي على هذه القطع  
النقدية بالإضافة الى المكتشفات الأخرى داخل  
الكهف ومواضعها :

ولا تحمل اسم الخليفة أو مكان الضرب ،  
ونص العبارة يوضح أنها ضربت في الاقاليم  
الشرقية . اذ ان ما ضرب في الاقاليم الغربية يختلف  
عن هذه في انها تتوقف عبارة الوسط عند وحده ،  
في الوجه ، وتتوقف عبارة الطوق عند ودين  
الحق - أما على الظهر فلا توجد كلمة بسم الله  
في الطوق - انما عبارة الوسط هي : بسم الله  
الرحمن الرحيم (٣) .

وبالنسبة للدرهم الفضية فهي تحمل  
العبارات القرآنية التالية :

### الوجه

الوسط : لا اله الا

الله وحده

لا شريك له

الطوق : بسم الله ضرب هذا الدرهم في سنة ٠٠

المحتويات	الموضع		الرقم
	الطبقة	الغرفة	
قطعة نقدية ذهبية أموية من فئة الدينار ، تعود الى عام ٨٠ هـ (٦٦٩-٧٠٠ م) قطرها ١٩ مم ، ووزنها ٤ر٢٠ غم .	VI	الاولى	١
قطعة نقدية فضية أموية من فئة الدرهم تعود الى عام ٨٥ هـ (٧٠٤ م) ضربت في واسط . قطرها ٢٨ مم ، ووزنها ٢ر٦٥ غم .	VI	الاولى	٢
قطعة نقدية فضية أموية من فئة الدرهم تعود الى عام ١٠٧ هـ (٧٢٥-٧٢٦) . قطرها ٢٦ مم ، ووزنها ٢ر٦٠ غم .	VI	الاولى	٣
قطعة نقدية فضية أموية من فئة الدرهم تعود الى عام ١٠٠ هـ (٧١٨-٧١٩ م) مكسورة .	VI	الاولى	٤
قطعة حجرية دائرية الشكل ، حفر في وسطها صليب ، كانت تستخدم سطحاً لمائدة تستعمل في الطقوس الدينية ، مكسورة . قطرها ٧٦ سم .		المدخل	٥
سكين حديدي ، حافته السفلى متآكلة ، طولها ١٣ سم	VI	الاولى	٦

(٣) فجر السكة (نفس المرجع) .

والفسيفساء مدمرة هنا أيضا من الجانبين الشمالي والغربي ، حيث تتوقف في الجانب الشمالي عند حافة قبر حفر في الصخر بطول ١٨٠سم وعرض ٨٠سم مغطى بأحكام بألواح بطول ويبدو أنه لم يستعمل اذا اننا لم نجد بداخله شيء سوى ما كان قد تسرب اليه من التراب خلال شقوق في سطحه ( لوحة رقم ٧ ) أما في الجانب الغربي فقد اقيمت مصطبة من الحجارة المشدبة مبنية بشكل معين لم يعرف الغرض من بنائها حتى الآن . تعلق هذه المصطبة نافذة فتحت في الجدار الشرقي تؤدي الى القسم المحاذي . ويوجد في الزاوية الشمالية الغربية عمود يبلغ ارتفاعه متران ونصف المتر ، يتفرع من العمود قوس يرتكز على عمود آخر في الجانب الغربي .

وبالرغم من توقف أعمال الحفر فقد تم الدخول الى بقية الأجزاء حيث أن نسبة الطم هناك ليست بالعلو الذي كانت عليه في الغرفتين السابقتين مما مكننا من القاء نظرة سريعة على داخل الكهف وعمل مخطط له ( لوحة ٨ - ١ ) .

ومن خلال المخطط يبدو لنا أن هذا الكهف غير محدد الشكل وقد تم تقسيمه من الداخل في الأصل على نمط الكنائس البيزنطية بشكل البازيليكا رواق أوسط تحفه ثلاث أعمدة في كل جهة تحمل أقواسا ما زال القوسان الأول والثاني في مكانهما ( المخطط ) ويحيط به من الجانبين رواقان ثم اضيفت الجدران العربية للغرفتين المشار اليهما في الفترة الأموية .

### التاريخ :

حيث ان أعمال الحفر قد توقفت دون اتمام الكشف عن الكهف بكامله فليس بالاستطاعة تحديد تاريخ الكهف على وجه الدقة ولكن ما وجد في داخله يدل على أنه قد استخدم في ثلاثة عصور مختلفة :

١ - العصر البيزنطي : من خلال الفسيفساء - تدل على أنها قد ترجع الى الفترة ما بين ٥٠٠ - ٦٠٠ م .

٢ - العصر الأموي : وتدل النقود الذهبية والفضية والكسر الفخارية على أن هذه الفترة امتدت من ٦٦١ - ٧٥٠ م .

٣ - عصر المماليك : وقد دلت دراسة القطع الفخارية على أنها امتدت من ١٢٦٠ - ١٤٠٠ م .

ونأمل أن تتمكن دائرة الآثار العامة من متابعة العمل في هذا الموقع الأثري .

### المكتشفات :

ان أهم ما اكتشف في هذا الكهف هو مجموعة من النقود الاسلامية الأموية الذهبية منها والفضية ومن الملاحظ أن الدنانير العربية الخالصة قد ظهرت سنة ٧٩ هـ بعد أن تطورت متأثرة بالنقود البيزنطية ، أما الدراهم الأموية فقد تطورت عن الدراهم الساسانية والعربية الساسانية (٢) . والنقود الذهبية في مجموعتنا هذه هي من فئة الدينار ، تحمل العبارات القرآنية التالية :

#### الوجه

الوسط : لا اله الا

الله وحده

لا شريك له

الطوق : محمد رسول الله ارسله بالهدى

ودين الحق ليظهره على الدين كله .

#### الظهر

الوسط : الله احد الله

الصمد لم يلد

ولم يولد

الطوق : بسم الله ضرب هذا الدين في سنة ٠٠٠

(٢) فجر السكة - العربية - تأليف الدكتور عبد الرحمن فهمي محمد مطبعة دار الكتب ١٩٦٥ ، ص ٤٩ - ٥٠ .

العصر الأموي حيث أقيمت فوق الأرضية البيزنطية . وقياسات هذه الجدران : طول الجدار الجنوبي ١٥م والجدار الغربي ٦٥م والجدار الشمالي ٢٨م والجدار الشرقي ٦٠م ، وقد حفر في السقف الصخري نتوان يشكلان ما يشابه كلابة ربما كانت تستخدم لتعليق مصباح أو ما إلى ذلك .

بعد ازالة طبقات الطم ظهرت رصفة مكونة من الحصى والحجارة الصغيرة والرمل ، وهي الأرضة الأموية ، وبعد ازالة هذه الرصفة ظهرت الأرضية الفسيفسائية البيزنطية الملونة والتي تمتد من الدرجة السفلى وحتى الحائط الشمالي للغرفة ( لوحة ٢ - ٢ ) .

وهذه الفسيفساء مكسورة في جانبيها الشمالي والغربي بسبب اقامة الجدارين الأمويين ، وتتكون من زخارف تشكل دوائر متداخلة في الوسط والاطار يتكون من زخارف هندسية أما الألوان فهي عبارة عن الأبيض ، القرميدي ، البرتقالي ، الاسود ويوجد ما يشابه هذه الفسيفساء في كنيسة القديس جورج في خربة المخيط على بعد ٩ كم الى الغرب من مادبا(١) .

وقد سارت عملية الحفر ببطء شديد نظرا لكثرة الطم من ناحية ولخطورة المكان من ناحية أخرى اذ ان السقف الصخري قابل للسقوط وتدعمه أعمدة وجدران من الحجارة المنحوتة المسنودة بهذا الطم . وكان أهم ما اكتشف بهذه الغرفة بالاضافة الى النقود الذهبية ( لوحة رقم ٣ ) والفضية ( لوحة رقم ٤ ) وبعض القطع المعدنية ( لوحة رقم ٥ - ١ ، ٢ ) كسر فخارية اسلامية أموية عليها كتابة باللغة العربية وزخارف هندسية بالدهان الاحمر ( لوحة رقم ٦ ) .

### الغرفة الثانية :

هناك مدخل في نهاية الجدار الشرقي للغرفة الأولى يؤدي الى الغرفة الثانية (II) والتي هي

بدورها كانت مملوءة تماما بالطم والحجارة الضخمة المتساقطة ، مما فرض أن تسير عملية ازالة هذا الطم بشكل عمودي لا بشكل أفقي في البداية ، الى أن أصبح بالإمكان العمل بشكل أفقي . ولم تنته عملية تنظيف الغرفة نظرا لصعوبة وخطورة الحفر حيث ان ازالة التراب كانت تؤدي الى سقوط الاحجار الضخمة التي كانت تسند السقف الصخري المتفسخ مما كان سيسبب بالنهاية في سقوط هذا السقف ، فرؤي أن من الأفضل أن تتوقف أعمال الحفر حتى يتم دعم السقف مما يمكن العاملين من اتمام العمل باطمئنان ودون أن تتعرض حياتهم للخطر . وقد ترك الجانب الجنوبي لهذه الغرفة مملوءا بالطم كما هو ، أما في الجانب الشمالي فقد توقف الحفر على امتداد المسافة ما بين العمود في الزاوية الشمالية الغربية والذي يحمل القوس وحتى الزاوية الشمالية الشرقية .

والمسافة التي تم تنظيفها أظهرت ان طبقات التراب ماثلة كما في الغرفة الاولى كما انها تعود الى نفس الفترات والعصور الزمنية وهي البيزنطية والاسلامية ( أموي - مملوكي ) وفي الزاوية الشمالية ظهرت طبقة حريق ، ومن الملاحظ أن آثار هذه الطبقة باقية على السقف ، وقد كانت الحجارة في تلك الطبقة مزينة بشكل يدل على أن تلك الزاوية استخدمت كموقد بالاضافة الى الالعثور على كسر فخارية لانهاء كان يستخدم للطبخ عليه آثار الحرق . استمر امتداد الرصفة الأموية الى داخل هذه الغرفة (II) وبعد ازالتها ظهرت الارضية الفسيفسائية والتي هي أيضا بدورها امتدادا للفسيفساء من الغرفة الأولى الا أنها تختلف عنها من حيث حجم حبة الفسيفساء ومن حيث اللون ، اذ أنها هنا ذات لون واحد - الأبيض - بعكسها في الغرفة الاولى حيث كانت متعددة الالوان .

(١) يرجع تاريخ الكنيسة الى القرن السادس الميلادي .

S. Saller and B. Bagatti.

The Town of Nebo, Jerusalem (1949) p. 7.



# كهف البصة ( ١٩٧٤ )

## « تقرير أولي »

بقلم الآنسة زاهدة صفر

### الموقع :

من الآنسة زاهدة صفر والآنسة رحاب الحديد والسيدة لينا السعدي ( في الاسبوع الأول من العمل ) والسيد صبري عبادي ، ومأمور آثار وادي السير السيد أنيس قراقيش ، والسيد عبد الكريم غضاب ، والعامل الفني السيد عايش يرافقه عدد من العمال .

تقع البصة على بعد ١٧ كم تقريبا جنوب غرب عمان ، على الطريق بين وادي السير وعراق الأمير . أما الكهف نفسه فهو على تلة مرتفعة على الجانب الأيمن من الطريق . وهذه التلة تستخدم كمقبرة ، يقابلها في الجهة الجنوبية خربة البرذون والتي ذكر أنها ربما تعود الى العصر الروماني المتأخر .

بدى الحفر بمساحة  $4 \times 2$  م أمام واجهة الكهف المزينة بالثلث المزخرف بعدد من الصلبان وبالقوس السوري . وكان قد سقط جزء من هذا الثلث ( أنظر لوحة رقم ١ ) وقد أسفر الحفر عن ظهور (٦) درجات مبنية من الحجارة الكلسية تؤدي نزولا الى المدخل ، وعند نهاية الدرج ظهرت لوحة حجرية دائرية الشكل مكسورة (لوحة رقم ٢ - ١) حفر في وسطها صليب ويعتقد بأنها كانت سطحا لمائدة تستخدم في الطقوس الدينية وجد جزء تابع لهذه اللوحة في داخل الكهف فيما بعد . وقد ظهرت بعض الكسر الفخارية الاسلامية ( أموية ومملوكية ) بالاضافة الى قطع من القرميد الاحمر وبعض العظام .

ويبدو ان واجهة الكهف التي انكشفت بفعل العوامل الطبيعية أغرت البعض للدخول اليها طمعا في العثور على الذهب ، وقد وجدت في الداخل بعض الأوراق المحترقة التي استخدمت لانارة المكان ليلا .

كانت واجهة الكهف تسترعي الانتباه لوجود المثلث الذي يتوسطه قوس يعرف بالقوس السوري ( لوحة رقم ١ ) وهذا الزخرف المعماري قلما ظهر على واجهات الكهوف الصخرية ، ولذا رؤي أن من الضروري الكشف عن الواجهة الصخرية بكاملها .

### الغرفة الاولى :

بعد تنظيف مدخل الكهف من الحجارة الكبيرة المتساقطة تم الدخول اليه عن طريق باب على جانبيه عمودان لا يزال أحدهما قائما تستند عليه واجهة الكهف ، أما الآخر فلم يبق منه سوى قاعدته وارتفاعها = ٨سم وقطرها ٣٠سم .

قبل البدء بالعمل قمنا بمسح للمنطقة فتبين أن هناك كهوف أخرى عديدة على التلة بالاضافة الى كهفنا هذا ، فعلى مقربة منه والى الجهة الغربية توجد فجوة حفرت في الصخر مطمورة بالتراب من المحتمل انها كهف أو مقبرة ، وان المواطنين كانوا يستخدمونها لدفن موتاهم .

### أعمال الحفر :

تؤدي ثلاث درجات نزولا الى داخل الغرفة الأولى (I) والتي مساحتها  $1.75 \times 2.80$  م ، تعود جدران هذه الغرفة الى فترة لاحقة وهي

بدأ العمل بتاريخ ١٣/٤/١٩٧٤ واستمر حتى ١٣/٥/١٩٧٤ ، وقد أشرف على أعمال الحفر كل



# فهرس المحتويات

كهف البصة (١٩٧٤)

٥ . . . . . الآنسة زاهدة صفر

الحفريات الأثرية في الأردن

١١ . . . . . اعداد الدكتور معاوية ابراهيم

لجنة التحرير :

الاستاذ يعقوب عويس - مدير دائرة الآثار العام ، المهندس يوسف العلمي  
الدكتور فوزي زيادين ، الدكتور معاوية ابراهيم  
السيدة لينا السعدي ، السيدة حنان الكردي  
الآنسة روز حبايبة

قيمة الاشتراك السنوي :

ديناران اردنيان - ترسل باسم مدير عام الآثار .

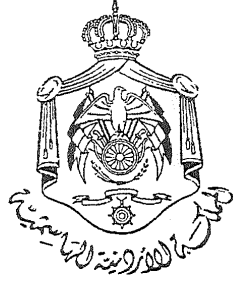
تقبل المقالات حتى اول تشرين الثاني / نوفمبر من كل سنة وترسل باسم محرر الحولية :  
مديرية الآثار العامة  
ص.ب ٨٨  
عمان

الآراء المطروحة في المقالات لا تمثل رأي دائرة الآثار بالضرورة . المؤلفون مسؤولون عن تدقيق مقالاتهم .

الطابعون

جمعية عمال المطابع التعاونية

عمان - هاتف ٣٧٧٧١



# حولية دائرة الآثار العامة

١٩٧٤

التاسع عشر

دائرة الآثار العامة  
عمان  
المملكة الأردنية الهاشمية