



THE HASHEMITE KINGDOM OF JORDAN

Annual  
of the  
Department of Antiquities

1979

XXIII

Department of Antiquities

Amman

The Hashemite Kingdom of Jordan

*Editorial Board:*

Dr. Adnan Hadidi, Director General  
Dr. Fawzi Zayadine  
Badi'ah Abdul Hadi  
Zein Shurdum  
Khawla Qusus-Hanayneh

Subscription Fee

5.000 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 Arab Printings &  
Publishing Co. / *ALAKHBAR*

## Table of Contents

The Hellenistic Pottery from the 1961 and 1962 Excavations at 'Iraq el-Emir by Nancy L.Lapp .....	5
Excavations at 'Iraq el-Emir by Robin M. Brown .....	17
Bericht über Oberflächenforschung in Gadara (Umm Qes) in Jordanien im Jahre 1974 by Ute Wagner-Lux <i>et alii</i> .....	31
Excavations at Tell Deir 'Alla by Moawiyah Ibrahim and Gerrit van der Kooij .....	41
Recherches archéologiques à Lehun au Wadi Mōjib par P. Naster et D. Homès-Fredericq .....	51
Investigations in a Prehistoric Necropolis near Bab edh-Dhra' by Vincent A. Clark .....	57
Archaeological Survey South of Wadi Mūjib by J. Maxwell Miller .....	79
Paleolithic Sites within the Ras en-Naqb Basin, Southern Jordan by Donald O. Henry .....	93
Safaitic Inscriptions in the Amman Museum and other Collections by M.C.A. Macdonald .....	101
A preliminary Report on a Survey of Nabataean-Roman Military Sites in Southern Jordan by David F. Graf .....	121
A Roman Family Tomb at es-Salt by Adnan Hadidi .....	129
Recherches au Qasr el 'Abd à 'Iraq al-Amir Par Ernest Will .....	139
Excavations at the Citadel (al Qal'a) Amman, 1977 by Crystal-M.Bennett .....	151
Excavations on the Citadel (al Qal'a), Amman, 1978 by Crystal-M.Bennett .....	161
First Excavation Campaign at Qal 'at el-Mishnaqa, Meqawer by Michele Piccirillo .....	177
Excavations at Petra (1976 and 1978) by Fawzi Zayadine .....	185
In Memoriam, Gerald Lankester Harding Arabic Section .....	198
A Roman Family Tomb at es-Salt Qasr el 'Abd at 'Iraq el-Emir Excavations and Restorations in Jordan (1978-79).	



THE HELLENISTIC POTTERY FROM  
THE 1961 and 1962 EXCAVATIONS  
AT IRAQ EL-EMIR

by  
Nancy L. Lapp

Excavations were first undertaken at 'Iraq el-Emir by Paul W. Lapp in 1961. One of the express purposes of the first campaign was to date the construction of the monumental building, the Qasr el-'Abd.<sup>1</sup> "Hardly a scrap of evidence" resulted from the spring campaign.<sup>2</sup> In the extensive excavations of the second and third campaigns a satisfactory number of sherds from the first half of the second century B.C. was unearthed, and although they were from Byzantine fills, that together with correlating literary and architectural evidence clearly indicated the attribution of the Qasr to Hyrcanus' building operations in the early second century B.C.<sup>3</sup>

Recently work has been resumed at the Qasr under the direction of the Jordanian Department of Antiquities and a French expedition, principally for the purpose of preservation and restoration of the Monumental Building for tourism and maintaining Jordan's cultural heritage. With renewed interest in the site, it seems appropriate that the pottery evidence for the Hellenistic dating of the Qasr from the excavations of 1961 and 1962 should be

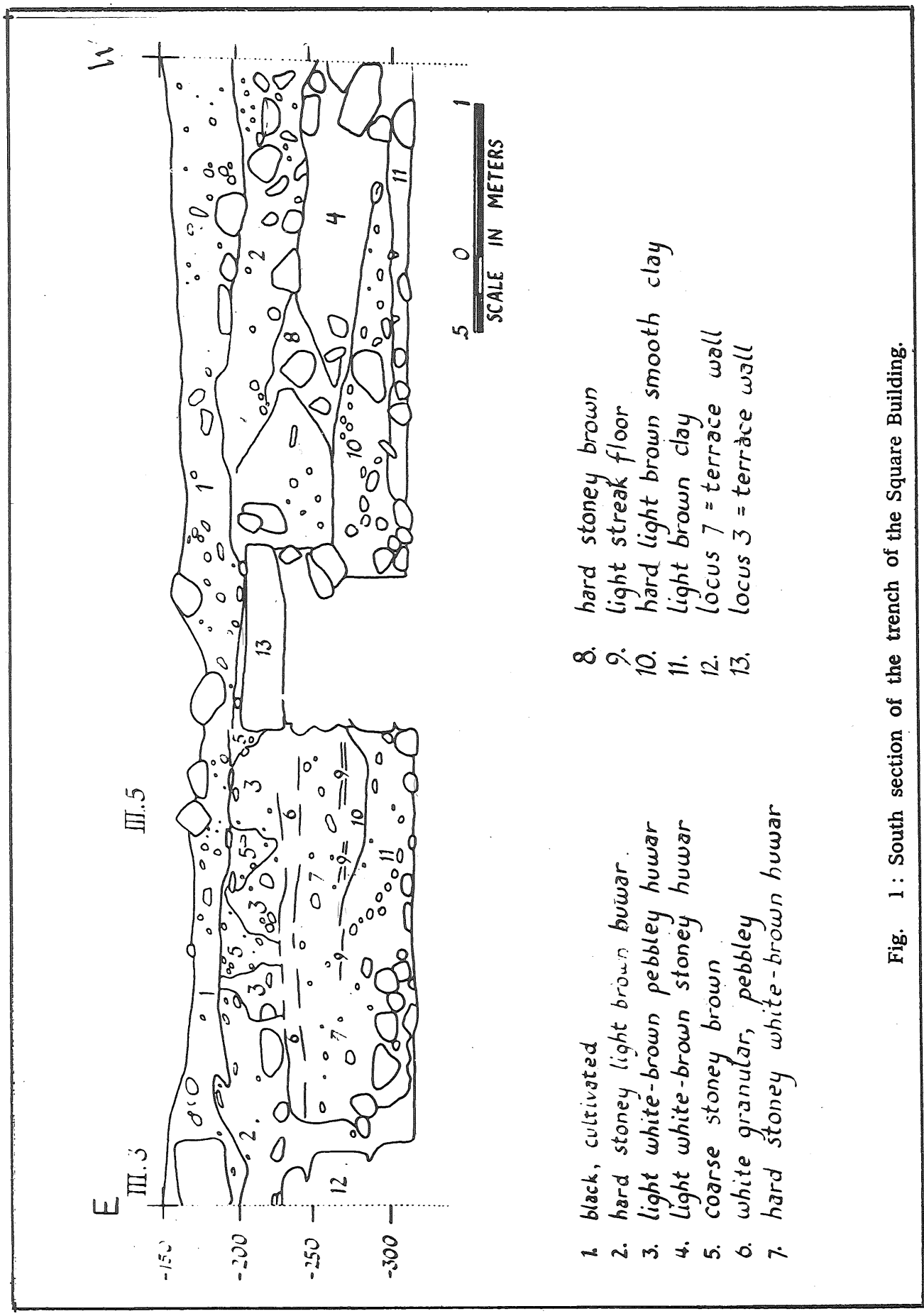
presented in detail.<sup>4</sup>

The feline fountain found near the end of P. Lapp's final campaign is well-known (Plate I) and has been competently published. Although it could not be dated by pottery stratigraphically related to it, artistically and culturally its early second century B.C. creation is certain.<sup>5</sup> That and other architectural features have established the Qasr as a second century B.C. building, most probably constructed by Hyrcanus.

Before the discovery of the fountain in the east wall of the Qasr extensive clearance had been carried on outside the northeast corner of the Qasr. A square had been opened here during the first week of the initial campaign. Two Byzantine floor levels were uncovered running against the outside Qasr wall, but pottery evidence for any Hellenistic occupation was entirely lacking (Plate II). An attempt to find a Hellenistic floor or closed locus was a particular aim of the two succeeding campaigns, but only occasional Hellenistic sherds were uncovered. By the time of the discovery of the feline<sup>6</sup>

1. P.W. Lapp, "Soundings at 'Arâq el-Emîr (Jordan)", *Bulletin of the American Schools of Oriental Research*, 165 (Feb., 1962), p. 15.  
2. *Ibid.*, p. 33.  
3. P.W. Lapp, "The Second and Third campaign at 'Arâq el-Emîr", *BASOR*, 171 (Oct., 1963), p. 24

4. The Final report of the excavations of P.W. Lapp, including a study of the pottery, is now in preparation.  
5. D.K. Hill, "The Animal Fountain of 'Arâq el Emîr", *BASOR*, 171 (Oct., 1963). p. 55.  
6. Lapp, *BASOR*, 171, p. 24.



1. black, cultivated
2. hard stoney light brown huwar
3. light white-brown pebbly huwar
4. light white-brown stoney huwar
5. coarse stoney brown
6. white granular, pebbly
7. hard stoney white-brown huwar

8. hard stoney brown
9. light streak floor
10. hard light brown smooth clay
11. light brown clay
12. locus 7 = terrace wall
13. locus 3 = terrace wall

Fig. 1 : South section of the trench of the Square Building.

fountain, the excavators were fairly certain that the Qasr had never been completed or actually used by its Hellenistic builders. However, the discovery of the fountain near the end of the third campaign did set off an intensive search along the east wall of the Qasr for a possible pair to it at the southern end. Nearly the length of the wall was cleared, but only more evidence of the Byzantine walls and floors against the east Qasr wall was uncovered—neither another feline fountain nor any Hellenistic occupation levels. Although very few Hellenistic sherds were noted during the excavation in this area in the fill and among the limestone chips laid in Byzantine times for a roadbed, the study of the pottery for final publication has made it possible to recognize parts of about seventeen Hellenistic vessels from the clearance outside the east Qasr wall which can be dated to the first half of the second century B.C. They were all found mixed with later Byzantine sherds of the Early Bronze fill on which the Qasr was laid, but there were enough to associate them with the early second century construction of the monumental building. Group I, fig. 2:1-17, are from outside the east Qasr wall in which the Hellenistic feline fountain was discovered.

In the second campaign the Square Building was excavated in order to obtain indirect evidence for the dating of the Qasr since architectural fragments indicated contemporary construction.<sup>7</sup> The original building with foundations below the remains of the Byzantine building with reused Hellenistic blocks can be attributed

7. *Ibid.*, p. 33.

8. *Ibid.*, fig. 14 and pp. 35-36; see below.

to the early second century B.C. on the basis of convincing ceramic evidence.<sup>8</sup> Inside the building below Stratum II (Byzantine) disturbance in fill associated with the laying of the slabs for the Hellenistic floor a Rhodian jar sherd (fig. 2:18) was found<sup>9</sup> mixed with Early Bronze pottery. Outside the building in the south trench (Plate III) a homogeneous group of Hellenistic sherds came from below a floor (section: fig. 1, no. 9) in clayey fill (section: fig. 1, nos. 10, 11; sherds fig. 2:23, 28-32, 34). In hard stoney fill at the west end of this trench only Hellenistic sherds were found beneath a burned area (section: fig. 1, No. 4; sherds fig. 2:20, 24-27), and a couple Hellenistic jar rims were in the hard stoney fill above (section: fig. 1, No. 2; sherds, fig. 2:21, 22). A sandy layer outside the Square Building which separated Hellenistic Stratum III from later material above (section: fig. 1, no. 6)<sup>10</sup> was present in the southern part of the eastern trench and below this in the hard stoney fill at least one Hellenistic sherd was found (fig. 2:19).

However, here the sandy layer was disturbed in places (see section: fig. 1, east end no. 2) and late sherds were also present (reg. nos. 366-368). A Hellenistic jug rim (fig. 2:33) also occurred at about this level north of the large cistern in the eastern strip outside the square Building.

This pottery with stratigraphical significance in and around the Square Building provides indirect evidence for the dating of the Qasr. It is shown as Group II, fig. 2:18-34.

Besides these Hellenistic groups from

9. *Ibid.*, p. 36 and fig. 15.

10. *Ibid.*, p. 35.

outside the east Qasr wall and the Square Building, only scattered Hellenistic sherds were found in clearing inside the Qasr walls and selected areas outside. The significant forms are presented here as Group III, fig. 2:35-58.

### The Pottery

#### Group I

Jar rims are typically out-turned and rounded. Fig. 2:1 has a remnant of an undercut, an early Hellenistic feature.<sup>11</sup> The rounded rims, fig. 2:2 and 3, are lengthened and out-turned,<sup>12</sup> but only 1 rim, fig. 2:5, approaches the "collared" type, which becomes popular later in the second century B.C. Rounded rims of a varied type continued to the end of the second century B.C., but are lacking in the first century.<sup>13</sup>

Jar handle sections are oval; some come to a point at the side. Fig. 2:9 is from a small jar, the handle has a central ridge, pointed side, and a thumb imprint at the bottom where the handle was attached to the vessel.

Three fragments of a Rhodian jar were found outside the East Qasr wall in the south (fig. 2:10a-c). They may be from one vessel, although more than one could be represented.

Fig. 2:11-14 are probably jug rims,

11. c. f. N. L. Lapp, "Pottery from some Hellenistic Loci at Balâtah (Shechem)", *BASOR*, 175 (Oct. 1964), p. 17, fig. 1a: 1 (Stratum III B, ca. 250-225 B.C.): P. W. Lapp and N. L. Lapp, eds., *Discoveries in the Wâdî ed-Dâliyeh, Annual of the American Schools of Oriental Research*, XLI (Cambridge, MA, 1974), pl. 19:3 and p. 31 (late 4th century B.C.), F. Zayadin, *Early Hellenistic Pottery*, *ADAJ*, XI (1966), pl. XXXVII: 2, 6 (First half third century B.C.).

12. cf. P. W. Lapp, *Palestinian Ceramic Chronology*, 200 B.C. - A.D. 70, (henceforth PCC),

similar to jar rim forms. They are still rounded,<sup>14</sup> and No. 11 is crescent-shaped with an undercut.<sup>15</sup> Rounded jug rims continued at Tell el-Fûl down to the end of the second century.<sup>16</sup>

Two small bowl bases are typically late Hellenistic-flat and carelessly made. They are probably from small incurved rim bowls. These were found in the third century B.C. at Balâtah<sup>17</sup> and were popular by late in the century. They continue into Roman times.<sup>18</sup>

Varied mortarium rims are part of the second century B.C. corpus.<sup>19</sup> Fig 2:17 has a plain rounded rim similar to one from the fill for the Hellenistic Fort Wall at Samaria (pre-150 B.C.), but it is from a deeper bowl.

#### Group II

Unfortunately the Rhodian jar sherd, fig. 2:18, from inside the Square Building was not part of a handle or rim, but the shape indicates it was probably from the neck, and the ware is characteristically orange-pink and very finely levigated.

From outside the Square Building, jar rim fig. 2:19 is typically out-turned and rounded, a form particularly characteristic of the 3rd century B.C.<sup>20</sup> It is fuller and more rounded than most late 2nd century B.C. rounded jar rims<sup>21</sup> but may not be

Corpus 11.3: *BASOR* 175, p. 19.

13. N. L. Lapp, ed., *The Third Campaign at Tell el-Fûl, Annual of the American Schools of Oriental Research* (in press), pl. 73:22-38 and text. (Henceforth TEL.)

14. cf. PCC, Corpus 21.1.A-C.

15. Zayadin, Pl. XXVIII: 20, 22.

16. TFL Pl. 75:1-7.

17. *BASOR* 175, p. 18.

18. PCC, Corpus 51.1.

19. PCC, Corpus 41.1.

20. Zayadin, pl. XXVII: 1-5.

21. PCC, Corpus 11.3; TFL, pl. 73:22-38.



out of place in the early 2nd century. Fig. 2:20-24 are flattened on the exterior to varying degrees, a Hellenistic characteristic that begins in the third century B.C. and is the most typical form by the late 2nd century.<sup>22</sup> Fig. 2:21-23 are of the somewhat squared type, while fig. 2:24 approaches the collared-type. Nos. 22 and 23 may be from the same vessel though no. 22 came from above the burned level in the west end of the southern strip outside the building while no. 23 came from beneath the floor to the east. Quite a number of Hellenistic rim, handle and body sherds came from below the burned level, but it is difficult to tell how many vessels are represented. Several handle sections are illustrated (fig. 2:25-27). A number of other handles (fig. 2:28-31) as well as a fragment of a storage jar base (fig. 2:32) came from a similar depth below the floor in the east.

Jug rim fig. 2:33, out-turned to an upper point, can be compared to those from Balâtah Stratum III A (275-190 B.C.) and Stratum II (190-150 B.C.)<sup>23</sup> Fig. 2:34 is the section of a cooking pot handle fragment with stub attachment.

### Group III

About 23 other Hellenistic sherds were found in the Byzantine fills and layers in and around the Qasr. The vast majority of them were jar rims a common phenomenon at sites where Hellenistic occupation occurs.<sup>24</sup> Most of the Hellenistic sherds are represented, fig. 2:35-58. Many of them can be compared to forms already presented in the stratigraphical im-

portant groups, but a few other common and important Hellenistic forms will be noted.

Jar rims are rounded and out-turned; most are somewhat lengthened, and these characteristics are those common early in the second century B.C. Some rims are flattened on the exterior (fig. 2:44-48; cf. nos. 5, 20-24 above) a trend which has begun and will be the dominant type by the end of the second century B.C. Fig. 2:46 and 47 are squared similar to nos. 21-23 above. Only one sherd (fig. 2:49) of the characteristic Hellenistic collar-rim type-folded over and impressed-has been identified in the excavations.<sup>25</sup> This becomes one of the most typical late second and early first century B.C. forms.

Only a couple Hellenistic storage jar handles could be identified and their sections are shown, fig. 2:50,51. In addition there was another Rhodian jar handle fragment, fig. 2:52, and a nearby Rhodian handle stub fragment most probably came from the same vessel.

Jug rims, fig. 2:53-56, are similar to those above, nos. 12-14. These rounded, out-turned jug rims are common through the second century. Fig. 2:56 rounds to a decided lower point.

One of the two Hellenistic sherds identified from the first campaign<sup>26</sup> is the base of a small bowl of Hellenistic Decorated Ware (fig. 2:57). The offset and the fair quality black paint, place the bowl easily in the first half of the second century B.C.<sup>27</sup>

22. *BASOR*, 175, pp. 17, 19; *TFL*, pl. 73:1-20.

23. *BASOR*, 175, figs. 2:9-12 and 3:1.

24. J. L. Kelso, *The Excavation of Bethel, Annual of the American Schools of Oriental Research XXXIX* (Cambridge, MA: 1968), p. 78; This was also noted at Tell el-Fûl.

25. cf. *PCC*, Corpus 11.21.B-C, dated 175-100 B.C. *BASOR* 175, fig. 2:3, Stratum III A, 225-190 B.C.

26. *BASOR*, 165, p. 33.

27. *PCC*, Corpus 153.1.

One cooking pot rim and handle is of the high neck type and thick ware; it is an early Hellenistic form<sup>28</sup> with a history back to Exilic times.<sup>29</sup>

The total collection of jar rims from the Qāsr and Square Building excavations at 'Iraq el-Emīr are perhaps the most certain evidence of the early second century Hellenistic presence at the site. Rims are predominantly out-tourned, rounded, and somewhat lengthened. There are a few remnants of the more rounded Early Hel-

28. *Wādī ed-Dāliyah*, pl. 23:2.

lenistic-type rims, and one sherd had a distinctive undercut, a late 4th century and third century characteristic. On the other hand, there are a few somewhat squared rims, common late in the second century, and some collar rims, which becomes the dominant type by the second half of the second century and early in the first century B.C. One sherd was of the most characteristic collared form, folded over and impressed.

29 *TFL*, pl. 69 : 9-22, 78:1.

Figure 2

	Reg.	No.		Description
1	II.11.9	354	jar rim	2.5 YR 5/8 red with 5 YR 5/1 gray core; some medium inclusions
2	II.11B.9	356	jar rim	5YR 4/2 dark reddish gray with 6/3 light reddish brown surfaces; few small and medium inclusions
3	II.11B.4	338	jar rim	10 YR 7/3 very pale brown; many small and some medium inclusions
	II.11B.5	339		
4	II.11A.2	331	jar rim	7.5 YR 6/4 light brown; small and medium inclusions
5	II.11C.1	350	jar rim	5 YR reddish yellow with 6/1 light gray/gray core; small and few medium inclusions
6	II.11A.2A	333	jar handle	complete handle, non-aligned on body; 10 YR 7/3 very pale brown; medium and small inclusions
7	II.11C.8	342	jar handle	10 YR 6/4 light yellowish brown; small and few large inclusions
8	II.11A.3	334	jar handle	5YR 6/6 reddish yellow with 7.5 YR N4/dark gray core; small and medium inclusions
9	II.11A.2	330	jar handle	complete handle; smaller than usual, poor lower attachment; 7.5 YR 6/4 light brown; small and few medium inclusions
10a	II.11B.7	341	Rhodian rim	2.5 YR 6/8 light red; very few small and medium inclusions
10b	II.11B.7	340	and handle	
10c	II.11B.1	337	fragments	
11	II.11A.3	335	jug rim	7.5 YR 6/4 light brown; medium and small inclusions
12	II.11A.3	336	jug rim	7.5 YR 6/4 light brown; small and few medium inclusions
13	II.11B.5	355	jar base	5 YR 5/1 gray with 6/3 light reddish brown surfaces; small and few medium inclusions
14	II.11A.2	332	jug rim	7.5 YR 5/4 brown; few medium inclusions
15	II.11.13	329	bowl base	whole, roughly finished flat base; 7.5 YR 5/4 brown; medium inclusions
16	II.11.8	353	bowl base	roughly finished, discernible wheel marks;

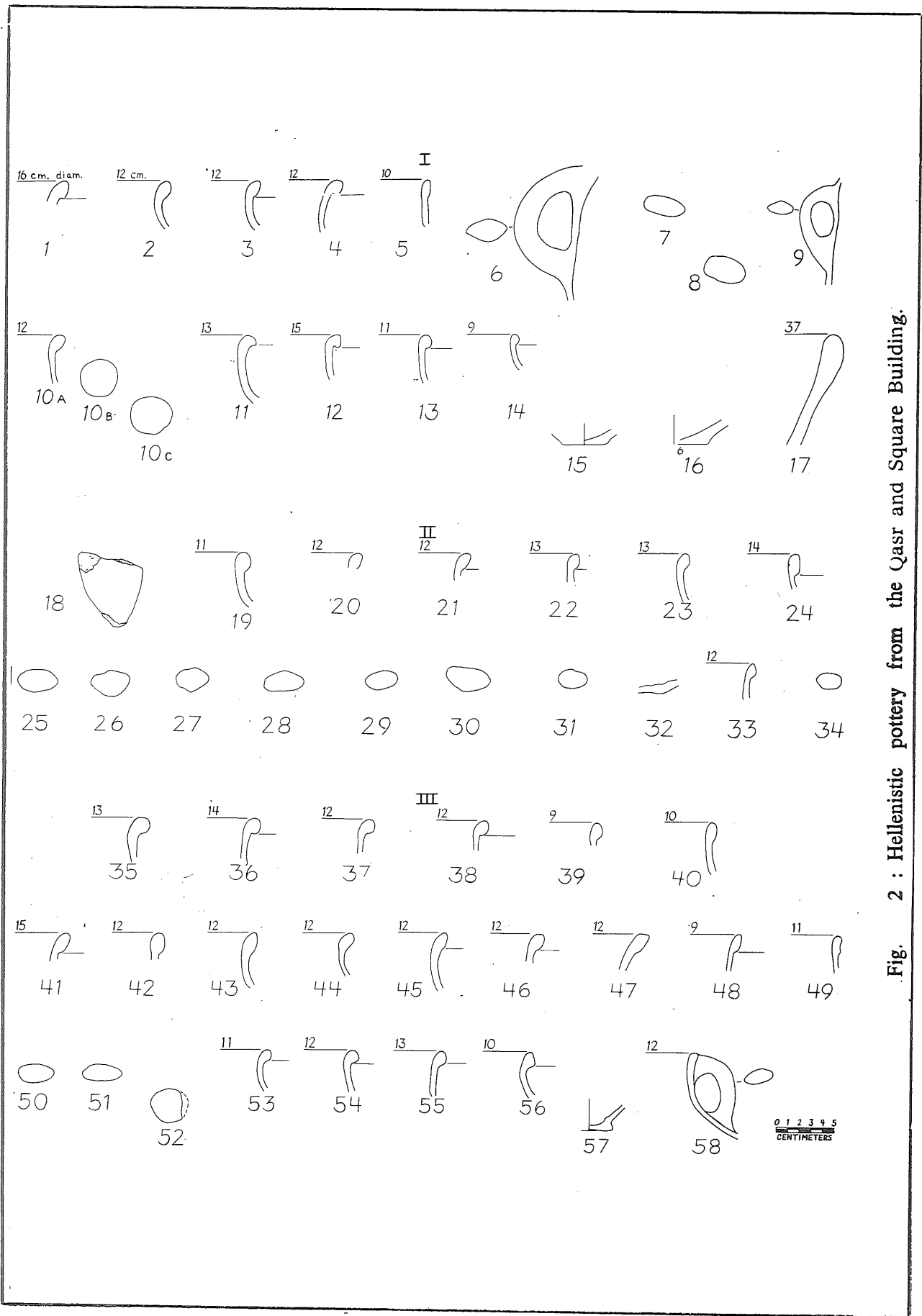


Fig. 2 : Hellenistic pottery from the Qasr and Square Building.

				5 YR 5/6 yellowish red; small and few medium inclusions
17	II.11B.3	463	mortarium rim	7.5 YR 5/2 brown to 6/4 light brown surfaces; small inclusions
18	III.2.25	364	Rhodian sherd	body sherd, approximately 7×5 cm. 7/4 pink; very few small inclusions
19	III.3.16	410	jar rim	2.5 YR N6/gray; medium and large inclusions
20	III.5.12	423	jar rim	fragmentary; 10 YR 6/3 pale brown; small and few medium inclusions
21	III.5.11	420	jar rim	5 YR 6/4 light reddish brown; small inclusions
22	III.5.11	421	jar rim	5 YR 6/1 gray, 6/6 reddish yellow toward surfaces; small to large inclusions
23	III.5.11	412 413	jar rim	5 YR 6/6 reddish yellow with 5/1 gray core; small to large inclusions
24	III.5.12	422	jar rim	10 YR 6/3 pale brown; small to medium inclusions
25	III.5.12	424	jar handle	2.5 YR 5/6 red; small to large inclusions
26	III.5.12	427 426	jar handle	2.5 YR 5/6 red with N5/gray core; small and medium inclusions
27	III.5.12	428 429 425 430	jar handle	jar handle fragments 429 and 425 and ware fragment 430 probably same vessel; 2.5 YR N5/gray with 5 YR 5/6 yellowish red surfaces; medium and large inclusions
28	III.5.5	414	jar handle	10 YR 6/3 pale brown; many small and medium inclusions
29	III.5.5	415	jar handle	10 YR 5/4 yellowish brown; many small and medium inclusions
30	III.5.5	416	jar handle	5 YR 6/8 reddish yellow to 5/1 gray; small and medium inclusions
31	III.5.5	418	jar handle	7.5 YR 5/4 brown with N6/gray core; small and medium inclusions
32	III.5.5	419	jar base	7.5 YR N5/gray core with 5/6 strong brown

				surfaces; few small inclusions
33	III.3.18	411	jug rim	2.5 YR 6/6 light red; small inclusions
34	III.5.5	417	cooking pot handle	5 YR 4/8 yellowish red; few medium inclusions
35	II.12.9	230	jar rim	2.5 YR 5/8 red with 5 YR 5/1 gray core; medium and few large inclusions
36	II.8.19	327	jar rim	5 YR 6/6 reddish yellow; small and medium inclusions
37	II.8.15	326	jar rim	5 YR pink; small and medium inclusions
38	II.17.1	346	jar rim	10 YR 6/6 brownish yellow; medium inclusions
39	II.5.4	320	jar rim	5 YR 6/4 light reddish brown; small inclusions
40	II.1.8	313	jar rim	5 YR 6/4 light reddish brown with 7/1 light gray core; small and few large inclusions
41	II.7.20	324	jar rim	5 YR 4/4 reddish brown with 4/1 dark gray core; small and medium inclusions
42	II.12.1	343	jar rim	5 YR 7/6 reddish yellow with 6/1 gray core; small and medium inclusions
43	II.1.23	315	jar rim	5 YR 6/6 reddish yellow with 6/1 gray core, small with some medium and large inclusions
44	II.8.23	328	jar rim	5 YR 6/6 reddish yellow to 5/3 reddish brown toward center; small, medium, and few large inclusions
45	II.1.23	314	jar rim	5 YR 7/4 pink with 6/1 gray core; small inclusions
46	II.16.3	345	jar rim	10 YR 7/3 very pale brown; small, medium, and few large inclusions
47	II.2.27	317	jar rim	5 YR 6/4 light reddish brown with 7/1 light gray core; small inclusions
48	II.2.2	352	jar rim	5 YR 6/4 light reddish brown; small and medium inclusions
49	II.3.1	318	jar rim	7.5 YR 6/4 light brown; small inclusions
50	II.1.39	316	jar handle	lower attachment; 5 YR 5/6 yellowish red with

				5/1 gray core; few small inclusions
51	II.15.5	344	jar handle	5 YR 6/8 reddish yellow; small inclusions
52	II.6.10	322	Rhodian jar handle	near attachment; 5 YR 6/4 light reddish brown
	II.6.9	321	Rhodian handle	6/6 reddish yellow; very few medium inclusions stub with attachment; probably same vessel as 322
54	II.8.15	325	jug rim	5 YR 6/6 reddish yellow; medium inclusions
55	II.3.5	319	jug rim	7.5 YR 6/4 light brown with 5 YR 5/6 yellowish red toward surfaces; small and few medium inclusions
56	II.9.7	349	jar rim	5 YR 5/8 yellowish red with 5/2 reddish gray core; small, medium, and few large inclusions
57	II.2.37	203	bowl base	Hellenistic Decorated Ware; 7.5 YR 6/4 light brown; very fine inclusions; worn 7.5 YR 2.5/black paint
58	II.2.1		cooking pot rim & handle	5 YR 4/6 yellowish red with 4/1 dark gray core; medium inclusions

Nancy L. Lapp





## EXCAVATIONS AT IRAQ EL EMIR

by

Robin M. Brown

With the generous co-operation of the Department of Antiquities of Jordan and its former Director General the late Mr. Yaquob Oweis, the American Schools of Oriental Research sponsored a one month excavation at Iraq el Emir in October of 1976. Through the kind assistance of Dr. Ernest Will, this project was coordinated with the current architectural expedition from the Institut d'Archeologie of Beirut. The objectives of the excavation were focused in and around the Qasr el Abd from which it was hoped that the project would be able to obtain greater clarification of the dating of the phasing sequence which was first defined by the late Dr. Paul W. Lapp during his excavations at the site in 1961 and 1962. The excavation staff included: Mr. Mujahid Muhaisin, Inspector for the Department of Antiquities and field archaeologist; Ms. Jane Muhawi, draftsman and field archaeologist; Dr. James A. Sauer, project advisor and Ms. Robin Brown, field director.

Lapp's excavations in the ancient village site revealed strata dating to the Early Bronze Age, Iron I, Late Hellenistic, Early Roman III-IV and (late) Roman (1963:10). Lapp also excavated within the Qasr which proved to contain a different historical profile including a Hellenistic founding level with which the original walls of the structure are associated, followed by two periods of Byzantine occupation. A clear break in the continuity between these two Byzantine strata was marked by massive structural collapse, pro-

bably the result of the earthquake of A.D.365 (Kallner-Amiran 1950-51:225). During the Byzantine Period the Hellenistic occupation debris and whatever floors existed within the Qasr were thoroughly removed and the interior partition walls were rebuilt, although in many cases along the lines and foundations of the Hellenistic walls. Much of the exterior structure withstood the earthquake but the west wall toppled completely and a Byzantine wall was set along the same wall line as the original. For the most part the Byzantine walls are clearly identifiable by their construction technique which employed small square and rectangular blocks of stone; clearly no attempt was made to duplicate the engineering feats accomplished in the Hellenistic Period.

Among Lapp's squares excavated within the Qasr, Squares II.1 and II.2 are particularly significant. There it was found that the sequence began with an Early Bronze Age fill which had been imported and landscaped into a platform upon which the Qasr had been set. While the Hellenistic wall foundations were evident, (Lapp. 1962: fig. 8) this Stratum III was largely unrepresented and its dating is dependant upon the appearance of Hellenistic sherds in the later Byzantine fills (Lapp. 1963: 24). The Byzantine phases consisted of a series of fills and floors overlying the Early Bronze Age fill. Presented below is a stratigraphic outline of Squares II.1 and II.2, of which the former was located just west of the Qasr interior and the latter lay adjacent to the west and intercepted the

west exterior qasr wall line.

#### Square II.1

- Str. IA Floor 1 (Above Banded Earth and Stones)
- Str. IB Floor 2 (Inclusive of Banded Earth and Stones below)
- Structural Collapse-Possible Earthquake
- Str. IIA Floor 3 (Above Light Grey)
- Str. IIB Floor 4 (Above Red Earth)

#### Square II.2

- Str. IA Unrepresented
- Str. IB Floor 2; possibly a temporary pavement (Above Red Earth and Stones and Brown Earth)
- Structural Collapse-Possible Earthquake
- Str. IIA Floor 3; Plaster and Rough Hewn wall (Above Mixed Clay and Earth)
- Str. IIB Floor 4; Plaster Above Mixed Stony)

### THE 1976 SOUNDINGS

All references to chronological periodization follow Sauer (1973: 3-4) and where abbreviated in the text they appear as follows: Hellenistic, Hell; Early Roman, ER; Late Roman, LR; Byzantine Byz, Early Byzantine, E. Byz, Ottoman, Ott. Other abbreviations include: Early Bronze, EB; Iron, IR and "undetermined", UD. Although the compass orientation of the long axis of the Qasr el Abd is approximately 18° west of north, for convenience purposes all directionals cited in the text refer to north as

if it were directly along the long axis. Descriptions of the size of geologic inclusions within the loci follow the Wentworth Scale (Lahee 1961: 38-39).

#### Square AE. 76.1

Square I was a 2.00 m. x 2.00 m. sounding located in the northwest corner of the interior of the Qasr. The north baulk consisted of an east-west wall which formed the south partition of a chamber flanking the front or north entrance portico. The west baulk lay along the north-south exterior qasr wall line, along which a post-earthquake Byzantine wall had been installed.

#### Topsoil Modern-Ottoman

The uppermost surface soil, Sediment Layer 1:3 A, consisted of soft powdery earth mixed with cobbles and cut architectural blocks of limestone, vegetation and modern refuse.

#### POTTERY

##### Pail Locus Call

1	3A	1 Ott. pipe fragment,
E. Byz,	1 possible LR IV body sherd	
<b>Total Save</b>		
75	12	

**Interpretation** This layer represents post-occupation accumulation of earth and refuse from the Modern-Period and retains no relationships of architectural significance.

#### Stratum 1 Early Byzantine III-IV

Beneath Topsoil 1:3 A, Green Brown Sediment Layer 1:3-6 covered the square and consisted of compacted soil and clay with inclusions of architectural blocks and rock rubble ranging from pebbles to boulders. Beneath this the Red Brown Sediment Layer 1:7 also extended over the entire square and while differentiated by its deep reddish color it too was character-

rized by a large percentage of rock rubble. Lying beneath Red Brown Sediment Layer 1:7, over Wall 1:9 and across the northern portion of the square was Clay, Limestone and Earth Layer 1:8 A; a layer of loose, granular brown soil mixed with clay and Limestone pebbles. Adjacent to that layer and covering the southern portion of the

square was Grey Soil Layer 1:8 B which also lay beneath Red Brown Sediment layer 1:7. This layer, consisting of loose, grey earth mixed with cobbles and boulders of limestone as well as randomly strewn limestone architectural blocks, met Wall 1:9 to the north and west.

Pottery				
Pail	Locus	Call	TOTAL	Save
2	3	E. Byz III-IV dominant, 1 possible Ir.	90	13
3	4	E. Byz III-IV dominant	110	15
4	4	E. Byz III-IV, few possible E. Byz I-II, 1 possible Byz waster	250	24
5	4	E. Byz III-IV 1 possible Byz waster, 1, possible Ir	100	17
6	5	Body sherds only, E. Byz dominant, few possible LR III-IV, UD	25	15
7	5	E. Byz III-IV dominant, few UD body sherds	24	16
8	4	Body sherds, E. Byz domi- nant, 1 possi- ble Hell	28	13
9	6	E. Byz III-IV, UD	89	23
10	6	Body sherds, E. Byz domi- nant, few po-	25	18

			ssible Hell, few possible EB		
11	7	Probable Byz body sherds		2	2
12	7	E. Byz I-II, UD body she- rds		23	13
13	8 A	E. Byz		3	3
14	8 B	Probable Byz body sherds		2	2
15	8 B	E. Byz I-II dominant, few ER-Hell body sherds		56	23

**Interpretation** The dominance of Early Byzantine III-IV wares in the uppermost Green Brown Sediment layer 1:3-6 indicate this fill to have been a Str. IA feature which when viewed in terms of Lapp's findings, seems likely to have originally had either an upper pavement or a beaten earth surface .

The lower Red Brown Sediment Layer 1:7, Clay, Limestone and Earth Layer 1:8 A and Grey Soil Layer 1:8 B represent a series of concurrent fills of which 1:8 A and 1:8 B appear to have been set over the rubble resulting from the structural collapse which has been attributed to the earthquake in order to raise a platform for new flooring. Contemporary with these, the Red Brown Sediment Layer 1:7, compacted and containing much less rubble may have

provided a packed earth surface. These layers, reflecting the pattern of rebuilding which characterized Str. IB, consistently date to Early Byzantine I-II, this being the available material for such an operation at the onset of the Early Byzantine III-IV period.

#### Stratum II Early Byzantine I-II

Constructed of roughly cut boulders of limestone, Wall 1:9 formed a right angle and ran parallel to the north and west baulk walls. Between Wall 1:9 and the baulk walls lay Plaster Pavement 1:10 ; made up of a ground limestone paste in the surface of which were embedded a few flat smooth limestone cobbles. The west baulk wall was dry laid and built of irregularly sized square and rectangular blocks of limestone.

Pail	Locus	Call	Pottery	TOTAL	Save
16	9	Byz.	body sherds	2	2
17	9	1	possible Hell, UD bo- dy sherd	2	2

**Interpretation** Wall 1.9 appears to have been a secondary support wall which skirted the inner faces of the north and west baulk walls and may be compared to a similar feature in Lapp's Square II.2. The plaster pavement was set subsequent to the west baulk wall and while it may have originally extended across the entire room and been cut back when wall 1.9 was built, it seems more probable that the two are contemporary. Wall 1.9 and the associated Plaster Pavement 1:10 correlate with Lapp's findings and may be assigned to Str. IIA. The west baulk wall which pre-dates these installations belongs to the Str. IIB period, implying that a portion of the original Str. III west Qasr wall collapsed prior to the major destruction.

**Stratum III Late Hellenistic**

The north baulk wall consisted of a single huge rectangular cut limestone block, only a portion of the face of which was exposed during excavation. This enormous

block is typical of the Hellenistic construction and while not dated directly during the 1976 excavations it is associated with Hellenistic pottery mixed in the later Byzantine fills which Lapp discovered in the Qasr (1963 : 24).

**Square AE. 76.2**

Square 2 was a probe which measured 1.00 m. north-south x 2.00 m. east-west, the south baulk of which was located against the outer face of the northern arm of the retaining wall surrounding the terrace upon which the Qasr had been built. Above that section of the retaining wall against which Square 2 was opened, stood a Late Ottoman-Modern Period house, whose foundations were provided by the retaining wall.

**Topsoil Modern-Ottoman**

The topsoil which covered the probe included compacted clay, granular brown soil, dung and rock rubble.

		Pottery			
Pail	Locus	Call	TOTAL	Save	
1	2	1 Ott, 7 E. Byz, 1 Ir, body sherd	75	9	
2	2	Body sherds, 1 possible Byz, 3 probable Hell, 1 possible Ir. I	5	66	
3	3	Body sherds, E. Byz dominant, few possible Hell, 1 probable Ir. I	45	10	

**Interpretation** The relatively recently deposited material of this layer contained a wide range of ceramic types

including Ottoman, which has been attested throughout the site but from a small number of sherds, and Iron I sherds which

correlate with the occupation pattern within the village.

### Strata I-II Early Byzantine I-IV

Clay and Sediment Layer 2:4-6 covered the whole probe area and was characterized by a tightly compacted matrix dominated by clay. Also included in the matrix were pebbles, cobbles and boulders of limestone as well as fossils. Adjacent

to this layer were the first course of the south baulk wall and its foundation courses; the latter, while exposed, were not unearthed to their fullest extent. The wall proper consisted of roughly squared blocks while the foundation stones were small boulders and large cobbles in their natural form.

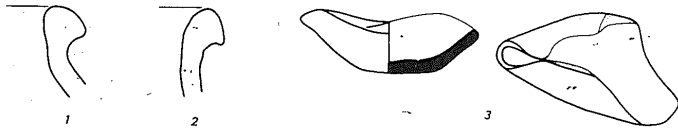
			Pottery	
Pail	Locus	Call	TOTAL	Save
4	4	Body sherds, 2 E. Byz/LR, 1 possible Hell, 2 possible EB	9	5
5	4	Body sherds, 4 probable E. Byz, Hell, UD	17	9
6	5	Body sherds, 1 Byz, 2 probable Hell, 1 EB, UD	10	6
7	6	2 E. Byz body sherds	2	2
8	6	2 E. Byz body sherds, 1 UD, 1 possible EB	4	4
9	6	1 probable E. Byz, 2 UD body sherds	3	3
10	6	No Pottery		
11	6	Body sherds, 4 E. Byz, 2 possible Hell, 1 EB	7	7

**Interpretation** The moist and tightly compacted layering of clay which dominates Strata I-II is indicative of water laid deposition; a situation that confirms that

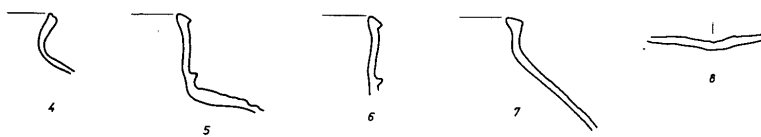
the retaining wall around the platform upon which the Qasr was built, served to protect the Qasr from a surrounding body of water. The ceramic repertoire includes

ARAB EL EMIR 1976 SURFACE SURVEY

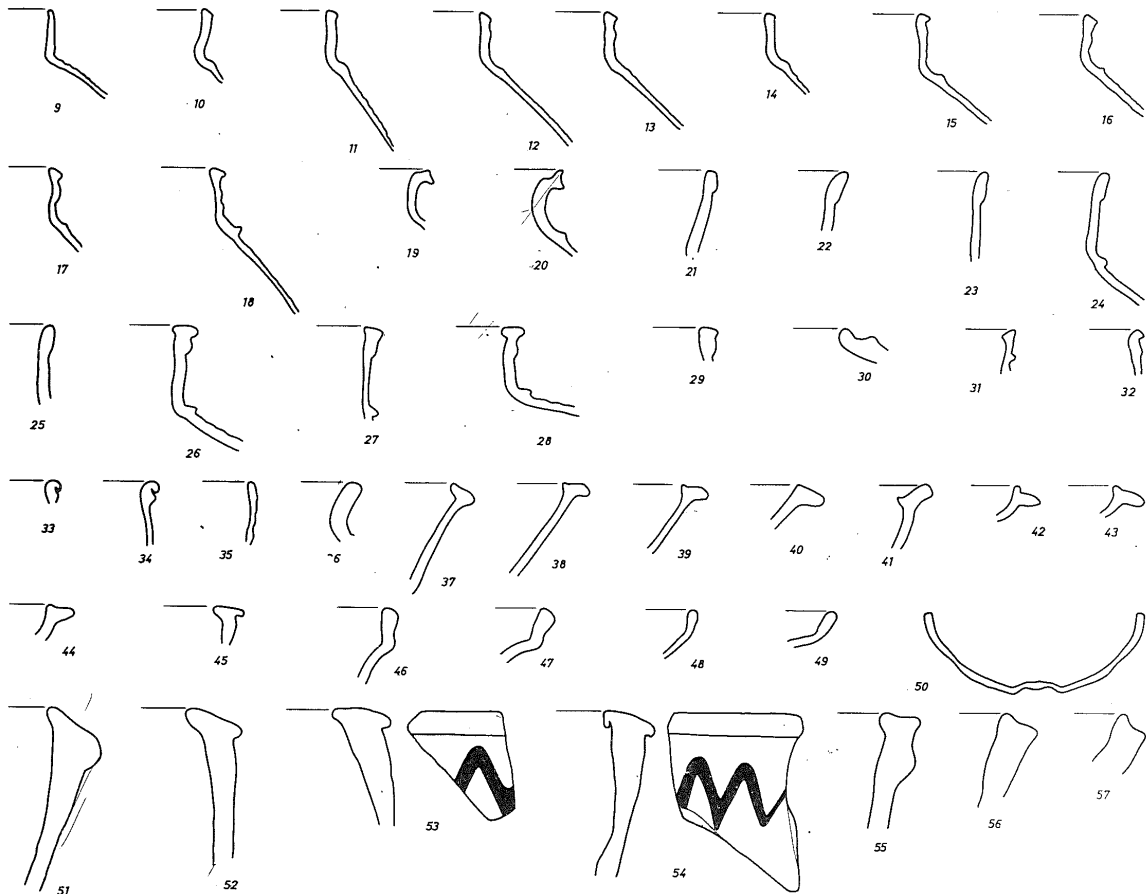
HELLENISTIC



EARLY ROMAN



BYZANTINE



SUPERVISOR - MUHAMMAD MUHAMMAD  
DRAFTSMAN - ARAZIQ YOUSSEF  
SCALE 1:4

Fig. 1

wares from several periods but distributed consistently throughout the loci were Byzantine sherds. It appears that during the Byzantine occupation water, either on a permanent or seasonal basis, surrounded the Qasr and it is probable that the same situation prevailed during the Hellenistic Period.

### CERAMIC ANALYSIS

Presented below in Nos. 1-98 is a group of sherds collected from the surface of the Qasr and its immediate environs. Sherds Nos. 99-158 represent the assemblages from Squares AE. 76.1 and 2.

#### Survey Sherds

**Hellenistic** (fig. 1) Sherd Nos. 1-2 are thick hooked rims from large bag-shaped storage jars. No. 1 has been quickly fired which resulted in a thick dark core which was mixed with coarse, blue and white inclusions and No. 2 exhibits a well fired orange ware throughout and a buff slipped exterior.

Lamp No. 3 is a saucer type with a flat base and folded over sides which have been pinched together.

**Early Roman** (fig. 1) Represented in No. 4 is the rim of a closed globular cooking pot which features a short incurved neck with a groove upon the edge of its out-turned rim and a brick red fabric.

Nos. 5-6 belong to a genre of large bag-shaped storage jars which are characterized by a narrow cylindrical neck, hooked rim and ridge at the base of the neck.

Possibly from a cooking pot, No. 7 is an unusual form characterized by shallow ribbing and light red ware.

The base of a closed cooking pot, No. 8 is unribbed, slightly curving and comes to a faint point.

**Byzantine** (figs. 1-2) Presented in

Nos. 9-18 is a group of globular closed cooking pots. Distinct from the rest of the group, the neck of No. 9 narrows into a thin, almost pointed rim and lacks carination where it joins with the shoulder. The others are generally slightly concave on the interior of the neck, convex or bulging on the exterior, have hooked rims and are marked by carination at the junction of the shoulder and neck.

The open cooking pot rims pictured in Nos. 19-20 feature incurved necks and splayed hooked rims.

The homogenous group of jar rims presented in Nos. 21-25 belong to high, collared storage jars. These rims are thickened, folded over and flattened on their exterior face. The neck is plain and cylindrical and, in the instance of No. 24, marked at the base by a ridge.

The storage jar rims shown in Nos. 26-29 are knob thickened and profiled at the top and retain a ridge at the base of the neck. This form appears in a variety of ware colors ranging from pink to black.

The grooved, hole mouth jar rim, No. 30 is distinct from most of the rest of the corpus for its light grey ware.

No. 31, a small decanter rim, is characterized by a pronounced ridge around the neck and grey brown slipped orange ware. Other small forms are represented by rolled rim juglets Nos. 32-34, which share an orange fabric. A thin ribbed neck sherd from a small jug is shown in No. 35, its orange ware is red-orange slipped on the exterior. An enigmatic and possibly unique form, No. 36 is thick, slightly splayed, rounded at the top and has an apparent convex curving of the neck and bright orange fabric.

Small bowls Nos. 37-39 feature slop-



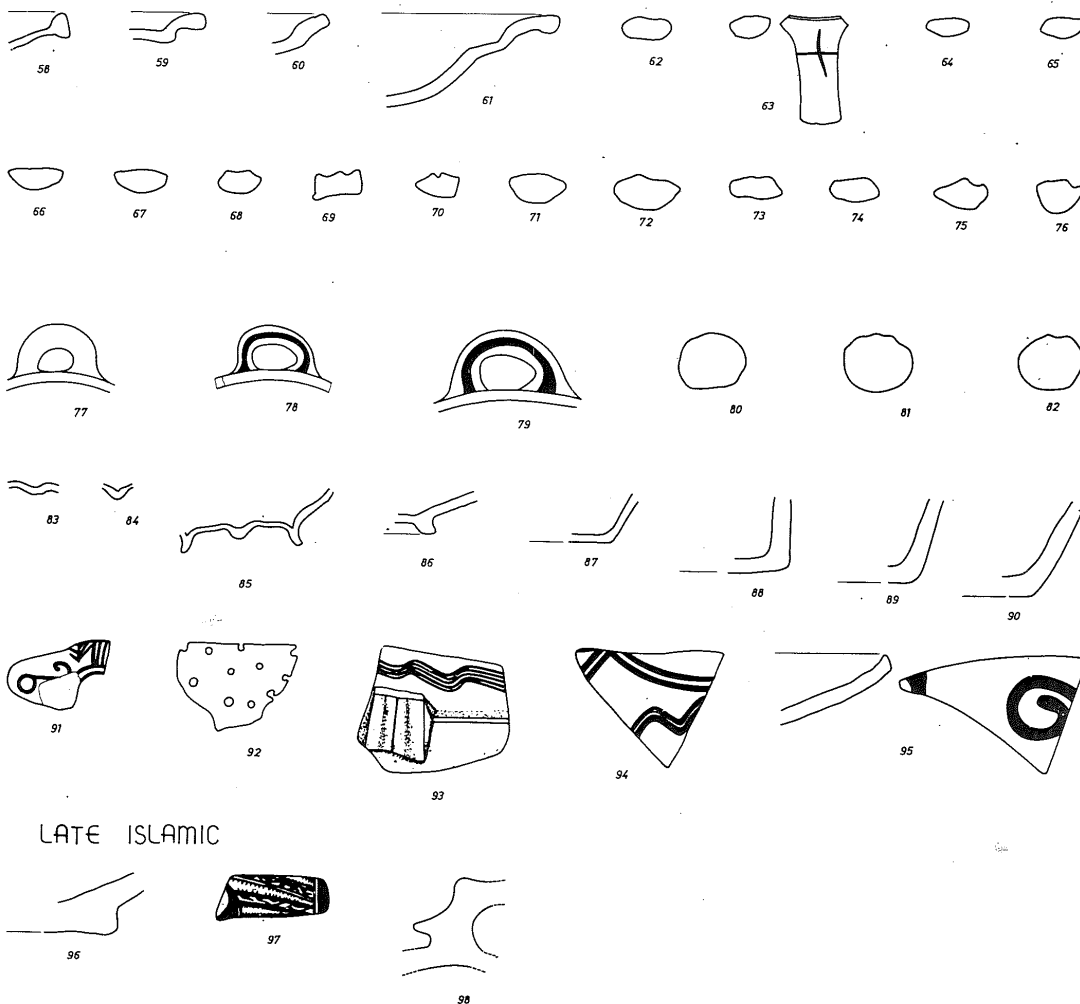


Fig. 2

ing sides and hooked rims pointing both outward, as illustrated by Nos. 38-39, and inward, as shown by No. 37. The latter has a dark grey brown slipped exterior and red slipped interior while the former two are of an orange-pink ware and grey brown exterior slip.

The rim from a large bowl form, No. 40 is characterized by a thick flaring lip and light red-orange ware covered on the exterior with a shiny red slip.

A group of small bowl types is presented in Nos. 41-49. No. 41 displays a high upward projecting blunt lipped rim which is peaked toward the interior. Its ware is pink-orange and covered with a grey brown slip on both the interior and the exterior. Two other small bowls, Nos. 42-43, have rims with peaked tops and outward flaring lips. The gentle curves of the necks indicate these to have been shallow, wide mouthed dishes. The wares are orange and red-orange slipped upon both the interior and exterior faces. Small bowl No. 44 also reflected the blunt out-flaring lip and peaked rim but is less exaggerated than Nos. 42-43. The ware is the same as the above. Flat topped and flaring both inward and outward, bowl rim No. 45 consists of a grey brown slipped pink-orange ware. Carinated bowls Nos. 46-47 share similar features, including a thick rounded rim, pink-orange ware and red-orange slip. Smaller bowls of the same fabric are represented in Nos. 48-49.

Vessel No. 50, a small open bowl, is marked by an umbellicus base and indented exterior side walls.

Presented in Nos. 51-57 is a corpus of basin rims. These thick, heavy handmade vessels reflect two different rim types. Nos. 51-54 have thickened rims which are

flat, sloping and projected and Nos. 55-57 are thickened, squared and grooved at the top.

The group of plates shown in Nos. 58-60 represent locally manufactured vessels in the style of red ware pottery. No. 58 has a thickened triangular knobbed rim and Nos. 59-60 are splayed rims from step sided dishes.

Red ware plate No. 61 shows the profile of a deep step sided dish with a thickened horizontal rim.

Three types of cooking pot handles are shown in Nos. 62-68. Belonging to an open cooking casserole, No. 62 is a straight horizontal handle which probably terminated with a loop turned up and over upon itself. Vertical cooking pot handles Nos. 63-65 are small and ovoid in section. The remainder of the vertical handles. Nos. 66-68 are larger and either flattened on the top face or multi-faceted.

Jar handles Nos. 69-76 exhibit a multiplicity of shapes, all are grooved across the top and most retain vestiges of a buff slip.

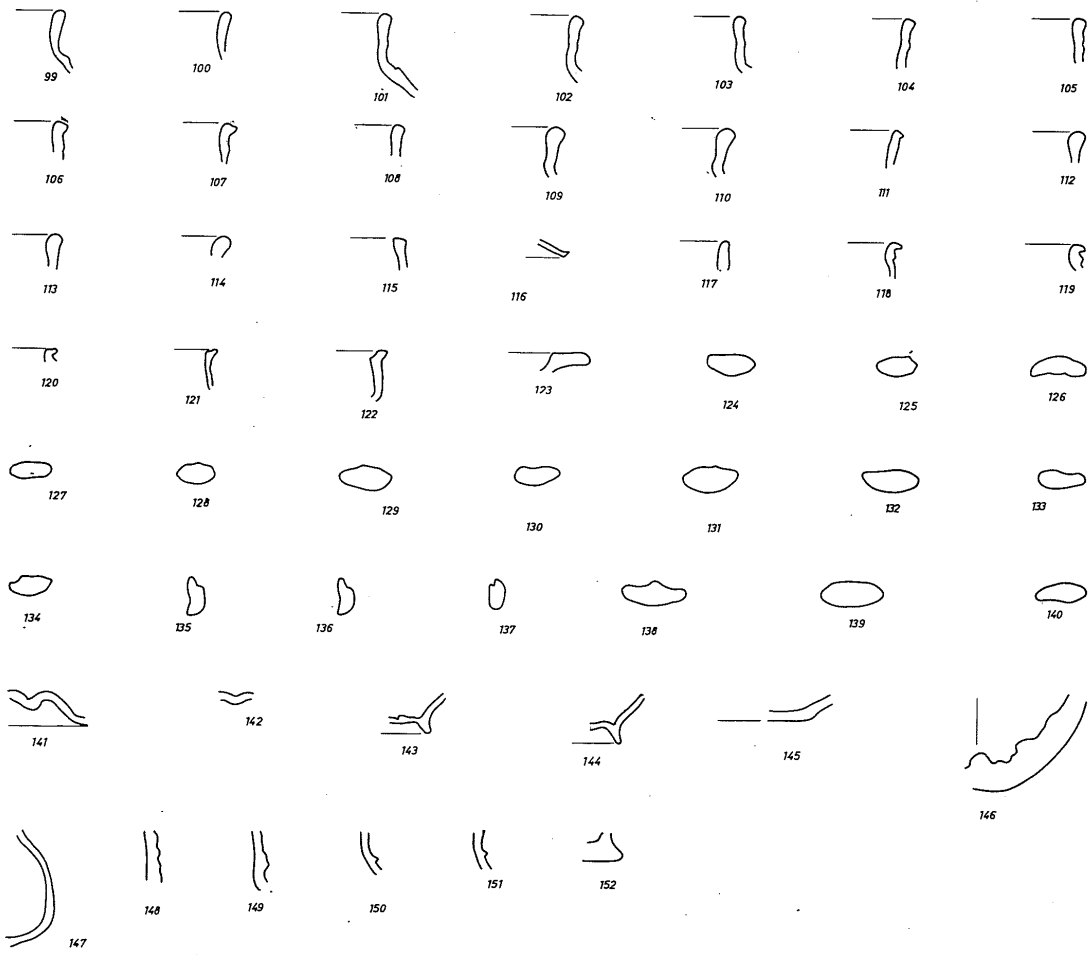
Horizontal handles Nos. 77-79 represent the open lidded cooking casserole, a form which varies in depth but usually is characterized by body ribbing and the bonding of the handles just beneath the rim.

The thick, heavy spherical jar handles pictured in Nos. 80-82 are marked by single or multiple grooves across their upper surfaces and a pink-orange ware.

Appearing frequently upon jars, Nos. 83-85 are ring bases which have a small center omphalos and orange ware with a grey brown exterior slip.

Represented in No. 86 is a ring base of grey buff ware belonging to a bowl or

ARAO EL EMIR 1976 SQUARE I



SQUARE II



SUPERVISOR-ROBIN BROWN  
DRAFTSMAN-A/RAZIQ YOUSEF  
SCALE 1:4

Fig. 3

similar open form.

The thin flat base pictured in No. 87 may be a fragment from a lantern.

Base sherds Nos. 88-90 are associated with the hand made basin forms whose rims are seen above in Nos. 50-56.

Sherd No. 91 consists of the upper portion of a mold pressed lamp which preserves a portion of the nozzle and part of the body around the filling hole. The raised molded decorative motifs include a volute, which curves from the nozzle's wick hole and a schematized olive branch or tree followed by a straight ray lines.

A section of a strainer is presented in No. 92. Wheel thrown and slightly concave, this thin disc of clay is marked by frequent perforations and an unslipped bright orange ware.

Sherd No. 93, the handle section of which is shown in No. 69, has a sharply ridged shoulder beneath which is a handle stump broken at its lower point of attachment. The concavity of the sherd; which lends it a biconical profile and the wide attachment angle of the handle indicate that it belongs to a jug form.

Illustrated in No. 94 is a thick body sherd from a large handmade vessel. The surface is marked by three bands of double line grooving running at right and oblique angles to one another.

The simple bowl rim which is depicted in No. 95 has red painted orange fabric decorated on the interior with a clockwise spiral and cross bands upon the face of the rim.

**Late Islamic (fig.2)** The handmade, undecorated base represented in No. 96 consists of a pink, poorly fired fabric with a rounded heel and a faintly concave underside. This type of base is associated

with a variety of wheel thrown and hand-made forms including bowls, jugs, craters and storage jars.

Jug spout No. 97 was handmade from a coarse pink ware and decorated on the exterior with a finely executed close bichrome pattern which repeats the same basic design alternating in red and black paint.

No. 98 features a cup and portion of a handle (shift stance 90° right) which had been affixed to the shoulder of a large bag-shaped storage jar. This appendage, resting between the neck and one of the shoulder loop handles of the jar, probably held a small rounded dipper juglet.

### **Sounding I**

Cooking pot rims Nos. 99-100 constitute one of three types of cooking pots represented in the soundings. They are thickened and rounded at the top, taper downward and are thinned at the base of the neck. At the junction where the neck and shoulder meet, the body of the vessel is ribbed on both the interior and the exterior.

The group of cooking pots illustrated in Nos. 101-114 are simple rims which vary individually but most are rounded and thickened at the top while a few are flattened and hooked.

No. 115 represents a third category of cooking pots differentiated from the other examples by both its squared rim and white slipped white ware.

The thin straight lid with up-turned edge shown in No. 116 is from an open cooking casserole.

Jar rim No. 177 is of the same form and ware type discussed above under Nos. 22 - 23.

Juglet rims Nos. 118-120 are bulbous and ware type discussed above under

Nos. 22-23.

Juglet rims Nos. 118-129 are bulbous with hooked rims and share an orange ware and dark grey brown slip.

No. 121 features a widely grooved jug rim, ribbed neck and light orange ware covered with a darker burnt orange slip.

The rim from a small bowl, No. 122 reflects heavy notching on the interior and a flaring of the exterior of the rim profile.

Plate rim No. 123 preserves a flatly horizontal lip which is slightly ridged along the edge which faces the interior of the vessel.

Two classes of cooking pot handles are represented within this sounding and the first of these includes Nos. 124-128 which are similar to Nos. 63-65, above, in that they reflect a relative smallness of size in aspects of length, breadth and width. The second group of handles, Nos. 129-133 are larger in size and their upper surfaces have three flattened faces.

Jug handle No. 134 consists of a poorly fired orange fabric and has three flattened faces upon its upper surface.

Presented in Nos. 135-137 are horizontal handles from cooking casseroles of the same form as pictured in Nos. 77-69.

Of the omphalos jar bases which are shown in Nos. 141-142 the former is pink in both ware and slip and the latter is orange with a brown exterior slip.

Sherd Nos. 143-144 are ring bases with a center omphalos identical to those illustrated in Nos. 83-85.

Belonging to a bowl or large platter, No. 145 is a flat base with an orange ware.

The thick rounded base shown in No. 146 is associated with the large zir rim sherds Nos. 1-2. The poorly fired orange ware exhibits a thick core speckled

with large bluish and white inclusions and the exterior is white slipped.

Illustrated in No. 147 is a portion of a juglet with a deep red-orange ware and black exterior slip. This form is possibly related to rim Nos. 118-120.

Sherd No. 148 shows the ribbed neck of a jug.

The body sherd No. 149 encompasses the neck and shoulder junction of a cooking pot whose form, deep orange ware and darker exterior slip are identical to those of Nos. 101-114.

Neck fragments from those jars whose rims are pictured in Nos. 22-24 are shown in Nos. 150-151.

Characterized by a dark reddish fabric and a shiny black slip, No. 152 is the molded base of a pipe bowl. Across the bottom of the bowl are two lines of tiny hatch marks and incised triangles.

## **Sounding 2**

Pictured in Nos. 153-154 are two bowl rims, the former of grey ware and the latter of orange ware.

The wheel turned bowl which appears in No. 155 is distinctive for its cut out decoration which completely covers the exterior surface of the sherd with triangular incisions.

Handle Nos. 156-158 are from cooking pots and all have orange wares.

## **Summary**

The presence of sherds from the Iron Age and Roman Period in Sounding 2 correlate with strata within the village site excavated by Lapp. The few Hellenistic sherds are significant for their contribution to the otherwise poorly represented Str. III but do not add to the picture of Hellenistic culture at Iraq, el Amir. More representative is the Byzantine group which reflects

a pattern of homogeneity, particularly in ware type and surface treatment. This consistency and the presence of possible wasters suggests a local workshop very close to the site. The forms themselves suggest a 4th - 5th century A.D. date which correlates with the Early Byzantine stratification of the Qasr.

#### Notes

Kallner - Amiran, D.H.

1950-51 A Revised Earthquake Catalogue of Palestine. *Israel Exploration Journal* 1:223-246.

Lahee, F.H.

1961 *Field Geology*. New York:

McGraw-Hill.

Lapp, P. W.

1962 Soudings at Araq el Amir (Jordan). *Bulletin of the American Schools of Oriental Research* 165:16-34.

1963 The Second and Third Campaigns at Araq el Amir. *Bulletin of the American Heshbon Pottery* 1971. Andrews University Monographs 7.

1973 *Schools of Oriental Research Basor*, 171:8-39.

Sauer, J. A.

Robin M. Brown

**BERICHT ÜBER OBERFLÄCHENFORSCHUNG  
IN GADARA (UMM QES)  
IN JORDANIEN IM JAHRE 1974**

Ute Wagner-Lux

E.W.Krueger, E.V Karel und Tootje Vriezen

Umm Qés liegt nahe der Nordgrenze Jordaniens ungefähr 10 km südöstlich der Südspitze des Sees von Tiberias auf einer Höhe von 350 m ü. d. M. In und bei der heutigen Ortschaft, die sich auf einem in Ostwestrichtung verlaufenden Landvorsprung befindet, liegen die Ruinen der antiken Stadt Gadara, die seit Pompeius als Glied der Dekapolis eine Rolle gespielt und bis zum Einbruch der muslimischen Araber bestanden hat. Nach Ausweis ihres Namens muss sie eine ältere, vorhellenistische Vorgängerin gehabt haben.

Anlage und Ausdehnung der alten Stadt war den Geländebeziehungen angepasst. Oestlich und westlich eines Hügels, der die Oberstadt trug, verengen verschiedene kleine Flussläufe, die einerseits nach Norden abziehen und vom Jarmukfluss aufgenommen werden, andererseits im Süden in das Wâdi el-Arab münden, das Siedlungsgebiet bis zu ca. 200 bzw. 130 m. Der Oberstadt, die etwa mit den Massen 250 × 270 m angegeben

werden kann, ist im Norden eine ca. 160 × 230 m grosse Fläche vorgelagert. Weiter westwärts des Stadthügels verbreitert das Gelände sich allmählich bis zu ca. 450 m, um ausserhalb des einstigen Stadtgebietes in eine fruchtbare, fast 3 km breite Ebene überzugehen.

Bei der vom 8. August bis zum 15. September 1974 unternommenen Oberflächenforschung, der eine solche Unternehmung von G. Schumacher 1886 vorausgegangen war<sup>1</sup> (Pl. III, 1), wurden Gebäudereste über eine Fläche von ca. 1600 m Länge und bis zu 450 m Breite festgestellt. Abgesehen von den rings um das Stadtgebiet sich befindenden Nekropolen sind alle vorhandenen Ruinen in einen in Felder von 100 × 100 m unterteilten Gesamtplan eingezeichnet (s. Plan), zusammenhanglos herumliegende Architekturteile notiert und inventarisiert sowie eine Fülle von Keramikbruchstücken gesammelt worden<sup>2</sup>.

**Stadtmauern.** Von den östlichen Stadt-

Arbeit gedankt werden. Unser besonderer Dank gilt Herrn M. Bisharat, der uns für die Dauer der Arbeit seine Farm in Muhobe im Jarmuktal als Unterkunft zur Verfügung stellte, sowie dem Ehepaar Dr. Peter Dassel von der Deutschen Botschaft in Amman für ihre unermüdliche Hilfsbereitschaft und damit grosse Erleichterung unseres Unternehmens. Am Ort selbst half uns tatkräftig der Antikenwächter Omari, der in den Dank an alle, die unsere Arbeit förderten, selbstverständlich eingeschlossen ist.

1. SCHUMACHER, Northern 'Ajlûn (1890) S. 46-80.

Aufmasse von Einzelheiten wurden bereits im April 1966 vom Deutschen evangelischen Institut für Altertumswissenschaft des Heiligen Landes in Jerusalem vorgenommen, vgl. M. NOTH, ZDPV 83 (1967) S. 110.

2. Die Kosten der Forschung konnten vom o.g. Institut getragen werden. An dieser Stelle möchte dem Department of Antiquities in Amman, besonders den Herren Y. Owés, Y. Alami und S. Shraide für die grosszügige Unterstützung der

mauern wurden nordnordöstlich des Nordtheaters auf dem Schnittpunkt der Felder 1, -1, 2 und -2 und in Feld 1 zwei Mauerteile in einer Länge von 4 und 6 m eingemessen, die mit den Massangaben von G. Schumacher aus dem Jahre 1886 übereinstimmen. Da die Stadtmauer östlich, nördlich und südlich des östlichen Teils der Stadtanlage, d. h. des Stadthügels mit nördlich daran anschliessendem ebenem Gelände wegen moderner Anlagen des heutigen Dorfes Umm Qês nicht mehr ganz aufgefunden werden kann, ist ihr Verlauf aus G. Schumachers Plan in den Plan der Oberflächenforschung 1974 mit punktierter Linie übertragen worden. Die nördliche Stadtmauer befindet sich an dem steil abfallenden Hang des Landvorsprungs, wo sie z.B. in den Feldern 106 und 107 bis zu 1,75 m hoch über dem Geländeboden in zwei Basaltstein- und drei Kalksteinschichten ansteht. Wegen des schwer zugänglichen Geländes war es 1974 aus Zeitgründen nicht möglich, ihren Verlauf vollständig zu erfassen; sondern nur Teile von ihr ausser an der schon genannten Stelle in den Feldern 104, 105, 109 und 110 einzumessen; die im Plan mit durchgehenden Linien wiedergegeben worden sind, während die dazwischenliegenden Teile gestrichelt eingezeichnet wurden. Die von G. Schumacher angegebene südliche Stadtmauer konnte in den Feldern -208 und -308 weiter verfolgt werden, wo sie auf Felsboden gegründet stellenweise in vier Kalksteinschichten bis zu einer Höhe von 1,80 m zu sehen ist. Westwärts davon fehlt jede Spur von ihr, wie auch der Verlauf der Nordmauer westlich von Feld 110 nicht weiter festgestellt werden konnte. Gänzlich ergebnislos verlief die Suche nach einer westlichen

Begrenzung der Stadt.

**Stadttore.** Das von G. Schumacher in der östlichen Stadtmauer vermerkte Stadttor ist auf Grund der heutigen Geländebeziehungen nicht mehr zu erkennen. Der Teil der Hauptstrasse aber, der nördlich des Nordtheaters in Feld -2 liegt, verläuft von Westnordwest nach Ostsüdost und erreicht die östliche Stadtbegrenzung etwa an der Stelle, wo G. Schumacher das östliche Tor angibt. Jedoch bot sich kein Anhaltspunkt für die Annahme eines westlichen Stadttors nahe beim Schnittpunkt der Felder 4, -4, 5 und -5, da es sich hier aller Wahrscheinlichkeit nach um Reste grösserer Gebäude handelt.

**Strassen.** Von der Hauptstrasse, die noch heute das Gelände der ehemaligen antiken Stadt von Ost nach West durchzieht, waren 1974 Teile erkennbar; sie sind im Plan der Oberflächenforschung eingetragen und mit gestrichelter Linie untereinander verbunden worden. Inzwischen kamen durch regen Autoverkehr weitere Strecken zum Vorschein. Vor dem Nordtheater in Feld -2 konnte der südliche Gehsteig in einer Länge von 9,50 m festgestellt werden, während nordwestlich davon in Feld -3 ca. 6 m des Strassenplattenbelags erkennbar sind. Weiter westlich auf der Grenze der Felder 5 und -5 kann sowohl die Strasse als auch der Gehsteig der Südseite über eine Strecke von 99,50 m verfolgt werden (Pl. III, 2), wobei ca. 24 m des Weges nicht aus Plattenbelag besteht, sondern aus dem Felsen herausgearbeitet worden ist. Ungefähr 340 m westwärts bei den Feldern 9 und -9 wurde ein weiterer 6 m langer Strassen teil vermessen. An dieser Stelle befindet sich an der Nordseite eine parallel zur



Strasse verlaufende Säulenstellung aus acht Säulen über eine Strecke von 24,78 m offensichtlich *in situ*, deren Säulenschäfte einen Durchmesser von 0,69 bis zu 0,73 m haben und bis zu einer Höhe von 0,68 bis 1,49 m aus dem Erdreich herausragen. Auf der gegenüberliegenden Südseite stecken zwei der ehemals die Strasse säumenden Säulen im Boden, so dass die Strassenbreite, von Säulenmitte zu Säulenmitte gemessen, mit 13,80 m angegeben werden kann. Weitere anscheinend *in situ* sich befindende Reste der Säulenstrasse gibt es in Form von Säulenschäften und Postamenten in den Feldern 7, -7,8 und -8. Bei allen hier behandelten Strassenteilen handelt es sich um Basaltbelag, während die dazugehörenden Säulen aus Kalkstein gearbeitet waren. Nunmehr ist der Verlauf der Hauptstrasse vom Osttor der Stadt bis in das Gebiet der Felder 9 bzw. -9 ersichtlich. Nach einer kurzen Westnordweststrecke vor dem Nordtheater biegt sie nach Westen um. Westlich der Felder 9 und -9 verliert sich ihr Verlauf. Es ist aber anzunehmen, dass die ungefähre Richtung nach Westen bis zum Ende der Stadt beibehalten wurde.

Am Schnittpunkt der Felder 4, -4, 5 und -5 weist eine Unterbrechung des südlichen Gehsteigpflasters der Hauptstrasse auf eine nach Süden abzweigende, ebenfalls mit Basaltplatten ausgestattete Nebenstrasse hin, die an einer Anzahl überwölbter Räume sowie am Westtheater vorbeiführte.

**Stadthügel bzw. Oberstadt.** Im Südosten des Stadtgebietes hebt sich ein Hügel vom übrigen Gelände ab, der wahrscheinlich teilweise durch Ablagerungen mehrerer Besiedlungs- oder Baupere-

rioden bis zu seiner heutigen Höhe angewachsen ist. Die auf dem Hügel verbliebenen antiken Baureste wurden bereits von G. Schumacher im Jahre 1886 erfasst und in seinem Lageplan festgehalten. Bei der Oberflächenforschung 1974 wurden an beiden Theatern lediglich Anhaltspunkte eingemessen, während die Grundrissmasse sowie einige Mauerzüge, die wegen der Wiederbesiedlung des Stadthügels am Ende des vorigen Jahrhunderts heute nicht mehr auszumachen sind, aus G. Schumachers Aufzeichnungen übernommen worden sind. Am Westhang 110 m südlich des Westtheaters wurden in Feld -205 die nördliche und östliche Apsis eines dreiapsidalen, nach Osten orientierten Gebäudes, von dem noch einige Kalksteinquaderschichten anstehen, vermessen. Wahrscheinlich handelt es sich hierbei um die Ruine einer altchristlichen Kirche.

**Terrasse.** Westlich des Stadthügels in Feld -4 zwischen Ober- und Unterstadt, von der Hauptstrasse im Norden und vom Westtheater im Süden begrenzt, befindet sich eine 95,40 m lange und 32 m breite Terrasse. Die östliche, zur Oberstadt hin in den Felsen eingearbeitete Stützmauer war, zumindest in ihren oberen Schichten, von denen zwei auf eine Strecke von 20 m zu erkennen sind, aus Kalksteinen errichtet worden, während die westliche, die auf eine Länge von 97 m zu verfolgen ist, sowie die an den Schmalseiten der Terrasse liegenden Wände ausschliesslich aus Basalt bestehen. Eine auf die westliche Stützmauer aufgesetzte, ebenfalls aus Basalt bestehende 76 m lange, 0,95 m breite und ca. 0,30 m hohe Steinreihe, die etwa in der Mitte sieben Basaltsäulenba-

sen im Abstand von je 3,20 m in situ zeigt, deutet auf zwei Bauphasen hin. Die Nordfassade der Terrasse ragte nur zum Teil aus dem Erdreich heraus. Soviel aber konnte auf Grund zweier verschiedener übereinandergelegter Mauern festgestellt werden, dass es sich hier ebenfalls um zwei Bauphasen handelt. Von drei auf die Terrasse führenden Portalen war 1974 nur die aus weissem Marmor ausgeführte Türschwelle der westlichsten Tür zu sehen. Ob und inwieweit nördlich der Nordbegrenzung der Terrasse unmittelbar an der Hauptstrasse sich befindende Fundamente aus Basalt mit der Nordfassade in Verbindung stehen, kann erst eine Ausgrabung dieses Geländes erbringen. Ueber die Südbegrenzung der Terrasse ist nur so viel zu sagen, dass sie über eine Länge von 20 m in spärlichen Resten vorhanden ist. Auf der Terrasse selbst befinden sich in ihrer Nordwestecke acht auf Basaltuntergrund stehende Säulenbasen aus Kalkstein mit vier- oder achteckiger Plinthe mit wechselnden Abständen von 2,60 bis 3,80 m, die zu parallel zu den Stützwänden geführten Säulenreihen gehört haben. Eine Anzahl aus grobem Kalkstein bestehender Säulenschäfte liegen unweit der Basen auf einem zum Teil mit Basalt-, zum Teil mit Kalksteinplatten ausgelegten Fussboden (Pl. IV, 1). Etwa in der Mitte der Terrasse konnte unter Olivenbäumen eine Seite eines aus Basalt ausgeführten Oktagonbaus mit einem ungefähren Durchmesser von 10 m ausgemacht werden.

**Unterstadt.** Auf der Ostseite der bereits erwähnten, von der Hauptstrasse nach Süden abzweigenden Nebenstrasse sind an der Westgrenze des Feldes -4 seit langer Zeit elf aneinandergereihte Räume mit gewölbten Decken sichtbar, - vier wei-

tere liegen noch unter Erdreich verschüttet, die sich unmittelbar an die westliche, in Basalt ausgeführte Stützmauer der soeben beschriebenen Terrasse anlehnen (Pl. IV, 2). Die Länge der einzelnen Räume, die durch im Durchschnitt 0,95 m dicke Wände voneinander getrennt sind, kann in allen Fällen mit 4,90 m angegeben werden, während ihre Breite zwischen 3,60 und 3,90 m variiert. Die Höhe von der Türschwelle bis zum Scheitel des Gewölbes beträgt da, wo Masse genommen werden konnten, entweder 3,05 oder 3,10 m. Türen in einer Breite von 1,48, 1,50 oder 1,51 m mit profilierten Rahmen, deren Schwellen zwischen 0,10 und 0,22 m über dem Strassenpflaster liegen, führten in die einzelnen Räume. Die unteren Schichten der Wände sowie alle Türrahmen wurden aus Basaltsteinen errichtet; der übrige Bau besteht aus Kalkstein. Offensichtlich haben wir es hier mit einem Geschäftsviertel zu tun, wie es in gleicher Weise heute noch im Orient mit seinen aneinandergereihten Läden gebräuchlich ist.

Westlich der Nebenstrasse wurde in der Mitte des Feldes -5 die Westfassade einer in Nordsüdrichtung verlaufenden massiven Mauer festgestellt, deren unterste Schichten aus Basaltsteinen, die obere aus Kalkstein errichtet wurden. In unmittelbarer Nähe, ca. 23 m westlich der Nebenstrasse, befindet sich ein 10,70×3 m grosser, heute unter der Erdoberfläche liegender Raum mit einer gewölbten Decke aus Kalkstein, der von Osten her zugänglich ist und den Dorfbewohnern als Vorratsraum dient. Aus diesem Grunde konnte seine Höhe nicht festgestellt werden. An der Westseite des Feldes -5 liegen -aus grossen behauenen Kalksteinen-Fun-

damente einer massiven Plattform, die sich über eine Länge von mindestens 41,80 m und eine Breite von 17,80 m erstreckt haben muss. Der grösste Teil aber wurde in früheren Zeiten ausgeraubt.

In Feld -6 sind, abgesehen von einem Teil einer halbrunden verputzten Nische, nur einige unzusammenhängende Mauerzüge aus Basalt oder Kalkstein sichtbar, die grösstenteils in Ostwestrichtung verlaufen.

Im südöstlichen Teil des Feldes -7 ist eine in Diagonalrichtung zum Feld angelegte Mauer aus Basaltgestein über eine Länge von 14,80 m mit einer Breite von 0,92 m vorhanden; im nordwestlichen Teil ragen an verschiedenen Stellen aus einem dort sich befindenden Hügel Mauerteile aus Kalkstein eines offensichtlich grösseren Gebäudes heraus. Die am Hang dieses Hügels vermessenen Baureste sind 13,90 m lang. Ihre Breite konnte nicht ermittelt werden. Auf der Spitze des Hügels gibt es einen 4,20 m breiten Raum, der in eine spätere Anlage einbezogen wurde, so dass seine Länge nicht erkennbar ist.

Feld -8 hat nur zwei zur Hauptstrasse gehörende Säulen in situ aufzuweisen.

Im südlich sich anschliessenden Feld -108 konnte ein diagonal zur Fläche aus Kalkstein errichtetes Gebäude mit gewölbter Decke aufgenommen werden; seine Länge beträgt 21 m, seine Breite 6 m. Die Höhe war nicht zu ermitteln.

In den westlich sich anschliessenden Feldern -9 und -109 befinden sich Reste dreier grösserer Gebäude. Das nördliche, dessen Nordseite ca. 26,20 m von der Mitte der Hauptstrasse entfernt liegt, besteht aus einer aus Kalkstein ausgeführten

massiven Terrasse von 27 m Breite, von der heute noch auf der Westseite eine Steinschicht, auf der Ostseite bis zu zwei Schichten, bei der allerdings die Aussen- seite der Fassade ausgebrochen wurde, erkennbar sind. Sie konnte über eine Länge von 103 m festgestellt werden. Zweifelsohne handelt es sich hierbei um die Reste eines Monumentalbaus, dessen südlicher Teil heute unter einem Hügel liegt. Ein Zusammenhang zwischen den nördlich davon unweit der Hauptstrasse sich befindenden Mauerteilen und den eben beschriebenen konnte bisher wegen der Wiederbenutzung des Geländes durch die Dorfbewohner nicht festgestellt werden. Südöstlich davon stehen die Ruinen eines Oktogonalbaus mit wahrscheinlich quadratischer Ummantelung bis zu 5 m an (Pl. V, 1). Dabei handelt es sich um einen Teil der südwestlichen Apsis sowie der Westwand, zu deren Bau im Inneren Basalt, im Aeusseren Kalkstein verwandt worden ist. Der Durchmesser des oktogonalen Innenraumes beträgt 16,50 m; eine Oktogonalseite ist 6,30 m lang. Die Apsis hat eine Breite von 5,08 m und eine Tiefe von 2,80 m. Die Stärke der Ummantelung beträgt 3,05 m. Ca. 10 m südlich des Oktogonalgebäudes schliessen sich die Fundamente einer weiteren massiven, in Ostwestrichtung verlaufenden Terrasse an, die in einer Mindestlänge und -breite von 48,50 zu 20,60 m aufgemessen wurde. Sie ragt in zwei bis drei Kalksteinschichten aus dem Gelände heraus. Im Osten lassen Spuren einer Treppe einen Ausgang zur Terrasse vermuten.

Die Felder -10, -110, -11, -111 und -12 weisen neben einigen spärlichen

Gebäuderesten (Pl. V, 2) und einem intakten Mausoleum (Feld -11) eine Anzahl von Schnitten auf, die durch Ausheben des Erdreichs in jüngster Zeit entstanden sind. Dadurch ergab sich die Möglichkeit, an einigen Stellen stratigraphische Beobachtungen zu machen.

Das Mausoleum in Feld -11 wurde als unterirdische Anlage fast nur aus Basaltsteinen errichtet. Von der Nordseite führen siebzehn Stufen, unterbrochen durch schmale Podeste, in die ca. 3,95 m unter dem heutigen Niveau liegende Vorhalle der Grabanlage hinab. Ihre Dachkonstruktion wurde ehemals von vier Säulen getragen (Pl. VI, I). Unmittelbar vor dem Eingang zur eigentlichen Begräbnisstätte befindet sich eine weitere von drei Bogen getragene Halle mit schmalen, horizontal aneinandergereihten Steinplatten als Ueberdachung, von der eine Steintür über drei Stufen in einen Vorraum des Begräbnisplatzes führt. Von hier aus bietet eine weitere Steintür Zugang zum eigentlichen Grabkuppelbau, dessen Fussboden fünf Stufen tiefer liegt. In diesem Kuppelbau fanden achtzehn Steinsarkophage auf drei Wandseiten je sechs in übereinanderliegenden Schiebestollen Platz (Pl. VI, 2). Um den Kuppelbau herum verläuft ein 2,42 m breiter Umgang, der ebenfalls durch eine Tür von der zweiten Vorhalle aus zugänglich ist. In der ersten grossen Vorhalle wurde in späterer Zeit ein kreisförmiger Einbau angebracht, so dass, wie heute gesehen werden kann, zwei Bauphasen in der Gesamtanlage vorliegen.

Am Treffpunkt der Felder 10, -10, 11 und -11 befindet sich ein aus Basaltsteinen errichteter Rundbau mit einem inneren Durchmesser von 7,10 m und einer Mauerstärke von 2 m. An der Nordostseite führt

ein 0,93 m breiter Kanal in die Anlage, so dass es sich hier anscheinend um ein Wasserbecken handelt. Der ganze Bau steht drei Schichten über dem Erdreich, wovon die obere Schicht 0,53 m zurückspringt und eine profilierte Aussenseite hat.

In Feld 2 wurden drei heute unterirdische Räume mit gewölbter Decke aus Kalkstein festgestellt, von denen einer zum Teil vermessen werden konnte. Dabei ergab sich eine Breite von 2,60 m und eine Mindestlänge von 7 m. Die Höhe konnte wegen der Wiederverwendung durch die Dorfbewohner nicht ermittelt werden. Dieser Raum wurde in Nordnordostrichtung angelegt, ebenso ein zweiter mit ungefähr den gleichen Massen. Beiden vorgelagert ist der dritte Raum, diesmal in Westnordwestrichtung und wahrscheinlich von gleicher Grösse. Masse konnten hier nicht genommen werden, da jüngst angebrachte Türen den Eingang verschliessen. Ausserdem gibt es in diesem Feld zwei Mauerfragmente.

In Feld 4 befinden sich die Ruinen eines in Ostwestrichtung verlaufenden langgestreckten und wahrscheinlich terrassierten Monumentalbaus aus Kalkstein, dem im Westen verschiedene Basaltsteinschichten vorgelagert sind. Der gesamte Komplex hat eine Mindestlänge von 37 m und eine Mindestbreite von 6,60 m. Er liegt gegenüber dem mit Säulen bestandenen Platz von Feld -4 und unmittelbar nördlich an die Hauptstrasse anschliessend.

In Feld 5 und im östlichen Viertel des Feldes 6 liegt eine ca. 110 m lange und ca. 60 m breite Terrasse, die teilweise von Bogensubstruktionen getragen wird,

und deren nördlicher Abschluss in Feld 5 in Form einer vierschichtigen, ca. 2 m hohen Terrassenmauer aus Kalkstein über eine Länge von 71,85 m zu sehen ist. Auf dieser Terrasse gibt es drei in der Erde steckende Säulentrommeln, deren Oberkante auf dem heutigen Gehniveau liegt; ihr Durchmesser ist 0,73 m. Im westlichen Viertel liegen ebenfalls in einer Höhe mit dem Gehniveau drei in Nord-südrichtung hintereinanderliegende Postamente; ihre Masse sind  $1,10 \times 1$  m. Des weiteren liessen sich eine kleine in Nord-südrichtung laufende Mauer aus Basalt sowie einige Kalksteinplatten, vielleicht eines Fussbodens, feststellen. Das höhlenähnliche Gelände unter der Terrasse wurde teilweise in ein Zisternensystem einbezogen, das durch Gänge miteinander verbunden ist.

In Feld 6 liegt unmittelbar an der nördlichen Strassenseite noch vor der Terrasse eine Fassade, die in einer Breite von 6,55 m unterbrochen ist. Zu beiden Seiten des Durchbruchs befinden sich in der Fassade 1,08 m breite Nischen mit Kalotten; sie haben eine Tiefe von 0,58 m. Teile der Kalotten liegen verstreut in der Nähe (Pl. VII, 1). Ausserdem gibt es in diesem Feld verschiedene kleine Mauerzüge aus Basalt oder Kalkstein und zahlreiche Kalksteinplatten verschiedener Fussböden.

Auf der Grenze der Felder 6 und 7 zeichnet sich am Boden eine nach Osten orientierte Apsis mit einem inneren Durchmesser von 4,45 m bei einer Tiefe von 2,20 m ab (Pl. VII, 2). An die Apsis schliesst ein Teil einer bogenförmigen

Konstruktion an, die, streckenweise unterbrochen, eine Ellipse mit einer Mauerstärke von 0,75 m bildet. Dass die beiden vorhandenen bogenförmigen Mauerzüge in einem Zusammenhang gestanden haben müssen, beweist die Gleichheit ihres Materials, nämlich Kalkstein, und ihrer Technik-verschränkte Läufer-Binder-Technik. Südwestlich dieser Gebäudereste liegen unweit des nördlichen Strassenrandes auf Gehniveauhöhe vier Kalksteinpostamente in Ostwestlinie im Abstand von 1,80, 1,95 und 2 m parallel zum Strassenverlauf, während ein fünftes Postament im rechten Winkel zur Reihe im Abstand von 4,25 m liegt. Die Masse der Postamente variieren von  $0,70 \times 0,80$  m bis zu  $0,95 \times 0,97$  m. In der nördlichen Hälfte des Feldes 7 sind spärliche Reste von zwei Kalksteinmauerzügen gerade noch so weit erkennbar, dass ihre Bauweise, nämlich Läufer-Binder-Technik, festgestellt werden konnte.

Am Nordrand dieses Feldes und in das nächste Feld 107 übergreifend befindet sich ein bereits vor 1974 freigelegtes Mausoleum<sup>3</sup>. Hierbei handelt es sich um eine rechteckige Einzelgrabanlage aus Basalt in einer Länge von 9,50 m und einer Breite von 7 m mit einem Treppenaufgang von Ost-südost (Pl. VIII, 1). Südlich dieses Mausoleums sind mehrere Fassaden von anscheinend älteren Gebäuden sichtbar, die sowohl aus Kalk- wie aus Basaltsteinen errichtet worden waren. Eine dieser Fassaden wurde als Rückwand eines hufeisenförmigen verputzten Kalksteinwasserbeckens benutzt, das von der Nordwestecke des Feldes 7 in die Nordostecke des Feldes 8 übergreift. Die

3. B. De VRIES, The North Mausoleum at Um Qeis, *ADAJ* 18 (1973) S. 77.

innere Breite des Beckens beträgt 2,40 m, die innere Tiefe 2,05 m; die Mauerstärke variiert zwischen 0,35 und 0,42 m. Wasserzuleitung und -abfluss sind deutlich erkennbar.

In Feld 8 und teilweise in Feld 108 befindet sich ein spätantikes Bad, das bereits 1965 aufgenommen und 1966 publiziert worden ist<sup>4</sup>. In den Jahren zwischen 1966 und 1974 sind von der jordanischen Altertümerverwaltung weitere Teile dieses Bades freigelegt worden, wobei zum Teil mit Marmor verkleidete Becken zum Vorschein kamen, so dass die Gesamtanlage heute 30,70 m bzw. 19,80 m lang und 19 m bzw. 18,60 m breit ist (Pl. VIII, 2).

Im Westteil des Feldes 108 sowie im Ostteil des Feldes 110 befinden sich am Hang ausser einigen im Verband liegenden Kalksteinen Reste von Stützmauern aus Kalkstein in ungefährer Richtung Ost-West in Längen von 6 m bzw. 12,50 m.

In Feld 9 konnte eine in sechs Steinlagen ca. 3 m hoch anstehende Terrassenmauer aus Kalkstein, die mehrmals ihre Richtung ändert, in einer Gesamtlänge von ca. 66,50 m festgestellt werden.

An der Westseite des Feldes II wurde ein Teil eines Basaltplattenfussbodens gefunden. Südlich davon gibt es einen weiteren Basaltplattenbelag, der sich ca. 1 m unter dem heutigen Niveau befindet und von dem sechs Plattenreihen auszumachen waren.

In der Nordwestecke des Feldes 12 liegt unter dem heutigen Niveau ein Raum von, 3,30 m Länge und 3,10 m Breite. Das aus horizontalen Steinplatten beste-

hende Dach wird von zwei Bogen getragen, die in den Wänden ansetzen. Das Baumaterial des ganzen Hauses besteht aus Kalkstein. Ein Zugang zu diesem Raum liegt im Süden, der die Breite von 0,78 m hat. Anscheinend handelt es sich hier aber um einen sekundären Eingang. Sowohl über die Gesamthöhe des Raumes als auch über die Tür lässt sich zur Zeit keine Aussage machen, da er teilweise mit Erdreich zugeschüttet ist. In der Mitte der Steinplattendecke befindet sich eine kreisförmige Oeffnung mit einem Durchmesser von 0,53 m, die sich nach oben zu einem Durchmesser von 0,45 m verengt. Die Wände des Raumes, von denen sieben Steinlagen sichtbar sind, wurden abwechselnd in Läufer-Binder-Technik und nur Läuferlage errichtet.

In Feld 212 verläuft in nordwestlicher Richtung ein Basaltmauerzug, der über eine Länge von 3,97 m festgestellt werden konnte.

In Feld 13 zeichnet sich auf dem heutigen Gehweg die Innenseite einer gegen Nordosten gerichteten Mauerecke ab. Das Material besteht aus Basalt. Der in Ostwestrichtung verlaufende Mauerzug dieser Ecke konnte auf 4,27 m festgestellt werden, die nordsüdliche Mauer in einer Länge von 4,08 m. Während bei der ostwestlichen Mauer sich die Breite nicht ermitteln liess, kann sie bei der Nordsüdmauer mit 2,20 m angegeben werden.

Ueber die Felder 14, 15 und 16 erstreckt sich ein leicht gekurvter grösserer Gebäudekomplex mit im Höchstfall achtunddreissig aneinandergereihten Räumen, der bisher als Begräbnisstätte oder

4. U. LUX, Der Mosaikfussboden eines spätantiken Bades in Umm Qes, *ZDPV* 82 (1966) S. 64ff. S.

MITTMANN, Die Inschriften des spätantiken Bades in Umm Qes, *ZDPV* 82 (1966) S. 71ff.

als Geschäftsviertel gedeutet worden ist, nun aber einwandfrei als Hippodrom angesehen werden kann, von dem die nördliche Langseite über eine Strecke von 225,45 m zu verfolgen ist bei einer Breite von 8,90 bis 10,35 m. Da, wo die Innenmasse der Räume feststellbar sind, handelt es sich um Längen zwischen 4,35 und 4,66 m, um Breiten zwischen 3,70 und 6,80 m, während die Zwischenwände von 1,15 bis zu 1,85 m variieren. Die Nordwand hat eine Stärke von 2 bis 2,10 m, die Südwand von 1,30 bis 1,65 m. Bei der untersten Steinschicht der Südwand handelt es sich um profilierte Steine (Pl. IX, 1). Der ganze Bau besteht aus Basalt.

In der westlichen Hälfte des Feldes 16 sind bei dem dort einst vorhandenen Monumentalbau vorläufig die Masse von G./Schumacher übernommen worden, da im jetzigen Trümmerzustand ohne Ausgrabung keine besseren Masse zu gewinnen waren (Pl. IX, 2).

Schliesslich sei noch erwähnt, dass in den Feldern 17, 117, 18 und 118 eine Vertiefung im Ackergelände von ca. 100 × 70 m zu sehen ist. Nach der Aussage der Dorfbewohner hat es hier noch vor zwei Generationen einen Teich gegeben, zu dem Stufen, die heute nicht mehr vorhanden sind, hinabgeführt haben sollen.

**Zusammenfassung.** Abgesehen von wenigen Ausnahmen ist in Gadara die im Altertum gebräuchlichste Bauart, die der Läufer-Binder-Technik, nachgewiesen. Zu welchem Zeitpunkt oder bei welcher Art von Gebäuden als Baumaterial Basalt oder

Kalkstein bevorzugt verwendet worden ist, konnte bei dieser Oberflächenforschung nicht ausgemacht werden. Es ist nur so viel mitzuteilen, dass bei einer Anzahl der Bauten die Unterkonstruktion aus dem härteren Stein, aus Basalt hergestellt worden ist, während der Oberbau in Kalkstein ausgeführt wurde, oder dass es ausschliesslich Basalt - oder ausschliesslich Kalksteinanlagen gab.

Von Deutungs - und Datierungsversuchen wurde Abstand genommen, da ohne Ausgrabungen keine sichere Aussage gemacht werden kann, ausser bei dem im Westen der Stadt liegenden Hippodrom, wo durch Vergleichsmöglichkeiten mit Gerasa alle Zweifel ausgeschlossen sind.<sup>5</sup>

Auf Grund der vorgefundenen Keramik kann gesagt werden, dass das Gebiet des alten Gadara vom 7. Jh v. Chr. an bis ins Mittelalter bewohnt gewesen ist, wobei die früheste Besiedlung auf einem nur schwach vom übrigen Gelände der Unterstadt sich abhebenden Hügel, vornehmlich in den Feldern 10 und 11, erfolgt sein muss. Etwa 440 Jahre lang hat der Ort verlassen gelegen. Nur hin und wieder wurde er von Reisenden besucht, die sich mit der Frage der Lokalisierung des alten Gadara beschäftigten, ehe unter den neuen Siedlern am Ende des vorigen Jahrhunderts die Stätte zu neuem Leben erwachte.

Ute Wagner Iux

5. C. H. KRAELING, *Gerasa* (1938) Plan VI





EXCAVATIONS AT TELL DEIR 'Alla  
SEASON 1979

by

Moawiyah M. Ibrahim  
and Gerrit van der Kooij

**Introduction remarks**

Archaeological excavations by a joint expedition of the Department of Antiquities at Amman and the University of Leiden were carried out at Tell Deir 'Alla during eight weeks in Febr. and March 1979. The work was a continuation of what was done in the seasons of 1976 and '78. (See preliminary report in A.D.A.J. XXII. 1977/78, pp. 57-80 Plts XXVI - XLII). The aims and methods were the same. Within the same program another two seasons are planned in order to excavate more of "phase M".

The expedition was financed mainly by the Department of Antiquities, and the University of Leiden, but also the Netherlands organization for the advancement of pure research (Z. W. O.) contributed materially.

The team consisted of Jordanian and Dutch members (See Pl. X), with Dr. Moawiyah M. Ibrahim and Gerrit van der Kooij as directors. Square supervisors were Miss Rose Habaybeh in square B/C8, Mr. Tayseer Ateyat with Anees Qarakesh in squares B/A7 and 8, Mr. Mohammed Darwish in squares B/A9 and 10, Mr. Mohammed Jamra in squares E/B9 and 10 and B/C9, Mr. Harm Mooibroek in square B/B5, Mr. Harco Willems in Squares B/A5 and 6, Dr. Klaas Smelik (during the last week assisted by Miss Emily Hemelrijk) in squares B/B6 and B/C6. Finds administration and - cleaning, as well as household

by Mrs. Malou Nozeman. Object drawing by Mr. Ad van Weezel. Photography by Mr. Peter Daalderop and Mr. Gerrit van der Kooij. The driver of the Departments car was Owdeh Toshani; chief cook Abu Mohammed. Specialised formen at the dig were Ali Abdulrasul, Sadik Abdullah, Amin Cana'an and Abu Maruf (the last two from Deir 'Alla). The workmen came from Deir 'Alla.

With the kind permission of Dr. Subhi el-Qasim we could, again, use the buildings and furniture of the University Farm as a camp. The team digging at Tell el Mazar under the direction of Dr. Kheir Yassine used the camp during partly the same period, which happened in good co-operation with us.

Apart from the actual work on the site and in camp, which meant for many team members an important training in field work, some stress was also put on understanding the archaeological and natural environment of the site. Several excursions were made during afternoons and weekends. Some issues concerning the background of archaeological studies were discussed by lectures.

Very important for our work was the support we got from Dr. Adnan Hadidi, Director general of the Department of Antiquities in Amman, and Dr. Henk J. Franken, Director of the Institute for archaeology of Palestine and surroundings in Leiden.

## Excavations

This season the excavations were limited to the top of the tell only. Work was done in almost all of the  $5 \times 5$  m squares to the North of the baseline, in which the work had started in 1978. See *op. cit.* fig. 9, p. 70. Work was done also in square B/C6, the SE corner of the 1967 excavation area.

The excavations had to do with the phases below phase V in most of the squares (for the preliminary phasing system see *op. cit.* p. 60). However the later phases were touched also, namely where baulks were removed (cf. *op. cit.* pp. 71 ff.).

### Phase I

The medieval arabic graveyard on top of the tell was touched in the baulks only. Some of the graves, excavated before, were still partly left in them. One complete, though damaged, grave with a main part of the skeleton was found in the 1.5 m wide N-baulk of B/B5, on top of the remnants of the phase V E - W wall. The skeleton had at its feet a small stone, artefact with a waist-like middle part.

### Phase II

The characteristic pits of this phase were found in some of the baulks (partly) as well as probably in square B/C8. Substantial work on this phase was done in B/A9 and 10, in excavating the very large pit which was discovered in 1978 already. This pit (deposit nr. B/A 10.6) turned out to be partly 2.75 m deep. Large portions of the thick accumulation of red-brown courtyard layers of phase IV, through which this pit had been dug and which formed the edge of it, were broken

off and fallen down into the pit, partly together with other fill. The reason for making this pit is still obscure. One might think of digging away the plant remains of phase IV as manure, but the pit went considerably below that phase as well.

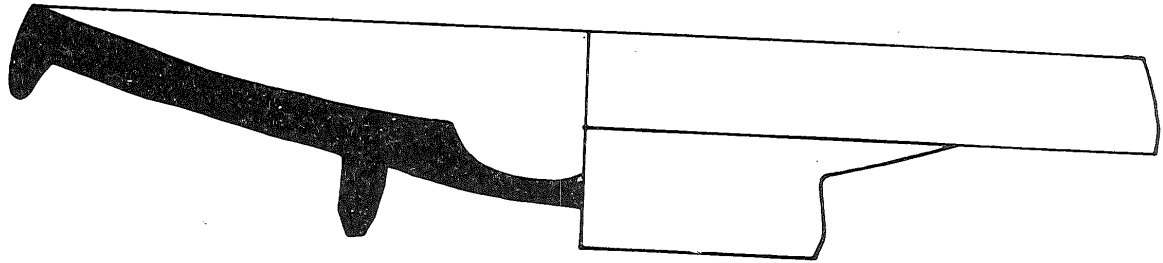
### Phase III

The remnants of this phase are of the last building activities (as far as the evidence goes until now), which took place on the tell. Wall parts of a large building were found in 1978 right on top of the mound. Outside this building no architectural remains of this phase could be discerned. The walls and floors found in squares B/A 5 and 6, and B/B 5 and 6 in 1978, and previously attributed to phase III have to be connected with phase V. This gives a change in date attribution of this phase: not earlier than the 4th cent. B. C.

Some pits belonging to this phase had been partly preserved in the baulks. An almost complete flat bowl was found in pit B/A.8.6 (= B/B 8.3, see section drawing fig. 3. ), which was partly filled with white vegetable material. This black slipped plate (see Pl. XXII, 1 and drawing fig. 1), made of red burning clay, is a Greek type, so called "fish plate", of the 4th cent. B.-C.

### Phase IV

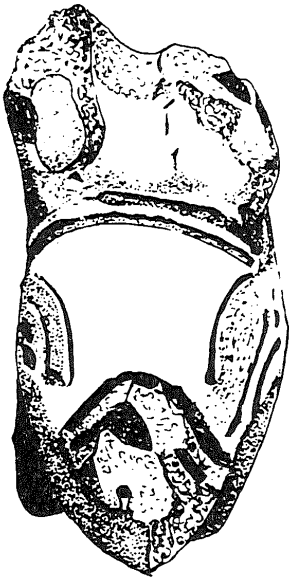
The thick accumulation of red-brown plant matter, mixed with some earth ("courtyard layers") was dug away again on several places, especially in the baulks. Again no walls were found associated with these layers during this phase. At places it is clear that some irregular pits were made during the accumulation



DA B/A 60 (2711)



Fig. 1



DA B/A 649 (2710)

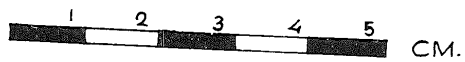


Fig. 2

and filled again with the same kind of layers. Human activity during the accumulation is also clear from some pots and many potsherds found in the layers, and also from a sherd with some aramaic ink writing on it (It is a sherd of a jar written below the handle). However the sherd was found without any other sherd of the same jar around.

The character of the layers is still not clear. A first-glance judgement at the Biological-Archaeological Institute in Groningen, where all the biological samples from Tell Deir 'Alla are being analysed, made it clear that the plant matter had been heated considerably, but the background of this way of accumulation is still obscure.

#### *Phase V*

Most of phase V had been excavated in the two previous seasons already. Some architecture was found as well as courtyards with pits (silo's). See *op. cit* p. 70 fig 9. However several lacunae in the walls still existed. The walls in squares B/A5 and 6 and B/B5 and 6 had been built in the phase between V and VI (see below) and rebuilt (reused) in phase V. Wall B/A5.1 was a re-use of wall B/A5. 21, 29, 30, going together with B/A6.1 on top of B/A6.33. B/A5 and 6.1 had been attributed to phase III in the previous report. On the other hand a 10 m long wall, discovered in the N. baulks of B/B5 and 6 was contemporary with N-S wall B/A5.2, so belonging to phase V. Peculiar in this E-W wall was that a large stone with a cavity (for grinding?) was found in its foundation. The wall was well preserved with its one, partly two, rows of foundation stones, and four, partly five, courses

of mudbrick left.

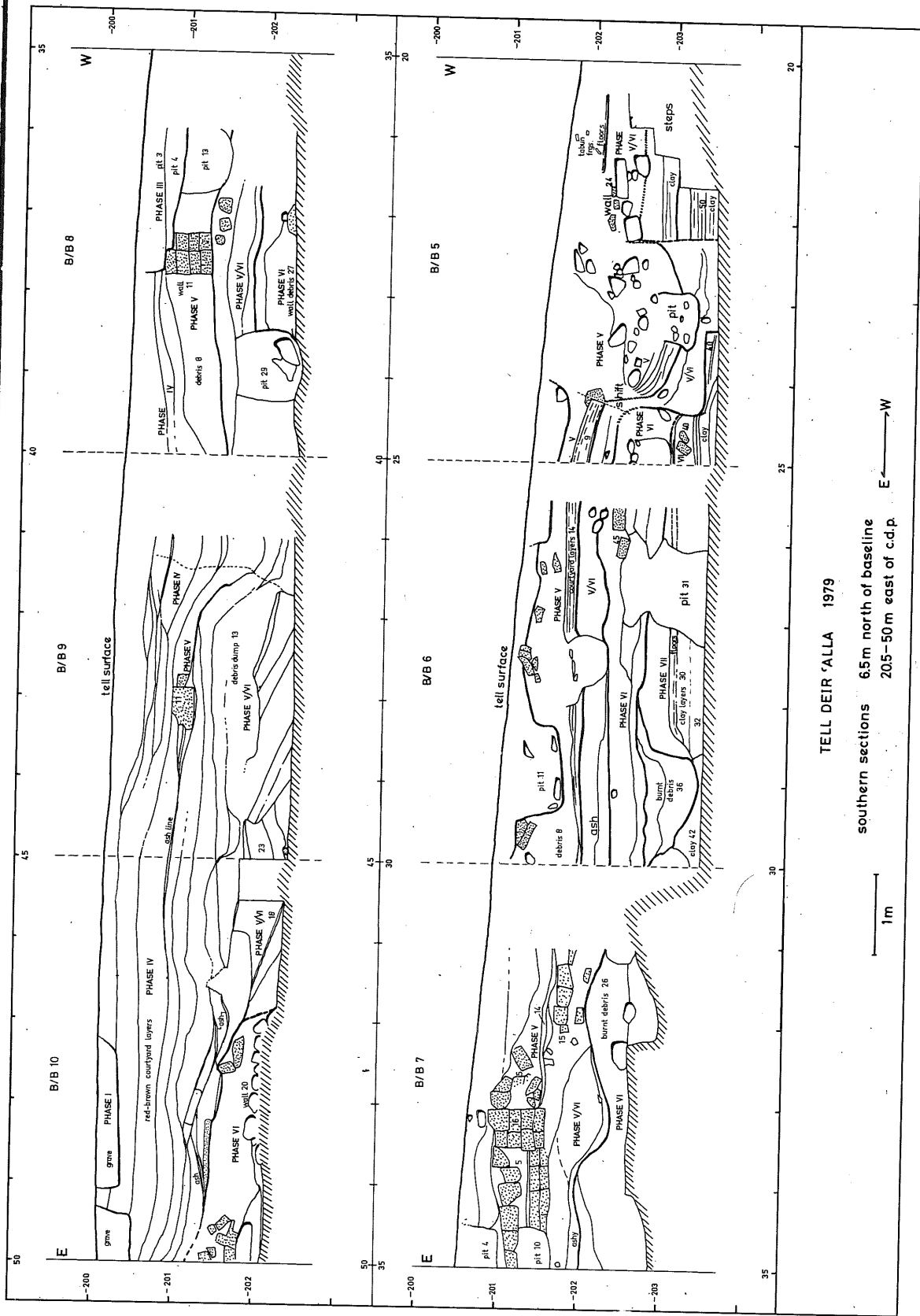
The date of this phase has to be put somewhere in the 5th/early 4th century B.C. (Fig. 2; Pl. XXII, 2).

#### *Additional phase between V and VI (phase V/VI)*

We had to decide to establish an intermediate phase to account for several courtyard layers, many pits and a reappraisal of the stratigraphy of the architectural evidence in squares B/A5 and 6 and B/B5 and 6. The architecture to be attributed to this phase is limited to the W. part of the excavated area, as it has been drawn in *op.cit.* p. 70, fig. 9, as attributed to phase V. Cf. Pl. XI for stone foundation of walls B/A5, 15, and 29. This phase started with digging away much of the preceding phase VI, e. g. in B/A8 and 9 and B/B8 and 9 (See section drawing fig. 3, and plan drawing of phase VI, fig. 4). This digging was possibly done in order to obtain clay for building. During the existence of this additional phase several other pits were made, e.g. in B/B9 and B/C8 (cf. Pl. XVIII). Some of them were filled with the same burnt debris of phase VI as was taken out.

The accumulation of courtyard layers was quite high as is visible on Pl. XII, a photograph of the E section of B/A7. Note The stones just above the bottom of the trench belong to phase VI as do some of the washed accumulation on top of the stones. The mudbricks visible in the upper half of the section belong to wall B/A7. 5A of phase V. It is also visible that this wall was cut by a phase III pit, to the N. To the S the phase V and IV courtyard accumulation are clearly visible.

Among the objects coming from this



TELL DEIR 'ALLA 1979

southern sections 6.5m north of baseline  
205-50m east of c.d.p.

1m

E ← W

Fig. 3

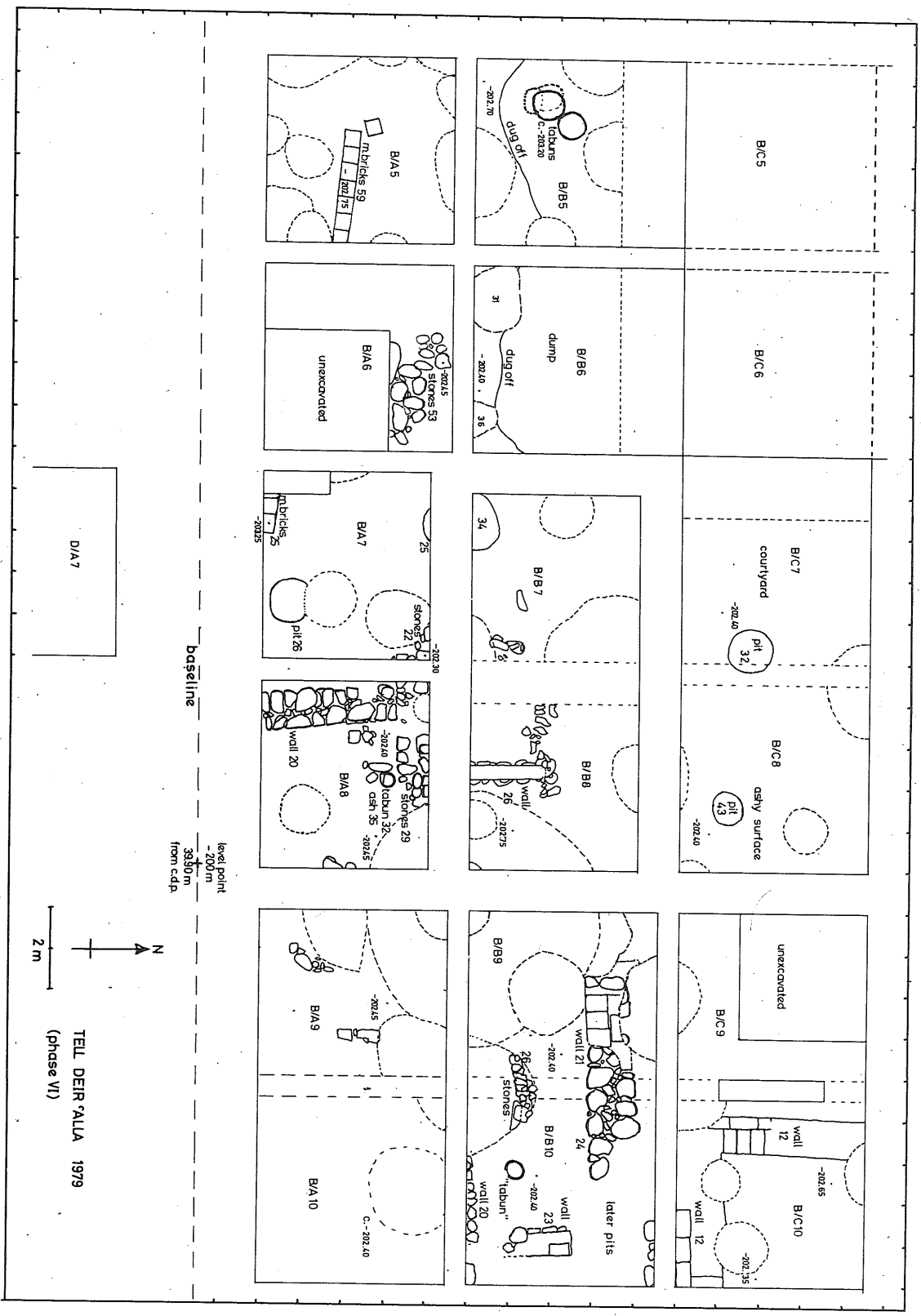
phase one may mention several oblong loomweights (some of them were found together with some pottery, including a small "decanter" (Pl. XXIII, 1) at the bottom of pit B/B5.34. In B/C8.31 (dumped debris) a small fragment of an ostracon was found written on both sides in aramaic script. The layers of this phase seem to date from around 600 B.C. (other objects: Plates XXIII, 2 — XXV, 1).

#### *Phase VI*

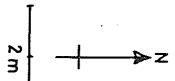
In addition to the architecture found in 1976/78 some more walls of phase VI were unearthed this season. See plan drawing (fig. 4), and see also plan drawing, (fig. 10) in the previous report. The architectural remains are still very fragmentary due to the large scale pit digging during subsequent phases. Most of these later pits are indicated on the plan drawing. The largest one is in the SW half of square B/B9 and the bordering squares (see also section drawing, fig. 3). It has a diameter of about 5.5 m. Phase VI itself had started with a large scale digging too. This is clear in squares B/B5 & 6. Much of the solid clay deposits of phase VII had been removed, and the resulting "pits" have been filled again with debris dump. Many sheep or goat bones were found on a surface in the lower part of this dump (Pl. XIII). There had been some leveling as well, and it is worth noticing that in most squares the surface of the beginning of phase VI was at about the same level (c. -202.40 m).

The main pieces of architecture were in squares B/C 10, B/B8, 9, 10 and B/A8. The room in B/C 10 had been excavated in 1978 and had still much plantmaterial on its floor. It apparently was a storeroom

with its thick walls. The heavy stone foundation of wall B/B9.21 (= B/B 10.24), see (Pl. XIV), may indicate an important building, but only very little had been left of it. The stones B/B9.26, visible on drawing and photograph, do not belong to phase VI; they are part of a pit fill. Squares B/A 10 and 9 did not show any connecting walls, just a few groups of stones. Their original function is not clear. The large phase II pit B/A 10.6 reached just to the lower surface of phase VI. Square B/A8 showed (see also Pl. XV) a N-S wall (nr. 20) with remains of a crosswall to the N, and further a connecting N-S wall again in B/B8. To the E of wall B/A 8.20 there was a small oven (dep. nr. 32) with much ash (nr. 35) around with several complete pots in it, e.g. (Pl. XVI, 22). The place W of this wall shows few remains: pit B/A 7.26 with plant matter and loomweights in it, and several courtyard layers. The function of mudbricks 25 is not yet clear, nor is it certain to which phase they belong. The stones B/A 6.53 may be of another wall. The row of bricks B/A5.59 is not a wall, but kind of a path. The surroundings of it were filled upto almost the same level with hard packed courtyard layers. No architecture was found in this square nor in B/B5 and 6. That place functioned apparently as courtyard. A cluster of four tabuns used successively, is characteristic of this (see Pl. XVII for three of them). An important feature in the construction of the tabuns was the use of mudbricks at some of the outside lower parts of them. The ovens were used during the process of filling up the "pit". There were no clearly used surfaces in the dump which filled the same pit in B/B6. The fill layers were



D/A 7



TELL DEIR 'ALLA 1979  
(phase VI)

sloping down northward. The squares B/C7 and 8 had courtyard layers only, with some small pits and much ash. (See Pl. XVIII, XIX). For some artifacts coming from this phase, (see Pls XXII - XXVII).

#### *Phase VII*

Phase VII is upto now represented by solid courtyard layers of clay in squares B/B5 and 6 as well as normal wash and courtyard layers in B/C7 and 8 and B/A7. In B/A8 also stones are involved, but no clear wall foundation. The clay deposits in B/B6 are especially interesting, because they have many holes of pointed poles in and below the floors, (see Pl. XX, 1). The unexpected identity of the holes was understood by the fact that the object that had made them had pressed the clay layers in which it came sideward and downward. The poles had been standing close together in a certain order, but not all at the same time. The precise function of them remains obscure. Further digging more to the S may give clear suggestions.

Very much of this phase had been dug away at the beginning of phase VI.

#### *Phase VIII*

The 8th phase has been touched in B/C6 7 and 8 only. There appears a very shallow remnant of it. The main feature is an almost 7 m. long double row of mudbricks (size 40 × 55 × 10 cm) going E-W, with in B/C6 a double N-S row of mudbricks making a corner. In B/C6 the rows have two courses of bricks each, and the bricks are made of the local yellow banded clay. It seems that the rows of bricks are two courses high everywhere. This would possibly mean that the brick-made construction had not been built higher originally, whatever its function

might have been.

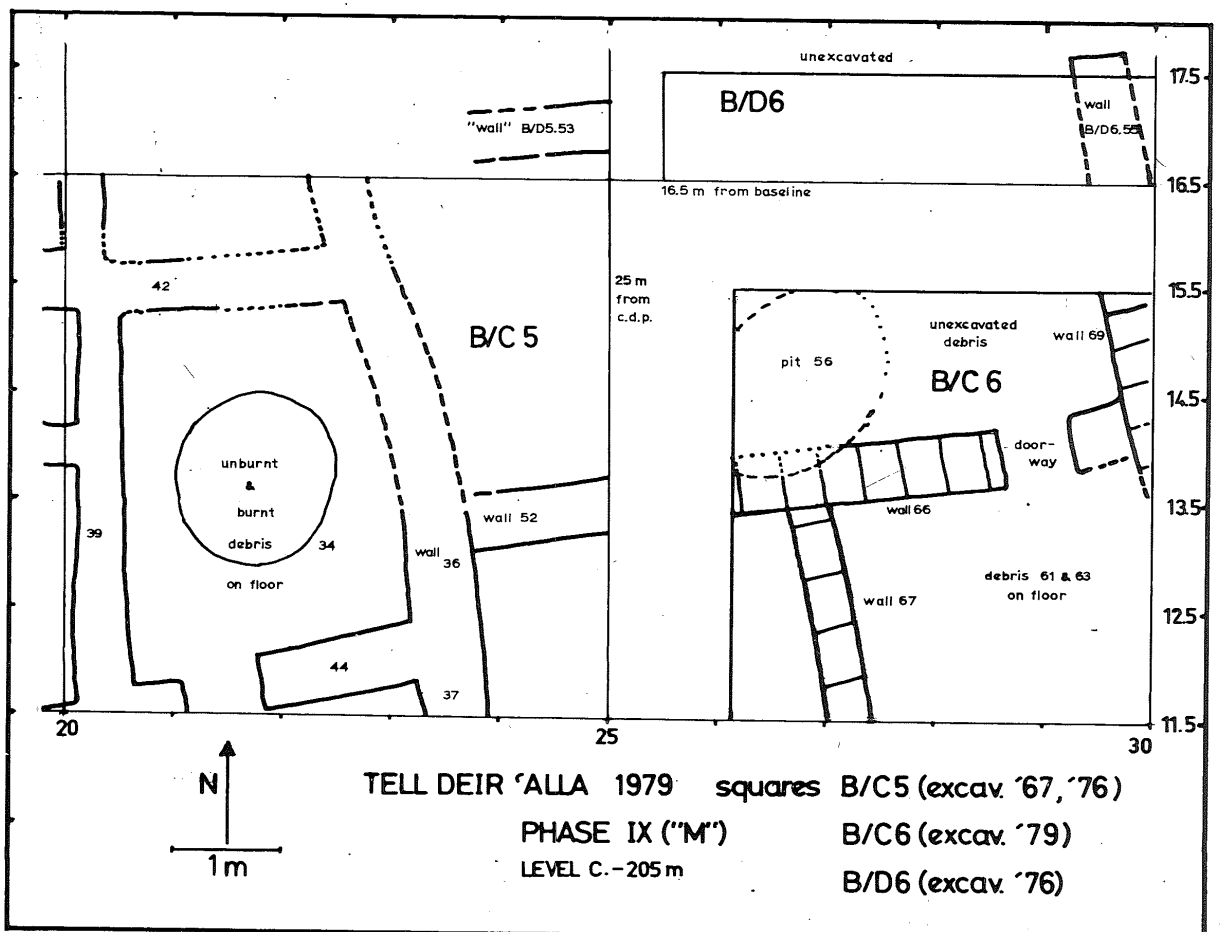
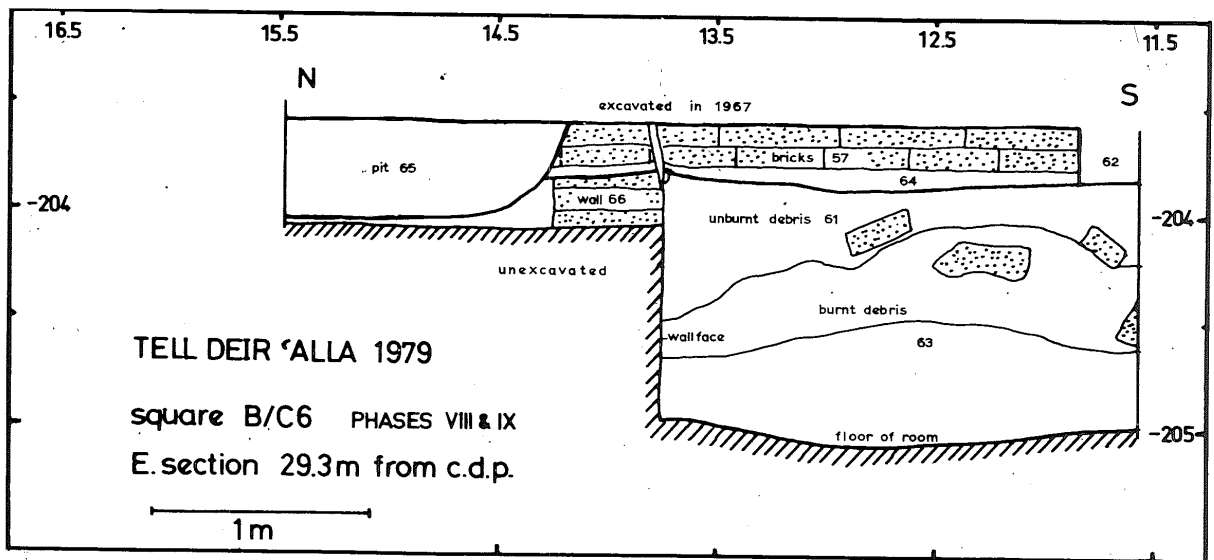
It is possible that phase VII has to be combined with VIII.

#### *Phase IX*

This phase IX is the same as phase M in previous countings. Much of it had been excavated in 1967 in an area of c. 25 × 25 m NW of the trenches dug during the last three seasons. Much of the architecture had been revealed, and some of it has been published preliminary in J. Hoftijzer, G. van der Kooij, *Aramaic Texts from Deir 'Alla*, Leiden, 1976, (Pls. 16-19) and in A.D.A.J. *op. cit.* 1978, p. 64, fig. 6 (square B/C5). During this season excavations of phase M were done in one square only, namely in B/C6, to the E of B/C5, labelled EE 400 and EE 300 respectively in 1967. In 1967 it became clear that all the phase M architecture excavated had been destroyed by earthquake and fire. The room found in B/C6 was destroyed by fire too.

The walls are partly still standing up to 1.25 m high, and the room is found filled with burnt roof and wall debris. For a plan of the walls combined with those of B/C5 see plan drawing (fig. 5). The height of the debris (deposits 61 and 63) is shown on (Pl. XX, 2) where the floor is visible as well as the E most part of the burnt debris. Note also the lower course of mudbricks 57 going N-S at the top of the photograph. To the left is a doorway with a quern at the threshold. See also (Pl. XXI, 1) for a photograph of one stage in the removal of the debris inside the room. In the NW corner the floor of the room is visible. An especially interesting feature is the antler found as fallen almost directly on the floor of the





room (Pl. XXI, 2). Some of the artifacts found may be mentioned here. Plates (XXVIII, 2 — XXIX, 2) show some of the pottery found. A sealed jar handle (see Pl. XXX, 1). A sherd with graffiti writing and drawing (Pl. XXX, 2). Phase IX probably has to be dated in the 8th century B. C. (Pl. XXXI).

#### Some general remarks

Dating the phases is still in a preliminary stage. The artifacts still have to be studied carefully in this respect and the samples for C 14 dating are still being analysed.

The information about all the upper phases is very fragmentary due to the large number of pits made during subsequent phases. This feature gives the fragmentary character to the architectural picture, but it also caused a large scale mixture of the artifacts from the distinguished phases. Many objects found in later deposits can be taken (or suspected) as belonging to earlier phases, because the digging of pits brought them higher up. This also applies to the pot sherds found. A careful study of the stratigraphy combined with a comparative study of the artifacts should be able to give some conclusions about the relations between objects and stratigraphy. Next season (the

expedition is planned for 1981) we hope to finish the excavations of the phases on top of phase M in the limited area we are working in upto now. Then a final publication can be expected. This publication is going to include also data and conclusions earned from the many metal, soil, plant matter, and animal bone samples taken from the deposits, so as to get a picture of the environment, culture and history of the people connected with those phases as comprehensive as possible.

It was important to have been digging in phase M this season. The height of the walls, the sudden fire destruction (in this place too), the proven large number of biological and cultural finds again underlined the possibility of getting a relatively extensive picture of the character of the settlement, of the culture and so of the people of this phase. This picture would have a value by itself, but an additional value is given by the phase M inscriptions with their important contents. For 1981 and '82 another two seasons of excavations are planned in order to excavate this phase in an area of at least 15 × 30 m.

Moawiyah M. Ibrahim and  
Gerrit van der Kooij

## RECHERCHES ARCHEOLOGIQUES A LEHUN AU WADI MOJIB \*

par

Paul Naster et Denyse Homès-Fredericq.

Le «Comité Belge de Fouilles en Jordanie», fondé en 1975<sup>1</sup>, a désigné une délégation de 3 membres pour entreprendre une prospection archéologique en vue de découvrir un site où la Belgique pourrait commencer des fouilles: les deux soussignés ainsi que le professeur H. De Meulenaere visitèrent à cet effet la région de l'est de la Mer Morte, entre Madaba et Kerak, en 1977.

### Travaux préliminaires.

Avant de déterminer la région à prospecter, la documentation disponible en Belgique avait été consultée: récits de voyages, rapports de prospections, comptes rendus de fouilles et cartes archéologiques.

Le rapport «Archaeological Heritage of Jordan»<sup>2</sup> édité en 1973 par le «Department of Antiquities» d'Amman, s'est avéré très utile: il donne une liste exhaustive de plus de 400 sites archéologiques encore à examiner et permet d'étudier plus en détail les diverses régions à visiter.

Le comité désirait se limiter du point de vue

\* Pour le noms des sites nous adoptons l'orthographe officielle, publiée dans le *Archaeological Heritage of Jordan*, Amman, 1973.

1) Le «Comité Belge de Fouilles en Jordanie» a été créé le 27 février 1975: il se compose d'un Comité interuniversitaire comprenant les professeurs suivants: H. Danthine (Vice-Présidente), H. De Meulenaere, D. Homès-Fredericq (Secrétaire-Trésorier), P. Naster (Président), J. Ryckmans, R. Tefnin et P. Vermeersch.

Le siège social se trouve aux Musées Royaux d'Art et d'Histoire, 10 Parc du Cinquantenaire,

chronologique aux époques les plus anciennes, depuis l'âge du Bronze (3200 av. J. C.) jusqu'à l'époque nabatéenne incluse (106 ap. J. C.). Du point de vue géographique, le choix se porta rapidement sur la région à l'est de la Mer Morte. Elle est certes moins bien connue que le nord de la Jordanie, où une mission jordano-américaine a récemment encore entrepris une prospection détaillée dénombrant un grand nombre de tells prometteurs<sup>3</sup>.

Au sud du pays, au contraire, la région étant moins fertile, la densité de population y était déjà plus faible dans l'antiquité et les sites à fouiller moins nombreux.

Dans la région médiane, l'ancien Moab, les vestiges historiques et archéologiques sont nombreux: d'après ces sources et le témoignage de la céramique ramassée, la contrée fut habitée dès l'époque chalcolithique.

La synthèse de A.M. Van Zyl sur les Moabites à l'âge du Fer<sup>4</sup> démontre leur importance dans l'Antiquité. Les textes de l'Ancien Testament, les sources cunéiformes, égyptiennes, moabites ou latines en témoignent également<sup>5</sup>. N. Glueck

B-1040-Bruxelles.

- 2) *Archaeological Heritage of Jordan*, Amman, 1973, 113 p., 11 cartes, fig (= AHJ).
- 3) IBRAHIM, M., SAUER, J. J., YASSINE, K., *The East Jordan Valley Survey*, 1975, dans *BASOR* 222 (1976), P. 41-66.
- 4) VAN ZYL, A. H., *The Moabites*. Leiden, 1960. (Pretoria Oriental Series, III).
- 5) Sources cunéiformes: VAN ZYL, A. H., *op. cit.*, p. 36-39; égyptiennes: *ibid.*, p. 36-41; moabites: *ibid.*, p. 29-36; latines et apocryphes: *ibid.*, p. 41-42.

dénombré, dès 1934, une cinquantaine de sites en Moab<sup>6</sup>, intéressants à fouiller et que les listes de l'Archaeological Heritage complètent. Compte tenu de ces diverses données, des tableaux synoptiques chronologiques ont été établis, comprenant près de soixante-dix sites à prospector éventuellement.

### Prospection de 1977<sup>7</sup>

La prospection a pu s'effectuer dans des conditions idéales grâce à la coopération et la générosité du Département des Antiquités et de son directeur, le Dr. A. Hadidi, qui mit notamment une jeep à notre disposition pour la durée de la prospection.

Grâce à l'aide des autorités jordaniennes et à l'aimable assistance des inspecteurs du Département des Antiquités, plus d'une trentaine de localités ont pu être étudiées et examinées en détail sur une étendue d'une centaine de km. Trois sites en moyenne ont été visités par jour.

1. *La région de MADABA*, au nord du Wadi Mojib (ancien Arnon) qui forme une séparation naturelle entre le district de Madaba et de Kerak, a été prospectée du 11 au 14 octobre 1977, avec la collaboration de Messieurs Mujahed Muheisen et Samir Issa Ghishan, représentants du Département des Antiquités jordaniennes.

Les sites suivants ont été visités: Aqraba, Ara'air, Ayl (Khirbet el), Dhiban, Hesban, Heri (Khirbet el), Jelul, Lehun, Libb, Madaba, Medeiyyeh (ei), Mekhayyat (Khirbet el), Mont Nebo, Sahab, Teim (Khirbet el), Um el Walid.

6) Les rapports de prospections les plus utiles ont été ceux de N. GLUECK, *Explorations in Eastern Palestine*, I-IV, Baltimore, 1934-1949 (AASOR XIV, XV, XVIII - XIX, XXIV, XXV). La région de Moab est plus spécialement traitée dans AASOR XIV et XV.

2. *La région de KERAK* a été examinée du 15 au 21 octobre avec la coopération de Messieurs Sami Rabadi et Nabil Bega'in, inspecteurs de la région de Kerak et représentants du Département des Antiquités.

Les sites suivants ont été considérés : Ader, Bab Edh Dhra', Balu'ah, Freiwan, Lejjun, Medeiyyeh (Khirbet el), Mejra, Mezna (el), Misa'ar (Khirbet), Qasr, Rabbah, Serareh (Khirbet), Shyhan, Smakieh.

Si la plupart de ces sites ont été choisis en fonction de notre but, nous en avons également visité d'autres, qui avaient déjà été fouillés mais présentaient un intérêt historique et scientifique de comparaison.

Sur ces différents sites, quantité de tessons de surface ont été rassemblés, de nombreuses photographies ont été prises et des mesures ont été faites des principaux monuments.

La plupart des sites possédaient une importance stratégique primordiale, le long de la route antique ou sur le plateau d'un wadi dominant toute la contrée environnante. Tous ont certainement joué un rôle plus ou moins important dans l'Antiquité, même si les textes ne les mentionnent pas.

Après avoir considéré les avantages et les inconvénients des divers endroits visités, deux ont particulièrement retenu notre attention : Lehun dans la région de Madaba et Mezna dans la région de Kerak.

Du point de vue scientifique, historique et archéologique, tous deux étaient intéressants et les vestiges architecturaux encore visibles

7) Pour un article plus détaillé sur la prospection de 1977 voir D. HOMES-FREDERICQ, *Prospection archéologique en Moab*, 23 p., 2 cartes, qui paraîtra dans les Acta de la XVI Journée des Orientalistes Belges, Bruxelles.

# LEHUN

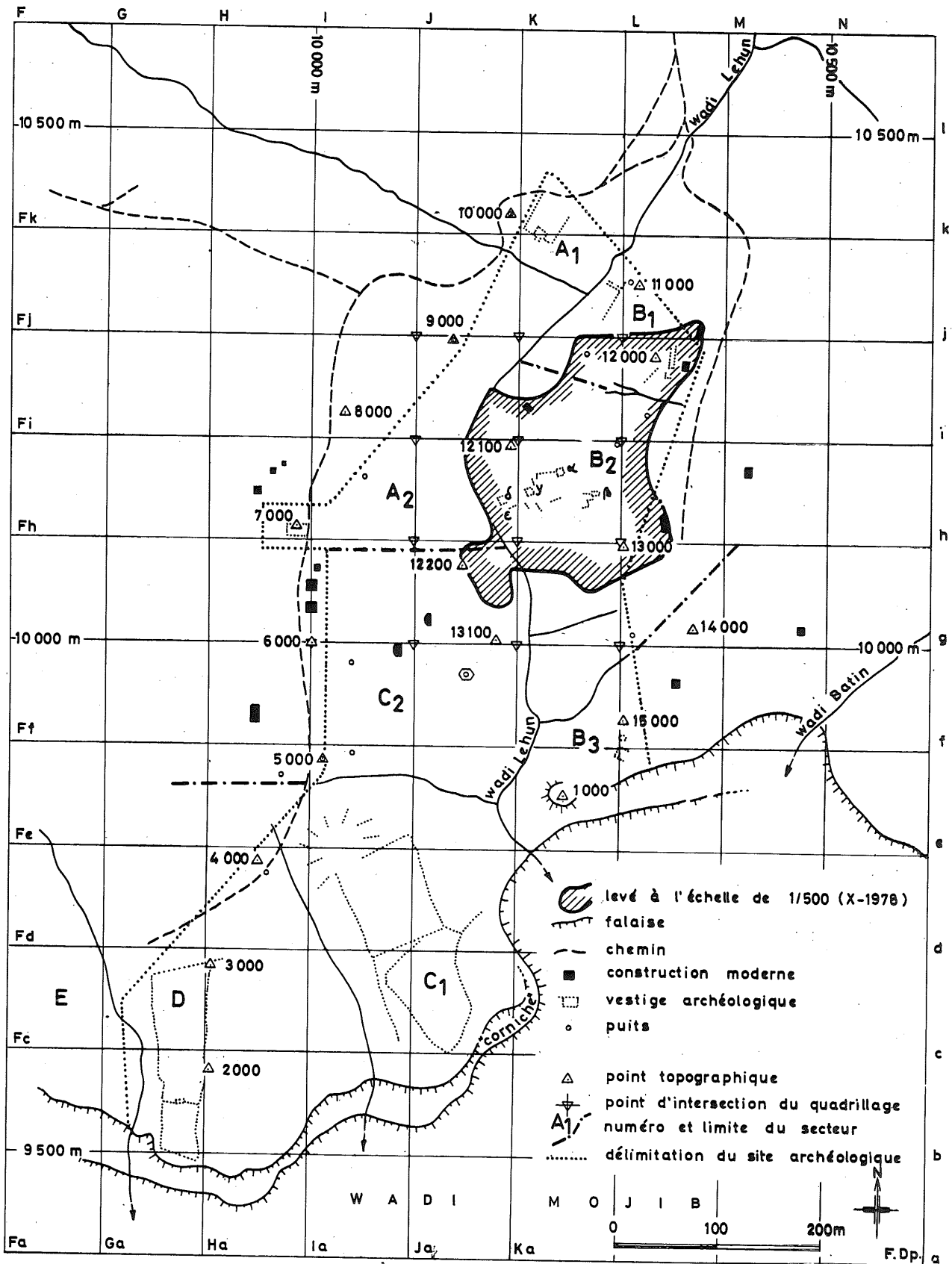


Fig. 1

ainsi que la céramique ramassée montraient assez leur importance dans l'Antiquité. Si le choix s'est porté en définitive sur Lehun, c'est principalement parce que à cet endroit aucun problème d'expropriation ne semblait se poser.

### Le site de Lehun<sup>8</sup>

Répertorié sous le n° 223 dans l'«Archaeological Heritage of Jordan, The Archaeological Periods and Sites», Part I, Amman, 1973, Lehun se situe à 31° 28' 03" latitude Nord et 35° 51' 12" longitude Est, à 7 km à l'est de la grand' route Madaba - Kerak sur la piste passant par Aqraba et Ara'air ( Aroër de la Bible, fouillé par une mission espagnole).

Il peut également être atteint par une piste depuis la route asphaltée Dhiban, Mesheirfeh, Um er Rassas, dont il se trouve à 4 km au sud. N. Glueck visita Lehun le 3 juin 1933 : il le décrit rapidement comme un site de l'âge du Bronze et de l'époque nabatéenne<sup>9</sup>. Il en donne également un plan succinct, quoique incomplet<sup>10</sup> qui nous a pourtant été très utile lors de la prospection de 1977.

L'ancien site, tout comme la modeste agglomération actuelle, est situé en bordure de la dépression du Wadi Mojib, au nord de cette vallée, qu'il domine de quelque 500 m.

D'une superficie de 1.100 m N/S sur 600 m E/O, il présente un relief très varié, vallonné et accidenté, avec des dénivellations d'une cinquantaine de mètres. Il est coupé en deux

par le Wadi Lehun, qui coule du nord vers le sud et se jette dans le Wadi Mojib.

Pour la facilité des désignations archéologiques, le terrain a été divisé en plusieurs secteurs, désignés par des lettres, indépendantes du relevé topographique : les secteurs A, C et D se situent à l'ouest du Wadi Lehun, le secteur B à l'est .

Des subdivisions dans chaque secteur ont été introduites en tenant compte de l'aspect physique de l'endroit : les sous-secteurs suivants ont été désignés : à l'ouest du Wadi Lehun : A1, A2, (sur le flanc nord de la colline), C1 et C2 (sur le flanc sud); à l'est du Wadi Lehun : B1, B2, B3, séparés par des wadis secondaires.

Dans la partie nord du site, de part et d'autre du Wadi Lehun, les secteurs A1, B1 et B2 comprennent des vestiges nabatéens. Certaines constructions sont relativement étendues, tel le complexe nabatéen dans la partie nord-ouest (A1). D'autres plus petites consistent en restes de murs et de constructions, de dimensions variées qui affleurent dans la partie nord-est (B1, B2). Un petit édifice de forme régulière (6,25 m × 6,25 m), en belles pierres calcaires, à bossage, soigneusement équarries, possède encore 6 assises visibles sur une hauteur de 1,80 m environ.

Les tessons découverts dans ces secteurs datent de l'âge du Fer et des époques nabatéenne, romaine, byzantine et arabe.

8). Bibliographie de Lehun : AHJ, p. 223, cartes 4, 8, 9, GLUECK, N., *Exploration in Eastern Palestine*, Baltimore, 1934 (AASOR XIV), p. 48-49 n° 99) et pl. 10; ID., *Further Exploration in Eastern Palestine*, dans BASOR 51 (1933), p. 9, 12, 13; ID., *Deities and Dolphins*, Londres, 1966, p. 62 et p. 574, n° 72; ID., *The Other Side of*

*-the Jordan*, Cambridge Mass., 1970, p. 147; HAMMOND, P. C., *The Nabataeans, Their History, Culture and Archaeology*, Gothenburg, 1973, p. 121 (Studies in Mediterranean Archaeology XXXVII).

9 GLUECK, N., *op. cit.*, AASOR XIV, p. 48-49.

10) GLUECK, N., *op. cit.*, AASOR XIV, pl. 10

Plus au sud, le plateau s'élève à une altitude d'environ 750 m au-dessus du niveau de la mer. Les secteurs B3, C1 et D devaient avoir été choisis à la fin du Bronze Ancien (EB IV - MBI) pour la situation stratégique parfaite. Surplombant la vallée du Wadi Mojib, elle permet de surveiller toute approche, aussi bien par le plateau du Balu'ah que par les vallées du Wadi Mojib, du Wadi Su'eidah, du Wadi Balu'ah et du Wadi Nukhila. De larges murs d'enceinte, en pierre calcaire y sont encore visibles.

Les tessons découverts ici appartiennent tous à la fin du Bronze Ancien et au début du Bronze Moyen.

Des fouilles dans cette partie du site nous renseigneraient vraisemblablement sur l'histoire de l'architecture à cette époque, tandis que celles dans les secteurs nord nous éclaireraient sur l'époque nabatéenne.

Avant de pouvoir entreprendre des fouilles effectives, il fallait qu'un plan topographique aussi complet que possible fût établi.

#### **Mission topographique de 1978.**

Le levé topographique a été entrepris en 1978, par deux missions successives, l'une du 16 au 29 avril (mission de préparation) et l'autre du 1 au 31 octobre 1979 (levé topographique proprement dit).

Participaient à cette mission: les deux sous-signés, co-directeurs, ainsi que le professeur F. Depuydt, topographe, et deux inspecteurs du Service des Antiquités de Jordanie, Messieurs Samir Issa Ghishan et Shaher Abul Ghanam.

Grâce à la collaboration du Service des Antiquités, du Service Cartographique de l'Armée (Geographical Center of Zerqa), du Service «Lands and Survey» et des responsables du cadastre de Madaba, le séjour du 16 au 29

avril 1979 a permis de préparer le travail de façon efficace sur le terrain et au retour de la mission en Belgique. Pendant tout le mois d'octobre le travail topographique s'est continué.

Le levé topographique peut se résumer comme suit (carte) : un réseau de base, comprenant 15 points de triangulation a été mesuré et calculé en coordonnées X-Y et a été développé par quelques points complémentaires. La précision absolue de chaque point topographique peut être estimée à environ 10 cm en X et Y. Le réseau des points topographiques a été nivelé par rapport au «Nivellement National». La hauteur des points topographiques varie entre 748 m et 714 m. Le terrain lui-même varie entre 750 m et 700 m. Ces différences de niveau ainsi que l'étendue du terrain (1.100 × 600 m) nécessitent un levé topographique à grande échelle.

Le réseau du quadrillage, indispensable aux archéologues, a été établi par carrés de 100 m suivant les axes des coordonnées X et Y. Sur le terrain, 13 points d'intersection du réseau quadrillé ont été matérialisés par des socles en béton, comportant une cavité centrale, assez profonde, dans laquelle peut être piqué un jalon (quelque 45 points déterminés de la sorte seront nécessaires; leur précision relative est de 20 cm).

Le levé détaillé a été effectué à l'aide d'une alidade dans la zone qui sera fouillée lors de la campagne prochaine. Il nécessite une échelle de 1/500. Près de 8% du terrain (env. 4 ha) ont ainsi été cartographiés (cf. carte), avec une précision de 15 à 20 cm (zone marquée d'un pourtour hachuré sur la carte de 1/5.000 dans le secteur B).

L'échelle de 1/500 a permis dès maintenant de reporter sur la carte les vestiges architecturaux les plus marquants, visibles au sol.

Le secteur B2 comporte la construction carrée  $\alpha$  en pierre calcaire, vestige architectural le mieux conservé du site.

Cet édifice fait sans doute partie d'un ensemble dont certains murs peuvent être reconnus.

## REMERCIEMENTS.

\* Nous tenons à remercier tout particulièrement le Dr. Adnan Hadidi, Directeur-Général des Antiquités de Jordanie, pour l'aide généreuse et efficace qu'il nous apporta lors de nos travaux. Grâce à la coopération des Départements du Tourisme et des Antiquités des ministères de l'Agriculture et de la Défense, du Geographical Centre of Zerqa et du Service Lands and Survey, ainsi que des responsables du cadastre de Madaba, les recherches ont pu s'effectuer dans des conditions idéales.

Nous remercions spécialement S.E. Mr. Galeb Barakat, Ministre du Tourisme et des Antiquités, qui nous offrit le logement lors de notre prospection à Kerak; S. E. Mr. Hikmat es-Saket, Ministre de l'Agriculture, qui nous procura le logement au Agricultural Center of Wadi Wala et S. E. le Ministre de la Défense Nationale qui nous fournit des tentes pour notre campagne topographique.

Notre reconnaissance va également à Messieurs les Inspecteurs Mujaheid Muheisen, Samir Issa Ghishan, Shaher AbulGhanam, Sami Rabadi et Nabil Bega'in, représentants du Ser-

Il est prévu de commencer ici les fouilles en octobre 1979. C'est à cette fin que le travail topographique relatif à ce secteur y a été le plus poussé.

Paul Naster

et Denyse Homes-Fredericq.

vice des Antiquités, pour leur collaboration lors de la prospection et la première campagne topographique de 1977-1978.

Grâce à l'aide matérielle en équipement apportée par l'American Center of Oriental Research et à l'hospitalité de son directeur, Dr. Jim Sauer, qui ne se lassa de nous aider par ses conseils, notre première campagne a pu se dérouler efficacement. Le Jonkheer Jacques Holvoet, Chargé de l'Expédition des Affaires Courantes à l'Ambassade de Belgique à Amman, contribua grandement à établir les contacts et à nous faciliter la tâche. Qu'ils trouvent ici l'expression de notre gratitude.

Quelques visiteurs sont venus sur le site et nous aidèrent en discutant des problèmes archéologiques. Que soient remerciés ici le Dr. A. Hadidi, le Dr. Fawzi Zayadine, Mr. Omar Younis du Département des Antiquités, le Dr. Jim Sauer, le Dr. Gary Rollefson le Dr. et M<sup>me</sup> Schick de l'American Center of Oriental Research, Jonkheer J. Holvoet, de l'Ambassade de Belgique.



# INVESTIGATIONS IN A PREHISTORIC NECROPOLIS NEAR BAB EDH-DHRA'

by  
Vincent A. Clark

The following report arises from a short season of survey and excavation carried out between 1st. November 1977 and 1st. December 1977. This expedition was undertaken in order to determine whether or not there were important antiquities present on a large area of land where it was proposed to construct a township intended to house the employees of the Arab Potash Company plant at the Dead Sea Begun originally as a two week survey it was soon realised that this time would need to be extended, as it was found necessary to examine more closely some of the features of the site. Among these was the necropolis, the details of which are the concern of this report.'

Lying approximately 1 km to the south of the Early Bronze Age site of Bab edh-Dhra', the cemetery area occupies a wide tongue of land which slopes gently to the south-west towards the level of the Dead Sea, between 230 and 280 m below sea-level (See Fig. 1). This area is sharply delineated to the south by a steep wadi and to the north by a shallower erosion bed. To the south-west the land drops sharply towards the level of the rift valley floor. To the east the approach is more gentle.

The ground surface of this area is of desert pavement type, across which are strewn numbers of larger boulders. It would appear

1. The expedition was a joint venture by the Jordanian Department of Antiquities and the American Center of Oriental Research. It was financed by the Arab Potash Company. The expedition staff consisted of David McCreary (director), Linda McCreary, Nazmieh Rida Tawfiq, Sami Rabadi and the

as if there has been considerable erosion of the surface soil by the actions of wind and water. At a depth of some 10 cm. below the surface a tightly compacted type of gravel is encountered. This gravel extends, at least in some places, to a depth of more than 9 m<sup>2</sup> and in all cases the encountering of this gravel put a halt to excavation.

The site has now been left to the Arab Potash Company and will be completely destroyed in the subsequent building operations. Unfortunate as this is it is the writer's belief that as much as possible was done to record the features of these burials. Because of the limited time available the work proceeded with more speed than would normally have been the case but in some respects the nature of the burials justified this approach.

## a. The Cemetery Area (Fig. 1)

Within the area just described 30 separate cairn burials were identified, numbered and surveyed. Across the shallow erosion channel to the north lay another robbed, cairn, while further to the north-east, outside of the surveyed area, lay three more; across the deep wadi to the south was another similar cairn. All of these cairns outside the survey area were of the same type as those which were investigated in more detail. Of the 30 cairns within the survey area a total of 14 were excavated.

writer. An overall report of the survey will be published by David McCreary in *ADAJ*. See his preliminary notice in the American Schools of Oriental Research, *Newsletter* No. 2, October 1978.

2. This information was provided by geologists of the Arab Potash Company.

Very few of those left unexcavated were suitable for further study, either having been disturbed by human or animal action or by severe erosion.

With the exception of those cairns already described as being outside the area to the north and east, and also Cairn #11, all lay to the south of the remains of a long, well constructed wall which traversed the area from west to east. This wall, consisting of only one remaining course and almost completely destroyed in some places, bisected the surveyed area and defined the cemetery area to the south of it. An average of 1 m in thickness, this was traced for more than two kilometers but its exact length is unknown, as its western end disappears where the land drops off towards the Dead Sea and its eastern end is lost where it runs into modern irrigated fields.

This wall was investigated at three places by means of small probes but no insight into its purpose was gained. Whether or not it should be related to the burials is unknown but it is apparently to be dated to roughly the same period, if the evidence of three small sherds, the only dating evidence found, can be accepted. These were crude, hand-made pieces, similar to those found in the vicinity of Circle 1 (see below). One, from a probe near the western end of the wall, was a fragment of flat base which could be of either Chalcolithic or Early Bronze Age type.

Also to the south of the wall were two large stone rings (Circles 1 and 2), which may have served a cult purpose and are described below.

#### **b. The Method of Burial.**

The method of burial employed here is

3. Samples of these snails were taken but disappeared in transit.

unusual and, to this author's knowledge, unparalleled. It was basically similar in all of the burials investigated. A ring of large field boulders was formed to make an interior chamber of approximately 1 m in diameter. The boulders used measured approximately 60-70 cm. in diameter. Sometimes the cavity or chamber thus formed was lined with roughly dressed paving stones and in a number of cases a fire was lit on the ground prior to the laying of this pavement. The disarticulated bones of the body (or bodies) were then placed in the chamber and this was then filled with a large number of small to medium stones. The chamber was often covered by a number of large unressed slabs and the whole structure was covered by smaller stones to form a cairn. Sometimes a second course was added to the inner chamber before it was filled and in such cases a secondary wall of smaller stones was constructed around the outside, giving the cairn a stepped appearance.

No soil appears to have been placed in the burial chamber but rather the interstices of the rocks appear to have become filled up over the ages with windblown detritus. Evidence for this comes from one of the most unusual and disconcerting features of the burials the presence in the cairns, between the rocks in the burial cavity and on and around the human remains mixed with the wind blown soil, of countless thousands of shells of various types of land snails.<sup>3</sup> In many instances the mass of snail shells exceeded that of the accumulated soil. If soil had been deliberately put into the burial chamber then it would have been all but impossible for the snails to have entered, particularly in such large numbers. The possibility that they were deliberately included in the burial is extremely remote

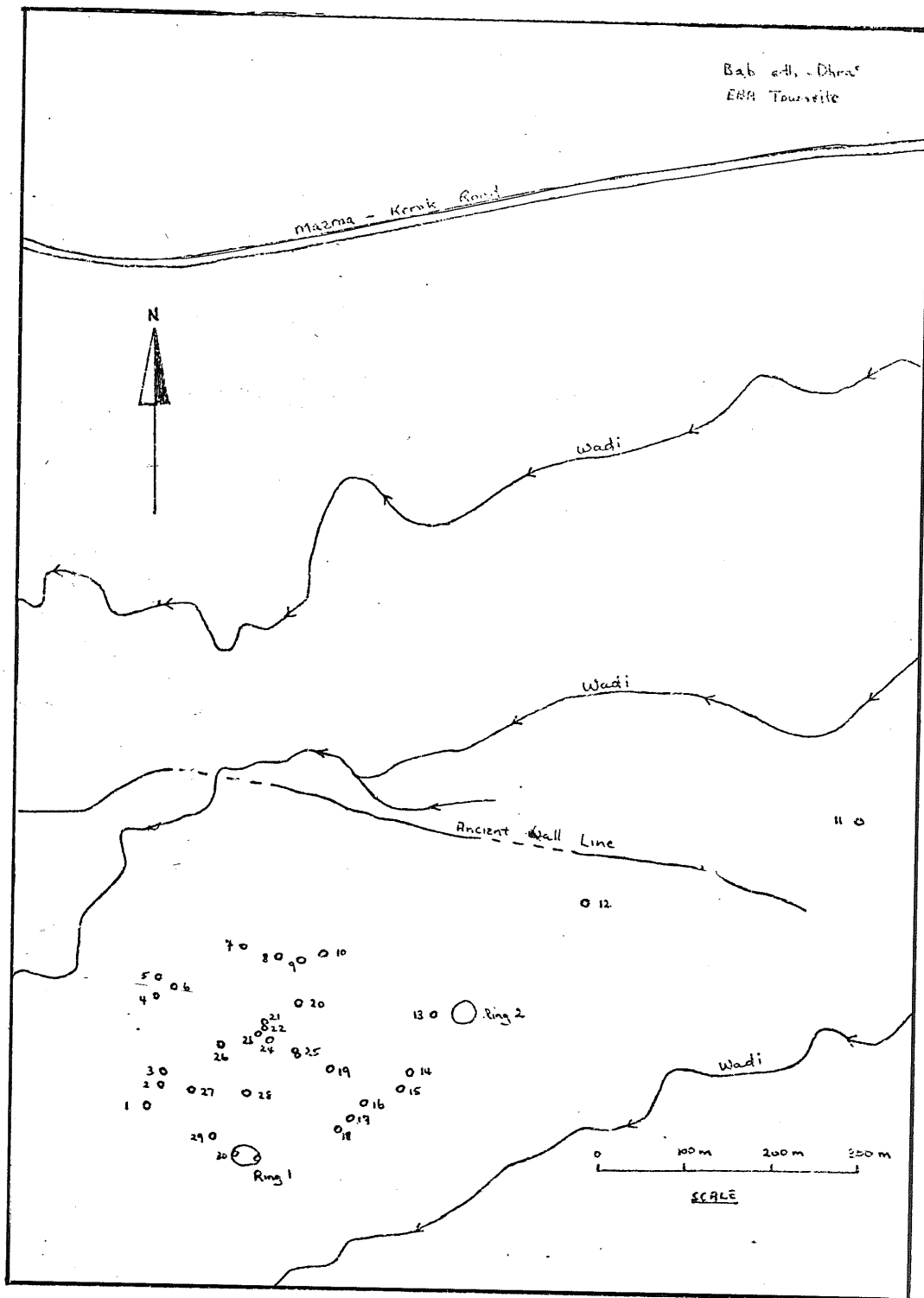


Figure 1. Map showing the location of the necropolis.

owing to the large numbers involved and to their presence not only in the chamber but also among the rocks over and around the cairn. Two other important points are raised by the presence of these snails. Firstly the large numbers of snails found to be actually on and among the bones may indicate that, at the time when the remains were interred, at least some flesh remained on the disarticulated bones to attract the snails and secondly that, at the time, climatic conditions must have been more favourable than at present.

Another significant feature of the burials was the almost complete absence of any grave goods of a non-perishable type. It is possible that textiles and other organic materials may have been buried with the dead but absolutely no trace of these, if such was the case, remain today. In three cases pottery fragments were found with the burials but these did not represent whole vessels or even sizable portions of vessels. In one cairn (# 25B) were found a number of beads.

### C. The Excavation of the Cairns.

#### *Cairn #12. (Fig. 2)*

This consisted of a ring of two courses of large boulders, the largest being more than 1 m by 70 cm, by 45 cm in depth. The cavity thus formed was of roughly oval shape, approximately 2 m by 1.5 m in diameter. Piled against the outside of this ring were many smaller rocks with no definite arrangement. The entire cairn measured 4.25 m in diameter.

In the centre of the chamber stood a large upright slab of roughly dressed limestone, measuring 70 cm by 80 cm and standing to a height of 1.45 m. The base of this was firmly wedged into a platform of smaller irregularly shaped rocks at the bottom of the cavity. This monolith was the most outstanding feature of this cairn but all

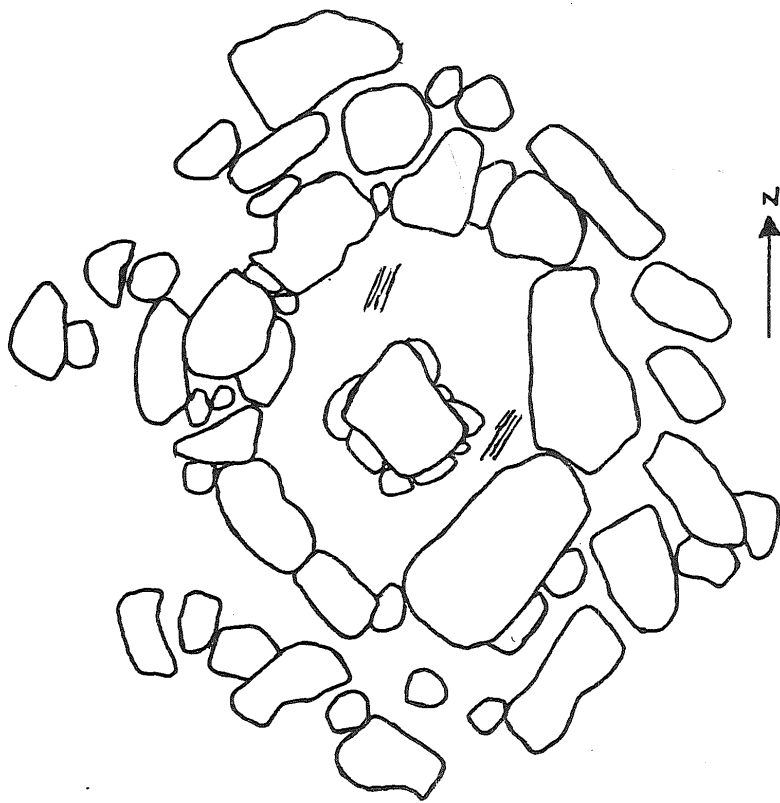
attempts to move it in order to determine whether anything lay beneath it were to no avail because of its size.

There were no covering stones to this cairn and within the ring, around the monolith, the soil level was some 20 cm below the top of the rocks forming the upper course. This gave the impression that the cairn had been disturbed; however the bones of two individuals were found at a depth of only 35 cm below the soil surface within the cavity, beneath a compact full of small rocks, soil and snail shells. These bones belonged to two adult individuals, one placed to the north-east of the monolith and the other to the south-east of it, resting on virgin soil. Neither skeleton was complete, both consisting of a few ribs and a number of the long bones of the arms and legs; also present were a few other badly decomposed and unidentifiable fragments. All of the bones were in such a poor state of preservation as to be unsalvageable.

#### *Cairn #13.*

This was the only other cairn which was observed to have had a large monolith standing in its centre. In this instance this had toppled over and the cairn appeared to have been either disturbed or never completed.

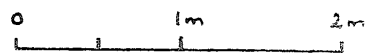
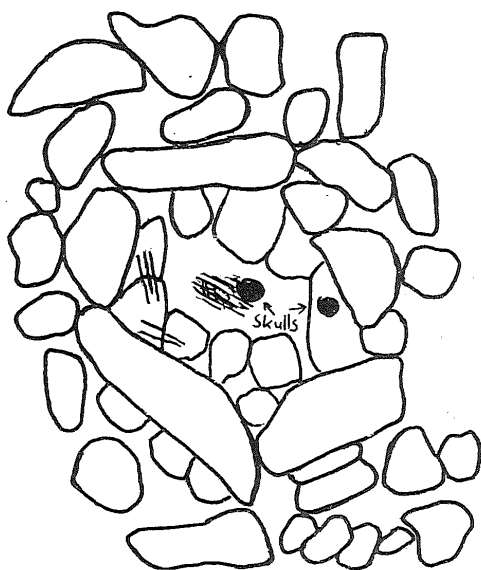
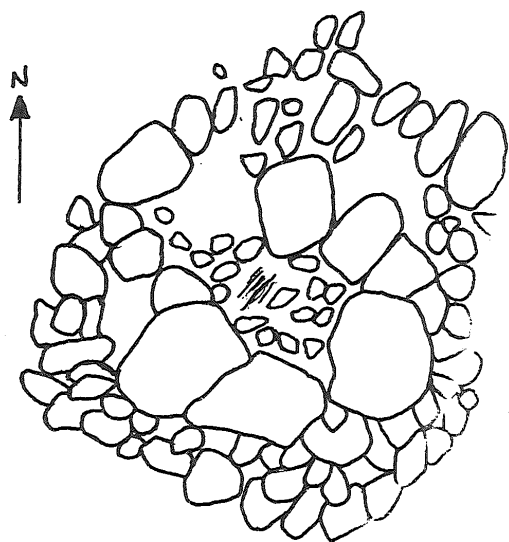
By far the largest cairn in the necropolis, it measured approximately 6 m in diameter. The ring consisted of two courses of large boulders, forming a central cavity some 4 m across. Very few other rocks were found to have been incorporated into the structure or strewn around it, lending strength to the impression that it had never been completed. Another possibility which cannot be discounted is that this structure bore only superficial resemblance to the cairns and instead played some undetermined function for which no evidence was observed.



Above. Figure 2. Cairn #12.

Right. Figure 3. Cairn #15.

Below. Figure 4. Cairn #16.



Within the ring only the eastern half of the fill was excavated, to a depth of 75 cm, without encountering any traces of human activity or of a burial. The monolith had toppled against the wall of the chamber towards the south. No trace of a supporting rock platform was observed in this case. The monolith itself measured 50 cm by 58 cm, by 1.62 m in height.

#### *Cairn # 14.*

Constructed of some very large stones this cairn was over 4 m in diameter and stood approximately 1 m above the present-day ground level. However, it was to prove disappointing as no recognizable human remains were found within it.

The ring of this cairn consisted of a single course of large boulders surmounting which was a type of cantilevered roof. A second ring, with a smaller internal radius, was placed on top of the lower one and then the entire structure was "roofed" with more large boulders, while many smaller stones covered the entire structure. At the north-eastern end one of the covering slabs had fallen into the chamber before the accumulation of soil built up, as it was largely buried by the accumulated detritus. Around the outside of this main ring was constructed a second, lower ring of smaller stones, giving the whole a stepped appearance.

The inner chamber was approximately 2 m by 2.5 m in diameter and was filled by the usual fill of rocks, snail shells and wind-blown detritus. The complete absence of any human remains can be due to only two factors: that the remains were originally present but had deteriorated to a point where they were no longer recognizable in the soil or that no burial ever took place within this cairn. The latter explanation is unlikely as the structure gave the appearance of having been

carefully completed. Also this was not the only cairn to be excavated completely without any discernable human remains being found, while in many of the cases where remains were found they were in such a bad state of preservation that they were often unrecoverable and even unrecognizable. This fact is probably to be attributed to the shallowness of the burials (often only 35 cm below the soil level), to the postulated extreme age of the burials and to the nature of the soil.

#### *Cairn # 15. (Fig. 3)*

A smaller cairn than the previous ones, being only 2.75 m across, was broken down on its north side but well preserved to the south and west. It consisted of an inner ring of two courses, the upper ring having a smaller internal radius, being placed slightly further towards the centre. This upper course was clearly added after the cavity was filled with stones following the burial, as its stones were supported by the stone fill. As in the case of Cairn # 14 the whole structure was then roofed with a number of flat boulders. To the south and west a second, lower wall was constructed against the outer face of the main ring. This secondary wall was two courses wide and two high.

Within the cairn beneath the capping stones and the upper course of the ring was a cavity measuring 1.20 by 50 cm. This was filled with the usual small stones, shells and soil to a depth of 40 cm. The bottom of the cavity was roughly lined with paving stones and on these, in the centre of the cairn, was a bundle of human bones. As far as they could be identified they were the long bones of the arms and legs of one individual, with a few other miscellaneous bones, including a few ribs. These were clearly disarticulated and in a very poor, friable condition. In amongst the bones were many snail shells. Owing to the

condition of the remains it was not possible with the means at our disposal to remove them for further study.

*Cairn #16.* (Fig. 4 and Pl. XXXII,1)

This cairn was well preserved with a well defined ring of two courses. The rocks used in the construction of this were larger than usual, a number of those in the inner ring measuring approximately 1.50 m. by 40 cm. in depth. The overall width of the cairn was approximately 4.25 m. while that of the inner chamber was 2 m. by 1.50 m.

In the centre of the ring was the usual fill of rocks, shells and soil to a depth of some 40 cm. before a regular, well-laid rock pavement was reached; this consisted of partially dressed and flattened stones. On this pavement were found a bundle of disarticulated bones, probably those of an adolescent. They did not appear to be a complete skeleton and the bones were so friable that it was impossible to determine which bones were present, apart from the obvious long bones of the side of the chamber to the south-west. To the south-east, by itself, was found what remained of a crushed skull.

This chamber was cleared to reveal the paving stones, which were then removed to reveal, instead of the expected virgin gravel, a stonelined chamber filled with loose, powdery soil and the ubiquitous snail shells. When this was cleared it was found to contain what seemed to be a complete, although disarticulated skeleton of an adult, the knee joints of which appeared to have been deliberately broken. These bones, although very fragile, were the best preserved of any found and some were able to be removed almost intact.

The skeleton had been arranged with all of the long bones laid side by side, pointing north-west to south-east, with the other bones piled

indiscriminately amongst them. The skull was placed on the top of this bone bundle standing upright with the lower jaw still in place. Unfortunately this skull was completely filled with soil and snail shells, which caused it to collapse outwards as it was cleared. Time and resources did not allow the proper treatment needed to preserve this skull as it was not cleared until the last day of excavation.

These lower chamber resembled a cist tomb over which the cairn was then erected. The walls of this chamber were lined by six flat slabs standing on edge to form a lozenge shaped cist. The bottom of the cist was paved by small stones or cobbles and the paved floor of the upper chamber formed the ceiling. The overall dimensions of the cist were 1.30 m. by 75 cm., with a depth of 30 cm. the cist had clearly been dug into the ground, whereas all of the other cairns investigated were entirely above the original ground level.

The total depth of the two chambers, from the top of the inner ring stones to the virgin soil beneath the cist, was 1.05 m. The soil level in the upper chamber was 20 cm. below the level of the top of the ring.

*Cairn #17.* (Fig. 5 and Pl. XXXII,2)

This consisted of an irregular ring of large boulders, resting on virgin soil, forming a cavity some 1m. by 1.50 m. in diameter. The rocks of this ring were set on edge and measured some 70 cm. on their vertical face, of which some 30 cm. stood above the level of the interior fill prior to excavation. This inner ring was supported around the outside by a large number of smaller rocks arranged irregularly while a number of large, flat undressed boulders covered the chamber.

Upon excavation of the central cavity it was found to contain the remains of more than one adult individual. These were disar-

articulated and not all of the bones were present. Resting on an irregular pavement they were placed around the outside of the cavity against the stone ring and were found at a depth of between 35 cm. and 45 cm. below the soil level. One skull could be recognized and this had been crushed by a rock which lay on top of it. There was no way of determining whether this was a deliberate action or whether the rock was positioned by chance, the weight of the fill eventually causing the skull to collapse. Both the skull and the other bones present were extremely friable and could not be recovered intact. Located with the skull was an amorphous group of bones, the recognisable ones being a number of vertebrae, a scapula, a number of ribs and arm bones. At various spots around the cavity were located a number of legs bones, obviously of more than one individual.

#### *Cairn #18.*

The bad state of preservation of this cairn makes its original state rather difficult to assess. Only the inner ring of large stones could be defined, a scattering of smaller stones round about being the only remaining traces of the rest of the structure; the original diameter seems to have been about 4.50 m.

The inner ring of this cairn was preserved to two courses and made of smaller than usual rocks. The cavity thus formed was 65 cm. by 1 m. in diameter; this was filled to a depth of 35 cm. with the usual fill.

No traces whatsoever of any human remains could be found here. What remains there were may have completely decomposed or the cairn may never have been used.

The bottom of this was lined with irregular, flat paving stones. After removal of these stones it became apparent that some attempt had been made to dig a shallow, saucer-shaped depression in the ground before

the pavement was laid. This depression varied from 5 cm. to 10 cm. in depth.

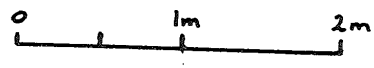
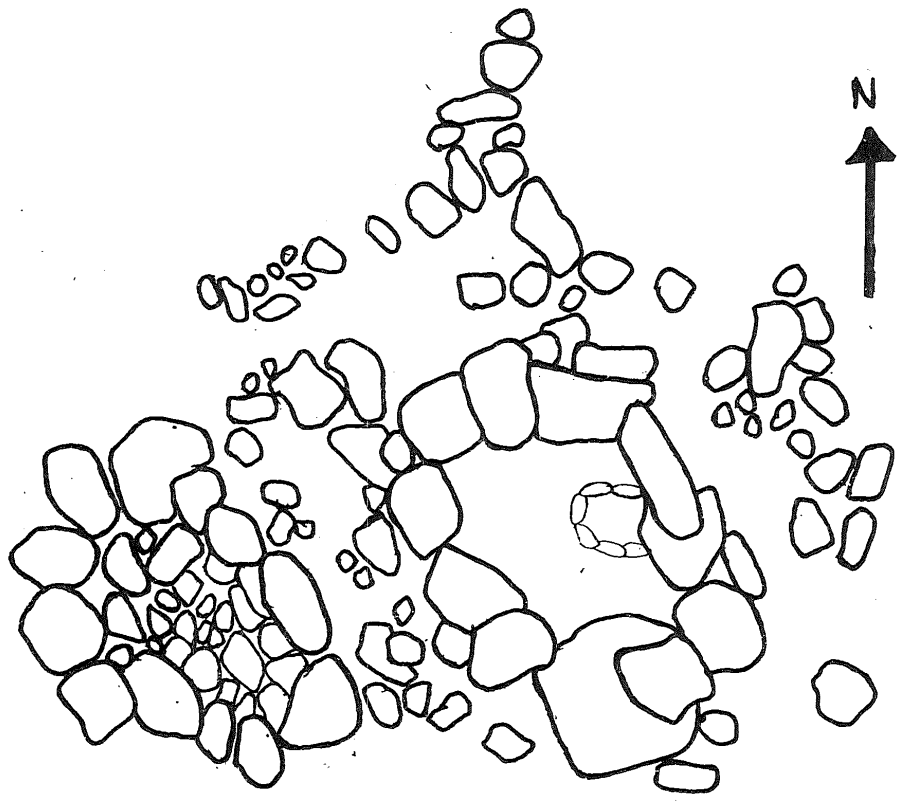
#### *Cairn #20.*

This was a roughly oval shaped cairn, well preserved and standing approximately 90 cm. above the surrounding ground level; it measured 3 m. by 2.5 m. in diameter. An animal burrow on the west side penetrated a short distance under the capping stones and may have partially disturbed the remains. The boulders serving to cover the cairn seem to have been partially removed, as only two stones remained in place. To the immediate south-east of the structure were a number of large, relatively flat slabs which could have originally served as capping stones. It was rather difficult to determine whether or not the burial itself had been disturbed.

The interior of the cairn was filled, for the upper 10 cm. with a very dense mass of snail shells and some loose soil, below this was a stone fill, the central part of which had been located so as to support a central stone in an upright position. This standing stone was quite small - 25 cm. by 25 cm. by 30 cm. in depth - but had clearly been deliberately positioned.

The stone fill, through which soil and snail shells had percolated, was a jumble of medium sized rocks about 25 cm. in depth. Below these rocks, at a total depth of some 35 cm. below the surface soil, was encountered a 5 cm. thick layer of dark, harder soil. This contained only a few shells, which were probably intrusive from the stone layer above, and in it were found a few traces of bone, mostly to the south and south-east side of the chamber against the inner face of the stone ring. These bone fragments were extremely friable and were unrecoverable. Only four bones could be distinguished, three of which appeared to be fragments of the long bones of





Top. Figure 5. Cairn #17. Bottom. Figure 6. Cairn #25.

the arms or legs; the fourth fragment could not be identified. Despite the bad state of preservation it would seem that this too was a disarticulated and probably incomplete burial. Directly below this darker soil was virgin gravel.

Cairn #25. (Fig. 6)

This was a double cairn consisting two separate chambers juxtaposed and incorporated into one large, figure-eight shaped cairn, 5.75 m. in length and 2.5 m. wide at the narrowest point in the centre. The western, smaller cairn is designated #25/A and the larger, eastern one #25/B.

#25/A. This cairn consisted of an outer lower course of boulders and an inner ring of two courses; some of the upper course had to be removed to prevent its collapse into the chamber as it had been stepped slightly into the centre overhanging the burial cavity. The dimensions of this chamber were 1 m. by 75 cm.

This was filled, for the first 15 cm., by a hard layer of yellow soil and snail shells. Below this was a fill of tightly packed small rocks, surrounded by looser yellow soil and enormous numbers of snail shells. In this case the bulk of the snail shells far exceeded that of the soil.

At a depth of 45 cm. the soil changed to a darker grey-brown colour. Within this soil a still darker pocket towards the northern end of the chamber contained a few badly decomposed bones of a child or young adolescent. The only identifiable pieces were an upper arm bone and a few ribs. The pocket of darker soil was approximately 10 cm. in depth. Immediately below this soil lay a well-laid stone pavement, covering the entire

bottom of the chamber, the stones of which had been partially dressed to make them flat. To the south this pavement lay directly on virgin gravel but at the northern end; immediately below the skeletal remains, was an irregular pocket of ash, with some tiny pieces of charcoal, some 8-10 cm. deep. There was no trace of burning on any of the stones or on the bones. (Pl. XXXIII, 1)

#25/B. This cairn, the larger of the two, proved to be something of an enigma. The structure consisted of a two course ring of large boulders, incorporating a very large field stone into its south side, and an irregular outer ring supported this; to the north of the cairn a rough alignment of stones seemed to form a crude wall.

The fill in the chamber of this cairn, which reached a total depth of 92 cm., more than twice the usual depth of fill, was most intriguing and its significance is not at all evident. It consisted of several clearly defined layers, the first being loose soil and shells. Below this was harder soil within which were found three rocks, one long and two smaller ones, arranged in a cruciform pattern some 40 cm below the soil surface in the chamber. The significance of these stones is unclear, unless we are to relate them to the practice of including monoliths or standing stones in the cairns. However, in this case the stones were in a horizontal position. (See Pl. XXXIII, 2)

Below this was darker soil in which were found one tiny sherd of indeterminate type and a number of beads of dentalium shell cut into pieces, similar to those found in the Prepottery Neolithic B stratum at Nahal Oren.<sup>4</sup>

4. T. Noy, A. J. Legge and E. S. Higgs, "Recent Excavations at Nahal Oren, Israel", in *Proceedings of the Prehistoric Society*, Vol 39, December 1973, p. 75 - 99. See Fig. 7.

A total of 13 of these beads were recovered but at least another 20 were lost because they tended to disintegrate very readily.

Under this soil was a roughly semi-circular stone ring of small stones placed directly on the virgin gravel. The diameter of this was 60 cm. The interior of it was filled with very powdery dark soil, mixed with pieces of yellow clay. Much fine charcoal and ash was in the soil and the underlying gravel showed signs of scorching.

Outside this ring to the west and south was a 22 cm deep pocket of ash, charcoal and burnt soil and rocks, filling a basin-like depression that had been scooped out of the gravel. No objects of any kind were associated with this burnt soil.

How then are we to interpret the evidence of cairn 25/B? Was it perhaps a cairn prepared for the remains of an individual who was never buried there, as the complete absence of human remains and the relatively small number of snail shells would tend to indicate?

However the absence of traces of human remains is to be noted in other cairns also. In this connection the presence of the beads and of the single sherd is puzzling. The evidence of burning can be paralleled in the adjacent cairn # 25/A, in cairn # 30 and in the burials found in Ring 1, G/6.3 (See below). Whatever the purpose of this burning, it is clear that it took place before the construction of the cairn.

*Cairn 27.* (Fig. 7). This cairn, with a diameter of approximately 3 m and standing 1 m above the surrounding ground level, consisted of a ring of two courses of boulders, the upper course being stepped slightly inwards and overhanging the interior chamber. On its eastern side a huge field boulder was incorporated into the structure.

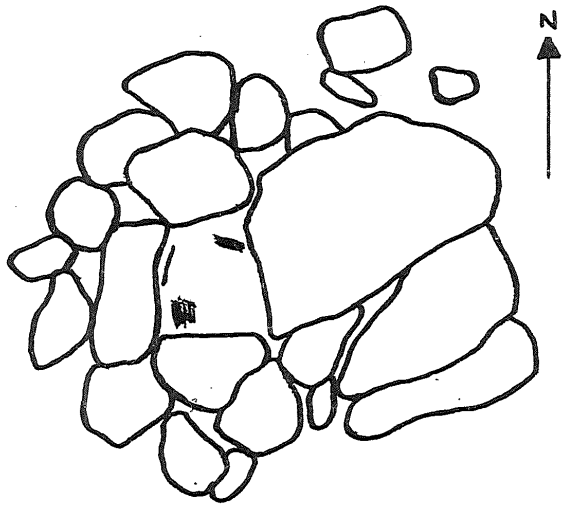
The cairn may have originally been covered over with capping stones which have since fallen off or been removed as a number of large flat stones lay about near the structure.

The interior was filled with the usual large number of small to medium rocks, snail shells and soil. At a depth of 40 cm, located immediately upon the virgin gravel were a few extremely friable bones. These appeared to be the long bones of the arm or leg and a few hand or foot bones. They had been placed against the walls of the chamber to the north and west.

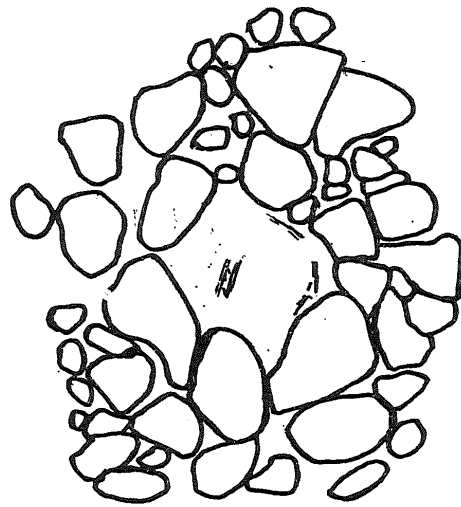
*Cairn 1.* (Fig. 8). Located a little to the southwest of the previous cairn this was taller than usual, standing more than 1 m above the surrounding surface. It consisted of a ring of a single course of large stones set on end to form a chamber 80 cm in diameter; the depth of the fill inside this was about 80 cm, with the upper 20 cm of the interior free of fill. Around the outside of this ring was piled a rough ring of supporting stones forming a cairn with an overall diameter of about 3 m.

Within the ring was a 45 cm deep fill of the expected stones, shells and soil. Below this, in the southwest part of the chamber, was a pocket of darker soil in which were a few badly decomposed and clearly disarticulated human bones; these consisted of long bones, ribs, and a few other unidentifiable bones of a child. Mingled with the bones were a number of sherds which appeared to belong to the same vessel, or one very similar, as a number of sherds which were found on the surface immediately outside the cairn.

These human remains, and the sherds, were found to be resting on a rough stone pavement. When this was removed, at a depth of 55 cm below the surface level of the fill, were found fragments of another skeleton; this was almost

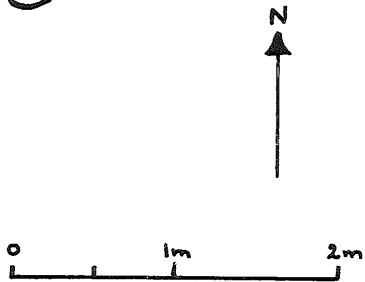
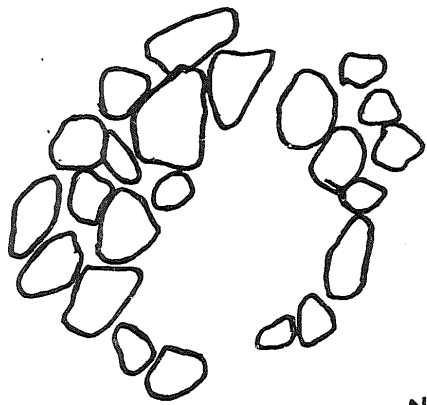


Above. Figure 7. Cairn #27.



Right. Figure 8. Cairn #1.

Below. Figure 9. Cairn #9.



totally decomposed but some fragments could be recognised as being the remains of long bones. These were spread across the chamber from the east side to the southwest but with no sign of any deliberate arrangement; they rested on the virgin gravel. This cairn would appear to constitute a less elaborate example of the two level burial which has already been described in Cairn # 16.

The occurrence in this cairn of potsherds, representing only a part of the rim and wall of a pithos-like vessel, and of closely related sherds immediately outside it, raises some important problems. The first possibility is that the sherds were a part of the one vessel which was perhaps broken inside the burial chamber during the interment and was largely removed, with only a few pieces escaping attention. It was perhaps the practice that nothing should be buried with dead (but see below, the excavation of G/6.3B). This would explain the presence of sherds of what may have been the same vessel both inside and outside the cairn. On the other hand the sherds may have come from a broken vessel which already lay on the ground in the vicinity when the cairn was constructed, some of them accidentally finding their way into the chamber when the burial was made. If this was the case then the sherds provide a *terminus post quem* for the burial.

*Cairn #9.* (Fig 9). The excavation of this cairn proved to be a disappointment, despite its impressive appearance. Consisting of a two course inner ring of large boulders, the upper being slightly cantilevered, and surrounded on the outside by numerous smaller stones, the diameter of this cairn was approximately 3.50 m and it stood some 80 cm above the surrounding ground level. However, instead of the usual fill the chamber was found to be

filled by six large boulders, around which were a few smaller stones, snail shells and soil. The density of snail shells was much lower than usual and virgin gravel was encountered without any trace of human remains being encountered at all. It would seem that this cairn was never used for a burial.

Alongside this cairn to the west was the remains of a cairn which had been thoroughly robbed of its larger stones, perhaps for the construction of cairn # 9.

Between the two cairns was what appeared to have been a subsidiary burial. This consisted of two parallel lines of stones standing upright. The area between these was filled with rocks, soil and an enormous quantity of shells. These covered a stone pavement and the entire feature had been erected in a shallow depression in the ground. No bones were found at all here.

### The Stone Rings

Located within the cemetery area were two rather curious circular stone structures. These consisted of a roughly circular ring of stones some 25 m in diameter, intersected by two parallel lines of small stones and with a number of stone tumuli along the perimeter of the ring.

The better preserved of the two was in the south-west of the surveyed area and was labelled G/6, following the system devised for area designation during the surface survey. Here it is referred to as *Ring 1*. Burials found within this ring contained the remains of at least five individuals.

Near cairns 12 and 13, in the eastern part of the necropolis, lay Ring 11. This had been severely denuded by erosion, and possible other factors, and was difficult to define. Sufficient remained of this to determine its close similarity to Ring 1.

*Ring 1.* (Fig.10). This was located on sloping

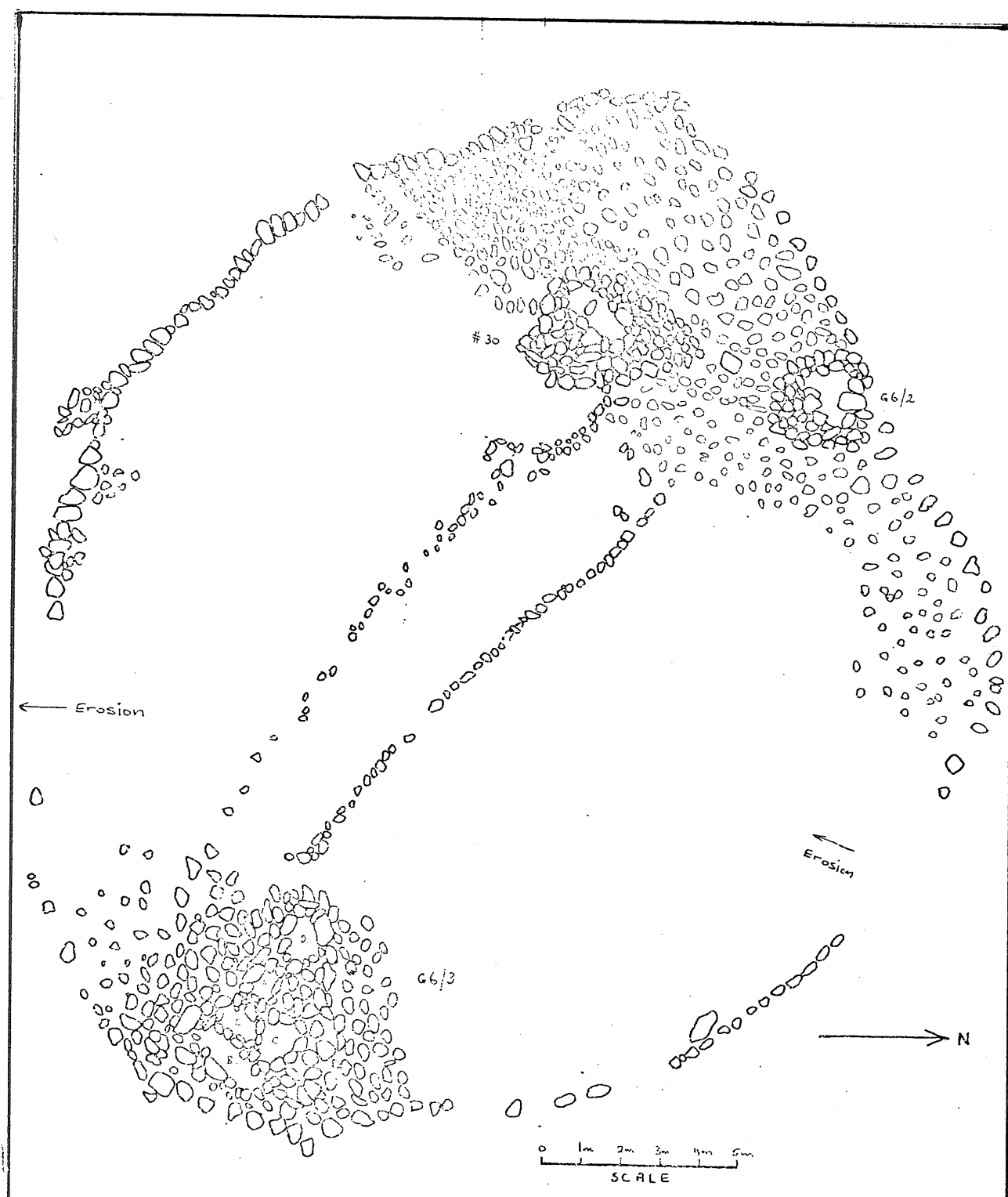


Figure 10. Plan of Ring 1 and Cairn #30.

Fig. 10

ground at the south-western extremity of the necropolis. Although its shape was not exactly circular its diameter was 24.5 m on both the north-south and the east-west axes. The western part was better preserved than the eastern one as the east side had been heavily eroded by wash from the north-east, which ran through the ring and cut the outer wall again to the south.

To the west the ring wall was clearly defined and consisted of a single course of rocks, averaging some 25 by 30 cm, set on edge to form a low fence. To the south-west was a gap in this fence some 1.10 m wide, which may have been some kind of entrance into the ring. To the north-west, within the ring were two cairn-like stone piles surrounded by a rough stone pavement. One of these was numbered Cairn 30 and was excavated as probe G/6.1, while the other was excavated as probe G/6.2.

To the east the ring wall was ill-defined but the line could be determined by the concentration of stones which appeared to mark the old line of the wall. Here the wall may have been partially constructed from a large number of small stones forming a rough fence up to 1 m in width. To the south-east lay a large tumulus which was labelled G/6.3. Two parallel lines of stones of head-size, some 2.50 m apart, connected this tumulus with the stone pavement surrounding Cairn 30 and G/6.2.

In the north-west part of the ring an L-shaped probe trench was opened in an attempt to discover any surfaces which might have survived in relationship to the ring wall, the cross walls, cairn 30 and the stone pavement, to determine whether the cairn could be considered to be contemporary with the rings as a whole, to investigate the cairn itself and to seek evidence as to the nature

of the ring. However, nothing which could be called a surface was discovered and all of the features investigated were found to be resting immediately upon virgin soil. It can only be assumed, from the intergral part which it formed of the rings, that cairn #30 was to be considered as contemporary to it but stratigraphic evidence for this is totally lacking. A few fragments of sherd and flint were found on the surface of this probe.

The cairn proved to be the most interesting feature of this probe. It consisted of the usual inner ring of large stones, forming an ovoid chamber 70 cm in width and 1.80 m in length. A second, outer ring, at a slightly lower level, gave the whole a stepped appearance, while many loose stones with no fixed arrangement were piled around it. The surrounding stone pavement ran right up to the cairn structure. Within the chamber a large upright slab was found to divide it into two sections. This slab measured 15 by 50 cm and stood approximately 40 cm in height. Although much smaller than the monoliths in cairns 12 and 13 its position and alignment suggest some similarity of function.

In the western part of the chamber, at a depth of only 30 cm below the usual fill were found fragmentary remains of an adult. Of these the only recognisable elements were some extremely friable, incomplete ribs, long bones and a tooth. It was not possible to remove any of these intact.

The bones were found to be resting on a stone pavement made from small, irregular-shaped stones, below which was a deposit of dark, ashy soil with a few fragments of charcoal. This lay on the virgin gravel.

In the eastern part of the chamber, at a depth of between 30 and 40 cm, was a disarticulated bone pile consisting of the

bones of an adult and a young child. The bones of the adult were surprisingly well preserved but the bones of the child were in an extreme state of decomposition. The only remains of the child which could be recognised were some skull fragments, against the south-east wall of the chamber, and a few ribs and long bones, mixed with the bones of the adult in the bone pile.

The bones of the adult had been piled together in the centre of the chamber (Pl. XXXIV) and, although mostly disarticulated a number of bones still appeared to be in articulation, namely the hip points and some of the rib-cage. The skull of the adult had been crushed by a rock. It lay to the west of the bone pile, against the upright slab.

The bone pile had been placed on an irregular stone pavement below which the soil showed traces of burning.

Probe G/6.2 involved the clearance of a second, smaller cairn some 5 m to the north-east of cairn 30 and surrounded by the same stone pavement. This cairn stood only 40 cm above the level of the pavement and when cleared was found to contain no human remains, although a few unidentifiable fragments of pottery were discovered.

Probe G/6.3 consisted of five probes (labelled A - E) made into separate chambers which were defined upon clearance of a jumble of surface rocks from the top of the stone tumulus which lay in the south-east part of the ring. This tumulus measured 7 m from north to south and 6.50 m from east to west and stood between 50 and 80 cm above the general ground level. The central part was more clearly defined and higher than the edges.

The fill within the five chambers which were cleared was distinguished from that found in the cairns by the total lack of snail shells, except on the surface. The usual head-sized and smaller rocks were found but these were surrounded by a fine loose soil.

In G/6.3A,C and D no human remains were found but at a depth of between 30 - 35 cm a layer of ashy soil was encountered. This was between 8 - 10 cm in depth and overlaid a layer of fine cream coloured clay some 8 cm thick. This clay formed the "floor" in all of the chambers investigated. In G/6.3E this clay lined a pit some 15 cm in depth and 20 cm in diameter which was filled with ashy material.

In G/6.3E the disarticulated bones of at least one adult were found at a depth of 30 cm. These included ribs, long bones and a lower jaw. These lay on a stone pavement which had been placed directly on the layer of clay.

G/6.3B was a chamber 2 m long and 60 cm wide, in the centre of which, at a depth of only 25 cm, were found the disarticulated bones of another adult. These were very fragmentary and the whole skeleton was not represented, perhaps because of disintegration or possibly because the entire skeleton was not originally interred. Ashy soil surrounded the bones but they showed no sign of having been burnt.

The chamber of B was entirely paved by irregular stones which overlay a 10 cm thick layer of ashy soil mixed with tiny fragments of charcoal. The stones themselves bore no traces of having been burnt. In this ashy soil was found a considerable quantity of sherds, some of which showed unmistakable traces of burning. At least three separate vessels were represented.



Beneath this material was found the cream coloured clay layer. This was traced outwards from the tumulus and was found to thin out and disappear just outside the perimeter of the ring. This clay showed signs of scorching in a number of places and appears to have been deliberately laid and restricted to the area immediately underlying the tumulus.

*Ring 2.* This was in a very bad state of preservation so that its original line could not be traced exactly; however it was possible to make out the general position of the ring wall from the concentration of stones which seemed to mark its perimeter. The wall was apparently constructed from a large number of small stones which were piled together to form a "fence" some 1 m wide, enclosing a roughly circular area between 25.5 and 26.5 m in diameter. Remnants of two roughly parallel stone lines of a single course could be traced running north-west to south-east and 4 to 5 m apart. These were cut by considerable erosion and could not be connected to any feature of the ring at either end.

On the perimeter of the ring to the north and the south-east remains of two tumuli could be made out. Both were so badly denuded as to be barely distinguishable from the surrounding jumble of rocks. No remains were found in either of them when they were investigated but slight traces of ashy soil could be detected.

A number of badly eroded sherds and a few flint fragments were picked up on the surface of the ground within the ring.

Concerning these rings some further observations can now be made. It is likely that the ring walls were once better defined than they now are. In places where they seemed to have been constructed of a mass of small stones these were probably piled up to

form a definite wall, albeit probably little more than 50 cm in height. It is also possible that some sort of superstructure had been supported by them, possibly of mud or of brushwood, although no traces of such a feature were found. It is also worthy of note that the ground surface within the rings was relatively free of stones and was probably originally completely cleared, thus leaving the interior parallel stone lines clearly delineated.

It is suggested here that the rings were the centres of a burial ritual which took place in this necropolis, not merely in relation to the burials actually located within the ring but also to those surrounding cairns in the vicinity. The close similarity between features found in the cairns to those found in the burials in the ring indicates both a cultural and temporal relationship between them.

#### **The pottery. (Fig. 11).**

No complete vessels were found and the majority of sherds were small body sherds. All were hand made and very coarse, with much grit tempering.

N. 1 : A rim sherd of a pithos-type vessel. Ware pinkish-buff with numerous grey grits and pottery fragments. Evenly fired. Hand made. 7 - 11 mm in thickness. Rim is flat and below it is a series of deep finger impressions running around the vessel. Below those is a raised applied clay band which does not appear to have been continuous right around the vessel.

No. 2 : Similar to be the previous, except with rim missing. This is almost certainly from the same vessel.

Nos. 1 and 2 both came from the surface near cairn 1. Inside this cairn were found further pieces of identical ware which seem

to belong to either the same vessel or one very similar to it.

No. 3 : A body sherd with a handle stump preserved and an applied band of finger-moulded clay. Ware is coarse, with grey grits and evenly fired. Colour is purple-grey. This was from the surface of Ring 1.

Within probe G6/3B were found a number of sherds, apparently belonging to at least three vessels. One was a holemouth jar of Neolithic or Chalcolithic type. This was hand made, of coarse brown-yellow clay with many grey grits. The vessel showed signs of burning both inside and out. Other sherds, of an unidentified type of vessel, were yellowish-buff with grey grits. The third vessel, possibly a small jar, was orange-brown colour with large grey grits and some white. The outer surface of the vessel had been covered with a matt brown-red slip surface or paint which did not cover the surface evenly. In colour and texture this slip is reminiscent of that found on vessels of pottery Neolithic B provenance from Jericho. However, insufficient material is available for a proper comparison.

The impression given by this pottery is that it should probably be assigned to the early part of Chalcolithic period, or pre-Ghassulian. It would also appear possible to assign it to Neolithic on the grounds moulding could be Neolithic. A few pieces with similar applied moulding to sherds 1 and 2 come from the Neolithic site of Ghrubba <sup>5</sup>

However the finger impressed band of sherd 3 recall Ghassulian techniques

and closely resemble similar moulding from el-Adeimeh near Tuleilat Ghassul<sup>6</sup>. The pithos form and the holemouth jar appear more at home in the Chalcolithic but would not be entirely foreign to the Neolithic period.

With the exception of the pithos-like vessel all appear to have been poorly made and none were fired above 500°C, as evidenced by tests carried out by the Department of Physical Chemistry at Melbourne University.

These tests also provided mineralogical analysis for two sherds as following :

Sample 1 ( from Cairn 1, the pithos-type vessel ) -

Clay minerals (including shale fragments ) 70%;

Plagioclase feldspars ( from Gabbroic rock ) 25%;

Pyroxenes 2 - 3%; Quartz 1 - 2%;

Magnetite 1%.

Sample 2 ( from G6/3B ) -

Clay minerals 77%; Calcite 20%;

Quartz 2 - 3%.

Other objects.

The beads from Cairn 25 B have already been noted. <sup>7</sup> These were of dentalium shells cut into sections and averaging only 3 - 5 mm in diameter. These were of a greenish-white colour and very fragile. They must have been imported to the Bab edh - Dhra' region from the Mediterranean coast.

Also found, on the surface of Rings 1 and 2, were a number of very crudely worked flint flakes with few distinguishing features, which cannot be assigned definitely to a specific period but may be Chalcolithic.

5. J. Mellaart, " The Neolithic Site of Ghrubba", *ADAJ III*, 1956, p. 24 - 33. See sherds 21, 25, 31 and 60.

6. M. Stekelis, *Les Monuments Mégalithiques de*

*Palestine*, (Archives de l'Institut de Paléontologie Humaine Mémoire 15, Paris 1935), Figs. 18 and 19 and Pls. IV and V.

7. See Note 4, above.

## Discussion.

At first impression these finds from Bab edh-Dhra' do not parallel finds at any other site but closer examination does reveal similarities to other finds which can be definitely dated to the Chalcolithic period.

Probably to be related to the stone rings is a similar structure near the Chalcolithic necropolis of el-Adeimeh, near Tuleilat Ghassul.<sup>8</sup> This consists of a roughly circular construction approximately 30 m in diameter. The wall consisted of small stones piled up to 35 cm in height and 1 m in width. In the southeast part of the wall was a possible entrance of about 1 m in width. Around the outside of the ring were a number of roughly triangular projections. Elliott considers that this ring "could well represent the solar disc in architectural form".<sup>9</sup> Elliott recognises seventeen of those projections but only fourteen could be recognised by this writer. The rings at Bab edh-Dhra' do not have these projection and Elliott's interpretation must remain doubtful. Little trace of any interior walls can be made out in the el-Adeimeh ring. In the opinion of Stekelis this ring may have been a "lieu sacré", possibly used for rites of the dead before burial in the nearby necropolis.

Also of great interest is a roughly ovoid construction at Nahal Mishmar, to the west of the Dead Sea.<sup>10</sup> This consists of a single row of stones forming a rough ring 37 m by 27 m in diameter, with entrances to the west and east. In the southern part an east-west line

of stones cuts off an area of 10 m by 20 m, inside of which is a rectangular structure. A number of short walls and stone rings occur elsewhere inside the ring, while there are three small semi-circular stone walls attached to the outside of the ring, paralleling that outside of Ring 1 to the southwest. This Nahal Mishmar structure is interpreted by the excavator,<sup>11</sup> and by Elliott<sup>12</sup>, as a sanctuary or cult installation. It should be noted that a number of burials of Chalcolithic date were found near this feature in the adjacent caves and it is possible that it was used in some form of interment ritual.

Parallels to the burials in G6/3 come from the el-Adeimeh necropolis, Tumuli I and II, which are two similar tumuli, of similar dimensions and apparently similar construction. As in G6/3 a number of separate burials of cist type were found in these tumuli, together with hearths or evidence of fires.<sup>13</sup>

Parallels to Cairn 30, which may be interpreted as two cists within a round in el-Adeimeh Tumuli III, IV, VI, and VII - X. Below tumuli III, VII, IX and X were found hearths. The cists within these tumuli were all constructed above ground level and clearly are similar in concept to the cairn burials at Bab edh-Dhra', the inner rings of which form what could be described as megalithic cist chambers. Two cairn type burials of apparently similar nature were found near the el-Adeimeh necropolis.<sup>14</sup> The cist-like "subsidiary burial" found near cairn 9; and similar ones observed near other

8. Stekelis, *op.cit.*, p. 67 - 68.

9. C. Elliott, "The Religious Beliefs of the Ghassulians c. 4000 - 3100 B.C.", *Palastine Exploration Quarterly*, January - June 1977, P. 3 - 25. See P. 19.

10. P. Bar - Adon, *The Cave of the Treasure, The*

*finds from the caves in Nahal Mishmar*, (Jerusalem, 1971, in Hebrew).

11. *Ibid*, P. 12 - 13.

12. Elliott, *op.cit.*, p. 17.

13. Stekelis, *op.cit.*, p. 40 - 46.

14. *Ibid*, p. 66 - 67.

cairns are probably to be seen as similar to the large number of cists found at the el-Adeimeh necropolis.

The evidence of burning found beneath the burials in G6/3B and E and cairns 25A and 30 may be paralleled by the large number of hearths found at el-Adeimeh, although more definite parallels to the latter site are provided by cairn 25B, which appears to have covered a definite hearth, and by the finds in G6/3A, C and D.

Another feature of the el-Adeimeh tumulis is that generally pottery was not found with the burials but that large number of sherds were found in the fill over and around the cists.<sup>15</sup> In the opinion of Steklis this represented a burial practice in which grave offerings were considered necessary only rarely but rather feasts were held at the funeral, following which the vessels were ritually smashed.<sup>16</sup> At Bab edh-Dhra' large numbers of sherds were not found but the evidence does suggest a similar practice here. Cairn # 1 and G6\3B provide the best comparisons.

At el-Adeimeh a pavement was found only under cist no. 110 while at Bab edh-Dhra this feature was found in Cairn 1, 15, 16, 17, 18, 25A, 30 and the burials of G6/3.

The human skeletal remains from el-Adeimeh, like those from Bab edh-Dhra', were badly preserved and largely fragmentary. Stekelis does not consider the possibility that the burials were disarticulated or incomplete

at the time of interment but claims to have found evidence for burials in a crouched position.<sup>17</sup> He would ascribe the incompleteness of the burials to the nature of the soil but it is interesting to note, nevertheless, the fact that it was the long bones of the arm and leg together with skull fragments, which were found most usually and that in some cases no recognisable human remains were found at all. Elliott considers the el-Adeimeh burials to be secondary in nature.

As noted, all of the burials found at Bab edh-Dhra appear to have been secondary. At Safadi, in the early phase of occupation, which is perhaps close to our finds chronologically, bone bundles with the skull placed on top were found.<sup>18</sup> This compares closely to the lower burial in cairn 16. The placing of standing stones near ossuaries is attested from three sites, Givatayim<sup>19</sup> Benei Beraq<sup>20</sup> and Ben Shemen.<sup>21</sup> In the opinion of Elliott this practice "may indicate the burial of a chief or cult leader, for whom the god's protection in this symbolic form was accorded".<sup>22</sup> Despite the obvious differences between these ossuary burials and the cairn burials the practice of placing standing stones in the cairn at Bab edh-Dhra' may represent a similar practice. These stones were found in cairns # 12,13,20 and 30. In the opinion of Stekelis the tumulis burials at el-Adeimeh represent the interment of family heads or of group chiefs, while the many cists represent less exalted persons.<sup>23</sup> From the number of cairns

15. *Ibid*, p. 45.

16. *Ibid*.

17. *Ibid*, p. 65 - 66.

18. Elliott, *op.cit.*, p. 22.

19. V. Sussman and S. Ben-Arieh, "Ancient Burials in Givatayim", *Atiqot* 3, 1966, p. 27 - 39 (in Hebrew).

20. J. Kaplan, "Excavations at Benei Beraq 1951", *Israel Exploration Journal*, 13, 1963, p. 300 - 312. See p. 302.

21. J. Perrot, "Les Ossuaires de Ben Shemen" *Eretz - Israel* VIII, 1967, p. 46 - 49.

22. Elliott, *op.cit.*, p. 23.

23. Stekelis, *op.cit.*, p. 45.

at Bab edh-Dhra and the megalithic nature of them one is tempted to assume a similar interpretation here. However, we have no definite evidence that the cairns do represent the burials only of leaders and one is forced to admit total ignorance in this respect. Also, so little is known of the Chalcolithic material remains in this region that it would be rash to speculate too far at this stage.

What does seem clear is that this excavation has produced evidence for the occupation of the area to the southeast of the Dead Sea in a period considerable before the well known Early Bronze Age culture in this region, probably early in the Chalcolithic period and provides more light on the growing body of evidence for this period in the Palestine area as a whole.

Vincent A. Clark



**ARCHAEOLOGICAL SURVEY SOUTH  
OF WADI MUJIB :  
GLUECK'S SITES REVISITED**

by

J. Maxwell Miller

The plateau between Wadi Mūjib and Wadi Ḥesa has received relatively little attention from archaeologists, in spite of the fact that it is exceedingly rich in surface artifactual remains. There are several reasons for this: (1) The area is somewhat isolated geographically and was not well policed during the nineteenth century when most other parts of Palestine were being mapped explored systematically for archaeological remains. (2) During the present century archaeologists have tended to concentrate on the excavation of *tells*, and there are few of these between the Wadi Mūjib and Wadi Ḥesa. (3) Scholars have relied heavily on Nelson Glueck's assessment of the archaeological remains in southern Transjordan, based on the survey which he conducted during 1933-38. Glueck himself expressed the opinion that further archaeological exploration south of Wadi Mūjib would produce diminishing returns:

It may be emphasized that despite the large number of sites visited from August 1936 on in Edom and Moab in the attempt to complete the survey of these areas, the possibilities of discovery of still additional ancient sites there have definitely not been exhausted. Some sites will inevitably have been missed; others are so deeply buried under the debris of modern settlements as to defy all surface examination. ... On the whole, however, the writer is confident that not very many ancient sites in Edom and Moab, whose ruins have not been completely obliterated, remain undiscovered. (1939: XXIII). During the past few years, however,

scholars have become increasingly aware that, while Glueck's very significant contribution to Palestinian archaeology is not to be depreciated, his survey of the Transjordan was superficial in places and some of his widely accepted conclusions based on that survey must be reconsidered: (1) Recent surveys in northern Transjordan (Mittmann, 1963-66) and immediately east of the Jordan itself (Ibrahim Sauer and Yassine, 1975) indicate that Glueck missed many ancient sites. (2) The descriptions of earlier travellers who explored south of Wadi Mūjib (e.g. Musil) suggest that he missed a number of sites there as well. (3) The results of recent excavations immediately north of Wadi Mūjib (Dhībān, 1950-56) and south of Wadi Ḥesa (Umm el Biyarah, 1958-68; Tawilan, 1968-70; Buseirah, (1971-72) have not supported Glueck's conclusion that southern Transjordan was resettled during the thirteenth century B. C. after an occupational gap which had lasted throughout the Middle and Late Bronze Ages. Specifically, the excavations at these sites failed to produce clear indications of occupation prior to approximately the ninth century B. C.

Village life disappeared almost entirely from the area between Wadi Mūjib and Wadi Ḥesa during the period of Ottoman rule, so that the surface archaeological remains were easily observable. Seetzen and Burckhardt encountered only four settlements when they passed through in 1805 and 1812 respectively (i.e., Kerak, el 'Irāq, Kathrābā, and Khanzīra). The situation had changed very little when Glueck made his survey during the 1930's. But recent government programs designed to

induce the Bedouin to settle down are bringing about a rapid change. New villages have begun to spring up all over the plateau, especially since the 1950's and generally these new villages are reappearing on the very sites occupied during earlier times. Consequently the ancient ruins are being robbed for building stones and rendered less accessible for archaeological investigation.

Primarily for these two reasons - Glueck's survey and conclusions seem increasingly inadequate, and the ancient sites themselves are becoming increasingly less accessible - - Emory University in association with the American Center for Oriental Research and the Department of Antiquities has undertaken a new archaeological survey of the plateau between Wadi Mūjib and the Kerak-Qaṭrana road (i.e., central Moab during ancient times). The first season was conducted between July 20- August 30, 1978. The survey team was housed at the Kerak Rest House and consisted of James R. Kautz, J. Maxwell Miller, Jack M. Pinkerton and Mike R. Pinkerton. James A. Sauer, Director of ACOR, initiated applications for the necessary permits and clearances before the survey team arrived in Jordan, and read the pottery on weekends. Sami S. Rabadī, representing the Department of Antiquities, played a crucial role explaining the presence of the survey team to the local people and gathering information regarding the names and locations of ancient sites. Charles Cashion joined the expedition for two weeks as surveyor, using a recently developed surveying and distance measuring device (3820 Distance Meter) loaned for the expeditions by Hewlett-Packard Instruments Company.

Much of the credit for the success of this first season must go to persons who were not directly involved in the field work. Dr. Adnan Hadidi, Director General of the Depart-

ment of Antiquities, gave the project his personal attention and full support. Funds were provided by the Near East Engineering Co., the Pinkerton and Laws Co., the Day's Inn Foundation and Mr. Drew R. Fuller, all matched by a grant from the Franklin Foundation. Drafting materials and work space were provided in Amman by the Heery International architectural firm. Special mention should be made of the friendliness and cooperation of the local inhabitants of the area being surveyed. We found these people extremely hospitable and, when we explained what we were about, eager to provide us with information regarding the locations of ancient sites and place names.

The primary task undertaken this first season was to search out the sites which Glueck recorded in central Moab (thirty-three sites on the plateau proper) and establish their precise locations in terms of the maps available today. This turned out to be a surprisingly difficult task, in spite of the fact that most of these sites had been noted already by earlier travellers and approximately half of them appear by name on the Jordan 1:50,000 Series K 737 maps (compiled in 1960-63 from aerial photographs). Glueck simply estimated the locations of the sites which he recorded, and it became increasingly apparent as we attempted to retrace his steps that his estimates are often misleading.

Following is an annotated list of Glueck's thirty-three sites arranged in order of the numbers which he assigned them and with his spellings. An asterisk marks those which appear by name on the Series K 737 maps, and their spellings as they appear on these maps are indicated in parentheses. Palestinian grid coordinates are provided for those which do not appear on the Series K 737 maps. Page references are to Glueck's report in *AASOR IV*



(1934) unless otherwise indicated. Descriptions of the current conditions of the archaeological remains at these sites and the statistical results of our resherding them will be published later, after we are further along with these aspects of the present survey.

No 47-48\* *ei-Lejjūn* (*Lajjūn*). Glueck reported four distinct ruins in the immediate vicinity of 'Ain Lajjūn : the Roman camp = his No 47, pp. 40-41): an EB site with a row of sixteen monoliths situated on a knoll above the Roman camp to the NW (pp. 44-45, plan on p. 95); a building complex immediately north of the EB site and separated from it by a deep wadi (= No 150, kh. el-Fityān, see below); and "a small ruined watchtower" approximately 1 km. E of the Roman camp (No 48, Rujm Lejjūn, p. 72). Both Seetzen (I, 416) and Burckhardt (373-374) reported ruins at 'Ain Lajjūn, although neither of them actually visited the place and Burckhardt misrecorded the name as "Tedoun". Doughty (I, 20) seems to have published the first description of the Roman camp, and Bliss (221-223) the first sketch plan of it. Later Vincent (437) provided a map which indicated the relative positions of the various ruins associated with 'Ain Lajjūn, along with a plan of Kh. Fityān; Brünnow and Domaszewski (II, 23-37) treated the Roman camp and a nearby platform (see Glueck 40-43) with plans, drawings and photographs; and Musil (I, 36) described the "monolith" site, recording its name as ḥarīm el-Fārde. This latter name corresponds to a story, also recorded by Musil, which explains that the monoliths are bridesmaids which were turned to stone.

No 110 \**Bālū'ah* (*Bālū'*). *Bālū'* is visible from a

considerable distance and was mentioned in passing by several early travellers - Seetzen (I, 410, 411), Burckhardt (374), Bliss (221), etc. Tristram (139) seems to have been the first to claim an actual visit to *Bālū'*; but his notes clearly are confused at this point, and one must suspect that he was at some other site altogether. Specifically, Tristram reports that, after exploring the ruins on top of *Jebel Shihān* his party.

...descended in a north-eastern direction by another ancient road, riding at a smart pace, and in twenty-five minutes passed through the ruins of *Bal'hua*, perhaps the poorest and most featureless we have seen, and all levelled with soil.

But *Bālū'* is not NE of *Shihān* it could not have been reached in twenty-five minutes, even riding at a very smart pace; and it is one of the most impressive standing ruins on the plateau. Possibly Tristram was passing through *Mis'ar*, which would have fitted his description precisely and was on the way to the next site which he described, *Meḥaṭṭet el Hājjī*.

The ruins at *Bālū'* received their first (and, only) focused attention during 1930-33, as a result of the discovery there in 1930 of the famous *Bālū'* Stele (see especially the study by Horsfield and Vincent which includes a plan of the site and map of the vicinity, and the analysis of the stele by Drioton). Crowfoot made a sounding at *Bālū'* in 1933, the same year that Glueck visited the site. Both Crowfoot, whose report appeared in *PEFQS* the following year, and Glueck (I-16, 18-19, 24-25) focused their attention on the ruins south of *Wadi Qurri* and

apparently underestimated the extent of the ruins north of this wadi. Crowfoot made hardly more than a passing reference to the latter, while Glueck ignored them altogether.

No 111 \**Azzūr* ('Azzūr) Tristram (120) listed 'Azzūr among the ancient ruins in the Kerak district, but Musil (1,139) was the first to actually visit 'Azzūr and provide a description. Note that 'Azzūr is ESE of Bālū'; rather than NE as Glueck (56) indicates.

No 112 \**Kh. Naṣīb* (Naṣīb). Tristram (120), Brünnow (I, 46) and Musil (I, 140) were aware of kh. Naṣīb, which they recorded as "N'assit" "en-Naṣīb" and "h. Naṣīb" respectively.

No 113 \**Kh. es-Sa'adūnī* (= Um Dimis on the Series K. 737 map; Pal. grid: 214840). Tristram (120) and Musil (I, 140) recorded the name as "Sahdouneh" and "h. es-Sa'dūnī" respectively. The site is hardly more than 1 km. NW of Naṣīb, rather than 3 kms. as Glueck (56-57) estimated. The next five sites recorded by Glueck cannot be identified with absolute certainty. The crucial part of his report reads as follows :

Two kilometres north of it ( Kh. es Sa'adūnī is a small ruined site called Kh. er Rub'ī where a few Nabataean sherds were found and numerous pieces of mediaeval Arabic ware. Two kilometres north of Kh. er Rub'ī lies another indistinguishable ruin called Kh. eḏ-Denn, or ed-Denneh. A kilometre farther north is Kh. es-Samrā, where there are extensive ruins from the Nabataean, Byzantine, and mediaeval Arabic periods.

Characteristic sherds from all of these periods were found.

Ruins of a similar nature were found on the same straight line northward toward the Wādī el-Mōjib at Kh. eḏ-Dribbān and at Kh. Abū Trābeh. Kh. ed-Dribbān is two kilometres north of Kh. es-Samrā, and Kh. Abū Trābeh is about five kilometres northeast of Kh. eḏ-Dribbān (pp. 56-57).

Glueck's Kh. es-Samrā seems to be the ruin now partially covered by the modern village Jad'at el Jubūr, also called Samrā. Correspondingly, it would make sense to equate Kh. er-Rub'ī with the site which appears as «Šamrā» on the Series K 737 map, and eḏ-Denn(eh) with the complex of building remains approximately 0.5 km. further NNW. The local inhabitants today do in fact associate the names Kh. er-Rub'ī and ed-Denn with these two places respectively (see below). Note however that the total distance between kh. esSa'adūnī (= Um Dimis) and Kh. es-Samrā (= Jad'at el Jubūr) hardly more than 2 kms., which would mean that Glueck's estimates of the distances between all four of these sites are excessive. Glueck's Abū Trābeh clearly corresponds to the Abū Turāba on the Series K 737 map (see below), in spite of the fact that Musil (1, 138) locates "h. Abū Trāba" further to the SE (near the convergence of Wadi Aheimir and Wadi Bālū'. Kh. eḏ-Dribbān must be sought in the vicinity of the modern village Jad'a, therefore, which is confirmed by the local inhabitants. In other words, the following identifications seem likely.

No 114 *kh. er-Rub'ī* (= Samrā on the series K737 map, Pal. grid : 215848). Appa-

rently Glueck was the first to record er-Rub'ī which now the local people pronounce er-Rub'īl. They explain that the place was named after a man who lived in one of the caves there many years ago

No 115 *Kh. ed-Denn(eh)* (Pal. grid : 214851). Musil (I, 376) mentioned a ruin which he knew as "h. Denn", located SE of Shīhān across the Sultan's Highway. This corresponds with Glueck's directions and the site proposed here. Actually the name Denn(eh) refers to the general area south of Jad'at el Jubūr as well as to this particular ruin. In fact, the local people seem to prefer the name Barādān for the latter. Note that Tristram (120) and Brūnnow (I, 46) knew a site which they called "el Bourdan" and "el-Burdān" respectively, and which Brūnnow located in this same immediate vicinity

No 116 *Kh. es-Samrā* (= Jad'at el Jubūr/Samrā, Pal. grid: 213860).

«Samrā» refers to the black stones used for building, especially in the vicinity between Jad'at el Jubūr and Um Dimis. As in the case of Denn(eh), therefore, the name can refer either to the particular site indicated here or to the general vicinity. Tristram (139) reported a ruin called "Khirbet Sum'hra" in this area, which he described as "a mere castle, apparently of Saracenic origin, near Muhatet el Haj, the remains of a city of yet older date than the castle ..." But Tristram seems to have been confused here as he was in several other instances (e.g., as in the cases of Bālū' and Ariḥā). Meḥaṭṭet el Hājj is situated ca. 7 kms. further to the NE and might itself be described as the remains of "a mere castle" but not as the remains of a city (see below). The

"Churbet Szōmra" listed by Seetzen (I, 394) may or may not be relevant here. Note that there is another place also called Samrā ca. 5 kms. WNW of Kerak. The modern village Jad'at el Jubūr already covers much of the remains of Kh. Samrā and is expanding rapidly. Recent excavations in preparation for construction have revealed a complex of walls, one of which forms a semi-circle not more than 4 m. across. Possibly this is an apse, since it seems to be on the east end of a larger structure and numerous tesserae were found in the area.

No 117 *Kh. eḍ-Dribbān* (= approximately the site of the modern village Jad'a). When we inquired regarding the location of Kh. eḍ-Dribbān, we were directed to foundation ruins and caves situated on the eastern slopes of Jebel Shīhān. However Musil (I, 376) seems to have located "h. eḍ-Dribbān" (noting the alternate spelling "edh-Dhribbān" somewhat further to the east, and Glueck's account seems to imply this as well. It is surprising, on the other hand, that Glueck ignored the ruins on top of Jebel Shīhān. This latter site provides a commanding view of the whole plateau north el Qaṣr (No 1134) and exhibits architectural remains which caught the attention of virtually every other traveller in that vicinity.

The so-called "Shīhān Warrior Stele" occasionally is reported to have been discovered by de Saulcy between Shīhān and Dhībān (see, e.g., Dussand, p. 4; Tufnell, p. 161; etc.). It is difficult to imagine how this misinformation originated. Possibly the Kh. eḍ Dribbān under discussion has been confused with the better known Dhībān situated north of

Wadi Mūjib, although reference to neither Kh. eḍ Ḍribbān nor Dhībān is appropriate in this context. According to de Saulcy's own account (278-280), the stele was discovered at Rujm el'abd which was located in another direction altogether from Shīhān than either Kh. eḍ Ḍribbān or Dhībān (see below, entry for No 128 Faqū').

No 18 \**Kh. Abū Trābeh* (Abū Turāba). Musil (1, 138) located "h. abū Trāba" on a spur of the plateau formed by the convergence of Wadi Aheimer and Wadi Bālā. But Glueck (57) clearly had in mind the site situated ca. 4 kms. further north now partially covered by a village called Abū Trāba. The remains of one of the two building compounds which Glueck observed are almost completely covered now with modern houses. The local people insist on pronouncing the name Abū Trāba, as Musil and Glueck heard it rather than Abū Turāba, as it appears on the Series K737 map.

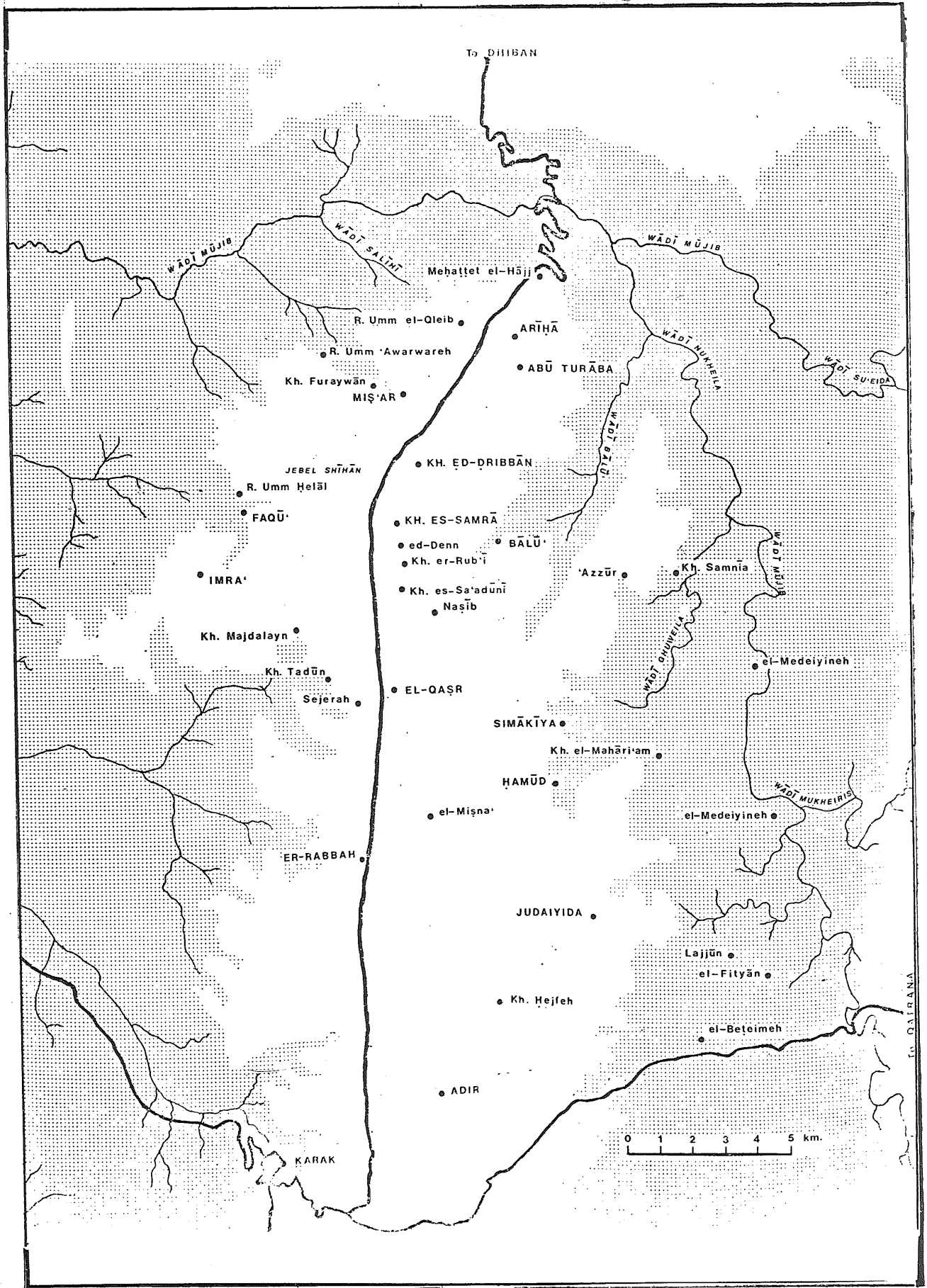
No 119 \**Meḥattet el-Hājj* (pal. grid: 257937) This ruin, a large square fortress-like building situated on the northern edge of the plateau near where the old Roman road ( followed by the modern road ) descends into Wadi Mūjib, was well known to early travellers. Often they referred to it as Upper Meḥattet el Hājj, following Burckhardt ( 374-75 ), in order to distinguish it from lower Meḥattet el Hājj another ruin situated approximately midway down into the Wady also along the road. Glueck does not mention the latter, while the local people today reserve the name Meḥattet el Hājj for the latter site only. That is, (Lower) Meḥattet el Hājj is referred to simply as Meḥattet el Hājj nowadays, while (Upper) Meḥattet el Hājj

is called Karakūn. The names have similar meanings - i.e., Meḥattet el Hājj means "pilgrimage station" in Arabic; Karakūn is derived from Turkish "Karakol", which means "police station". The name Karakūn apparently began to replace (Upper) Meḥattet el Hājj at approximately the turn of the century when a Turkish guardhouse was built nearby. Wilson (311) noticed the guardhouse in 1899; and Smith (374), in 1904, was the first to record Karakūn as the preferred name for the ruin. Brünnow and Domaszewski (I, 43-45) provide a detailed description of the site with a plan and photograph.

No 120 *er-Rihā* (Arīhā). Earlier readers of Burchhardt's account inferred incorrectly from the context in which he mentioned Arīhā (recorded by him as "el Ryhha", that this site was located south of Jebel Shīhān. Tristram (135) assumed this to be the case, for example, and viewed from a distance a place ca. 2 miles north of Qaṣa which he surmised to be Arīhā (possibly it was Naṣīb). Brünnow (I, 45) and Smith (373) later recognized and cleared up this misconception. Glueck (57) reported that Arīhā is 2 kms. SSE of Meḥattet el-Hājj, which again is somewhat misleading. Actually, Arīhā is situated SSW of Meḥattet el Hājj.

No 121 *Rujm Umm el-Qleib* (Pal. grid : 233920). Glueck (57-85, plan on p. 99) seems to have been the first to record this site. It is to be distinguished from a very similar ruin with the same name located ca. 3.5 km. south of Arīhā on the Wadi Suwer, pal. grid 256879.

No 122 \**kh. Miṣ'ar* (Miṣ'ar). No longer referred to as a "khirbet" since a village has



emerged on the site in recent years, Miṣ'ar is ca. 3 kms. SSW of Rujm Umm Qleib. Glueck (58) estimated 7 kms. Kh. Miṣ'ar had been noted earlier by Seetzen (I, 416), Brünnow (I, 45) and Musil (I, 138).

No 123 \**Freiwān* (Kh. Furaywān). "H. Frêwān" had been noted earlier by Musil (I, 137, 376), who mislocated it somewhat on his map in relation to Miṣ'ar and Jebel Shīhān.

No 124 *Rujm Umm 'Awarwareh* (Pal. grid: 190914). Glueck (58) seems to have been the first to record this site, although Musil (see esp. I, 136-137) must have passed nearby on one occasion. Note that 'Awarwareh is situated ca. 2 kms. WNW of rather than 4 kms. WSW as Glueck indicated.

No 125 *Rujm Umm Helāl* (Pal. grid: 164869)

This is another site recorded for the first time by Glueck (58-59) but for which his directions are misleading. Specifically, Rujm Umm Helāl is ca. 5 kms. SSW of Rujm Umm 'Awarwareh, rather than 4 kms. west as Glueck indicated. The possibility must be considered, of course, that we ourselves misidentified Rujm Umm 'Awarwareh and Rujm Umm Helāl. But this seems unlikely. 'Awarwareh and Helāl are well known by those names to the local people, and they insist that there are no other places with such names anywhere else in the vicinity. Moreover, Glueck's directions seem to lead nowhere. Certainly they do not lead to viable candidate sites for 'Awarwareh and Helāl.

No 128 \**Faqū'ah* (Faqū'). De Saulcy (280, 286, 289) visited and described Kh. Faqū' in 1851, followed by Duc de Luynes (I, 17074) in 1864, Palmer (67) in 1870, Mu-

sil (I, 373) in 1902 and Albright in 1924.

Glueck (58-60) found a small cluster of houses there in 1933. This cluster has since expanded into a thriving village. Rujm el 'Abd, where de Saulcy discovered the so-called Shīhān Stele and which Glueck described as "a small tumulus" near Faqū', has been dismantled in the process. When asked about Rujm el 'Abd, two elderly men of Faqū', interviewed separately and without further prompting, mentioned a "statue" having been discovered there; and both insisted that foreigners had taken the statue away while they were young. Actually, the Shīhān Stele was transferred to the Louvre already in 1864 (Dussaud, p. 4).

No 129 \**Mrâ' (Imra')*. Here again this site was represented only by a ruin when de Saulcy (276-277), Palmer (67) and Musil (I, 88, 374) passed through. Glueck (60, 62) encountered a small village which since has expanded considerably.

No 132 \**Mejdelein* (Kh. Majdalayn). This is a large ruin recorded already by Seetzen (I, 416) and Burckhardt (389). It was visited and described by de Saulcy (290), Palmer (67, 69) Tristram (136), Musil (I, 87, 375) and Glueck (62) each in turn.

No 133 \**Kh. Tadūn* (Kh. Tadūn). De Saulcy (291-293) and Musil (I, 87) provide full descriptions. The Arab inscription which de Saulcy reported is still there.

No 134 *Sejerah* (Pal. grid: 198805). Glueck's (62) estimates of the distances between Imra', Kh. Majdalayn and Sejerah are again excessive. Also, Sejerah (pronounced "Shejerah" by the local people) is SE rather than E of Tadūn. Musil (I, 87) observed a circular stone wall at this spot and a high stone basin on which one

of the local tribes occasionally sacrificed sheep. The place was known as "šağara 'Obejdallâh" in Kerak according to Musil, who also heard it called "Bejt Allah". Note that Seetzen (I, 416) listed a ruin called "Bêt Allah".

No 135 \**Qaṣr Rabbah* (elQaṣr). This site was known as Beit Kerm by earlier travellers Seetzen (I, 411), Burckhardt ( 376 ), Irby and Mangles ( 141 ), Macmichael (241), de Saulcy (273-296) and de Luynes ( 172-73). Later travellers - - Tristram (133-34), Hill (1891, p. 212; 1896, p. 40), Bliss (217), Brünnow (I, 46-51), Smith (371) and Musil (I, 35) -- began to hear also as alternate names Kh. el Qaṣr and less often Qaṣr Rabbah. Glueck (62,66; 1939, pp. 46, 48, 107-113, etc.) recorded the name Qaṣr Rabbah only. Today Qaṣr is one of the largest villages on the Plateau. For a full description of the ruins which were visible before the modern village emerged, a plan of the Nabataean temple and early photographs, see Brünnow and Domaszewski (I, 46, 51).

No 136 \**er-Rabbah* (er Rabbah). This site also was well known before Glueck's survey, and had been described in full with a plan and photograph by Brünnow and Domaszewski (I, 54-55). Irby and Mangles (141) identified it as Rabbath Moab, later Areopolis, and most of the nineteenth century travellers agreed (see esp. Smith, 370). Rabbah also is a rapidly expanding village today, secondary in size only to Kerak among the villages in this area. The Rabbah temple has been partially cleared in recent years by the Department of Antiquities.

No 137 *el-Miṣna'* (Pal. grid: 223767). Brünnow (I, 54) and Musil (I, 140) both were

aware of this site, the name of which they recorded as "el-Muṣṣena" and "h. el-Miṣna'" respectively. Brünnow clearly distinguishes between it and another ruin which he called "el-Miṣde" and listed on his map slightly further north also along the old Roman road. Although Tristram (120) listed a "Misna'" among the ancient sites in Moab, both he (132) and Smith (370-71) ignored el Miṣna and referred only to el-Miṣde (recorded as "Missdeh" and "el-Miṣdaḥ" respectively) in connection with their journeys through the vicinity north of Rabbah. Actually Tristram's description of "Missdeh" sounds rather like Glueck's description of "el-Miṣna'" (62-63, plan on p. 102). Possibly Tristram confused the two.

No 138 \**Hamūd* (Hamūd). Tristram (120) and Musil (I, 34, 139) knew this place as a ruin only. Glueck (63) found it to be "a small inhabited site". Today it is a flourishing village.

No 139 \**es-Simakiyeh* (Simākīya). The situation here corresponds to that of Hamūd. What Tristram (120) and Musil (I,34, 139) knew as a ruin and Glueck (63) observed to be a small Christian settlement is now a well established village.

No 140 *Jedeideh* (Judaiyida). Glueck (163) is the first to record this site by this name, but comparison of his report with the observations of earlier travellers suggests that this is the same place which Seetzen (I, 416) recorded as «Körriét, Brünnow (II, 41) recorded as "Hirbet el-Grâb" and Musil (I, 35, 141) recorded as "h. el-Rurâb". At the time of Glueck's visit Judaiydia still could be described as "a small, indistinguishable ruined site". Today it is a thriving village.

No 141 *el-Medeiyineh* (Pal. grid: 529767) Musil (I, 34) passed near the foot of the steep-sided knoll overlooking Wadi Mūjib on which this ruin is located and included it on his map (spelled "el-Mdejjene" and slightly out of place). Glueck (52-33, 98) provided a description with a plan. This el-Medeiyinah is to be distinguished from a strikingly similar site with the same name and situated on a very similar knoll ca. 5 kms. further north (Pal. grid: 322813). A Spanish team directed by Olávarri made a sounding at the latter site, in 1976. Apparently both el Medeiynah (South), Glueck's site, and el Medei-yineh (North), Olávarri's site, represent early Iron I fortifications.

No 142 *kh. Hejfeh* (Pal. grid: 244710) Seetzen (I, 416), Burckhardt (389) and Tristram (120) listed Hejfeh among the ruins in the Kerak district which they learned about but did not visit. Brünnow (II, 41) and Musil (I, 141) passed nearby. Glueck (63) apparently stopped there, but tells us only that it was "a small early Arabic site". Hejfeh is not identified by name on the Series K 737 map, but its position is indicated by the designation "Ruins".

No 143 \**Ader (Adir)*. Adir was well known to earlier travellers -- see Seetzen (I, 414), Burckhardt (387), Layard (99), Wilson (315), Hornstein (97), Brünnow (II, 41) and Musil (I, 27-28). Albright collected sherds at Adir in 1924 and made a sounding there in 1933, the same year of Glueck's (45, 47) visit.

No 149 *el-Beṭeimeh* (Pal. grid: 307699). Brünnow (11/41) recorded the name "el-Bṭē-me" in reference to the vicinity a short distance (ca. 45 minute horse ride) SW of Lajjūn. Musil (28) and Glueck (63)

associated this name with a particular site -- apparently the small ruin in that vicinity which still today is called el Beṭeimeh and indicated anonymously as "Ruins" on the Series K 737 map. This means that Glueck's directions are again misleading -- i. e., the site el Beṭeimeh turns out to be ENE of Adir, rather than ESE and it is much nearer to Lajjūn (ca. 3 kms.) than to Adir (ca. 8 kms.) There is no viable candidate site for el Beṭeimeh 3 kms. ENE of Adir.

No 150 *Kh. el Fityān* (Pal. grid: 316725). Fityān appears on the gazetteer corresponding to the Series K 737 map, but not on the map itself. It was a well known site already when Glueck (47-48) visited, and had been planned by Vincent (436-439) and Brünnow and Domaszewski (II, 38-40). Also Musil (I, 141) had provided an unusually good description of the geographical surroundings. (See entry above under No 47-48 el-Lejjūn.)

These thirty-three sites recorded by Glueck represent no more than a good sampling of the ancient ruins in central Moab. Musil had already recorded at least twice that many in the same area three decades before Glueck's survey; and it is apparent from the results of our first season that there are still other sites which escaped the attention of earlier investigators altogether, including Musil. Following are two examples of sites which belong to the latter category:

*Kh. el-Mahāri'am* (Pal. grid: 289789). This site is called a "khirbet" with reference to the numerous configurations of stones which cover an area of approximately 0.5 sq. km. Sherds from various periods (e.g., Roman, Byzantine and Late Islamic) were found among the stone configurations, but no more than we



normally found scattered randomly throughout the countryside. From roughly the same area however, (i.e., overlapping but not corresponding exactly with the stone configurations), a total of 416 flints were collected. The absolute and relative frequencies of the major classes of these are as follows.

<u>Class</u>	<u>Number</u>	<u>%</u> (blades)	<u>%</u>
Flake Tools	47	11.3	(3) (6.4)
Bifaces	5	1.2	
Chopper/chopping tools	2	0.5	
Core scaper	1	0.2	
Total tools	<u>55</u>	<u>13.2</u>	<u>(3)</u> <u>(5.4)</u>
Cores	42	10.1	(0)
Flakes	213	51.2	(20) (9.4)
Chunks&debris	106	25.5	(0)
Total lithics	<u>416</u>	<u>100.0</u>	<u>(23)</u> <u>(5.5)</u>

The five bifaces (handaxes) indicate a late Acheulian or early Middle Paleolithic complex, and the vast majority of the unretouched flakes are consistent with this general cultural attribution based on such features as the striking platforms and exterior scar patterns. Most of the flake implements are also suggestive of Middle Paleolithic contexts, although some of the "retouch" on several of the pieces may be due to natural agencies rather than intentional shaping. Two or three of the tools indicate Upper Paleolithic or more recent cultural stages. But the small percentage of these blades (none of which exhibit platforms indicating a "punch" technique of production), the absence of pyramidal or other blade cores, and the lack of any microlithic elements, all suggest that the post-Middle Paleolithic occupations at the site were rare and sporadic. In short the lithics collected at Kh. Mahârî'am may be described as reflecting primarily late Lower and/or early Middle Paleolithic characteristics, suggesting an occupa-

tion during the initial portions of the Upper Pleistocene (ca. 80,000- 60,000 years ago).

*Kh. (or Rujm) Sanīna* (Pal. grid: 296844). Sanīna is a regional name, referring to a north-eastern spur of the plateau between Wadi Bâlū' and Wadi Mūjeb. Kh. Sanīna is located on the northeastern rim of the spur, overlooking Wadi Ghuweila (locally pronounced "Ghweite") and consists of two separate structures situated approximately 50 m. apart. Both structures were built of field-dressed, squared stones. The larger and northernmost structure measures 20×26 m. including a courtyard or large hall on its east side. The other measures 15.6×12.0 m. and includes several rooms. Cisterns nearby provided water. The pottery collected at Kh. Sanīna indicates occupation primarily, if not exclusively, during the Nabataean-Roman period.

We are not far enough along with the process of sherding the sites in central Moab to warrant publishing a statistical report at this time. But we have made significant progress in that regard. Specifically, we collected approximately 20,000 sherds at more than thirty sites this first season and processed them as follows: (1) Nondescript body sherds were counted and discarded on the sites where they were collected. (2) Those which seemed to have any potential for dating purposes were read under Sauer's direction and assigned whenever possible to their respective periods. Those which could not be assigned to a particular period with confidence were assigned to either of two further categories: UD (= unidentified) or UDE (= unidentified, but apparently early - i. e., pre-Roman). (3) With the exception of some additional discards - - poorer examples where there was an abundance of sherds representing a particular period - - the sherds were then registered and placed in clearly identified containers

(with a copy of the Registry Book) at the Kerak Museum. The registered pottery from the survey will remain at the Kerak Museum available for general research, except for certain items which may be absent temporarily in preparation for publication. A similar procedure was followed for lithics, which were analyzed by Gary O. Rollefson.

The approximately thirty sites sherded thus far represent hardly more than a good start on this aspect of the survey, and almost all of them are situated in the northern part of the plateau (i. e., north of Qaṣr). Thus the following trends, while noticeable, must be considered extremely tentative. The Early Bronze Age, Nabataean through Byzantine, and Late Islamic (Late Mamluk, Ottoman) periods are best represented in the surface pottery collected thus far. The Late Bronze, Early Iron and Late Iron ages are well represented also, but less abundantly. Only occasional sherds have been found from the Persian, Hellenistic and Fatamid periods, and thus far none from the Neolithic period, and none which can be assigned with certainty to the Chalcolithic, Middle Bronze or Ayyubid periods. Whether these trends will continue, and if so, what they mean, remains to be seen.

Thus far we have resherded twenty-three

of Glueck's thirty-three sites listed above, with the following results. The periods which he reported as represented in the surface pottery of a particular site, we usually found represented also. But often we found other periods represented as well. And in some cases where he reported no pottery at all, we found pottery in abundance. Glueck reported no pottery at Abū Trāba, for example, and indicated that it probably was "an early Arabic site". We found an abundance of pottery, mostly Byzantine. Specially, we collected 813 sherds at Abū Trāba, including 99 diagnostic items (3 Nabataean, 92 Byzantine, 4 Late Islamic). At 'Awarwareh, where he likewise reported no pottery, we collected 864 sherds including 60 diagnostic items (20 Early Bronze, 9 Middle or Late Bronze, 2 Late Bronze, 1 Persian, 6 Nabataean, 5 Late Islamic, 17 Unidentified).

The fact that Late Bronze pottery has turned up already at least five sites (Miṣ'ar, 'Awarwareh, Bālū', Imra', Miṣna'), seems to be further indication that Glueck's "gap" hypothesis will have to be modified or dropped altogether. But surely the most important result of the survey thus far is that it calls attention to the abundance and variety of surface antiquities yet to be investigated in central Moab.

Maxwell Miller

## Works Cited

- Albright, W.F.  
 1924 The Archaeological Results of an Expedition to Moab and the Dead Sea. *BAOR* 14:1-12.
- 1934 Soundings at Ader, A Bronze Age City in Moab, *BASOR* 53:13-18.
- Bliss, F.J.  
 1895 Narrative of an Expedition to Moab and Gilead in March 1895. *PEFQS*: 203-234.
- Brünnow, R.E., and von Domaszewski, Alfred  
 1904-1909 *Die Provincia Arabia. auf Grund Zweier in der Jahren 197 und 1898 unternommenen Reisen und der Berichte früherer Reisender*, 3 vols. Strassburg : Karl J. Trübner.
- Burckhardt, J. Ludwig  
 1822 *Travels in Syria and the Holy Land*, ed. William Martin Leake, Association for promoting the discovery of the interior parts of Africa. London: John Murray.
- Crowfoot, J.W.  
 1934 An Expedition to Balu'ah. *PEFQS*: 76-84.
- Doughty, Charles M.  
 1888 *Travels in Arabia Deserta*, 2 vols. Cambridge : University Press.
- Drioton, Etienne  
 1933 A Propos de la Stèle du Balou'a. *RB* 42 : 353-363.
- Dussaud, René  
 1912 *Les Monuments Palestiniens et Judaïques*. Paris : Ernest Leroux.
- Glueck, N.  
 1934 *Explorations in Eastern Palestine* 1. *Annual of the American Schools of Oriental Research* 14. Cambridge, MA : American Schools of Oriental Research, 1-113.
- 1939 *Explorations in Eastern Palestine III*,  
*Annual of the American Schools of Oriental Research* 18-19. Cambridge, MA : American Schools of Oriental Research.
- Hill, Troy.  
 1891 *With the Beduins*. London : T. Fisher Unwin
- 1896 A Journey East of Jordan and the Dead Sea, 1895, *PEFQS*: 24-46.
- Hornstein, Alexander.  
 1898 A Visit to Kerak and Petra. *PEFQS*: 94-103.
- Horsfield, G., and Vincent G.H.  
 1932 *Chronique : une Stèle Egypto-Moabite au Balou'a*. *RB*. 41; 417-444.
- Irby, Charles Leonard, and Mangles, James.  
 1823 *Travels in Egypt and Nubia, Syria and Asia Minor; During the years 1817 and 1818*. London: Printed for private distribution .  
 2 ed. 1844 *Travels in Egypt and Nubia, Syria and the Holy Land. Including a Journey Round the Dead Sea, and Through the Country East of the Jordan*. London : John Murray
- Layard, A.H.  
 1840 *Early Adventures in Persia, Susiana, and Babylonia*. London : John Murray.
- Luynes, Duc de.  
 1854-66 *Voyage d'Exploration à la Mer Morte, à Pétrâ et sur la rive gauche au Jourdain*. 3 vols. Paris: Arthus Bertrand.
- Macmichael, William.  
 1819 *Journey from Moscow to Constantinople, in the years 1817, 1818*. London: John Murray.
- Musil, Alois  
 1907-1908 *Arabia Petraea*. kaiserlicher Akademie der Wissenschaften, 2 vols. Wien Alfred Hölder.

- Palmer, E. H.  
 1871 The Desert of the Tih and the Country of Moab. *PEFQS*: 3-73.
- de Saulcy, F.  
 1853-4 *Narrative of a Journey round the Dead Sea and in the Bible Lands*. Trans. from French. Ed. and notes by Count Edward de Warren. London: Bentley.
- Seetzen, Ulrich Jasper  
 1854-55 *Reisen durch Syrien, Palästina, Phönicien, die Transjordan-Länder, Arabia Petraea und Unter-Aegypten*, ed. Fr. Kruse et al., vols I-III. Berlin: G. Reimer.
- Smith, George Adam  
 1904-5 The Roman Road between Kerak and Madeba. *PEFQS*: 367-377; *PEFQS*: 39-48.
- Tristram, H.B.  
 1875 *The Land of Moab: Travels and Discoveries on the East Side of the Dead Sea and the Jordan*. New York: Harper.
- Tufnell, O.  
 1953 The Shihan Warrior. *Iraq* 15: 161-66.
- Vincent, Hugues  
 1898 Notes de voyage. *RB* 7: 424-451.
- Wilson, C. W.  
 1899 Address Delivered at the Annual Meeting of the Fund. *PEFQS*: 304-316.

PALEOLITHIC SITES WITHIN THE  
RAS EN NAQB BASIN, SOUTHERN  
JORDAN

by

Donald O. Henry

In September, 1977 a brief archaeological reconnaissance was conducted near the village of Ras en Naqb, southern Jordan in order to determine the feasibility of initiating a multi-disciplinary investigation of the Ras en Naqb basin. The proposed study would focus on the reconstruction of paleoenvironments and on the definition of prehistoric adaptive strategies which spanned much of the upper Pleistocene. The study area of Ras en Naqb appears to provide an ideal setting for addressing these problems due to the heavy erosional activity which has revealed large numbers of prehistoric sites in southern Jordan and the marked elevational/environmental diversity which should have made the area sensitive to both long - and short-term climatic fluctuations. A question remained, however, as to whether prehistoric sites were to be found in high enough densities and in proper contexts to warrant further investigation.

#### Site Description

During a two day reconnaissance of portions of the Ras en Naqb basin four prehistoric sites were discovered (Figure 1). The sites represented an Epipaleolithic, an Upper Paleolithic, and two Mousterian occurrences. Due to the nature of the reconnaissance, only a few artifacts were collected from each of the sites in order to gain a general impression of the assemblages and to assist in the chronologic placement of the sites.

#### *Epipaleolithic*

An Epipaleolithic site was found deflating

from a dune which runs along the west side of the main stream of Wadi Ras en Naqb about 4 km, upstream from the basin's opening into the Wadi Hisma. Microlithic artifacts were distributed over the surface of an area approximately 150 m. long and 20 m. wide and were confined to those areas of the dune in which reddish, compact sand was exposed. The zones of reddish sand are viewed as belonging to a fossil dune surface resting under the recent dunes in the area.

The artifacts recovered from the site represent a single lithic industry which was based upon the production of rather broad bladelets and micro-bladelets from opposed platform cores (Figure 2 : a-e). While geometric microliths are associated with the assemblage, microburins were not found. The apparent absence of microburins, however may have resulted from the cursory examination of the site. A highly translucent gray chalcedony, exhibiting a gravel cortex, furnished the raw material for the assemblage.

#### *Upper Paleolithic*

A site tentatively identified as containing Upper Paleolithic artifacts was discovered approximately 1 km. upstream from the Epipaleolithic site. The site is located in deposit of sandy silt which is exposed along the west bank of the Wadi Ras en Naqb about 6 m. above the channel. Artifacts were found eroding along the crest of the high ground running parallel to the wadi in areas where the silt was exposed through the surface

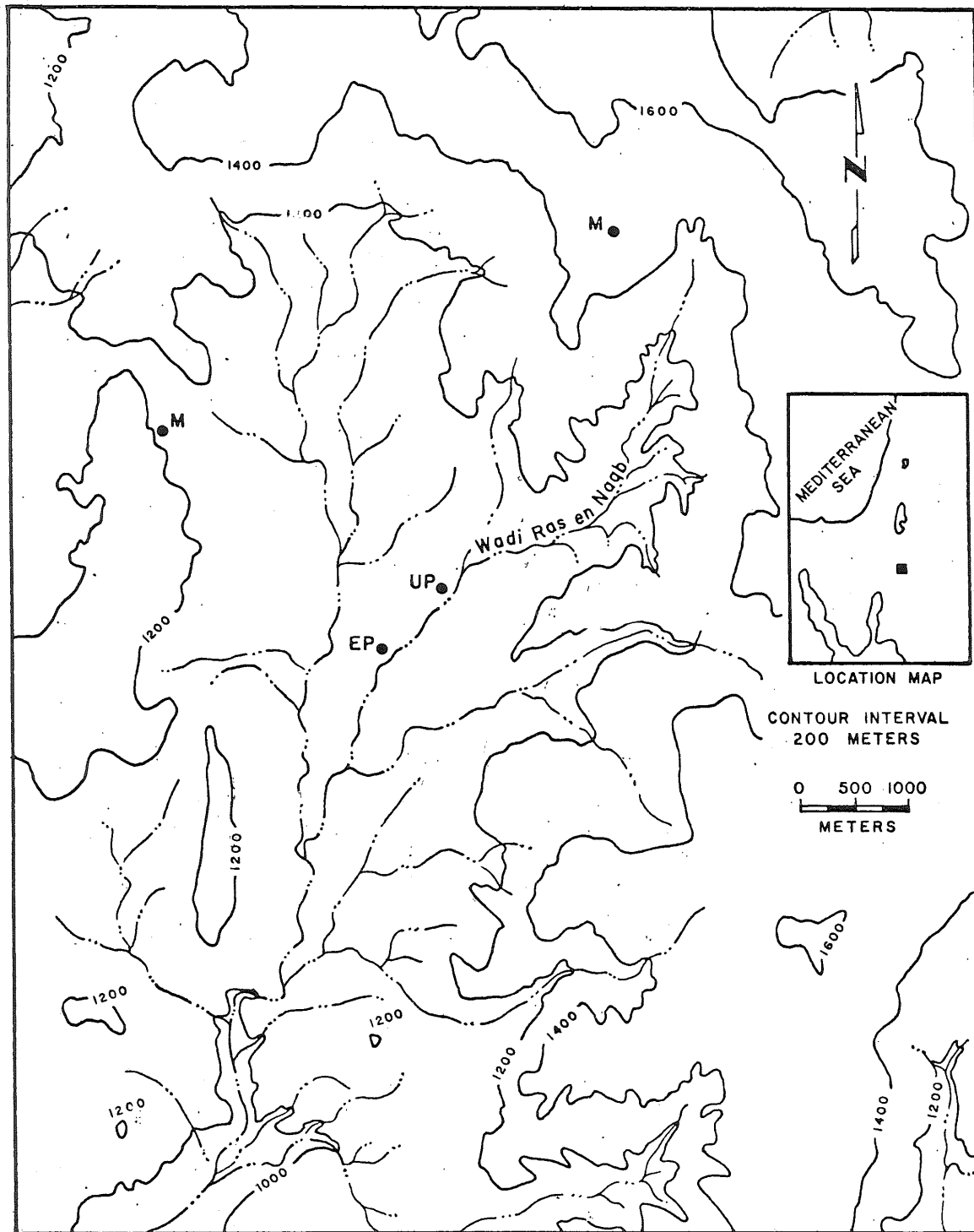


Fig. 1 Map of the Ras en Naqb basin, southern Jordan, indicating locations of Epipaleolithic (EP), Upper Paleolithic (UP), and Mousterian (M) sites.

sand.

Although artifacts which are diagnostic of an Upper Paleolithic industry were not recovered, the presence of backed blades, backed flakes, and blade cores are suggestive of an Upper paleolithic occurrence (Figure 2 : f.g). Furthermore, the absence of a microlithic element in the assemblage, in conjunction with the site's stratigraphic position which appears to underly the sands containing the nearby Epipaleolithic site, supports the assemblage's proposed Upper Paleolithic affiliation.

#### *Mousterian*

Two Mousterian sites were discovered in quite different topographic settings. One site is situated on a bench about 100 m. beneath the rim of the Edom Plateau at an elevation of over 1,400 m. Artifacts are distributed over the surface of an area covering some 1,000m<sup>2</sup> in extremely high densities. Although the site has obviously been deflated, there is a possibility that it contains cultural horizons which are *in situ*.

A striking aspect of the assemblage is the large size of tools, debitage and debris (Figure 3 : c, d, f). Large Levallois cores and flakes characterize the assemblage which has been fabricated from a gray translucent chalcedony. Although many of the artifacts exhibit a light gray to cream patination, they display fresh non-abraded edges.

The second Mousterian site was found in a dune area which fronts the sandstone outlier that forms the western edge of the basin. The site, resting at about 1,200 m elevation, displayed a low density of artifacts scattered over approximately 300 m<sup>2</sup>. A small Levallois core, a side scraper on a Levallois point, and a burin were collected from the surface ( Figure 3 : a, b, e). Although fresh in

appearance, the artifacts exhibit a white patination and carbonate encrustations.

#### **Discussion**

While intensive systematic surveys of Paleolithic sites have not been conducted in southern Jordan, several reconnaissances have furnished information on the varieties and densities of Paleolithic occupations in the region (Kirkbride and Harding, 1947; Zeuner et al., 1957; Kirkbride, 1960; Field, 1960; Huckreide and Wiesemann, 1968; Copeland and Hours, 1971; Price and Garrad, 1975). In excess of forty sites representing Lower Paleolithic, Middle Paleolithic, Upper Paleolithic, Epipaleolithic and Neolithic industries have been recorded in southern Jordan (Stockton, 1969). Detailed studies and excavations, however, have only been initiated on late Pleistocene and early Holocene occupations attributed to Epipaleolithic and Neolithic industries at the sites of Beidha (Kirkbride, 1966; Mortensen, 1970), Wadi Madamagh (Kirkbride, 1958), and Wadi Dhobai (Wachter and Seton-Williams, 1938). From these preliminary studies, it is evident that the region exhibits a high density of Paleolithic occupations which span most of the upper Pleistocene.

As documented by the four sites described in this report, the the Ras en Naqb basin apparently displays a density and time-span of Paleolithic sites similar to that recognized for the region as a whole. Subsequent to the reconnaissance it was learned that a Neolithic site is also situated in the basin (Crystal-M. Bennett, personal communication).

If an estimate of site density within the basin is made upon the basis of the number of sites recorded in the reconnaissance of less than 5% of the total basin area (approximately 73 sq. km.), then some 80 sites would be

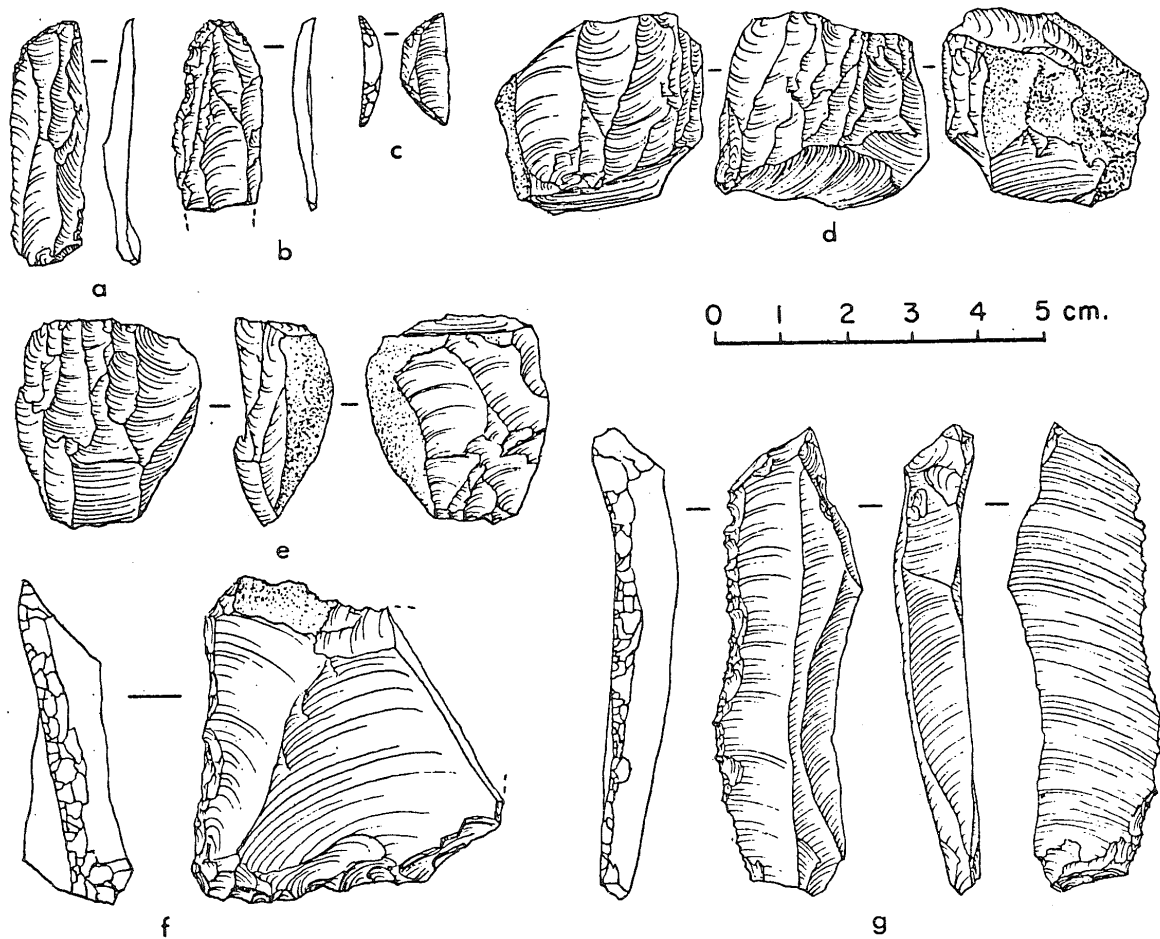


Fig. 2 Illustrations of Epipaleolithic and Upper Paleolithic artifacts:

lightly retouched bladelets (a,b), unfinished (f), backed and denticulated blade (g).  
 trapeze (c), bladelet cores (d,e), backed flake



predicted. However, this estimate is probably too high, for those portions of the basin which exhibit surfaces unlikely to contain sites were excluded from the reconnaissance. Judging from the number of prehistoric sites which were recorded in the total surveys of areas in the Negev (Marks, 1976) and the Azraq Marshes (Garrad and Price, 1975), an estimated 40 to 60 sites within the basin would seem more reasonable.

The evidence acquired from the brief examination of the basin provides for a tentative framework on which to compare the cultural and paleoenvironmental sequences of the upper Pleistocene for the area.

The Mousterian site which is located on a bench beneath the rim of the plateau would appear to be the earliest of the recorded occurrences in the basin. The surface on which the site rests extends around the northern and eastern edges of the basin on the flanks of the plateau and is being dissected by tributaries of the Wadi Ras en Naqb. The elevation of the surface at almost 300 m. above the present floor of the basin implies a significant erosional cycle subsequent to the Mousterian occupation. The geomorphic setting of the surface parallels that recognized for an early Mousterian surface defined in the highland Negev (Goldberg, 1976 : 45-46). The other Mousterian site, situated in a fossil dune on the basin floor, apparently post-dates the erosional cycle and may relate to the postulated arid phase of the late Mousterian (Goldberg, 1976:53; Marks, 1977:7) in the Negev.

A precise chronological placement of the Upper Paleolithic site is not practical due to the absence of temporally diagnostic artifacts. The presence of geometric microliths (trapezes) in the Epipaleolithic assemblage suggests that the site is roughly contemporaneous with

Geometric Kebaran occurrences and therefore dates from approximately 11 - 15,000 B.C. (Henry and Servello, 1974:34; Bar-Yosef and Phillips, 1977:257). Furthermore, the position of the site in a fossil dune is in concert with the wide spread arid phase associated with the Geometric Kebaran as recognized in the Negev (Marks, 1977:7), Sinai (Goldberg, 1977:29), and in the northern Levant (Henry and Leroi-Gourhan, 1976:405).

#### **Conclusion**

The four sites discovered in the brief reconnaissance of the Ras en Naqb basin suggest that the area has a high density of sites and a prehistoric record which spans most of the upper Pleistocene. Additionally, the geologic settings of the sites have a potential for containing occupations which are in primary archaeological contexts in conjunction with paleoenvironmental evidence.

Although there appear to be broad parallels between the upper Pleistocene prehistory of the basin and the southern Levant, an intensive study is needed to define the relationship between the two regions. Prehistorians have paid considerable attention to circum-Mediterranean interaction between the Levant, northeast Africa, and the Nile Valley. Little is known, however, of the prehistoric relationship of the Levant to inland areas such as the southern Trans-jordanian Plateau.

#### **ACKNOWLEDGEMENTS**

The study was made possible by a grant from the office of Research, University of Tulsa. I am also grateful to Adnan Hadidi, Director General of Antiquities, and James A. Sauer, Director of the American Center of Oriental Research, for their assistance and advice during my visit to Jordan.

Donald O. Henry  
University of Tulsa

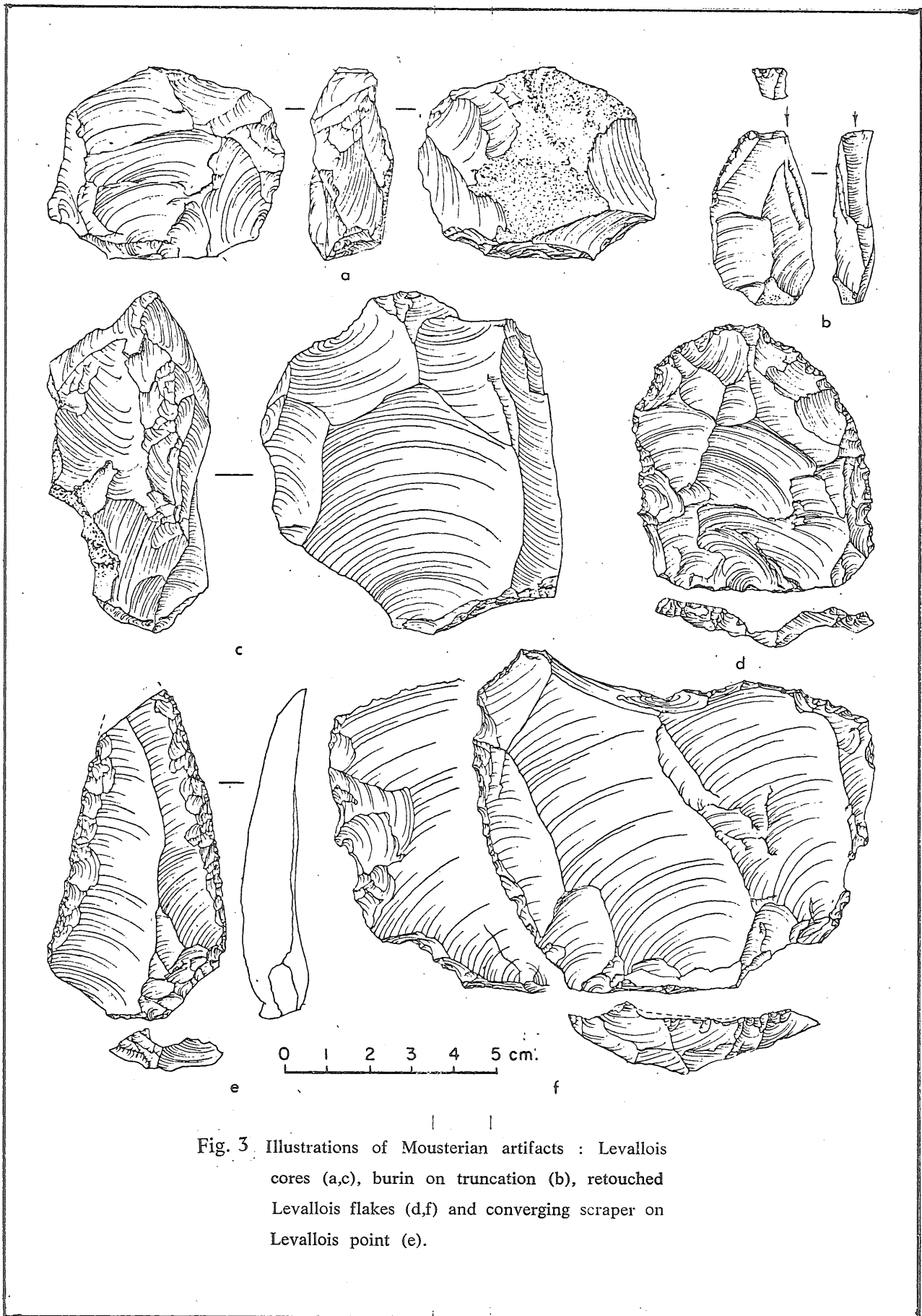


Fig. 3. Illustrations of Mousterian artifacts : Levallois cores (a,c), burin on truncation (b), retouched Levallois flakes (d,f) and converging scraper on Levallois point (e).

## References Cited

- Bar-Yosef, O. and J. Phillips  
 1977 Prehistoric Investigations in Gebel Meghara, Northern Sinai, Qedem 7. Monographs of the Institute of Archaeology, The Hebrew University of Jerusalem.
- Copeland, L. and F. Hours  
 1971 A microlithic flint site in the Wadi Rum, Jordan, and a review of the Epi-Paleolithic of Northern Arabia. In Proceedings of the Seminar for Arabian Studies, 1970:7-21, London.
- Field, H.  
 1960 North Arabian Desert Archaeological Survey, 1925-1950. *Papers of the Peabody Museum* 45, 2 Cambridge.
- Goldberg, P.  
 1977 Late Quaternary stratigraphy of Gebel Maghara. In Prehistoric Investigations in Gebel Meghara, Northern Sinai, Bar-Yosef, O. and Phillips, J. eds. Monographs of the Institute of Archaeology, The Hebrew University of Jerusalem.  
 1976 The Upper Pleistocene geology of the Avdat/Aqev area. In Prehistory and Paleoenvironments in the Central Negev, Israel, Volume 1, Marks, A. eds., Southern Methodist University Press, Dallas.
- Henry, D. and Leroi-Gourhan, Arl.  
 1976 The excavation of Hayonim Terrace : an interim report. *Journal of Field Archaeology*, Volume 3:391-406, Boston.  
 and Servello, F.  
 1974 Compendium of C-14 determinations derived from Near Eastern prehistoric sites. *Paleorient*, 2:19-44. Paris.
- Huckriede, R. and Wiesemann, G.  
 1968 Der jungpleistozane Pluvial-See von El Jafr und Weitere Daten zum Quartar Jordaniens. *Geologica et Palaeontologica*, 2:73-95.
- Kirkbride, D.  
 1966 Five seasons at the pre-pottery Neolithic village of Beidha in Jordan. *Palestine Exploration Quarterly*, 98:8-27.  
 1960 In Chronique Archéologique. *Revue Biblique*, 67, 231-235.  
 1958 A Kebaran rockshelter near Wadi Madamegh, near Petra (Jordan). *Man* 58:55-58.
- Marks, A.  
 1977 *Prehistoric an Paleoenvironments in the Central Negev, Israel, Volume 11*. Department of Anthropology, Southern Methodist University, Dallas.  
 1976 *Prehistory and Paleoenvironments in the Central Negev, Israel, Volume 1*, Southern Methodist University Press, Dallas.
- Mortensen, P.  
 1970 A Preliminary Study of the Chipped Stone Industry from Beidha. *Acta Archaeologica*, 41:1-54.
- Price, N. and A. Garrad  
 1975 A Prehistoric Site in the Rum Area of the Hisma. *Annual of the Department of Antiquities* Vol. 20:91-93.
- Stockton, E.  
 1969 A Bibliography of the Flint Industries of Transjordan. *Journal Levant*, 100, 103.
- Waechter, J. and V. Seton-Williams  
 1938 Excavations at Wadi Dhobai, 1937-1938 and the Dhobian Industry. *Journal of the Palestine Oriental Society* 18:172-186; 292-298.
- Zeuner, F.E., D. Kirkbridge, and B. Park  
 1957 Stone Age Exploration in Jordan, I *Palestine Exploration Quarterly*, 17-54.



*SAFAITIC INSCRIPTIONS IN THE  
AMMAN MUSEUM AND OTHER  
COLLECTIONS I*

*by*

*M.C.A. Macdonald*

In Memoriam Gerald Lankester  
Harding, my friend and teacher.

The Amman Museum possesses a large number of Safaitic Inscriptions and has recently been enriched by the acquisition of two more collections of these texts. One of these collections was published by Mr. Lankester Harding and myself in *A.D.A.J.*, vol.21. The present article is the first of two in which I hope to complete the publication of all the hitherto unpublished material. I should like to take this opportunity of thanking Dr. Adnan Hadidi, the Director-General of Antiquities of Jordan, for giving me permission to publish these texts and for the constant help and kindness which he and his staff have shown me. My thanks are also particularly due to the staff of the Museums in Amman and Kerak. I should also like to thank Miss Eugenia L. Nitowski, Curator of the Andrews University Archaeological Museum, who not only gave me permission to publish Nos. 27 to 29 but also provided the superb photographs of these texts. Finally, I am most grateful to Herr E.W. Krueger and Dr. Ute Wagner Lux, Director of the Deutsches Evangelisches Institut für Altertumswissenschaft, Amman, for permission to publish texts 34 and 35.

Some of the texts here published have been in the Amman Museum for many years. The majority, however, Nos. 10 to 26, have only recently been acquired. They were given to the Museum by the late Mr. Mahmud al-Afghani, an Amman antiquities dealer, and so, to some extent, form a group. The stone

bearing Nos. 27 to 29 originally formed part of Mr. al-Afghani's collection, but was sold by him, some years ago, to Andrews University, Michigan, and is now in the University Archaeological Museum. It is unfortunate that, with the exception of Nos. 1 to 5, all the texts here published were acquired from dealers and therefore have no provenance.

Several words and expressions new to Safaitic will be found in these texts, as well as variants of those already known. The number of new names, however, is not large, though, if my readings are correct, we have two new tribes. There is much that is puzzling in these texts and the readings and translations are offered with some diffidence. I have not thought it necessary to give the measurements of the stones since these can be worked out, if desired, from the scales in the photographs. I am grateful to Miss Nitowski for the photographs of Nos. 27 to 29 and to Mr. J.E. Clarke of the Jordanian Royal Society for the Conservation of Nature and to the World Wildlife Fund, who hold the copyright, for the photograph of an oryx which will be found on Plate XLII. All the other photographs are mine. In view of the uncertainty as to how Safaitic names were vocalized, I have left the names in purely consonantal form in the translations. Consequently, those texts consisting solely of names have not been "translated".

Nos. 1 to 4 are on one stone: Amman Museum Registration No. J.1821. It was brought into the Museum in October 1950 and

is from a Cairn to the West of Jawa (near H5). It seems probable that it was brought back by Professor Winnett's expedition to that area, but, if so, it was not published in SIJ. It is an irregular chip of basalt inscribed on three faces. Nos. 1 and 2 are on the same face while Nos. 3 and 4 are on two other faces. (Plates XXXV and XXXVI).

**No.1:**

... *bdbl bn 'bd bn whš bn jrm'l w̄ bny h str f h lt slm d'l hzy*

... Bdbl s. 'bd s. Whš s. Jrm'l: (and) he built the shelter; and so, O Lt, security: of the tribe of Hzy.

The stone is chipped at the corner where this text and No. 2 begin so the first letters of each text are missing. Both texts are very faintly and finely scratched and are, in places, very difficult to read with any certainty. The "magic sign" of seven parallel lines is scratched between texts 1 and 2. The *w* following *jrm'l* is so faint as to be virtually invisible. However, a few traces of it can be made out on the stone and in the context the reading seems highly probable. The *r* of *str* is also a little uncertain and looks more like a *j*. However, *stj* does not appear to give any sense in this context.

All the names are known. It is interesting

1. See SIJ 361, 590, 634, 667; though compare C 1294, 4389 and HCH 109 where it is borne by members of other tribes.
2. See C 845 (cf. *r* in *s'r* and *rgm*); 853 (no *rs* but cf. *b* in *bn*); 1294 (the *rs* in this text are very doubtful, but cf. *b* in *bn*); 3930 (cf. *r* in *sfr*, though the whole is text is doubtful); 4389 (cf. *r* of *'bjr* and *trh*); HCH 109 (where Harding reads *bdbl* but notes that it seems an impossible name, no *r* in text, but cf. *b* of *whb*); SIJ 85 (where Winnett notes that the "R of *BDRL* is oddly

to note that *bdbl* appears to be a particularly popular name among members of the tribe of *hzy*.<sup>1</sup> It is curious, however, that in the past the name seems always to have been read as *bdrl*, despite the fact that in every case where there is an *r* in the text there is a clear differentiation between *r* and *b*.<sup>2</sup> In the present text the *r/b* differentiation is also clear and the name can only be *bdbl*. It is also strange that G. Ryckmans (in his commentary on C 845) and Winnett (SIJ p.145) should quote the names *βαδαρον* and *βαδαραιλος* respectively in support of the difficult reading *bdrl* when Wuthnow (p.31) also has the name *βαδαβαιλος*.<sup>3</sup>

The tribe of *hzy* seems to have been concentrated mainly in the Jawa area, with two texts from H5 (HCH 105 and 162) and one from Tell el-'Abd (SIJ 909), both near Jawa, and one of uncertain provenance (MSTJ 7) which may be from the Burqu' region some 100 km. to the East. The expression *bny h str* is known from SIJ 296 etc. and I have followed Winnett's interpretation of the word *str*.

**No.2:**

... *bn bdbl bn 'bd bn jrm'l*

The *j* of *jrm'l* looks more a ' *and is certainly no larger than the ' of 'bd. The name 'rm'l, if such it is, is so far unattested.*

- formed", cf. *r* in *dkr*); 100 (cf. *r* in *sfr*); 288 (cf. *r* in *rf't*); 348 (no *r*, but cf. *b* of *'bd*); 361 (no *r* and possibly this really is *bdrl*); 495 (copy is doubtful, but cf. *b* in *'bd*); 590 (cf. *r* in *rf't*); 634 and 667 (no *r*, but cf. *b* in *bn*). See also WH. p. 9 on *b/r* differentiation.
3. It might be added that in the one reference Wuthnow (p. 31) quotes for *βαδαραιλος* (Weszst. 361) he notes *βαδαβαιλος* as an alternative reading.

**No.3:**

*l 'r bn ..m..l'mf<sup>oc o</sup>*

The text is so faintly and carelessly scratched that I can make nothing certain or coherent of it beyond the first name. 'r is attested three times in Safaitic (though once in a doubtful reading).

**No.4:**

*... bn mḡ bn 'dm*

Again the text is very faintly and carelessly scratched. Both names are known.

**No.5:**

Amman Museum Registration No. J.5115.

A roughly square basalt block bearing one Safaitic, two clear and two faint Arabic texts and several drawings of animals. It was brought into the Museum in 1952 and was said to be from Aretain (Plates XXXV and XXXVI)

*l ḡt bn m'd w wjm 'l hn' w 'l hdd w 'l dll bn hn'*

By ḡt s. M'd: and he grieved for Hn' and for Hdd and for Dll s. Hn'.

The first letter of the first name and the last letter of the text are unclear on the photograph but quite clear on the stone. Note the form of the d in m'd. All the names are known. It is uncommon, though by no means unknown, for the father of a person grieved for to be mentioned.

**No.6:**

Amman Museum Registration No. J.13955.

A triangular piece of basalt inscribed on one face. Provenance unknown. (Plates XXXV and XXXVI).

*l hlf bn mqm bn 'hd w hḡr f dsr slm*

By Hlf s. Mqm s. 'hd: and he was here; and so, Dṣr, security.

Although the text is firmly and carefully engraved and all the letters, with the exception of the ṣ of dṣr which is very faint, are clear,

the patina on the text is such as to make it almost impossible to obtain a clear photograph. All the names are known. I have translated hḡr by "he was here" rather than the usual "he was present" since the latter has, to my ear at least, a somewhat quaint sound in English. The omission of the vocative h in the invocation, though uncommon, is not unknown (see, for instance, NST 6, HCH 76, 134, SIJ 745).

**No.7:**

Amman Museum Registration No. J.13956.

Provenance unknown. (Plates XXXV and XXXVI). A basalt boulder with a roughly hammered drawing of a woman standing with raised arms and another figure (an animal or seated (?) man) with his arms and large phallus stretched out towards her. There appears to have been another drawing on the stone but it has been so thoroughly scratched over as to be unrecognizable. The inscription, which is above the head of the woman, is scratched in very fine strokes quite unlike the technique of the drawing. It has been partially obliterated. What remains appears to read:

*jr ...h mr't*

Jr...the woman.

The woman referred to is presumably the one in the drawing.

**No.8:**

Amman Museum Registration No. J.13957.

A small fragment of limestone with a red patina over part of one side and at one end. The inscription is scratched into the patina at this end. The stone has obviously been broken in at least two places after the text was inscribed. One break has removed the tops of the first three letters and the other the central part of the text. Provenance unknown. (Plates XXXV and XXXVI).

*l 'qrb bn ṣ' w nj...rj sfr fh<sup>o o</sup>*

(Bv 'q) rb s. Ṣ' : and he ... the inscription of

Fh(1).

The text begins on one line, runs downward into the next line and then curls back onto the first line again. I have marked the first three letters as doubtful but I think enough of them survives to make the reading virtually certain. The difference in shape of the three *rs* in the text will be noted. However, they are still clearly differentiated from the *bs* by a much shallower curve. Traces of a letter are visible on the very edge of the stone after the *j* but too little of it survives for any reading to be made. I have made no attempt to restore it since there are too many words in Safaitic beginning *nj* to make any such restoration reliable in the absence of what follows. It should be remarked that if the last letter of the text is indeed a *l*, then it is of the hooked variety more common in Thamudic than in Safaitic. All the names are known. It is possible that one should read the last three letters of the text as *f hl* = "and so he camped", though this would appear to leave *sfr* indefinite. It is possible that we have to do with two texts, but without knowing how much has been lost this is impossible to decide.

**No.9:**

Amman Museum Registration No. J.13958.

A basalt block, inscribed on one side. Provenance unknown. (Plates XXXV and XXXVI).

*l hl̄f bn mky b [n] skyd w lh 'nfs bl*

By *Hlf* s. *Mky* [s.] (*Sk*)yd : and for him are monuments of a tomb (?).

The text, though fairly clearly written, is not easy to interpret. There is a chip in the stone which obscures parts of the letters immediately following the second name so that the third name, if such it is, is extremely doubtful. I think that traces of a *š* can be seen along the edge of the chip and traces of an upper stroke are still visible on the letter

following. The upper part of the *d* is not visible on the photograph since it runs over the edge of the stone. Finally, the *f* of '*nfs*' looks at first sight like a *š* but this is due to its proximity to the *b* above it.

Of the names *hl̄f* is known. *Mky* is new, though *mkyt* has been found once in Safaitic (WH 3412), and *škyd*, if such it is, is also new. The final part of the text is particularly difficult to interpret. For one thing I am not certain that the final letters *bl* are indeed part of the text and not merely odd scratches. Their position is somewhat suspicious since they could quite easily have been fitted in after the *s*. If they are to be read as part of the text, it is difficult to see what they mean. I have taken them to be a shortened form of *bly* (see WH163) which appears in Safaitic to be some sort of sepulchral structure (with or without the camel), but this is not at all satisfactory. I have given to '*nfs*' the meaning assigned to it by previous editors, that of "funerary monuments" (see NSR 112 and WH 587). It is, of course, possible that the author has omitted a *h* either before *bl* (if this is to be read) or before '*nfs*' (if *bl* is to be ignored). The fact that such an omission is more easily accepted before '*nfs*', through haplography, might be taken as another reason for suspecting the final *bl* (see No. 13 for a similar example of probable haplography).

As mentioned above, Nos. 10 to 29 come from a collection formerly in the possession of Mr. Mahmud al-Afghani. Nos. 10 to 26 are now in the Amman Museum and the stone bearing Nos. 27 to 29 is in the Andrews University Archaeological Museum, Berrien Springs, Michigan. Unfortunately, none of these stones has any provenance.

**No.10:**

Amman Museum Registration No. J.13367.



An oval piece of basalt, inscribed on one side. (Plates XXXV and XXXVI).

*l 'bjr bn mqm bn t' d'l 'mrt w qṣṣ w ṣwy  
w nṣb w wjm 'l 'ḥh d'b*

By 'bjr s. Mqm s. T' of the tribe of 'mrt: and he took revenge and he built a cairn and was distressed and grieved for his brother D'b.

A text in the square script by a member of the 'mrt tribe (see No. 11 for another, but compare No. 23). It is worth noting that the members of this tribe appear to be by far the most consistent users of this form of the script. Of the eleven texts<sup>4</sup> so far published claiming membership of this tribe, six are in the square script (however, see No. 35 for a square script text by a member of another tribe). All the letters are clear, despite a certain amount of scratching and rubbing over certain parts of the stone. All the names are known.

The sequence *w qṣṣ w ṣwy w nṣb w wjm* is interesting and rather puzzling. All the words are attested but, unfortunately, there has been disagreement about the meanings of all of them. Moreover, this is, as far as I know, the first time this particular combination has been found. Qṣṣ has been variously translated by different editors. Winnett translates "followed in pursuit", "followed" and "followed after" (SIJ 786, 787 and 823 respectively and see also BASOR No.211,p.56). This meaning might

4. These are C 2947, HCH 191, 194, MSTJ 8, 10, 12, CSP Ia, Ib, the present text and Nos. 11 and 23.

5. Ja. Saf. N. note 41 (p.48). He limits this to SIJ 787 and 823, since in SIJ 789 he reads *bn 'ql*, below the first name, where I would read *b'd* after *qṣṣ*.

6. That is in SIJ 786, 789, WFSG B ii, JaS 75b, 88, 145a and 170: see Ja, Saf. N. note 41.

7. Even the proper name *qṣ* which Jamme (commentary to JaS 75b) claims to find in C 5275 is

also be applicable to SIJ 789, which Winnett does not read, but on the photograph of which (SIJ Pl. IX) I think *b'd m.* may be observed after *qṣṣ*. Oxtoby has "followed in pursuit" (ISB.7 and 57). Worrell has "he followed a trail" (WFSG B ii) and Mr. Lankester Harding and I have "he tracked" (MSTJ 10 and 12). Jamme, on the other hand, while admitting that where *qṣṣ* is followed by *b'd* the translation "to follow" is suggested<sup>5</sup> would translate all other occurrences by "was a narrator" or has narrated".<sup>6</sup> There are difficulties inherent in all these translations. For one thing, they all rely on meanings which, in Classical Arabic, are only found in Form I of the verb, whereas Safaitic practice with geminate verbs would lead us to expect *qs*, if Form I were intended, and this we never find<sup>7</sup>. The other main problem is that whereas Safaitic *qṣṣ* is usually intransitive, it seems that all the meanings of the Arabic verb *qaṣṣa* are transitive.<sup>8</sup> However, the latter problem seems insoluble at present. Where *qṣṣ* is followed by *b'd* the translation "he tracked, he followed" would seem to be reasonable, even if it entails postulating the extension of this meaning from Form I to Form II or III. However, in some of the cases where it is not followed by *b'd*, I would suggest that the translation "he took revenge, he retaliated" (see Lane p. 2526/3) might be more appropriate, especially in such

surely *qṣṣ*.

8. Jamme's translation "was a narrator"/"has narrated", apart from appearing to me inherently unlikely, disguises the fact that Ar. *qaṣṣa* means "to relate something to someone", while if his citing (in the commentary to JaS 75b) of the noun *qaṣṣ* (a "relator of a story or narrative in its proper course") means that he is taking Safaitic *qṣṣ* as a noun, one would surely expect the equivalent of *wa ḥūwa qaṣṣun* in the text rather than *w qṣṣ*.

cases as the present text. This translation at least has the advantage of using a meaning of Form III of the Arabic verb (see also the commentary on No.11).

The verb *ṣwy* presents even greater problems in some ways. On the one hand the Safaitic evidence is much scantier, while on the other the Arabic lexica know relatively few meanings for the verb. Of the meanings proposed by the editors of the texts in which this word has appeared<sup>9</sup>, I have followed Winnett's interpretation based on Syriac *ṣwā* = "to pile up (stones), set up (a cairn)" (Payne Smith p. 474) and *ṣwāyā* = "a cairn, heap of stones" (Payne Smith p.475), since in the present context this seemed the most appropriate. I have taken *nṣb* in the sense of "he suffered, difficulty, trouble, distress or affliction" (Lane p.2799/2) i.e. Ar. *naṣiba*, though *naṣaba* also has several meanings which might suit the context: e.g. "he set up (a stone) as a sign or mark" (Lane p. 2799/1) though, since *nṣb* in the text has no object, this would seem to be a less likely alternative.

**No.11:**

Amman Museum Registration No. J.13944.  
A roughly spherical piece of basalt. (Plates XXXV and XXXVI).  
*l š'd bn mlh d'l 'mrt w qṣṣ mñ ḏb' l ḥs w t...*  
By (S)ḏ s. Mlh of the tribe of 'mrt: and he retaliated (against D)b' on behalf of Ḥs and ...

The stone has been very badly rubbed over the part of the text between *qṣṣ* and - *b'*, though I think it is still possible to make out the letters. However, the end of the text has been completely destroyed. Apart from these passages, the only letter about which there is any uncertainty is the *s* of *s'd*. It is possible

9. Winnett (SIJ 90) "he built a tomb"; Jamme (JaS 61) "he has withered"; Mr Lankester Harding and

that it is a *b*, though it is different from both the *bs* and the *s* in the rest of the text. Both *s'd* and *b'd* are well attested while *mlh*, *ḏb'* and *ḥs* have each been found once before in Safaitic. On 'mrt texts in the square script see No. 10.

The expression *w qṣṣ mn ḏb' l ḥs* is interesting. For a discussion of the meanings of *qṣṣ* see No. 10. If my reading of the mutilated passage is correct, we would appear to have the first example in Safaitic of *qṣṣ* followed by *mn*. Although, in Arabic, Form III of *qaṣṣa* takes its object in the accusative and refers to revenging *oneself* on someone, Form IV "he retaliated for such a one upon such a one" takes *min* before the person retaliated upon. It is possible that in Safaitic the causative meaning of this verb, which in Classical Arabic is found only its Form IV and VIII, was also present in its Form II and that it took *min* with the person retaliated upon and possibly *li* (as in the Arabic Form VIII) with the person retaliated for, (see Lane p. 2527/1-2).

**No.12:**

Amman Museum Registration No. J.13943.  
A triangular block of basalt bearing a drawing of a two-humped camel, the text being written round the drawing. (Plates XXXVII and XXXVIII).

*l skrn bn ḥ... šty b h d'n f h dšr slm*  
By Skrn s. Ḥ... (he) winter (ed) with the sheep; and so, O Dšr, security.

The text is very badly rubbed near the camel's rump so that the end of the second name and what immediately follows it are lost. Near the camel's tail traces of some letters can be made out but they are so faint that I cannot read them with any confidence.

1 (MSTJ 23) "strength" and (MSTJ 24) "he made -a tomb".

The name *skrn* is very well attested. In view of the uncertainty about what precedes *šty* it is impossible to decide whether it is a noun or a verb. The drawing of a bactrian camel is very unusual, but see WH 476-477 for parallels and discussion. It is worth noting that we do not yet know what the two-humped camel was called in Safaitic.

**No.13:**

Amman Museum Registration No. J.13945.

A small piece of basalt inscribed on one face. (Plates XXXV and XXXVI)

*l jyn bn bnjtm [ ] w lh rjm d'l tm*

By (J)yn s. Bn(j)tm [ ]; and for him is a cairn: of the tribe of Tm.

There is a second *m*, below that of the second name, which I have not taken to be part of the text. It is possible that the author miscalculated and found that part of the stone unsuitable for inscribing and so continued the text above. The latter part of the text is somewhat carelessly written with letters squashed together. I have marked the *js* in the two names as doubtful since it is possible that they are intended to be ' *s* though, in view of the *j* in *rjm*, *j* seems the more likely reading. Both names are new. At first sight the second name appears to be one of the many names prefixed by *bn* which are found from time to time in the Safaitic texts (see HIn. pp. 118-122). However, most of these names have an equivalent without the prefixed *b* or *bn*. In view of the fact that no name *jtm* or *njtm* is attested and that the author is of the tribe of *Tm*, it seems possible that the name should be read *bnj-tm* = "of the lineage of Tm" (cf. Ar. *binj* = "Origine, race, descendance", Kaz. vol. I, p. 166/2).

The expression *w lh rjm* may be haplogra-

10. To the references quoted there add JaS 4, 5, 6, and 56b.

phy for the more usual *w lh h rjm*. However, for another example of the phrase see WH 3420. For the tribe of *Tm* see HST p.7 and 21.<sup>10</sup>

**No.14:**

Amman Museum Registration No. J.13946.

A large oblong block of basalt inscribed on one face (Plates XXXVII and XXXVIII).

*l mtrn bn slmn w bny d'l bs'*

By Mtrn s. Slmn: and he built: of the tribe of Bs'.

Both names are known. For the tribe of Bs', see HST p. 7.

**No.15:**

Amman Museum Registration No. J.13947.

A basalt boulder bearing a drawing of a horseman and a donkey (?) at right angles to each other. Text (a) runs vertically under the horseman, while (b), of which only a few letters survive, runs under the donkey which appears to have been superimposed on part of the text. (Plates XXXVII and XXXVIII).

(a) *lm'f bn h's w'l...*

The first name is very faint and the letters following *h's* cannot be read with any certainty. Both names are known.

(b) ... *'wr ... s' ... r'*

...blind ...?

**No.16:**

Amman Museum Registration No. J.13948.

A falt oval piece of basalt inscribed on one side. (Plates XXXIX and XL).

*l hl bn' k'lb bn 'bd'l bn hnn'l bn l'tmn bn m's  
bn k'mh bn šhr w wjm 'l hnn'l w 'l 'jyš w 'l  
'syh w 'l šh w 'l 'wd'l w 'l s' w 'l mrj w 'l šhr  
w 'l slm w 'l zbd'l d'l hly w 'l 'bh' k'lb w 'l 'bd'l*

By Hl s. 'klb s. 'bd'l s. Hnn'l s. L'tmn s. M's s. K'mh s. Šhr: and he grieved for Hnn'l and for 'jyš and for 'syh and for Šh and for

'wd'l and for Š' and for Mr(j) and for Šhr and for Slm and for Zbd'l of the tribe of Hly (and for) his father 'klb and for 'bd'l.

The "magic sign" of seven parallel strokes can be seen below the beginning of the inscription. The text is very faint at some points. The letters are very lightly incised and there is little difference in colour between the text and the surrounding stone. The latter is, anyway, not particularly suitable for inscribing since its surface is rough and covered in small indentations. The second name and the preceding *bn* are very faint and, unfortunately, almost invisible on the photograph, though readable in certain lights on the stone. The *j* of *mrj* is uncertain and could be a *m*. The *w* after the tribal name is not very clear but cannot, I think, be anything else. On two occasions the author appears to have omitted a letter and inserted it later. The *m* of *wjm* has been added above the line while the *l* of the 'l before *mrj* appears below the line. It would seem that the part of the text after the tribal name was an afterthought, unless one takes *d'l hly* as referring only to *Zbd'l*.

All the names are known, though 'klb, 'syh and Šh have each been found only once before in Safaitic. The author has given us a fairly lengthy genealogy but it does not appear to link up with any others so far found. The long list of people for whom the author *wjm* is paralleled in such texts as HSIM 49217. The tribe of Hly has so far been found only at the Cairn of Hani' (HCH 106, 131 and 132).

Nos. 17 and 18 are on one stone, Amman Museum Registration No. J.13949.

A basalt boulder inscribed on one face. (Plates XXXVII and XXXVIII).

**No.17:**

*l yškr bn frzl*

*bn zkr*

The text is very badly written and gives the impression that its author was none too practised in inscribing. It is written in bold hammered characters, but on several occasions the instrument used appears to have slipped and this has produced the rather "smudged" effect of some of the letters. On the photograph the fourth letter looks more like a *b* than a *k*. However, on the stone its side stroke can be seen on one side of the "smudge". On the other hand, the sixth letter looks more like a *k* than a *b*, but on close examination the apparent side stroke does not seem to be joined to the rest of the letter, though it looks deliberate enough. The remaining letters, though messy, are, I think, clear enough. All the names are known.

**No.18:**

*l 'jrl bn frzl w h rdy šlm*

By 'jrl s. Frzl : and, O Rdy, (security).

In contrast to the last text, this is scratched quite finely. Parts of the last three letters of the first name are difficult to see on the photograph but are clear on the stone. The last six letters of the text are particularly faint. *Frzl* is known, but *'jrl* is new. The author may be a brother of the author of No. 17, though the genealogies are too short for this to be certain.

**No.19:**

Amman Museum Registration No. J.13950.

A large block of basalt bearing one inscription and drawings of two horsemen. The style of the two drawings is quite different and they may be by different hands. The text, which is between two horizontal lines, is immediately above the central horseman. (Plates XXXVII and XXXVIII).

*l s'd bn šrm bn 'm h frs*

By S'd s. Šrm s. 'm is the horseman.

All the names are known. It does not appear possible to establish which of the horsemen is the one claimed in the text, though the position of the text above the central drawing suggests that it is that to which it refers. It seems possible that the rider in this drawing is by a different hand to that of the horse, since the style is quite different. If this is the case then it is possible that we should translate *h frs* by "the horse" rather than "the horse-man".

Nos. 20 to 22 are on one stone, Amman Museum Registration No. J.13951.

A basalt boulder bearing three texts and a drawing of a horseman wielding a spear. (Plates XXXVII and XXXVII).

**No.20:**

*l h's bn skrn w hḏr b šddt snt myt ḡnm  
fḥbndhḥfytn'wh'ti*

By H's s. S(k)rn: and he was here in hard- (ship) the year Ḡnm died...?

A very puzzling text. Several of the letters are doubtful. Part of the *k* of *Skrn* is obscured by an abrasion, but, given what is left of it and the other letters of the name, it can surely only be a *k*. The last two letters of *šddt* have been scored over and are by no means certain. The *h* after the *f* could be a *y*, though the stroke joining the two prongs is much thinner than the rest of the letter and is probably a stray scratch. The letter after the *b* which follows is definitely a *n*. Although on the photograph it is rather vague, it is quite clear on the stone. The next letter could be a *d* or a *y*. After the horse's fore-legs the *'* and the *w* could be taken either in the order given above or vice versa. The final letter of the text is again partially obscured by an abrasion and could be a *t*, a *n* or a *z*.

All the names are known. The expression *w hḏr b šddt*, if such it is, has not been found before. I have translated *šddt* on the basis of

Ar. *šadīdah* = "a hard, or distressing, event, an affliction, or a calamity" (Lane p. 1518/3, s.v. *šiddah*). Lane notes that the plural of this word can mean "seditions, discords or dissensions, whereby men are put into a state of commotion" and it is possible that we should translate *šddt* here by something of this sort, though these meanings appear, in Classical Arabic, to be restricted to the plural. For *myt*, instead of the more usual *mt*, see WH 387 and the references quoted there. I can make nothing coherent of the section of the text after *Ḡnm* and publish it in the hope that others will succeed where I have failed.

**No.21:**

*l qḏy bn slj bn 'b'qt  
w h rḏy 'wr m'wr*

By Qḏy s. Slj s. 'b'q(t):

and, O Rḏy, blind an obliterator.

I have taken the two lines to be one inscription. There are a great many lines and abrasions over various parts of the text though there does not seem to have been a deliberate attempt to deface the inscription. *Qḏy* and *Slj* are both known, but *'b'qt* is new, though *'b'q* has been found once (C 2216).

**No.22:**

*l š'bdk*

The text is scratched in very rough letters down the left hand side of this face of the stone. Only the *'* seems certain.

**No.23:**

Amman Museum Registration No. J.13952.

A block of basalt bearing a very rough outline of a camel. (Plates XLI and XLII).

*l hnn bn ḏbr ḏ'l 'mrt*

By Hnn s. D(br) of the tribe of 'mrt.

There are a great many scratches crossing both the drawing and the text. One of these crosses the opening of the *r* of *'mrt* giving it the appearance of a *'*. Some of these scratches resemble Safaitic letters, but they do not seem

to give any sense if read as a text. The script of this text shows some interesting features. Most of it is written in careful hammered letters, but the last three letters of the tribal name appear to be scratched. Again, while the majority of the text is not written in the square script, the letters *d* and take the square forms. *Hnn* is a well-known name. However, the second name is more difficult to establish. *Dbr* appears to me the most likely reading, though neither the *b* nor the *r* resemble their counterparts in the rest of the text. The only certain thing is that they can only be *b* or *r*. *Dbr* is found once in Minaean; *ḍbb*, *ḍrb* and *ḍrr* are all unattested. For other 'mrt texts in this collection see Nos. 10 and 11.

Nos. 24 and 25 are on one stone, Amman Museum Registration No. J.13953.

A conical block of basalt bearing two texts and a drawing of a camel which appears to have rays emanating from it, (Plates XLI and XLII).

#### No.24:

*l r' bn frk*

There is a mark looking rather like a *r* before the *lam auctoris* which I have not taken to be part of the text. Both names are known, though *R'* only in uncertain readings. Note the elongated, almost *l*-like form which *r* takes in both this and the next text.

#### No.25:

*l lt bn yt' h bkrt*

By *Lt* s. *Yt'* is the young she-camel.

Apart from the last word the writing of this and No. 24 is so similar as to suggest

that they are by the same hand. For other examples of texts in which the last word is in a different style to the rest of the text see Nos. 23 and 26. As with No. 24 there seems to be a letter before the *lam auctoris*, but in this case examination of the stone reveals that it is merely a casual scratch. Both names are known.

#### No.26:

Amman Museum Registration No. J.13954.

A block of basalt bearing a drawing of what is probably an oryx (see below) and an inscription. Both are enclosed in a roughly drawn border. (Plates XLI and XLII).

*lbn 'hrb bn 'm bn 't' h dsy*

By *Bn'hrb* s. 'm s. 't' is the oryx.

As with Nos. 23 and 25, the last word is written in a different style to the rest of the text (see also WH 762, which provides an exact parallel to this text in this respect).<sup>10a</sup> This may, of course, be due to the fact that the author, having written his name in rather large letters had not left himself enough room to complete the text in the same style. *Bn'hrb* is a new name, though 'hrb is well-known. The other two names are known.

For a discussion of the word *dsy*, see WH 762. I cannot, however, agree with the conclusion reached there that the *dsy* is the *Gazella dorcas saudia*. Safaitic drawings, even when they are little more than stick-figures, surely tend to concentrate on the most obvious distinguishing features of what they are trying to represent. I would suggest that, to the layman - into which category the Safaitic artists would presumably fall - the most

10a. See also WH 190 and 648. For a discussion of this feature see F.V. Winnett in A.F.L. Beeston et al.: *The inscription JS 71*, in Proceedings of the Seminar for Arabian Studies, vol. 3, 1973, pp. 70-71; and J. Ryckmans: *Alphabets, Scripts and*

*Languages in Pre-Islamic Arabian Epigraphical Evidence*: Paper presented to the Second international Symposium on Studies in the History of Arabia: Pre-Islamic Arabia, University of Riyadh, 1979.

obvious distinguishing features of the oryx leucoryx are its long straight horns and relatively heavy body, features which it does not share with the gazella dorcas saudia. Certainly it is these features which are most striking in all the drawings of *ḍsy* (C 3022, WH 762, 3502-3503 and the present text) <sup>11</sup>. A photograph of an oryx will be found next to that of No. 26 (Plate XLII) for comparison.<sup>12</sup> However, it should be noted that there is another characteristic of the oryx, its tufted tail, which is not present in any of these drawings <sup>13</sup> all of which show the animal with a short, untufted tail, which is indeed more characteristic of the dorcas gazelle. To the solution of the philological puzzle of the origin of the word *ḍsy*, I can, alas, add nothing to what has been said in the commentary to WH 762. It is interesting to note that beside WH 709 there is a drawing of an animal very similar to the *ḍsy*, but which in the accompanying text is called a *tr*. As the authors remark (WH p. 24) "no bull ever had such horns". However, as they point out, in the commentary to WH 762, one of the modern Arabic names for an oryx is *baqar waḥṣ* and it is possible that alongside the "technical" word *ḍsy* the Safaitic bedu may have used a similar phrase, but with the word *tr*, to describe the oryx.

11. There are also other drawings which are probably of oryx, though either they are not accompanied by a text or else the authors do not identify the animal: see C 5320, SIJ 61, WH 353-355 (Plate 77, above the woman's head) etc.
12. Mr. J.E. Clarke, of the Jordanian Royal Society for the Conservation of Nature, who kindly gave me this photograph, pointed out to me that the oryx in this photograph has much shorter horns than is usual since the animal had worn them down on the concrete of a pen in which, at one

Nos 27 to 29 are on one stone, Andrews University Archaeological Museum Registration No. A.U.A.M. 73.0372.

A wedge-shaped limestone chip inscribed on both sides. Nos. 27 and 28 are on one side and No. 29 on the other. The stone has been broken, after the texts were inscribed, the major break occurring at the wide end of the "wedge" and this break affects all the texts. In addition to this, Nos. 27 and 29 have also suffered from a chip on one side of the stone. I have not had the opportunity of studying the original, but have worked from the excellent photographs sent me by Miss Nitowski. Plates XLI and XLII).

**No.27:**

...h *ḍl jrf l l*

...h of the tribe of Jrf.

The mark before the *h* is, I think, a chip. After the *f* there appears to be a *n*, but I think this probably a stray scratch. A comparison with No. 29 suggests that the tribal name is *Jrf* and that only a small portion of the stone has been lost at this point. If the latter is true, we are faced with two possibilities: either the tribal name is *Jr* and it is followed by *f* + a verb beginning with *n*, or the reading suggested above. It seems highly improbable that the tribal name would be followed by a

stage, it had been kept.

13. It is possible that it is present in C 3022, though it is of such a peculiar shape that one is tempted to conclude that an imperfection of the stone has been included in the copy as part of the tail. However, A.F.L. Beeston (BSOAS vol. 16, 1954 p. 592) has identified two of the animals in the drawing accompanying HCH 73 as oryx on the basis of their horns and tails. See also ADAJ, vol 3, 1956, p. 82.

statement without a conjunction. See No. 29 for my reasons for believing that the tribal name is probably *Jrf*. The tribe of *Jrf* is so far unattested in Safaitic (though it is known as a personal name) but has possibly been found in Thamudic (ARNA, Tham. No.48a, where the authors read *jf(f)*, though HIn. (p. 159) reads *jr(f)*). In support of the first possibility, however, a Safaitic tribe *Jr* is known from four texts (see HST p. 8).

**No.28:**

...th *d'l fhr w qyz 'l f...*

...th of the tribe of *Fhr*: and he spent the summer at ...

The *f* of *Fhr* looks on the photograph more like a *ḡ*. However its upper stroke can be seen, though it does not stand out so sharply as the rest of the letter owing to a dip in the surface of the stone at this point. Other photographs sent me by Miss Nitowski, which unfortunately do not show other letters of the text so clearly, show this upper stroke distinctly. The tribe of *Fhr* has been encountered once before in Safaitic in LP 1064, though this is an emended reading. The expression *qyz 'l* has, as far as I know, been found only three times before (C 2577, LP 330 and HCH 107). In view of its occurrence with *hnmrt* in LP 330, it seems likely that Safaitic used *qyz 'l* where Classical Arabic has *qayyaza bi* to mean "spent the summer at", though it should be noted that Littmann translates the phrase in LP 330 by "spent the summer in front of". It is possible that one should read *w qyz 'lf* "and he spent the summer giving fodder" (Ar. *'alafa*), but with no clue as to what, if anything, has been lost it is impossible to decide.

**No.29:**

...j *d'l jr(f) [w] bny w dtn 'jl bjt...* (?) *šrq b hl*  
 ...j of the tribe of *Jr(f)*: [and] he built and he alighted for a time... he went east with

numerous flocks.

The effects of the chip on the side of the stone (see No. 27) can be seen very clearly in this text. However, from the traces of letters which remain, relatively little seems to have been lost: viz. half of the *f* of *Jrf* and the letter which follows it. In the context *w* seems a fairly safe restoration for the latter. I have also restored a ' before *šrq* to give the Form IV of this verb which is usual in Safaitic. However, this restoration is perhaps more questionable since Safaitic also knows Form II of this verb (see C 1875 and 2307). The last part of the text appears to read *bnhl*. However, I think that the mark which looks like a *n* is, in fact, the end of the long horizontal groove which runs across the previous four letters, though without being able to check the original it is impossible to be sure.

Because, from the traces which remain, only two letters appear to have been lost through the chipping of the side of the stone, it would seem that the first of these must belong to the tribal name. From the traces which remain, *f* seems the most likely reading and this would accord with my reading of the tribal name in No. 27. My translation of *w dtn 'jl* is only a suggestion. In Classical Arabic *datana* is used, it seems, purely of birds flying about and alighting suddenly on trees, etc. However, in LP 461 it is apparently used of a lion springing on his prey. It is, perhaps, possible that in Safaitic it had a less restricted meaning than in Classical Arabic. I have taken *'jl* as representing Arabic *'ajalan* "for a period, a time". Without knowing what the lost passage contained, it is difficult to interpret the next three letters. I have translated the last two letters of the text on the basis of Arabic *hail* = "numerous flocks" (Hava p. 844/2). Other translations of *w dtn* onwards are, of



course, possible.

Nos. 30 to 33 are on two stones in the Kerak Museum. These stones and a small tripod platter (which I hope to publish in a future article) were bought by the Kerak Museum from Mr. Ali Mahadin, an antiquities dealer. Unfortunately, we know nothing of the provenance of any of these texts.

**No.30:**

Kerak Museum Registration No. 320.

A basalt boulder inscribed on one face. (Plates XLIII and XLIV).

*l jrmt bt hr w jlst 'ly'mfr f wjldlt sfr 'b f wjmt 'lh*

By Jrmt (d.) Hr: and she sat (or halted) ...?... and then she found the inscription of 'b and so she grieved for him.

An interesting and rather difficult text, one of the relatively few by a woman. Most of the letters are clear, though there is a certain amount of doubt in the following cases. The *t* of *bt* is almost totally obliterated though enough survives to suggest its presence and to make *bt* a more likely reading than *bnt*. For another example of *bt* for *bnt* see WH 214. Between *w* and *jlst* there appears to be a *n*, but examination of the stone shows this to be merely a continuation of the long vertical scratch below it. The *l* of *jlst* has a small triangle half way down its length making it look like a *d*, but this is so much more faintly scratched than the rest of the letter that I think it is accidental. In certain lights the second ' after *jlst* looks like a *s* and the abrasion on the stone at this point makes it difficult to be certain, though I think ' is the more probable reading. There is a solitary *f* below the last letter of the text which does not seem to belong to the inscription. All the names are known, though this appears to be the first occurrence of *Jrmt* as a woman's name.

For a discussion of the possible meanings of the word *jls* in Safaitic see No. 34. I am at a loss satisfactorily to explain the section of the text between *jlst* and *f wjldlt*. Several interpretations have suggested themselves but all involve grave difficulties. The last part of the text is straightforward. It should be noted that I have restored a *d* to *wjt* since the latter does not seem to make any sense in the context and *wjd sfr...* is very common in Safaitic.

Nos. 31 to 33 are on one stone: a small piece of basalt inscribed on three faces. (Plates XLIII and XLIV). Kerak Museum Registration No. 321.

**No.31:**

Inscribed around a drawing of a horse.

*l wdm bn 'hd bn 'qwm h htt w h rdy w lh  
'wr m'wr*

By Wdm s. 'hd s. 'qwm is the drawing (or writing): and, O Rdy (and) Lh, (bl)ind an obliterator.

Though the drawing is intact, it looks as though someone has tried to scratch out the inscription. However, most of the letters are clear with the exception of the second and third *w*'s of the invocation which have been pretty thoroughly obliterated. The ' of 'wr is some distance along the horse's tail from *lh* and is rather faint. All the names are known.

**No.32:**

*l mdd bn rkb w gzz*

By Mdd s. Rkb: and he fought.

There is a drawing which could possibly represent a stylized sitting figure (?) in the middle of the text. Both the names are known.

**No.33:**

*l 'rz' bn 'rš bn hl bn hmtt*

The text is accompanied by a crude drawing

of a figure with legs apart and arms raised and by the "magic sign" of seven strokes. There appears to have been some attempt at enclosing the text and drawing within a border, part of which has gone through the last four letters of No. 32. All the letters are clear and the names known.

Nos. 34 and 35 are in the collection of the Deutsches Evangelisches Institut für Altertums-wissenschaft, Amman. They have no provenance.

**No. 34:**

An approximately square chip of limestone, inscribed on one side. (Plates XLIII and XLIV).

*l n̄zr bn 'zz d̄l lkm w d̄t' b b̄qr w hrn w jls mn 'nft tl jmm*

By N̄zr s. 'zz of the tribe of Lkm: and he spent the spring with some cattle and two flocks of sheep and he halted because of an area of abundant *jil*.

Most of the letters are clear on the stone, though some are very faint and one or two have somewhat unusual shapes. However, the undulations of the surface of the stone, the shallowness of most of the letters and the complete absence of contrast in colour between the letters and the surrounding stone make it very difficult to achieve a photograph which shows all the letters clearly. In the first two lines the letters are well cut, but in the third line they become shallower, while in the fourth and fifth lines they are often extremely faint indeed. The ' of *d̄t'* is squashed in on the very edge of the stone; the *b* of *b̄qr* has a strange "backward kick" making it look more like a *g*; the *n* of *'nft* is very faint as

is the upper loop of the *t* of *tl*. Both names are well-known. The tribe of *Lkm* has not been found before.

The translation offered above is suggested tentatively as a possible solution to the many difficulties presented by this intriguing text. *Bqr* could either be the plural of *baqrah*, i.e. "some cows", or *baq̄r* "a herd of cattle" (Lane p. 234/1). The next phrase is more puzzling. I have interpreted it on the basis of Ar. *hawr* = "flock of sheep" (Kaz. vol II pp. 1456-1457), taking the *n* as marking the dual. I have interpreted *jls* as "he halted" since although I cannot find this meaning in Classical Arabic, it seems more appropriate to the context in this and the other inscriptions in which it appears than the basic meaning "he sat". In view of those cases in which *jls* occurs in combination with *hll* (HCH 71, 129 and 141, JaS 132c 145a), it is perhaps, possible that the two words denoted to the Safaitic bedu different aspects of, or degrees of permanence in, setting up a camp. The primary meaning of *hll*, after all, is "to untie" and then from the idea of untying baggage derives the meaning of alighting, taking up one's abode. It seems to me quite possible that Safaitic may, for instance, have used *jls* in the sense of a brief stop, a sitting down for a rest, and *hll* for the longer-term camp where everything would be unpacked. The expression *wjls w hll* might then mean something equivalent to "he halted and decided to camp". The expression *jls mn 'nft* has occurred once before, in HFSI 46940 b, where Harding suggested the translation "he abode opposite NFT?"<sup>14</sup> The translation offered above is based on the

14. Jamme (JMAA, 5, p.94), however, takes *mn'nft* as a separate text on the basis that "the form of *m* is entirely different from that of the two *m*'s of text b". But *m* is notoriously inconsistent

in shape even within one text. Moreover, Jamme reads this "text" as *mnhn jw* "Manḥān was youthful". The *h*, which he reads as *h*, is clear on the photograph and I can see no trace of his final *w*.

following: taking *mn* in the sense of "in consequence of" (see Wright, vol II p. 131 B); *'nft*, I would suggest, represents Ar. *'anīfah* which in such phrases as *'anīfatu n-nabti* means "land that produces vegetation" (Lane p. 117/1); I have taken *tl* to be Ar. *tīl*, "a kind of plant" variously described (see Lane pp. 366/3 - 367/2) but of which some authorities say "it is one of the plants that are regarded as indicative of the existence of water"; *jmm* is presumably Ar. *jamīm* = "abundant" (of herbage: Lane p. 449/3). If this translation is correct, *Nzr* presumably halted either to pasture his animals (if *tīl* is good pasture) or to look for the water indicated by the presence of the *tīl*, or both.

**No.35:**

A large triangular block of basalt inscribed on one side. (Plates XLIII and XLIV).

*l ḡt bn 'tl bn ḡt d'l kkb w hrs 'l 'sy'h f h lt slm*

By ḡt s, "tl s. ḡt of the tribe of Kkb: and he was on the look-out on behalf of his companions; and so, O Lt, security.

A text in the square script. All the letters are clear and all the names are known. Texts by members of the tribe of *Kkb* have been found over a fairly wide area from Jebal Sais to Wadi Miqāṭ and Tapline. The most interesting feature of this text is the occurrence

Apart from the fact that his reading produces virtual nonsense, I can see no reason for divorcing these letters from the rest of the text.

15. The previous occurrences are in LP 597, JaS 108 and WH 1901; Jamme has also identified the expression in RVP 10 (Ja. Saf. N. note 67) which he reads as *hrs 'l 'hh s'dlt* as opposed to G. Ryckmans' reading *hrs 'hy s'd...*. With the exception of the last two letters, which are pure imagination since only the very tips of the letters have survived a chip in the stone, I would accept

of the phrase *w hrs 'l 'sy'h*. Although the verb *hrs* is very common in Safaitic, both alone and with an object, this is, as far as I know, only the fifth<sup>15</sup> time that *hrs 'l* has been found. On the meagre evidence we have it seems unlikely that this represents a dialectal variant of *hrs* since we have so few examples and these come from widely separated areas - al-'Īsāwī, Burqu' and the 'Ar'ar region. One is therefore left with the more likely possibility that *hrs 'l* represents a difference in meaning from *hrs* + accusative. The position is complicated, however, by the fact that the meaning normally given to *hrs* is not found in Classical Arabic and has been accepted by scholars solely because it appears to fit the, usually vague, contexts. The four previous examples of the phrase are as follows:

LP 597 : *w hrs 'l rjlh*

JaS 108 : *w hrs 'l 'trṣ*

RVP 10 : *hrs 'l 'hh s'd..*

WH 1901 : *w hrs 'l 'bh*

With the exception of Littmann, the editors of all these texts<sup>16</sup> have translated the phrase as if it were simply *hrs* + accusative. Littmann translated "and he was on the look-out [being placed] over his men" and in the commentary he explains that he takes this to mean that the author "protected his men by looking out for the enemy" (LP p. 155). Certainly, some-

Jamme's reading, though it should be noted that neither the *r* of *hrs* nor the ' of 'l is at all clear on the photograph. Jamme also claims (Ja. Saf.N. note 106) to find the expression in HCH 125, but I can see no justification for this on the photograph.

16. G. Ryckmans does not read the 'l in RVP 10 and translates by "il a épié les frères de Sâ'id...". Jamme, on the other hand, reads the 'l but still translates "he was on the look-out for".

thing of this sort would suit all the contexts and I have, therefore, suggested either "he watched over" or "he was on the look-out

on behalf of" as possible translations of this expression.

## INDEX

N.B The first numbers refer to the text numbers; x followed by a number refers to the number of occurrences of the word in that text. *Bn* and the *lam auctoris* have not been included in this index.

'b : N.Pr. : 30;  
 'b : sb.: father: 16;  
 'bjr: N.Pr.: b. m<sub>q</sub>m: 10;  
 'b'qt: N.Pr.: fa. slj: 21;  
 't: N.Pr.: fa. 'm: 26;  
 'jr'l: N.Pr.: b. frzl: 18;  
 'jl: sb.: a time, period: 29;  
 'jys: N.Pr.: 16;  
 'hd: N.Pr.: b. 'qwm: 31;  
 'h: sb.: brother: 10;  
 'dm: N.Pr.: fa. mt: 4;  
 'rz' : N.Pr.: b. 'rš: 33;  
 'rš: N.Pr.: b. hl: 33  
 'syh: N.Pr. : 16;  
 'šrq: see srq  
 'sy' : see šy'  
 'tl: N.Pr.: b. gt: 35;  
 'qwm: N.Pr.: fa. 'hd: 31  
 'klb: N.Pr.: 16;  
                   : b. 'bd'l : 16  
 'l : see d'l  
 'nft: sb.: area (of herbage) : 34;  
 'nfs: see nfst  
 b: prep.: with: 12; 29; 34;  
           in : 20 (?);  
 bdbl: N.Pr.: b. 'bd: 1; 2;  
 bs' : N.Tr.: 14;  
 bqr: sb.: cattle: 34;  
 bkrt : sb.: young she-camel : 25;  
 bl: sb.: tomb (?) : 9;  
 bn'hrb: N.Pr. : b. 'm: 26;

bnjtm: N.Pr. : fa jyn: 13;  
 bny: vb. : to build 1; 14; 29;  
 tm: N.Tr.: 13;  
 tl: sb.: tīl (a plant) : 34;  
 jrf: N.Tr.: 27: 29;  
 jrm'l: N.Pr. fa. 'bd: 2;  
                   fa. whš: 1;  
 jrmt: N.Pr. (f) : d. hr: 30;  
 jls: vb.: to sit, to halt: 3 sg. f. perf.: 30;  
                   3 sg. m. perf. + mn = because of 34;  
 jmm: adj.: abundant: 34;  
 jyn: N.Pr.: b. bnjtm: 13;  
 hdd: N.Pr.: 5;  
 hs: N.Pr.: 11;  
 hdr: vb.: to be here: 6: 20;  
 hzy: N.Tr.: 1;  
 hl: N.Pr.: b. hmtt: 33;  
 hly: N.Tr.: 16;  
 hmtt: N.Pr.: fa. hl: 33;  
 hnn: N.Pr. b. dbr: 23;  
 hnn'l: N.Pr.: 16;  
                   : b. l'tmn: 16  
 hr: N.Pr.: fa. jrmt: 30;  
 hrs: vb.: to be on the look-out: + 'l = on  
 behalf of : 35;  
 htt: sb. : drawing, writing: 31;  
 hl: N.Pr.: b. 'klb: 16;  
 hlf: N.Pr.: b.m<sub>q</sub>m: 6;  
                   : b. mky: 9;  
 dt': vb.: to spend the spring: + b = with : 34;  
 dt<sub>n</sub>: vb.: to alight : 29;  
 dšr: N.Div.: 6; 12;  
 dšy: sb.: oryx: 26;  
 dll: N.Pr.: b. hn' : 5;  
 d'b: N.Pr.: 10;  
 d'l: of the tribe of: 1; 10; 11; 13; 14; 16;

23; 27; 28; 29; 34; 35;  
 db' N.Pr.: 11;  
 rjm: sb. cairn: 13;  
 rdy: N.Div.: 18; 21; 31;  
 r' : N.Pr. : b. frk: 24;  
 rkb: N.Pr.: fa. mdd: 32;  
 zbd'l: N.Pr.: 16;  
 zkrt: N.Pr.: fa. frzl: 17;  
 str: sb.: shelter: 1;  
 s'd: N.Pr.: b. srm: 19;  
     b. mlh: 11;  
 sfr: sb.: inscription: 8; 30;  
 skrn: N.Pr.: b.h....: 12;  
     : fa. h's: 20;  
 slj: N.Pr.: b. 'b'qt: 21;  
 slm: N.Pr.:16;  
 slm: sb.:security: 1; 6; 12; 18; 35;  
 slmn: N.Pr.: fa. mtrn: 14;  
 snt: sb.: year: 20;  
 sty: sb. or vb.: (to) winter: 12;  
 sddt: sb.: hardship (?) : 20;  
 srq: vb. II or IV: to go eastward: 29;  
 s' : N.Pr.: 16;  
     : fa. 'qrb: 8;  
 skyd (?) : N.Pr.: fa. mky: 9;  
 sy' : sb. pl. 'sy' : companions: 35;  
 sh : N.Pr.: 16;  
 shr: N.Pr.: 16;  
     : fa. k'mh: 16;  
 srm: N.Pr. b. 'm: 19;  
 swy: vb.II: to build a cairn: 10;  
 d'n: sb.: sheep: 12;  
 dbr: N.Pr.: fa hnn: 23;  
 t' : N.Pr.: fa. mqm: 10;  
 ' r : N.Pr.: 3;  
 'bd: N.Pr.: b. jrm'l: 2;  
     : b. whs: 1;  
 'bd'l: N.Pr.: 16;  
     : b. hnn'l: 16;  
 'zz: N.Pr.: fa. nzz: 34;  
 'qrb: N.Pr.: b. s' : 8;  
 'l: prep: after hrs: on behalf of: 35;

: after qyz: at : 28;  
 after wjm: for: 5, × 3: 10; 16,×12;  
     30;  
 'm: N.Pr.: b. 't: 26;  
     : fa. srm: 19;  
 'mrt: N.Tr.: 10; 11; 23;  
 'hd: N.Pr.: fa. mqm: 6;  
 'wd'l : N.Pr. 16;  
 'wr: vb II : to blind: impv.: 15b (?): 21; 31;  
     : to obliterate: act. ptc.: 21; 31;  
 gt: N.Pr.: b. 'tl b. gt: 35;  
     : b. m'd: 5;  
 gzz: vb. III: to fight: 32;  
 gnm: N.Pr.: 20;  
 f: conj: and so: 1; 6; 12; 30×2; 35;  
 fh: N.Pr.: 8;  
 frzl: N.Pr.: fa. 'jrl: 18;  
     : b. zkrt: 17;  
 frs: sb.: horseman, horse: 19;  
 frk: N.Pr.: fa r' : 24;  
 fhr: N.Tr.: 28;  
 qdy: N.Pr.: b. slj: 21;  
 qss: vb. II (?): to take revenge: + mn = on  
 someone, + l = on behalf of someone: 11;  
     : vb. III (?): to take revenge: 10;  
 qyz: vb. II: to spend the summer: + 'l = at:28;  
 k'mh: N.Pr.: b. shr: 16;  
 kkb: N.Tr.: 35;  
 l: prep.: + pron.: for: 9; 13;  
     : after qss: on behalf of: 11;  
 lt: N.Div.: 1; 35;  
 lt: N.Pr.: b. yt' : 25;  
 'tmn: N.Pr.: b. m's: 16;  
 lkm: N.Tr.: 34;  
 lh: N.Div.: 31;  
 mdd: N.Pr.: b. rkb: 32;  
 mr't: sb.: woman: 7;  
 mrj: N.Pr.:16;  
 mt: N.Pr.: b. 'dm: 4;  
 mtrn: N.Pr.: b. slmn: 14;  
 m't: N.Pr.: b. h's: 15a;  
 m'd: N.Pr.: fa gt: 5;

m's: N.Pr.: b. k'mh: 16;  
 mqm: N.Pr.: b. t' : 10;  
       : b. 'hd: 6;  
 mky: N.Pr.: b. škyd: 9;  
 mlh: N.Pr.: fa. s'd: 11;  
 mn: prep.: against: 11;  
       : because of: 34;  
 myt: vb.: to die: 20;  
 nšb: vb.: to suffer distress: 10;  
 nzz: N. Pr.: b. 'zz: 34;  
 nfst: sb. pl. 'nfs: funerary monuments: 9;  
 h: definite article: the: 1;7;12;19;25;26;31;  
 h: vocative particle: O: 1; 12: 18; 21;31; 35;  
 -h: enclitic pron. 3 sg. m.: him: 9; 13; 30;  
       his: 10; 16: 35  
 h's: N.Pr.: b. skrn: 20;  
       : fa. m't: 15a;

hr: sb. dual hrn: two flocks of sheep: 34;  
 hl. sb.: numerous flocks: 29;  
 hn': N. Pr.: 5;  
       : fa. dll: 5;  
 w: conj: and: 1; 5,×3; 6; 8; 9; 10,×4;  
 11,×2; 13; 14; 16,×12; 18; 20; 21; 28;  
 29,×2?; 30; 31,×2; 32; 34,×3; 35;  
 wjd: vb.: to find: 3 sg. f. perf.: 30 (?);  
 wjm: vb.: to grieve: + '1 = for: 3 sg. m.  
 perf.: 5; 10; 16;  
       : 3 sg. f. perf.: 30;  
 whš: N.Pr.: b. jrm'l: 1;  
 wdm: N.Pr.: b. 'hd: 31;  
 yṯ: N.Pr.: fa. lt: 25;  
 yškr: N.Pr.: b. frzl: 17;

#### ABREVIATIONS:

- acc. : accusative  
 act. : active  
 ADAJ : Annual of the Department of Antiquities  
       of Jordan  
 adj. : adjective  
 Ar. : Arabic  
 ARNA : F.V. Winnett and W.L Reed: Ancient  
       Records from North Arabia. (University of  
       Toronto Press, Toronto, 1970)  
 b. : ibn  
 BASOR : Bulletin of the American Schools of  
       Oriental Research  
 BSOAS : Bulletin of the School of Oriental and  
       African Studies, University of London  
 C : Corpus Inscriptionum Semiticarum, Pars V,  
       Tomus I (Paris, 1950)  
 conj. : conjunction  
 CSP : V.A. Clark: Some New Pre-Islamic Arabian  
       Inscriptions from Northern Arabia. *Abr-Nahrain*,  
       vol. 17, 1976-1977, pp. 35-42.  
 d. : daughter of  
 f. : feminine  
 fa. : father of  
 Hava : J.G. Hava: *Al-Faraid Arabic-English  
       Dictionary* (Beirut, 1970)  
 HCH : G. Lankester Harding: *The Cairn of Hani'*.  
       ADAJ vol.2, 1953, pp.8-56.  
 HFSI : G. Lankester Harding: *Further Safaitic Texts  
       in the Iraq Museum: Sumer vol. 26, 1970;*  
       pp. 179-185  
 HIn. : G. Lankester Harding: *An Index and  
       Concordance of Pre-Islamic Arabian Names  
       and Inscriptions.* (University of Toronto  
       Press, Toronto, 1971)  
 HSIM : G. Lankester Harding: *Safaitic Inscriptions  
       in the Iraq Museum: Sumer vol. 6, 1950,*  
       pp. 124-129  
 HST : G. Lankester Harding: *The Safaitic Tribes:*  
       *Al-Abhath*, vol 22, 1969, pp. 3-25  
 impv. : imperative  
 ISB : W.G. Oxtoby: *Some Inscriptions of the  
       Safaitic Bedouin.* (New Haven, 1968)  
 JaS : *Safaitic inscriptions published by A. Jamme:*  
       JaS 2-23 in *Oriens Antiquus*, vol. 6, 1967  
       pp. 189-213; JaS 44-176 in F. Altheim and  
       R. Stiehl. *Christentum am Roten Meer*, vol. I

- Berlin, 1971), pp. 41-109
- Ja.Saf.N. : A. Jamme: Safaitic Notes (Commentary on JaS 44-176), (Washington D.C., 1970)
- JMAA : A. Jamme: Miscellanées d'ancien arabe. Volume 5 (Washington, D.C., 1974)
- Kaz. : A. de B. Kazimirski : Dictionnaire Arabe-Français (Paris, 1860).
- N.B. / after the page no. refers to the column.
- Lane : E.W. Lane: An Arabic-English Lexicon (London, 1863). N.B. / after the page no. refers to the column.
- LP: E. Littmann: Safaitic Inscriptions (Publications of the Princeton University Archaeological Expeditions to Syria in 1904-1905 and 1909: Division IV, Section C: Leyden, 1943).
- m : masculine
- MSTJ : M.C.A. Macdonald and G. Lankester Harding: More Safaitic Texts from Jordan: ADAJ, vol. 21, 1976, pp. 119-130
- N.Div. : divine name
- N.Pr. : proper name
- NSR : Y.M. Abdallah: Al-nuqûš al-safawiyah fî majmû'at jâmi'at riyâd: M.A. thesis, American University of Beirut, 1970 (unpublished)
- NST : G.Lankester Harding: New Safaitic Texts: ADAJ, vol. I, 1951, pp. 25-29
- N.Tr. : Tribal name
- p. : page
- Payne Smith : J. Payne Smith: A Compendious Syriac Dictionary (Oxford, 1903)
- perf. : perfect
- prep. : preposition
- ptc. : participle
- RVP : G. Ryckmans: Inscriptions Safaitiques de Transjordanie: Vivre et Penser, I ère serie, 1941, pp. 255-259
- s. : son of
- Saf. : Safaitic
- sb. : Substantive
- SIJ. : F.V. Winnett: Safaitic Inscriptions from Jordan (University of Toronto Press, Toronto 1957)
- Tham.: Thamudic
- vb. : verb
- WFSG : W.H. Worrell: Four Safaitic Graffiti: American Journal of Semitic Languages and Literatures, vol. 58, 1941, pp. 217-218
- WH : F.V. Winnett and G. Lankester Harding: Inscriptions from Fifty Safaitic Cairns (University of Toronto Press, Toronto, 1978)
- Wright : W. Wright: A Grammar of the Arabic Language (3rd. edition, reprinted by Librairie du Liban, Beirut. 1974)
- Wuthnow : H. Wuthnow : Die semitischen Menschnennamen in griechischen Inschriften und Papyri des vorderen Orients (Studien zur Epigraphik und Papyruskunde, Band I Schrift 4, Leipzig, 1930)

M.C.A. Macdonald





A PRELIMINARY REPORT ON A SURVEY  
OF NABATEAN-ROMAN MILITARY  
SITES IN SOUTHERN JORDAN

by  
David F. Graf

Although S. Thomas Parker's recent survey of the *limes Arabicus* has provided a valuable overview of the major Roman/Byzantine military structures in Jordan, our knowledge of the southern sector of the defensive system remains quite rudimentary.<sup>1</sup> Archaeological investigations of this region have focused basically only on the string of forts and guard posts along the *via nova Traiana* at Khirbet al-Kithara, Khirbet al-Khāalde, Quweira, Humeima, and Šadaqa.<sup>2</sup> However, in the region east of this main artery, in the Hisma desert, a number of other ancient military structures have been observed which may have possibly constituted part of the *limes* system.<sup>3</sup> Since the Trajanic road was buttressed by an advanced eastern militarized zone of some

depth elsewhere in the province an investigation of the occupational history of these sites for evidence of their utilization during the Roman/Byzantine period was both promising and needed.

In this interest an archaeological survey of southern Jordan was organized in 1978 with the approval and assistance of the Department of Antiquities of the Hashemite Kingdom of Jordan and its director, Dr. Adnan Hadidi. The project was also granted affiliation with the American Schools of Oriental Research and received the full cooperation and support of its Amman institute, the American Center of Oriental Research (ACOR). Financial assistance was provided for by a grant from the Zion Research Foundation and

1. S. Thomas Parker, "Archaeological Survey of the *Limes Arabicus*: A Preliminary Report," *ADAJ* 21 (1976) 19-31.

2. R. Brünnow's fundamental investigation of the *limes* system did not embrace the southern sector; however, earlier accounts of explorations in this region were included in his major studies. See his "Die Kastelle des arabischen Limes," *Florilegium ou Recueil de travaux d'érudition dédiés à Monsieur le marquis Melchior de Vogüé* (Paris, 1909) 65-77 and *Die Provincia Arabia*, 3 vols. (Strassburg, 1904 - 09) which was co-authored with A. von Domaszewski. The most significant early work for this sector was done by A. Musil, *Arabia Petraea*, 2 vols. (Vienna, 1907-08) and *The Northern Hegaz* (New York, 1926). F. Frank, "Aus der Araba I: Reiseberichte," *Zeitschrift des Deutschen Palaes-*  
*Araba II: Römische Kastelle und Strassen,*

" *Zeitschrift des Deutschen Palaestina-Vereins* 58 (1935) 1-59 and "Der südliche Endabschnitt der römischen Strasse von Bostra nach Aila," *Zeitschrift des Deutschen Palaestina-Vereins* 59 (1936) 92-111 provide the basic discussion of the fortified *via nova* in the south. All of the forts outlined by them were included in Parker's survey with the exception of Humeima.

3. N. Glueck, *Explorations in Eastern Palestine II*, *AASOR* 14-15 (1934-35) and *Exploration in Eastern Palestine III*, *AASOR* 18-19 (1937-39), and later, A. Kirkbride and G. L. Harding, "Hasma," *Palestine Exploration Quarterly* 79 (1947) 7-26, made reference in their surveys to several Nabatean or Roman forts and watchtowers east of the *via nova* which were not included in the earlier work on the *limes* system or by subsequent investigators.

several substantial contributions from interested friends. To all of these organizations and individuals I would like to express my thanks.

The actual survey took place from June 4 to 10, 1978, with myself as the director; additional staff consisted of Mohammed A. Darwish, the official representative of the Department of Antiquities, and James A. Armstrong of the University of Chicago as associate and driver. Dr. James A. Sauer, director of ACOR, served as the ceramic typologist and was of immeasurable aid in making preparation for the survey, for which I am deeply indebted. In addition, G. Lankester Harding and the American Ambassador, Thomas R. Pickering, gave helpful and illuminating counsel on several matters. Finally, grateful recognition must be made of the Department of Antiquities' staff at Petra and the camel corps at the Wadi Ram police post for their generous hospitality during our stay there.

### Description of the Project

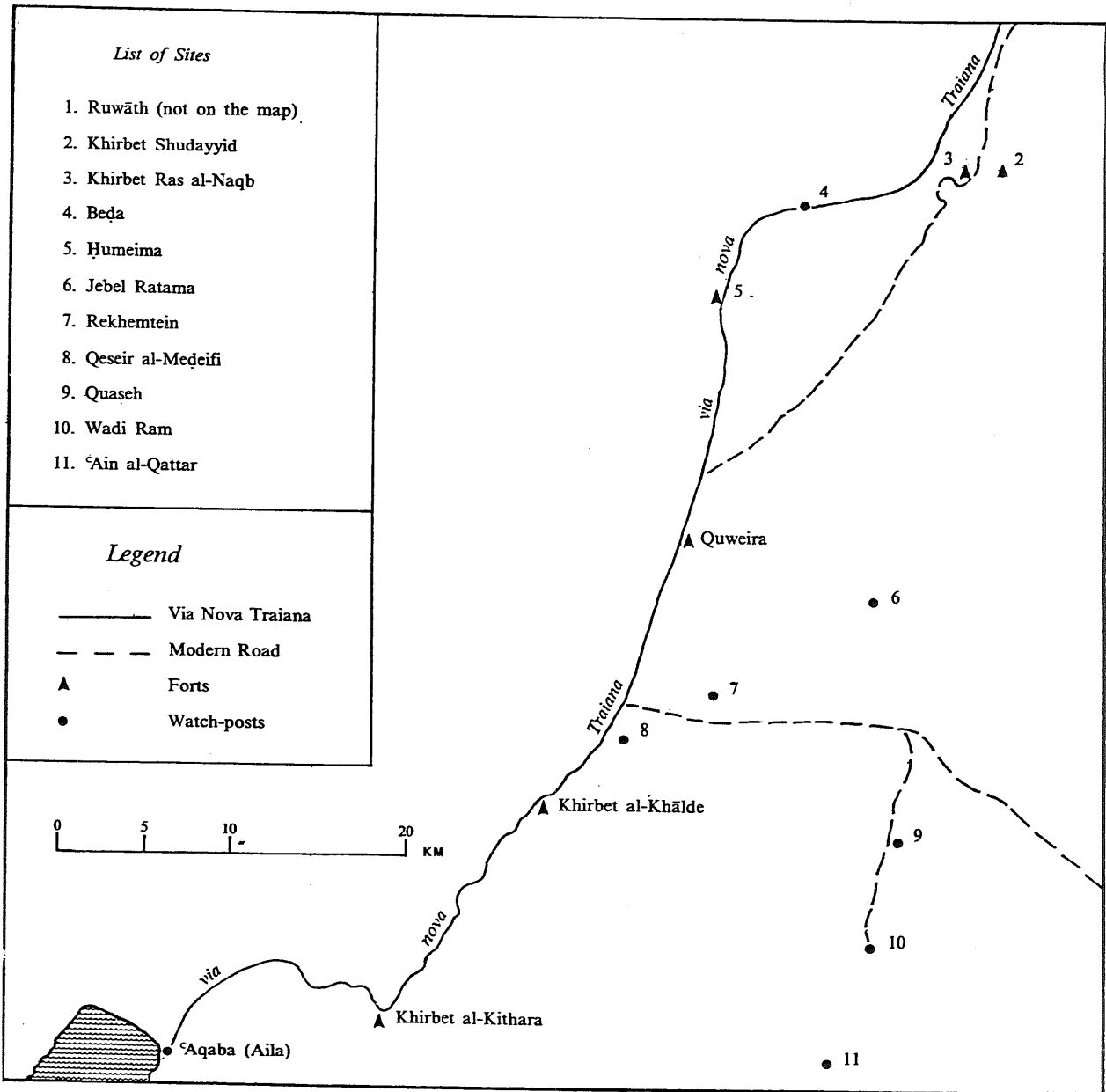
With the exception of Ruwāth all of the sites selected for the survey were in the Hisma desert. This area extends from the al-Shera escarpment in the north to the borders of Saudi Arabia in the south, and stretches west to the Wadi 'Arabah and east as far as al-Mudawwara. An excellent and breathtaking view of the region can be gained from the heights of Ras al-Naqb, where the extensive sandy plains and mud-flats some 2,000 feet beneath can be seen for miles, broken up only by majestic outcrops of reddish-brown and yellowish-white sandstone mountains, marked by centuries of weathering and erosion. Precipitation in this area averages

4.G. L. Harding, *Some Thamudic inscriptions from the Hashimite Kingdom of the Jordan* (Leiden, 1952).

less than 100 mm. per annum and at Wadi Ram less than 40 mm. As a consequence, agriculture is drastically restricted, although bedouin could be seen working in the fields in a number of places during our visit.

The procedure in the examination of the sites was fourfold. The architectural and physical features of each military structure were first studied and carefully recorded. Secondly, ceramic and surface finds were collected for analysis later in Amman at ACOR. Some 1,113 sherds were taken from 11 different sites with approximately a hundred of these being retained for their diagnostic value. The number of sherds collected from each site depended on the circumstances. From those rich in surface finds like Humeima, only a sample was taken; at other sites like 'Ain al-Qattar and Quaseh in the Wadi Ram, where lengthy combing of the area yielded only a few sherds, every piece was carefully kept. Thirdly, a topographical analysis was made of the environs of each site to determine the sources of water supply for the settlement as well as the strategical relationship the structure may have had to adjacent forts and watchtowers in the *limes* system. Finally, a search was made among the ruins, nearby boulders, and the mountain sides of the vicinity for any inscriptions or drawings which might provide additional evidence of the occupants of the site. Of primary interest were the pre-Islamic Thamudic graffiti, several hundred of which G. Lankester Harding had copied in exemplary and meticulous fashion from the soft sandstone surfaces of the mountains in Wadi Ram and elsewhere in the Hisma more than thirty years ago.<sup>4</sup> Although these are generally

# NABATEAN-ROMAN MILITARY SITES IN THE ḤISMĀ



interpreted as the product of caravans and cameleers engaged in commercial traffic, the Thamudic tribes are also known to have served as auxiliary forces in the Roman army from the third century into Byzantine times.<sup>5</sup> Traces of their graffiti in proximity to any of the military structures in this region may then be understood as possible evidence that they had garrisoned the watchposts which guarded the routes and valleys which intersected the *via nova*.

The purpose of this report is to summarize briefly the results of the survey and make some tentative historical observations of their importance for our knowledge of the Nabatean/Roman/Byzantine pattern of defense in southern Jordan. A later publication will present in detail the ceramic evidence and surface finds of each site with a complete analysis of the related literary and documentary material. It should also be stressed that a fully comprehensive survey of the Hismā is a still needed, a study similar to that produced for the Wadi Ram in recent years.<sup>6</sup> It is hoped that this survey, far from exhaustive, may serve as the stimulus for such an enterprise in the near future.

### Catalogue of the Sites

5. See my study of "The Saracens and the Defense of the Arabian Frontier," *Bulletin of the American Schools of Oriental Research* 299 (1978) 1-26.

6. Besides the survey of Kirbride and Harding, there have been a number of other investigations of the Wadi Ram. See Diana Kirkbride, "Le temple Nabatéen de Ramm. Son évolution architecturale," *Revue Biblique* 67 (1960) 65-92 and "Chronique archéologique," 230-239; N. P. Stanley Price and A. N. Garrard, "A Prehistoric Site in the Rum Area of the Hisma," *ADAJ* 20 (1975) 91-93; and E. Borzatti von Löwenstern and G. Pinna, *Wadi Rum* (Milan, 1977). In spite of these efforts, mostly

Listed below are the sites included in the survey with a brief description of the nature of the ruins, a tabulation of the ceramic and surface finds, and occasionally a few explanatory comments and remarks. The abbreviations used are as follows: E - early; L - late; UD - undetermined; B - Bronze; Ir - Iron I; Ir<sup>2</sup> - Iron II; Nab - Nabatean; R - Roman; Byz - Byzantine; Mam - Mamluk. As much as possible, the system of Parker has been retained for the sake of convenience and comparison.

1. *Ruwāth*. These ruins were in a jumbled state, encroached upon by the modern settlement. Ceramic sample 105; tabulation - 8 EB, 1 UD perhaps Ir<sup>1-2</sup>, 1 Nab, 14 Byz, 38 Mam. This site is located about 20 km. north of Shobak on the road to Tafilah and just about 3 km. southeast of Buseirah (ancient Bosra, the capital of the Edomites). Although not in the Hisma, the site was included in the survey because of its proposal as the location of Robatha, an unidentified garrison of *Palestina salutaris* or *tertia* known from Byzantine sources.<sup>7</sup> It was of interest also because of the similarity of the ancient and modern names with the Thamudic tribe, Rubatu/Robathoi.<sup>8</sup> Although some Byzantine directed towards pre-historic and pre-Roman remains, it may still be said that "The Roman desert patrol is more clearly visible in the north than in the south" of the province, as was observed by G.W. Bowersock in his important study, "A Report on Arabia Provincia," *Journal of Roman Studies* 61 (1971) 219-242, at 241.

7. As suggested by R. Hartmann, "Materialien zur historischen Topographie der Palaestina tertia," *Zeitschrift des Deutschen Palaestina-Vereins* 36 (1913) 100-112 and 180-198 at 183-184.

8. See Graf, *BASOR* 229 (1978) 10 for the references and bibliography.

pottery was found, the results must be regarded as inconclusive.

2. *Khirbet Shudayyid*. A badly ruined fort previously surveyed by Glueck. Ceramic sample 92; tabulation - 17 UD perhaps Ir<sup>1-2</sup>, 6Ir<sup>2</sup>, 23 Nab, 2 UD; hills below fort to the south - 19 UD perhaps Ir<sup>1-2</sup>, 3 Ir<sup>2</sup>, 15 Nab, 2 LR, 1 Modern, 4 UD, and 1 broken flint.

3. *Khirbet Ras al-Naqb*. A settlement just west of Shudayyid which was designated by Glueck as Fuweilah. Ceramic sample 87; tabulation - 19 Nab. Most of this settlement was destroyed by British road work during World War II; the old fort, once located near the modern rest station, was used as a stone quarry during the same operations, and nothing remains.

4. *Beda*. A settlement just west of Qa' al-Naqb on the desert track leading to Humeima; the broken milestones and stretches of the pavement of the old Roman road are still visible, (Pl. XLV) although the aqueduct leading from 'Ain al-Qana to the valley area observed by Musil and Frank was not sighted. Ceramic finds 50; tabulation - 12 Nab.

5. *Humeima*. The ruins of the military camp and settlement are still clearly visible; large reservoirs are located both inside and outside the walls of the fort. (Pl. XLVI,1). Ceramic sample 357, tabulation - 78 Nab, 34 LR, 49 Byz. A small fragmented piece of the base of a Roman glass bottle and traces of a badly deteriorated and indecipherable inscription were found inside the fort walls. (Pl. XLVI,2).

6. *Jebel Ratama*. A small caravan post located about 10 km. east of Quweira; no

9. R. Savignac and G. Horsfield, "Le Temple de Ramm," *Revue Biblique* 44 (1935) 245-278, esp. 258-261, discovered a Latin inscription and a Roman bronze coin in the temple area, perhaps to be dated

traces were found of the makeshift observation post observed by Harding. Ceramic finds 13; tabulation - 1 UD perhaps Ir<sup>1-2</sup>, Ir<sup>2</sup>, 11 Nab.

7. *Rekhemtein*. A small watchpost located just north of several small mountains with a clear view of the plain leading to Quweirah. Ceramic sample 79; tabulation - 29 Nab. Thamudic inscriptions have been recorded at nearby Hadbet al-Hamra, but only some (Thamudic?) animal drawings appear at Rekhemtein.

8. *Qeseir al-Medeifi*. Two small watchposts were observed by Harding at the junction of the Wadi Mersed and Wadi Yitm; the one in the plain was not located and the ruins of the other have been used in a new structure on the small hill at the junction. Ceramic sample 117; tabulation - 31 Nab, 2 LR.

9. *Quaseh*. A small watchpost located near the old rest house in the Wadi Ram. Ceramic finds 15; tabulation 14 Ir<sup>2</sup>, 1 Nab.

10. *Wadi Ram*. An ancient settlement located just west of the modern police post; previous excavations at the site had revealed Roman remains and perhaps some Byzantine pottery.<sup>9</sup> Ceramic sample 191; tabulation - 1 Ir<sup>2</sup>, 63 Nab. The area abounds in Thamudic inscriptions, most of which have been recorded by Harding.

11. *Ain al-Qattar*. The small watchpost referred to by Harding at the southern end of the valley was not discernible in a determined search of the area although a circle of stones, one of which with strange markings, was discovered nearby. Ceramic finds 2; tabulation - 2 Nab.

to the time of Marcus Aurelius in the second century. For possible Late Roman/Byzantine sherds from Wadi Ram, see Kirkbride, *Revue Biblique* 67 (1960) 71-73.

## Historical Observations

The following sketch of the occupational history and developments in the Hisma during the Roman period must be considered provisional as any conclusions based mostly on surface evidence are somewhat precarious and hazardous. Just how misleading arguments from silence can be is well illustrated by the results of two sites of the survey where literary and epigraphic evidence confute the ceramic finds. The first is Humeima, familiar from later Arabic sources as an Abassid center, where no Islamic sherds were picked up from the extensive settlement. The other is Wadi Ram, where the pottery finds which indicate the absence of any Roman presence are belied by the evidence of previous excavations at the site. Although these words of caution about the interpretation of any gaps in occupation cannot be emphasized too strongly, there are certain positive implications about the survey which can be highlighted.

During the period of Nabatean control of the Hisma, a number of forts and watchposts appear to have been constructed to protect the settlements in the region and caravan traffic coming from North Arabia and 'Aqaba to the center of the kingdom at Petra. The occupation of this desert area is a tribute to Nabatean ingenuity and engineering skill in conserving the small amount of rainfall and water which exists in the region, but is perhaps also attributable to their predecessors in southern Jordan. At least the small amounts of Iron II Edomite ware found at Wadi Ram, Quaseh, and Jebel Ratama suggest that the desert tracks leading to the plateau were previously utilized if not settled. At any rate, by the end of the first century the Nabateans had established a somewhat loose but

impressive defensive system in the Hisma which would later form the basis for the Roman *limes* along the southeastern frontier of the empire.

After the annexation of Arabia in 106, a major road was constructed called the *via nova Traiana* which connected the important port of Aila on the gulf of 'Aqaba with the capital of the new province at Bosra near the borders of Syria. In the Hisma, this route joined together a number of the Nabatean fortified settlements and caravanseries into roadstations, each separated by about 20 km. In addition to Khirbet al-Kithara, Khirbet al-Khaldé, and Quweira, all of which Parker's survey indicated were occupied early in the second century, Humeima and the small watchpost at Qeseir al-Medeifi may now be added to the Nabatean sites incorporated into the defensive system. On the other hand, the more remote and outlying Nabatean outposts at Rekhemtein and in the Wadi Ram do not appear to have ever been garrisoned by the Roman military. What is significant about these results is that there is then no evidence of any later effort to extend or expand the frontier defense into the desert east of the Trajanic road. In contrast to the north of the province, the military reforms of Diocletian and Constantine did not even witness the construction of any new forts in the area. Throughout Roman and Byzantine times the fortified posts along the *via nova* apparently constituted the essential framework of the *limes* system in the Hisma.

This does not preclude the control of the desert east of the Trajanic road by the Nabateans themselves, perhaps even as regular *auxilia* of the Roman army. It seems increasingly clear that they played such a role in the caravan traffic through the desert regions

of the Sinai and Egypt in the second and third centuries.<sup>10</sup> Since our understanding of the chronology and development of Nabatean pottery is also still in its elementary stages, it is possible that some of the Nabatean sherds collected in the vicinity of Wadi Ram, Rekhemtein and Jebel Ratama may represent similar activity in the Hisma during the same period.<sup>11</sup> In addition, if the conclusions drawn from the Thamudic graffiti scattered along these routes is correct, the Arab tribes of the Hejaz gradually replaced the Nabateans as the guardians and protectors of caravan traffic in this area during the third century.

This utilization of indigenous forces for the defense of the more desolate regions of the frontier was the characteristic pattern elsewhere along the desert borders of the empire in North Africa and the Near East. Nevertheless, it may still be argued that outlying posts in the Hisma east of the *via nova* existed in Roman and Byzantine times. Although this is in my opinion less likely, neither view can be substantiated until the region has been subjected to a more thorough and comprehensive investigation than it has thusfar received.

David F. Graf  
The University of Michigan  
Ann Arbor

10. For Egypt see E. Littmann and D. Meredith, "Nabatean Inscriptions from Egypt," *London University, Bulletin of the School of Oriental and African Studies* 15 (1953) 1-28 and 16 (1954) 24-46. Although caravan traffic, mining activities, pastoral migrations and pilgrimages may explain the majority of the Nabatean inscription in the Sinai, some may have been produced by Nabatean soldiers in the Roman army on service in the area. See G. W. Ahlström, "A Nabatean inscription from Wadi Makatteb, Sinai," in *Ex orbe religionum, studia Geo Widengren, part i; Studies in the History of Religion* vol. 21 (Leiden, 1972) 323-331 and A. Negev, *The Inscriptions of Wadi Haggag, Sinai*, in *Qedem, Monographs of the Institute of Archaeology* 6 (Jerusalem, 1977), esp.

62-67

11. For recent treatments of the sequence of Nabatean pottery see P. J. Parr, "A sequence of pottery from Petra," *Near Eastern Archaeology in the Twentieth Century*, ed. J. A. Sanders (Garden City, New York, 1970) 348-381; Philips C. Hammond, "Pottery from Petra," *Palestine Exploration Quarterly* 105 (1973) 27-49; and A. Negev and R. Sivan, "The Pottery of the Nabatean Necropolis at Mafsis," in *Rei Cretariae Romanae Fautorum Acta XVII XVIII* (1977) 109-131. A general discussion is provided by K. Schmitt-Korte, "Die bemalte nabatäische Keramik: Verbreitung, Typologie und Chronologie," in *Petra und das Königreich der Nabatäer*, ed. M. Lindner (Nürnberg, 1974) 70-93.





## A ROMAN FAMILY TOMB

### AT ES - SALT

by

Adnan Hadidi

This tomb was discovered accidentally at the end of April, 1978, while workmen were leveling ground for a new sewerage plant in the Wadi Shu'eib, 3 km. west of the city of es-Salt, situated in the Transjordanian tableland east of the Jordan Rift Valley at a latitude of about 30°03' N and a longitude of about 35°42' E.<sup>1</sup> The find was reported immediately, and the Department of Antiquities took over excavation of the tomb and its adjacent vicinity; twenty labourers were employed to lift and carry, and the actual clearance and recording was done by Mr. Ali Sa'idi, Inspector of Antiquities of the Balka Governate of which es-Salt is the center of administration.<sup>2</sup> The plans and sections partly done by Miss Madiha Hafez, were checked, perfected, redrawn with the necessary profiles by Prof. H. Kalayan, to whom the writer wishes to express sincere thanks and appreciation.

The tomb and its contents were found in perfect state of preservation; stones fallen when the bulldozer struck a wall have been marked and reconstructed, and the sewerage plant structure was modified to make room for this new acquisition in Jordan's open-air archaeological museum.

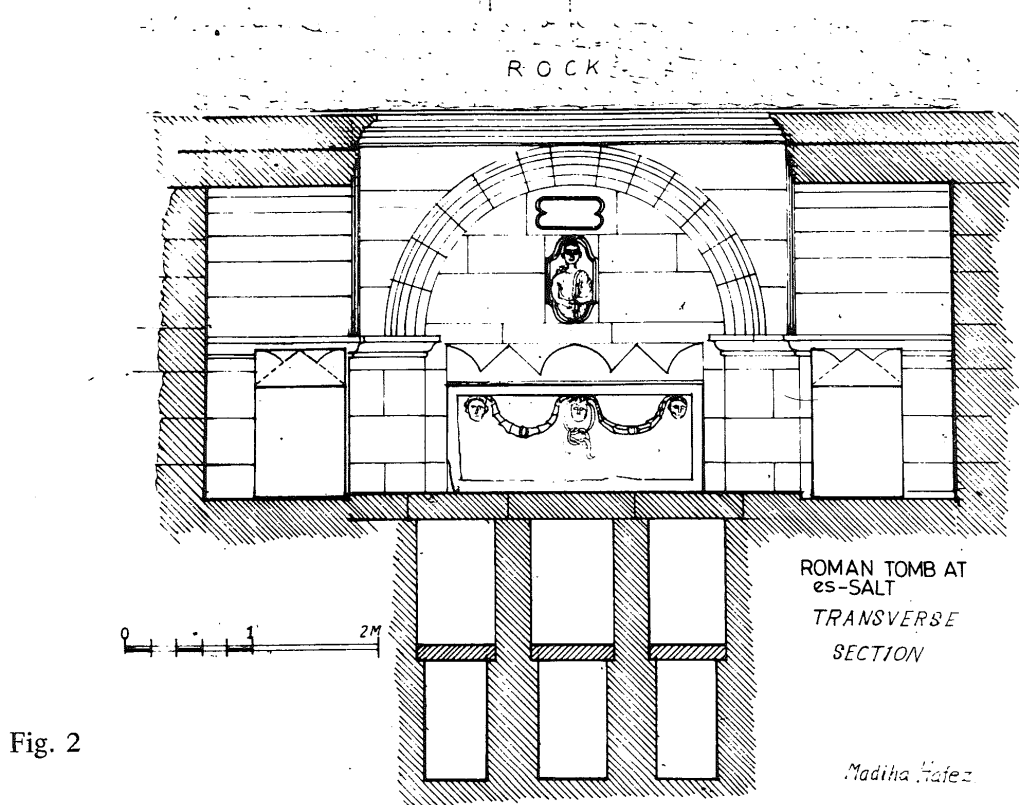
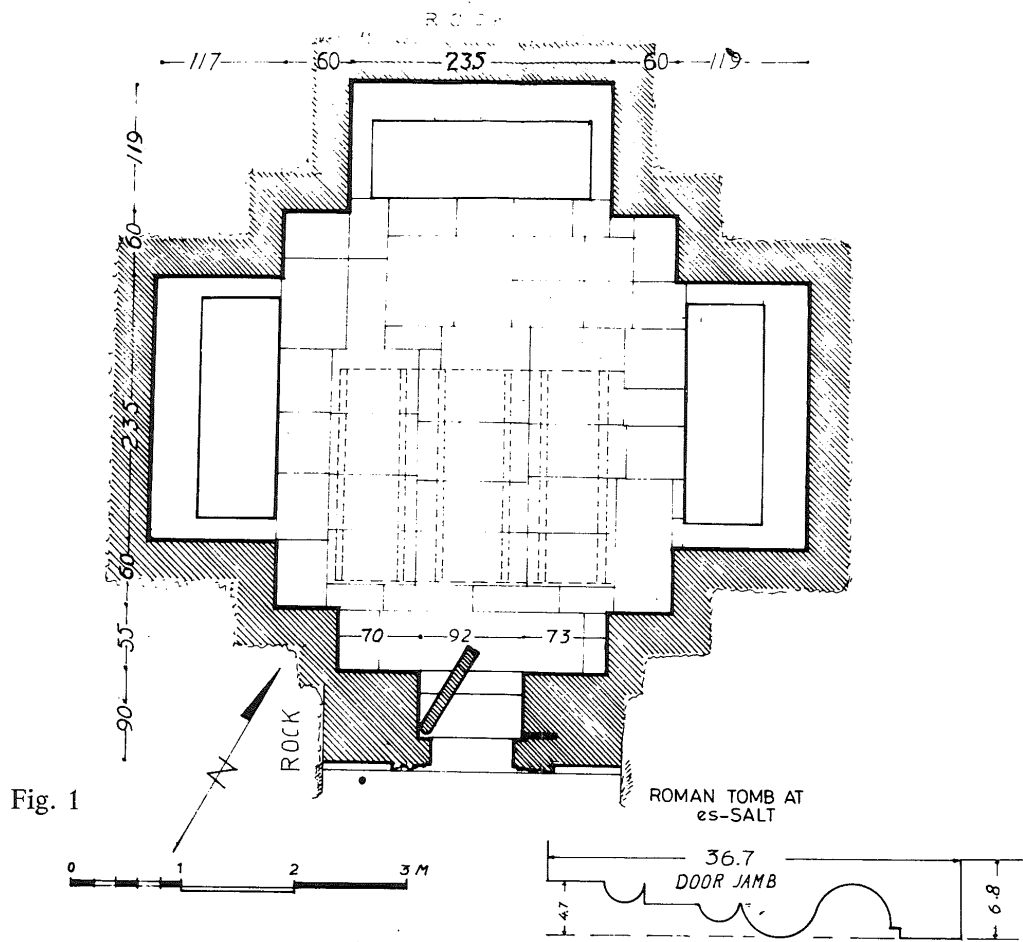
#### Description of the tomb:

1. *Archaeological Map of the Hashemite Kingdom of Jordan Sheet 1*, Amman, Scale 1 : 250,000, Department of Lands and Surveys of Jordan, 1949.
2. The excavation team also included: Hussein Qandil, Sa'd Hadidi, Madiha Hafez, architect and draughtsman, B. Darakidjian and Salem Da'ja,

The tomb complex consists of a main square hall, approximately 3.50 x 3.50 m., with a narrow doorway in the south with the stone door still in position (Fig. 1; Pls XLVII, XLVIII). The lintel and jambs of the door had a simple moulding. Centered above the lintel is a square stone cut through in the "Whirling wheel" motif, 0.50m. in diameter, apparently to allow for ventilation, but may also have a religious significance with an apotropaic purpose.<sup>3</sup> On each of the remaining three sides of the main hall is an arched chamber, approximately 2.35 x 1.80 m. Contained within are three sarcophagi in addition to six burial chambers beneath the floor of the main hall (Figs. 1.2 & 3; Pls. XLIX, L,LI). The main hall, sarcophagi and burial chambers contained many objects including pottery, glass bottles and bracelets, jet beads and metal bracelets, jewelry and coins. Particularly unusual features of the sepulchre are the two-story arrangement of the graves, six in all with covering slabs, and the stone-carved relief of a man in the main north chamber, who must have been the *pater familias* or head of the household buried there (Fig. 2; Pl XLIX). Above the sculpture is a carved *tabula ansata* 0.60 x 0.25 m., left without inscription. It has a simple moulding and indeed an unusual shape for this

Photographers. Mrs. Hanan Kurdi-Bisha did the classification, preliminary description and registration of the objects. The writer wishes to thank all of them for their fine performance.

3. Cf. Avi-Yonah, "Oriental Elements in Palestinian Art", *QDAP*, Vol. XIV, p. 73.



period. The sculptured relief (Pl. XLIX) has a rectangular frame 0.40 x 0.66m., with simple moulding, arched on the top and below and two straight sides. The image itself represents a middle age man in frontal position, half draped and holding a scroll in his left hand. His face is clean-shaven except for a thin moustache and narrow thin beard. The eyes and mouth have been emphasized by deep narrow chiseling. The ears are not worked in detail, the hands and fingers are placed unsymmetrically, giving a coarse and slightly sinister expression. This sculpture is a typical provincial version of a treatment commonly to be seen in imperial busts of the first half of the third century, and which first appeared in portrait sculpture under the successors of Septimius Severus.<sup>4</sup>

The whole tomb complex appears to have been originally a natural cave, which had been prepared by chiseling before the various chambers, walls and arches were built up with very well dressed masonry, carefully worked to shape and laid dry. Judging from the style and technique of the tomb and its contents, it must have been in use during the third and fourth centuries A.D. One bronze coin was found in the tomb. It belongs to Constantine I ( 307-324 A.D )<sup>5</sup>.

#### **Condition of the contents, Mainhall.**

As mentioned above the tomb and its contents were found in perfect state of preservation. The main hall which was covered with debris and fallen stones as a result of the damage caused by the bulldozer to the south arch over the doorway of the tomb was cleared and restored. At the corner between the main

north chamber and the west chamber was found a collection of pottery objects carefully laid down on the floor. It consisted of a carinated tall flask with a broken base, a globular ribbed cooking-pot and a fragment of a water jar (Pl. LIII). The floor was paved with carefully shaped rectangular slabs (Pl. XLIX). The stone door 0.70 x 0.80 m. on the south end of the main hall was slightly ajar, and there was no trace of the wooden bolt which originally closed it from the outside (Pls, XLVII, XLVIII). The arch with simple mouldings over the doorway on the south side of the main hall is integral with the structure and carried on piers.

**The side chambers.** The three vaulted masonry chambers flanking the main hall on the north, east and west (Fig. 1), were found to contain three stone sarcophagi, each measuring 2 x 0.70 x 0.80 m. Each of the lids which are similarly decorated with pedimental arrangement, consisting of carved triangles and half circles, measures 2 x 0.70 x 0.30 m. (Pls. XLIX&L). The southern long side of the sarcophagus in the main north chamber is ornamented with three frontal male masks between suspended stylized garlands (Fig. 2; Pl. XLIX). Inside the coffin were found two intact skeletons of a male and female, but disintegrated and crumbled away as soon as they were touched. A signet ring (Pl. LIV), a pair of gold earrings and a pendant were also discovered.

The second sarcophagus in the east chamber has its west long side ornamented in relief with four columns surmounted by a pediment and flanked on each side by a two-handled jar

4. Cf. E. Strong, *La scultura romana da Augusto a Costantino*, Firenze, 1923-6, p. 398.

5. Cf. A. Spijkerman, *Cafarnao III*, p. 67, pl. 3: 1-5.

For similar tombs of the same period cf. QDAP, II, 4 pp. 182f; 170f, 175f.; VI, 1, pp. 54f.; VIII, 1&2, p. 38f.; p. 45f., p.64f.; XIV, p. 81ff.

placed on an altar stone, and connected to the outer columns of the façade with suspended stylized garlands (Fig. 3; Pl. L). It contained one skeleton, several soft gold leaves and seventeen black semi-precious diamond shaped stones (Pl. LV).

The third sarcophagus in the west chamber has its east long side ornamented in relief with two suspended stylized garlands interlaced in the center (Pl. L). Inside this coffin was found a signet rings, pottery lamp and a small ribbed juglet (see inventory below).

**The graves.** Six graves were sunk into the floor of the main hall and vertically superimposed, the cover-stones of the lower three forming the floor of the upper. They are totally built of carefully shaped masonry. The lower three graves have smaller dimensions than the upper.

For practical purposes, they are referred to in the plan from east to west as 1B, 2B, 3B (Fig. 1). The middle grave, 2B is 1 x 0.50 x 0.90m., while each of the outer graves, 1B and 3B, is 1 x 0.46 x 0.90 m. All three graves contained bones of adults and children mixed together without any consistent orientation. In grave 2B, about 49 skulls were counted. Numerous objects of ornament were also found and are described in the following inventory below.

The upper three graves are also numbered from east to west, 1A, 2A and 3A. Grave 2A measures 1.20 x 0.66 x 1.10m. Each of the outer graves is 1.20 x 0.60 x 1.10m. All three graves contained two or more burials, disposed without consistent orientation (Fig. 2; Pl. LI). More bones from burials were found scattered in the main hall between the sarcophagi and the walls of the chambers.

ROCK

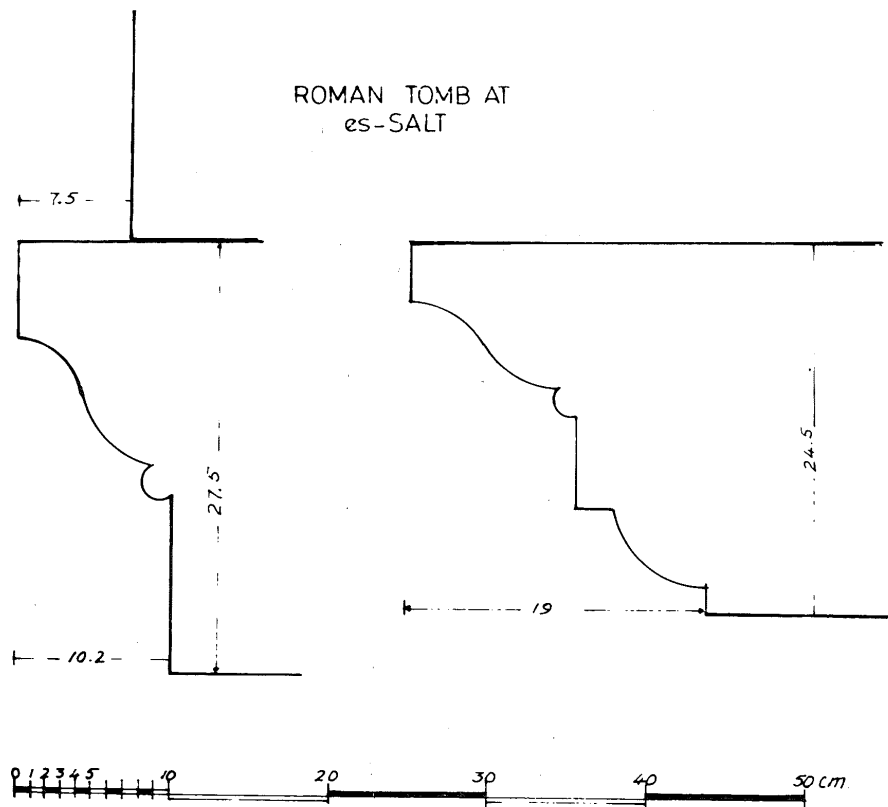
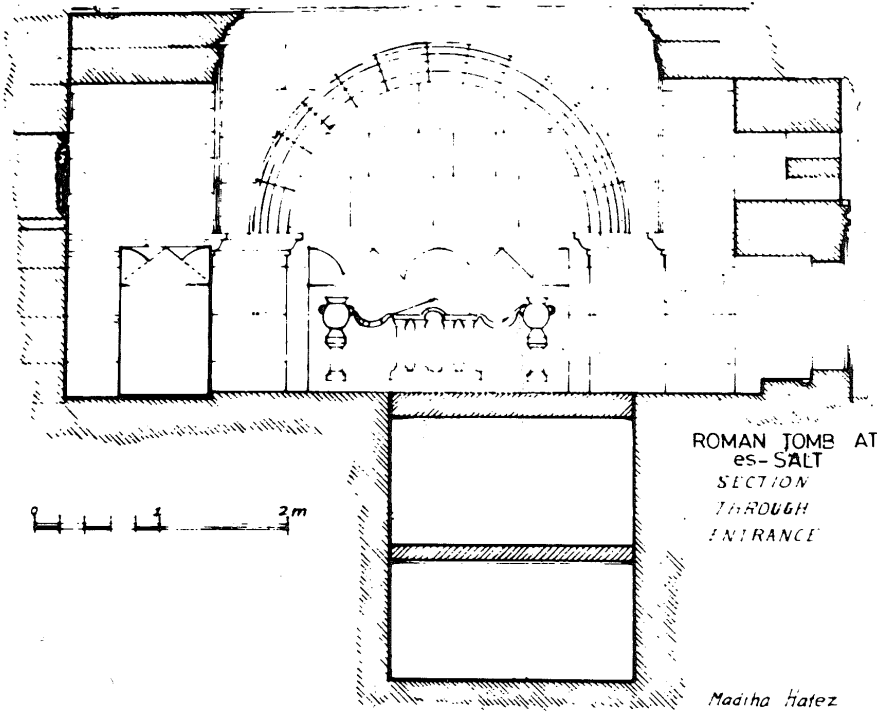


Fig. 3

**Inventory**

<b>Exc.No.</b>	<b>Plate</b>	<b>Description</b>	<b>Burial</b>
47	LIII	Pottery flask, long neck, carinated, broken base and handle	Main hall
48	LIII	Pottery cooking-pot, two handles, ribbed globular body. Intact. Ht. 17cm. Diam. of rim 9.5 cm.	Main hall
46	LIII	Pottery juglet, high stump base, one handle, ribbed body. Ht. 6.5 cm.	West Sarcophagus
5-7	LIII	Three pottery lamps, pear-shape body, circular nozzle, wide filling hole; moulded and decorated with stylized floral design.	Main hall
8	LIII	Twin glass bottle, one top handle in addition to two side smaller handles. Probably used as Kuhl tube. Ht 10.5 cm. (see <i>QDAP</i> , IV 4, Pl. LXXXV, 3; VI, 1. Pl. VI).	East Sarcophagus
9	LIII	Small glass pot, several intertwined handles around shoulder. Ht.6.5 cm.	2 B
10	LIII	Small glass pot	2 B
59	LIV	Bronze coin of Constantine I, Obv. Laur. head of emperor, inscr. around 1. IMPCONSTANTINVS <b>PFAVG</b> Rev. Personification of the Sun, radiate and standing l., holding globe; inscr. around 1. SOLIINVICTOCOMITI; in ex. SC  (For similar types see: A. Spijkerman, <i>Cafarnao III</i> , P. 67, Pl. 3, 1-5)	Main hall

1	LV	Gold pendant with small chain; originally containing a piece of precious stone or coloured glass in a rope pattern frame; the four hanging wires probably had a glass or paste beads on them Diam. of central disc: 2 cm.	West Sarcophagus
21	LV	Pierced bone disc.	North Sarcophagus
2	LV	Pair of gold earring with gold wires projecting from either side of the frame: Diam. of disc: 1.8 cm.	North Sarcophagus
3	LV	Gold single ear-ring	West Sarcophagus
3	LV	Gold ring with precious stone in the bezel	West Sarcophagus
4	LV	Soft gold leaves and 17 diamond - or lozenge - shaped pieces of black glass	East Sarcophagus
16	LV	Two pairs of gold ear-rings. Daim. 1 cm.	1 B
17	LVI	Various types of beads (glass, bone, stone, mother-of-pearls); one in form of miniature pot.	1 B
31	Not illustrated	Black small beads	2 B
32	Not illustrated	Black glass, blue paste with brown sard amulet in center.	2 B
33	"	Green chalky stone in form of a miniature frog; pierced horizontally	2 B
11-12	"	Two bracelets of twisted bronze	1 B

13-15	LVI	Fragments of bracelets of twisted bronze	I B
18-20	Not illustrated	Bracelets and fragments of bracelets of twisted bronze and iron wire.	I A
37	"	Twisted bronze and iron wire bracelets	I B
39	LVII	Small bronze bracelets	3 A
40	LVII	Flattened bronze bracelet	3 B
41	LVII	Glass amulet in form of a human bust	3 B
26	Not illustrated	Fragments of corroded twisted bronze and iron wire bracelets	I B
43	Not illustrated	Two bronze child rings	3 A
44-45	LVII	Twisted bronze bracelets	3 A
21	Not illustrated	Fragments of corroded bronze & iron wire bracelets	I A
28	LVIII	Glass bracelets	2 B
29	LVIII	Twisted glass bracelet	2 B
30	Not illustrated	Twisted glass bracelets	2 B
22-24	"	Various beads	I A
36	LVIII	Fragments of jet beads (see <i>QDAP</i> , XIV, p. 95, Pl. XXXI).	2 B
42	LIV	Bronze ring with a carnelian engraved bezel in a hollow mount. The engraved scene represents an owl in the middle with two standing deities on the sides.	2 B



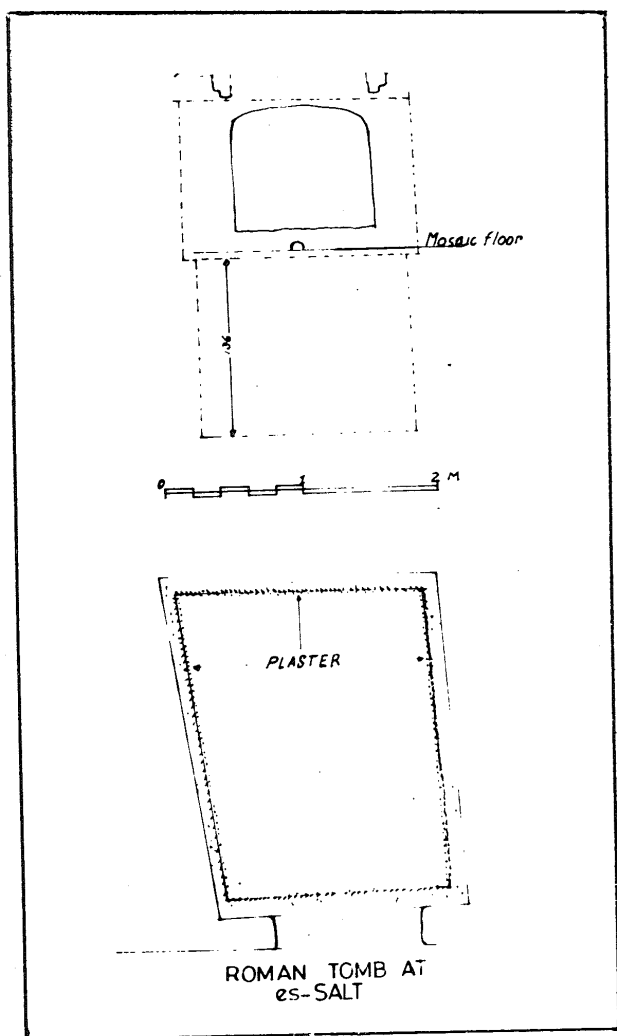


Fig. 4

### The olive press

An olive press adjacent to the tomb on the west side was also discovered during clearance work carried out at the site. It was located inside a natural cave which may have been originally used as a burial place (Pl. LII).

The cave had been prepared similarly by chiseling and excavating several loculi for burials before it was used as an olive press. Two olive crushers are situated in the main hall. Each one is made of a large carefully carved circular stone basin or mortarium (Pl. LI). Originally an axle penetrated the central hole of the orbis and was balanced on an upright support in the middle of the mortarium. This type of olive press was known by Roman agricultural writers as *trapetum*, an olive crushing machine using two crushing stones (orbis), matched in size and contained in a large, carefully carved stone basin (mortarium).<sup>6</sup>

### The water reservoir

A water reservoir was also discovered adjacent to the tomb on the east side (Fig. 4; Pls XLVII - LII).

The site was originally a natural cave which had been prepared by chiseling before the various walls were partly built with cherts and mortar. The walls were carefully plastered and the doorway on the south had three steps leading inside. On the right hand side of the doorway, are traces of a channel carved in the rock which led rain water from the slopes of the hill above. The whole area in front of the reservoir, the tomb and the olive press was originally paved with medium size plain white mosaic stones (Pl. XLVII).

Adnan Hadidi

6. Cf. H.A. Forbes & L. Foxhall, "The Queen of all Trees", *Expedition*, University of Pennsylvania, vol. 21, No. 1 (1978). PP. 37ff. For a

similar type in Amman see: F. Zayadine, "Excavations on the Upper Citadel of Amman", *ADAJ*, P. 20 Pls. VII, 2; X,1.



## RECHERCHES AU QASR EL 'ABD A 'IRAQ AL AMIR

Par  
E. Will

L'étonnant édifice dit Qasr el 'Abd à 'Iraq al Amir a, depuis sa redécouverte par les voyageurs et archéologues du début du 19<sup>e</sup> siècle, toujours retenu l'attention des savants et donné lieu à une série de relevés, de sondages et de restitutions. Mais le monument conservait son mystère, comme il était trop évident. Aussi la Direction Générale des Antiquités, donna-t-elle en 1976 son accord, en engageant en même temps ses moyens, à une reprise de l'étude de ce monument, étude qui associe l'Institut français d'archéologie du Proche-Orient, représenté sur place par l'architecte F. Larché, et le personnel de la Direction Générale sous le contrôle de M.F. Zayadine. Le couronnement de cette entreprise considérable sera le redressement de certaines parties de l'édifice qui retrouvera ainsi une partie de son ancienne splendeur. Il convient de remercier et de féliciter la Direction Générale, et en particulier l'actuel directeur, le Dr. Adnan Hadidi, des décisions qu'elle a prises et de l'aide qu'elle a apportée et apporte toujours à l'exécution d'un projet d'envergure, qui rendra à la Jordanie un monument unique de son espèce.

Le programme des travaux commencés en 1979 comportait deux volets, un volet architectural et un volet archéologique. D'un côté, il s'agissait par l'étude des murs encore en place complétée par celle de la masse des blocs tombés, d'aboutir à retrouver

l'image primitive du monument. Cette opération est menée depuis trois ans sous la direction de F.Larché<sup>1</sup>. Elle a été plus longue que prévu en raison du grand nombre des blocs conservés et en raison surtout de leur volume et de leur poids (le nombre des blocs dont le poids va de 5 à 25 tonnes est considérable): sans l'intervention de moyens techniques puissants - heureusement engagés par la Direction Générale - l'opération était pratiquement impossible; elle touche aujourd'hui à sa fin. Les résultats sont dès à présent des plus satisfaisants. Pour ce qui est des murs externes et des deux massifs nord et sud, la restitution de l'état primitif est assurée dans le détail au niveau du rez-de-chaussée; elle a fait de considérables progrès pour ce qui est de l'étage pour lequel les données sont plus lacunaires et plus incertaines. Il ne serait guère utile actuellement de donner un aperçu des conclusions présentes; l'exposé serait par la force des choses sommaire ou demanderait des longueurs incompatibles avec un compte-rendu provisoire. Il suffira de dire ici que les restitutions proposées antérieurement et largement diffusées, notamment celle de C.Butler, sont insoutenables. Au reste, comme on peut penser que d'ici la fin de l'année cette partie du programme aura pu être pratiquement achevée, mieux vaut attendre la publication définitive.

D'un autre côté, un programme strictement archéologique a dû être prévu pour l'intérieur

---

(1) Un compte-rendu provisoire de la première campagne a été publié dans les *Comptes-rendus de l'Académie des Inscriptions et Belles-Lettres*,

1977, pp. 69-85. On y trouvera l'essentiel de la bibliographie.

du monument, en particulier pour la partie qui s'étend entre les deux massifs nord et sud. Cette partie était en effet encombrée d'une accumulation de déblais et sillonnée de murailles diverses. L'existence en surface d'un état tardif - byzantin - était évidente. Les sondages pratiqués en 1962 et 1963 par l'archéologue américain P.Lapp n'avaient pas abouti à des conclusions certaines. C'est donc du problème de l'aménagement de l'intérieur qu'il sera question dans ce compte-rendu.

Les savants qui, au cours de plus d'un siècle, eurent l'occasion de s'occuper du Qasr el 'Abd ne manquèrent pas de présenter des restitutions de l'intérieur du monument; ainsi de Saulcy avec un plan de temple à trois nefs et à abside, ou aussi de Vogüé avec une petite esquisse qui illustrait la parenté présumée avec le temple de Jérusalem. Mais ce fut C.Butler qui, sur ce point comme pour la restitution de la façade, fit la loi pendant un demi-siècle et au-delà, non sans avoir hésité lui-même entre deux propositions qui ne coïncidaient pas sur tous les points, mais tenaient ferme à l'image de deux murs latéraux articulés sur leur face interne par une file de colonnes engagées.

Ces propositions étaient en fait scandaleusement téméraires les unes comme les autres, étant donné que les auteurs cités ne pouvaient dépasser dans leur examen de l'intérieur le dernier niveau conservé - bien plus élevé que le niveau du seuil du vestibule d'entrée admis comme niveau 0 - dernier niveau qui est de fait un ou le niveau byzantin.

P.Lapp de son côté était arrivé à une vue plus exacte des choses: il s'était rendu compte

de l'importance des niveaux byzantins; mais il se révéla par ailleurs comme complètement sous l'emprise des restitutions de C.Butler dans celles qu'il présenta d'abord dans le *BASOR* de 1963, plus récemment dans *l'Encyclopédie des sites archéologiques de la Terre-Sainte* (s.v. 'Iraq al Amir): on voit là une salle basilicale à trois nefs dont les colonnes sont implantées tant bien que mal sur les murs internes qui venaient d'être dégagés; on voit aussi toujours des demi-colonnes articulant les murs latéraux.

L'étude architecturale des murs externes a tout simplement balayé les restitutions de Butler. Il est apparu que pour les longs côtés la place des demi-colonnes était occupée par un vide, celui de sept grandes baies aménagées de part et d'autre. A l'intérieur, les nettoyages et les sondages entrepris au cours des trois dernières années ont complété ceux de P.Lapp et ont permis d'aboutir à une série de constatations indiscutables. Ce travail n'est cependant pas achevé.

P.Lapp<sup>2</sup> avait donc procédé à une demi-douzaine de sondages à l'intérieur du bâtiment. Il cherchait ainsi à résoudre le problème de la chronologie des cloisons internes dont l'existence et l'importance lui étaient apparues pour la première fois. Aussi bien ces sondages sont-ils placés contre ces cloisons internes; dans un cas seulement (II,2) le sondage allait du mur externe ouest à la cloison interne faisant face; mais, curieusement, la place choisie était celle où le mur externe s'était écroulé dans l'antiquité sous l'effet d'un puissant tremblement de terre. Autrement

---

(2) Voir surtout l'étude parue dans *BASOR* 171 (1963) sous la plume de Lapp et celle de son architecte Brett.

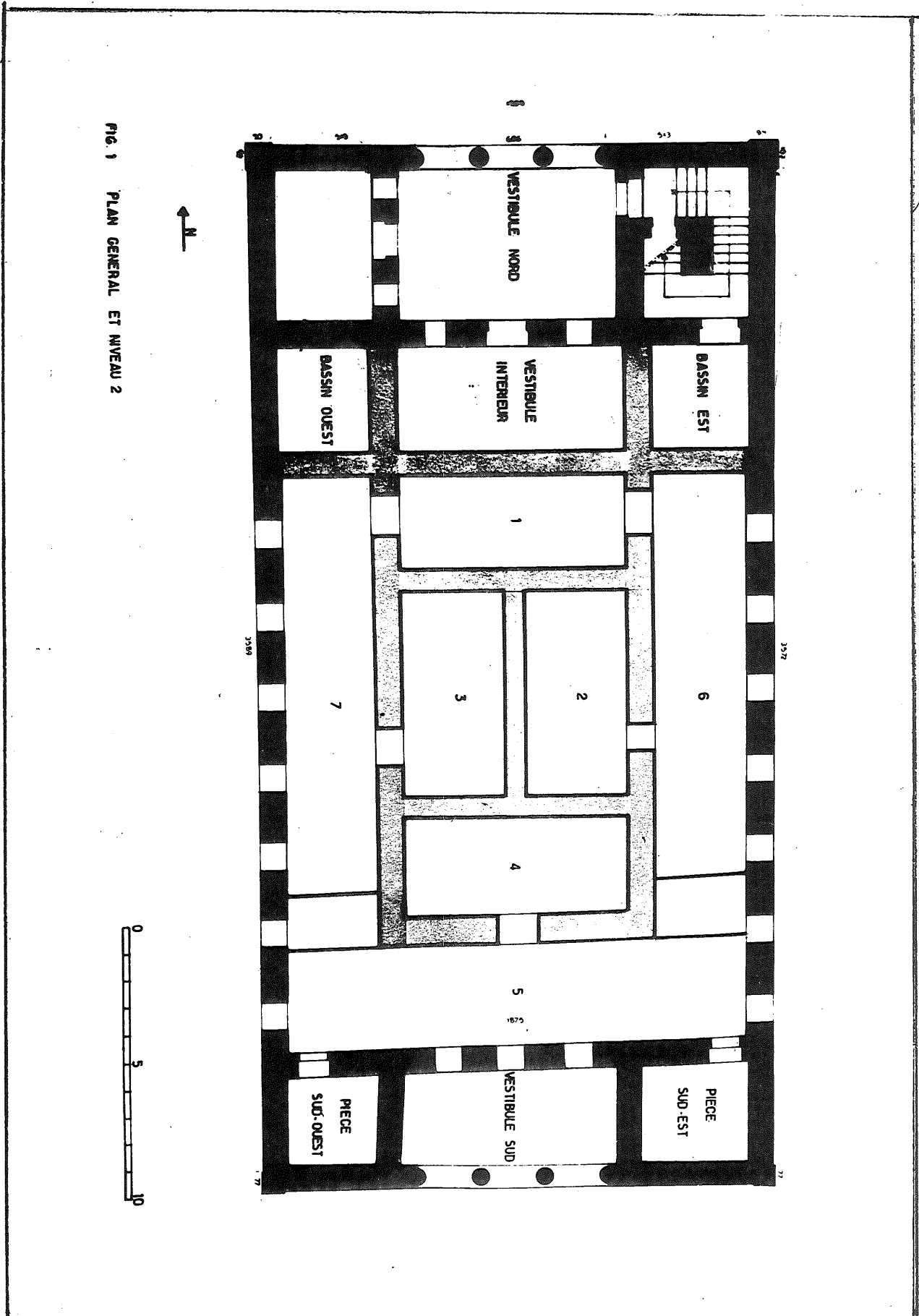


FIG. 1 PLAN GENERAL ET NIVEAU 2

dit, on n'y pouvait vérifier de quelle manière les couches conservées butaient contre le mur externe; or c'était précisément cette rencontre qui était capitale.

P.Lapp se trouva ainsi devant un double constat ambigu et difficile à interpréter. Voici, d'un côté, le constat de l'existence d'un "fill", d'un remblai uniforme dans tout l'édifice sur une épaisseur importante, si on le prend à partir du niveau 0 (de fait 1.64). Ce remblai occupe tout l'espace compris entre le réseau des cloisons internes et entre ces cloisons et les murs externes et selon Lapp ce remblai ne contenait jamais que des tessons byzantins, était donc byzantin dans son ensemble. Voici, d'un autre côté, dans l'étude des cloisons internes, la distinction établie par Lapp entre les fondations (toujours comptées à partir du niveau 0), les cloisons en élévation dans la partie engagée dans la masse du remblai et enfin ces mêmes cloisons dans leur partie dépassant le remblai (stratum I,II,II).

Se laissant guider en bon stratigraphe par la céramique, P.Lapp est arrivé aux conclusions suivantes:

1) Le remblai, comme déjà dit, est à ses yeux uniformément byzantin, du niveau 0 jusqu'au sommet. Le niveau 0 même dans le sondage II 2 est caractérisé par le terme de "byzantine floor", rien ne saurait être plus net. P.Lapp aurait pu ou même dû ajouter que bien entendu ce niveau 0 ne pouvait être aussi que le niveau hellénistique.

2) Les cloisons séparées par le remblai sont reconnues par P.Lapp comme byzantines aussi, ceci sans qu'aucun argument détaillé ne soit fourni par lui. On peut penser seulement qu'un des arguments pouvait être la technique apparemment totalement différente adoptée pour ces cloisons en comparaison avec celle des murs externes: ici, un appareil de pierres

de taille monumental; là, un appareil de moellons irréguliers entassés comme dans un mur de pierres sèches.

3) Comme hellénistiques ne subsistaient ainsi aux yeux de Lapp, en-dehors des murs externes, dont le cas ne pouvait prêter à discussion, que les fondations et toutes les fondations, celles des murs externes comme celles des cloisons internes.

Ces conclusions de P.Lapp attirent d'abord une remarque d'ordre général. Comment user, en effet, dans le cas particulier de l'argument stratigraphique lié à la céramique? En fait, la céramique recueillie n'a pas permis à P.Lapp d'identifier un niveau hellénistique interne sûr, mais seulement des niveaux byzantins, tant et si bien qu'il caractérise, comme nous l'avons vu, le niveau 0 fourni par la construction hellénistique du terme de "byzantine floor". L'intérêt de cette stratigraphie byzantine et de sa chronologie est au reste médiocre, et cela d'autant plus qu'il reste impossible de préciser la destination exacte des divers états byzantins discernables. La remarque la plus importante que l'on fera dans ce contexte est que le monument présente les vestiges de deux états principaux seulement, l'un hellénistique, l'autre byzantin. Le problème consiste à distinguer dans les vestiges conservés à l'intérieur ce qui est hellénistique et ce qui est byzantin.

Nous avons, pour notre part, procédé à une série d'opérations. Pour commencer nous avons procédé au nettoyage du dernier niveau de façon à obtenir une idée plus claire de la dernière période du monument, la période byzantine. Sans prétendre avoir abouti à une vue tout à fait précise des états byzantins successifs, nous pensons que l'identification d'un niveau byzantin uniforme qui lui-même a passé par une série de phases, dont deux

principales, est d'un intérêt certain.

Curieusement en effet, P.Lapp ne s'était pas rendu compte clairement de l'existence de ce niveau byzantin uniforme. On constate cependant de façon indubitable, dans tous les sondages établis à travers le monument, que la partie supérieure des cloisons est séparée de leur partie inférieure par une couche de remblayage constituée de terre, de cailloux et à l'occasion de cendres: on ne peut douter qu'à une certaine date le monument a été complètement nivelé à l'intérieur et cette date ne peut être que byzantine, comme le prouve le "fill" de Lapp, établi précisément partout au-dessous de cette couche. L'état byzantin proprement dit avec ses différentes phases correspond donc à cette partie supérieure des cloisons.

On peut dire aussi que contrairement à l'affirmation de P. Lapp le "byzantine floor" véritable ne coïncide nullement avec ce qui est le niveau 0 hellénistique à l'intérieur du monument mais qu'il correspond au niveau 1.64. C'est à partir de là et sur une épaisseur de 0.20 au moins que l'on dégage la grande masse de tessons byzantins - qui, comme il est naturel, ne sont jamais abondants dans le "fill", mais le datent sûrement.

Nous ajouterons une remarque encore à propos des thèses de P. Lapp. Nous avons signalé la coupure qui existe dans les cloisons internes entre les niveaux II et III; on note, au contraire, que ces cloisons paraissent comme construites d'un jet pour ce qui est des niveaux I ( les fondations ) et II ( la partie correspondant au "fill" ). Il est bien évident de toute manière que la date du "fill", pour bien établie qu'elle soit, ne saurait décider de celle des cloisons internes qui peuvent être, en théorie, aussi bien hellénistiques que byzantines. C'est un point qu'il reste à étudier.

Nos sondages ont apporté des données

nouvelles et sur certains points concluantes dans ce problème des niveaux.

Le premier point d'intervention choisi, en 1977, fut l'angle sud-ouest du monument, très exactement la partie délimitée au nord par un mur byzantin très tardif qui s'étend devant la pièce d'angle hellénistique (PL.LIX,2). Cette pièce communiquait avec l'intérieur du bâtiment par une porte qui est sans nul doute d'origine, même si elle a pu encore servir à l'époque byzantine. Or, chose frappante, le seuil de cette porte plafonne à 2.27 au-dessus du niveau 0 du bâtiment.

Comment donc expliquer cette porte surélevée et comment concevoir les rapports avec l'intérieur du bâtiment? Il n'était apparemment possible de rendre compte de la situation que de deux manières: ou bien l'on accédait à la porte par un escalier qui montait du niveau 0 ( ou éventuellement d'un niveau interne plus élevé ); ou bien la porte était précédée d'un palier qui s'étendait devant elle sur une largeur probablement identique à celle de la pièce d'angle et sur une profondeur qu'il restait à déterminer.

Dans l'un et l'autre cas, la partie inférieure du mur dans lequel la porte est percée devait présenter un aménagement particulier. C'est bien ce que le premier sondage entrepris fit aussitôt apparaître: au-dessous du niveau du seuil, le mur offre l'apparence d'une fondation faite de gros blocs irréguliers entassés et en saillie sur le nu du mur ravalé dans sa partie supérieure, et cette fondation s'étend effectivement sur toute la largeur de la pièce d'angle. On sait par ailleurs que le mur transversal compris entre les deux pièces d'angle est fait de gros orthostates analogues à ceux des murs externes.

Qui plus est, la fondation ainsi découverte se retourne en quelque sorte le long du

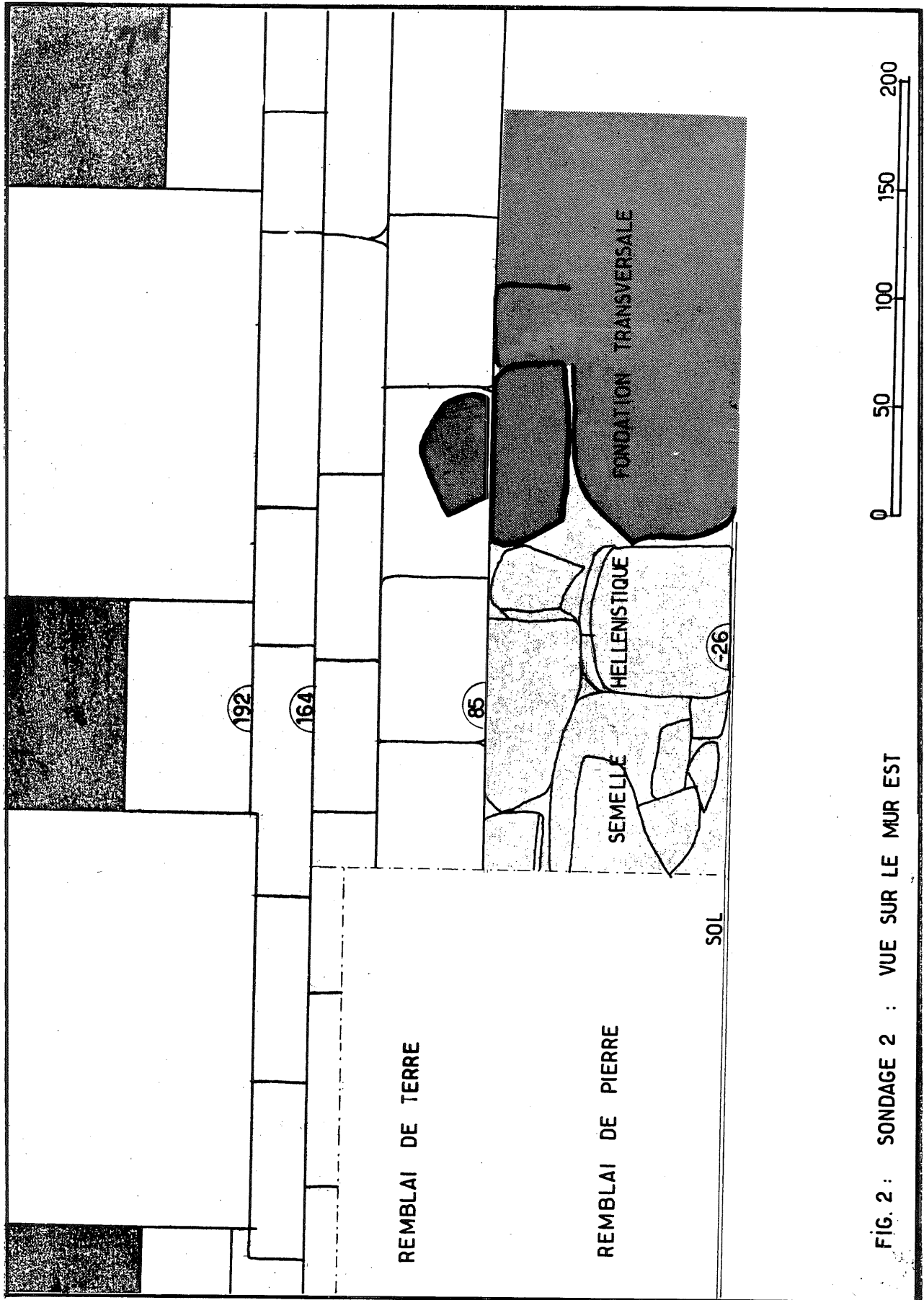


FIG. 2 : SONDAGE 2 : VUE SUR LE MUR EST



mur externe ouest, sur toute la longueur conservée de ce dernier, c'est-à-dire jusqu'à la grande brèche du tremblement de terre de la période byzantine. C'est à la suite de ce dernier que cette partie du monument fut encore réoccupée et reçut une installation qui comporta plusieurs fours de terre-cuite circulaires; deux lampes byzantines ont été recueillies à ce niveau; mais d'autres niveaux byzantins ont précédé celui qui vient d'être décrit ( Fig.2 ). Une découverte inattendue fut celle, au niveau 1.00, d'une large fondation (environ 2.00) allant du mur externe ouest à l'angle sud-ouest que forment à cette place les cloisons internes. Cette fondation faite de moellons de taille moyenne ajustés de façon lâche était recouverte par le "fill", mais peut naturellement lui être antérieure. Sa destination reste énigmatique et dans l'ensemble il fallut bien se rendre à l'évidence que les résultats obtenus dans ce sondage manquaient de clarté.

Nous envisageâmes aussitôt de pratiquer un sondage symétrique devant la pièce d'angle sud-est, mais cette partie du monument était très encombrée de blocs divers et surtout surplombée par deux énormes blocs installés en équilibre instable au-dessus de la pièce d'angle. L'enlèvement de ces blocs demandait des moyens spéciaux et ne pouvait être réalisé aussitôt; il ne l'a été que cette année.

C'est pour cette raison qu'un deuxième sondage fut pratiqué plus en avant de la porte de l'angle sud-est à peu près à l'aplomb de l'arête nord de la fondation transversale symétrique à celle découverte du côté ouest. Cette fois-ci les indications fournies par le sondage furent tout à fait claires du côté du mur externe est: pour la première fois, à l'intérieur du bâtiment, un niveau hellénistique sûr pouvait être déterminé.

Ce deuxième sondage montra en effet qu'à sa base le mur externe ouest offre une structure particulière - analogue à celle du côté ouest mais plus nette - : les grands orthostates partant du niveau 0 à l'extérieur sont doublés du côté interne par des assises en pierres parementées au sommet ( sur environ un mètre ) et par des assises de fondation faites de gros blocs empilés et en débord par rapport aux précédentes. Les assises supérieures comprennent successivement du haut vers le bas une assise normale en calcaire dur et deux autres en calcaire plus tendre. Les pierres sont parementées, mais naturellement, comme ce devait être le cas aussi pour les blocs se plaçant au-dessus, l'apprêt définitif restait à donner ( Pl. LIX,1 et LX. 1 et Fig. 2-4).

Ce constat ne souffre qu'une interprétation. La fondation interne, haute d'environ 0.85, et qui part du niveau 0 externe devait naturellement être cachée aux regards; le débord qu'elle marque permet l'installation d'un pavement très probablement d'un dallage qui, lui, devait représenter dans le projet premier le véritable niveau hellénistique à cette place. Le niveau de ce dallage ne soulève pas de problème; il est surélevé par rapport au niveau externe, ce qui est normal, mais d'une valeur raisonnable et qui laisse aux baies leur rôle de fenêtres. On notera pourtant que ce niveau se place au-dessus de celui qui est marqué par le seuil interne (entre le vestibule externe et le vestibule interne), qui lui-même se place à environ -0.40 au-dessus du seuil de l'entrée (niveau 0).

Il ne reste pas trace du dallage ou du pavement quel qu'il pût être, que le dispositif décrit implique et il y a pour le moins autant de chances que ce pavement ne fut jamais posé qu'il y en a pour qu'il ait été démonté à une date postérieure quelconque. C'est là un

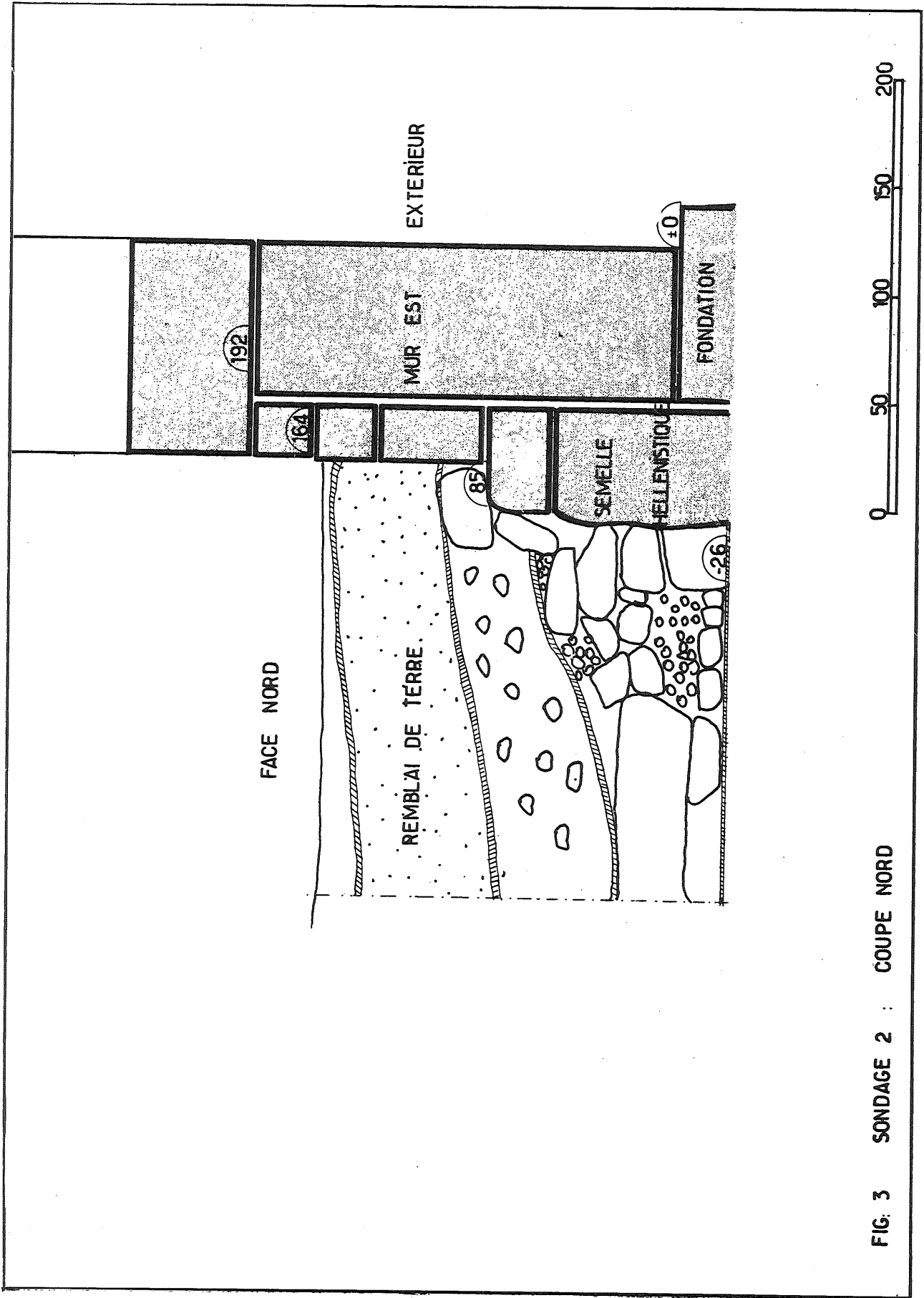


FIG. 3 SONDAGE 2 : COUPE NORD

des nombreux indices de l'inachèvement de l'édifice, inachèvement probable avec les données actuelles et explicable à l'aide des données historiques connues, mais qui risque de rendre difficile la restitution du projet primitif pour l'intérieur du bâtiment.

Quant à la fondation transversale qui est apparue à sa place comme à l'ouest, son étude ne pourra être reprise qu'avec le reste de l'angle sud-est.

Malgré son intérêt considérable, ce deuxième sondage n'a pas apporté de réponse tout à fait claire au problème du rapport entre les murs externes et les cloisons internes.

En conséquence, un troisième sondage fut pratiqué à l'extrémité nord du même côté est devant ce qu'il est convenu d'appeler le "bassin" (c'est-à-dire la partie du monument marquée à l'extérieur par panthère sculptée découverte par P. Lapp). On peut constater là d'abord que l'appareil du mur externe relevé au sud continue sans changement jusqu'à cette place, ou son parement interne vient buter contre la cloison transversale délimitant le bassin. La cloison interne qui fait face au mur externe ouest présente en élévation les grandes subdivisions de ce genre de cloisons, mais elle était aussi à cette place percée d'une porte dont les deux états sont bien nets; la baie de l'état premier fut bouchée sans doute lors de l'établissement du "fill" (Pl. LX,2). Or le niveau du seuil de cette porte (dans l'état actuel il s'agit seulement d'un seuil maçonné) correspond au niveau supérieur de la fondation du revêtement interne du mur externe; cette correspondance apparaîtra difficilement comme l'effet du hasard. Dans l'état actuel de nos connaissances, elle peut être interprétée comme un indice favorable à la date hellénistique de la cloison interne de ce niveau.

Aux données qui viennent d'être exposées et qui n'imposent pas de conclusion certaine, on ne peut encore ajouter que des remarques générales. La plus importante consiste à noter que les cloisons internes dessinent un plan équilibré; on reconnaît un système dans ces quatre pièces rectangulaires disposées perpendiculairement les unes aux autres, accessibles chacune seulement par une porte de faible largeur. De dimensions pratiquement identiques, elles prolongent, sur une même largeur dans le sens est-ouest, les deux vestibules du massif nord, le vestibule interne étant de nouveau de dimensions très proches. Enfin ces pièces apparaissent comme liées à une sorte de couloir qui les entoure à l'est, au sud et à l'ouest.

Une chose apparaît clairement au premier coup d'oeil: l'incompatibilité entre ce plan et la restitution, plusieurs fois tentée, d'une salle basilicale à colonnades internes, restitution qui n'a jamais été possible, sinon au moyen de quelques coups de pouce. Si, par ailleurs, on prolonge les cloisons internes en élévation, on aboutit à l'image de salles aveugles indépendantes et commandées par le couloir qui les sépare des murs externes: ce couloir, en revanche, est bien éclairé.

On ne peut malheureusement invoquer l'exemple de quelque monument comparable. Flavius Josèphe (qu'il n'y a pas lieu de mettre en doute) nous dit bien que l'édifice était une *baris*, soit un château ou un petit palais, et la description qu'il en fait correspond à cette définition. Hyrcan, le constructeur, a très certainement pris modèle sur un type de château qui ne devait pas être rare de son temps dans le Proche-Orient. Là comme ailleurs une ancienne formule orientale a reçu un vêtement grec sensible dans le décor. Sans doute le plan du rez-de-chaussée, que nous

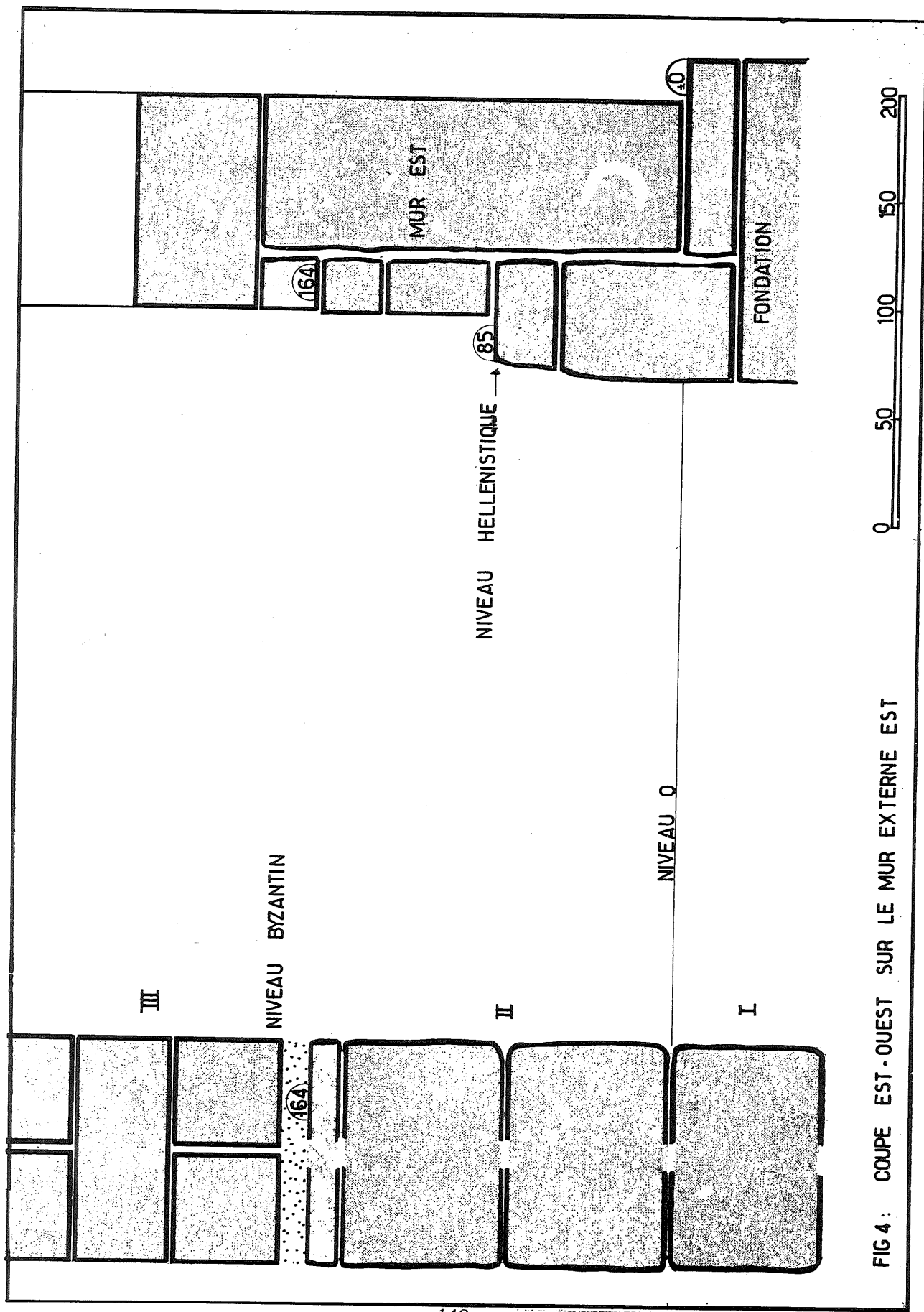


FIG 4 : COUPE EST - OUEST SUR LE MUR EXTERNE EST

venons d'esquisser avec les cloisons du niveau 2, ne semble guère fait pour répondre à des exigences de luxe et de faste. Peut-être convient-il de ne pas oublier que l'édifice comportait deux étages et que l'étage du haut pouvait présenter un aménagement bien différent de celui du bas. Mais l'insuffisance des fouilles dans toute la région nous prive encore d'un terme de comparaison.

Les constatations que nous venons d'exposer éliminent un certain nombre de théories

arbitraires; elles fournissent pour la première fois des données sûres pour les niveaux hellénistiques et byzantins. Elles ne permettent pas encore de se faire une idée satisfaisante de ce que fut l'aménagement intérieur du monument. Deux ou trois sondages supplémentaires restent possibles; ils seront tentés en 1979. De leurs résultats dépendra l'image que l'on pourra se faire de manière définitive de l'installation interne de la baris d'Hyrkan.

Ernest Will

directeur de l'Institut français  
d'archéologie du Proche-Orient.



**EXCAVATION AT THE CITADEL**  
**(AL QAL'A)**  
**AMMAN 1977**

by

Crystal-M. Bennett

The third season of excavations on the Qal'a ( the Citadel ) in Amman (Fig. 1 ADAJ. Vol. XXII p. 174) took place from the 10th July to the 8th September 1977, though key personnel stayed on after that date to work on the planning, sections, drawings of small finds and analysis of the pottery. The personnel was largely the same as in 1976 <sup>1</sup> As in the two previous seasons the excavations were sponsored and financed mainly by the Jordanian Department of Antiquities <sup>2</sup>

Our goals were two-fold : to finish off Area C (Fig. 2, ADAJ. Vol. XXII, p. 177) and then to extend northwards and eastwards in Area B, (see Figs 1 and 4 in ADAJ. 1973 Vol. XX, pps. 133 and 138).

To achieve our first goal it was necessary: 1) to get complete house plans for the three main periods already discovered in the 1976 season - the 10th/11th Century A.D., (possibly Fatimid) Umayyad and Byzantine; 2) to analyse in detail and depth the existing defensive wall; 3) to reach bedrock in all relevant areas and 4) to expose the much earlier periods which obviously lay to the west of the Umayyad defensive wall in C.O. (Fig. 2, ADAJ. Vol. XXII, p. 177).

1. See the 2nd Preliminary Report in ADAJ., Vol. XXII, 1977-8 p. 178. Mrs. Sue Balderstone replaced Mr. Upton as Architect Surveyor; Mr. Simon Lamb was Photographer and new Site Supervisor were Misses A. Budeiri, P. Assinder and V. Segreti. Mr G. Ramahi was Dept. Represent-

In the event, Area C was not finished (Plates LXI,1 and LXI,2) in the time allotted so the completion of the house plans of the post Umayyad ( ? Mamluk ) periods in the BXX and BXXX trenches and the extension eastwards from Trench BXIX, Loci 1 and 2 in order to expose the large Byzantine building which was going under the easternmost baulk (Fig. 4, ADAJ. Vol. XX, 1975 p. 138) remained for another season.

It was soon obvious that if we wished to analyse the existing defensive wall, we would have to open up to the south of the C Area. This was done some 30 metres from Trenches C.O. and C. XXX. This new area was named D (Fig. 1,) and as it was very closely supervised by the Assistant Director, Mr. A. Northedge, his findings are reported separately in an Appendix to this report.

To obtain one of our objectives in Area C, it was necessary to remove some of the 10th/11th Century A.D. walls (Fig. 2) and to expand the working areas within the original 5 metres square trenches, by destroying baulks as soon as they had been understood and drawn. (Already, in the previous season, in C.I., the removal of the overall plastered

tative.

2. Our grateful and sincerest thanks are due to H.E. the Minister of Tourism, Mr. Ghaleb Barakat, to Dr. Adnan Hadidi, Director General of the Department of Antiquities and to all their staffs for their help and co-operation.

Umayyad floor had revealed a Byzantine building in the rubble fill with a doorway in the middle of the trench with two well cut door jambs (Pl. LXII,1). There had also been evidence of Byzantine occupation in three other areas - the trenches C. VIII, IV and III. Bedrock had been reached in several trenches in the previous season but had not been recognized as such. It varied in depth from 4 metres in C.I to 2 metres in C.VII going eastwards up the slope. It is difficult with this soft limestone to differentiate between a hard plaster floor and actual bedrock.

### 10th/11th Century Period

As will be seen from the plan (Fig. 2 in ADAJ. Vol. XXII, p. 177), at the end of the season in 1976, we had uncovered in Area C. small rectangular houses, with roughly built dry stone walls and rooms varying from  $2\frac{1}{2}$  -  $3\frac{3}{4}$  m x  $2\frac{1}{2}$  - 3m.

These had been built into, on and over the Umayyad defensive wall and over the western Umayyad building. The clearest examples are to be seen in Trenches C. II/III, IV/V and C.I/XI, the latter two trenches incorporating the Umayyad defensive wall. There was a gap in occupation between the scattered *ad hoc* building of these houses and the very large coherent town planning during the Umayyad period.

The 10th/11th Century houses of the Fatimid period were very poorly built and reflect an adverse change in prosperity from the preceding Umayyad period. As will be seen in the Plan (Fig.3), in C.IV and especially in C.V. (the eastern wall), these buildings are

often at a different angle from the earlier Umayyad walls on which they partially rest.

The large rooms of the Umayyad period were re-used as store rooms as is clearly seen in C.XIV (Fig.3) Although it was stated in the Second Preliminary Report that the eastern limit of this occupation was the Umayyad street running almost exactly north-south and separating Trenches C.V., XV and XXV from C. VI, XVI, XXVI and XXXVI, further excavation has shown clearly that there was a period of rebuilding and re-occupation in several rooms of the eastern Umayyad building; and this phase appears to be contemporary with the late buildings under discussion nearer the fortification wall.

In the present season, while dismantling some of the 10th/11th Century house walls in C.II (Pl. LXII;2), we discovered a cache of small objects - mostly jewellery - and obviously belonging to a lady. The cache included six complete and four incomplete copper bells - two clappers from the bells (presumably parts of a necklace) two rings with the inset stones missing, one shell, one piece of sharpened bone, some copper pieces (Pl. LXIII.1 and 2) and a gold half dinar of the Fatimid Caliph Al-Hakim (Pl. LXIV.1 and 2).

This particular coin was minted in 407AH/1016-17 A.D. Unfortunately, the name of the mint is missing from the coin. The Caliph, Al Hakim, reigned from 386-411 AH/996-1021 A.D., when he disappeared<sup>3</sup>. The Fatimid coins of the Hakim period were all struck in Egypt in the year 397AH/1007 A.D. Found in association with our coins was some pottery,

3. It is worth recording that issues under two other Fatimid Caliphs are known in Jordan: three coins from Al Mu'izz's reign and three from the reign of Al'Aziz. Four other coins of

Al Hakim are also known. See ADAJ., Vol. 1. (1951), Sir Alec Kirkbride: Recent Finds of Arabic Gold Coins, p. 18.



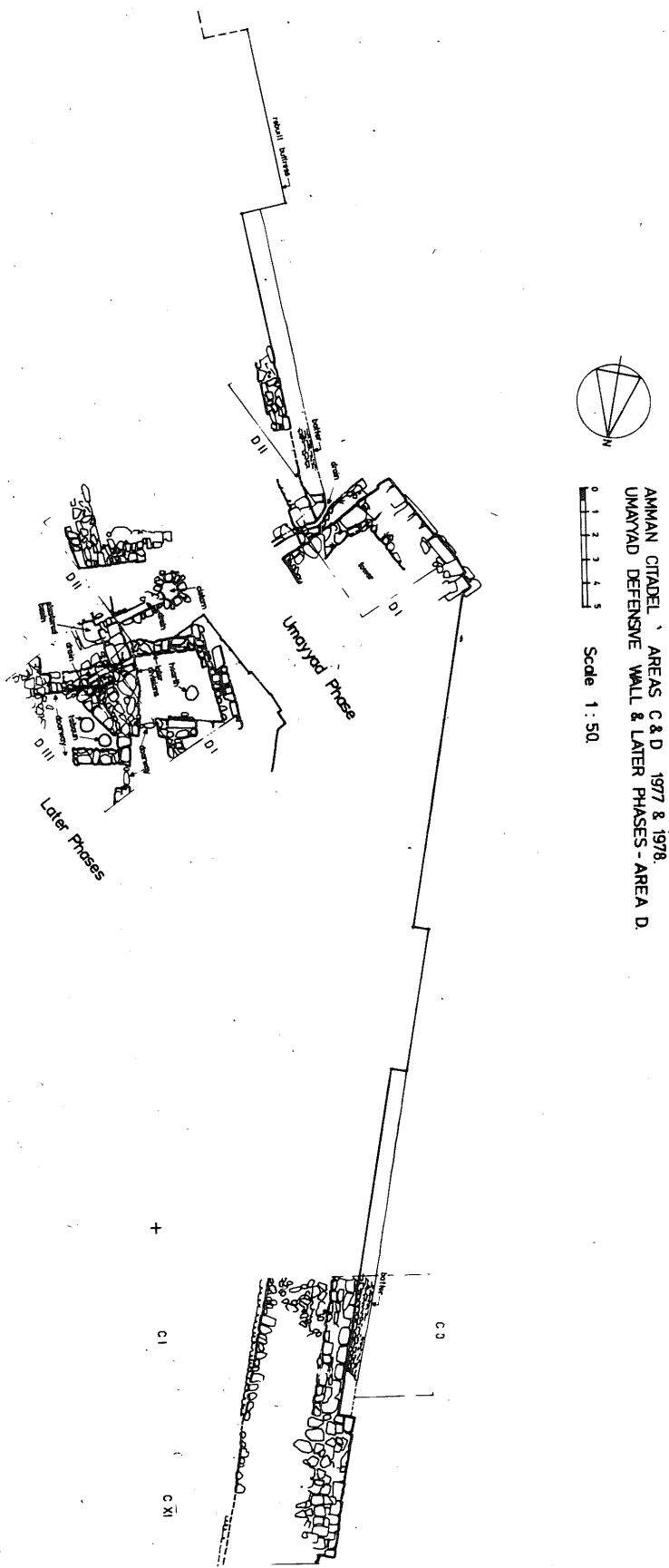


Fig. 1



which it is hoped, when studied, will prove a useful addition to our knowledge of the pottery of this period. While it is not entirely clear from the stratigraphy whether this hoard was laid down before or during the construction of the house over it, it does help to confirm the general context of the last phase of occupation as the late 10th/11th Century A.D.

If we assume that the Fatimid occupation was around 1000 A.D., then there is a gap of something like 250 years between this and the Umayyad occupation. The accumulated debris, which is not a deliberate fill, but rather a natural collapse of an abandoned site - at its very greatest depth it is less than 150 cms - hardly seems enough for a span of 250 years.

### Umayyad Structures

As will be seen from the Plan (Fig. 2) there are two distinct *insulae* to the west and east of the main street, which first appeared in C.V. The houses are approximately rectangular, the individual rooms measuring 5 m x 4 m. The main street was 3m wide plus or minus 25cms. There is little to add to what has been described in the 2nd Preliminary Report regarding the buildings of the Umayyad period, except that the outline of the house in the eastern Umayyad building has become much clearer, and it is possible that room B belongs to a second house abutting the first to the north. However Trenches C.III, IV and V pose some difficulties: in these areas apart from the north-south wall in C.V, and the remains of a wall north of the steps in C.III (as yet undated), there are no walls which can be assigned to the Umayyad period and one goes from the 10th/11th Century to the Byzantine period. There is, however, a very definite plaster floor of the Umayyad period which has been cut for the foundations for a later wall. (Plate LXV, 1). It is possible that this area was an open courtyard associated with the Umayyad

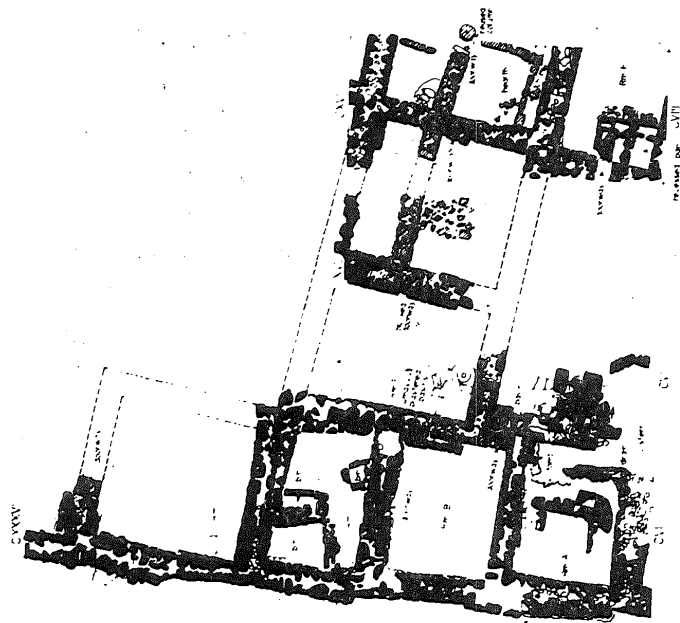
building immediately to the north in trenches C.XXX-XV and XXV.

### Remains of the Byzantine Period

It is now clear that underlying the Umayyad buildings, which have been set on a levelling fill (Pl. LXV, 2) that varies from 20 cms to 2 metres, we have a complex of Byzantine buildings of some importance. In C.I as reported in the 2nd Preliminary Report a Byzantine doorway was discovered leading into a room to the west, (Pl. LIX). The southern Byzantine wall in C.I goes under the Umayyad defensive wall, but was not picked up in C.O. Presumably it makes an angle with the north-south wall in C.O under the defensive wall. In this season (Pls. LXVI, 1 and 2) two doorways were found in the adjoining trench C.II, one with an arch adjacent to the portal, and both leading into rooms further east, though in the southern portal (as Pl. LXVI, 2 shows) there is a very definite and strong wall running north-south east of the arch. Obviously this portal has gone through several phases and whether we shall be able to elucidate them is, as yet, an unknown quantity.

The latest floor in this area produced a follis of Constans II (641-668), which may in fact be an Arab copy or a poor Byzantine forgery. In either case it is clear that occupation of the Byzantine levels continued into the Umayyad period.

The steps in C. III, over which a 10th/11th Century wall had been erected remain anomalous. The whole of this area from C.III to C.V inclusive has been so badly robbed, and there is so much collapse, that it is difficult to clarify the stratigraphy. To the north and slightly west in C.V, an odd feature emerged - what looked like steps from a tessellated floor which extended into C. XIV and went up to a doorway. The *tesserae*



AMMAN CITADEL AREA C 1976 & 1977 & 1978.  
 Scale 1:50  
 Late phase (11th C)  
 Umayyad  
 Byzantine  
 Middle / Late Bronze

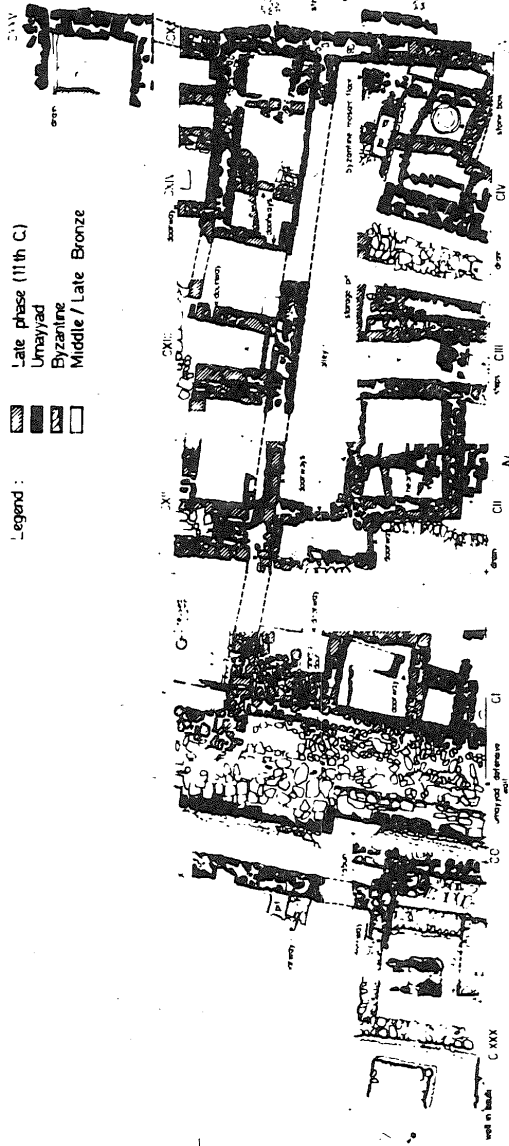


Fig. 2

were very large, coarse and white, and probably represent parts of a large mosaic floor which has long since disappeared. A curious feature of this area was that the earth to the north of the doorway, which was almost in the baulk, was plastered with a fine lime plaster<sup>4</sup>.

### Water Catchment and Drainage

Another feature worthy of comment is the attention to water catchment and drainage. It was reported in the previous report that a water drainage complex had been found in room E and trench C. VII. In the 1977 season in C. XXV where three walls, north, south and east, were visible to a height of 2 metres, a plastered drain obviously for roof drainage ran down the wall into a drain. This drain was subsequently covered by a 10th/11th Century floor, and went out of use, (Pl. LXVII, 1)

The drain shown on the plan (Fig. 2 in ADAJ Vol. XXII p. 177) in C. II has been cut into the Umayyad fill, and is likely to be contemporary with it. It is rough and unlined, as is a second north-south drain uncovered in 1976 in C. IV overlying a fine plaster floor. This second drain is similar but has not so far been dated. However the majority of drainage works in this area appear to be related to the Umayyad phase.

### The Umayyad Defensive Wall

This wall has a series of buttresses at regular intervals of c. 15 metres, measuring 4 metres across at the inset and 4.50 metres at the offset. It was built in three sections: two outer walls enclosing a loose rubble fill or core, set in red clay (*terra rossa*). A fuller description of various aspects will be found in the

accompanying report on Area D.

Bedrock was reached in several pertinent areas up the slope from C. I inside the town wall - notably C. I, II and XVII, nearly the furthest east limit of our excavation in C area.

### Conclusions

We can restate, therefore, that the sequence of occupation on this western slope of the summit of the Citadel and to the east and inside of the defensive wall is as follows:

Stratum I modern debris.

Stratum II slight traces of post 11th Century occupation unassociated with structures

Stratum III 10th/11th Century occupation with structures of an earlier period. c. 750 - 980 A.D.

Stratum IV Abandonment and slight squatters' settlement.

Stratum V Several phases of Umayyad occupation.

Stratum VI Levelling - off of fill with some Umayyad mixed with Byzantine pottery.

Stratum VII Short period of neglect with Byzantine pottery abundant.

Stratum VIII Substantial Byzantine settlement founded on bedrock.

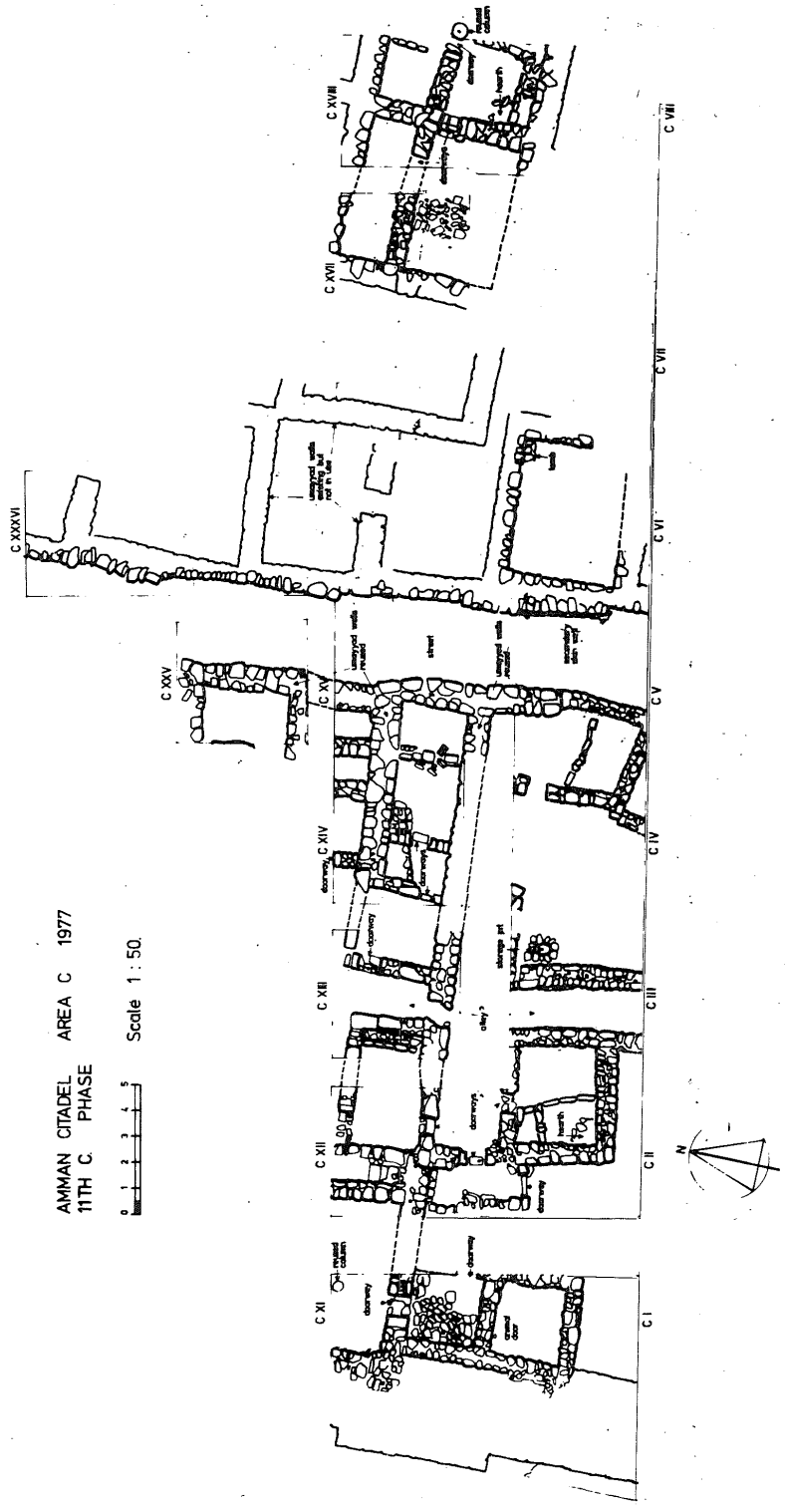
Thus we have achieved three of the four objectives in our first goal.

### The Area outside the Fortification Wall

(Plate LXVII, 2) and Fig. 2)

There remain to be discussed the two trenches C. O. and C. XXX west of the Umayyad defensive wall. These show a very different picture of occupation and need much expansion in all directions Unfortunately to the

4. This was referred to in ADAJ., Vol. XXII, p. 178 and see Fig 2 on p. 177 in the same volume.



AMMAN CITADEL  
11TH C  
AREA C 1977  
PHASE

Scale 1:50.

Fig. 3

west, there is a steep drop of several metres to the main road. It was remarked in last year's report, that in C.O. Byzantine occupation was missing. Further excavation this season proved this wrong. The north/south wall in C.O. (Pl. LXVIII, 1) which is to the west of the battered revetment may be part of the Byzantine building complex in C.I and II. A hearth had been constructed against this wall, which must relate in time to the two walls forming a right angle in the northern side of C. XXX/0, in the east/west side of which a clear but blocked doorway is to be seen (Pl. LXVIII, 1)

The stratigraphy in this area was very difficult to establish because of the restricted space in which one could work and of the permanent fear of stones falling. On the other hand it was essential that we should investigate the mystery of the appearance of the late M. Bronze IIc/Late Bronze jug and a level with nothing but Late Bronze pottery. C.XXX, therefore, immediately to the west of C.O. with an intervening baulk of two metres (necessary because of the trees) was opened up. This baulk comprised mainly a terrace wall running north/south and was removed as soon as planned.

In the western part of the trench two walls or rather one complete wall and the eastern

face of a parallel wall emerged: the easternmost wall running under the so-called Byzantine wall and the western wall way below the later Tower (?) construction. The fill between these two walls contained nothing later than Roman sherds with a sprinkling of Late Bronze and a few Iron Age. The construction of the eastern wall, consisting of small stones very carefully laid in mortar, was quite different from the other walls. It is possible that this wall (casemate construction ?) could be part of the Roman defences, though the small size of the stones hardly warrants this.

On the other hand it does bear a marked resemblance to a very long wall running east-west in Area A (and which Dr. Zayadine has ascribed to the early Roman period). The wall (dotted on the plan) (Fig. 2) running almost due south-north (the southern end is under a vast lip of loose stones), we have provisionally assigned to the MBIIc/LB on the somewhat tenuous evidence of the jug found in 1976 with an associated level of the same period.

Obviously this area is of great importance to all interested in the total history of the Citadel and must receive priority treatment in any further excavations.

May 24th, 1979

Crystal-M. Bennett





**EXCAVATIONS ON THE CITADEL  
( AL QAL' A ), AMMAN, 1978 FOURTH  
PRELIMINARY REPORT**

by  
Crystal-M. Bennett

At the end of the 1975 season<sup>1</sup>, I suggested that the chronology of Area B, on the Upper Citadel (Fig. 1) varied between the individual trenches, but that the overall picture showed an occupation (including present day and Turkish) from the Mamluk down to and including the Byzantine, with a possible Early Bronze occupation without structures in one isolated area.

It was not until the 1978 season that I was able to excavate Area B more fully<sup>2</sup>. Work was resumed in the very important B.XXX.4 trench and a new trench B.XXXI. laid out, measuring 5.50 m. north-south by 5.0 m. west-east, immediately to the east of B.XXX.4 with no intervening baulk. (Fig. 2). The eastern half of the new trench was only excavated to a depth of about 1.0 m. and comprised mostly of a modern fill and some collapse. One item of interest, however, was a small roughly circular group 35 cms.x 30 cms. of 30 pebble-like stones about 5 cms. in size, all blackened and obviously used as firestones in a hearth. (This was also found in Area A in 1975 above the Umayyad paved floor).

#### **Mamluk - Umayyad**

As will be seen from the section drawing (Fig. 3), there is nothing complicated about

the stratigraphy, and the history of B.XXX.4 and B.XXXI.1 falls neatly into the pattern that we have already outlined. An interesting feature in the western half of B.XXXI. was a poorly built structure consisting basically of two large stones set on edge with some loose stones to the west and built against the southern wall. (Pl. LXIX.1). A very similar feature (Pl. LXIX.2) was found in B.XXX.4 only a metre away to the west, but at a lower level - suggesting a difference in time - the former Ayyubid and the latter Fatimid. As we had already picked up in 1975 a quantity of slag and in this season 22 kilos of it, we decided that we might have some kind of iron smelting installation, which, judging from the pottery found in the structures could belong to the Ayyubid/Mamluk periods. Samples of the slag were sent to England for analysis and Dr. Tylecote's report will be found in Appendix A.

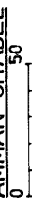
Only the western half of B.XXXI was excavated below the upper fill and this, in conjunction with B.XXX.4 gave us a rectangular room of some 2.40 m. x 2.20 m. A modern walking surface sealed the contemporary fill which had been thrown in over the remains of Fatimid walls, which themselves had been re-used in the Ayyubid/Mamluk period. The walls were initially Umayyad but

1. A.D.A.J., Vol. XX. 1975, p. 137

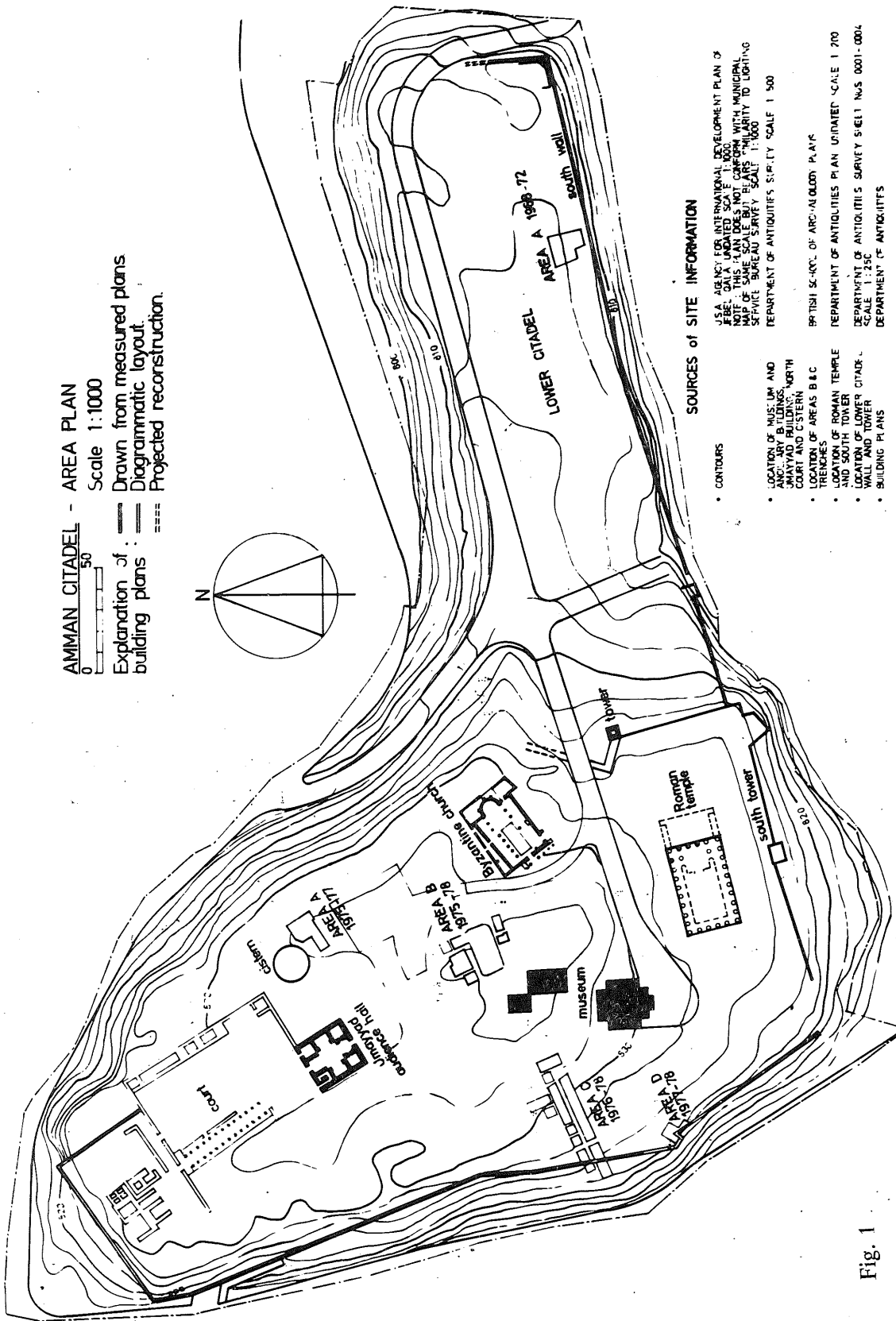
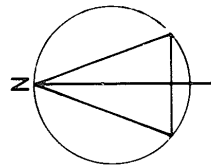
2. The following were members of the team: A.E. Northedge, Assistant Director: Misses A. Bamber and V. Clewes; Messrs. A. Killick, J. Irvine, M. Kuypers and S. Reid. were Site Supervisors as was Mr. A. Walmsley, who was also the photo-

grapher. Miss N. Assinder was draughtswoman, registrar and housekeeper and Mrs. Sue Balderson, the architect. Our most grateful thanks are due to Dr. Adnan Hadidi and his staff at the Department of Antiquities.

AMMAN CITADEL - AREA PLAN  
Scale 1:1000



Explanation of:  
 ———— Drawn from measured plans  
 - - - - - Diagrammatic layout  
 ===== Projected reconstruction.



SOURCES OF SITE INFORMATION

- CONTOURS
- LOCATION OF MUSLIM AND Umayyad BUILDINGS, NORTH COURT AND CISTERN
- LOCATION OF AREAS B & C
- TRENCHES
- LOCATION OF ROMAN TEMPLE
- LOCATION OF LOWER CITADEL WALL AND TOWER
- BUILDING PLANS
- USA AGENCY FOR INTERNATIONAL DEVELOPMENT PLAN OF FEB. 1961, UNDATED SCALE 1:1000
- NOTE: THIS PLAN DOES NOT CORRELATE WITH MUNICIPAL SURVEY BUREAU SURVEY SCALES 1:1000
- DEPARTMENT OF ANTIQUITIES SURVEY SCALE 1:500
- BRITISH SCHOOL OF ARCHAEOLGICAL PLAYS
- DEPARTMENT OF ANTIQUITIES PLAN UNDATED SCALE 1:200
- DEPARTMENT OF ANTIQUITIES SURVEY SHEET NOS 0001-0004 SCALE 1:250
- DEPARTMENT OF ANTIQUITIES

Fig. 1

if we can judge by the walls to the north of B.XXX.4 and B.XXX.1, they were based on Byzantine walls. The excavations in B.XXXI and B.XXX.4 ceased at the level shown in Fig. 3. The earliest structure found in this area was a round bin, comprising 8 standing stones, built up against the western wall and sitting on a mud plaster floor (Pl LXIX. 2) of the Umayyad period.

In order to clarify the house plans which had been revealed in the B. area generally in 1975, two new trenches B.XXV and B.XXXVI. were opened up, the latter measuring 5 m. x 5 m. and the former 6 m. x 5 m. with an intervening 1 m. baulk ( In fact B.XXV had already been opened up in 1975 but very little work was done in it because of the priority of work in the C Area). The section (Fig. 4 ) shows the stark simplicity of the overall stratigraphy and the ever-recurring sequence of post 10th 11th C.A.D., 10th/11th C.A.D. or Fatimid, and Umayyad. It is worth commenting on the size of the room in B.XXVI/XXV. - 2.70 m. x 1.70 m. These rectangular rooms seem to have been a dominant feature in Umayyad domestic architecture on the Citadel. The blocked doorways in both B.XXVI and B XXV testified to a re-use of these rooms. An interesting feature in B.XXVI was the two holes in the threshold stone (Fig.2 and Pl. LXX,1. They cannot be old door sockets: perhaps they were used for grinding meal or some such domestic activity. Excavation in B.XXVI ceased at a very interesting level - a mud plaster floor, which had been cut into for a later pit. Some time earlier in the excavations, a disturbance had been noticed to the south of the threshold (Fig.2 and Pl.LXX,2), cutting through

one of the floors which had sealed another pit to the west of the threshold. The eastern pit measured roughly 8 cms. in diameter at the top and sloped in gradually to 67 cms. at the base, the total depth being 85 cms. The lower part of the pit had cut through a rubble fill. The southern edge of this pit was made up of a long stone going East-West, which formed part of the floor surface. The western pit measured 85 cms. approx. in diameter and sloped to 74 cms. at the base, the depth being 95 cms. As with the eastern pit, it had cut through a rubble fill. Both contained debris, glass and pottery sherds, but the outstanding find was the glass bowl (Pls LXXI,1 and LXXI,2). Amazingly, the base has survived intact and shows a very high degree of artistic merit. A seven pointed star is the centre of the base and from it radiates a whole series of lozenges which spread up the body of the bowl. Judging from the latest pottery found with it in the pit, we suggest a very early Fatimid date - it is certainly Early Islamic.

#### The Byzantine Period in Areas B and C,

One knew, from other excavations, that the Byzantine period existed in large measure on the Upper Citadel<sup>3</sup>. It was still gratifying, however, to get below the Umayyad levels in B.XXV and find the pier of a wall, (perhaps an entrance ) in the south-west corner of the trench and associated with it a paved stone floor (Pl. LXXII,1). This latter is just about at the same level as the paved floors found in BXIX in 1975 and which belonged to rooms going out under the eastern baulk. It is hoped that further excavation, particularly to the east, will give us a direct link up with the Byzantine Church (Fig. 1).

3. See particularly Dr. F. Zayadine: Excavations on the Upper Citadel of Amman, Area A. (1975 and 1977), A.D.A.J., Vol. XXII. 1977-78.

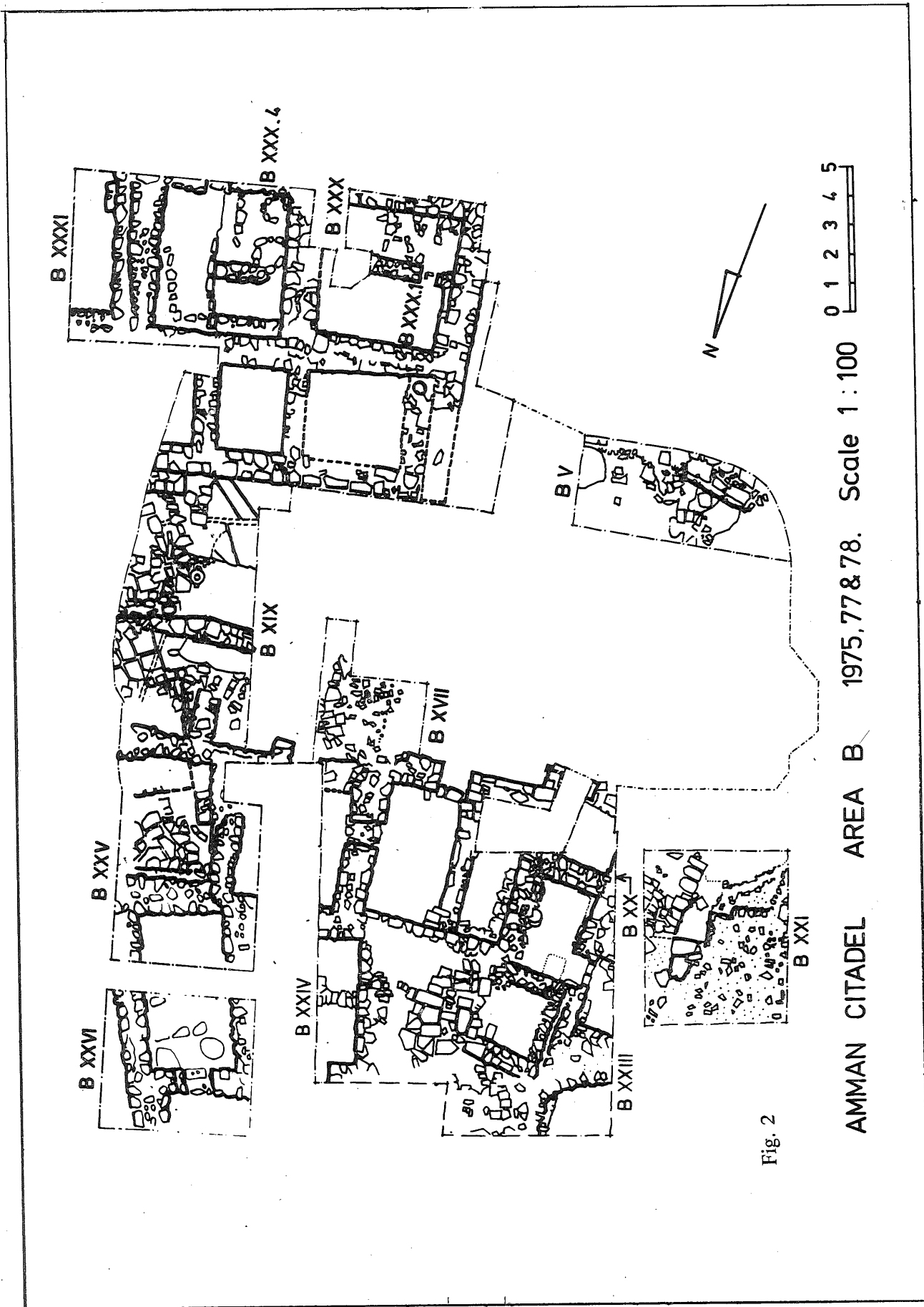


Fig. 2

AMMAN CITADEL AREA B 1975, 77 & 78. Scale 1:100

B XXX. 4 East Section, N-S.

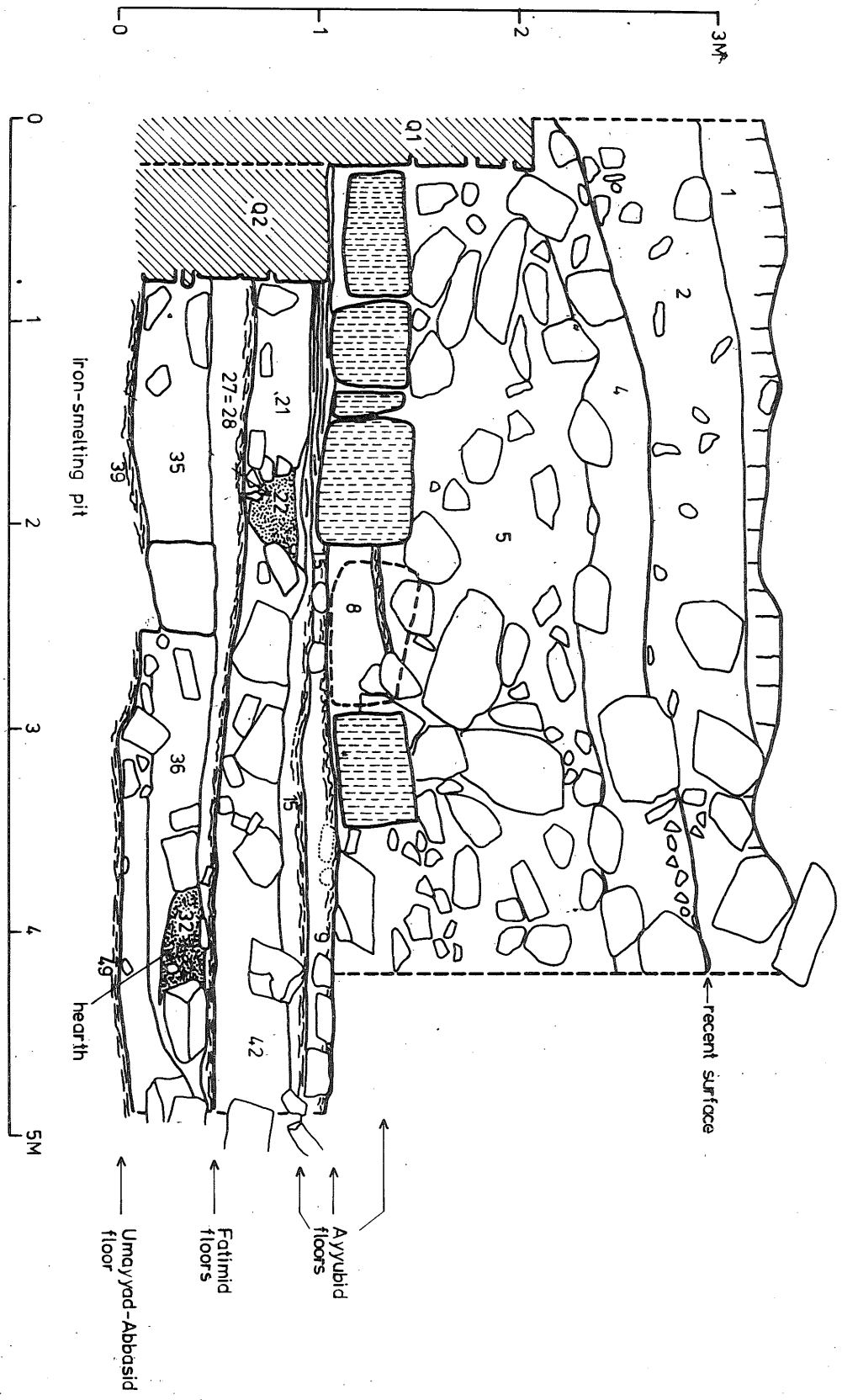


Fig. 3

One of the more interesting results of this series of excavations on the Citadel has been the extensive Byzantine occupation revealed on the western slope. (Figs 5 and 6): It is most unfortunate that the whole of the central area, trenches CI, to V, inclusive have been "cnewed-up" or subject to subsidence, to such an extent that it is almost impossible to get a coherent plan. But, as will be seen from the plan (Fig. 5) there were a whole series of walls and doorways. In 1977, in trenches C.O. and C.XXX we had discovered Byzantine walls outside and to the west of the Umayyad defensive wall, and which had some link with the Byzantine doorway in C.I. (Fig. 5). In 1978, we opened up a small area 3 m. x 5 m. to the north of C.O. with an intervening baulk of 1 m. There were no problems about this small area; the stratigraphy behaved according to the pattern established in previous seasons and we ceased excavations for the season on a broken but very nice plaster floor, which had some typical Byzantine pots sitting on it. (Pl. LXXII,2). The Byzantine wall, running north-south, to which this floor ran up, went through the baulk into C.O. where it made a right angle to go east-west. What is important to notice is that these Byzantine buildings, which give no indication of being anything other than domestic, are *outside* the Umayyad defensive wall, which is not, in itself, an original structure, but based on earlier fortifications, some of which are certainly Roman. Where, then is the Byzantine fortification wall?

In C.X. and just to the north and east of the threshold (Pl. LXXIII,1). There is an egg-shaped basin measuring north to south 66 cms. x east to west 85 cms. in diameter and of a

depth of 72 cms. The entire basin is plaster lined and is contemporary with the floor on which the pots sat. It is interesting to record that a somewhat similar phenomenon was found in the Byzantine house in BXXX in 1975<sup>4</sup>. Another interesting feature in this room was the inset in the north-south wall, which undoubtedly had been made deliberately. It measured 95 cms. north-south by 33 cms. in depth and was 82 cms. above the Byzantine floor level.

#### The Roman Period and Earlier

Remains of the Roman period are well attested on the Citadel<sup>5</sup>. What is not sure is whether there was any domestic occupation or whether the occupation was solely devoted to cultic rites - as for example, in the Temple of Hercules - and the erection of outlying walls for their protection. On Area A. Dr. Zayadine found fills containing undoubtedly very early Roman and Late Hellenistic sherds.<sup>6</sup>

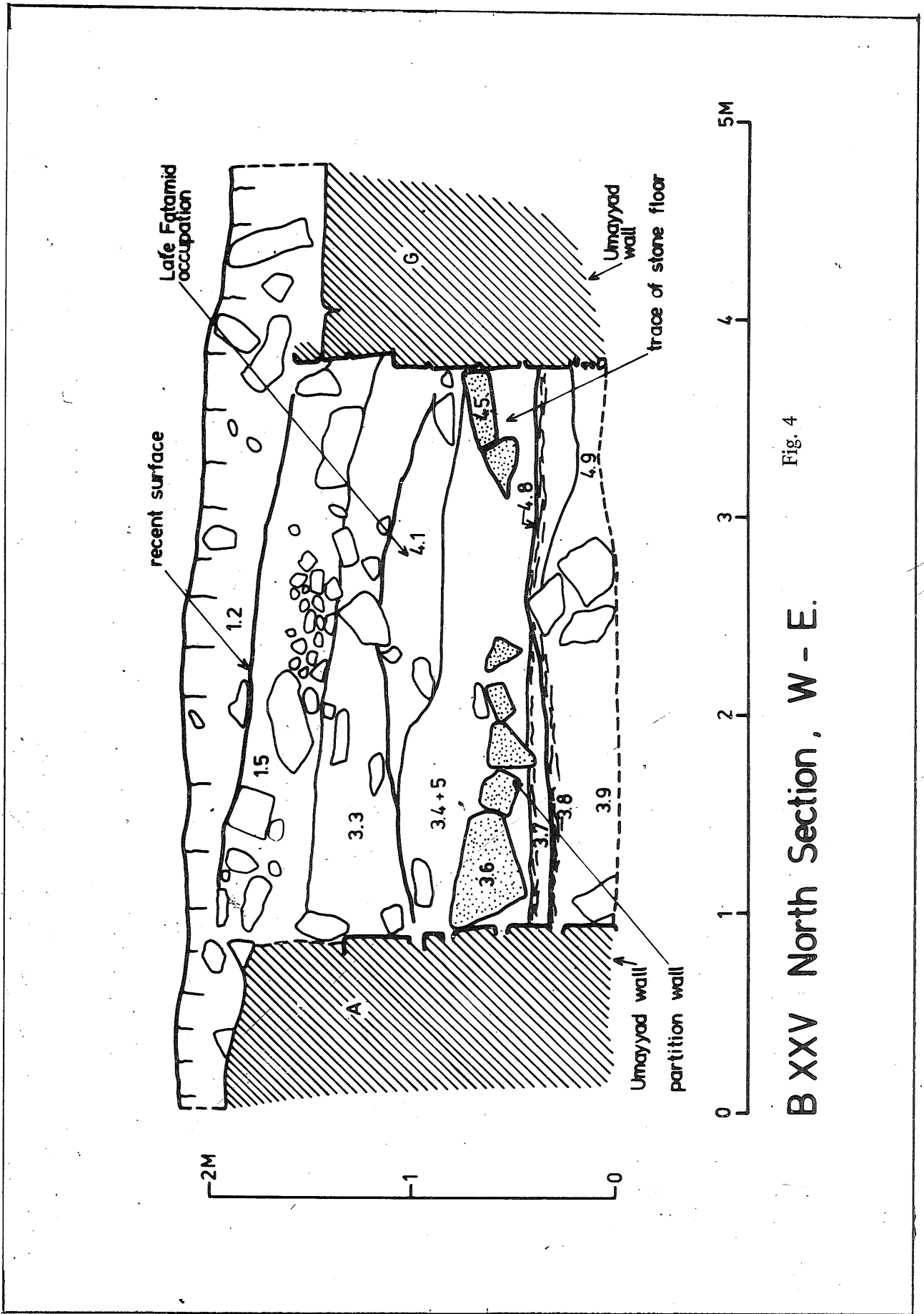
In 1977, we had opened up C XXX (Fig.5) because in the 1976 season in C.O. we had found a jug of the Late M.B/L.B period and we hoped to find this period of occupation on the Citadel in this area. Most of the upper levels of C.XXX. however were a very recent fill overlying modern terrace walls. In the lower levels, which were still fill and underneath the Byzantine walls, we began to get almost exclusively Roman and Late Hellenistic sherds, in between a series of walls clustered together. It was impossible to disentangle their sequence, as I pointed out in the 1977 report, and thus in 1978 we extended our excavations, removed some of the terrace walls and dug deeper into the western section of C.XXX. We also removed the baulk between C.O. and C.XXX. It has been extremely difficult to

4. See A.D.A.J., Vol. XX. 1975, p. 139

5. See G. Lankester Harding; *The Antiquities of*

Jordan, 1967, - new edition Lutterworth Press.

6. op cit. Zayadine, pps. 27 and 28.



excavate this area because of the very loose fill which overlies the early walls and of the steepness of the slope to the west. The furthest point of our excavations hangs almost vertically at a height of about 8 metres over the Shari'el Qal'a. (Pl.LXXIII,2). Obviously further excavation in this area will be impossible, which is sad, because it is one of the few spots on this western slope where we might have a good sequence for the pre-Christian era.

Underlying the Byzantine wall in the north section (the west-east wall which forms a corner to go shooting off south/north in C.X.), is a wall of completely different construction from the Byzantine walls and which is part of a complex of three walls forming three sides of a rectangular room: all three walls are bonded. The fourth and southern wall lies under the southern baulk. The walls varied in height from 2.70 m. to 1.50 m. All three walls were well built in medium sized stones and were covered with a mud plaster. So far as could be judged, the walls were uncoursed.

Inside these three walls and roughly equidistant from them was a rectangular structure some 2.5 m. in height and measuring 1.27 m. 1.35 m. x 1.23m. 1.44m. It had been well built, but uncoursed, the average size of the stones being 40cms.x 30cms. The whole had been encased in a mud plaster. Excavation ceased at the base of the structure on a possible floor level - the only one to be found from the top of the structure to its base. Everything around was an early Roman, Late Hellenistic fill, with sherds of Megarian and Greek black glazed ware. The function of this structure is uncertain - a tower foundation or a stairwell? (Plate.LXXIV,1).

Surprisingly, a similar structure (Pl.LXXIV,2) was picked up in the extreme western end of the trench; again one side (the western) is

under the baulk. Its measurements were 1.45 m. x 2.28 m. x 1.72 m. and it rested on an offset of rough medium sized stones. Its height to this offset was 1.37 m. An earlier floor which ran under the structure ran up to the western wall of the building enclosing the similar eastern structure. (Fig. 6). The western structure was built of much smaller stones than the eastern one, the average size of stone being about 20 cms. x 15 cms. It was uncoursed and had a mud plastering similar to that on the eastern structure.

In the fill between the western structure and the western south-north wall of the ? early Roman room in C.XXX. was found a very fine but shattered Hellenistic squat lykthoi (Pl. LXXIV,2). It is of very pure cream to buff, uniformly fired clay; a possible self slip, very smooth as much of Hellenistic ware is, with bands of reddish brown paint. Unfortunately it was in the fill and cannot help us with our dating of these "tower" / stairwell structures. And it is impossible for us to extend our excavations to the west in this trench.

## CONCLUSIONS

There is little to add to the overall conclusions already arrived at and stated in the report for the 1977 season. The most important result from this season has been the presence of Early Roman and Hellenistic fills with possibly associated structures in Area C and which seem to have a direct relationship with the earlier periods on Area A. If these two areas can be linked up, then the whole picture of classical Amman could change.

I have made no mention of Area D. as once again this was closely supervised by the Assistant Director of the excavations Mr. Alastair Northedge and his findings on that area are attached to this report as Appendix B.



AMMAN CIVIL AREA C  
 BYZANTINE PHASE  
 Scale 1:50

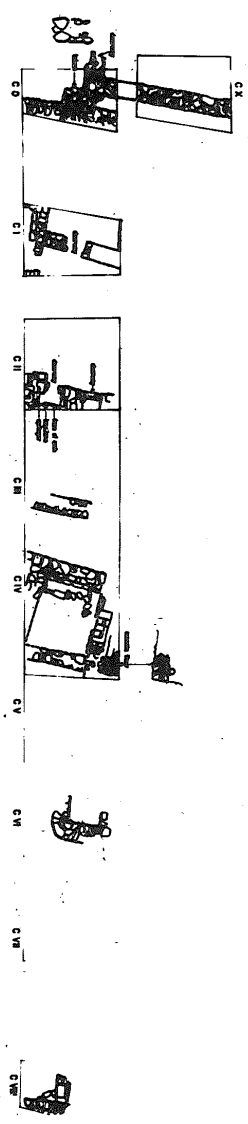


Fig. 5



AMMAN CIVIL AREA C 1976 & 1977 & 1978  
 Scale 1:50  
 Legend:  
 Late phase (11th-13th)  
 Unexcavated  
 Middle / Late Byzantine

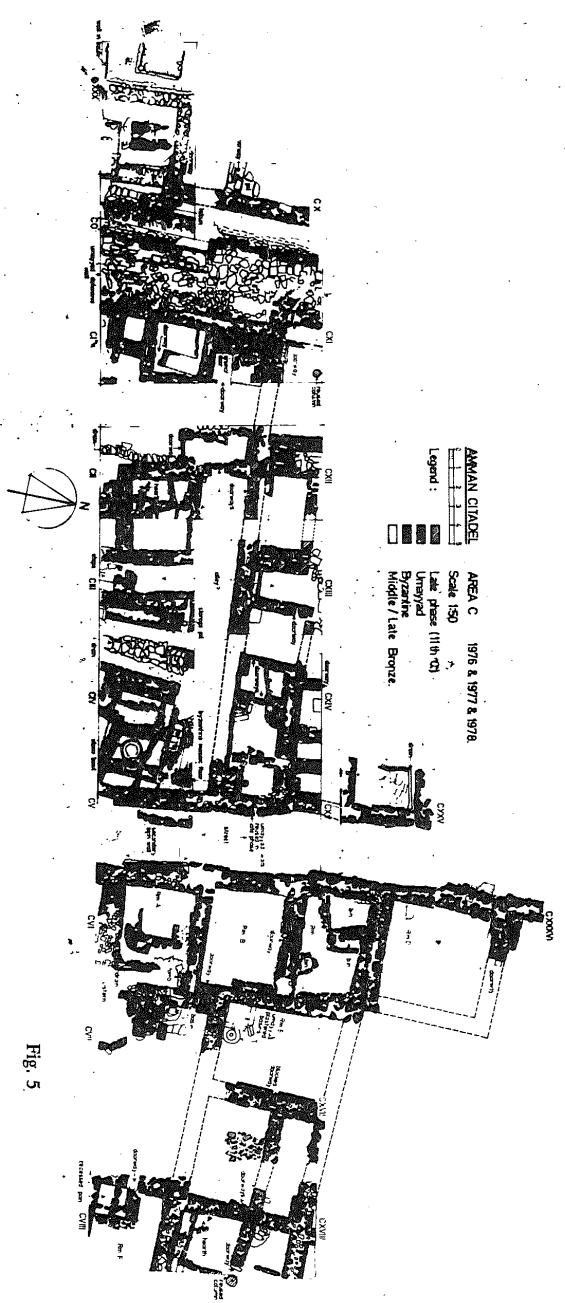
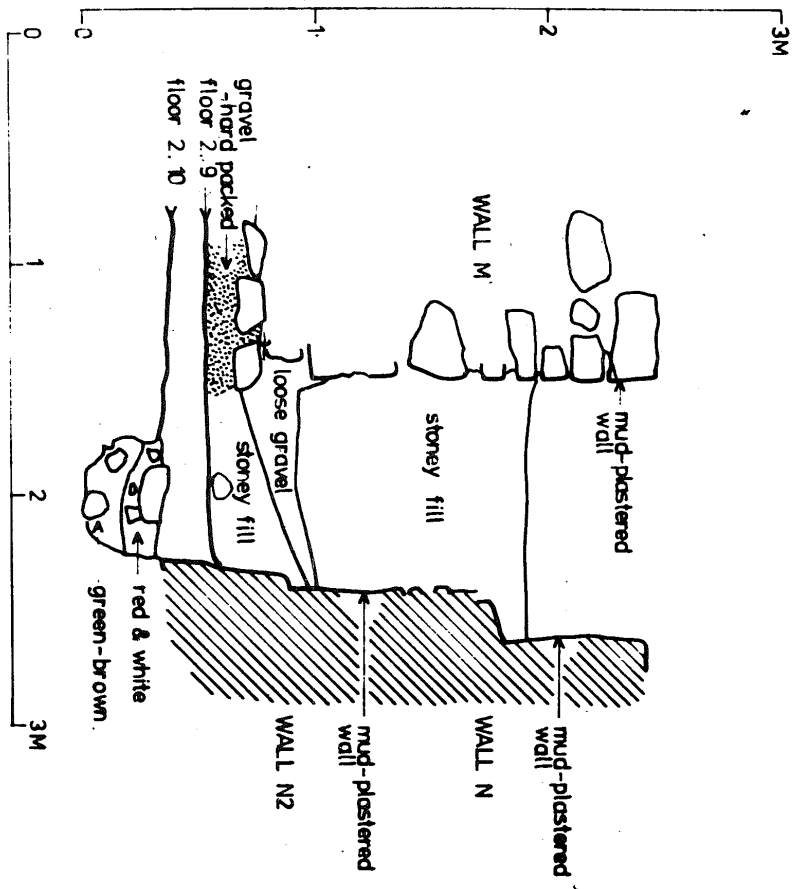
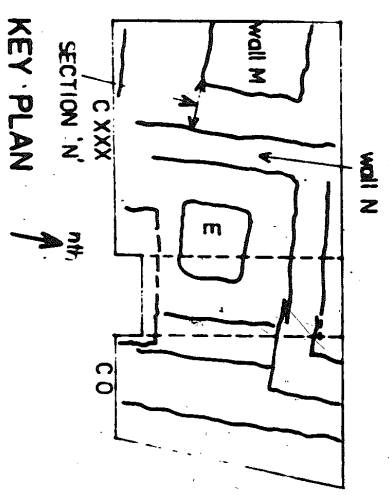


Fig. 5



C XXX. 2  
NORTH SECTION 'N', W - E.

Fig. 7



KEY PLAN

## APPENDIX A.

### SLAG FROM THE CITADEL, AMMAN, JORDAN.

This is a dark grey slag of high density and therefore not merely vitrified fuel ash. It is porous and slightly magnetic. Its shape is that of a ball flattened on one side - hardly plano - convex - but more like a "Bun".

A piece was broken off and mounted and polished using the standard metallurgical techniques which are applicable to slags as well as metals.

Fig 1 (X 100) is a low - power photograph showing the slag (light) with pores (dark). As these pores are not very rounded they have not been formed by gas, i.e. they are not due

to bubbles forming in a highly fluid medium. Higher magnification (Fig.2 x X400) shows the presence of thin, contorted, films of iron (light).

#### Conclusions.

This is a smithing slag formed by the coalescence of viscous particles of fuel ash and scale from the hot surface of the iron. The temperature has been below the free-running temperature (1000° - 1100 C). This is therefore not a "tap-slag" but a "smithing furnace bottom" which is removed mechanically from the smithing hearth when necessary.

R. F. Tylecote

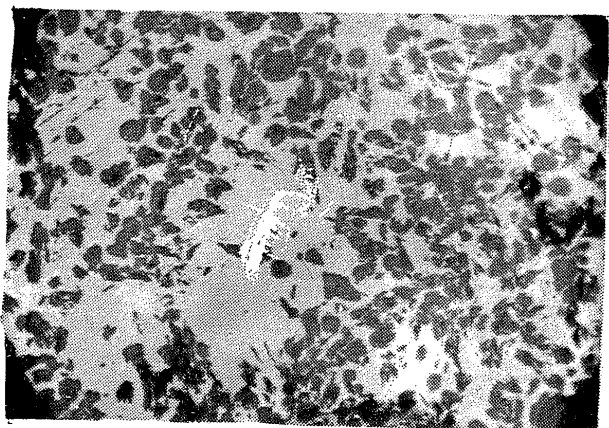


Fig. 1 Amman slag showing pores (grey) X 100

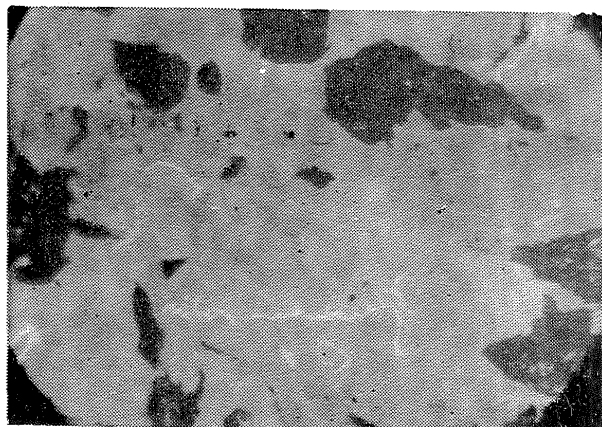


Fig. 2. Amman slag showing metal films (light) in slag matrix (light grey) X 400

APPENDIX B  
AMMAN CITADEL  
EXCAVATIONS ON D AREA

1977 - 1978

by

Alastair Northedge

In 1976 a 12m. section of the western wall of the Qal'a was excavated in Area C<sup>1</sup>: this section, 4m. wide has an outer face of soft limestone ashlar, and an inner face of snecked rubble walling, with a fill of rubble packed in *terra rossa*. The foundations on the inside are trench-built with no face, but on the outside a probe in trench C.O showed that on this side the foundation is a freestanding rubble wall. One can conclude from this that the ashlar are in fact merely a facing for what is properly a rubble wall. The outside face is also adorned with a series of shallow rectangular buttresses 6m. long and 70cms. deep. Surprisingly, the stratigraphy dated the original construction of this wall to the Umayyad period.

D Area, 30m. to the south of Area C, was intended to confirm the stratigraphy of that area and to explore the history of this wall at the site of an anomaly in its line, an S-bend. The area has been worked on for two seasons: in the first a pair of 5m. squares, one of which was later extended to 6 x 5m., were dug over the outside line of the wall; and in the second season a third trench was added on the inside line<sup>2</sup>. In fact penetration to bedrock was not attempted in view of time and resources, but study was limited to the fortification wall and its succeeding phases.

The sequence of the area consisted broadly of modern remains - a modern spoil dump and a slit trench - overlying domestic architecture,

which itself is built over the fortification wall.

This may be presented schematically:

Modern

House Phase 4b

4a

Phase 3

Phase 2

Phase 1

Wall Phase 3

Phase 2

Phase 1

Byzantine Pottery

Fortification Wall (Pl. LXXV,1)

Phase 1 : Construction

The line of the fortification wall is clear both north and south of D Area. The same construction links C to D, and to the south a variant 2.50m. wide, with buttresses 4.50m. long, which project 20cms., continues as far as the southwest corner of the Citadel. In other words the majority of the western wall is of this construction.

Facing southwest in trench D1 is a structure 5.80m. long with a southeast side which projects 3.60m. from the southern wall. Three courses of limestone ashlar possibly reused - are visible. The contemporary ground surface on the southeast side shows that only the top course was originally exposed, and on this there are traces of the typical (for this site) Umayyad stone-studded plaster behind the Phase 3 additions. On the inside a small area of a hard

1. ADAJ, XXII, pp. 172-179.

2. Site Supervisors were: (1977) Virginia Segreti;  
(1978) Michel Kuypers.

D.I.S

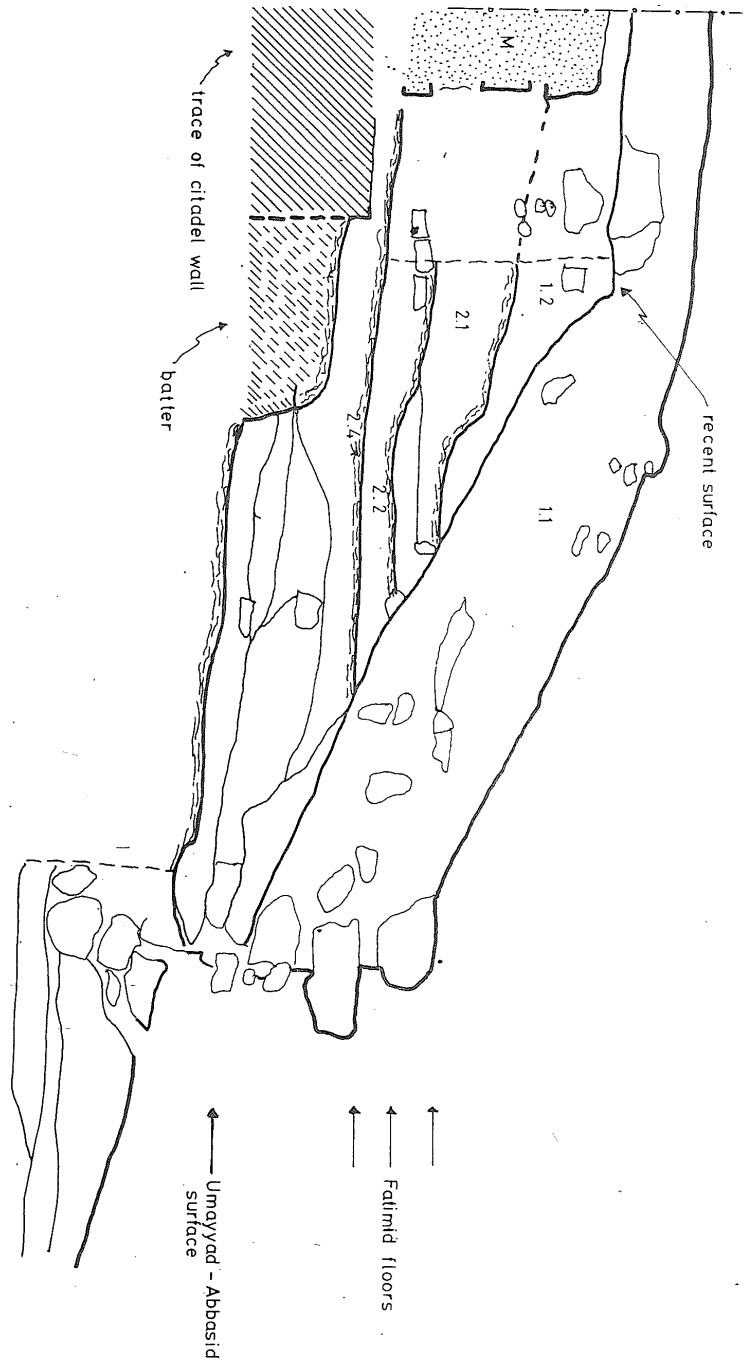


Fig. 1

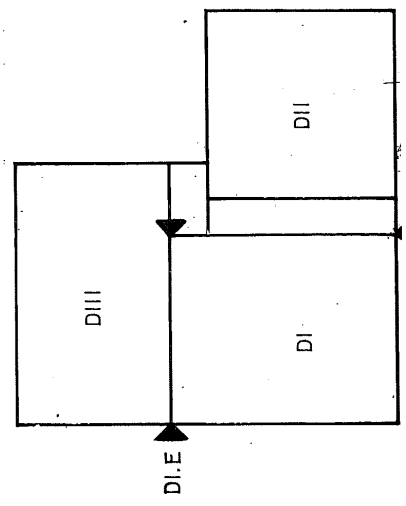
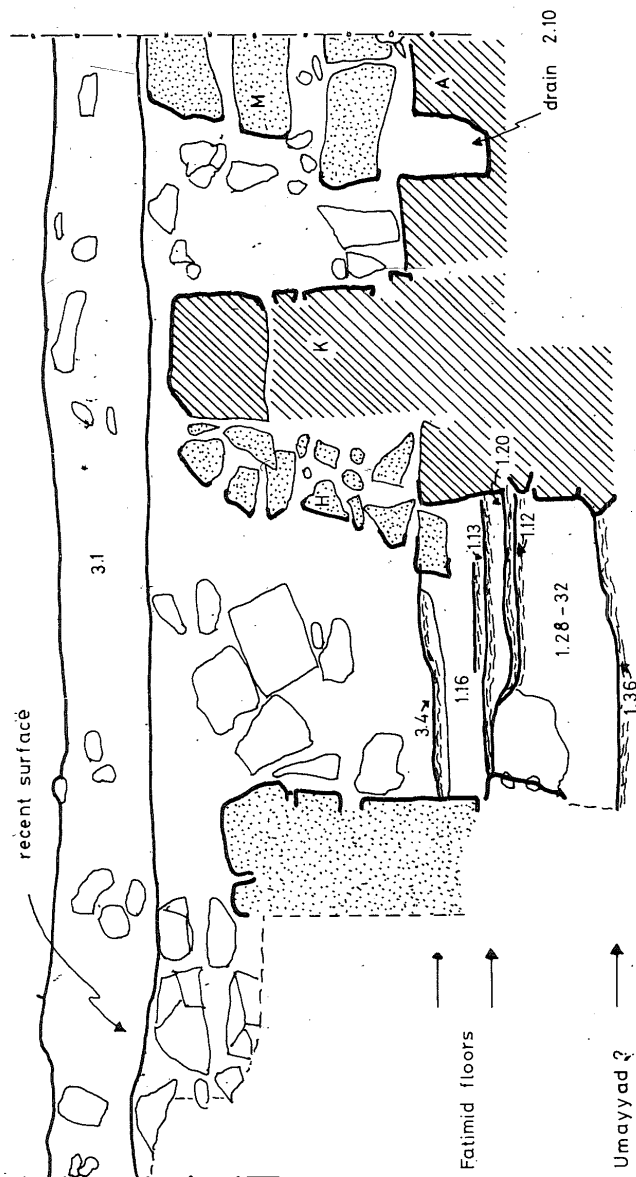


Fig. 2

VPS/AEN

mud floor survives, level with the exterior ground surface. Elsewhere the floor foundation of a bed of small stones is the only indicator of a floor. In the acute angle formed with the wall running south is a plastered drain invert. The excavation of DIII in 1978 failed to resolve conclusively where the back line of this structure is, but showed that later occupation has cut through levels contemporary with the construction of the fortification, and in DIII.4 in the southwest corner has even destroyed traces of the fortification wall down to its foundations.

This is the only point on the fortification wall so far uncovered that has an interior room, while the foundations are constructed of ashlar. Therefore this structure may well be a square tower set at an angle to the main run of the wall. Although no sealed levels directly linked to the construction of this phase were uncovered, there was a general context of Umayyad pottery, and the relationship with the fortification wall dated by C Area is clear.

### Phase 2

The first buttress south of D Area has been rebuilt with a sloping facade on a projecting vertical sided base. Construction is of small rubble stones in *terra rossa* plastered with a coarse plaster of lime and woodash, studded with pieces of lime or chalk, a style differing from but closely related to the Phase I plastering. Investigation suggested that the original buttress in this place had simply collapsed. Two complete examples of this kind of buttress may be seen north of C Area.

### Phase 3: The "Batter"

The last structural addition to the fortification wall was a sloping revetment approximately 1m. high. Traces of this are to be seen

widely on different parts of the Citadel's fortification wall. At one time it was thought that this revetment was a modern support, but in D Area it underlies the house phase. During the construction of this revetment the drain in the re-entrant angle was extended, the revetment ending against a stone block.

In addition to this formal evidence of the development of the fortification wall, there is evidence - presumably later than the three phases described - of unmortared repair work on the face of the wall.

In the relationship between the fortification wall and the subsequent domestic phases there still remain difficulties; for example what caused the collapse or destruction of the fortifications? Was there an abandonment between the destruction of the wall and the appearance of the subsequent phases of domestic architecture? In one respect there is evidence to support continuity: a new drain-line blocks off, and feeds into, the drain discussed above. The new line then matches construction of the later period.

### House Period

Following the collapse of the wall, new construction was built over the top of the tower. There are four main phases, but the 1978 excavation has not resolved completely the relationship between different parts of the construction.

#### Phase 1 :

This is the best construction of this period, which is otherwise undistinguished. It is a building over the northern half of the tower, of which a corridor and an east-west wall have been uncovered. This may be contemporary with the re-aligned drain mentioned earlier.

#### Phase 2 :

Later than the rebuilt drain is the room in

the south part of DIII (DIII.4). This had a basin and short drain leading to the cistern in DII. (Pl. LXXV,2)

#### Phase 3:

A room was built over the southern half of the tower and the cistern, thus extending outside the line of the wall. This phase of this room has two major floors, the earlier of which has two ash hearths. In DIII.4 a new floor was laid over the Phase 2 basin, and two *tabuns* added on the east side of DII.

#### Phase 4:

This is marked by the reduction in size of the new Phase 3 room (Phase 4a). The new south wall then has one rebuild (Phase 4b). This phase has one associated floor level in DI, and some pottery in a destruction level. It is possible that the reduction was prompted by the collapse of the Phase 3 floor into the Phase 2 cistern or down the side of the hill.

The floors of the last two phases clearly attest the Fatimid pottery of the 11th Century phase seen in Area C, while the destruction level is of a distinguishable horizon that we shall call Late Fatimid.

#### Discussion

The excavations in this area have given us a clear sequence of development for the fortifications in the Islamic period, that can be extended in the future by comparison with other parts of the site. The wall, known from C Area to have been constructed in the Umayyad

period, went through three phases but was destroyed before the Fatimid occupation at the site. However, we have no absolute date for its destruction, although its development implies a date later than the end of the Umayyad period (750 AD). Perhaps the most likely time is a date in the 9th Century, or possibly, as late as the 10th Century. Whatever of timescale is postulated, it is striking how **short-lived these fortifications were, perhaps little more than 100 years.** And it is also **true that no Roman fortifications has yet come to light on this side of the hill.**

The occupation of the Fatimid period (11th Century) resembles that found elsewhere on the site, small irregular rubble built houses, in this case going through four phases, but finishing before the introduction of the hand-made painted wares of the Ayyubid-Mamluk period, 12th Century. In trench B.XXX.4 the Late Fatimid types found in the destruction level which is usually dated to the second half of the here are the last horizon before the introduction of the Ayyubid-Mamluk wares. This would suggest, still tentatively in the absence of coin evidence, an end to the occupation in this area at the beginning of the 12th Century, that is, in the early years of the Latin Kingdom. As this ceramic picture is applicable to large areas of the Citadel (Areas B, C, and the Terrace area), B.XXX.4 being the notable exception, it may be that this gives us a date for the end of major occupation on the Citadel.



**FIRST EXCAVATION CAMPAIGN AT  
QAL'AT EL-MISHNAQA-MEQAWER  
(Madaba) (September 8 - October 28, 1978**

by M. Piccirillo

The fortress of Machaerus was one of the strongholds of the defence system of Herod's kingdom in the eastern province of Perea on the boundary with the Nabateans of Petra. With Masada, Hyrcania and Alexandrium, Machaerus was one of the Fortresses that Herod the King has inherited from the Hasmoneans and which he had rendered more powerful by rebuilding it from the foundations.

Thanks to Josephus Flavius we also possess for Machaerus an enviable historical documentation. The naturally defended site was chosen by Alexander Janneus (103-56 B.C.).<sup>1</sup> The king-priest of Jerusalem through successful military campaigns, had succeeded in stabilizing the dominance in Perea begun by his father John Hyrcanus, by fixing the borders on the southern slopes of the Wadi Zerqa-Ma'in on which rises Machaerus.<sup>2</sup>

The fortress was dismantled for the first time by Gabinius ( 57 B.C. )<sup>3</sup> in a punitive

action conducted by the general of Pompey the Great, who had voluntarily agreed to intervene as arbiter in 64/63 B.C. in the family quarrel about succession between the two sons of Queen Alexandra, Hyrcanus II and Aristobulus II.

After fleeing from Rome, Aristobulus himself and his son Alexander sought refuge here by camping among the ruins of Machaerus in a desperate attempt to resist the legions of Rome.<sup>4</sup>

"When Herod became king, "so writes the historian," he considered the place worthy of maximum attention in order to build there the most powerful fortress, especially because of its proximity to the Arabs, finding himself in an excellent position against that country. Consequently, he enclosed a large area within a circuit of walls and towers and built a city there. One of its roads led all the way up to the top. There at the top he erected a walled

1. "Now when Alexander the king of the Jews, observed the nature of this place, he was the first to built a citadel here, which afterwards was demolished by Gabinius, when he made war against Aristobulus" (*The Jewish War* VII, 6,2, from *Josephus Complete Works* translated by W.WHISTON, Edinburgh 1867).

2. *Antiquities of the Jews* XIII,XV,4.

3. *Jewish War* VII,6,2. *Antiquities of the Jews* XIV,5,4 "He (Alexander) also delivered up the fortresses Hyrcania and Macherus, and at last Alexander itself, which fortresses Gabinius demolished".

4. "Alexander...got together a large army...he also built walls about proper places; Alexandrium

and Hyrcanium and Macherus, that lay upon the mountains of Arabia" (*Jewish War*, 1,8,2)... all which Gabinius demolished, at the persuasion of Alexander's mother, that they might not be receptacles of men in a second war" (*Jewish War* 1,8,5). Alexander's father Aristobulus, yet did he afford a new attempt against the Romans retreated with the army to Macherus. "When the king (Aristobulus) had lodged the first night on its ruins ...he fortified that stronghold, though it was done after a poor manner. But the Romans falling upon him, he resisted, even beyond his abilities, for two days, and then was taken and brought a prisoner to Gabinius... (*Jewish War* 1,8,6).

enclosure and built towers at the corners which had a height of sixty cubits. In the center of the walled area he built a royal palace which was renowned for its grandeur and the beauty of its accommodations. In the more suitable places he arranged many cisterns to collect water and to distribute it in abundance as if he wanted to compete with nature in rendering again more impregnable with his own works of fortification a place which was already of itself impregnable. The fortress... consists of a rocky prominence which rises up to a very great height so as to be invincible also because of that and even more so has nature made it in such a way as to be inaccessible... It is in fact surrounded on every side by ravines ... which cannot be easily crossed nor even less easily filled in".<sup>5</sup>

Given the strategic importance of Machaerus, it is easy to imagine that the fortress was rebuilt already in the 30's, after the first years of adjustment of the government of Herod, who was elected King of Judea by the Roman Senate in 40 B.C.<sup>6</sup>

Upon the death of Herod in 4 B.C., his kingdom was divided by Augustus between the three sons of the late king. Herod Antipas inherited Galilee and Perea.<sup>7</sup> It was during the years of Antipas' rule (4 B.C. - 37 A.D.) that the preaching of John the Baptist is historically situated and also that of Jesus of Nazareth, with the tragic ending of both of them.

A digression of Josephus brings the fortress of Machaerus to the foreground in his narration of the summary execution of John. The

execution had been ordered by Herod Antipas and recounted by the Gospel and the Jewish historian in two passages which complete each other. A defeat inflicted by the Nabateans on the army of Antipas gives occasion to the historian for his account. On the one hand he relates the immediate cause of the encounter between the two bordering kingdoms and on the other hand the reason for the defeat according to the popular opinion of the Jewish subjects. According to Josephus the encounter was occasioned by an insult caused to the King of Petra by Antipas when he divorced and then sent back to the king his daughter so he could marry Herodias, his brother's wife, whom he had met in Rome. "Many Jews," comments Josephus, "thought that the undoing of Herod's army came from God and in a manner to exemplify the punishment of that which he had done against John called the Baptizer ... a just man ... by his order thrown into the prison of the fortress Machaerus, where he was put to death".<sup>8</sup>

In the political view of the historian the imprisonment and the subsequent beheading are placed in relation to the success and impact which the preaching of the prophet had upon the masses and Herod's fear of such competitive inconvenience. According to the gospel account of much more religious and popular tone and in substance probably closer to reality, it was the fiery words of the Baptist against the two adulterers, which condemned him to death.<sup>9</sup> The two accounts are based on the people's rejection which followed upon the

according to Josephus - is from Machaerus to Pella" (*Jewish War* III,3,3).

8. *Antiquities* XVIII,5,1-2.

9. Mk 6, 14-29; Mt 14, 1-12; Lk 9, 7-9: "For Herod had sent and seized John, and bound him in prison for the sake of Herodias, his

5. Josephus, as usually, gives a description of the site and its buildings before the narration of its destruction by the Romans (*Jewish War* VII,6, 2 - 3).

6. *Antiquities* XIV,14,4.

7. *Antiquities* XVII,11,4. "The length of Perea

summary beheading of John. Some years later there was an ill-advised political move by Herodias which deprived Herod of the tetrarchy and forced him into exile.<sup>10</sup>

On the death of the nephew Agrippa (44 A.D.) who had inherited the territory of Herod the King, Galilee and Perea came under direct imperial administration through a procurator, as Judea had before. In 66 A.D., at the outbreak of the Jewish revolt against Rome, we find at Machaerus a Roman garrison which, in order to save its own life, abandoned the fortress into the rebels' hands, who held it for six years up to 72 A.D.<sup>11</sup>

After a bloody siege of Jerusalem, peace was again restored in Judea and Galilee. Consequently the Romans decided to end with the

brother's wife; because he had married her. For John said to Herod "It is not lawful for you to have your brother's wife". And Herodias had a grudge against him, and wanted to kill him. But she could not, for Herod feared John, knowing that he was a righteous and holy man..."

10. His tetrarchy was given to his nephew Agrippa, brother of Herodias, and friend of the emperor Caligula (*Antiquities* XVIII,7, 1-2).

11. "This was about the same time that the multitude of the Jews that were at Machaerus persuaded the Romans who were in garrison to leave the place, and deliver it up to them. These Romans being in great fear, lest the place should be taken by force, made an agreement with them to depart upon certain conditions; and when they had obtained the security they desired, they delivered up the citadel, into which the people of Machaerus put a garrison for their own security, and held it in their own power" (*Jewish war* II,18,6).

12. "Lucilius Bassus...took the citadel which was

last possible hot beds of revolt barricaded inside the Herodian fortresses. Lucilius Bassus first took the Herodion. Then he reunited all the forces and directed himself to Perea against Machaerus, because, as Josephus writes "it was absolutely necessary to eliminate this fortress with its solid strength to avoid the eventuality that it would have enticed many to rebellion".<sup>12</sup> The mountain on which the fortress rises was closed off with a wall defended by the camps and towers of the legion and the auxiliary soldiers. Then began the construction of the main ramp to enter the fortress, by assault.<sup>13</sup> An accidental event decided the surrender of the besieged so that the ramp was never completed.<sup>14</sup> Machaerus was definitively leveled to the ground and abandoned. This left the Romans free to come back into Judea and

in Herodion...after which he got together all the soldiery that was there with the tenth legion and resolved to make war upon Machaerus; for it was highly necessary that this citadel should be demolished, lest it might be a means of drawing away many into a rebellion, by reason of its strength" (*Jewish War* VII,6,1).

13. "Now when Bassus had taken a full view of this place, he resolved to besiege it by filling up the valley that lay on the east (west) side; so he fell hard to work, and took great pains to raise his banks as soon as possible, and by that to render the siege easy" (*Jewish War* VII,6,4).

14. "When Bassus perceived that (that the Jews were terribly confounded by the whipping of a young prisoner taken by the Romans), he began to think of using a stratagem against the enemy, and was desirous to aggravate their grief, in order prevail with them to surrender the city for the preservation of the man" (*Jewish War* VII,6,').

to concentrate themselves on the more toilsome undertaking of storming Masada.

### The Exploration of the site

On January 17, 1807 the German explorer Ulrich Seetzen detoured off the King's Way at 50 kilometers south of Amman and ventured toward the village of Meqawer with the help of his beduin guide (Pl. LXXVII, 1). The name Meqawer had reminded him of the Greek name for Machaerus, i.e. "Macheiros".<sup>15</sup> It was not difficult for the explorer to mark out on the west of the village the shape of what remained of the fortress on the top of el-Mishnaqa. (Pl. LXXVI, 1). He was the first European to have the opportunity to visit it. Later he wrote in his diary: "The ruins of the site are very important. One can reach there only by one entrance along a high bridge and one can see there very important foundations of times past related to an enclosure wall system". That was practically the same as could be seen on the summit up to our days: partial remains of the wall enclosure with at least one southwesterly tower, some cisterns and the "access bridge". Better than the others who had preceded him, Ricciotti succeeded in identifying in the jumbled rock heap piled up

at the northwest base of the fortress, the beginning of the ramp which would have permitted the Roman soldiers to break through the fortress wall if the besieged had not surrendered.<sup>16</sup> (Pl. LXXVIII, 2). In 1904 Smith identified on the north flank of the mountain a canal which could be the end of a water channel. This hypothesis was confirmed by Vardeman in 1968. The American archaeologist, to whom is due the first attempt to excavate the fortress, succeeded in giving an account of the exact nature of the "Bridge" seen by Seetzen. This bridge connected the mountain on which the fortress was built with the plateau on which the village of Meqawer rises. It is the foundation of an aqueduct which collected the water from the plateau, directed and distributed it to the series of cisterns excavated on the northern slope of the fortress. (Pl. LXXVII, 2 and Pl. LXXVIII, 1).

In 1973 another German scholar, Strobel, made a very careful and detailed investigation of the site. He succeeded in determining the Roman Siege works which Lucilius Bassus used to entrap the besieged.<sup>18</sup>

In spite of these results there actually remains very little on the surface to show the

15. For the history of the exploration of Meqawer - el Mishnaqa see the article of J. VARDAMAN, "Machaerus: Project for Excavation", Louisville, Ky., in manuscript form in the archive of the Department of Antiquities of Jordan. The Diary of U. SEETZEN, *Reisen durch Syrien Palaestina Phoenicien die Transjordan-Lander, Arabia Petraea und Unter Aegypten*, was edited by Fr. KRUSE, Berlin 1854-59. For the visit to Machaerus see vol. II, pp. 330-334 and vol. IV, pp. 378-382. See also A. STROBEL, "Machaerus-Geschichte und Ende einer Festung im Lichte archaologisch - topographischer Beobachtung",

*Bibbe und Qumran*, Berlin 1968, pp. 198-225.

16. G. RICCIOTTI, *Il Cantiere di Hiram*, Torino 1936, 122-133.

17. VARDAMAN, "Preliminary Report on Results of the 1968 Excavations at Machaerus" in the Archives of the Department of Antiquities.

18. A. STROBEL, "Observations about the Roman Installations at Mukawer" in *ADAJ* 19 (1974) 63-127. The same in German "Das Roemische Belagerungswerke um Machaerus. topographische Untersuchung" in *ZDPV* 90 (1974) 128 - 184.

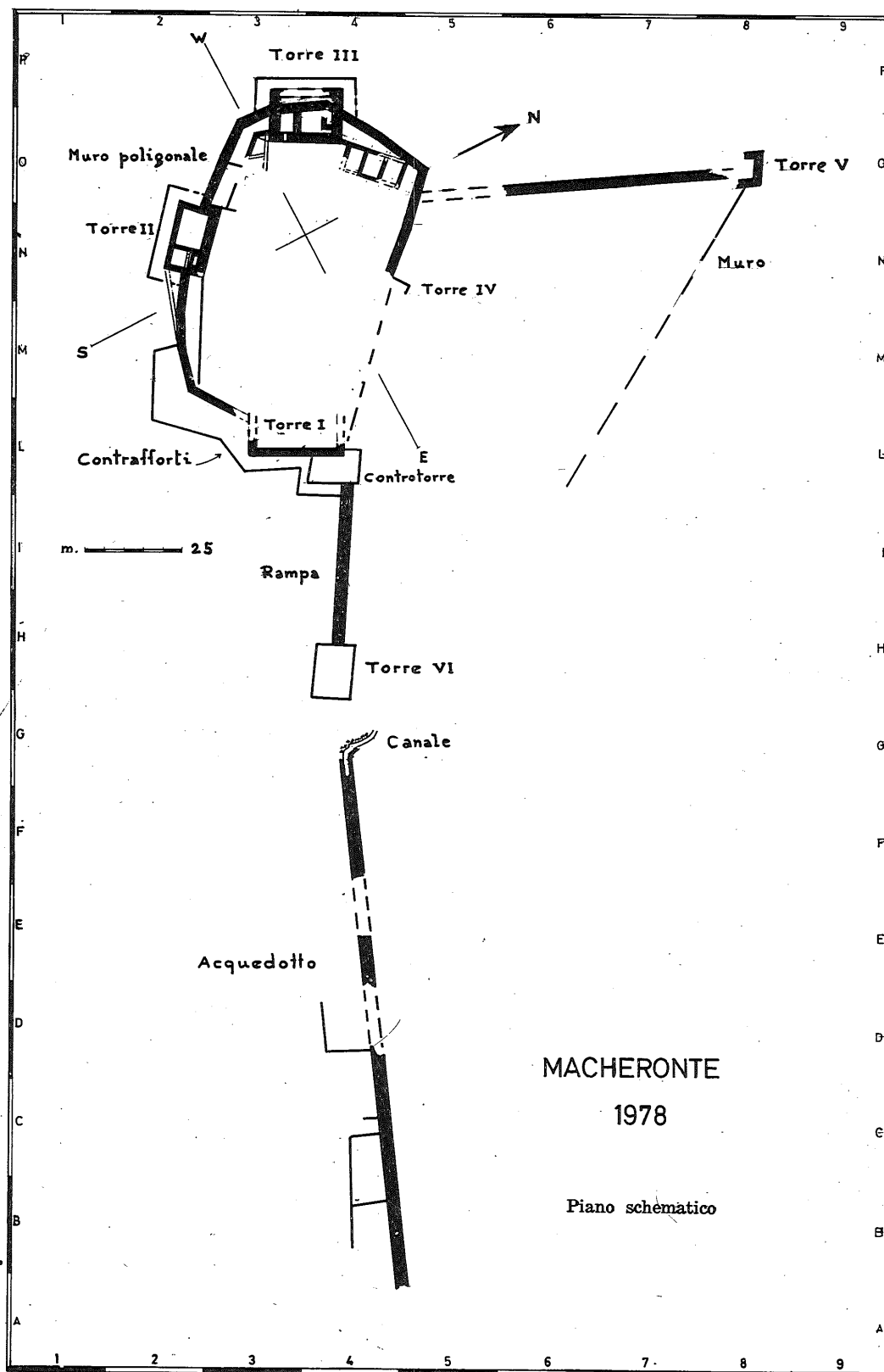


Fig. 1. A sketch plan of Qal'at el Mishnaqa Machaerus, at the end of the first campaign of excavation.

magnificence of the Herodian fortress so greatly peased by Josephus Flavius. So little in fact, that a careful scholar like Abel, disillusioned with his visit to el-Mishnaqa, could write in 1909. "The small amount of ruins requires a critical revision of the number and grandeur of the buildings erected by Herod on the tell".<sup>19</sup>

### First Campaign of the Franciscan Biblical Institute

Thanks to the financial support of the Custody of the Holy Land and the Italian Government in cooperation with the Department of Antiquities of Jordan, an expedition of the Franciscan Biblical Institute directed by Fr. Virgilio Corbo, resumed the archaeological work at el-Mishnaqa in September-October 1978<sup>20</sup>.

Logistical reasons have made it advisable to limit the area of excavation in order to evaluate objectively the difficulties of the enterprise. These are first, the lack of a road to reach the top which must be climbed up to every day, plus a certain necessary prudence required by previous uncontrolled excavations.

From Josephus' description of the works done on the fortress, we can distinguish: a) the walled enclosure with towers at the corners b) the palace on the inside of the fortifications c) the system of cisterns for the provision of water, and finally, d) the "city".

The excavation of the first campaign has

19. F.M.ABEL, *Une croisière autour de la Mer Morte*. 1914, 30-41.

20. The archeological team was composed by Fr. Virgilio Corbo, Fr. Stanislao Loffreda and Michele Piccirillo, professors at the Franciscan Biblical Institute. The Department of Antiquities was represented by Mr. Abul Ghananm.

been restricted to the enclosure wall. However, it has yielded some valid results useful in orienting future work within the fortress. Fr. Corbo has already been in a position at the end of the campaign to present scholars with a provisional plan of Machaerus.<sup>21</sup> (Fig. 1).

The military architects of Herod had to adapt themselves to the irregular shape of the summit and to the preceding Hasmonean structures destroyed by Gabinius. From the historical dates provided by Josephus we can distinguish two periods in the occupation of the fortress:

I. The Hasmonean period from 90 B.C. ca to 58 B.C.

II. The Herodian period from 30 B.C. ca to 72 A.D.

With some subphases of occupation and partial readaptation.

From the excavation of the enclosure wall and of the nearby surroundings, it is possible to see two important overlapping structures (Pl. LXXX,1 and LXXXI,1). On the surface there is an enclosing wall forming a many angled perimeter (Pl. LXXX,2) and LXXXI,1). On the surface is an enclosing wall forming a many angled perimeter. It is very irregular and extends over a more regular structure which juts out in quadrangular towers. (Pl. LXXXI, 2). The internal surroundings in the last phase of occupation were

Precious was the help of the Hamaideh of Machaerus.

21 V.CORBO, "La fortezza di Macheronte" Rapporto preliminare della prima campagna di scavo: 8 settembre - 28 ottobre 1978", in *Liber Annuus* XXVIII (1978) 217-240, Pls 57-70.

utilized in provisional way and ended up destroyed by fire. (Pl. LXIX,2). The lack of floors, some dividing dry walls built from reused material and a thick layer of ashes attest to the provisional quality of the occupation and to the tragic end of the fortress. In the ashes various projectiles testified again to the assault which had preceded the end.

A second interesting element is the uniformity of the pottery for the entire area examined. It includes late-Hellenistic types up to the first Roman period without insertion of material of any later period. We can already conclude a limited occupation of the site, as stated by Josephus. El-Mishnaqa was not inhabited before the Hasmoneans nor was it ever reoccupied after the destruction by the Romans.

The coins are too few to guarantee any absolute conclusions on chronology. Some Nabataean coins were present with coins of the first Revolt (66-72 A.D).

### **Conclusion**

If it is premature to give a historical identity to the diverse phases of occupation of the fortress, one can still certainly say presently that the destruction of the fortress was complete. The walls brought to light so far were razed to the foundation level and only in one case have we found a door with its threshold.

The nature of the rock, also collaborated effectively in helping the Roman soldiers. It is very siliceous rock and once exposed to the inclement weather, especially the heat of the desert, it flaked off.

We do not wish to force the conclusions from the data of a preliminary campaign, but one could still attempt a comparison between the real Machaerus and the one described by Josephus Flavius. The least that can be said about this is that the historian allowed himself too much liberty in the description abetted by the desire to glorify King Herod and the Roman military might as capable of the impossible to even assault an inaccessible fortress like Machaerus.

In a comparison with other fortresses the Herodion near Bethlehem, is better built than Machaerus. From the viewpoint of strategical importance it certainly cannot be compared with Masada.

Some blunders and some fanciful elements added to the description make one think that Josephus never visited the fortress. In spite of this possible conclusion, his description will be the basic source during the progress of a difficult excavation like this on the top of el-Mishnaqa which promises to be of primary importance for understanding the first Roman period in Jordan.

Michele Piccirillo





## EXCAVATIONS AT PETRA

( 1976 - 78 )

by

Fawzi Zayadine

Previous investigations<sup>1</sup> in the rock-cut monuments of Petra unearthed dating material which stimulated systematic research in the ill-known necropolis. Thanks to the financial assistance of the Naturhistorische Gesellschaft, directed by Dr. Dr. M. Lindner and to the Petra-Jerash Tourist Project, headed by Mr. Y. Alami, short seasons of excavations were conducted in several areas of the city. The main objectives were to resume the clearance of Tombs BI,1, 815 and to uncover new promising rock-cut monuments in the hope to solve the crucial problem of their chronology.

**Shaft Tomb BI,1** (Fig.1 and Pls.LXXXIII-LXXXIX).

On the slope west of the Urn Tomb (Br. 772) a square structure was discovered in 1973, overlaying a shaft of 2.05m by 0.70m, dug in the rock floor. It leads by means of toe-holes (Pl.LXXX,1) to a funeral chamber measuring 5.20m by 2.70m (Fig.1) and excavated with 8 sunken-graves. Only Graves 1 and 2 were cleared out in the first campaign. In April 1976, the work was resumed by Muhammed Murshed, Kathrin Göbel and W. Müller<sup>2</sup>, while the writer was in the hospital. This report depends mainly on the notes of the supervisors.

Grave N°3 was covered with fragments of

green, yellow, blue, black and red stucco. Its origin remains problematic, although it was assumed in the 1973-74 report that it was introduced through the shaft, after the destruction of the upper structure. But it is well known that Nabataean tombs bear traces of stucco (see Tomb 813, above). The cist was filled up with red sand and contained very poorly preserved skeletal remains together with bronze bells and glass fragments.

In the adjacent Grave 4, which was disturbed, a skeleton was covered with sand and stones. Roman, Byzantine and Nabataean sherds were collected. An ostrakon fragment inscribed with illegible Nabataean letters (N°1, Pl. LXXXI) was among them.

Three covering slabs out of six were *in situ* over Grave 5. Two skeletons were exposed in the cist which measures 2m by 0.6m and was 1.10m in depth. The earliest one which was laid on a layer of sand was separated from the upper one by a bed of mortar. A rich funeral deposit was recovered with the lower burial, consisting of pottery objects and bronze bells (see inventory).

Grave 6 was still covered by four slabs, two being removed from the south. Three lamps (N°s 8,9 and 10) were deposited with the fragmentary skeletal remains. Iron nails and two cockles were also found.

1. ADAJ, XIX (1974) p. 135-50.

2. Cf. a preliminary report by W. Müller and Kathrin Göbel, in *Natur und Mesch* (1976) p. 97-101.

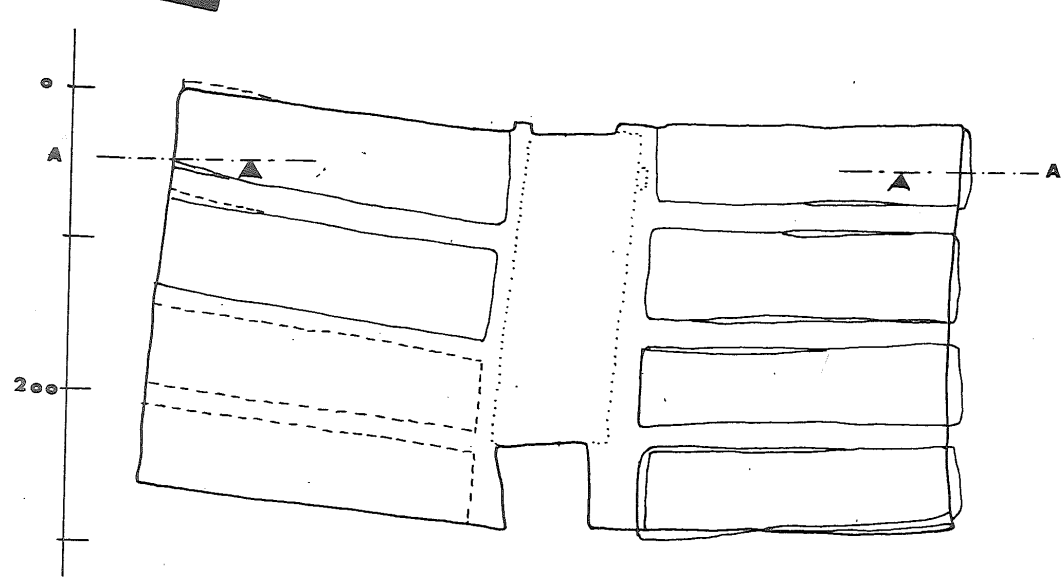
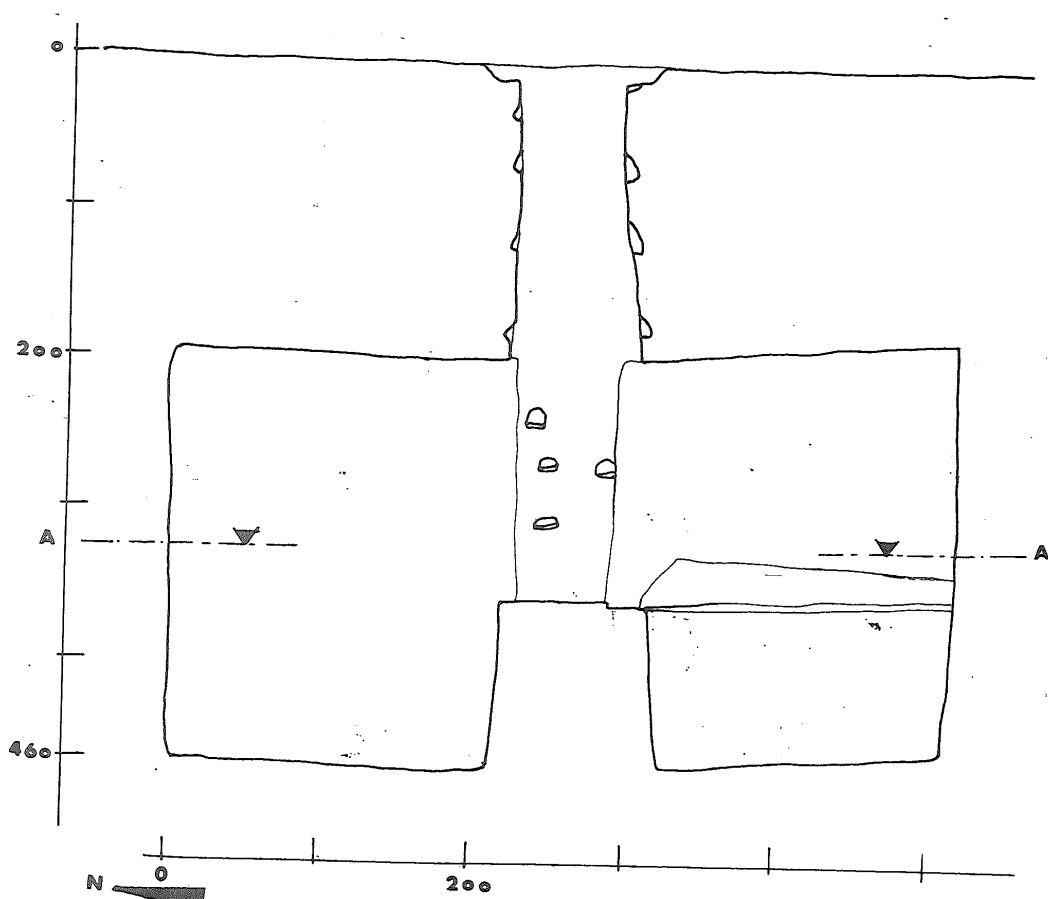


Fig. 1: Plan and section of Tomb BI, 1 (by W. Müller).

The next Grave 7 was of a different arrangement : when the top soil was removed, a complete skeleton appeared (Fig.2), head to north and arms alongside the body. A fragmentary skull which was left to the west, may belong to a different internment. Below this skeleton, several layers of mortar, sand and stones (Fig. 2a) were removed. Fragmentary bones were encountered at the bottom of the cist, on the usual bed of sand with a small cosmetic pot (Pl. LXXXV,2) and iron nails.

The last Grave 8 to the south was covered with a layer of painted plaster. Two skeletal remains, separated by mortar were recognised. The skull found with Grave 7 may have been transferred from the upper skeleton. A silver coin of Aretas IV and Shaqilat (Pl.LXXXIII) bronze bells and nails were found at the bottom of the cist together with two skulls and bones.

**The Objects:**

A significant pottery group was collected from the Graves (Pls.LXXXIV - LXXXIX). The most characteristic objects are four oil lamps, two of the delphiniform type. Lamp N°6 found in Grave 5 is of a dark gray ware, common in the Hellenistic period<sup>3</sup> and is decorated with a moulded horse-shoe impressions. The elongated burned nozzle bears an incision which starts from the top of the handle. The second example (N°9) from Grave 6 is remarkable because of a moulded lion head, the mouth working as the oil hole. Four other little holes for ventilation are distributed around the main hole. This object, as far as I am aware, has no parallel in the Nabataean

3. Paul Lapp, *Palestine Ceramic Chronology*, New Haven, 1961, p. 196, Type 84.
4. *RB*, LXI (1954) Fig. 2:16; LXIII (1956) Fig. 1:14.
5. *QDAP*, IX (1939) Pl. XXVII, 155.

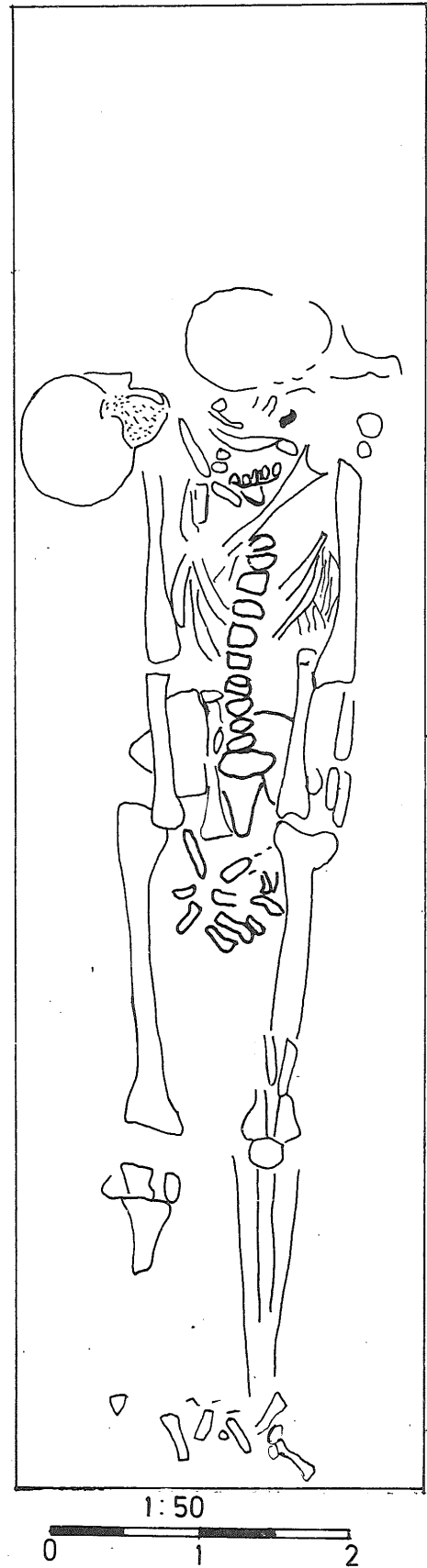


Fig. 2: Upper skeleton in Grave 7

corpus.

A hoard of delphiniform lamps close to the Petra model which were discovered by Father de Vaux at Qumrân and are dated 50-31 B.C. and are provided with loop handles and a little channel between the body and nozzle. this channel is replaced at Petra by a shallow incision. An exact parallel to lamp N°6 was yielded in Tomb E 3 in the Mu'eisrah Ridge<sup>5</sup>, excavated by Horsfield and dated by him to the 2nd century B.C. or Early Christian period. This chronological appreciation must be re-considered in the light of these new discoveries.

Lamps N°8 and 10 of the bow spouted type (so-called Herodian) are decorated with moulded rays and rosettes. They are typical of the Nabataean factories and are abundantly represented at Petra. An excellent example of

6. A. Negev, *The Nabataean Potter's Workshop at Oboda*, Bonn, 1874 p. 28 and Pl. 17:88.

7. *QDAP*, IX (1939) Pl. XXI, 155.

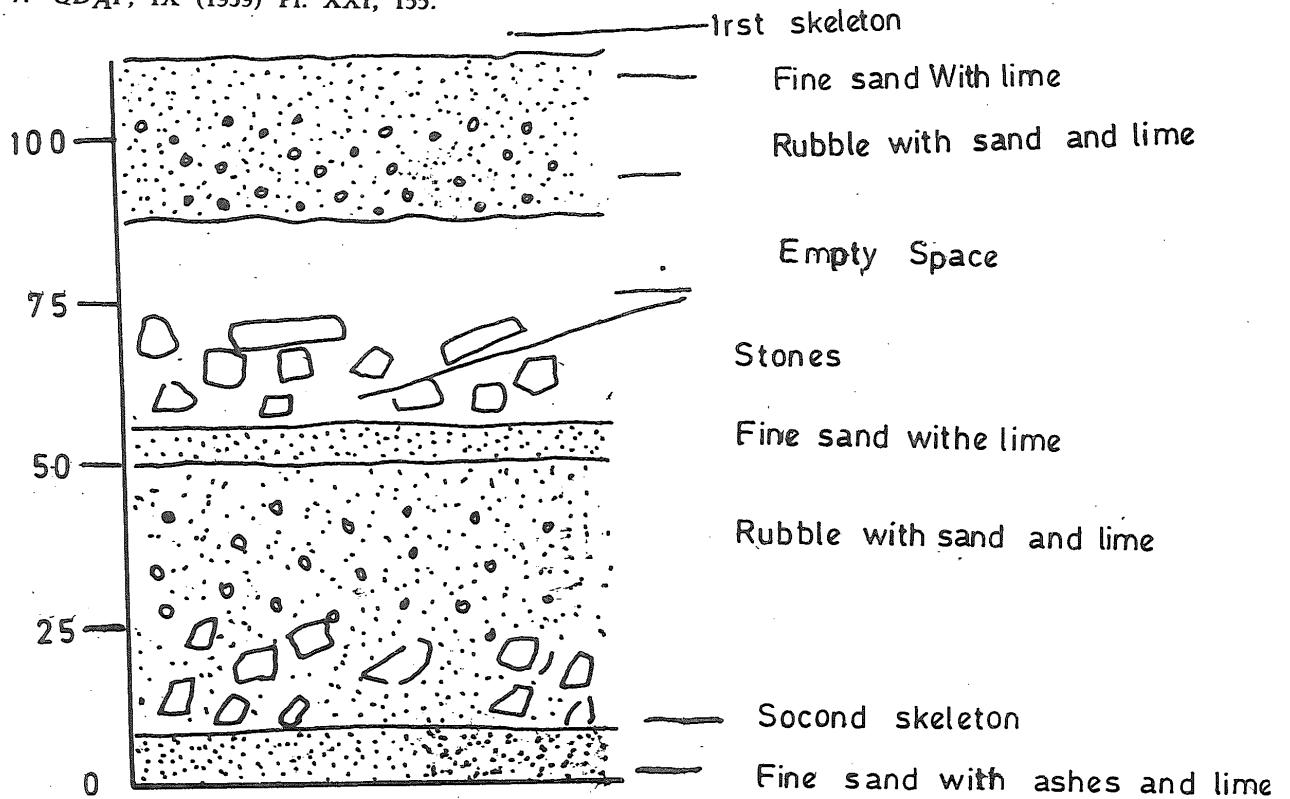
the voluted type came from the pottery workshop of Oboda<sup>6</sup> in the Negev and is dated to the early first century A.D.

This dating can be corroborated by the two unguentaria N°s 4 and 5; N°4, of a pear-shaped body and a pointed base was found in grave 5 and is covered with a gray-slip. The other unguentarium (N°5) discovered in the fill between graves 5 & 6 has a globular ribbed body and an outflaring rim. A good parallel to it was found by Horsfield<sup>7</sup> who dates it to the 1st century A.D.-B.C and the same date is given by M. Murray<sup>8</sup>.

Bowl N° 13 with an inverted rim and a ring base is related to Hellenistic prototypes. Similar forms were published by Murray<sup>9</sup>, Horsfield, and can be dated to the early first

8. *A steet at Petra*, London (1940) Pl. XXVII, 155

9. *Ibid.* Pl. XXVII, 62 (Form 22, p.22).



Tomb B 1  
Section Of G 7

Fig. 2a

century A.D.

Cup N° 14 of thick coarse ribbed ware may seem intrusive in this group. But good parallels to the form may be cited from Petra<sup>10</sup>, in the 1st century A.D

A fragment of a moulded vase (N°11, Pls LXXXIV-LXXXIX), is decorated with the profile of a female figure, wearing a chiton and a calathos decorated with an uraeus. She is holding an unidentified object in the left hand and extending the other. A cupid dressed with a rounded wig<sup>11</sup>, is advancing to the left, dragging an object with the right hand. The female figure is probably an Egyptian goddess. The vase of pinkish creamy ware and brown paint is possibly an imitation of the Arretine pottery<sup>12</sup>, which flourished in Italy in the first half of the 1st century A.D. An Egyptian-

Alexandrian influence could be postulated.

*The silver coin N°17* was found in grave 8' which, unfortunately, produced no other objects, except for iron nails and bronze bells. the obverse is struck with the busts of Aretas IV and Shaqilat, while the reverse bears the head of the king only. This type of coins can be dated to the twenty-seventh year of Aretas' reign (18 A.D.)<sup>13</sup>.

#### **Small objects:**

Nails and bells were collected from all the excavated graves. The nails could be an evidence of wooden boxes and the bells which are very common in Nabataean tombs<sup>14</sup>, can be considered as apotropaic. As for the cockles, they may be used with the same intention but also for pottery burnishing<sup>15</sup>.

10. *ADAJ*, XIX (1974) p. 147 and Pl. LXIX, 40.

11. Compare the wig of Cupid to a figurine of Alexandria, *Annuaire du musée gréco-romain* (1935-39) Pl. 167 and Pl. LXVII,2.

12. C. Johns, *Arretine and Samnian Pottery*, British Museum Publication, Oxford, 1977, p.9.

13. Y.Meshorer, *Nabataean Coins*, *Qedem*, 3 (1975), group D, P. 55 and Pl. 7, 103.

14. F. Zayadine, *Syria*, XLVII (1970) p. 125-26, and Fig. 12.

15. *Samaria-Sebaste*, III, Pl. XXVII.

**Tomb BI,1 Inventory**

N°	Reg/ N°	Prov.	Description	Pl.
1	12	BI,T1, Grave 4	Ostrakon inscribed with Nab. letters in black ink. Red ware, white slip.	LXXXIV
2	18	BI,T1, Grave 7	Small cosmetic pot, pedestal base, ribbed globular body. Orange ware, yellowish slip, white deposit.	LXXXV LXXXVII
4	3	BI,T1, Grave 5	Unguentarium, piriforme ribbed body, pink ware, gray slip, rim missing.	LXXXV, LXXXVII
5	2	BI,T1, Between G. 5&6	Unguentarium, outflaring rim, globular ribbed body, pink ware, buff surface, white inclusions.	LXXXV LXXXVII
	6	BI,T1,2 Grave 6	Moulded lamp, dark gray ware, pinkish slip, burned nozzle.	LXXXV
7	7	BI,T1,3 Grave 6	Two Cockles.	LXXXIV
8	8	BI,T1,3	Bow-spouted lamp, creamy ware, ochre slip, traces of brown paint on depressed oil hole and rounded body.	LXXXV LXXXVIII
9	9	BI,T1,2 Grave 6	Delphiniform lamp, moulded, decorated with lion mask, pink to gray ware, burned nozzle L.11,7 cm; H.3,5 cm.	LXXXV
10	10	BI,T1,2	Bow-pouted lamp, creamy ware, ochre slip, moulded. L.8,6 cm; H. 3,2 cm.	LXXXIV
11	12	BI,T1,2 Grave 5	Vase fragment, decorated with a female figure with cupid; creamy pinkish ware, brown slip	LXXXIV LXXXIX

13	13	BI,T1,2 Grave 5	Bowl fragment, pink ware, yellow paint over outer rim.	LXXXV LXXXIX
14	14	BI,T1,2	Cup, pink ware, buff surface, white inclusions,	LXXXV, LXXXIX
15	15	BI,T1	Bronze-bells.	LXXXVI
16	16	BI,T1	Iron nails.	LXXXVI
17	17	BI,T1,11 Grave 8	Silver coin. Ob. Bust of Aretas IV,r. Inscr [HRTT MLK NBTW] RHM'MH Rev. Jugate busts r. of Aretas IV and Shaqilat. Diam. 14 mm; Wt. 3,5g.	LXXXIII

### Tomb 813

The 'Uneishu Tomb, of the Hegra type, is carved in the western Khubtha cliff, at the exit of the Siq and opposite the theatre (Pl. XC). It has been already excavated in 1973-74<sup>16</sup>, and yielded rewarding objects and inscriptions. Loculus 4 of the eleven sunken graves (Fig. 3) was not excavated for it was obscured with one meter of rubbish accumulated by the bedouins and their herds. When this modern occupation debris was removed, it appeared that the first covering slab of the grave was missing and the space filled with sand and rubble. A sandstone fragment of 29X25X8cm engraved with few Nabataean letters (see below) came to light (Pl. XCII, 1). The sunken grave which is 1.35 m in depth was covered by slabs about 12cm thick overlaid with a layer of stone chips and mortar about 25cm in height. It was evident that the grave was visited in ancient times. Nevertheless, a fragment of a skull was at the southern end of the burial resting on a bed of ashes and lime. The contents was swiftly and a gold ring together with a silver coin were found. (see below).

#### The clearance of the Courtyard:

Part of the esplanade in front of the tomb was cleared out from the accumulated sand. This operation exposed the podium of the tomb and a flight of 3 steps 25cm in height, leading to the chamber. This is, to my knowledge, the only example of Hegra tomb at Petra, provided with a stepped access. A fragment of an Egyptian cavetto (Pl. XCII,2) fallen from the tomb façade was discovered in the debris.

#### The Objects:

1. The fragment of gold ring (Pl.

XCI,2). is 4,5 cm in diameter and is hollowed. It is too small for a bracelet but could be used as earring or pendant.

2. The silver coin (Pl. XCI,3) which is 16mm in diam. and 3,13g in weight, is badly corroded. The profile of the king with long-curved hair can be distinguished in the obverse. It is most probably the bust of Malichus II (40-60 A.D.) as one can assume from comparable silver coins in the Amman Museum.

3. The Nabataean inscription is unfortunately very fragmentary and reads:

1. MLKT
2. W

In the second line, the top of the curve belongs to a *waw* and it is likely that the word to be restored is NBTW. In this case, the inscription can be translated: Queen of the Nabataeans. The title of Queen was carried by princess of the royal family<sup>17</sup>, as proved by a dedication to Pasaël, daughter of Aretas IV who is called "Queen of the Nabataeans". It is not easy to determine whether the inscription commemorates the Queen or a princess of the royal family. The coin of Malichus II with the other objects and inscriptions suggest that the burial belonged to 'Uneishu and other members, of the ruling dynasty, in the time of Malichus II. The closed *mem* is certainly in favour of a date in the second half of the first A.D.

#### Monument Br. 9

As the visitor descends from the modern Rest House, towards the Siq, he will encounter in the er-Ramleh area, three disengaged sandstone blocks, locally known as *Sahrij* or water tanks (Pl. XCIII,1). The third monument to the right is distinguishable by the attached half

16. ADAJ, XIX (1974) p. 142ff.

17. T.J. Milik, J. Starcky, ADAJ, XX (1975) p. 113-14.



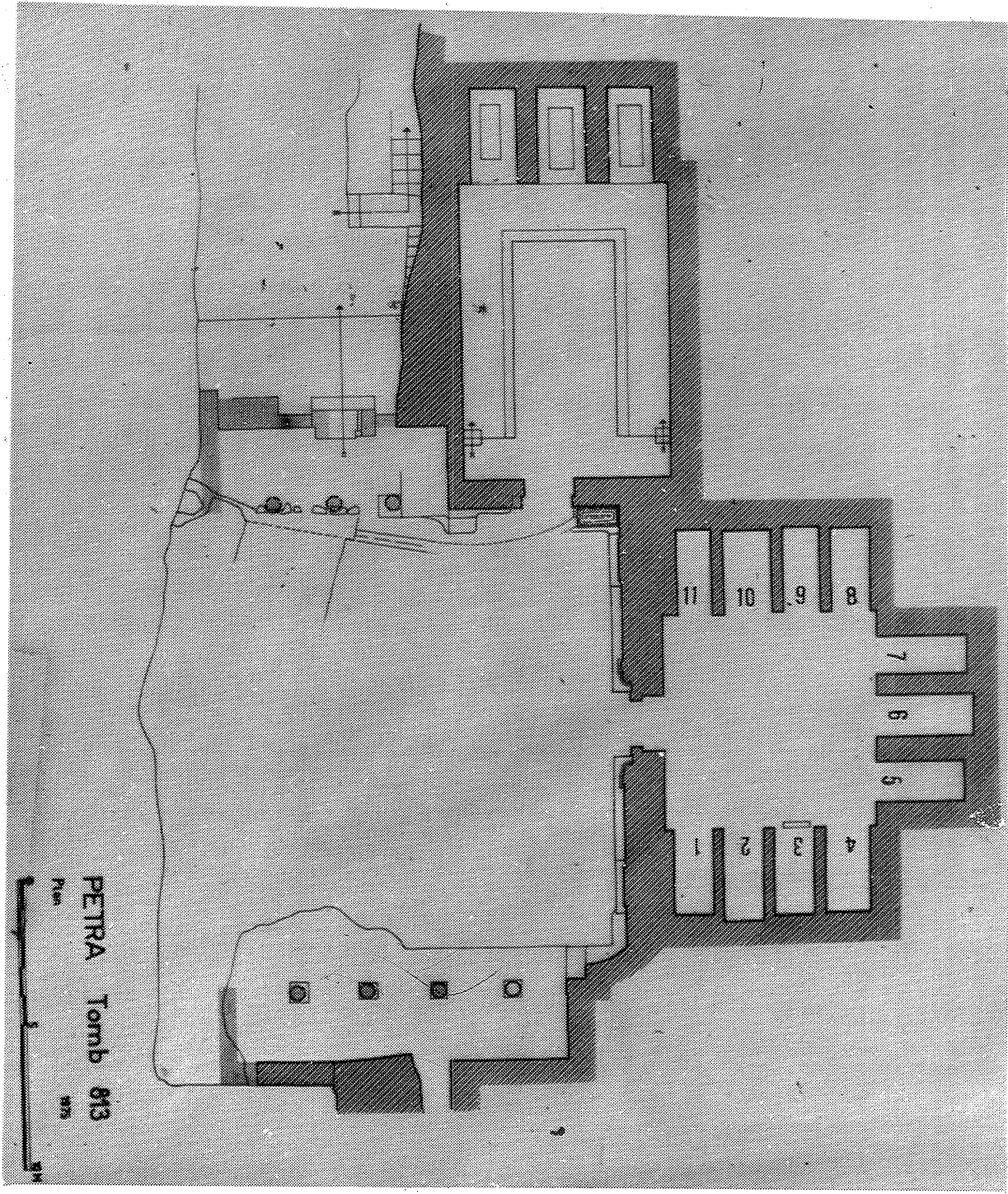


Fig. 5: Ground plan of Tomb 813 and adjacent trichlinium.

columns and pilasters (Pl. XC, 3) on the four façades which were once crowned by imported capitals. The entablature consists of an architrave, topped by a cornice which was wedged in a groove and a plain attica. It is likely that the monument was terminated by a built over structure including a *kimation* or apron string, a cavetto and half merlons of the Hegra type (see Tomb 813). This hypothesis is suggested by the discovery of a depressed margin of 64 to 68 cm in width, around the tip of the monument (Fig. 4) probably prepared to support the over imposed structure.

#### Exploration of the Monument:

In the northern rock wall, out of which the block was separated, a sloping ramp was prepared. It terminates in a little square platform which allows the explorer to examine the flat top of the monument. A shaft, cut in the terrace of the block was an irresistible appeal for investigation which the writer accomplished in the winter 78-79, while he was in charge of the Qasr el Bint excavations. The access to the shaft was made possible by a wooden bridge about 7 meters long (Pl. XC,2) which was laid between the ramp and the tip of the platform. Fearless bedouins crossed the bridge followed by architect Fr. Larché and other members of the excavation team. The rim of the shaft was strewn with pot sherds and stone chips. A rectangular cut 13 cm deep was carved in the northern margin while a little drain is incised in the eastern margin.

The cist which average 2.62m by 1.15m is 2.05m deep. There is a ledge on the southern flank only. After the clearance of the shaft, no objects were collected except for broken water pipes, 15cm in diameter and few Nabataean and Byzantine body sherds. The inter-

pretation of the monument is problematic. The absence of bones and covering slabs work against the hypothesis of a tomb. G.H. Wright<sup>18</sup> has suggested that some of the Petra High-Places were used for ritual exposure. It is more likely that such isolated cists similar to those of the Fars in Iran are better candidates for such practices, if they were ever adopted by Nabataeans. The discovery of water pipes is rather unexpected. They were probably a waist of the aqueduct which runs along the foot of the rock wall, north of the monument.

#### A Cultural Niche in the Siq

A niche hewn out of an isolated sand-stone block, about halfway in the Siq, where a section of the paved street is preserved, has been uncovered by the inspector of Petra, Mr. Mujahed el-Muhaisen in 1977. Although the upper part of the niche, i.e., the frieze of triglyphs and metopes seems to have been always visible, the monument was not recorded neither by Brünnow and von Domasewski nor by G. Dalman<sup>19</sup>, who published a meticulous survey of the sacred sites of Petra.

The niche (Fig. 5 and Pl. XCIV,1) which is 2.47 m high, is flanked by two antae, crowned by Nabataean capitals, a doric architrave and a frieze of triglyphs and metopes. Holes which hold traces of stucco are drilled in the architrave and the niche. A remarkable feature of the niche are the two baetyls which are cut in low relief on a pedestal. The left one which averages 0.93m by 0.49m bears in relief two squares, separated by a rectangular band, a schematic representation of a human face. This type of anthropomorphic idol is already known at Petra<sup>20</sup>, Wadi Ramm<sup>21</sup>, and Southern Arabia<sup>22</sup>. The best parallel to these twin idols are preserved on the granitic rocks of

18. PEQ (1969) p. 113-16.

19. *Petra*, Leipzig (1908).

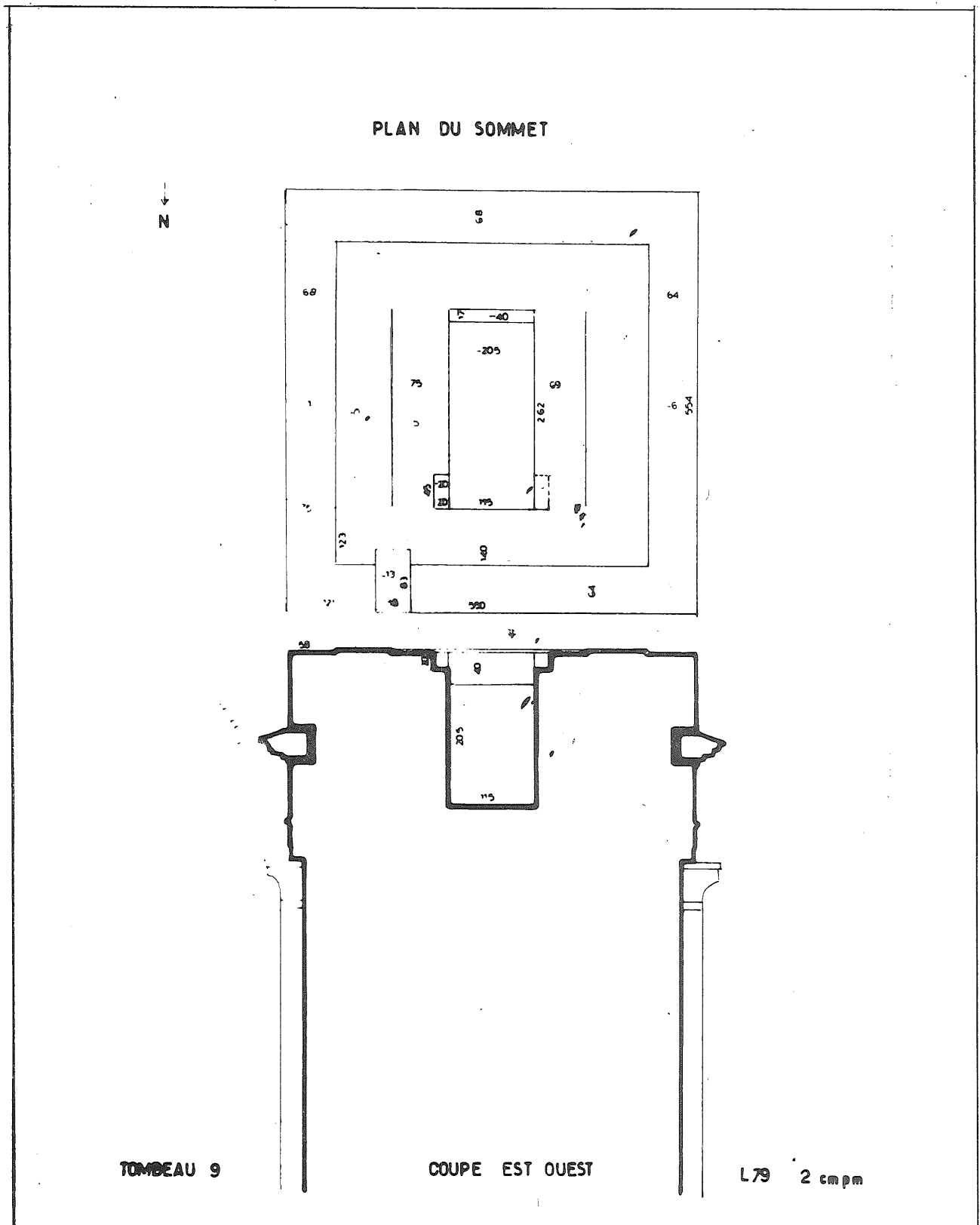


Fig. 4: Tomb 9, top plan and E-W. section (by Fr. Larché)

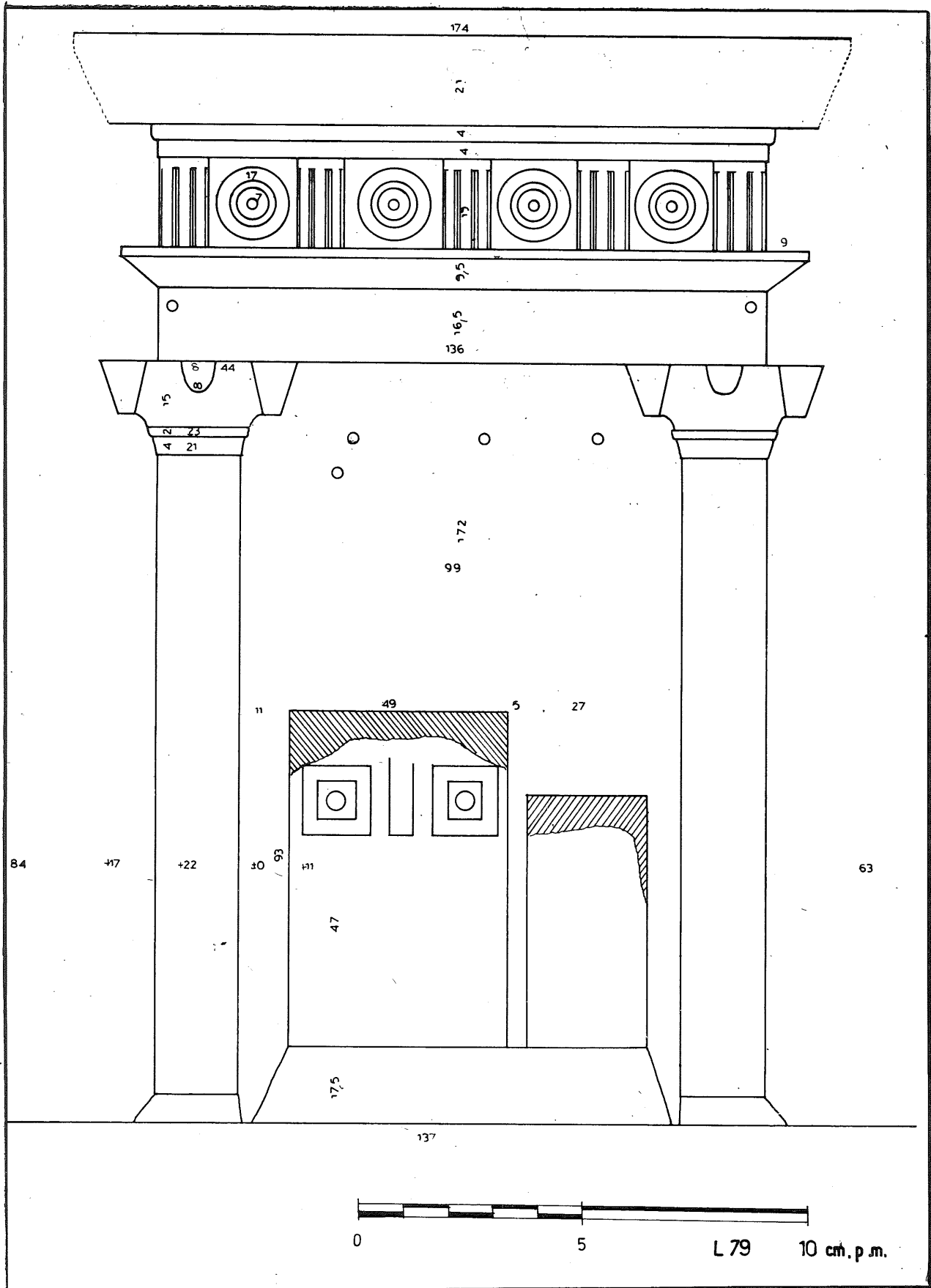


Fig. 5: Cultual niche in the Siq

Ain esh-Shallaleh, near Wadi Ramm temple (Pl. XCIV,2). Two pairs of idols are identified by inscriptions as al-'Uzza and al-Kutba of Ga'ia (modern Wadi Musa village) and as al-'Uzza and the "lord of the house". In both cases, the baetyl of al-'Uzza is adorned with a schematic human face. The Arabian origin of this idol is well attested by the stele of Hegra and South Arabia. A more anthropomorphic version of these idols was discovered at Hajar bin Humeid in Yemen<sup>23</sup>, at Taima<sup>24</sup> and recently in the Winged Lion temple of Petra<sup>25</sup>, excavated by Ph. Hammond (Pl. XLII). The Nabataean inscription which is to be dated to the 2nd half of the 1st century A.D. reads: "The goddess of Hayyan son of NYBT". There is no convincing evidence to identify this goddess with Atargatis.<sup>26</sup> Consequently, it is not easy to identify the two steles of the Sîq. New epigraphic discoveries at Petra brought to light many dedications to al-'Uzza, mentioned with a priest, in some cases: she is recorded in Wadi es-Siyyagh,<sup>27</sup> near the spring, at Sidd el Ma'âgen, in a gorge at the northern end of Khubtha, and on the way to al Khubtha High-Place,<sup>28</sup> with the "lord of the house". It is probable, if we compare these dedications to the other mentioned goddesses, that the consort of Dushares at Petra was al-'Uzza.

The dating of the Sîq niche is conjectural, due to the absence of inscriptions. It is clear that it is part of the layout of the Sîq as the main access to Petra. The constructed podium

on the paved street is probably the footway built with the paved road. If the assertion of P. Parr<sup>29</sup> that the street was built after 76 A.D. is accepted, the niche must be of earlier date. The frieze of triglyphs and metopes appears at Hegra as early as 1 B.C. It is possible to date the niche of the Sîq in the 1st half of the first century A.D.

#### General conclusion:

Shaft tomb BI,1, on the western Khubtha slope can be dated on the evidence of coins and pottery objects to the reign of Obodas III (30-9 B.C.) and Aretas IV (9 B.C. - 40 A.D.). The deposit was certainly disturbed by tomb robbers of the Byzantine period. Pottery lamps of the delphiniform type are related to the end of the first century B.C. But the majority of vases are to be dated to the reign of Aretas IVth.

It is now established that Tomb 813 was the burial place of Minister 'Uneishu and probably of members of the royal family. The double frame of the doorway which appears at Hegra after 31 A.D. can be considered as a good criterion for similar façades at Petra. The influence of Alexandria on this type of door frame is evident.

It is hoped that the resumption of the excavations in Tomb 813 and other rock-cut monuments will bring dating material which will certainly elucidate the mystery of the Petra undecipherable façades.

F. Zayadine

20. *CIS*, II, 1, Pl. XIIX, N°423.

21. *RB*, XLIII (1934) p. 14ff and Figs. 11-12

22. C. Rathjens, *Sabaica* (1955) p. 219-24.

23. G.W. Van Beek, *Hajar bin Humeid*, Baltimore 1969, Pl. 47f. and Fig. 116g.

24. *Saudi Arabia Antiquities*, Department of Antiquities and Museums, 1975.

25. *ADAJ*, XII (1977-78) p. 81ff.

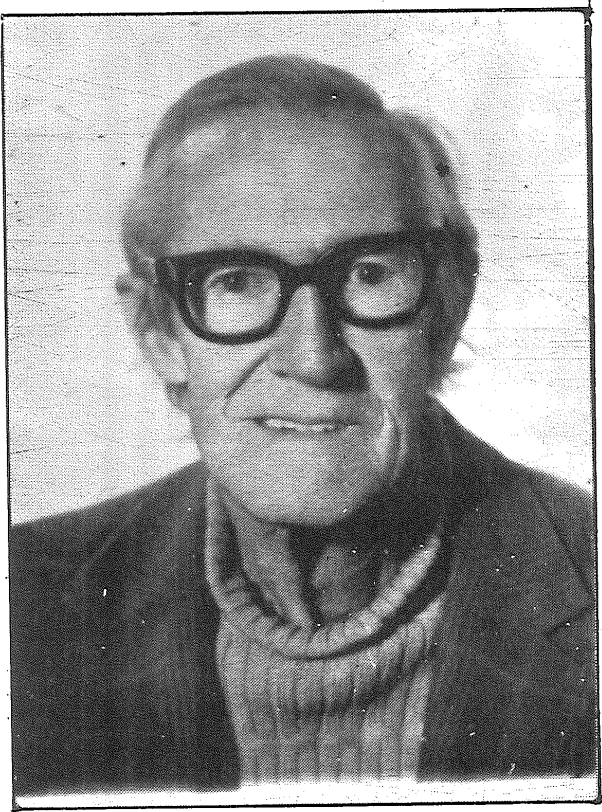
26. The nude goddess (*Ibid.* p. 86) riding a dolphin is probably a Nereid. Atargatis, the Syrian Goddess, was never depicted as a nude deity.

27. *ADAJ*, XX (1975) p. 124ss.

28. *RES* 1088.

29. *Near Eastern Archaeology in the Twentieth Century* (1970) p. 370.

IN MEMORIAM  
GERALD LANKESTER HARDING



The death of Gerald Lankester Harding on 11th. February 1979 was a grievous loss to Jordanian archaeology and epigraphy. Of his long life he had spent fifty-three years in the Middle East and had done more than anyone else to alert the world to Jordan's immensely rich archaeological heritage.

Gerald Lankester Harding was born in Tientsin, North China, in 1901 and spent his early childhood in Singapore. In 1913 his family moved to England and at the age of sixteen he took a job in a publisher's office, experience which he always said was most valuable to him in later life. While doing a variety of different jobs, between the ages of sixteen and twenty-five, he became fascinated by Egyptian hieroglyphics. Eventually, he joined the classes then being held by the

distinguished Egyptologist, Dr. Margaret Murray, who soon recognized his brilliance. With her encouragement he decided to devote himself to archaeology and in 1926 he joined Sir Flinders Petrie on the latter's excavations in Southern Palestine.

It was not long before Petrie noticed Gerald Harding's archaeological abilities and gave him more and more responsibility. Between 1926 and 1932 he dug with Petrie at Tell Jemmeh, Tell Fara and Tell el-Ajjul. At the same time he was learning to speak Arabic from the Bedu of the region. In a remarkably short time he became so fluent that he was several times mistaken for an Arab. He then taught himself written Arabic, no mean task as any foreigner who has tried it will know! In 1932 he moved with J.L. Starkey and Olga Tufnell to the very important site of Tell ed-Duweir (ancient Lachish) which they dug until 1938. With

Olga Tufnell and Charles Inge he was responsible for the second volume of the Lachish final report and worked with the various experts on the famous Lachish letters. Indeed, he was entirely responsible for the exquisite hand copies of these difficult ostraca and it was said that his sharp eyes could see things on the original which others needed infra-red photography to make out.

Meanwhile, in 1936, he had been appointed Director of Antiquities of Jordan. During the twenty years in which he held this post he conducted and supervised a vast amount of archaeological work throughout the length and

breadth of Jordan. Quite apart from the large number of excavations and surveys he conducted and encouraged, he drew up a series of archaeological maps of Jordan, he founded the Archaeological Museum in Amman, administered the Palestine Archaeological Museum in Jerusalem and created the Annual of the Department of Antiquities of Jordan. He published a great many articles, in this and other learned journals, on a wide variety of archaeological and epigraphical subjects. His breadth of knowledge was extraordinary, ranging from the Prehistoric to the Islamic periods. He was one of the first to recognize the importance of the Dead Sea Scrolls and organized an international panel of scholars to come and work on them. With Père Roland de Vaux he excavated the site of Khirbet Qumrân, excavations which were of enormous importance for the study and dating of the Scrolls.

When he retired from the Department of Antiquities, in 1956, he went to live in Lebanon. While he was there he wrote *The Antiquities of Jordan*, a book which has been of immense value to specialists and non-specialists alike and in which the author's enthusiasm for his subject can be felt on every page. Despite the fact that it was written twenty years ago, it still remains unsurpassed.

During this period he was asked by the British Government to conduct the first major archaeological survey of what was then the Aden Protectorates. This he did in 1959-1960 and it resulted in his book *Archaeology in the Aden Protectorates*. While in Aden, he helped to organize the Aden Museum and to secure for that Museum, and then catalogue, the famous Muncherjee collection of South Arabian antiquities.

In 1976 he returned to Jordan where he lived for the rest of his life. It was, in a

very real sense, a homecoming for him and he was deeply moved by the welcome he received.

The last twenty years of his life were increasingly devoted to the study of North Arabian inscriptions and of this field also he proved himself a master. He had already published, in 1952, *Some Thamudic Inscriptions from the Hashemite Kingdom of the Jordan*, which was hailed as a model of how these texts should be published, and in 1951 had conducted the first ever excavation of a Safaitic Cairn, the Cairn of Hani'. In 1950 he had accompanied Professor Winnett of Toronto University on an expedition to record Safaitic Inscriptions in the H5 area and in 1958-1959 he and Professor Winnett returned to record another four thousand of these texts in the region of H4. These were published in 1978 as *inscriptions from Fifty Safaitic Cairns*. He also compiled, *An Index and Concordance of Pre-Islamic Arabian Names and Inscriptions*, a massive work which has been of incalculable use to scholars working in the fields of North and South Arabian Epigraphy. At the time of his death he was working on a dictionary of the North Arabian Inscriptions. To his work on these texts, which were written by Pre-Islamic bedu, he brought not only the resources of his wide-ranging scholarship but also his deep knowledge of the bedu and their way of life.

As a scholar he had extraordinary gifts: a penetrating mind, a wonderful memory and an instinct in archaeology which seldom, if ever, seemed to fail him. He also, and this was perhaps one of his most valuable qualities, never lost touch with common sense. In 1951 he was awarded the Star of Jordan by H.M. King Talal in recognition of his services to Jordan and in 1957 he was appointed C.B.E.

Among his many other talents he was a very

gifted musician. He composed music and was an accomplished pianist. His tastes in music were wide, ranging from Arabic music to European Classical, Jazz and Pop. He also knew much about Modern Art. He will be missed, by all those who had the good fortune to know him, not only as a scholar but as a friend. We shall miss his infectious enthusiasm, his humour and his modesty, his fearlessness and his loyalty. He was a good and gracious

teacher, was most generous in sharing his gifts and his knowledge with others and was full of encouragement for all those who showed enthusiasm. For Jordan he always felt a special love and he was very moved to find how greatly this love was reciprocated. Through the generosity of the Jordanian Government he has been buried at Jerash, in Jordan which he always felt was his home.



# PLATES





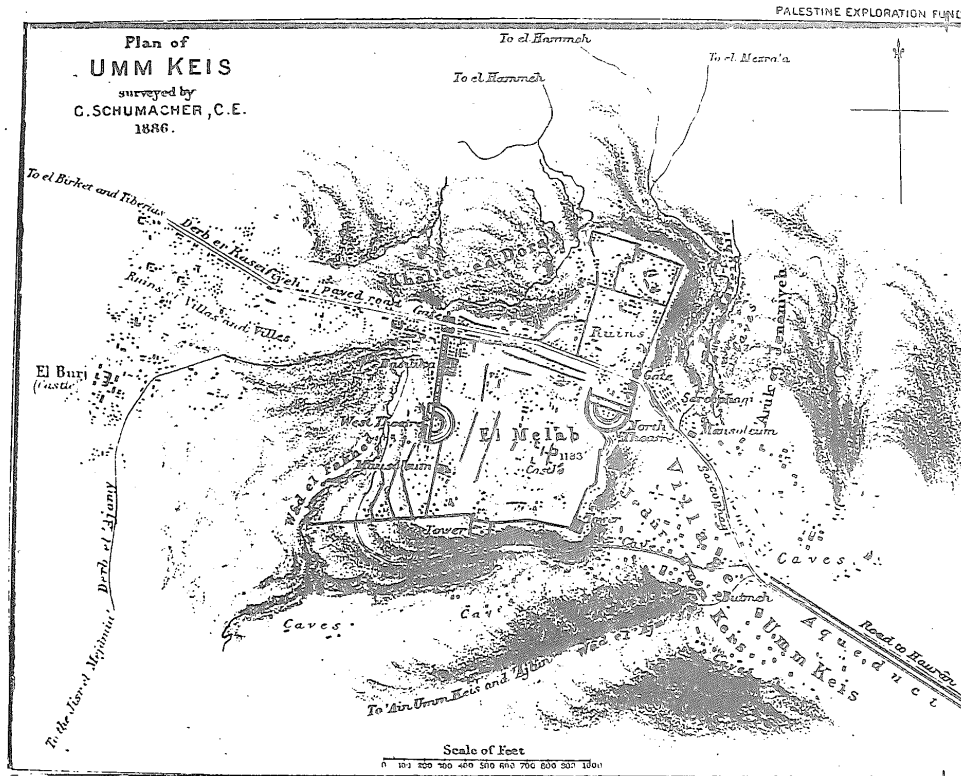
1. Outside the northeast corner of the Qasr, the Monumental Building at 'Irâq el-Emîr. The clearance at the corner was carried out during the first campaign and no evidence of Hellenistic construction or occupation was found. The feline fountain, in the wall to south, was found only incidentally when the area was being cleared for photography in the third campaign.



2. Close-up looking north along the East Qasr Wall. Note the lower Byzantine (Stratum II B) floor on the upper right, and the lowest dressed course of the Qasr wall in the upper lefthand corner. Below the Byzantine floors was only fill with occasional sherds.



3. Looking east at the south trench outside the Square Building. Note the terrace walls going south from the south wall of the Square Building on the left (cf. fig. 1: nos. 12, 13). In these areas below a floor (fig. 1: no. 6) and a burned area groups of Hellenistic sherds were found.



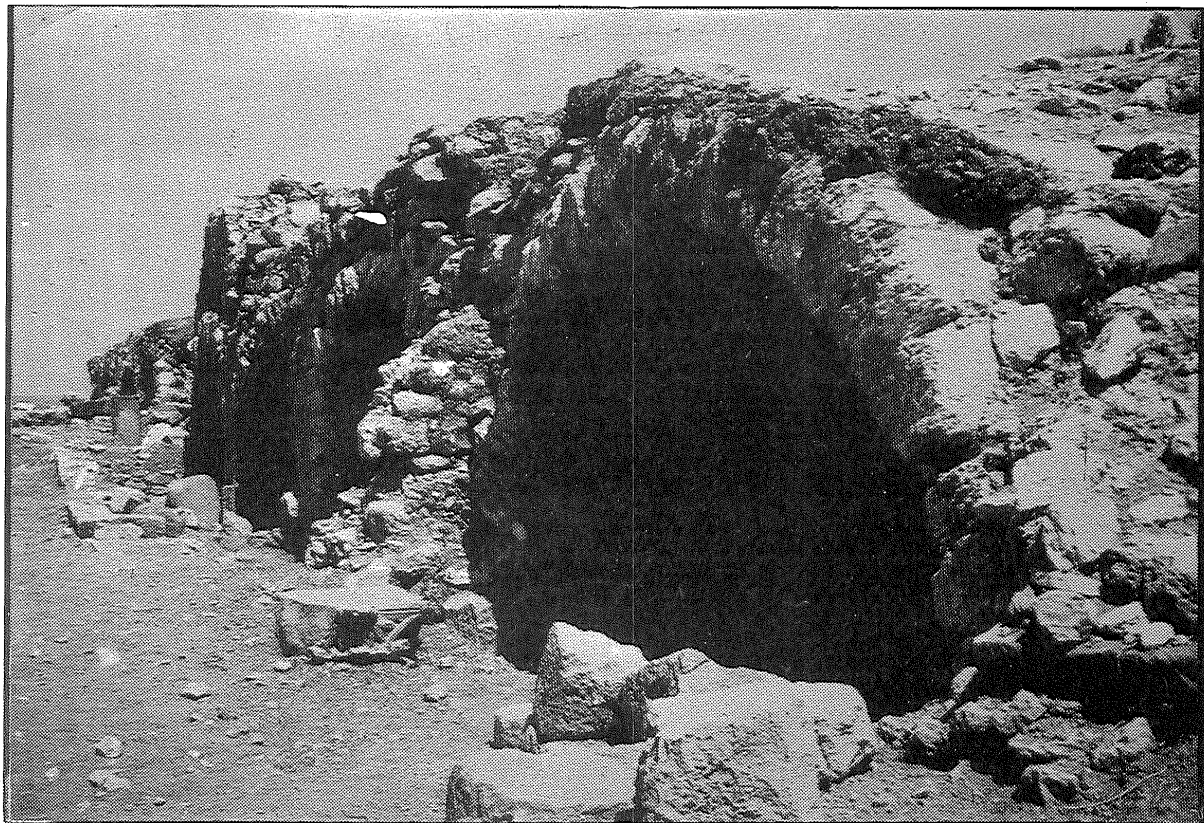
1. Plan der Oberflächenforschung von G. Schumacher aus dem Jahre 1886.



2. Hauptstrasse auf der Grenze der Felder 5 und - 5.



1 Nördlicher Teil der Terrasse in Feld - 4.



2 Räume mit gewölbter Decke an der Westgrenze des Feldes - 4.



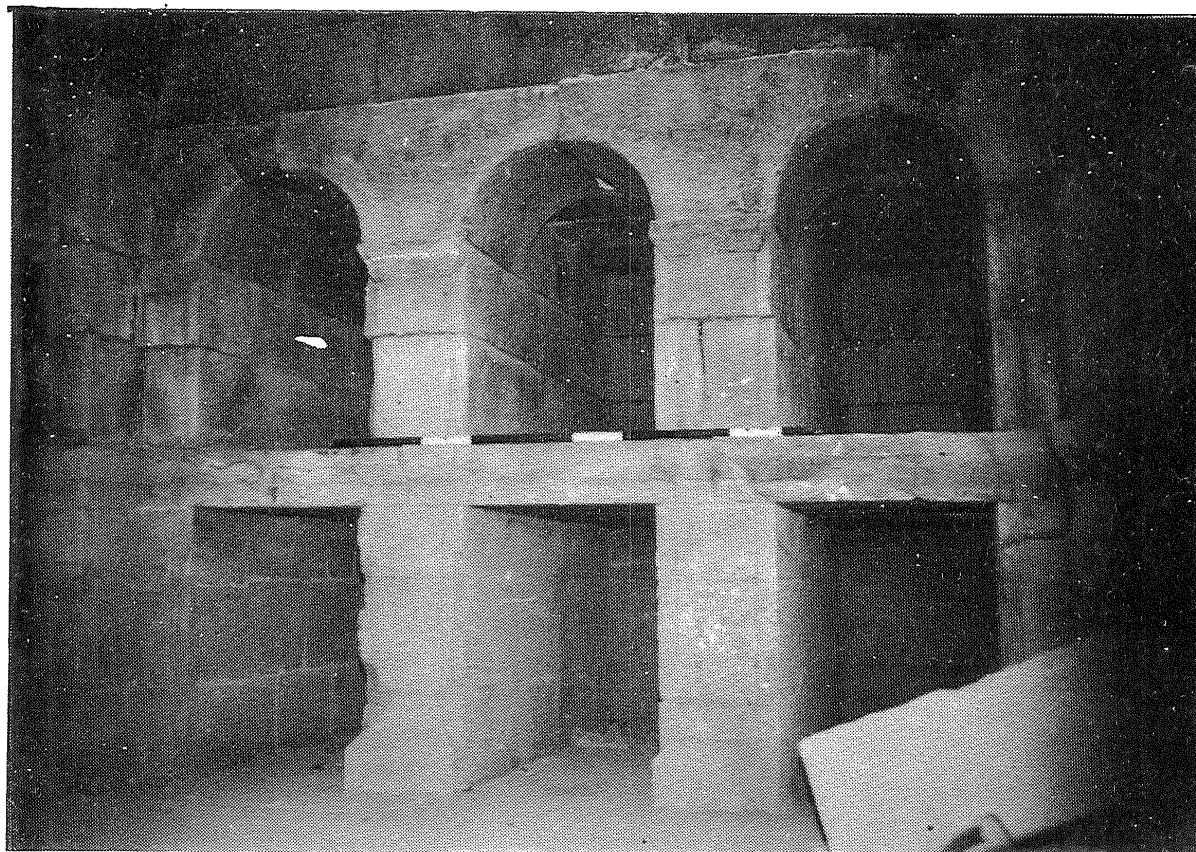
1. Reste eines Oktogonalbaus in Feld - 109.



2 Säulenreste in Feld - 12.



1. Mausoleum in Feld - 11.



2 Schiebestollen im Kuppelbau des Mausoleums in Feld - 11.

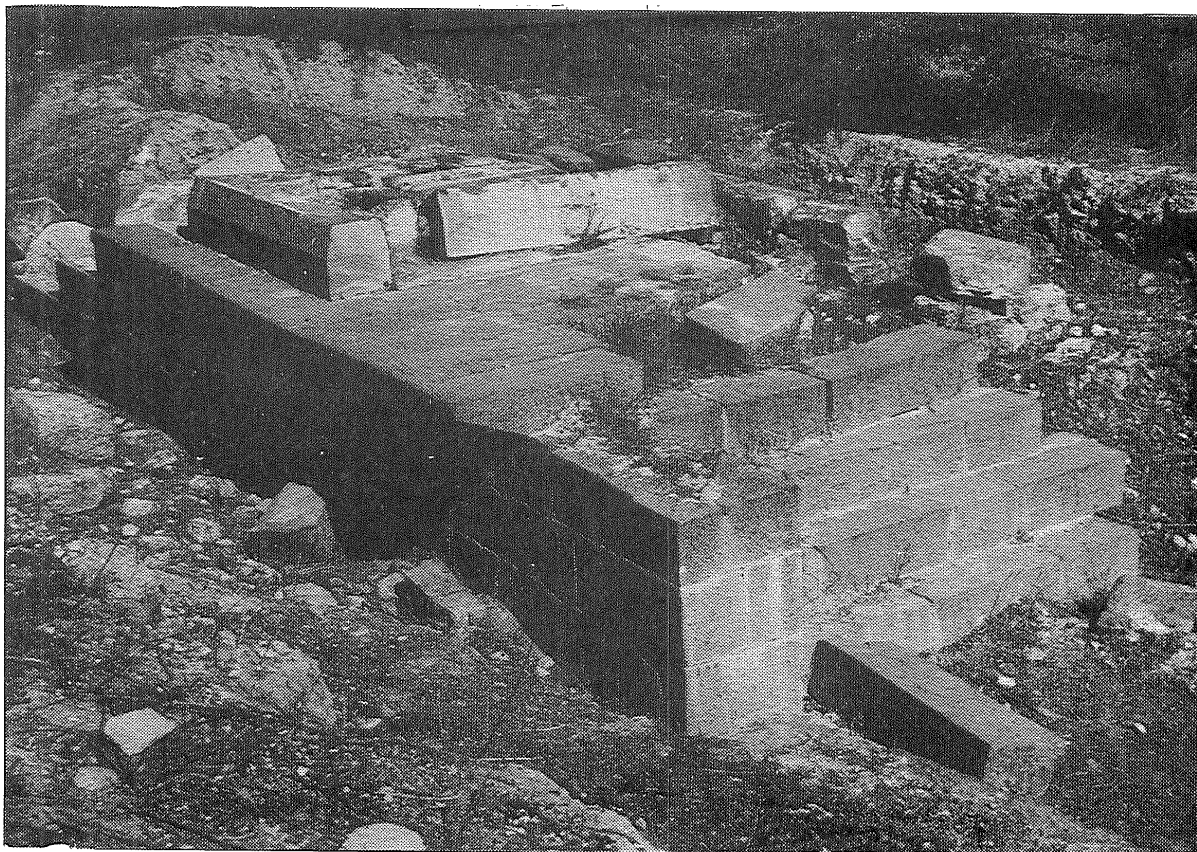




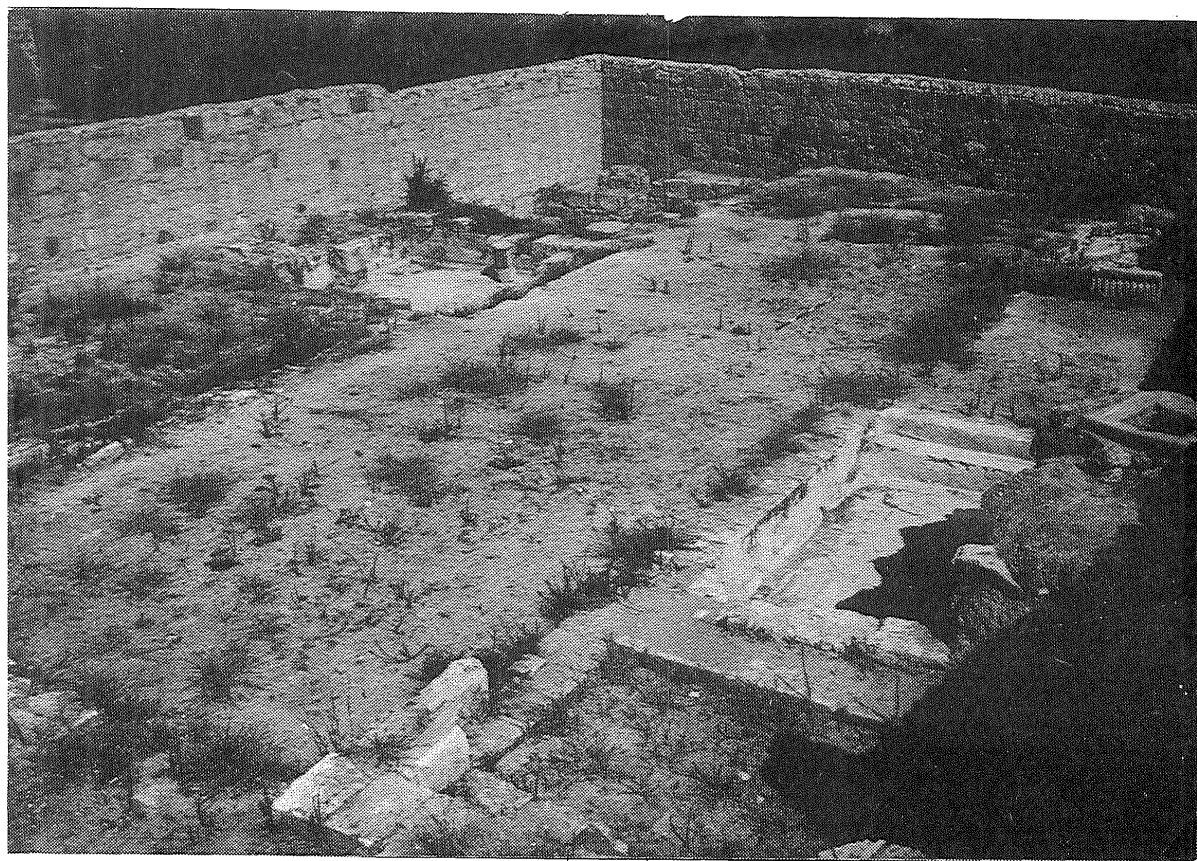
1 Reste der Fassade in Feld 6.



2. Apsis auf der Grenze der Felder 6 und 7.



1. Mausoleum in den Feldern 7 und 107.



2 Spätantikes Bad in den Feldern 8 und 108.

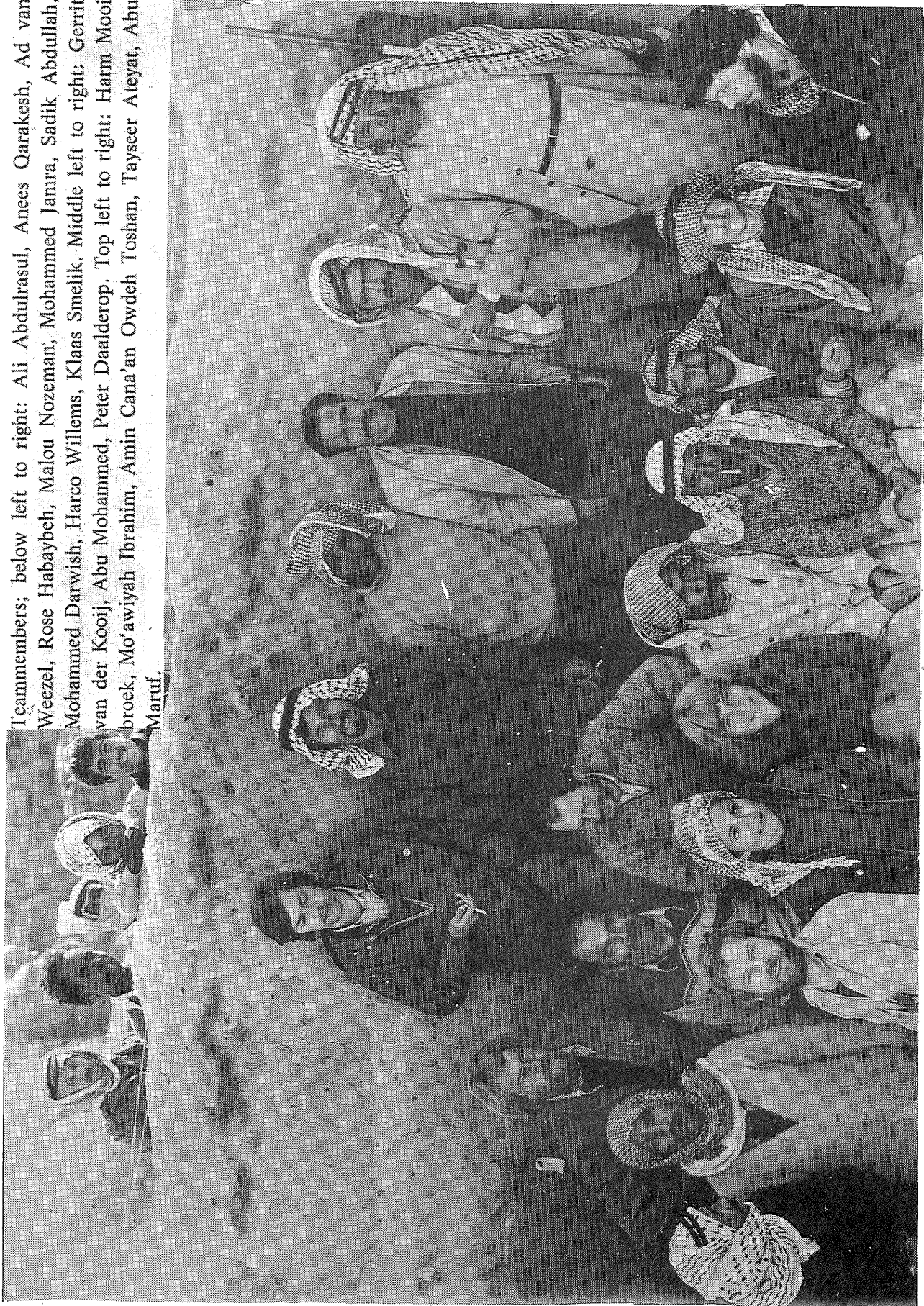


1 Profilierte Steine des Hippodroms in Feld 14.



2 Reste des Monumentalbaus in Feld 16.

Team members; below left to right: Ali Abdurassul, Anees Qarakesh, Ad van Weezel, Rose Habaybeli, Malou Nozeman, Mohammed Jamra, Sadik Abdullah, Mohammed Darwish, Harco Willems, Klaas Smeik. Middle left to right: Gerrit van der Kooij, Abu Mohammed, Peter Daalderop. Top left to right: Harm Mooi broek, Mo'awiyah Ibrahim, Amin Cana'an Owdeh Toshian, Tayseer Ateyat, Abu Maruf.





Square B/A5, wall of phase V/VI.



Square B/A7, E section.



□ Square B/B5, goat/sheep bones in phase VI.



Squares B/B9 and 10, remnants of architecture of phase VI.

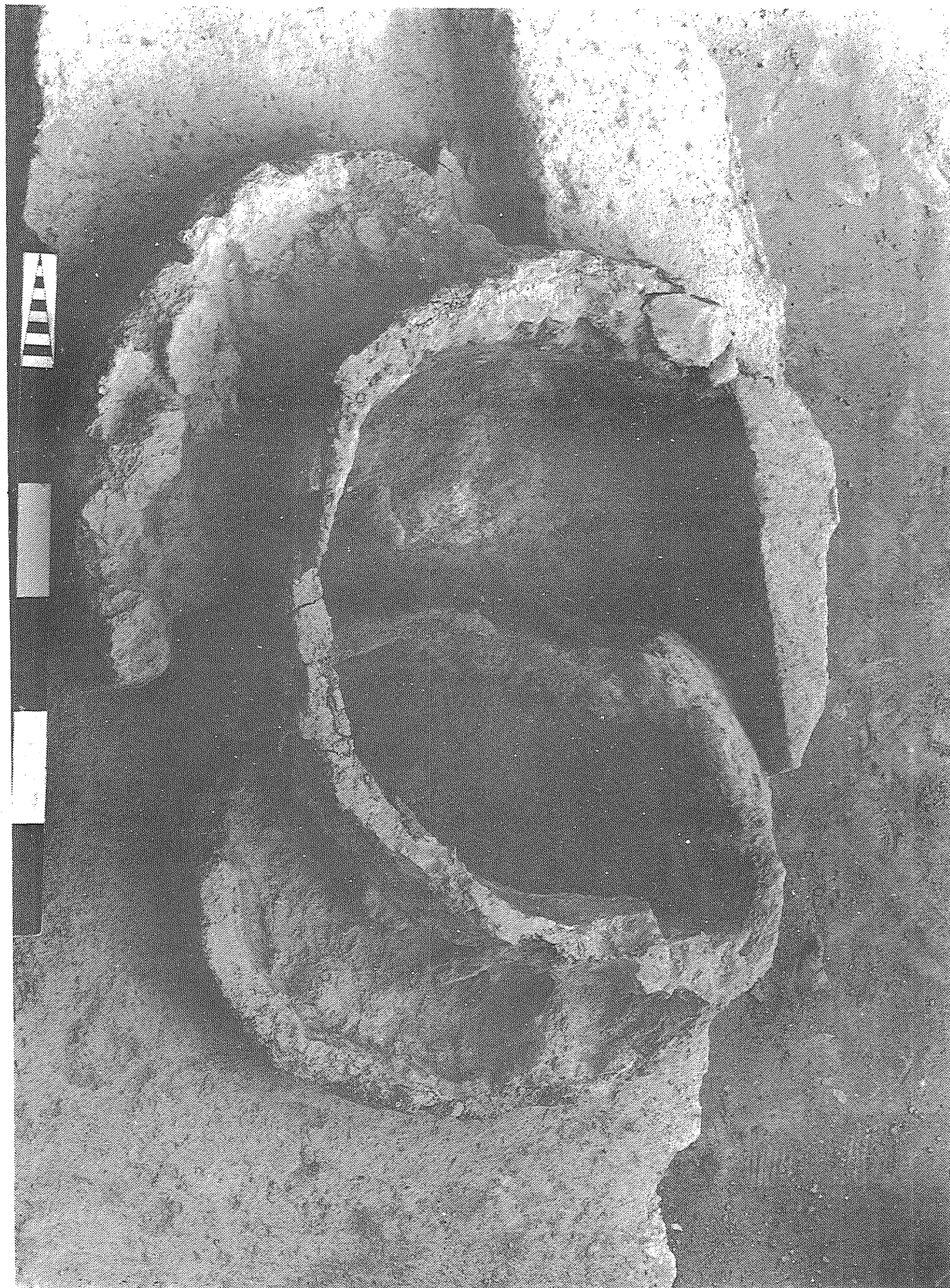


Square B/A8, wall fragment and oven of phase VI.





Square B/A8, oven with ash and pot of phase VI.



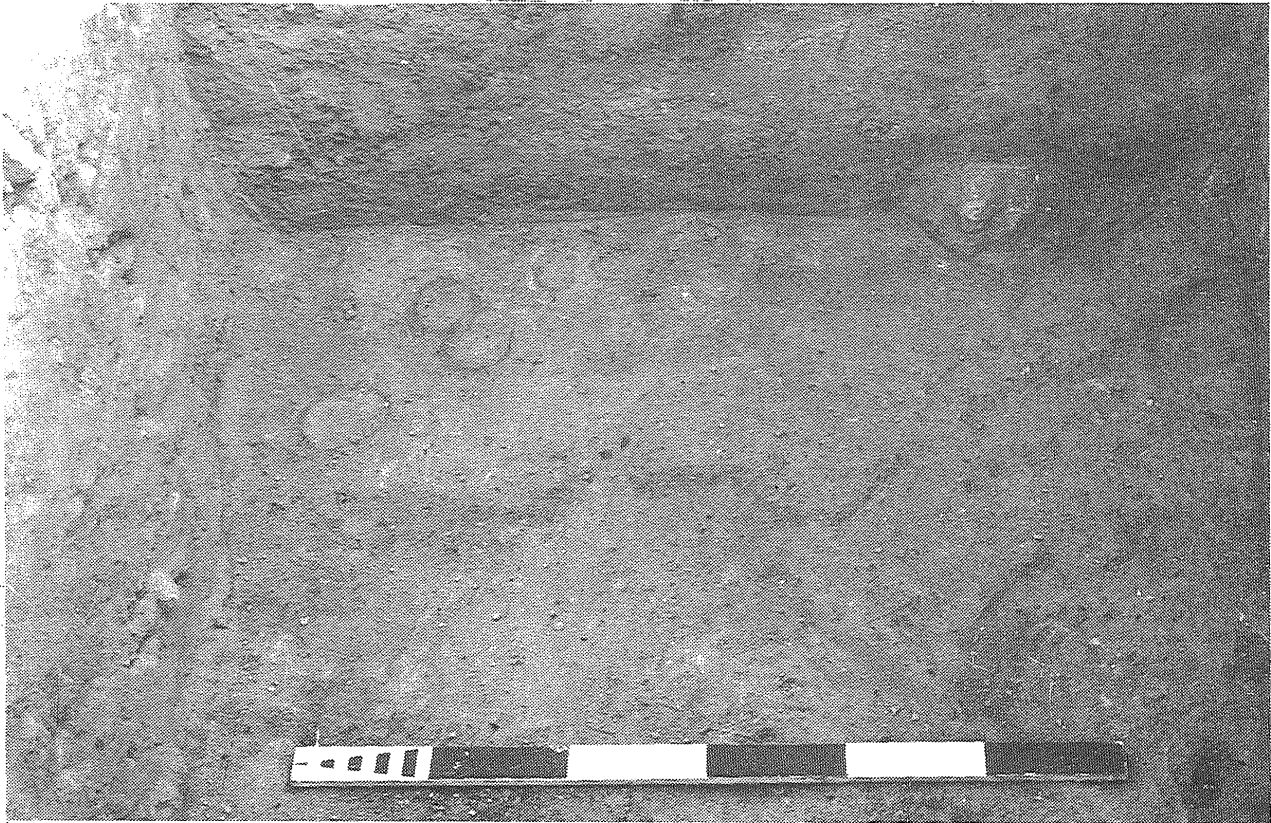
Square B/B5, tabuns in phase VI.



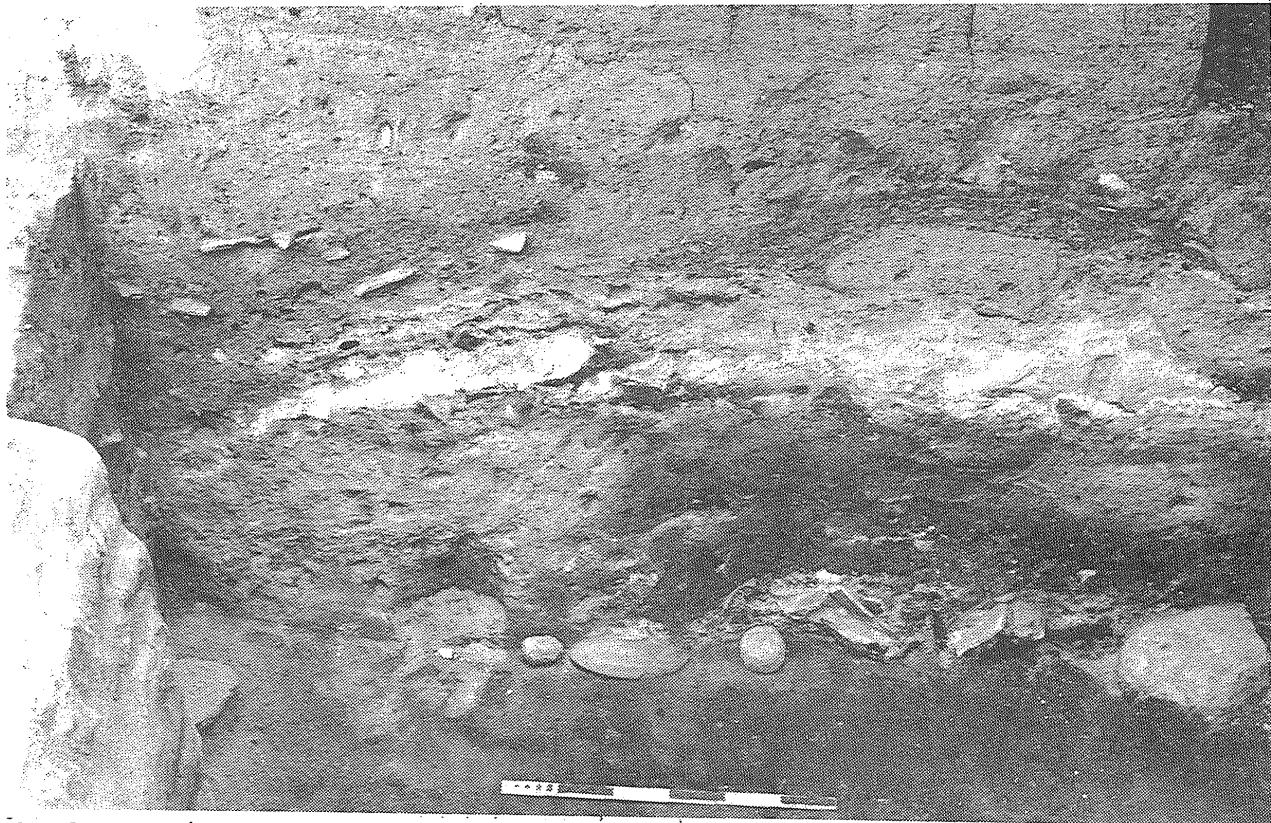
Square B/C8, surface with ash of phase VI.



Square B/A5, remnants of a woven mat from phase VI; the length of the two visible main pieces of the mat is 4.5 cm.



1. Square B/B6, phase VII, some of the pole holes in solid clay deposits.



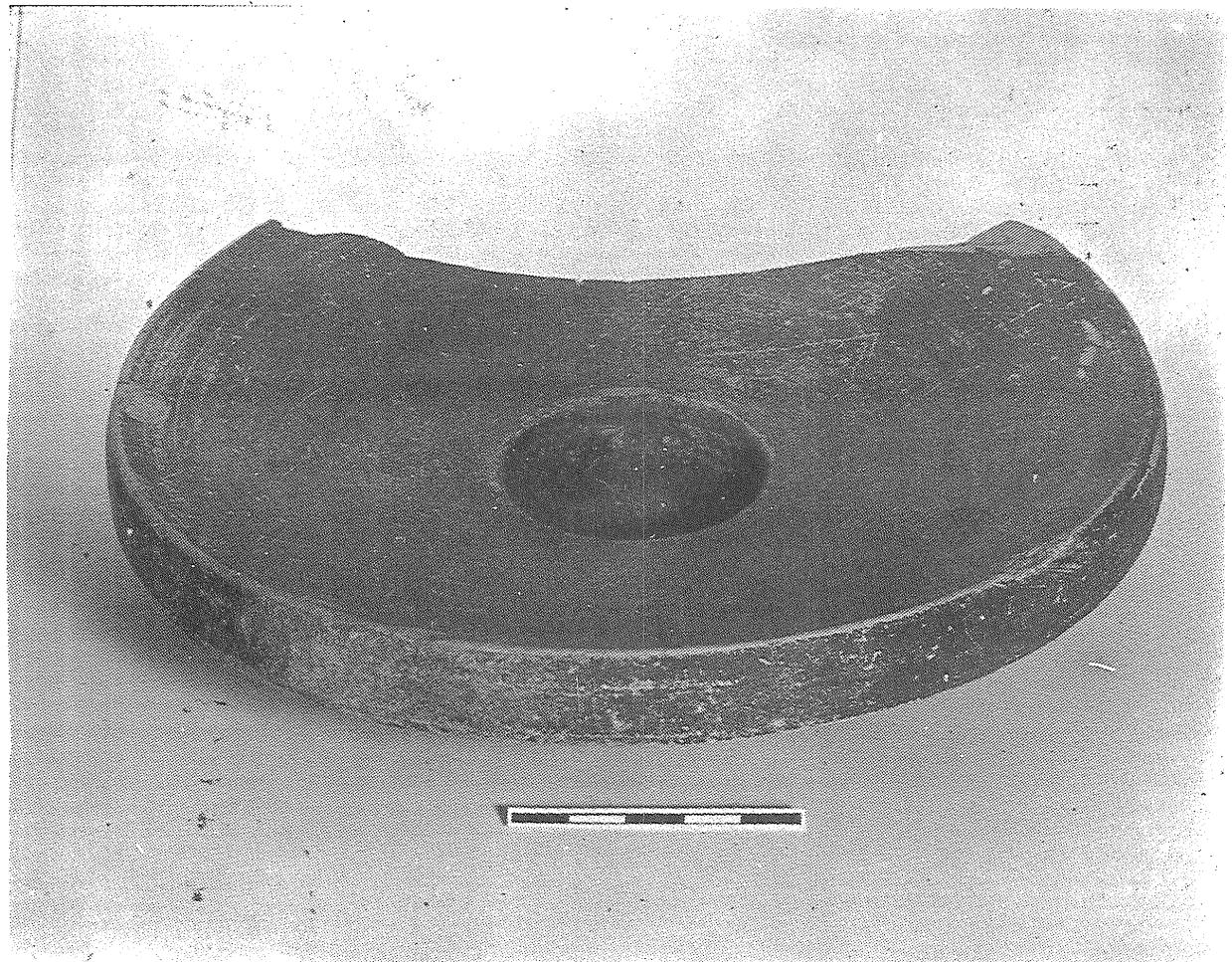
2. Square B/C6, phase IX, section through burnt debris in room, with floor of room, and mudbricks of phase VIII at the top (cf. the section drawing of fig. 5).



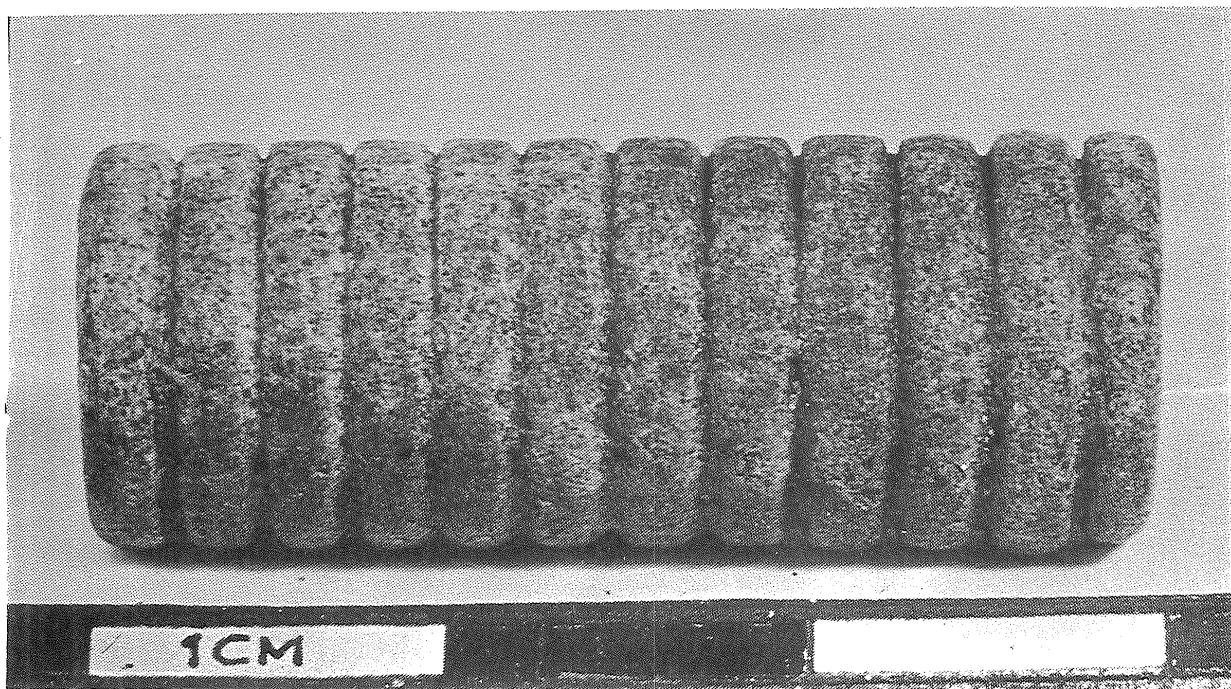
1. Square B/C6, phase IX, burnt debris with pottery inside room (cf. plan drawing fig. 5).



2. Square B/C6, phase IX, burnt antler in debris B/C6.63 inside room, close to floor.



1. "Fish plate" from B/A8.6 (nr 2711), phase III (cf. fig. 1)



2. Bead (?) from B/A8.8 (nr 2691), phase V.

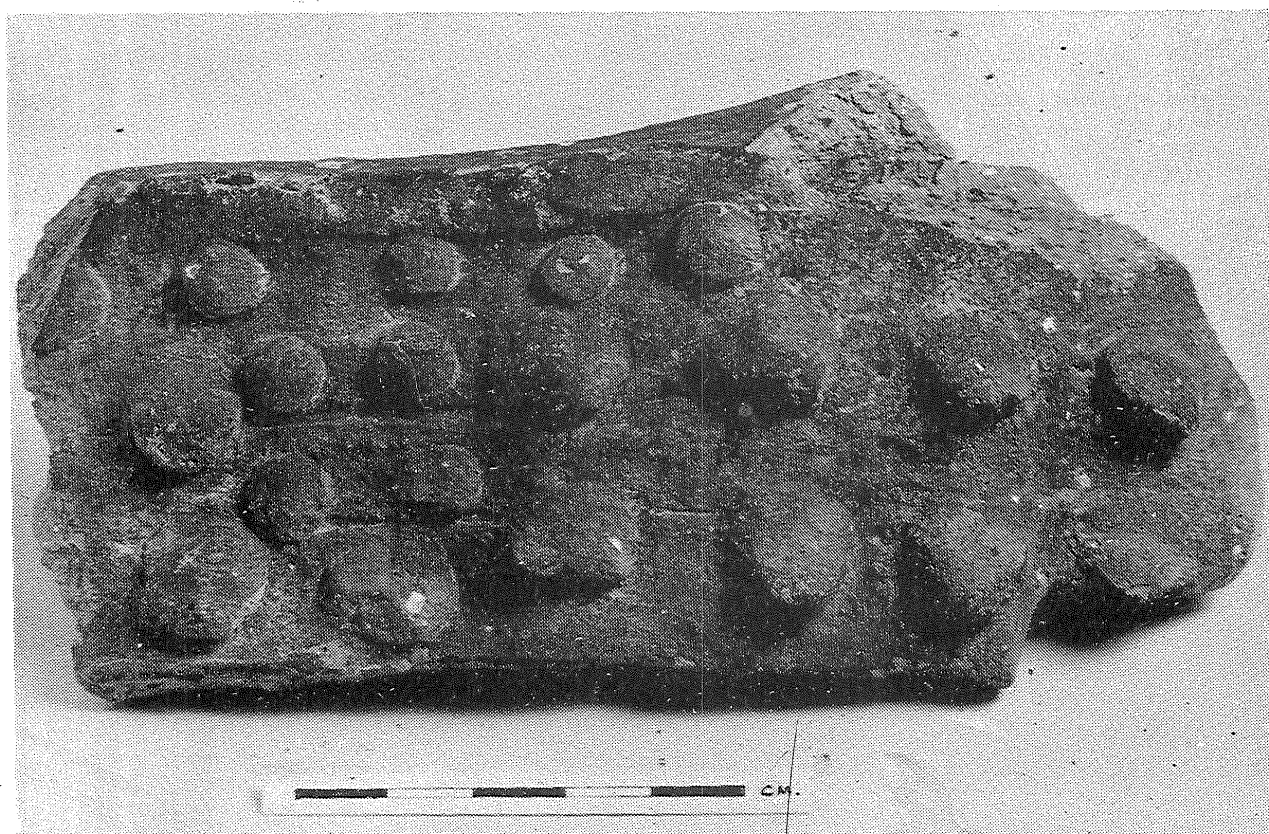




1. "Decanter" from B/B5.34 (nr. 2702); phase V/VI.



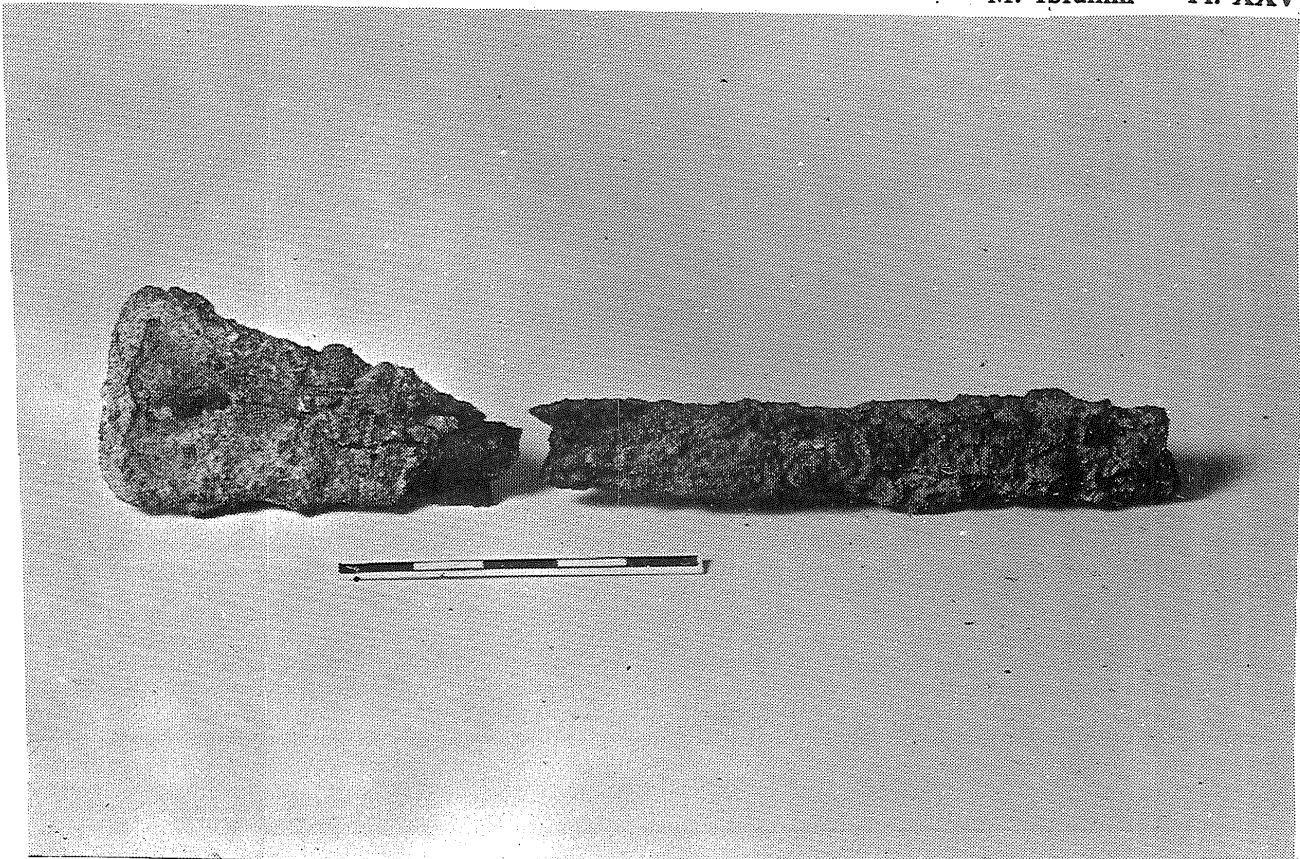
2. Bowl from B/A5.30 (nr. 2687), phase V/VI.



1 Fragment of pottery house model (?) from B/B5.34 (nr. 2649), phase V/VI.



2. Pendant bead (black stone) from B/C8.16 (nr. 2647), phase V/VI



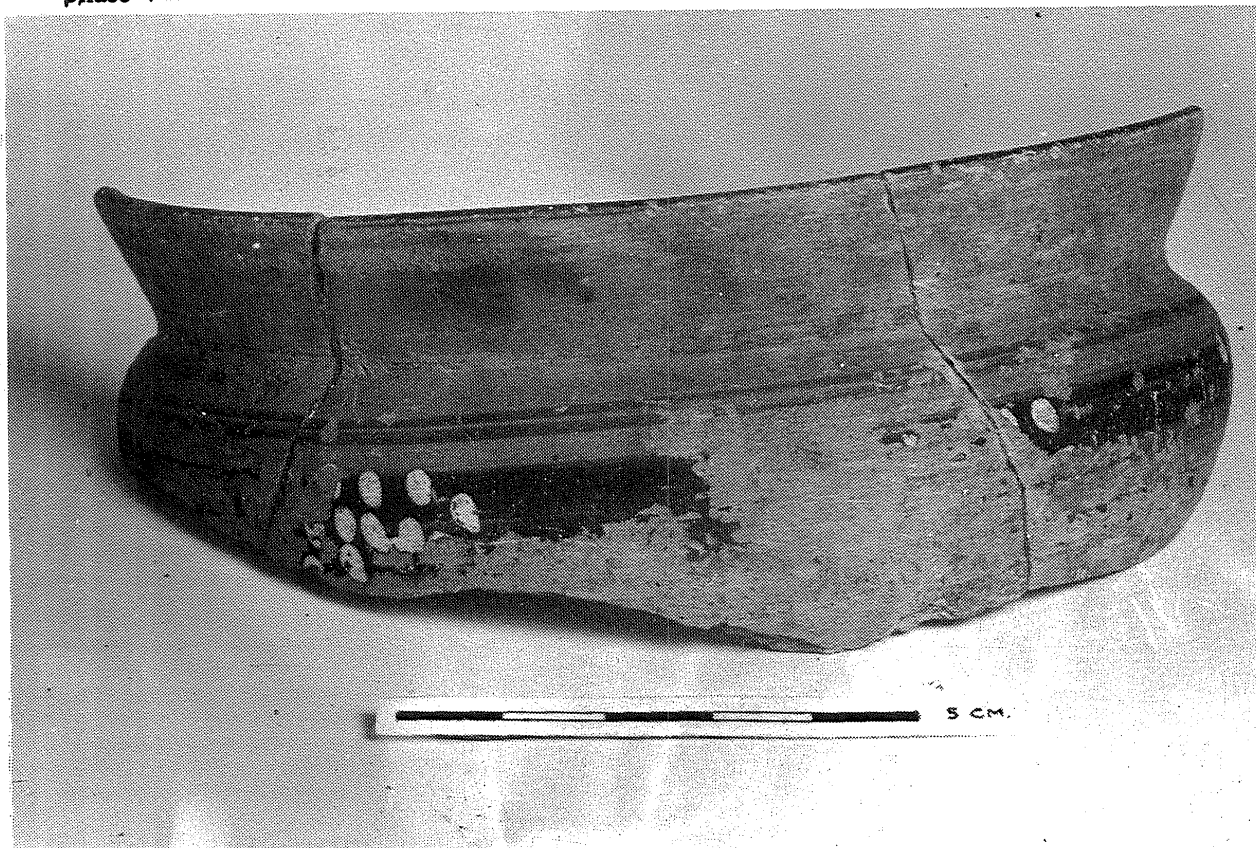
1. Complete iron "chisel" from B/A5.61 (nr. 2718), phase V/VI



2. Damaged jug from B/A8.35 (ash) (nr. 2699), phase VI



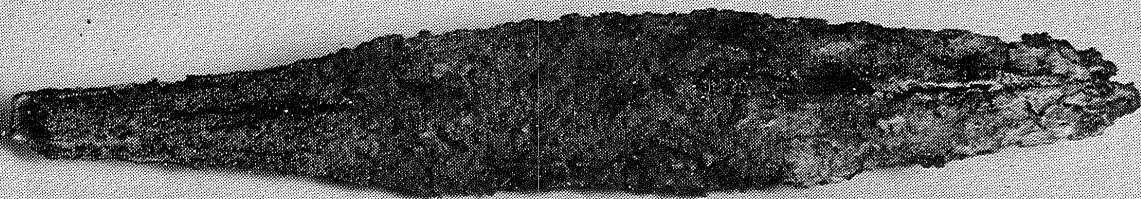
1 Head of human terracotta figurine, with joining pin, from B/B5.36 (2689) phase VI.



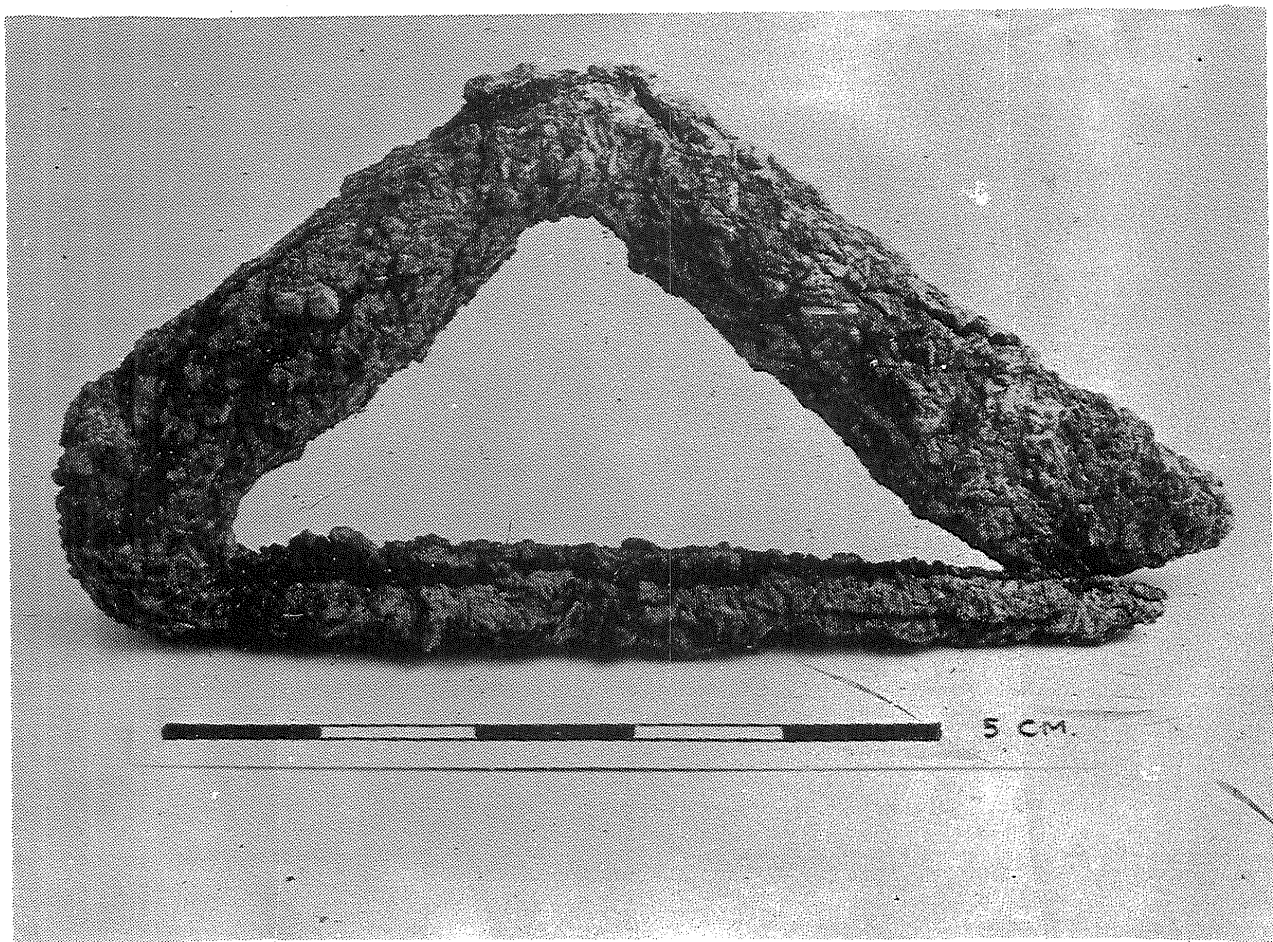
2. Fragmentary bowl, of red baked clay with black and white decoration, from B/B5.36 (nr. 2692), phase VI



1. Incomplete stone bowl from B/B10.19 (nr. 2693), phase VI



2. Iron spearhead from B/C8.18 (nr. 2670), phase VI



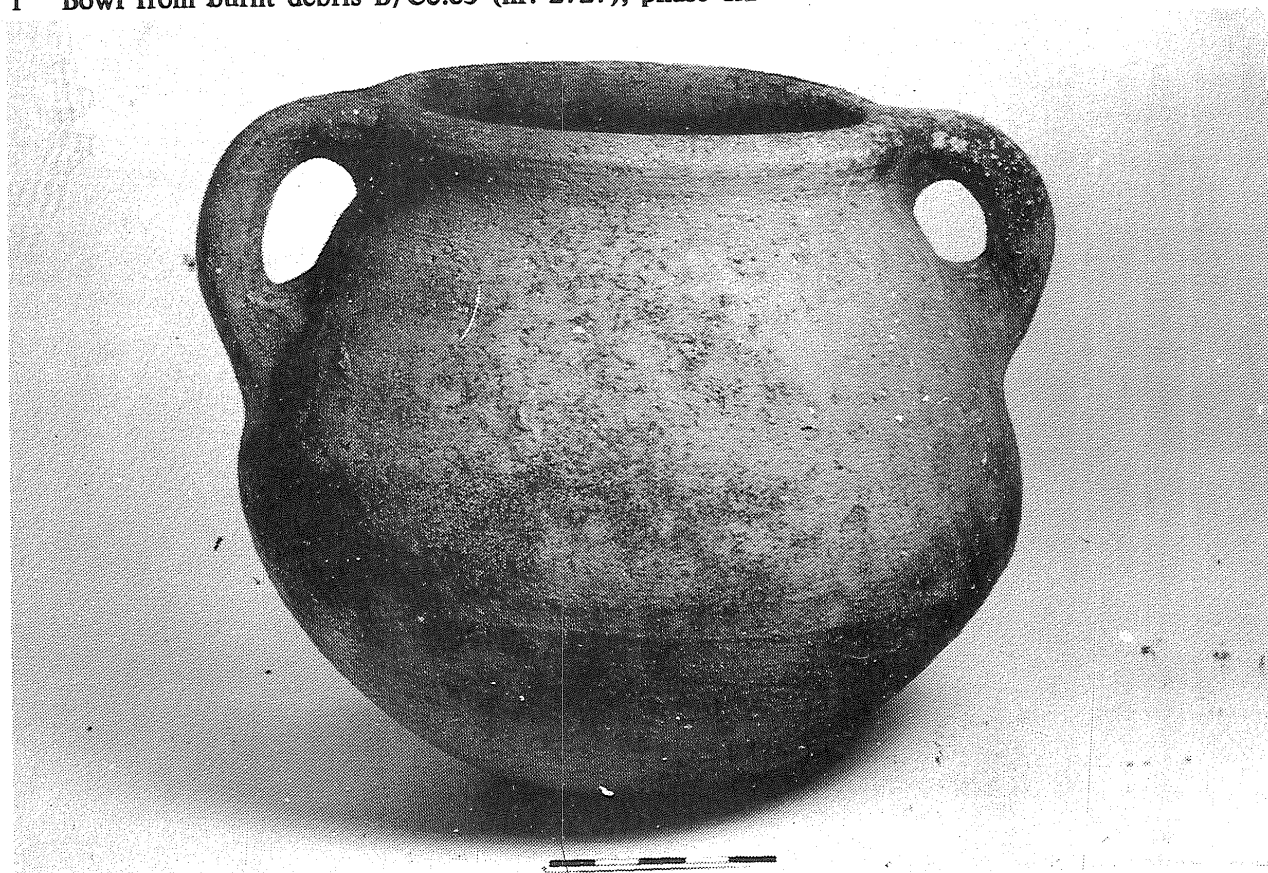
1 Corroded bronze fibula from B/B5 29 (nr. 2658), phase VI.



2 Jug from burnt debris B/C6.63 (nr. 2729), phase IX.



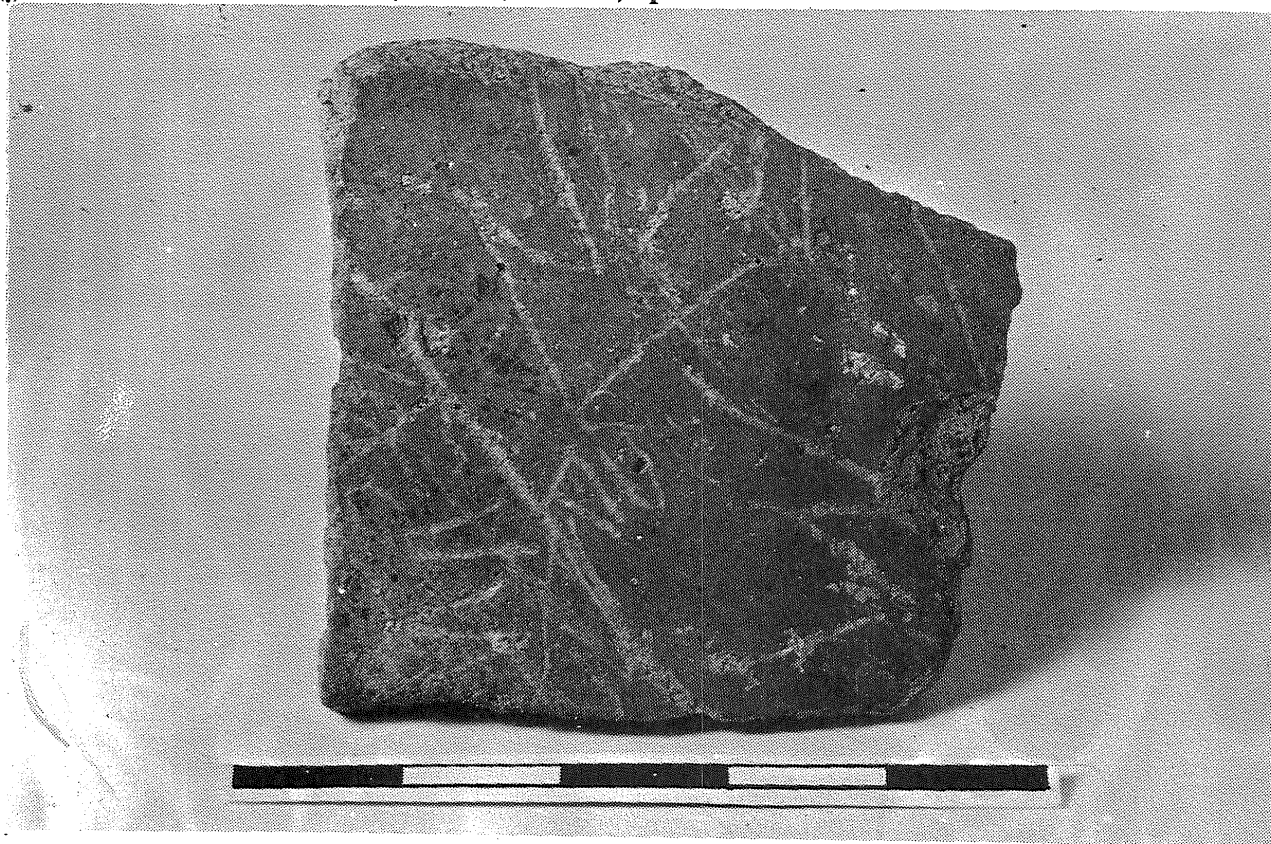
1 Bowl from burnt debris B/C6.63 (nr. 2727), phase IX



2. Bowl from burnt debris B/C6.63 (nr. 2728), phase IX



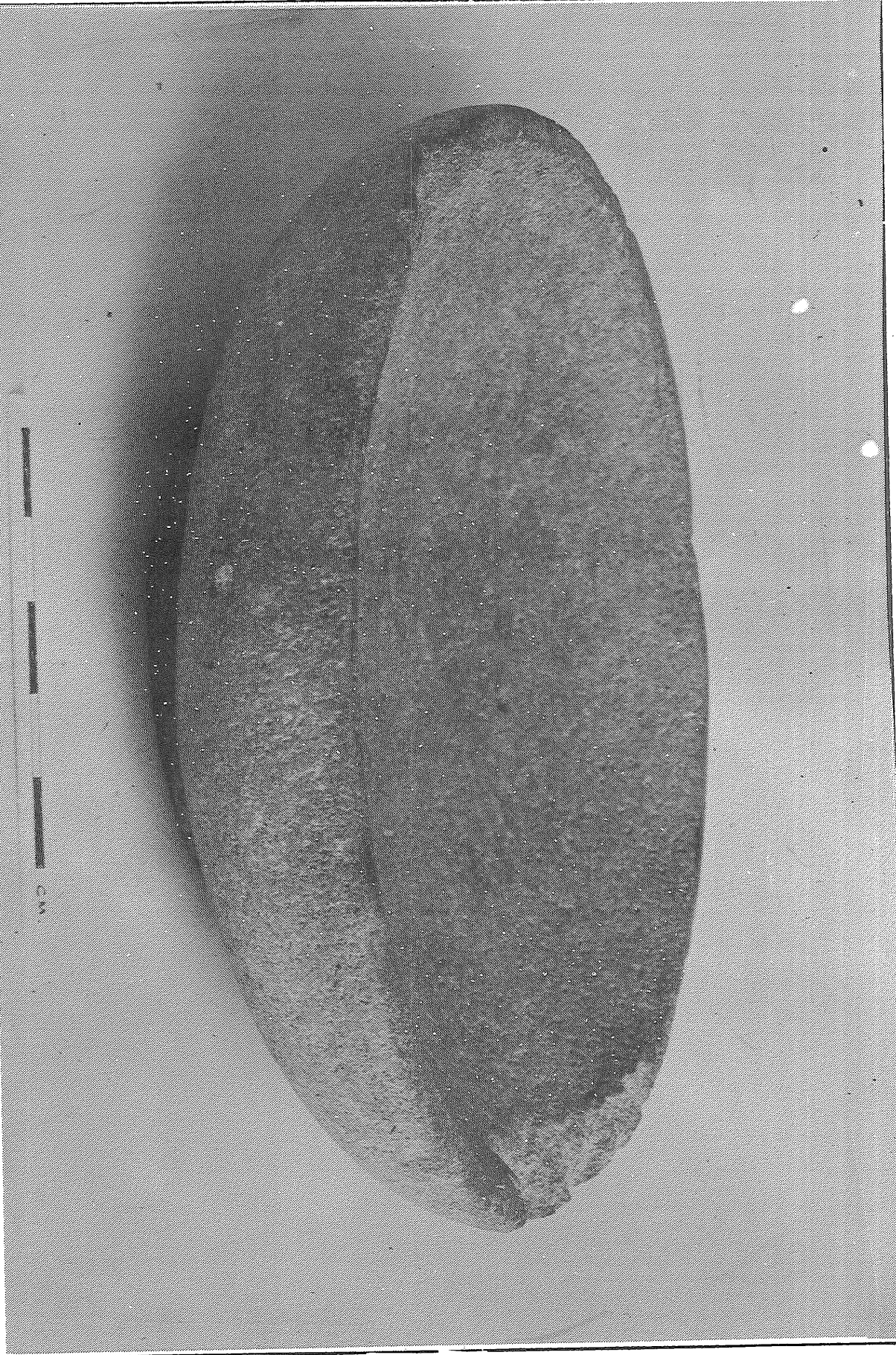
1. Sealed jar handle from B/C6.63 (nr. 2731). phase IX



2. Fragment of sherd with graffiti drawing and writing from B/C6.63 (nr. 2732), phase IX

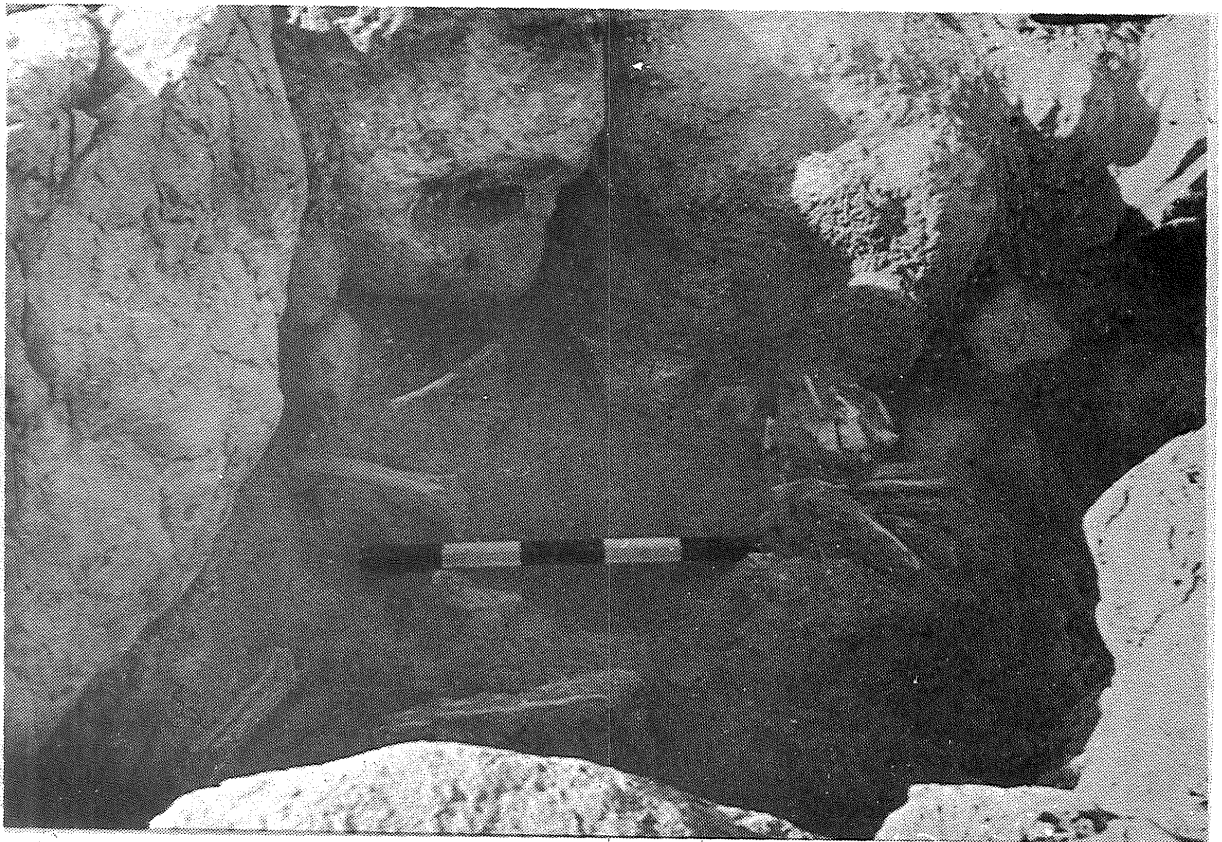


Flat bowl of stone from tell surface (nr. 2654):



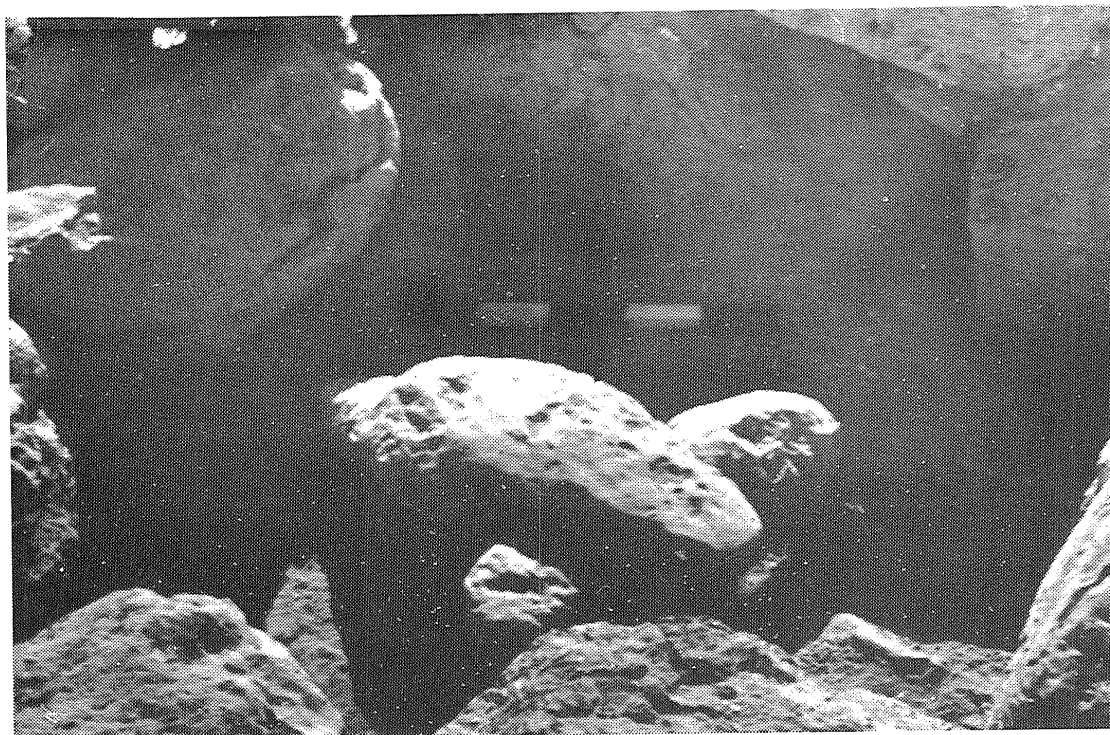


1. The lower burial in Cairn 16



2. The human remains in Cairn 17

1 The interior of Cairn 25 A  
after clearance



2 Stone arrangement in Cairn 25 B  
— 235 —



The burial in the eastern part of Cairn 30 (Ring 1)

1  
2

Handwritten script in two lines. The first line contains approximately 15 characters, and the second line contains approximately 12 characters. A scale bar is positioned below the text.

3

Handwritten script in a single line. A scale bar is positioned below the text.

5

Handwritten script in a single line. A scale bar is positioned below the text.

4

Handwritten script in a single line. A scale bar is positioned below the text.

Handwritten script in a single line. A scale bar is positioned below the text.



A fragment of script on a rectangular piece of material. A scale bar is positioned to the left of the fragment.

10

Handwritten script in a single line. A scale bar is positioned below the text.

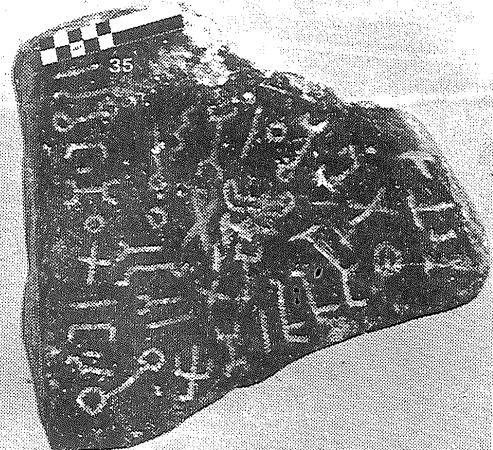
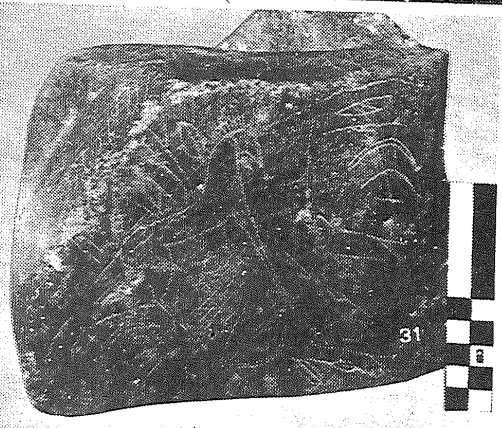
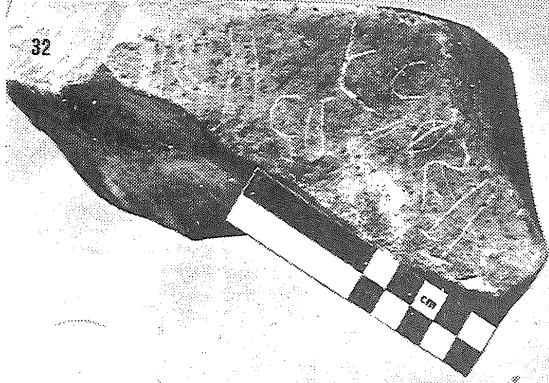
Handwritten script in a single line. A scale bar is positioned below the text.

11

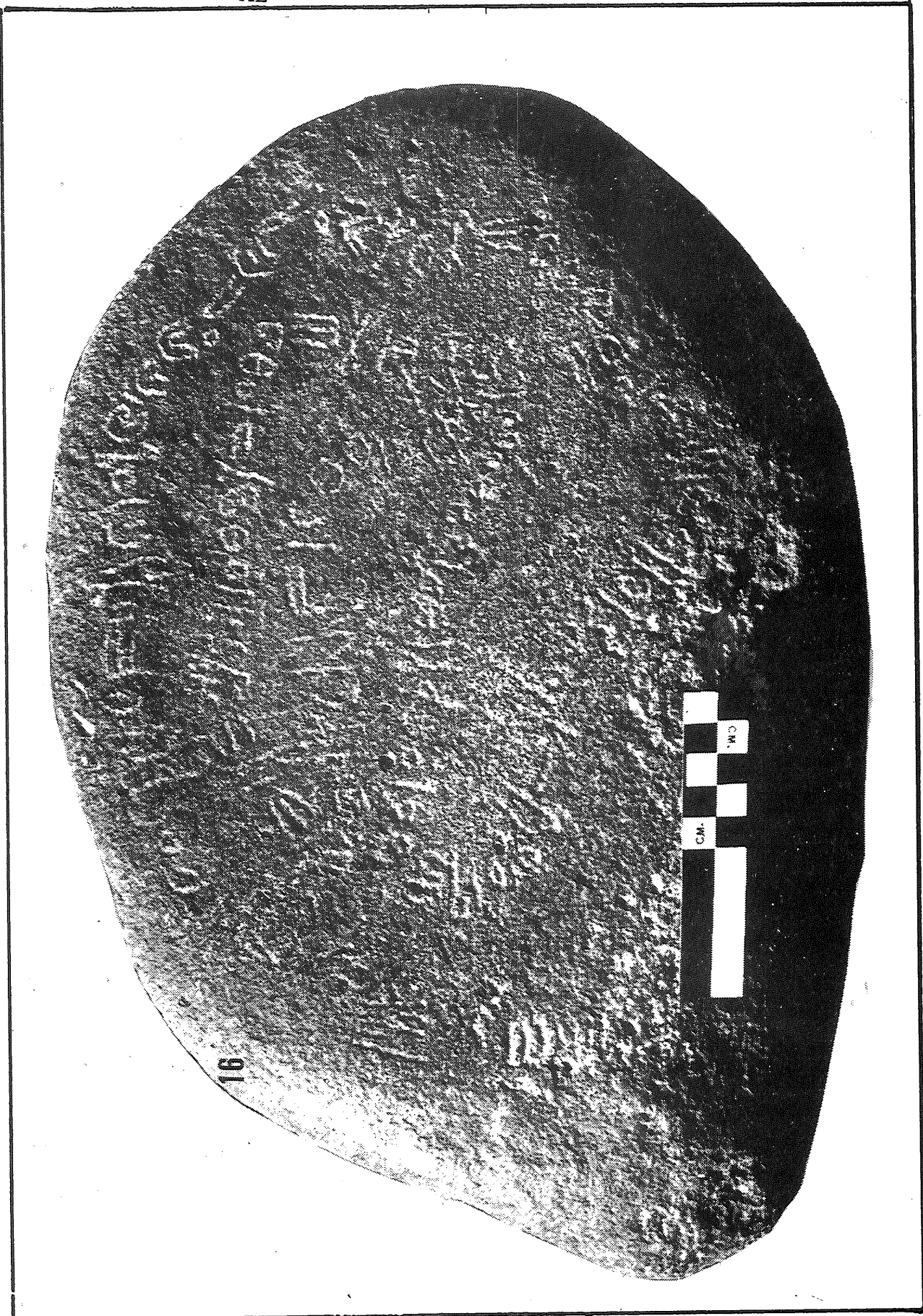
Handwritten script in a single line. A scale bar is positioned to the right of the text.

13

Handwritten script in a single line. A scale bar is positioned below the text.

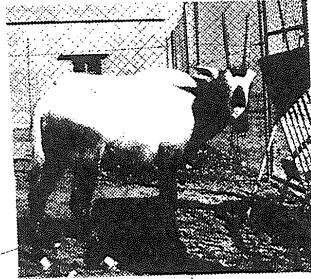




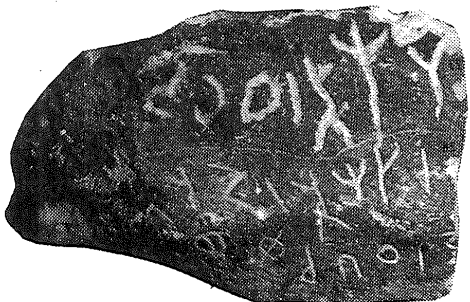








sheep in enclosure  
at the station



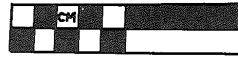
sheep in enclosure  
at the station



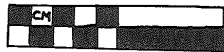
32 RPPIC KC  
0211



31 RPPIC KC  
0211



30 RPPIC KC  
0211



33 RPPIC KC  
0211

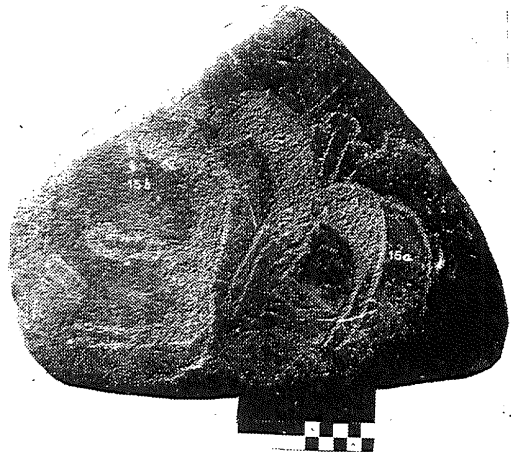
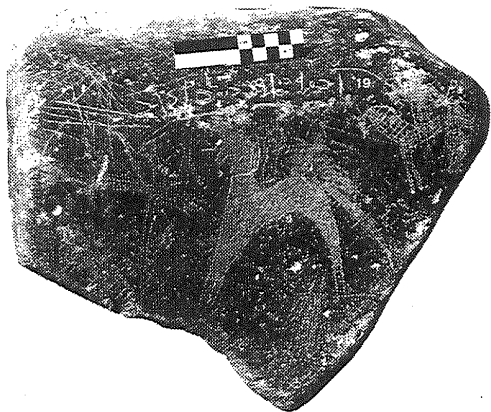


34 RPPIC KC  
0211



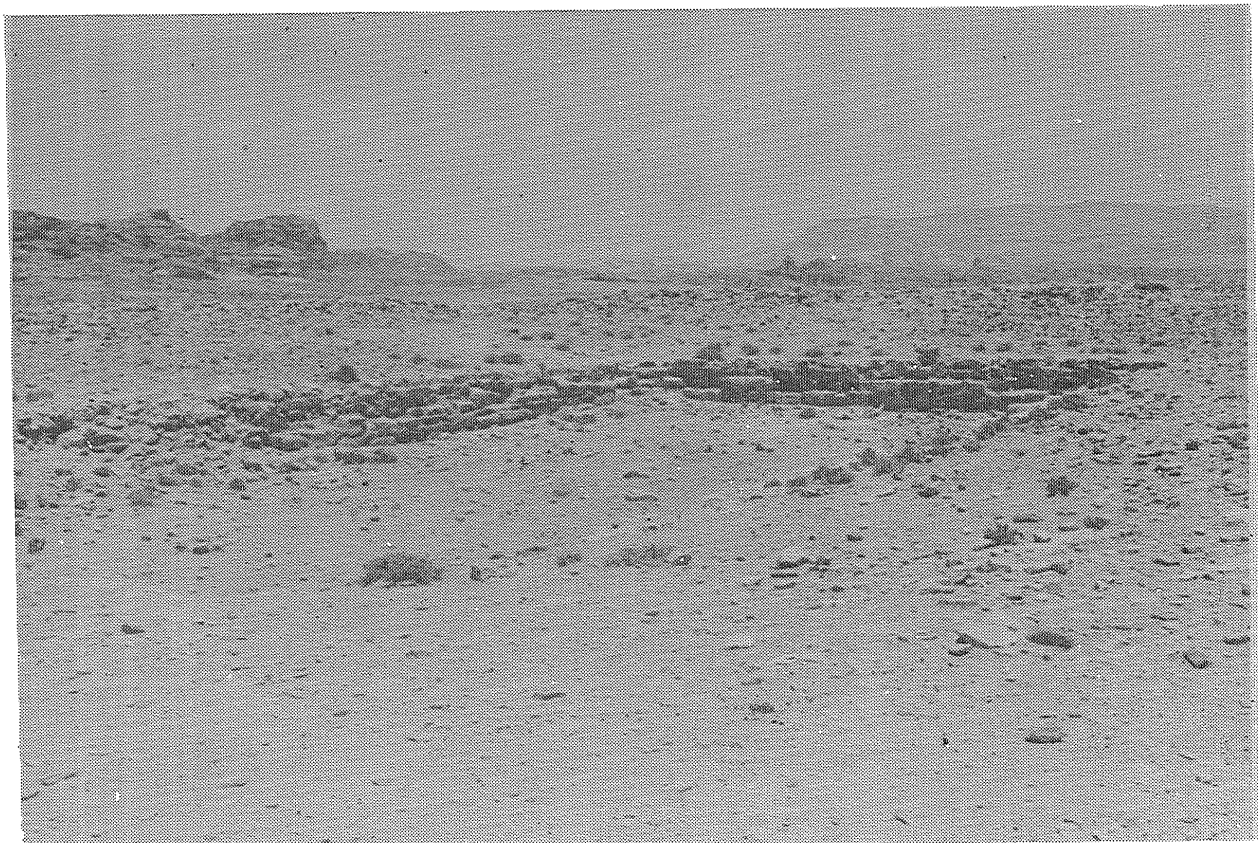
35 RPPIC KC  
0211





Beda. Stretch of Roman road

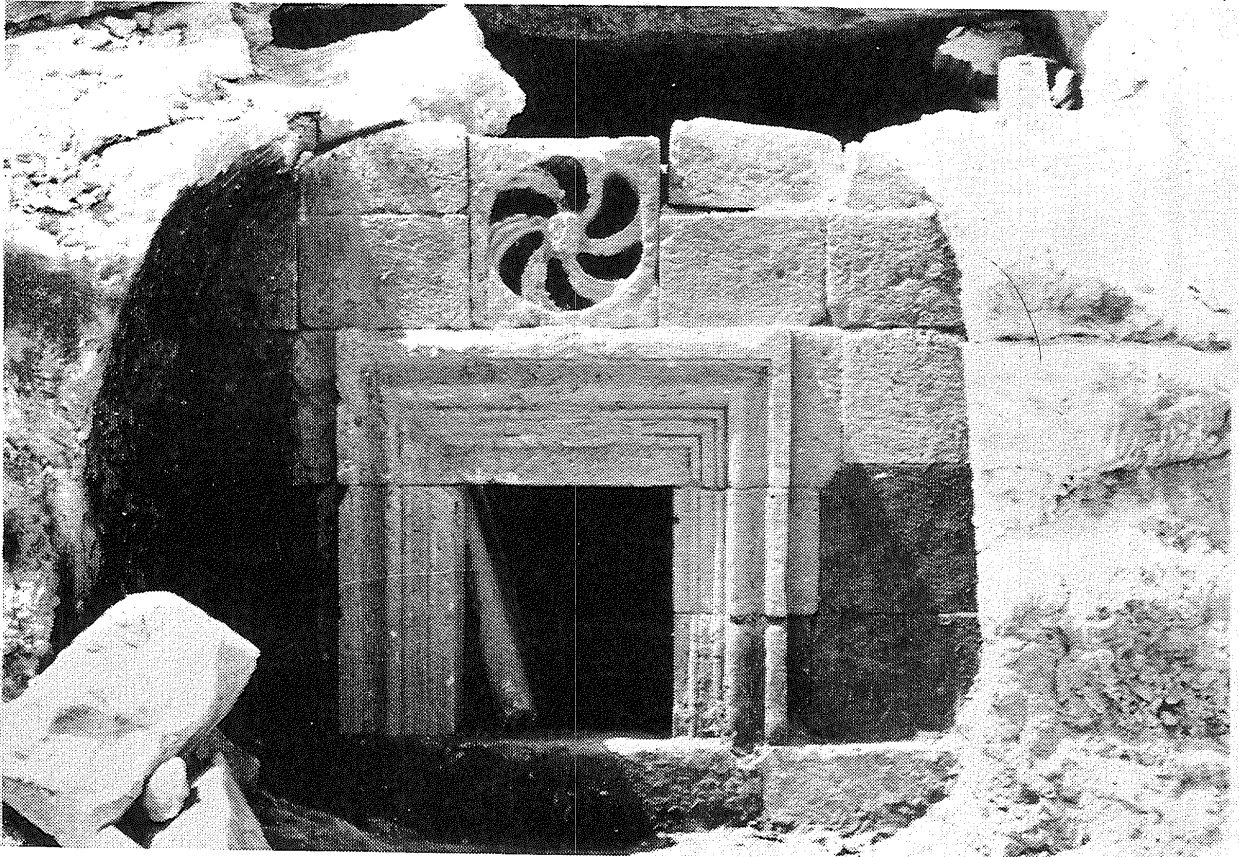




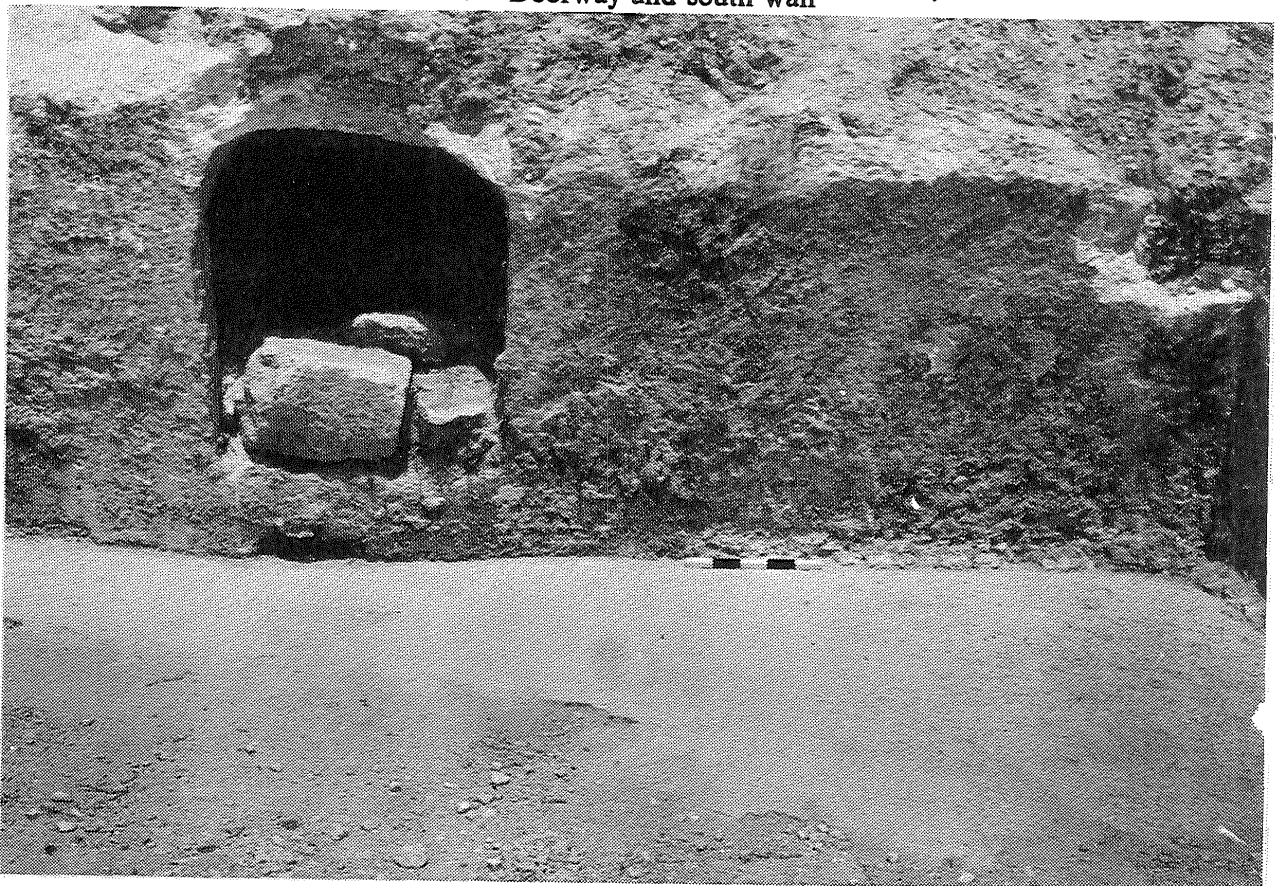
1. Humeimá. reservoir inside fort



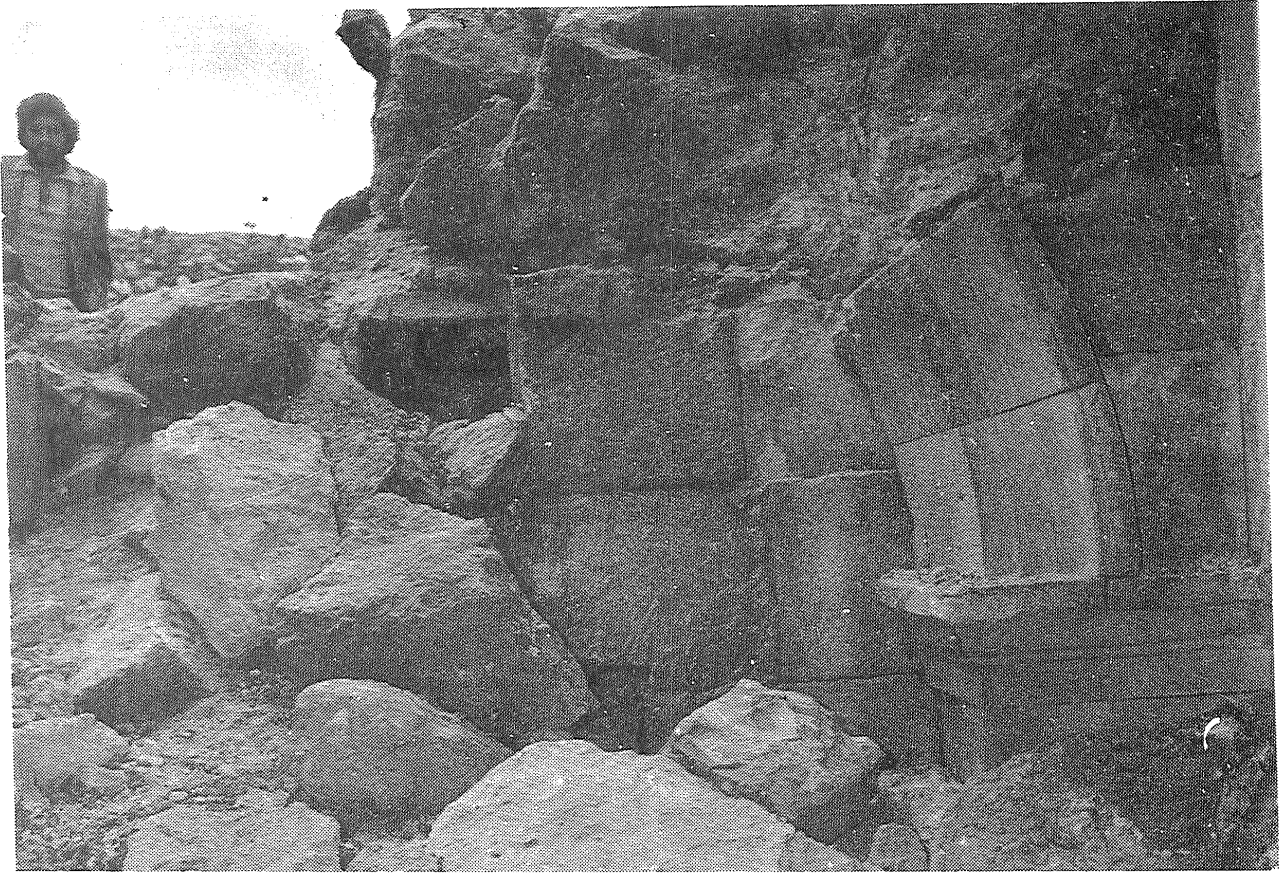
2. Humeima. terrace of inscription at fort



1. Doorway and south wall



2. Water reservoir and mosaic court in front.

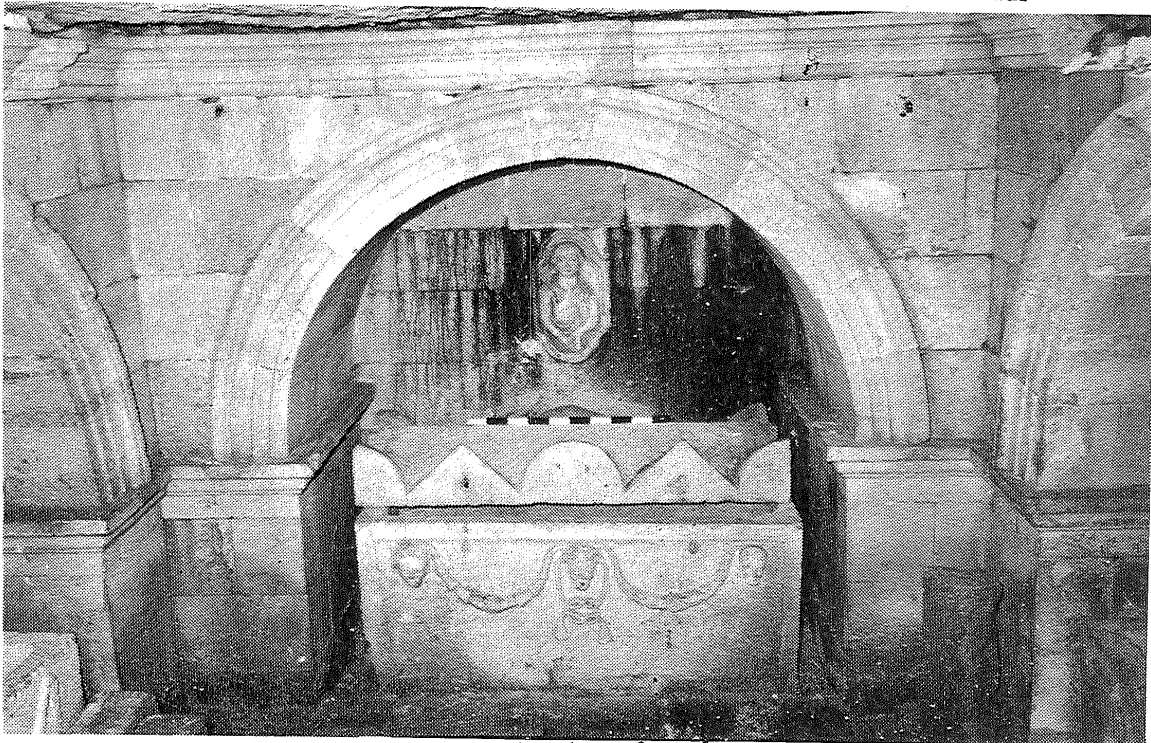


1 Doorway under debris seen from inside.

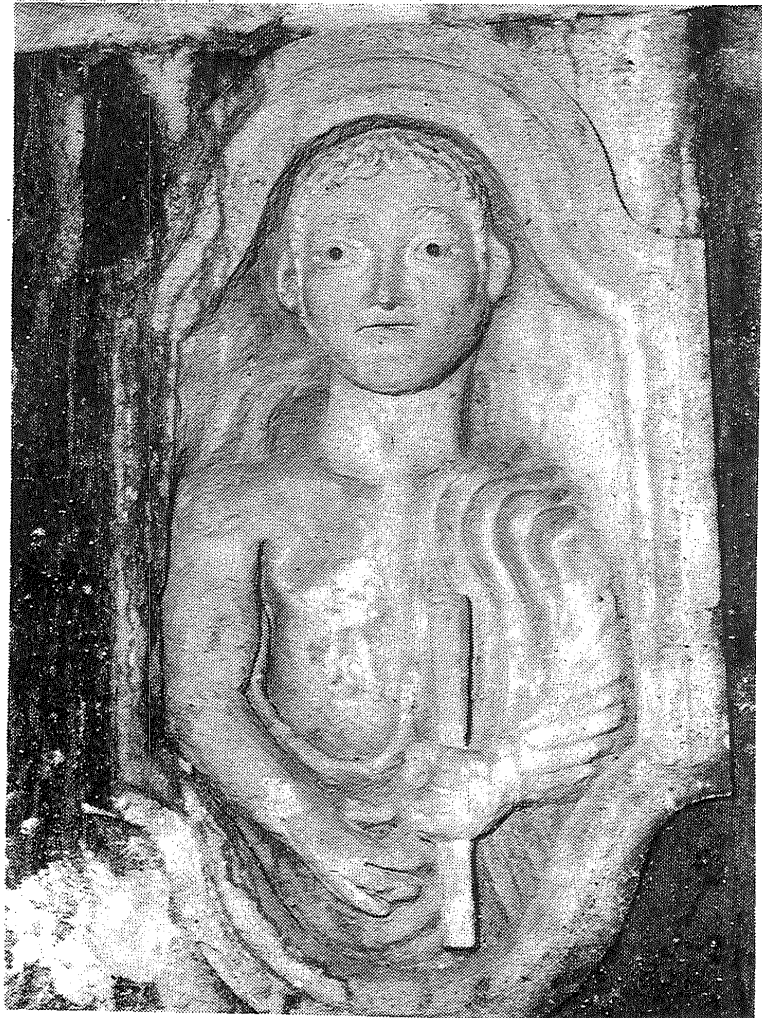


2 Doorway after clearance seen from inside





1 North chamber after clearance



2 Sculptured relief in north chamber



1. East chamber



2. West chamber



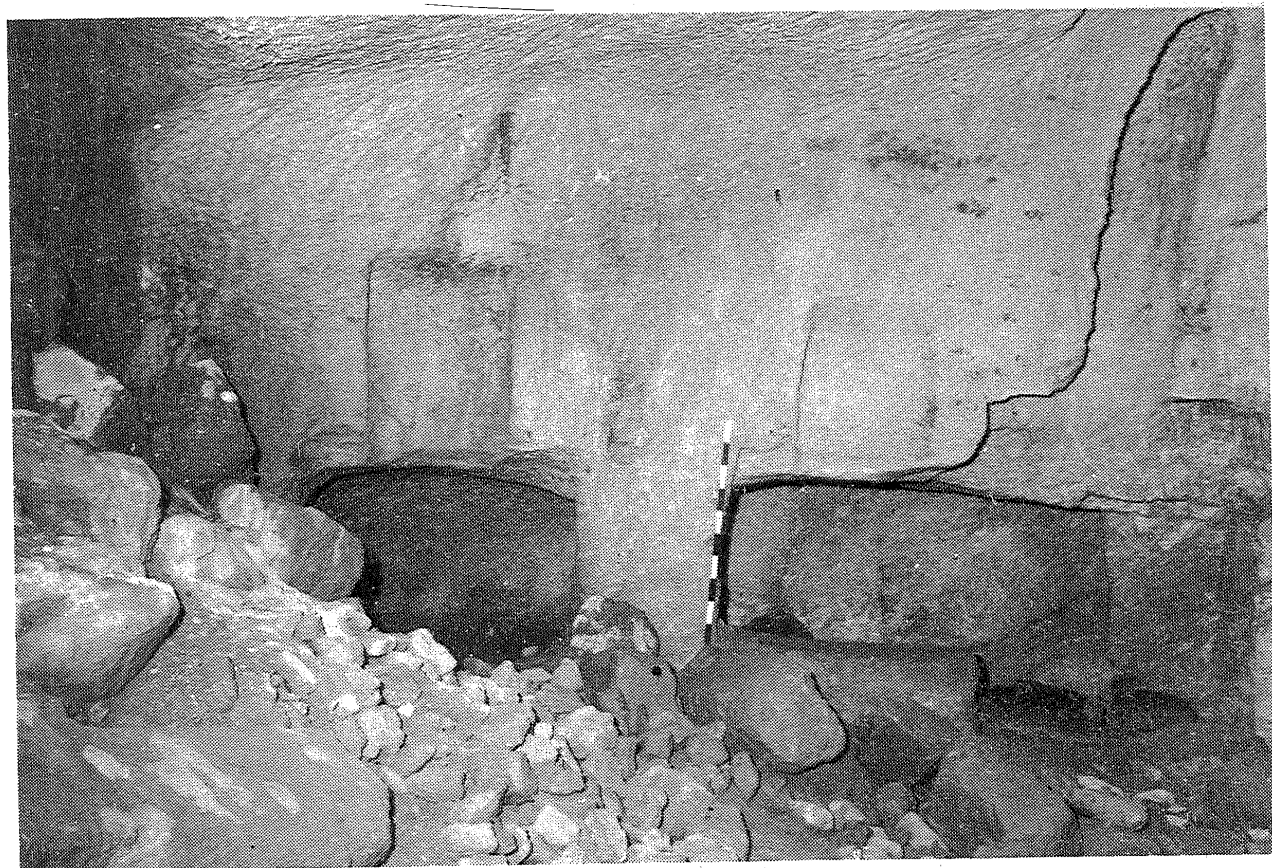
1. Graves 1A, 2A, 3A



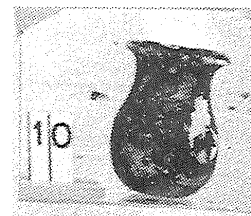
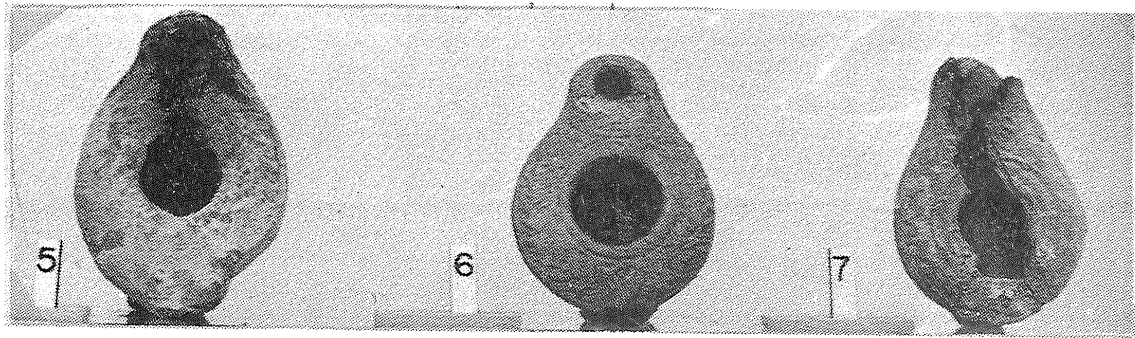
2. Olive press



1 Inside of water reservoir



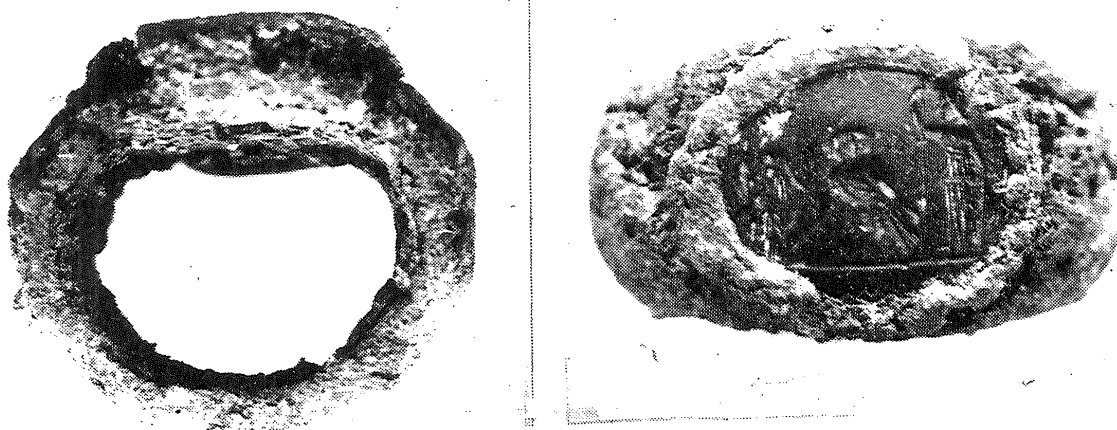
2 Loculi inside cave where an Olive press is located



Pottery and glass objects



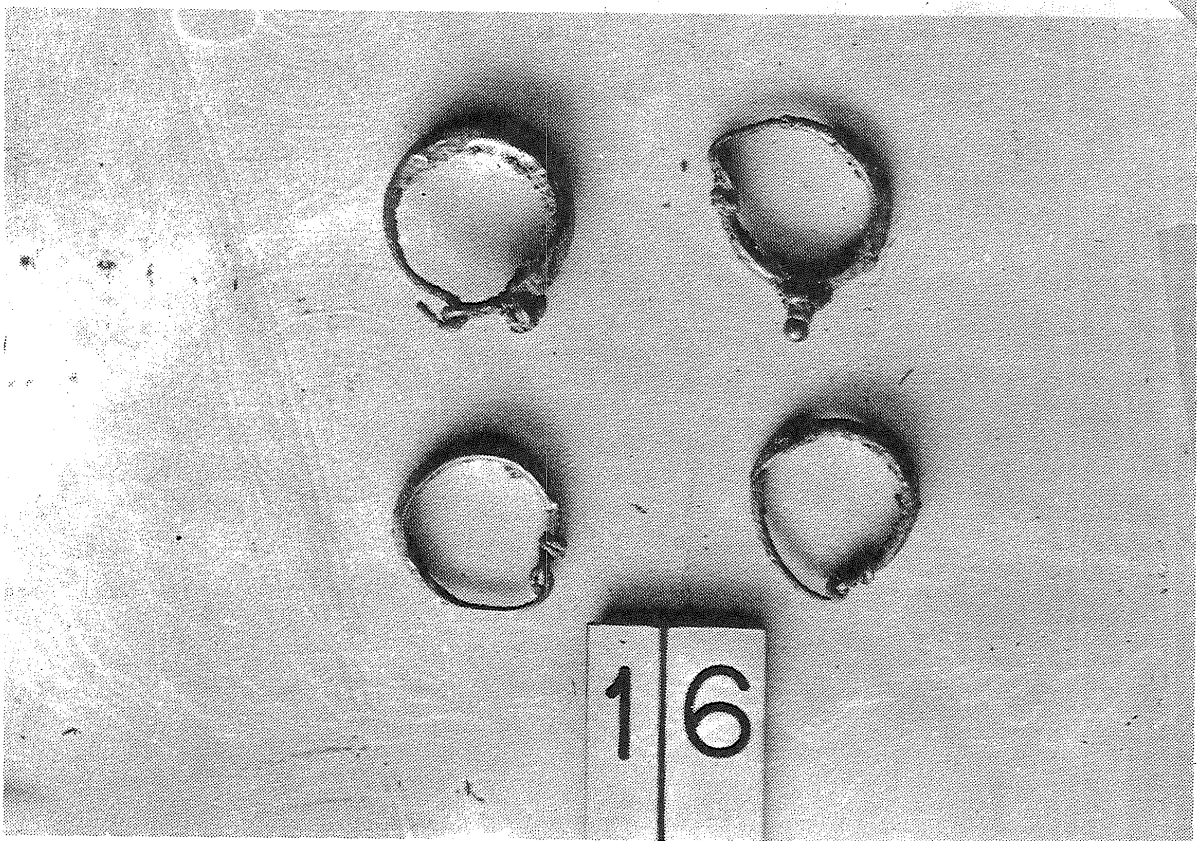
Bronze coin of Constantinus



Two views of bronze signet ring.



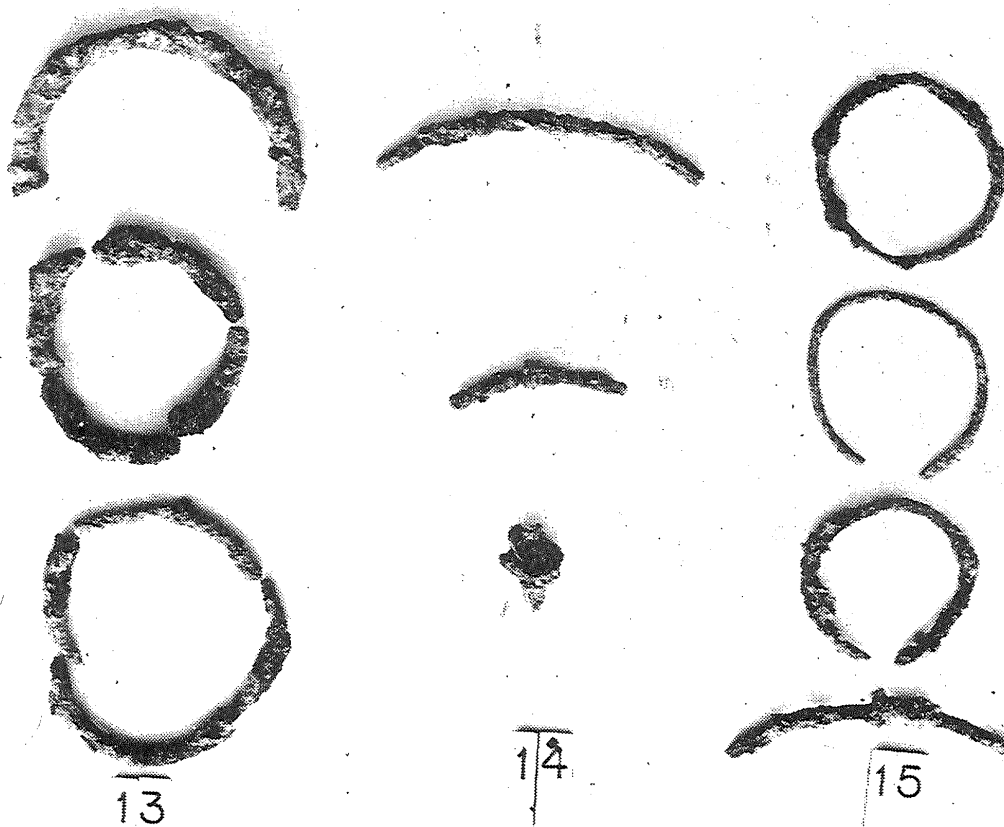
Glass beads, gold leaves, ring and ear-rings



Gold ear-rings



Beads, necklaces and rings



Bronze bracelets

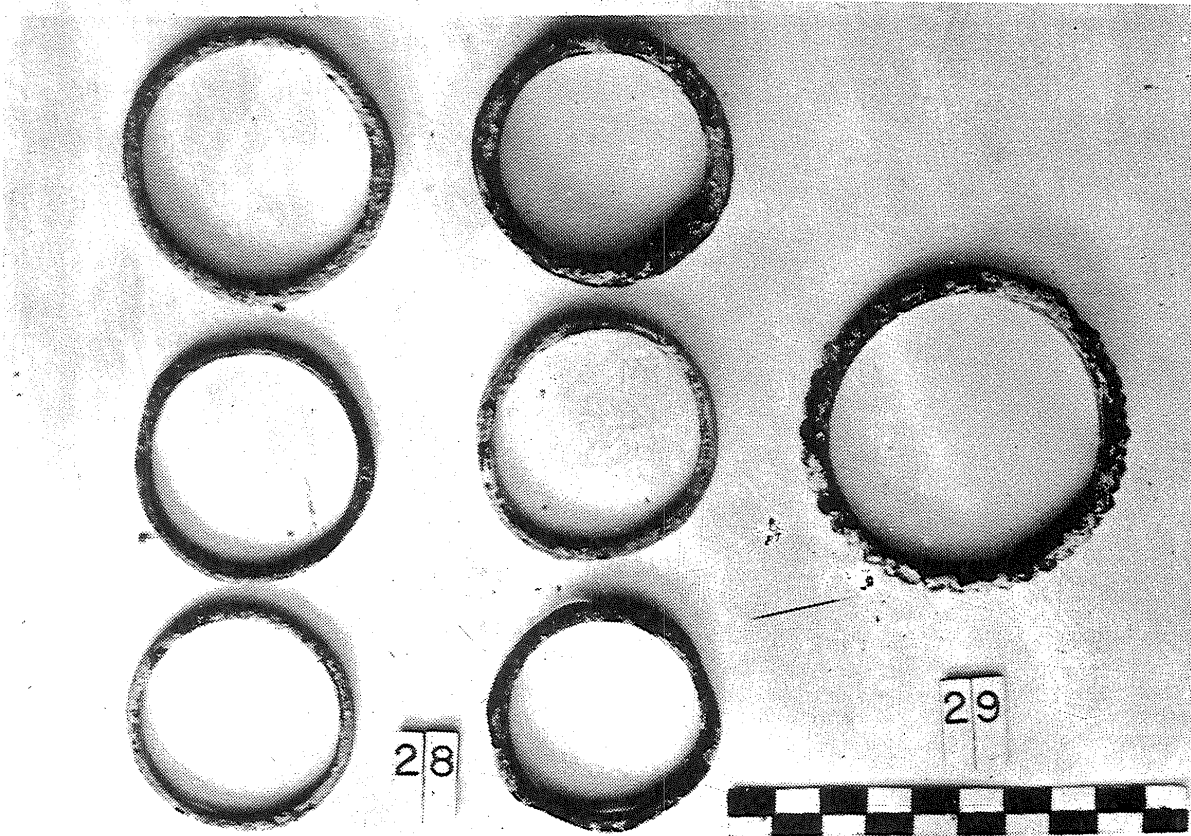




Bronze bracelets and amulet



Bronze bracelets and rings

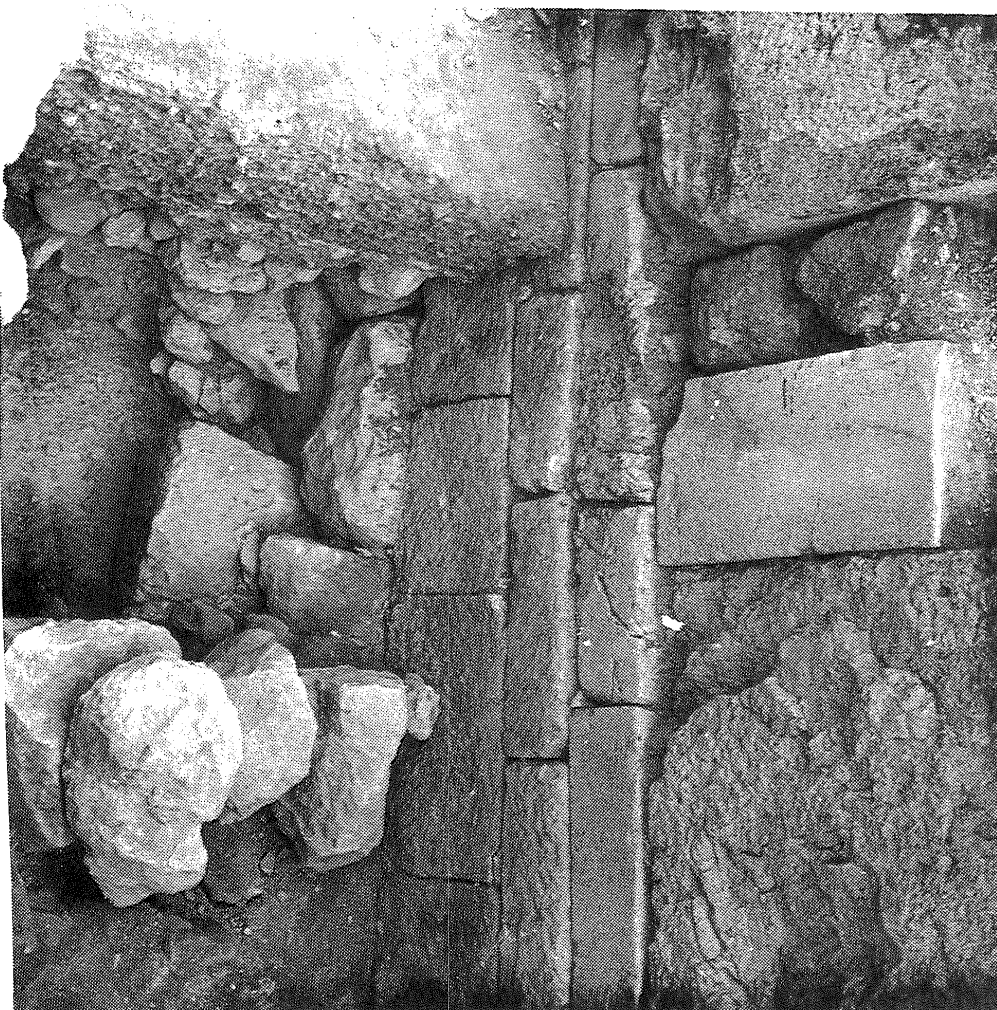


Glass bracelets



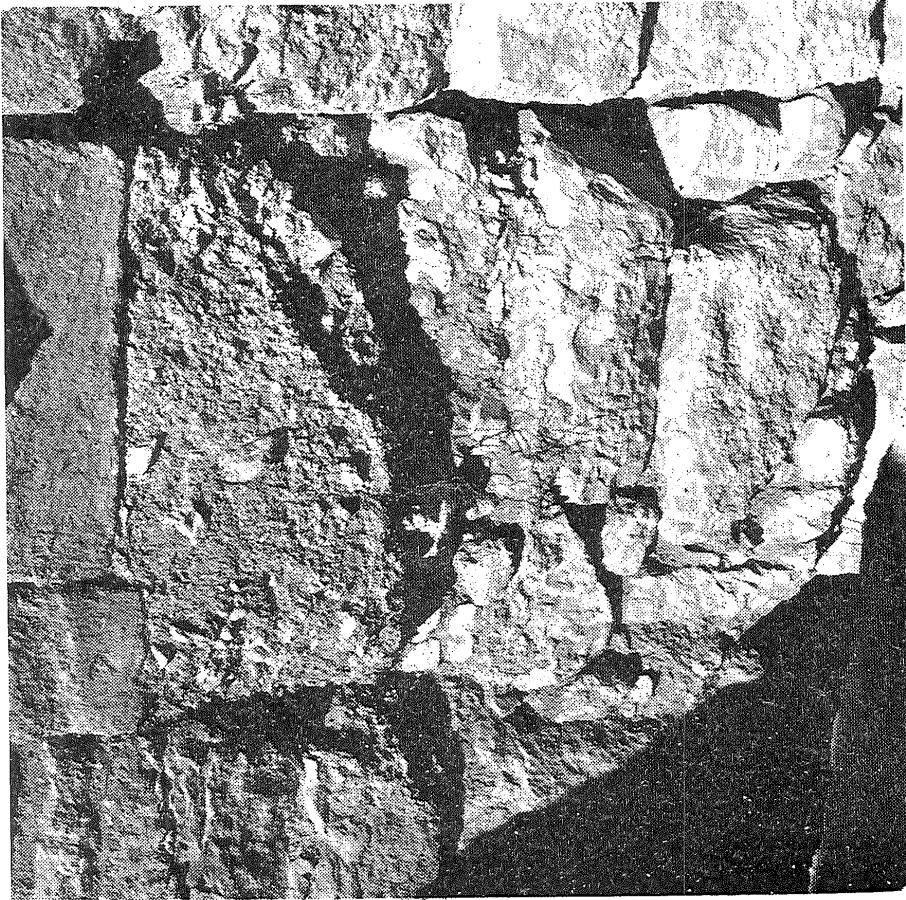
Jet beads

1 le sondage 1 : les fours



2. le sondage 2 : vue sur le mur externe est

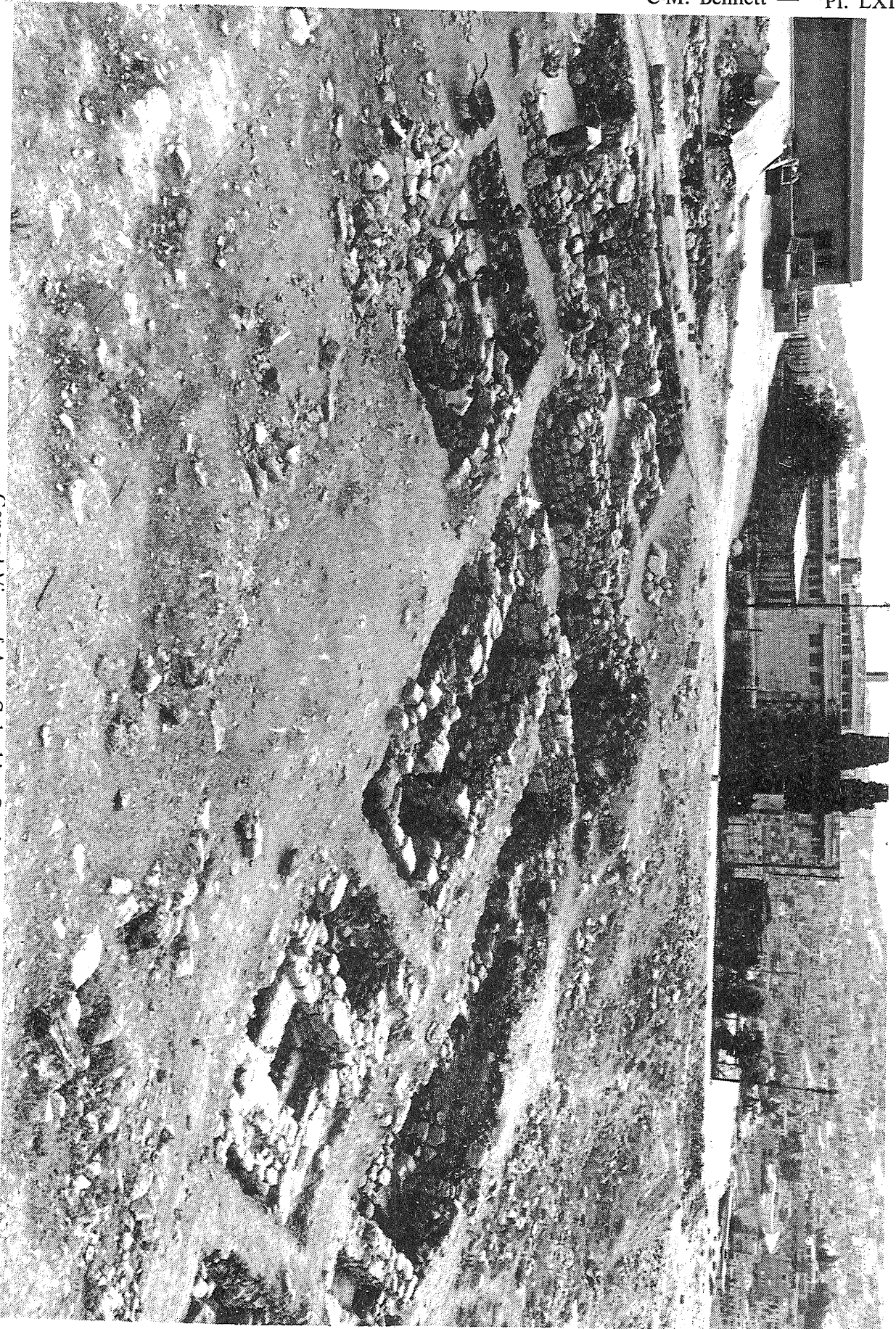




2. le sondage 3: la porte de la cloison interne



1. le sondage 2: coupe nord



General View of Area C. looking South.



1 Byzantine Doorway in C.I. looking North.



2 Broken north wall under which the cache was found looking west of North.



i Some of the cache.



2. Some of the cache.



2 Reverse of Gold Half Dinar.

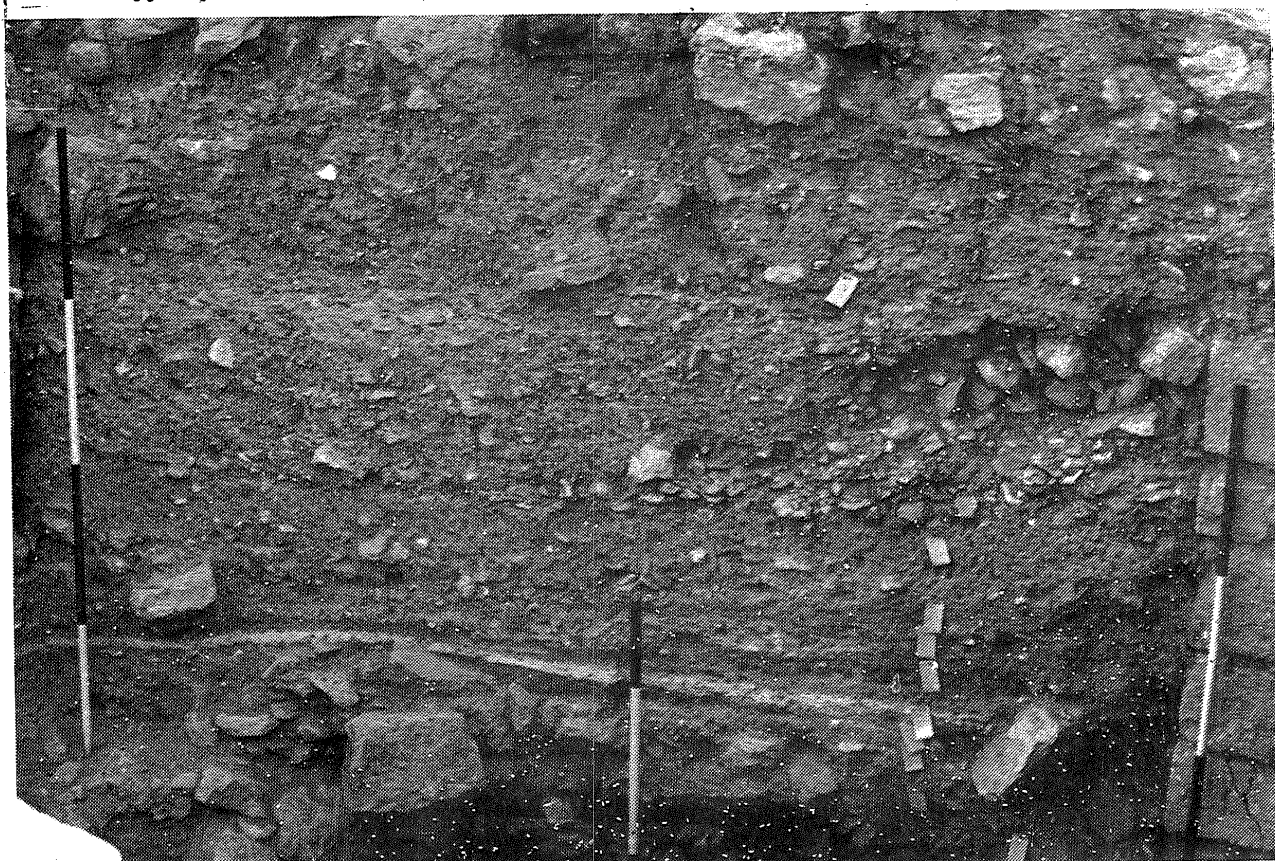


1 Obverse of Gold Half Dinar.





1. Umayyad plaster floor cut for Foundation Trench for later wall, looking South



2. Umayyad plaster floor in C.1 overlying Byzantine collapse, looking East.



1. Northern Byzantine Doorway in C.II. looking East.



2 Southern Byzantine doorway in C.II looking East, showing wall running north-south.



1 Drain in C.XXV, looking North East.



2 C.U and C.XXX looking north west.



North/South wall in C.O looking north and blocked doorway in C.XXX.



11. B.XXXI. Poorly built structure in the south west corner of the trench, looking south.



2. A similar structure in the south-east corner of B.XXX.4. (also the earliest structure (circular), built against the western wall of the trench, looking north.



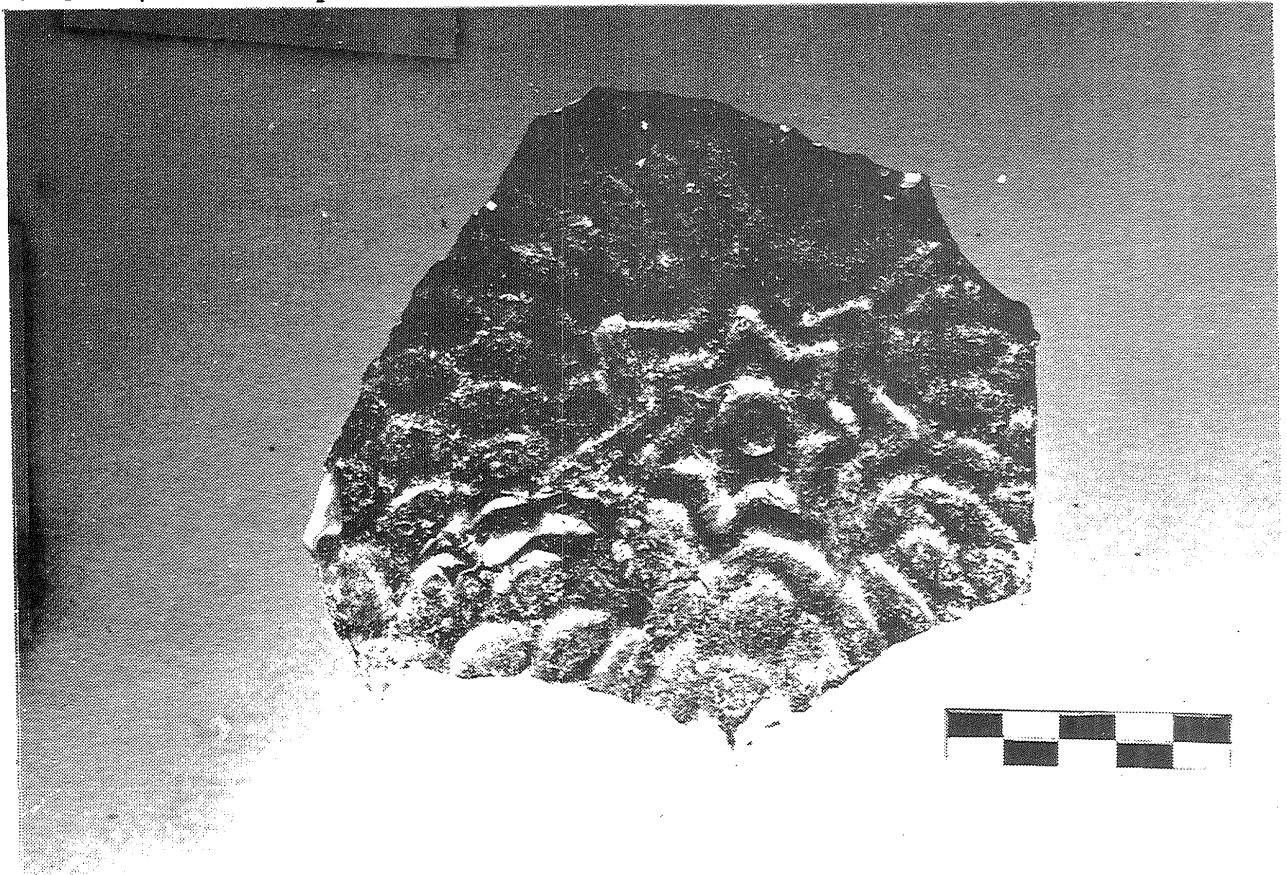
1. B.XXVI. Two holes in the threshold stone, looking north.



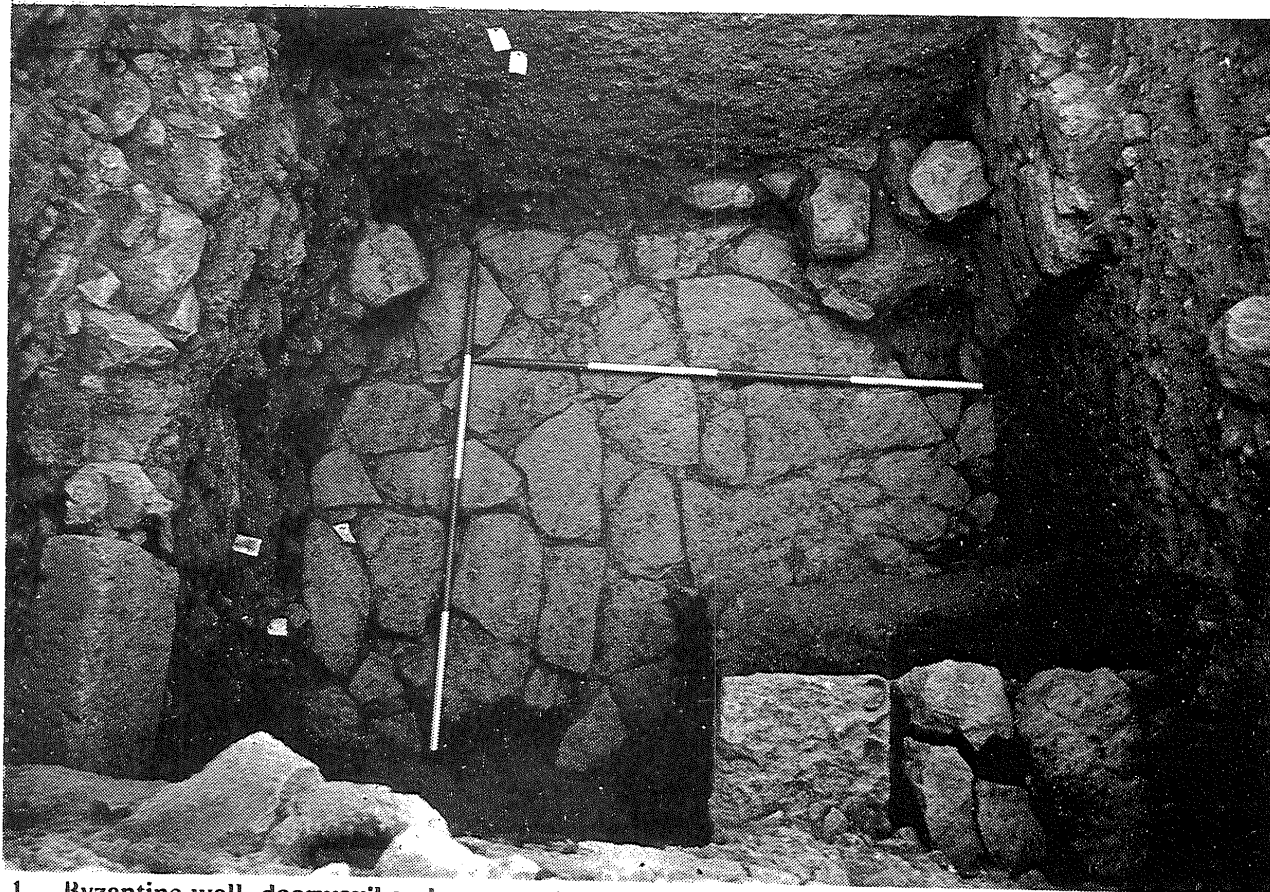
2. B.XXVI. Pits in floor, looking north.



1. Glass bowl found in pit (eastern) in B.XXVI.



2. Base of above.



1 Byzantine wall, doorway? and pavement in B.XXVI looking south.



2 C.X Byzantine pots in situ.



1. C.X. showing remains of plaster floor, threshold, and basin, looking south.



2. Area West of C.XXX. showing the slope down to Sharia al Qal'a,



1. C.XXX. Rectangular structure inside possible Roman walls and a similar structure to the west outside the wall, looking north.



2. Hellenistic (probably 3rd C.B.C.) squat lekythos.



i.D. Area : Tower base, looking North.



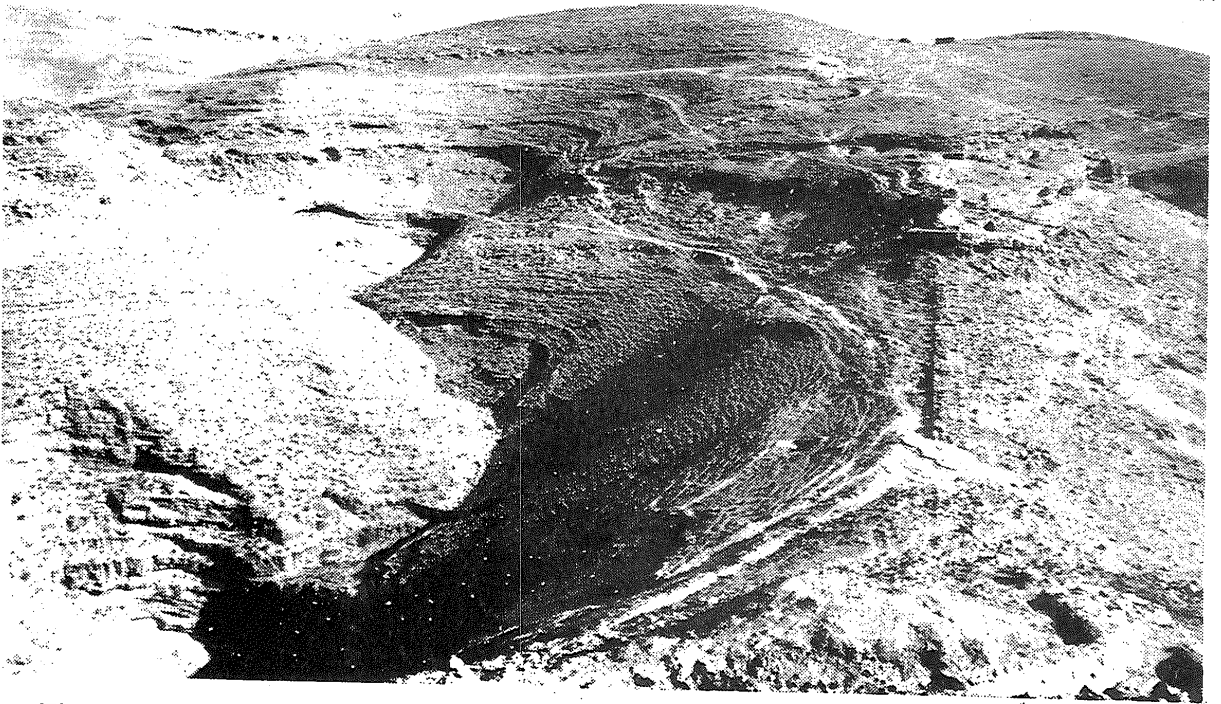
2.D. Area : Extended drain in fortification wall, and drain of House Phase 2.



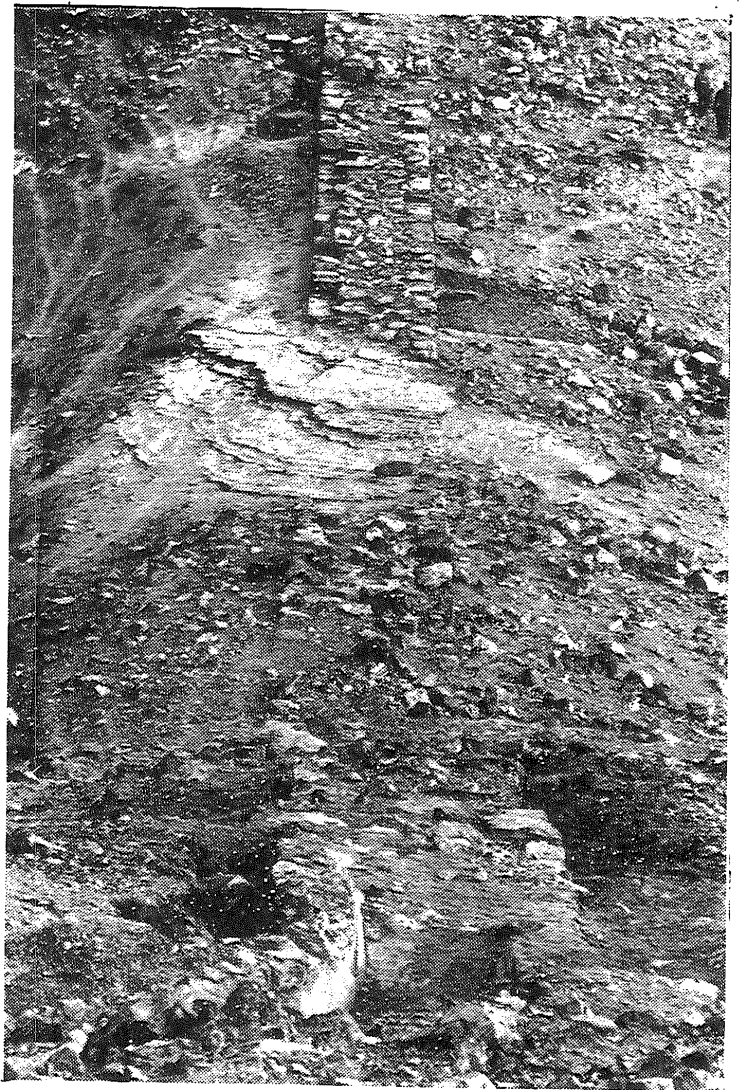
1. Qal'at el Mishnaqa.



2. Qal'at el Mishnaqa. The top seen from north-east, at the end of the first campaign.



1 The village of Maqawer, and,  
(at right) the base of the  
aqueduct.



2. The exit of the aqueduct.



1 A close-up of the exit of the aqueduct.



2. Excavating the western tower in front of the Roman *agger* (ramp).



1. The south-western tower before the excavation.



2. The south-western tower after the excavation.

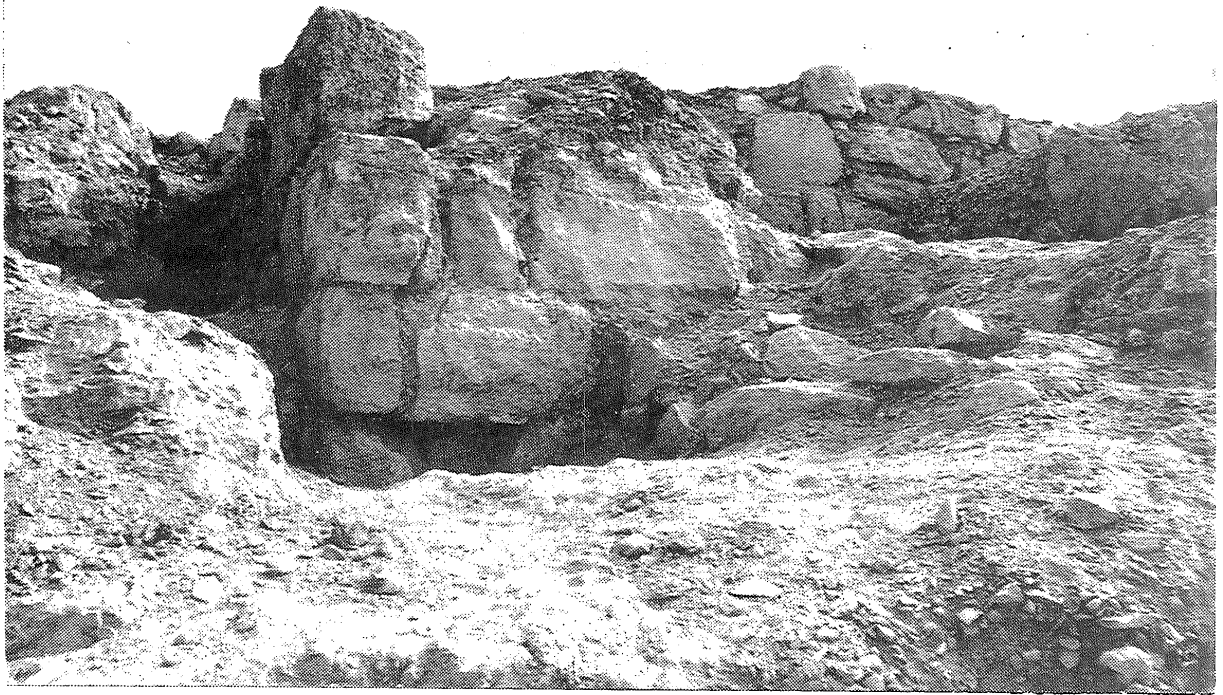


1 A sounding at the southern corner of the western tower.

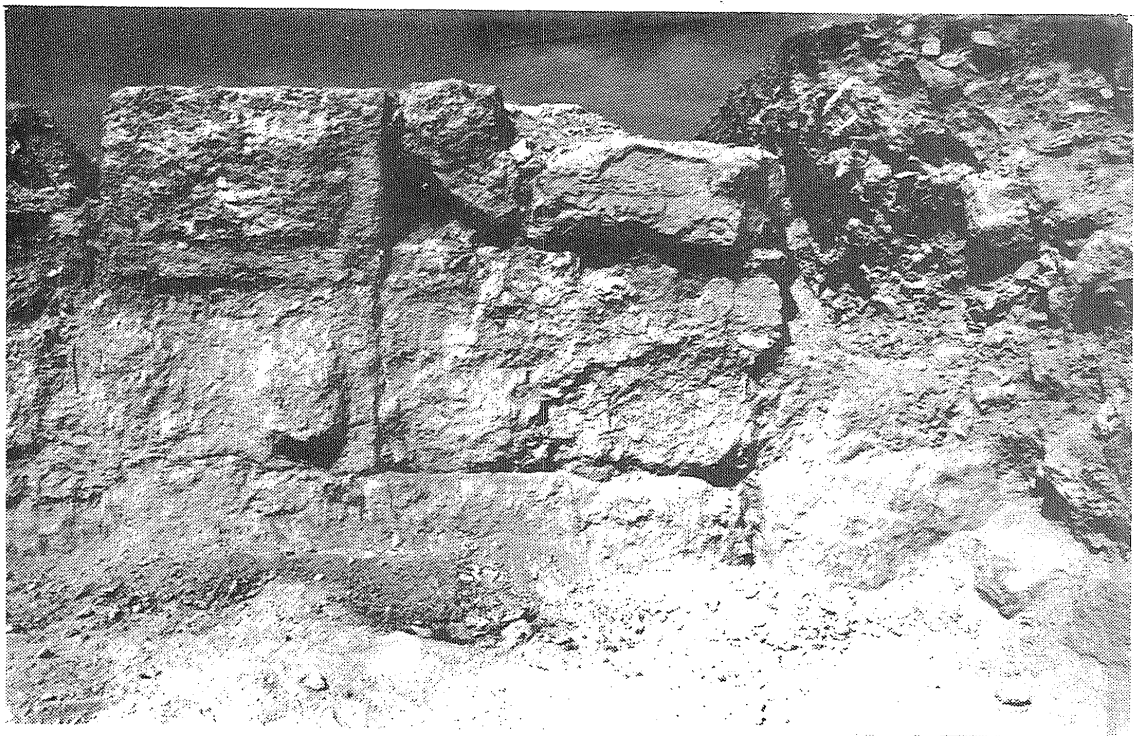


2 Inside the western tower.





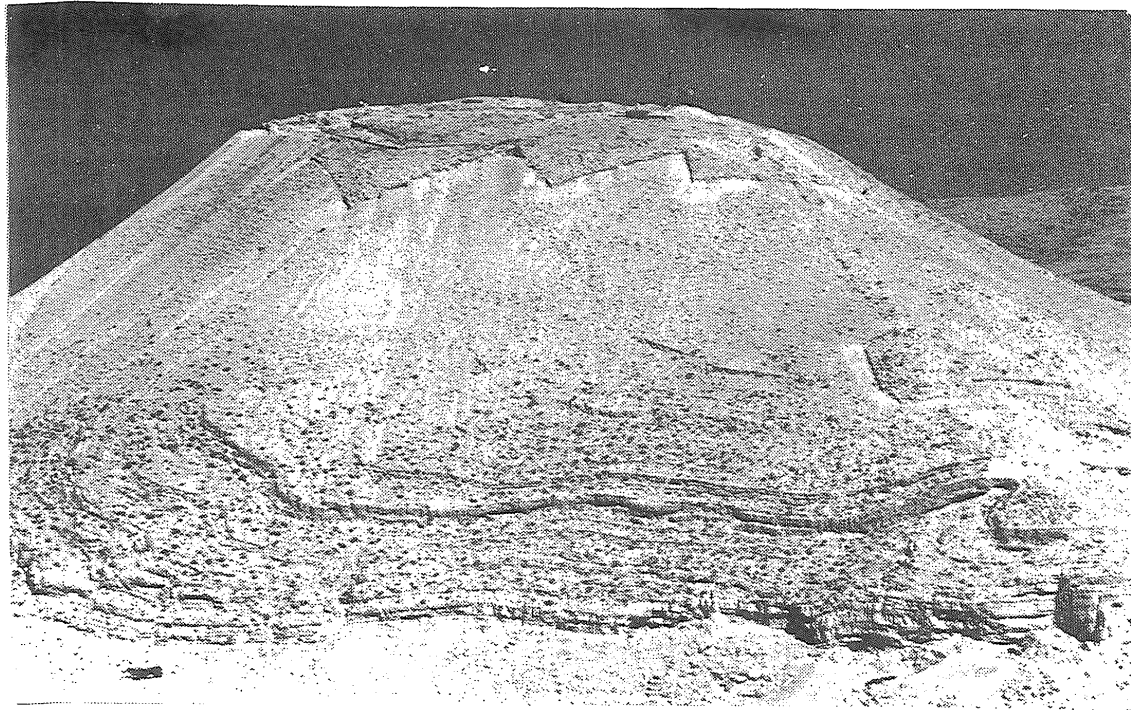
1. The western square tower and (background at right) the overlapping polygonal perimeter wall .



2. A still blocked doorway on the southern wall of the south-western tower.



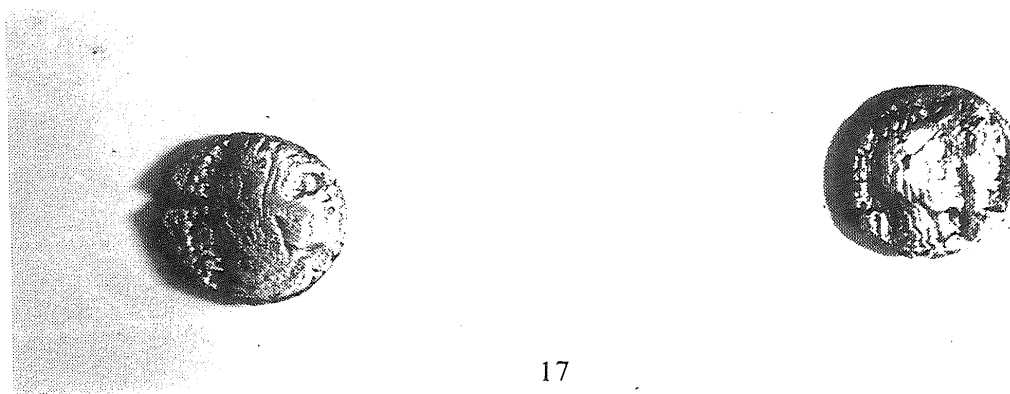
1. Some architectural elements,  
probably part of an architrave.



2. The top of Qal'at el Mishnaqa seen from the south, at the end of the first campaign.

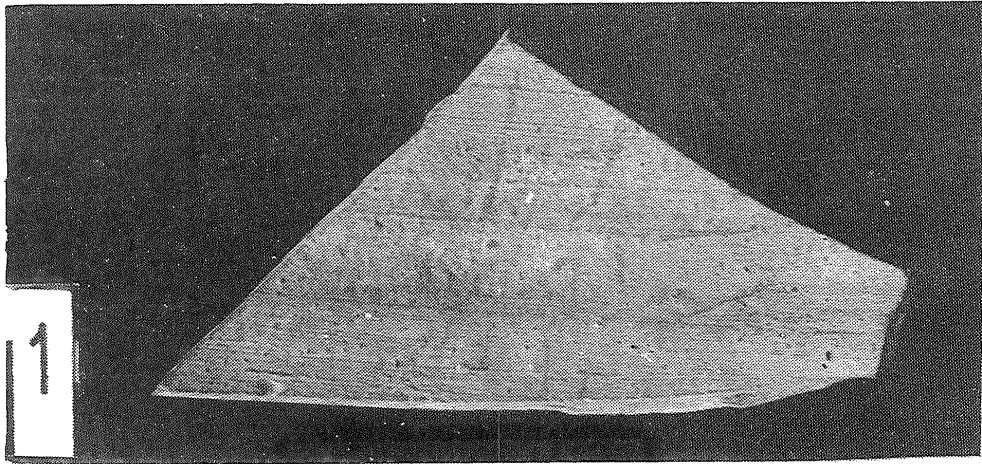


1 The shaft of Tomb BI, 1 (Looking North)

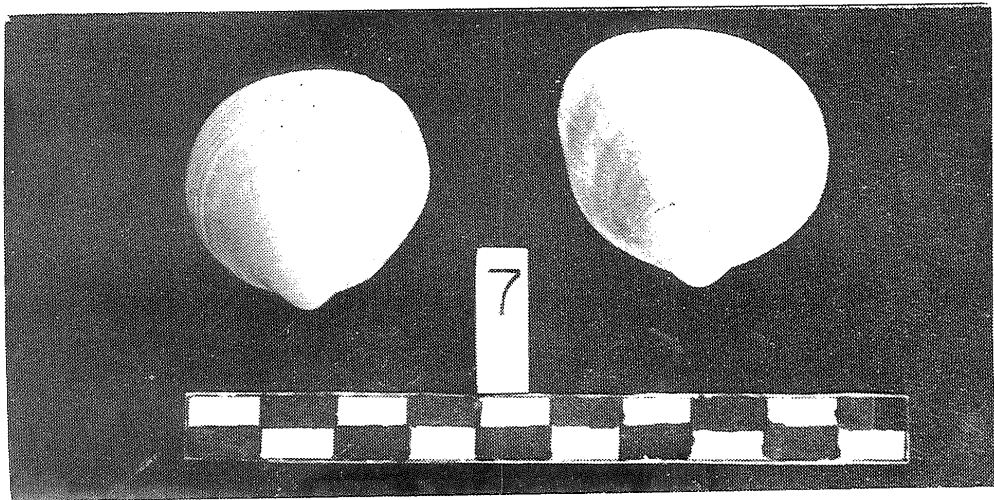


17

2. Silver coin of Agetas IV and Shaqilat Obverse Reverse



1. T. Bl.1, G.4: Inscribed Sherd.



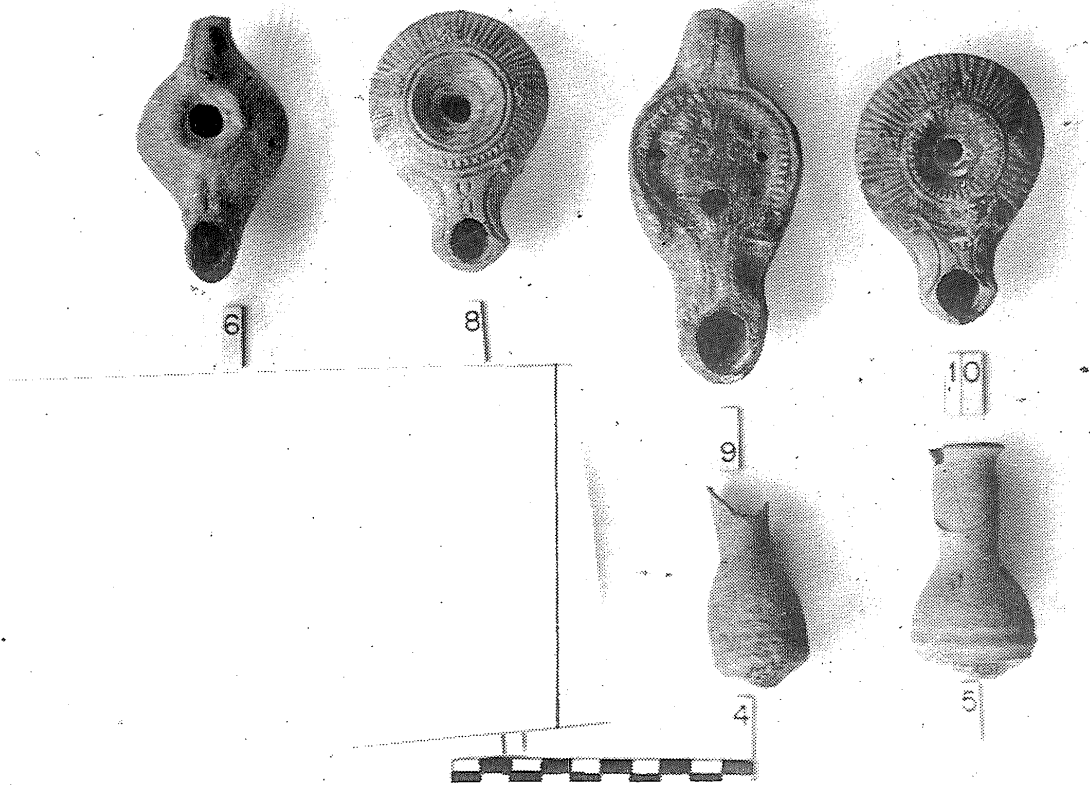
2. T. Bl.1, G.5: Moulded Vase fragment.



3. T. Bl.1, G.6: Two cockles.



1. Pottery found in BI, 1: No 2: G.7 ; 13-14 G.5.



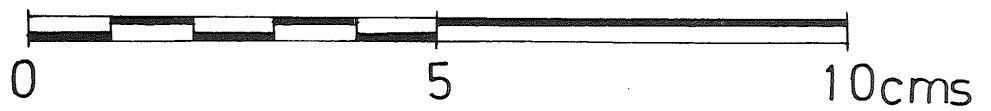
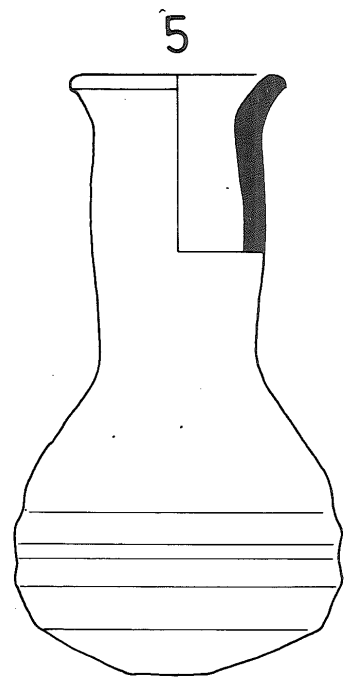
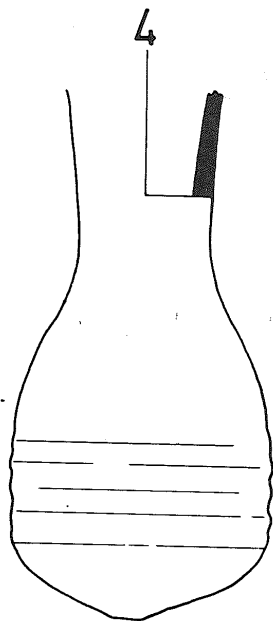
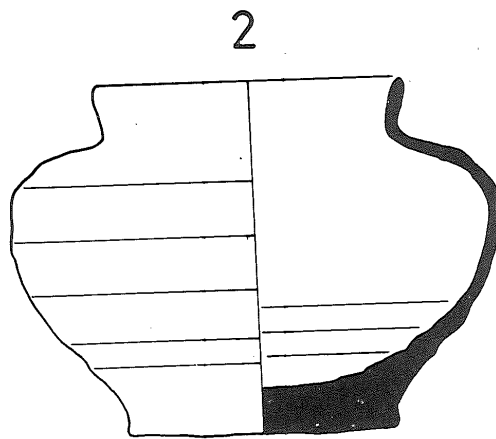
2. Pottery found in BI, 1: Nos 6-8, G.5: Nos 4-10, G.6



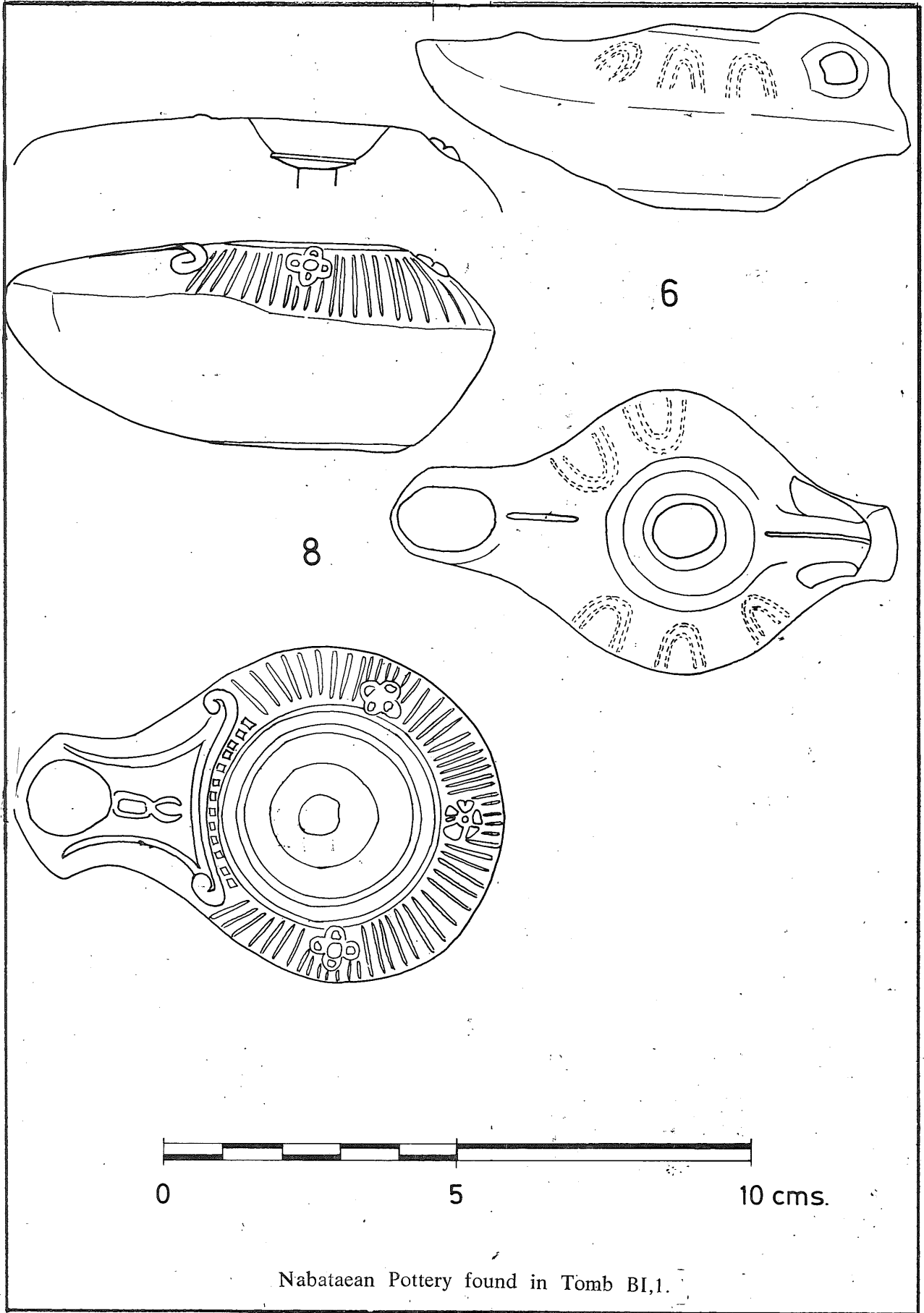
1. Bronze Bells from Tomb I,1



2. Iron Nails from Tomb BI,1

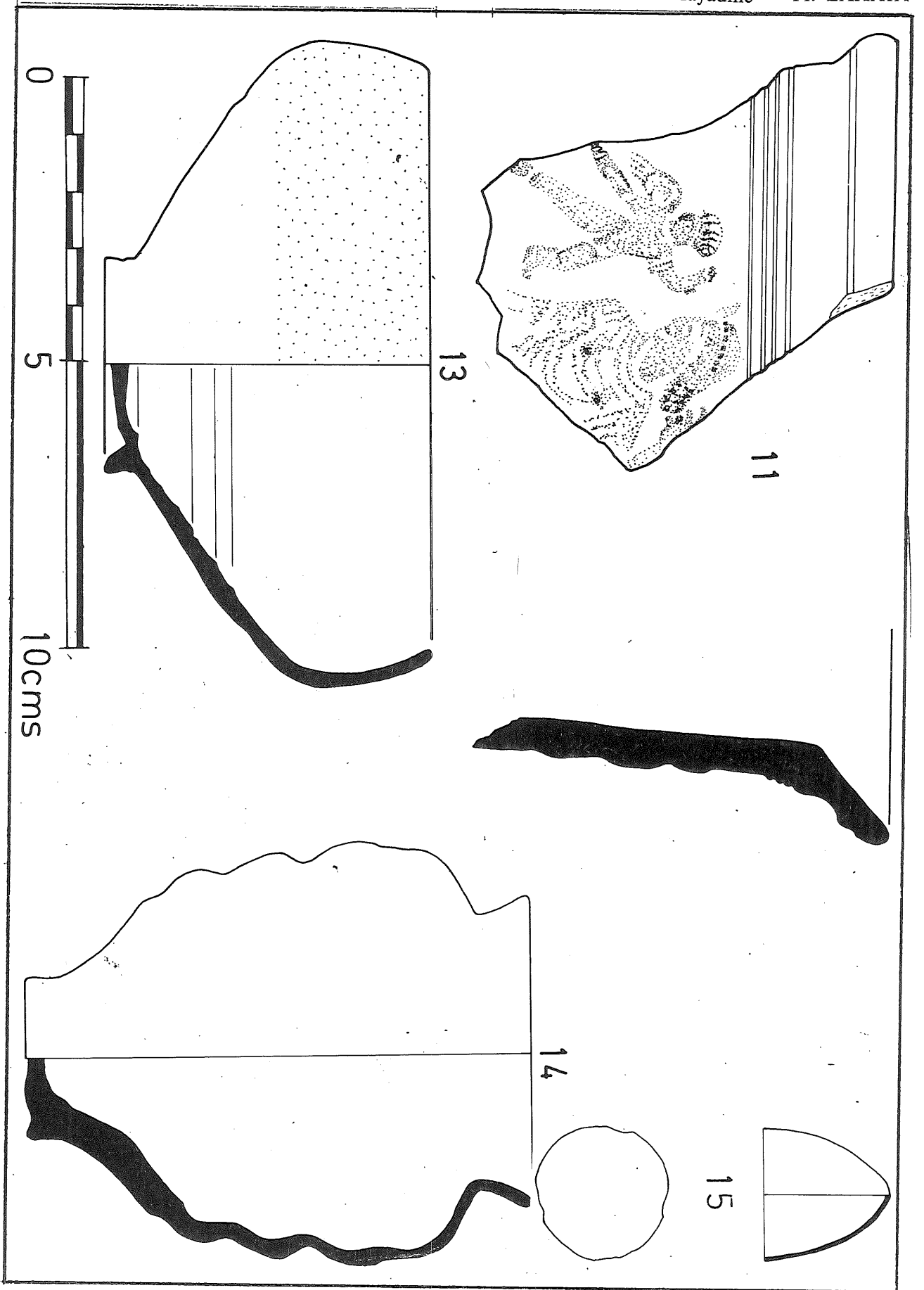


Nabataean Pottery found in Tomb BI,1.



Nabataean Pottery found in Tomb BI,1.





Nabataean Pottery found in Tomb BI,1.



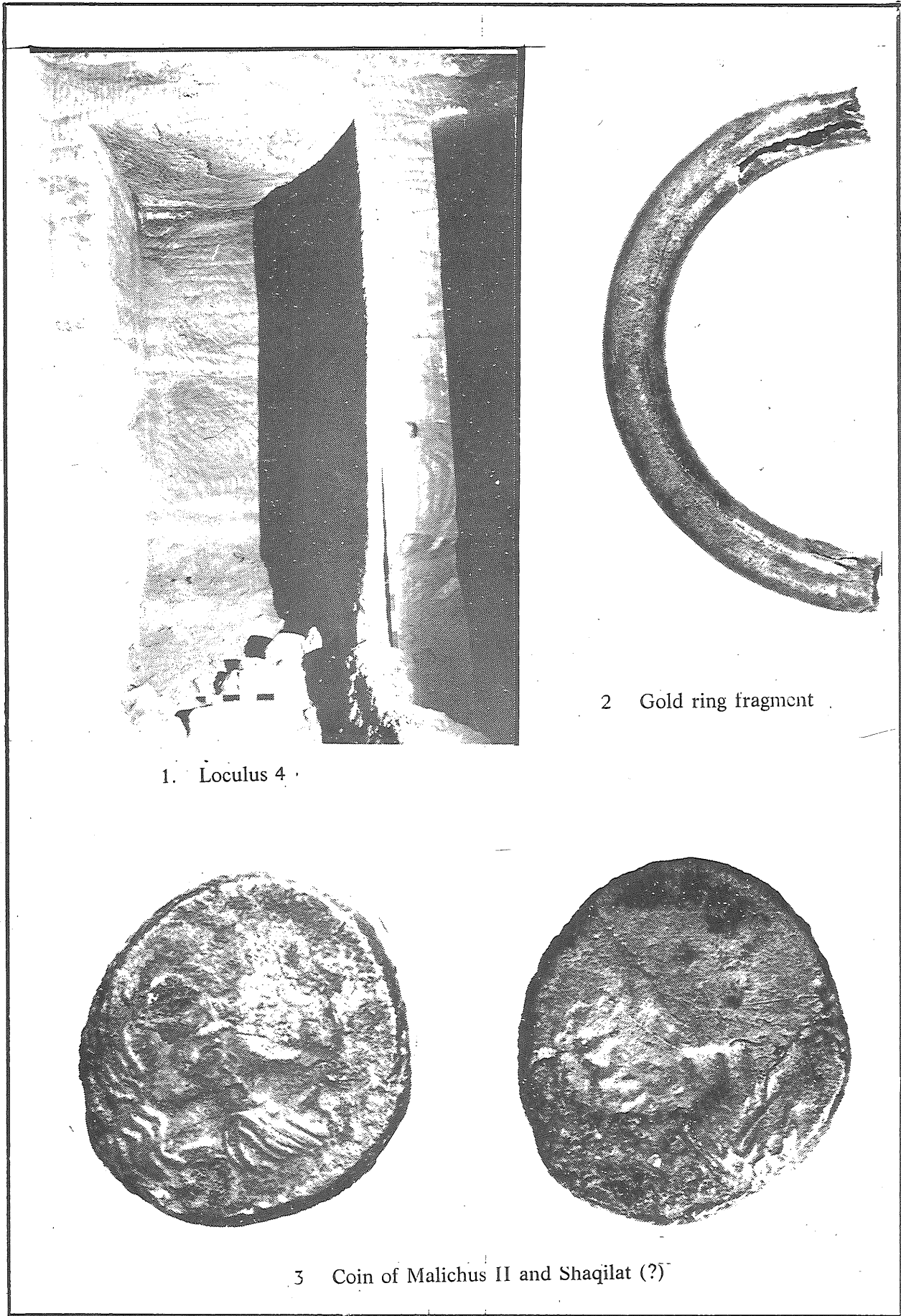
1 Tomb 813 from the theater area



2. Doorway of Tomb 813



3. Steps in front of entrance.



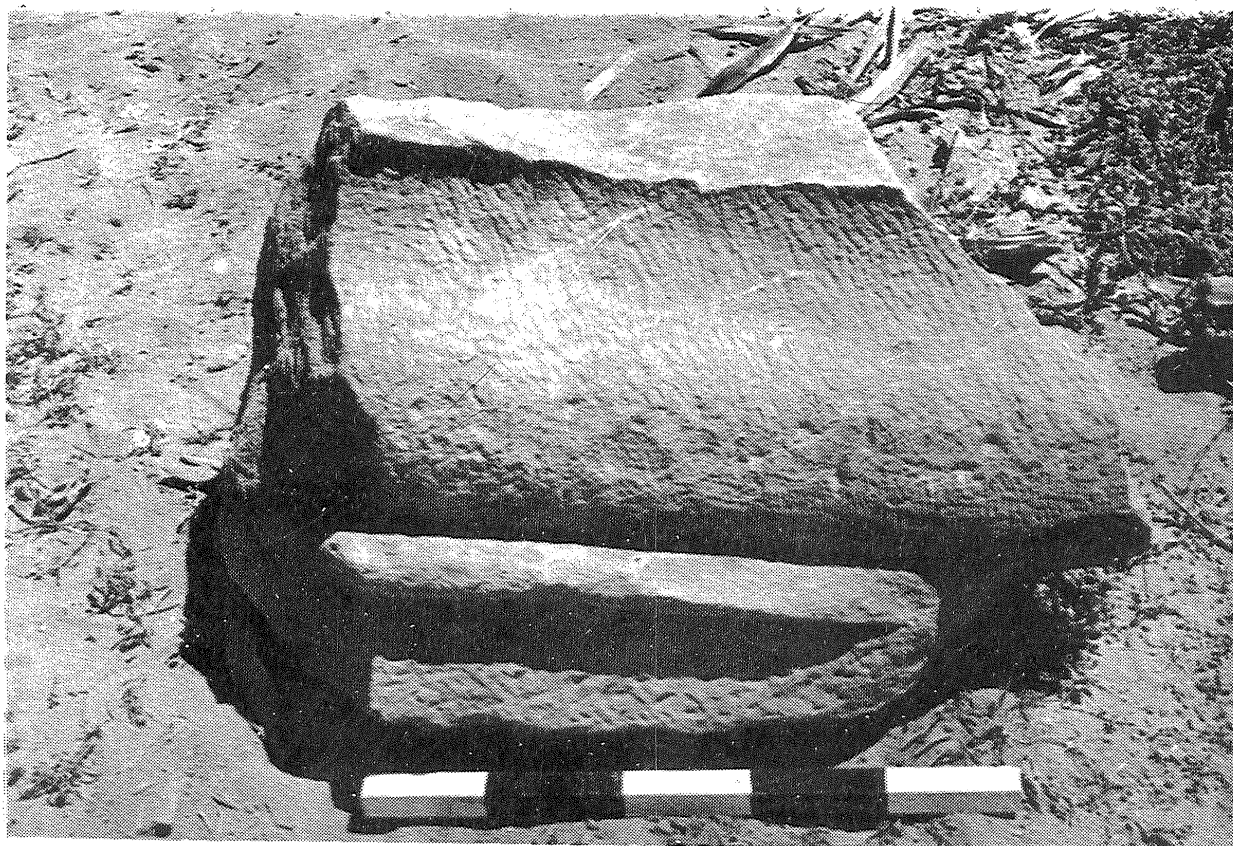
1. Loculus 4

2 Gold ring fragment

3 Coin of Malichus II and Shaqilat (?)



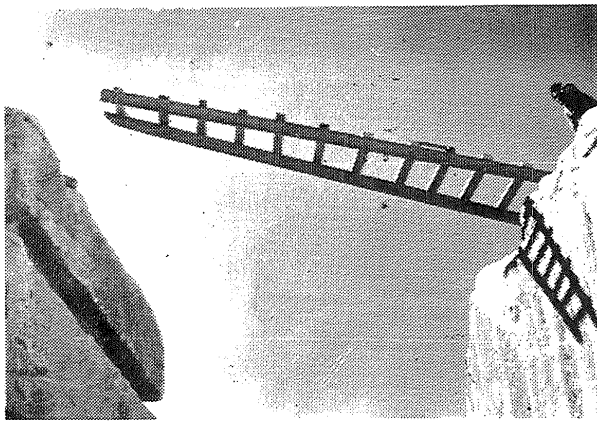
1. Fragmentary Nabataean inscription from T. 813, L.4 H. of K: 8, 5; T: 9 cm



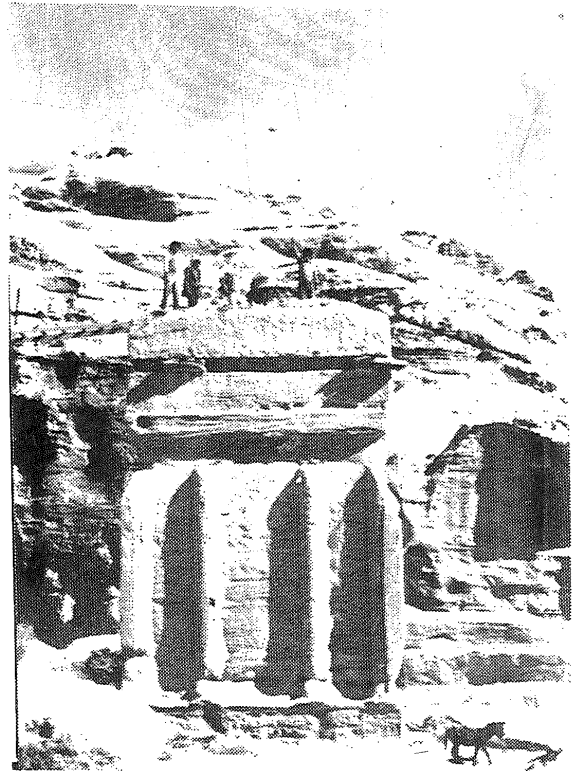
2. Egyptian cavetto fragment



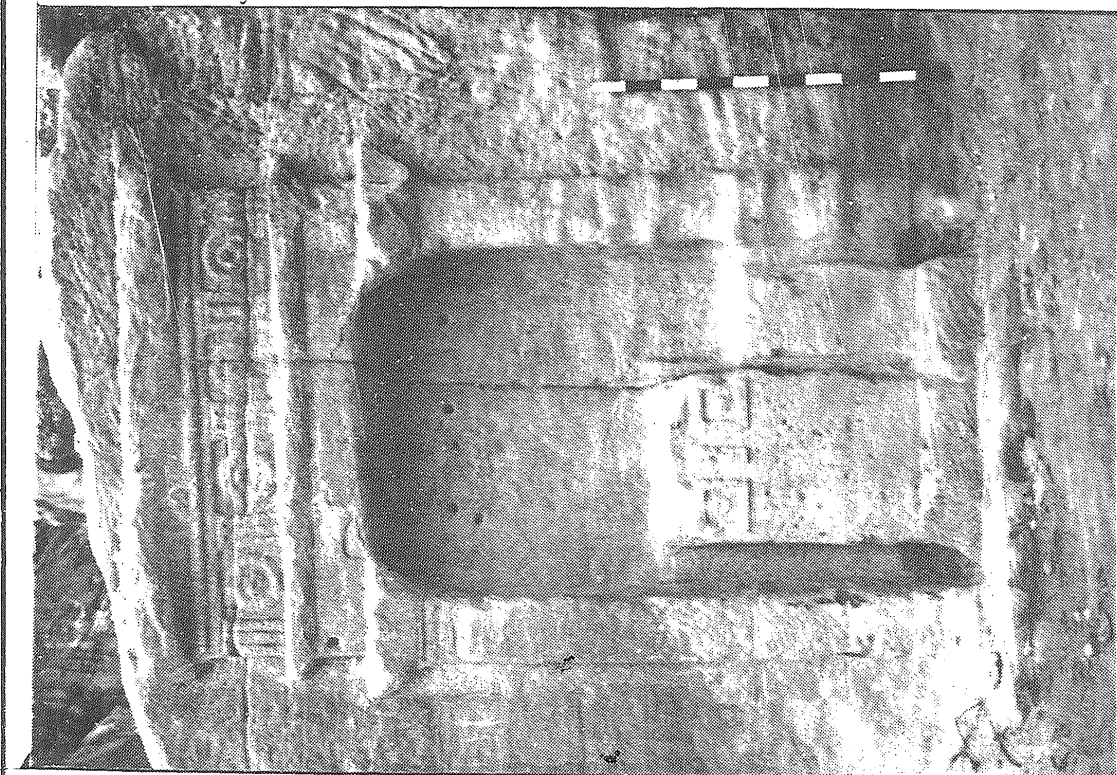
1. Three tower-tomb in Bab es-Siq (Looking East)



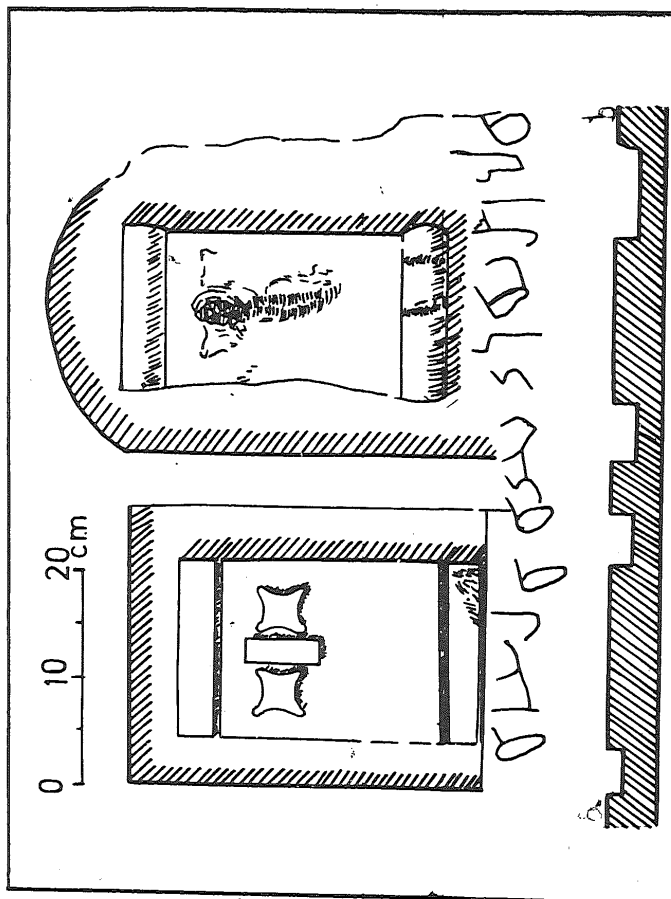
2. The ladder being placed between the ramp and the monument.



3. Monument 9 from west.



1. Cultural niche in the Sîq



2 Al 'Uzza and the Lord of the house at W. Ramm (after Savignac)