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Table Of Contents

	Page
A Bibliography of Gerald Lankester Harding	8
Preliminary Report on the 1979 Season of the Sydney-Wooster Joint Expedition to Pella <i>R.H. Smith</i>	13
The Winter Session (Sydney) <i>Anthony McNicoll and J.B. Hennessy</i>	14
La Tribu des Bani 'Amrat en Jordanie de L'époque grecque et romaine <i>J.T.Milik</i>	41
Explorations in the Umm Ad-Dananir region of the Baq'ah Valley 1977-1978 <i>Patrick E. McGovern</i>	55
Excavations at Qasr Al-Hallabat, 1979 <i>Ghazi Bisheh</i>	69
On the Structure of the Safaitic Inscriptions <i>R.M. Voigt</i>	79
The 1978 Excavation of the Hesban North Church <i>J. Lawlor</i>	95
A Safaitic Inscription in the Amman Archaeological Museum <i>F. Zavadine</i>	107
The Photogrammetric Survey of the Citadel of Amman and other Archaeological Sites in Jordan <i>Antonio Almagro</i>	111
Recherches au Qasr El Hallabat <i>Jean Marcillet-Jaubert</i>	121
The Paleolithic industries on Ain El-Assad (Lion's Spring), near Azraq, Eastern Jordan <i>Garv O. Rollefson</i>	129
The Sanctuary of Artemis at Jerash, an Architectural Survey <i>Roberto Parapetti</i>	145
A Note on the Church of the Virgin at Madaba, Jordan <i>Michele Piccirillo</i>	151
The Antiquities of Rihab of the Bene Hasan <i>M. Piccirillo</i>	153
A Preliminary Report on the Excavations at Gadara (Umm Qes) in Jordan from 1976 to 1979 <i>Ute Wagner-Lux and Karel J.H. Vriezen</i>	157
First Report on Paleolithic Sampling at Abu El Khas, Pella <i>Linda E. Villiers</i>	163
The Wadi El Hasa survey 1979: A Preliminary Report <i>Burton MacDonald</i>	169
Safaitic Inscriptions in the Amman Museum and other Collections II <i>M.C.A. MacDonald</i>	185
A Graeco-Nabataean Sanctuary on Umm El Biyara <i>Crystal-M. Bennett</i>	209
The Cemetery at Tell es-Sa'idiyeh (Book Review) <i>Adnan Hadidi</i>	213
Plates	215



This volume of *ADAJ* is dedicated to the memory of Gerald Lankester Harding who died on 11th. February, 1979. He was Director of Antiquities of Jordan for twenty years and did more than any other single person to make known, not only to the world of scholarship but also to the general public, the riches of Jordan's archaeological heritage. It was he who founded this journal, who edited its early volumes and who was one of its most faithful contributors. Modest as he was, Gerald Harding repeatedly refused to allow a *festschrift* to be published in his honour during his lifetime. The editors felt, therefore, that, rather than produce a special *Memorial Volume*, it would be more appropriate to dedicate a volume of *The Annual* to his memory. We hope that he would have approved.

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M.C.A. Macdonald

PRELIMINARY REPORT ON THE 1979 SEASON OF THE SYDNEY-WOOSTER JOINT EXPEDITION TO PELLA¹

INTRODUCTION

by
R.H. Smith

The site of Tabaqat Fahl (ancient Pella of the Decapolis) has been known to travellers, historians and archaeologists since early in the 19th century.² Before the present undertaking, the site has twice been investigated in recent years: two small soundings by the American School of Oriental Research in 1958³ and the initial season, in 1967, of a large-scale, long-term project by The College of Wooster under Dr. Robert H. Smith. The latter undertaking had scarcely begun when the Arab-Israeli war erupted in June of that year. That war and its aftermath of disruption in the Jordan Valley prevented the immediate return of the Expedition to the field, and an initial temporary delay lengthened into more than a decade. Although this interruption was unfortunate, it had one salutary by-product: it gave the director ample time to study the findings of the 1967 season and to engage in related research, which came to fruition in his volume *Pella of the Decapolis, Volume I: The 1967 Season of The College of Wooster Expedition to Pella*, published in 1973.

By 1978 conditions at Pella had long since returned to normal, and it was financially feasible for Wooster to return to the field at Pella. This time, however, the venture was to be a joint effort with The University of Sydney as a partner and the Department of Antiquities of Jordan as an active participant in the program. Because of escalating costs of field operations and the relative isolation of Tabaqat Fahl from major urban centers which required extensive preparations for accommodations at the site, it is doubtful if the excavation of so large a site as Pella could have been undertaken in any major way except with international cooperation of this kind.

During the fall and winter of 1978 the two sponsoring institutions, with extensive financial assistance from the Department of Antiquities, had a permanent field headquarters constructed atop the large central mound of the site. The L-shaped building consisted of six spacious rooms plastered and painted cement-block construction, plus a kitchen, showers, a wash area and toilets. The southern and eastern sides of the building have a large veranda. On the other side of the courtyard outside the veranda are two storerooms, remnants of a villager's compound were refurbished and utilized as storerooms. A wall containing a wide iron gate was constructed on the eastern side of the compound. The southern end of the compound was fenced with barbed wire, the expectation being that additional construction might soon be needed along that side of the compound. The architectural design for the compound was prepared by Susan Balderstone and executed by a supervisor provided by the Department of Antiquities. The helpfulness of the Department in seeing this compound through to completion is consistent with both the high standards of the Department and the policy of encouragement of responsible foreign archaeological expeditions that the Department has promoted over the years. Although many persons in the Department rendered assistance to the Expedition in various ways, the sponsoring institutions wish to express their **appreciation** especially to Dr. Adnan Hadidi the Director General of the Department, who took a close personal interest in all details of the planning of the Expedition and its field accommodations.

Because of differing academic schedules, it was feasible for The University of Sydney to field a team during January and February, whereas the most suitable period for Wooster was mid-March through mid-May. Consequently the 1979 season consisted of two sequential sessions, the first under the directorship of Dr. J. Basil Hennessy of The University of Sydney and the second under the direction of Dr. Robert H. Smith of The College of Wooster. The teams shared the new field headquarters and jointly purchased such equipment and supplies as were needed for the field operations of the season. It is anticipated that this continued sharing of costs will continue in future seasons, thereby reducing the financial demands of the program considerably for each of the cooperating institutions.

In addition to the assistance of the Department of Antiquities, the Wooster session received two major grants which enabled it to carry out its 1979 field activities at Pella, one from the The National Geographic Society and another from The National Endowment for the Humanities, the latter being a branch of the United States Government. There were also smaller but much-appreciated financial contributions to the 1979 Wooster session.

The archaeological objective of these extensive preparations is a sprawling site on the eastern side of the northern Jordan Valley, strategically located near the intersections of a number of ancient roads. Ancient texts speak of *Pihilum* as early as *ca.* 1900 B.C., and sherds excavated in 1967 demonstrated occupation at the site going back to the Chalcolithic period. Occupation continued, apparently almost without total interruption, over several thousand years until the 8th century A.D., after which time the city declined but still did not fall into abandonment until many hundreds of years later. Its time of greatest prosperity and largest population was presumably the Byzantine period, as the many evidences of Byzantine occupation of surrounding hills indicate. Throughout its long history, Pella's existence was made viable by copious springs that burst out of the base of the mound and adjoining slopes.

Because of this long history, Pella has many areas of potential archaeological importance: the central mound, where most of the city's inhabitants clustered throughout the major portion of Pella's existence; the Wadi Jirm, a small alluvial valley that lies just south of the mound; a large natural hill called Tell el-Husn that looms two hundred feet high on the south side of the Wadi Jirm; various architectural remains scattered about the perimeter of the city; and cemeteries that ring the city.

By prior arrangement, certain areas at Pella were to be the responsibility of The University of Sydney and certain others the responsibility of The College of Wooster (Pl. I). The Australian group would commence a stratigraphic probe on the eastern side of the mound and undertake the mapping and eventual excavation of an interesting complex of buildings that lay far up the hillside to the east of the city proper, as well as explore for tombs. Wooster's areas of responsibility included the western side of the mound, where a stratigraphic excavation of major dimensions was needed, and a cluster of Roman-Byzantine ruins near the city's spring. There was also the matter of tombs. Furthermore, it was desirable to carry out some limited archaeological investigations and perhaps restoration at the West Church, where Wooster had conducted excavations in 1967.

I. The Winter Session (Sydney)

by

Anthony McNicoll and J.B. Hennessy

The winter session lasted from December 27, 1978 through March 6, 1979. There were twenty-three members of the excavation staff, mainly from Australian universities and tertiary institutions.⁵

SURFACE FINDS

During the course of the excavations, members of the expedition noted remains of all periods from the Neolithic to the Medieval. Of particular interest are the typical flaked stone blades of the Neolithic B period (Pl. XII,3), a wide selection of Ghassulian Chalcolithic ceramics and flaked and polished stone implements (Pl. XII,2), large quantities of grain wash and Early Bronze Age fabrics, some very fine slipped wares of the Middle Bronze Age, Late Bronze Age painted and plain wares, Cypriot White Slip and Base-Ring, Mycenaean sherds, Iron I and II ceramics, large quantities of Hellenistic, Roman, Byzantine, Umayyad and Ayyubid ware, sgraffiato and earlier glazed fabrics.

Perhaps the outstanding surface find was a superb gold solidus of Heraclius (610-641 A.D.), picked up just above the spring outlet directly below Area IV (Pl. XII,1).

Bronze Age tombs from Smith's 1967 season and remains on the N. slopes of Tell el-Husn are the only evidence so far of the earlier burials at the site. Surface exploration also made it abundantly clear that hundreds of the later tombs of the Roman and Byzantine periods have already been looted.

AREA III

Two 9 m. x 9 m. trenches were opened up on the SW slopes of the mound, the first of a series of trenches which are designed to give the full stratigraphical history of the site. The lower trench Area III Plot D showed evidence of wash lines only, but at the end of the season the strata appeared to be levelling out and Middle and Late Bronze Age sherds were noted.

Above IIID, Area III Plot C (hereafter IIIC) produced a closely stratified section of late Hellenistic material (see below,) overlying a deep fill (Pl. V) of the Hellenistic period, a fill which also contained Iron Age sherds.

Iron Age II (Pls II-III, XVI)

Beneath the floor levels of the Hellenistic house (see below, and Pl. IV-V) a deep levelling fill butted on to the collapsed mudbrick and partly eroded floor of an earlier house (Pl. III). The earlier house was built of a 'massif' of boulders and *pise*, which is, as yet, undated. The fill was probably intended as the terrace on which the later house was built and contained sherds dating from the Late Bronze Age to the Hellenistic period.

The Iron Age II sherds of this fill agree well with the few fragments of pottery (Pl. XVI) found on the floor of the room F23. The vessels itemised below were sealed in a burnt layer (9.1) immediately on the rough flat stone pavement of the floor of the house and beneath the collapsed mudbrick (Pl. III). It should be stressed that only a small area of the room was cleared in this first season (Pl. II) and a full description of the architecture of the room must await work in future seasons.

Pl. XVI - *Iron Age Pottery*

1. CN 20377 Lamp. Medium gritty fabric, fired beige. Diameter ca. 16.0 cms.
Ill. ex. from IIIC 9.1 Plot object No. 84.
Parallels: *Tell en-Naşbeh II*, pl. 71.1634. Late Middle Iron,
8th - 7th centuries B.C.
: *Lachish III*, pls 75:15, 83:151. Tomb 106. 670-580 B.C.
: *Sahab*, pl. 35:72. 8th - 7th centuries B.C.
2. CN 20387 Jar. Medium gritty fabric, fired beige. Rim diameter 8.6 cms.
Ill. ex. from IIIC 9.1.
Parallels: *Tell en-Naşbeh II*, pl. 50:1963-1969.
700-500 B.C.
Comments: Rim only of cooking pot?
3. CN 20437 Lamp. Coarse gritty fabric, fired beige. Diameter ca. 14.0 cms.
Ill. ex. from IIIC 9.1 Plot object No. 85.
Parallels: *Dhiban*, pl. 79.7. Tomb J.3. 8th but may be as late as
6th - 5th centuries B.C.
: *Tell en-Naşbeh II*, pl. 71.1640. Most common from 700-500 B.C.
Comments: Broken. Lower body and lip fragment.
4. CN 20421 Bowl. Gritty fabric, fired beige. Diameter ca. 22.0 cms.
Ill. ex. from IIIC 9.1.
Parallels: *Beth Shan*, fig. 67:26,28. Level IV, ca. 800-700 B.C.; pl. 47:2.
Secondary clay floor of N. temple.
: *Dhiban*, pl. 73:5, Iron II.
: *Tell en-Naşbeh II*, pl. 55:1253. 8th century B.C.
Comments: Rim and upper body only.

In the present state of the excavations it is too early to suggest a firm date for the building. Stratigraphically, it is earlier than the Hellenistic building and its underlying fill, but it shouldn't be that much earlier. The two lamps recovered from the small area of floor space have a long history and perhaps continue as late as the fifth century B.C. The cooking pot and bowl rims are

similarly types with a long history and for the present it would be safer to merely suggest a date in Iron Age II.⁶

J.B. Hennessy

THE HELLENISTIC DEPOSITS (Pls IV-V, XIII, XVII-XIX)

1. *Stratigraphy and architecture*

Stratified material of the Hellenistic period was found only in IIIC (Pl. V). In the northern half of IIIC, immediately below the remains of a Byzantine/Umayyad wall, a yellow, orange and black tumble of burnt mudbrick, scorched earth and carbonized material about 1.00 m. deep was encountered (Pl. V, 1.2, 1.3, 2.1, 2.2, 2.6, 2.7 and 3.1). This deposit resulted from the destruction of a building, perhaps a fairly humble house, of which only a small part was unearthed during the 1979 season. The building, as so far revealed, is late Hellenistic with two or three architectural sub-phases; judging by the number of floors and by the objects found, the occupation lasted not more than a generation or two.

The architecture was simple (Pl. IV). Walls, approx. 0.65 m. thick, were rubble-built to a height of about 1.00 m. Above the stone-work were mudbricks measuring about 0.32 x 0.32 x 0.09 m. The foundations were of rubble of varying depths, except for the wall of the final sub-phase (Wall F4) which was simply built on the existing floor in order to divide the interior of the dwelling (i.e. the area bounded by Walls F3,25 and 2) into two. The internal floors consist of thin layers of whitish plaster or of tamped yellow or brown clay, in contrast with the thick layers of white and yellow plaster on a well-constructed basis of compacted earth and stones west of Wall F3. To judge by the pits in the western area of IIIC, this was an open courtyard. In the SW corner of the house was a doorway, of which only the threshold survives. Its masonry contrasts oddly with the rubble-built walls, for it is comprised of three neatly worked and joined ashlar blocks of limestone, each approx. 0.69 x 0.50 x 0.20 m.

Below the occupation strata was a soft fill some 2.5 m. deep (Pl. V, 1.7 - 1.24). Although a few soil changes could be discerned within it, and although the artefactual material recovered from it spanned a period of more than a millennium, the fill was clearly formed at one time. Evidently the as-yet undated 'massif' of large stones and *terre pisée* (see J.B. Hennessy above,) to the south of this fill was used as a retaining wall for the build-up of soil and rubbish, which in turn was laid down as a basis or terrace on which to construct the dwelling and courtyard.

2. *Artefacts and chronology*

For the purposes of this report, the Hellenistic material has been divided into two groups, A and B (Pl. XVII-XIX).

Group B

Material from the 'fill' deposits was copious even by Near Eastern standards. It ranges in date from the Late Bronze Age to the Late Hellenistic period.

Among the artefacts are large quantities of LB and IA potsherds and fragments of figurines. Three Mycenaean sherds (Pl. XIII,3) give promise of things to come.⁷ However, for the chronology of the building on the terrace formed by the fill, the later objects provide a more precise *terminus post quem*. Notable amongst the Hellenistic artefacts are the following:

- i. A tetradrachm of Ptolemy II Philadelphus (282-246 B.C.), P 20244.⁸
- ii. A fragment of West Slope ware amphora of the late 3rd century B.C. (CN 20324, Pl. XIII,2). The fragment consists of a sherd of a fine pink ware with a rich black glaze and a white painted decoration of diminishing rectangles, below which is a horizontal groove with a rich red paint. Attached to the sherd is part of a twisted handle, at the base of which is plastic mask of Pan.⁹
- iii. An imported black and red glazed bowl with stamped palmettes and rouletting, dating to the early or mid-2nd century (Pl. XIX no. 1).¹⁰
- iv. Four stamped Rhodian jar handles of well-levigated buff ware (Pl. XIII,1), as follows:

P 20310	IIIC 1.17	ΕΠΙΠΑΥ/ΣΑΝΙΑ	in incuse rectangle	180-150 B.C.
P 20338	IIIC 1.17	ΕΠΙΧΑΡ/ΜΟΚΛΕΥΣ	„ „	280-220 B.C.
P 20342	IIIC 1.19	ΑΡΤΕΜΙ/ΔΩΡΟΥ	„ „	n.d.
P 20363	IIIC 21.22	ΔΑΜΟΚΡΑΤΕΥΣ	around rose in incuse circle	200-180 B.C.

v. Lamps (P 20347 and P 20311, Pl. XVII, nos 3 and 4). Ceramic lamps with seven nozzles have been found at Samaria and the Amman citadel. The lamp with a bow spout is of a type common in Palestine in the 1st centuries B.C. and A.D., and thus presents a problem, discussed below.

vi. Local pottery. An extremely common local Hellenistic ware is what we have called 'coarse light brown ware'. It is akin to Kenyon's 'household ware' and to Weinberg's 'semifine to coarse' ware used in the locally manufactured plates of Tel Anafa. At Pella this ware can be fired drab, rosy or brown; it has more or less inclusions, and can be slipped with varying shades of red and brown as well as black. Commonly it is found in carelessly finished bowls and plates (Pl. XVIII, nos 8-14, Pl. XIX, nos 7-13) with ring or stringcut bases. In Group B vessels with ring bases appear to predominate.

Other local Hellenistic wares in both groups include well-levigated fabrics fired buff or pale grey (used for storage jars and the like); coarse terracotta coloured ware (cooking vessels); and metallic grey ware (lamps).

A notable absentee from the Group B fill pottery excavated in 1979 is Eastern Sigillata A ware. If Weinberg's recent proposal that this ware begins around 150 B.C. is correct,¹² we may have further evidence for the date of the fill. However, given the small area so far excavated, such an *argumentum ex silentio* may be premature.

In conclusion, the fill in IIIC appears to contain no material which must be dated later than the 2nd century. The lamp shown on Pl. XVII, no. 3, is antecedent to the kind commonly called Herodian (which Lapp dates to the years 75 B.C.-A.D. 70¹³). Given the occurrence of lamps with similar spouts outside in the 3rd and 2nd centuries,¹⁴ and the context of our own example, we would at present be unhappy with a date later than 100 B.C.

On balance, then, it seems likely that the infilling for the terrace on which the building was placed occurred in the second half of the 2nd century.

Group A

This group comprises the material from the occupation strata and destruction. It is less plentiful, less diverse and less diagnostic chronologically than the Group B material. Amongst the finds are the following:

- i. Three bronze coins. Unfortunately all are completely corroded, but fabric, module and weight suggest that they are pre-Hasmonean.
- ii. Lamps (Pl. XVII, nos 1 and 2). The type belongs to the 2nd - 1st century B.C.¹⁵
- iii. Local pottery. The same wares are present as those of Group B above. The Group A assemblage may be a representative selection of ceramic vessels used in a fairly humble house and its courtyard - water jars (Pl. XVIII, 1,3&4), jug (Pl. XVIII, no 2), cooking vessel (Pl. XVII,5), bowls (Pl. XVIII, nos 7-14). Fine imported wares such as those found in the 'fill' are so far completely absent.

At present it is impossible to date the pottery by analogy closer than the 2nd - 1st centuries. If, however, the absence of Hasmonean coins and the evidence of the burnt tumble overlying the late Hellenistic house are significant, it may be possible to relate the destruction of this building to the sack of Pella by Alexander Jannaeus about 83-2 B.C.¹⁶

If this hypothesis is correct, and if the suggestion that the laying down of the 'fill' occurred in the second half of the 2nd century B.C. is accepted, the Hellenistic occupation in IIIC will date roughly between 150 and 80 B.C.

Pl. XVII - *Hellenistic lamps, cooking vessels and storage bowls*

1. P 20103 Lamp, fairly fine metallic fabric with dark grey slip, fired grey.
Length: 9.6 cm.
Ill. ex. from IIC 6.1 (Group A)
Parallels: Type for nos I and 2: *Samaria-Sebaste III*, fig. 87, no.1
(different decoration). Late Hellenistic?
2. P 20055 Lamp, fairly fine fabric with dark grey slip, fired grey.
Length: 9.5 cm.
Ill. ex. from IIC 1.3 (Group A)
3. P 20347 Lamp, well-levigated fabric with black slip, fired buff, undecorated.
Length: 8 cm.
Ill. ex. from IIC 1.22 (Group B)
Comments: See above.
4. P 20311 Seven-spouted lamp, fairly fine metallic fabric with black slip,
fired grey. Max. width: approx. 12 cm.
Ill. ex. from IIC 1.19 (Group B)
Parallels: *Samaria-Sebaste III*, fig. 87, no. 9. Late Hellenistic?
Comments: Perhaps similar to Weinberg's Tel Anafa example:
IEJ (1971), 105 (Post 150 B.C.?).
5. CN 20089 Cooking vessel, coarse fabric, fired terracotta colour. Width at
neck: 9.5 cm
Ill. ex. from IIC 1.3 (Group A)
Others from IIC 1.14 (Group B)
Parallels: General type as *PPC*, 186, Type 71.1, K2.
75 B.C. - A.D. 20.
6. CN 20335 Cooking vessel, ware as no. 5. Diameter of neck: 15 cm.
Ill. ex. from IIC 1.14 (Group B)
Others from IIC 1.14 (2 ex.)]
 1.19 (3 ex.)]
 1.21] (Group B)
 1.25]
 IIID 1.16 (wash?)
Parallels: *PCC*, 186, Type J, 140-100 B.C.
7. CN 20477 Frying pan, ware as no. 5. Diameter: 27 cm.
Ill. ex. from IIC 1.25 (Group B)
Parallels: Somewhat similar to *Samaria-Sebaste III*, fig. 41, no. 23.
Hellenistic.
8. CN 20195 Storage bowl, gritty fabric, beige colour with self-slip.
Diameter: 33.5 cm.
Ill. ex. from IIC 1.7 (Group B)
9. CN 20251 Storage bowl, very coarse with grits, fired brown. Diameter: 36 cm.
Ill. ex. from IIC 1.10 (Group B)
Other from IIC 1.10 (2 ex.)
 1.14]
 1.15]
 1.16] (Group B)
 1.19]
 1.24]
 9.1 Late Iron Age

Parallels: General Type - *Ancient Pottery*, Pl. 75, nos 1 - 16.
 Comments: Clearly Iron Age in origin. However, the large number of specimens found in the 'fill' suggest that the shape may have survived into later periods.

Pl. XVIII - *Hellenistic storage vessels, jugs and bowls*

1. CN 20112 Jar, coarse metallic fabric, fired terracotta. Diameter at neck: 12 cm.
 Ill. ex. from IIIC, 2.2 (Group A)
 Parallels: Hadidi, A. The pottery from the Roman Forum at Amman, *ADAJ XV* (1970), Pl. III, no. 7. 200 B.C.
2. CN 20116 Jug, fine metallic fabric, fired grey. Diameter of neck: 9 cm.
 Ill. ex. from IIIC 5.1 (Group A)
 Comments: Relief decoration appears to be impressed in two moulds and the vessel joined at its greatest diameter.
3. CN 20069 Jar, fine well-levigated fabric, fired grey at core with pale grey surfaces. Diameter: 9 cm.
 Ill. ex. from IIIC 1.3 (Group A)
 Others from IIIC 1.3 (Group A)
 Parallels: Comparable with *PCC*, 146, Type 11.2D. 175 - 100 B.C.
4. CN 20184 Jar, ware as no. 3. Diameter: 10 cm.
 Ill. ex. from IIIC 4.1 (Group A)
 Others from IIIA 8.2 (rubbish survival?)
 IIIC 1.14 (2 ex.) }
 1.22 } (Group B)
 1.23 }
 1.25 }
 Parallels: Somewhat like *PCC*, 146, Type 11.2B. 175 - 50 B.C.
5. CN 20212 Jar, fine fabric with a few white inclusions, fired buff.
 Diameter: 12 cm.
 Ill. ex. from IIIC 2.8 (Group B)
 Parallels: Somewhat like *PCC* 146, Type 11.2A. 175 - 100 B.C.
6. CN 20210 Jar, ware as no. 3. Diameter: 11 cm.
 Ill. ex. from IIIC 2.8 (Group B)
 Others from IIIC 1.10 }
 1.14 } (Group B)
 Parallels: Hennessy, J.B. *Excavations at Samaria-Sebaste*, (1968),
Levant II, (1970), fig. 11, no. 15 (dark buff ware).
 'Lower Phase E' - Early Hellenistic.
7. CN 20058 Plate, fine fabric, fired terracotta colour. Diameter: 21 cm.
 Ill. ex. from IIIC 1.3 (Group A)
 Parallels: General type: *PCC*, 206-7, Type 153. 200 - 100 B.C.
8. CN 20207 Bowl, coarse gritty fabric, fired a drab light brown. Diameter: 16.5 cm.
 Ill. ex. from IIIC 2.7 (Group A)
 Comments: The ware of nos 8-14 is equivalent to Kenyon's 'Household Ware' (*Samaria-Sebaste III*, 265).
9. CN 20033 Bowl, ware as no. 8. String-cut base. Diameter: 9.5 cm.
 Ill. ex. from IIIC 1.1 (Group A)

Others from IIIC 1.1 (Group A)
 Parallels: General types for nos 9-12, *PCC*, 178, Type 53 H-J.
 75-29 B.C.

10. CN 20035 Bowl, ware as no. 8, roughly made, with a string-cut base.
 Diameter: 12 cm.
 Ill. ex. from IIIC 1.1 (Group A)
 Others from IIIC 1.2] (Group A)
 1.3]
11. CN 20038 Bowl, ware as no. 8, string-cut base. Diameter: 11 cm.
 Ill. ex. from IIIC 1.2 (Group A)
 Others from IIIC 1.2] (Group A)
 1.3]
 Comments: IIIC 1.3 produced seven disc bases from this or a similar type of bowl.
12. CN 20047 Bowl, ware as no. 8, string-cut base. Diameter: 11 cm.
 Ill. ex. from IIIC 1.3 (Group A)
 Others from IIIC 1.3 (11 ex., Group A)
 1.7]
 2.8 (2 ex.)] (Group B)
 1.19 (2 ex.)]
13. CN 20032 Bowl, ware as no. 8, string-cut base, very rough manufacture.
 Diameter: 10.5 cm.
 Ill. ex. from IIIC 1.1 (Group A)
 Others from IIIC
 1.1 (3 ex.)]
 1.2]
 1.3 (2 ex.)] (Group A)
 2.6]
 3.2 (with red slip)]
 1.7/10 (with red slip))]
 1.7 (4 ex.) (" " ")] (Group B)
 2.8 (" " ")]
 1.10 (" " ")]
14. CN 20046 Bowl, ware as no. 8, string-cut base. Diameter: 7.5 cm.
 Ill. ex. from IIIC 1.3 (Group A)
 Parallels: *PCC*, 51.1 for general type. 200 B.C. - A.D. 68.

Pl. XIX - *Hellenistic bowls and plates (Group B)*

1. CN 20416 Bowl, fine well-levigated fabric fired terracotta colour, metallic black glaze inside and outside and red glazed tondo and in foot.
 Rouletting and five palmettes impressed in tondo. Diameter: 20 cm.
 Ill. ex. from IIIC 1.19 (Group B)
 Others from IIIA 8.2 (fragment)
 Parallels: *Samaria-Sebaste III*, fig. 43, no. 4. Late Hellenistic.
TCHP, fig. 117, D.5. Mid-2nd century.
 Comments: Fragment from IIIA must be a rubbish survival in an Umayyad deposit. Pella specimen is less angular than the Samaria ex., which lacks palmettes.
2. CN 20477 Bowl, coarse fabric, fired light brown, with red slip inside and outside.

- Diameter: 12.5 cm.
 Ill. ex. from IIC 1.17 (Group B)
 Others from IIC 1.25 (Group B)
 Parallels: General Type *PCC*, 203, Type 151 E, with slight outcurved rim. 150-107 B.C.
 Comments: Similar to that of Pl. XVIII, nos 8-13, in ware.
3. CN 20228 Plate, fairly fine fabric, fired buff, matt black glaze inside and outside.
 Diameter: 21 cm.
 Ill. ex. from IIC 1.7 (Group B)
 Others from IIIA 8.2
 Parallels: General type of nos 3-6: *PCC*, 206-7, Type 153.1. 200-100 B.C.
 Comments: Ex. from IIIA is a rubbish survival.
 Quality of the black glaze indicates local manufacture.
4. CN 20174 Bowl, ware as no. 2, matt black glaze inside and outside.
 Diameter: 12.5 cm.
 Ill. ex. from IIC 1.10 (Group B)
 Others from IIC 1.10 (matt black glaze outside, red inside)
 1.14
 1.7 - 1.25 (numerous examples)
5. CN 20219 Bowl, ware as no. 2, matt red to black slip or imitation glaze inside and outside. Diameter: 15 cm.
 Ill. ex. from IIC 1.10 (Group B)
 Parallels: *Samaria-Sebaste III*, fig. 37, no. 11, early 3rd century .
Levant II, (1970), fig. 9, no. 5
 (more downturned rim). 'Phase D'. Late Hellenistic.
6. CN 20229 Bowl, grey ware with matt black slip inside and outside.
 Diameter: 16.5 cm.
 Ill. ex. from IIC 1.7 (Group B)
 Parallels: *Levant II*, (1970) fig. 10, no. 25.
Samaria-Sebaste III, fig. 55, no. 5.
7. CN 20227 Bowl, ware as no. 2, black slip outside and red inside.
 Diameter: 14 cm.
 Ill. ex. from IIC 1.7 (Group B)
 Others from IIC 1.10
 1.14 (red slip only inside and outside - 2 ex.)
 1.25 (2 ex.)
 and other fragments from 1.7 to 1.25.
 Parallels: General type of nos 7-10: *PCC*, 201, Type 151.1.
8. CN 20368 Bowl, ware as no. 2. Diameter: 10 cm.
 Ill. ex. from IIC 1.14 (Group B)
 Others from IIC 1.14 (Group B)
 9.1 (Late Iron Age)
 Comments: The late Iron Age ex. is contamination.
9. CN 20452 Bowl, fine well-levigated fabric, fired buff with a matt red 'glaze'.
 Diameter: 10 cm.
 Ill. ex. from IIC 1.19 (Group B)
10. CN 20220 Bowl, ware as no. 2 with matt black slip inside and outside.
 Diameter: 15 cm.
 Ill. ex. from IIC 1.10 (Group B)

Others from IIIC 1.19 (2 ex. - no slip) (Group B)

11. CN 20463 Bowl, ware as no. 2, red slip inside and outside. Diameter: 12 cm.
Ill. ex. from IIIC 1.19.
12. CN 20535 Bowl, ware as no. 2. Diameter: 15 cm.
Ill. ex. from IIIC 1.22 (Group B)
Others from IIIC 1.22 (2 ex. - Group B) and several from
strata 1.7 to 1.25.
13. CN 20401 Bowl, ware as no. 2. Diameter: 15 cm.
Ill. ex. from IIIC 1.14.

A. McNicoll

AREA V

1. *Location* (Pl. I)

East of the main mound of Tabaqat Fahl, set high on the west slopes of Jabal abu el-Khas lies a complex of ruins which comprise at least two major buildings. The larger of these two buildings is orientated east-west and sited on a level platform, which nestles into an otherwise steeply-ascending mountain slope. The location is one of the most spectacular at Pella, and faces west, across the verdant carpet of the Wadi Jirm el Moz and its ever flowing springs, to a view of the river Jordan and the Jordan Valley almost as far as the sea of Galilee.

North-east of this building and seven metres above is another small platform on which are located the ruins of the smaller second building. Remains of an approach staircase, walls and entrance doorways are visible on the surface.

Remnants of terrace walls to the north, south and west of the complex suggest that the site was enclosed by a boundary wall. Retaining walls of well-constructed masonry on the western and southern slopes indicate that the main building was surrounded by terraces and approached on its western side by a steep monumental staircase of which the rubble core is still *in situ*.

The site exhibits signs of violent destruction in the past. Piles of columns, capitals, bases and decorated lintels and architraves lie within the buildings or strewn down the surrounding slopes.

The walls of the main building on the surface (Pl. VIII) are nowhere more than two courses in height, and the east end is completely buried beneath the debris of landslides from the mountain above the site.

2. *Historical Descriptions*

Many of the 19th century travellers who visited Pella described these ruins and gave various interpretations to them.

S. Merrill visited the site in 1876 and described the larger building as “the remains of a church”.¹⁷

Gottlieb Schumacher, who drew a comprehensive survey plan of Pella and its surroundings in 1887, denotes the site as “Temple ruin” on his plan.¹⁸ He described the tumble of building stones, Corinthian capitals, cornices and columns of 21" (inches) diameter. (He must have measured the diameter of the moulded tops of the column shafts as these are the only column features that have a diameter of 21" or 53 cm.). He reckoned that the decoration and workmanship of the architectural elements was Roman, and this, together with the discovery of a Corinthian capital with a carved cross led him to describe the building as “.... a temple, probably rebuilt by the Crusaders”.¹⁹

Another survey of Pella was carried out by John Richmond and published in 1934. His plan shows two buildings and an enclosing boundary wall. He described the complex as a monastery and the larger building as a church which he drew with a triapsidal east end and five entrance doorways. “There are vestiges of a triapsidal east end, three doors in the west end and one on the north side.”²⁰

A larger sketch plan of the church indicates the division of aisles and nave and the triapsidal east end only with a hesitant dotted line.

He omits in his description and larger plan a doorway in the south wall, but indicates one on his survey plan. This doorway is still visible today (Pl. VIII). The east end of the building is now totally obscured by landslides, as previously mentioned. Richmond's ambiguous plans and statements make it difficult to assess what was actually visible of the east end of the building in 1933. He also notes the portico of the church as an unusual feature.

3. *Plan of the Excavations*

This site has been designated Area V. The intention of the present series of excavations is to examine the whole complex to discover, where possible, the building types and their chronological sequence, and to assess the possibility of an eventual reconstruction of the building remains.

A limited series of excavations were carried out to enable the numerous architectural fragments to be carefully catalogued. A sondage was made within the enclosing walls of the main building and a series of 7 m. x 7 m. squares were set out along its western extremity, each square called after a lower case letter of the alphabet (Pl. IX). Squares 'c' and 'd' were excavated and architectural elements and worked stones were given painted numbers and their positions located within the squares, e.g. c.1, c.2, c.3, etc....

All columns, capitals and bases were left *in situ*, while other numbered building stones were transported via an earthen ramp to a platform storage area located down the northern slope from the building.

4. *Recent occupation of the site*

Pl. VIII shows a group of three enclosures roughly constructed of conveniently available stones from the ruins, using a dry walling technique. The principal enclosure 1 was probably a house and the other enclosures a grain store and/or sheep pens. Schumacher described a number of similar *siars* or sheep enclosures built from the ruins on the main *tell* of Fahl.²¹

Information from local villagers described the structures as having been erected by a refugee from Ramlah in 1948. Occupation was apparently short-lived as the Jordanian government relocated the family away from the building ruins to the main village.

However, it appears that at least the main enclosure was there already in 1933 as Richmond describes... "A modern arab construction obscures the north-east corner of the church portico."²² It is actually located in the north-west of "the church portico". Excavation and dismantling of enclosure 1 revealed no traces of roofing or signs of modern occupation. This could indicate that the construction was never finished or that it was occupied on a seasonal basis by nomadic herdsmen.

5. *Roman elements*

Excavation of squares 'c' and 'd' revealed three stylobates with four *in situ* limestone bases - some slightly displaced (Pl. IX). A floor of mudstone tiles was found *in situ* beneath the topsoil and set approximately 5 cm. below the top of the stylobates, spanning the area between them as well as areas to the north and west of the building.

Erosion has caused the destruction of any possible paving to the south and also the disappearance of the south-west corner junction of the stylobates. Here, traces of cement-lined drains are now visible on the surface. There is no continuation of the western stylobate in a northerly direction as indicated on Richmond's plan,²³ since the mudstone paving is unbroken.

Within the stylobates the shattered remains of large limestone columns, and three well-preserved Corinthian capitals had fallen onto the mudstone floor. The Corinthian capitals are beautifully carved in a hard grey limestone and each exhibits a different execution within the traditional design framework of acanthus leaves and volute scrolls. They are the finest capitals visible in the whole site of Pella (Pl. X, a,b,c).

A fragment of classical cornice was found on the mudstone floor and the north stylobate, beneath the south wall of enclosure 1. The cornice displays remnants of modillions, bead and reel moulding, dentil moulding, and ovolo moulding (egg and dart) (Pl. X, i).

The workmanship of the bases, columns, large capitals and cornice is probably late Roman and a geometric analysis of the elements confirms their relationship in a classical order based on

Vitruvian models (Pl. X).

In the squares excavated, elements of four complete columns (base, shaft and capital) were found.

6. *A Byzantine Church*

The sondage confirmed the continuation of the north and south stylobates within the rectangular building. The stylobates divide the interior of the building into three (Pl. IX). These stylobates are, however, set 10 cm. further apart and are 80 cm. above the outer stylobates which would indicate that steps should be located at the three western entrances to the building.

Traces of a robbed-out floor were revealed 8 cm. below the stylobates. All that remained was a layer of lime plaster and upstanding plaster interstices set in a pattern of rectangular paving slabs.

Bases were also found *in situ* on the stylobates, some badly shattered by the collapse of the building. These are of white marble, of the same general style as the outer limestone bases, but only just over half the height and more delicately carved (Pl. X, k) .

No columns proportionally related to these bases were found, but fragments of limestone columns, two small limestone bases and a worn white limestone Corinthian capital (Pl. X, f,h,l), found scattered in the sondage, are geometrically related to one another.

Two column fragments in square 'c' are also geometrically related to this small order, the function of which is as yet undetermined.

That the building had a Christian use was confirmed by the discovery of a small Corinthian capital with a cross carved in two positions normally occupied by an upper patera (the other two sides being destroyed (Pl. IX and Pl. X, e). This was probably the capital mentioned by Schumacher, or another like it - "On the buttons of one of the Corinthian capitals I found a cross carefully worked" .²⁴

7. *Hexagonal Pool* (Pl. XI)

Within the portico area lying on the east-west axis of the building, a hexagonal pool was discovered (Pl. XI). The pool was filled with a yellow clay marl, and lying upside down and half buried in this fill was a squat stylized capital (Pl. X, g) The bottom of the pool contained two layers of terracotta tiles measuring 52 x 51 x 3.75 cm. The flattened end of a 13 cm. diameter lead water pipe with a rolled top flange is visible in the north-east side of the pool. The lower layer of tiles was cut for the insertion of the pipe, which was probably reduced to 9 cm. diameter once inside the pool, as indicated by the remnants of the cement bedding still visible, and turned up perpendicularly at the centre of the pool to form a fountain. No traces of a drainage point have yet been found, but half the pool fill is yet to be excavated. If the drain point was set in the surrounding ridged mudstone tiles, it may have been destroyed as three sides of the pool were badly shattered by the falling building.

The hexagonal pool, the mudstone floor and the four rough shaped stones set in the north-west corner of the stylobates all appear to be contemporary.

No traces of the finishes of the pool were discovered, apart from one triangular marble tile and a radially shaped red limestone tile. The robbed-out upper layers of terracotta tiles, the missing finishing materials for the pool, and the lead pipe broken off at its point of entry to the pool, together with the deliberate filling of the pool, indicate that the pool had fallen into disuse, been robbed of useful materials and filled before the ultimate collapse of the building.

A stepped foundation, projecting 8 cm. round the inside of the pool, may have formed a step or supported a low upstanding wall constructed of 1.8 cm. thick marble sheets, remnants of which were found in the surrounding topsoil.

Hexagonal ablution fountains and reflection pools were favourite devices used in the design of Umayyad public buildings and mosques. The Umayyad pottery found above the mudstone floor and in the pool fill confirms that the building was used and occupied during that period. Further excavation may determine the use of the building.

8. *Finishes of the buildings*

(a) *Roof*

At the time of the building's collapse it was roofed with terracotta tiles. 7.5 sq.m. of tile fragments were found in squares 'c' and 'd' and 9 sq.m. in the sondage. The tiles are flat

tegulae, slightly cambered upwards in the centre, with raised edges on both sides. These raised edges were stopped 7 cm. short of the top of the tile to facilitate the overlap of another tegula set above it. The front undersides were chamfered to ensure a close fit. The adjacent raised edges of two tegulae set side by side were spanned by a parabolic sectioned imbrex tapered in both width and length to ensure a close fit for overlapping tiles, and cemented in position.

Out of the hundreds of fragments found, two distinct types were discernable. The first is a well fired tile composed of finely textured materials which exhibits a sharp ringing tone when struck. The majority were 1.5 cm. in thickness, although a range of sections were apparent, together with many different raised edge profiles. The tiles were various shades of pink and grey. The second type of tile was of a porous nature, composed of coarsely textured materials with sections of 2.0 cm. up to 2.5 cm. and colours of grey, pink and beige. Four stamped fragments of this type displayed an indented circular stamp (tending slightly to elliptical) of diametres 2.5 cm. and 3.2 cm. A complete imbrex of the second type was 33 cm. long with a span of 10 cm. Both types were found intermingled in the ruins, which indicates that they were used together, or that batches of both types were used in close association. Many fragments of iron nails and spikes were found, one complete specimen, though broken measured 16.5 cm.

It appears from this that some form of timber roof supported terracotta tiles of a tegula and imbrex system (pan and roll type). The tiles are probably from at least two different periods of construction.

(b) Floor

The mudstone floor in squares 'c' and 'd' was the only floor found *in situ* but the remains of many different flooring materials were discovered.

Almost 2 sq.m. of loose tesserae were found in the sondage and 1/4 sq.m. in squares 'c' and 'd'. Tesserae were generally 14 cu.mm.; the majority are white while others are red, grey and dark green. Two fragments of plaster had small groups of embedded tesserae, one of white alone, and the other of white, grey and pink stones forming some kind of pattern or design. There must have been mosaic floors inside the main body of the building, with some areas of patterns or designs executed in coloured tesserae.

Many different kinds of floor tiles were found, but none were *in situ*. Square, rectangular and triangular magenta coloured limestone tiles had chamfered sides and rough cut bases. Square, rectangular and triangular white and grey marble tiles and fragments of red and green marble were also found.

R.H. Smith, in his 1967 excavations of the West Church²⁵ found several pavements of red limestone tiles, and white marble tiles arranged in patterns utilizing square, rectangular and triangular shapes. By analogy, the many floor tiles found by us would have formed decorative pavements of patterns similar to those discovered in the West Church during the Byzantine church phase of the building's history.

(c) Walls

In squares 'c' and 'd' 180 stones were catalogued, 80% of which were rough limestone blocks, some with worked faces and a few with plaster fragments adhering to them. Many fragmented blocks of calcareous tufa were found, of which 26 could be measured. There were two standard sizes of 40 x 27 x 20 cm. and 52 x 26 x 22 cm., with others varying up to 4 cm. either side of these dimensions. Two main areas of wall tumble in the sondage were composed of blocks of calcareous tufa with heavily plastered interstices. Plaster remnants on these and other limestone blocks were painted red, and loose fragments of red painted plaster were discovered in the soil.

Many fragments of white polished marble sheets were discovered, most with sections of 1.4 cm. or 1.8 cm. and one edge rounded. One piece had a fixing recess on the rear. These fragments may have been used as a dado finish to the walls on the interior of the building, possible as an upstand for the hexagonal pool, or as marble plinths. No fragments were found *in situ*.

Several orange-red tesserae were shaped in the form of lozenges, sickles, and curved leaves. These, together with two white rectangular marble fragments, were most likely

used in a wall or floor design as inset decorative pieces.

In the sondage two fragments of wall plaster exhibited white tesserae embedded but standing proud of the surrounding plaster surface, one fragment of which was painted red. These seem to be fragments of wall paintings inset with mosaic, used above dado level on the walls.

Small pieces of yellow, turquoise, green, blue and magenta glass mosaic indicate that glass mosaics may have been used above dado level as a wall or ceiling decoration.

9. Conclusion

The limited nature of the excavations preclude conclusive dating of the building at this stage, but sufficient architectural material has emerged to indicate three major usages for the building.

A. Stylistically the larger limestone bases, column shafts, capitals and cornice fragments are related. Geometrical analysis has confirmed that their relationships are based on Vitruvian models, and this will be discussed in greater depth when other areas containing architectural fragments are excavated.

The commanding setting, the terraced walls of well-constructed masonry and the rubble core of a monumental approach staircase suggest these elements belong to a late classical Roman Temple. The stylobates may have been part of such a temple orientated east-west, but further excavation is needed before making any definitive statement about the form of such a temple.

B. The layout of the walls on the surface with three entrances in the west wall and one in each of the north and south walls, the division of the building into three by stylobates with marble bases *in situ* indicates a Byzantine church plan with nave, side aisles and an outer portico. Although no traces to Richmond's triapsidal east end are visible, the discovery of the Corinthian capital with carved crosses on two sides confirms a Christian occupation of the site. The smaller order of limestone bases, column shafts, and bases and capitals probably belongs to this period also, and may have been used in a triforium or clearstorey level.

Using the analogies of the West Church and of other Byzantine churches, the patterned floor mosaics, marble and limestone floor tiles, as well as wall paintings and glass mosaics, would belong to the Christian period of construction.

C. The mudstone floor, the hexagonal pool and the reconstruction of the north-west corner of the stylobates are all contemporary. The evidence of pottery and the hexagonal pool indicate that the building had a major occupation during the Umayyad period. Certainly the pool had fallen into disuse before the final, violent destruction of the building, possibly by the 8th century earth-quake which destroyed the West Church and so many other sites in the Jordan Valley.

Garry Martin

AREAS III AND IV

A. THE Umayyad DEPOSITS (Pls VI-VII, XIV-XV and XX-XXIII)

1. *The Architecture and Stratigraphy*

In Areas III and IV part of a large building was unearthed (Pls VI, XV). Since its full extent is not yet known, the numbering of the rooms is provisional. Evidently the building's final occupation dates to the Umayyad period; equally evident is its destruction by an earthquake (see below).

Although the 1979 season revealed in the main only the last phase of occupation, both stratigraphy and architecture indicate that the building is considerably older than the Umayyad period. On the evidence of two sondages in Rooms II and IV there appears to be a considerable depth of occupation below the surface reached. Furthermore there are a number of architectural alterations which indicate that the function of the building in its final state differed from

that in its initial layout.

The building was an imposing one. On top of stone foundations of as yet unknown depth, walls up to 1.00 m. wide were constructed of large blocks of stone with snecking and mud mortar to a height of 2.00-2.50 m. Some of the stones are roughly squared, especially those used in doorways and at corners, and where necessary the faces were roughly dressed. Above the stonework the upper part of the walls were built of *terre pisée* which collapsed to form a massive fill within all the rooms of the building. Given the depth of fill in the rooms away from the edge of the *tell* and the width of the walls, we suggest a ceiling height of 4.50 - 5.00 m. if the building had only one storey. If, however, there was an upper storey, the height of the ground storey ceiling would obviously have been much less. The roof was probably used as a living-cum-work area. No traces of beams to support the roof were found: either the wood decayed without trace or, more probably, the timber was retrieved for re-use elsewhere.

The layout of the building is roughly rectilinear. Many of the walls do not meet at precise right angles, perhaps because of the slope on which the building stood. As yet, it is impossible to tell whether the majority of walls is coeval, since the full stratigraphic sequence of occupation, and particularly the foundation trenches, have not yet been excavated. However, it is clear that the north-south wall which bounds the building on its west side is a later addition truncating the building in that direction. In the final phase the area west of this wall formed part of an open courtyard in which a number of domestic ovens were built.

Apart from the western wall (which may not, in fact, belong to the very latest phase), the late alterations to the building consist principally of blocked doorways and crudely built feed-bins in several rooms.

The blocking-off of doors drastically altered the character of the building. The previously extensive dwelling was broken into smaller units, none of which is as yet completely excavated. Three such units can be discerned:

1. Rooms I, II, III and IV
2. Rooms VII, VIII, X and XI
3. Rooms V, VI and IX

In the case of rooms I-IV the extreme softness of the surfaces in rooms III and IV, combined with the comparative lack of artefacts, the presence of feed-bins in room III and the discovery of several wellnigh complete articulated sheep/goat skeletons in room IV, suggests that they were used as stables or pens immediately prior to the building's abandonment. The soft surfaces may be explained as decayed organic material, straw and dung, while the skeletons may indicate that at least some of the beasts were caught in the final collapse.

Rooms I and II may have been used for human habitation, although the inconvenience of leading beasts through the living rooms seems a little extreme. Probably all four rooms formed the stables.

Given the existence of feed-bins in room X, it too may have been a stable in the final phase. Rooms VII and VIII may well have been living rooms (the two bronze bowls, one of which is illustrated in Pl. XIV, 1, were found in room VIII); in room VII there is what appears to be the base of a staircase giving access to the roof. The function of room XI is as yet uncertain. In the third unit function was not immediately evident, though the fact that in room V an earlier pavement was used as the floor of the final phase suggests that this too may have been a living room.

The stratigraphy of the Umayyad period is reasonably straightforward (Pl. VII). Only in Area III Plot A was there any later habitation: the protruding stumps of two walls were used as foundations for walls of a small, two-roomed dwelling which covered an area of less than 30 sq. m. This too was Umayyad. However, it does not appear in the stratigraphy of Pl. VII, which shows only the last phase of occupation of the large building, its destruction and some of the post-Umayyad graves. The illustrated section is taken from the east baulks of IV B and IV A, i.e. through rooms II, IV and VIII.

The predominant feature of the section is the mass of dull yellow, orange and grey clayey soil overlying all the surfaces. Since no mud bricks or mud brick fragments were found in this deposit it appears highly probable that this mass is comprised basically of 'melted' *terre pisée* of the upper walls and of roof mud, brought down by the collapse of the building. This interpretation is strengthened by the existence in some rooms of irregular lines which were observed to

slope downwards away from the walls to the centre of the room. We interpret these as traces of the faces of collapsed walls.

Absence of burning within the collapsed *pisé* and evidence that the whole building was destroyed at one time points to an earthquake as the agent of destruction.

A.G. Walmsley

2. Artefacts and chronology

The bulk of the artefacts found in the building came from within the collapsed *pisé*. Presumably there were shelves, niches and/or hooks and nails in the walls to house or to support the objects.

Among numerous finds the following may be noted:

- i) Objects of bronze and iron. One of the former is a lamp holder, likened by Basil Hennessy to a clutch-plate suspended by three chains! - evidently phial-shaped glass lamps were slotted into the holes in the plate. Examples of such lamp-holders can still be seen in the Umayyad Mosque at Damascus. Among the iron objects are large quantities of nails, of which concentrations were found in room III by door 'd' and in room IV.
- ii) Glass vessels, including the intact juglet found within the *pisé* tumble in room IV (P 20110, Area IV Plot A 1.7 - translucent, green-tinged glass juglet - 13 cm. high, Pl. XIV,2) - scarcely the sort of thing to keep in the stables! It had probably fallen into room IV in the collapse of the building, either from the roof or from room V.
- iii) Coins. Most of the coins which we recovered came from the collapse deposits of the large building. The majority are 4th or 5th century minims, which were probably puddled into the *pisé* when the building was being constructed; they provide us with no more than a rough *terminus post quem* for the construction of the building. More critical are the following:

(a) Post-reform Byzantine *folles* of the 6th century, P 20045, P 20202, P 20266, P 20341, P 20418.²⁶

(b) A post-reform Byzantine *follis* of the reign of Heraclius (610-641),²⁷ P 20076.

(c) Post-reform Umayyad *fulūs*, P 20005 and P 20013 (c. 700-750 A.D.).²⁸ (a) and (b) are probably contemporary with the building, while (c) may possibly postdate it.

- iv) Pottery. A number of lamps of Umayyad types²⁹ were recovered in stratigraphical contexts.

For the rest, we have limited our selection of illustrated forms mainly to the larger fragments and whole vessels. A notable exception is the bowls (Pl. XX, nos 1-5). During the cataloguing of shapes and wares, Lady Wheeler noted the curious paucity of bowls as against other vessels: not only are there few specimens, but a number of the forms used are Late Roman red ware types or variants (Pl. XX, nos 3-5³⁰). The inhabitants of Pella in the period under consideration either ate their food from communal pots or trays or else used wooden bowls, of which we have so far found no trace.

Among the ware and decoration found in the large building in 1979³¹ are the following:

- (a) Putty coloured ware with single-point incisions (Pl. XX, nos 1-2). The ware and shape (although not the decoration) find parallels in Sauer's 'buff white ware cups' at Heshbon; the ware is related to the Khirbet Mefjer ware, and the ware and decoration to sherds at Khirbet Kerak. These last lack clear chronological definition, unlike the Heshbon cups which are Umayyad.³²
- (b) Grey combed ware and grey 'cut-ware' (Pl. XXIII, nos 6-7) Sauer comments that combed ware rarely occurs at Heshbon outside the Umayyad deposits. However, at Pella in Area 1, Smith found a combed ware bowl very similar to our P 20001 (not ill.) in a Byzantine context.³³ He notes that the collars on rims of Byzantine specimens tend to be absent from Umayyad examples (as our Pl. XXIII, no 7). Since we found several specimens of the form with the collar (albeit lacking combed decoration) in Umayyad deposits, we are inclined to think that the collar may endure throughout the 7th century, if

not into the 8th.

- (c) Pink ware with white painted wavy lines (Pl. XX, nos 6-8). Smith comments that this ware appears to be 'particularly Umayyad'.³⁴ In our experience the ware is confined to jugs, juglets and small jars.
- (d) Perhaps related to the above is the buff-cream ware with red paint (no examples illustrated). At Pella in 1979 the Sydney session recovered a number of sherds of this ware, but no complete forms. Sauer uses the evidence from Heshbon to propose a pre-Umayyad/Umayyad date for this red-painted ware³⁵, rather than the broad Byzantine-Umayyad dating proposed by earlier writers.
- (e) Dark grey ware with white painted lines. This ware, commonly found in bag-shaped jars (Pl. XXI, no. 4) was present in quantity throughout the larger building. It was evidently a popular Umayyad ware: although at Khirbet Kerak it occurred in deposits reckoned to be Byzantine, at Pella Smith found that it does not occur much before 650 A.D.³⁶
- (f) Coarse chaff-tempered ware. This is Smith's 'roofing tile ware', which he found predominantly in Byzantine strata, fired grey or brown.³⁷ Our specimen (Pl. XXIII, no 4) is red with a self-slip. Given its context (topsoil) and the absence of complete forms from the Umayyad strata, it is possible that the illustrated sherd will turn out to be a Byzantine form.
- (g) Coarse gritty terracotta coloured ware. This is common in open and closed cooking vessels ('casseroles' - Pl. XXIII, nos 3,5; 'cooking pots' Pl. XX II, nos 2 and 5 and Pl. XX, nos 9-10). Finer examples such as Pl. XXII, no. 3 are basically similar ware. Such vessels and wares appear to have a long life. The ware is also found in storage jars (Pls XXI, 2 and 5).
- (h) Various other finer wares appear to have been used in cooking vessels - e.g. the portable *tabūn* (Pl. XXIII, no. 1) in fine grey ware, and the closed cooking vessels (Pl. XXII, nos 1 and 4) in fine biscuit and putty coloured ware respectively. These may be related to the putty coloured ware of the Khirbet Mefjer type (above (a)).

Concerning the chronology, then, three points may be made. Firstly, given that the 1979 Sydney session reached only the end phase of occupation of the large building in Areas III and IV, it would be rash to commit ourselves to a firm dating for the material recovered from this phase. However, with this caveat in mind, it may be pointed out that our pottery shows a marked resemblance to the material found by Smith in the Umayyad stratum of Area I, which he dates 650-750 A.D.³⁸ But whether the destruction of the Area III-IV building should be attributed to the earthquake of 746 A.D. or to an earlier earthquake is, at present, impossible to say. The third point to be made is a much more limited one. Certain of the wares found at Pella are absent from the contemporary deposits at Heshbon. The most obvious explanation for this anomaly is that certain wares existed in some regions, but not in others, as Sauer has pointed out à propos of the red painted ware.³⁹

Pl. XX - *Bowls and small painted jugs and jars from the final phase of the Area III-IV building and from its collapse*

- 1. CN 20132 Bowl, incised well-levigated fabric, putty coloured. Diameter: 18 cm.
Ill. ex. from IVC 3.1 (Room X)
- 2. CN 20246 Bowl, incised ware as no. 1. Diameter: 16.5 cm.
Ill. ex. from IVA 1.7 (Tumble)
- 3. CN 20425 Bowl, coarse gritty fabric, fired terracotta colour. Diameter: 25 cm.
Ill. ex. from IIIB 1.2 (Room XI)
Others from IIID 1.7
- 4. CN 20245 Bowl, ware as no. 3. Diameter: 24 cm.
Ill. ex. from IIIB 4.1
- 5. CN 20108 Bowl, ware as no. 3. Diameter: 21 cm.

- Ill. ex. from IVA 1.7 (Tumble)
Others from IIIA 5.1 (Room VIII)
IIID 1.7
6. CN 20127 Juglet, fairly finely-levigated fabric, fired pink, white painted decoration. Diameter of neck: 3 cm.
Ill. ex. from IVA 1.7 (Tumble)
IIIA 6.11 (Room IX)
IVA 1.7 (Tumble)
IVC 4.1 (Room X)
7. CN 20153 Jar, ware and paint as no. 6. Diameter of neck: 5.5 cm.
Ill. ex. from IVA 1.7 (Tumble)
8. CN 20129 Jar, ware and paint as no. 6. Diameter of neck: 7 cm.
Ill. ex. from IVA 1.7 (Tumble)
Others from IIIA 3.4 (Room V)
9. CN 20125 Jar, coarse gritty fabric, fired terracotta colour. Diameter: 13 cm.
Ill. ex. from IIIB 1.2 (Room XI)
Others from
IIIA 3.2 (Room V) IIIA 8.1 (Room IX)
3.4 (Room V) IIID 1.7
4.3 (Room VI) IVC 3.3 (Room X)
6.11 (Room IX) IVD 1.3
10. CN 20013 Jar, ware as no. 9. Diameter: 14 cm.
Ill. ex. from IIIA 2.1 (Topsoil)
Others from IIIA 8.1 (Room IX)
IVC 4.1 (Room X)

Pl. XXI - *Storage vessels from the final phase of the Area III/IV building and from its collapse*

1. CN 20140 Storage jar, well-levigated fabric, fired dark grey.
Diameter of neck: 28.5 cm.
Ill. ex. from IVA 6.1 (Room IV)
Comments: The four handles are irregularly spaced around the shoulder. Combed decoration.
2. CN 20350 Storage jar, coarse gritty fabric, fired terracotta colour
Diameter of neck: 10 cm.
Ill. ex. from IIIB 3.3
3. CN 20190 Lid, well-levigated fabric, buff colour. Diameter: 9 cm.
Ill. ex. from IVB 3.1 (Room II)
Others from IVB/IVD baulk 2.1
4. CN 20007 Storage jar, coarse gritty terracotta coloured fabric with brown slip outside and white painted decoration.
Diameter of neck: 8.25 cm.
Ill. ex. from IVA 1.7 (Tumble)
Others from
IIA 3.1
IIIA 2.2 (Room IX) IV 4.1 (Room IV)

IIID 1.1 (Topsoil)	IVC 3.2 (Room X)
IVA 1.7 (Tumble)	IVD 1.1 (Topsoil)
IVB 3.1 (Room II)	IVA/IVB Baulk B3 (Room IV)

5. CN 20150 Storage jar, coarse gritty fabric, fired terracotta colour.
Diameter: 11.5 cm.
Ill. ex. from IVA 1.7 (Tumble)

Pl. XXII - *Jars/Cooking vessels from the final phase of the Area III/IV building and from its collapse*

1. CN 20202 Jar, fine medium fabric, biscuit coloured, fired self colour.
Diameter: 13.5 cm.
Ill. ex. from IVC 3.3 (Room X)
Others from IVC 4.1 (Room X - slightly grittier ware)
IVC 6.1 " " "
IVE 1.2
2. CN 20043 Jar, coarse gritty fabric, fired terracotta colour. Diameter: 9.5 cm.
Ill. ex. from IVA 1.7 (Room VII)
Comments: Probably used for cooking.
3. CN 20051 Jar, well, levigated fabric, fired putty colour. Diameter: 10.5 cm.
Ill. ex. from IVB 3.1 (Room II)
Comments: Possibly a cooking vessel.
4. CN 20065 Jar, fairly fine well-levigated fabric, fired hard terracotta.
Diameter: 8.25 cm.
Ill. ex. from IVB 1.4 (Room II)
5. CN 20078 Jar, coarse gritty fabric, fired terracotta. Diameter: 13.5 cm.
Ill. ex. from IVB 3.1 (Room II)
Comments: Probably used for cooking.

Pl. XXIII - *Cooking vessels, storage bowls and portable oven from the final phase of the Area III/IV building and from its collapse*

1. CN 20309 Portable oven, well-levigated fabric, fired grey. Fire-blackened on outside bottom. Max. diameter: 34.5 cm.
Ill. ex. from IVA 1.7 (Room IV)
2. CN 20062 Lid, coarse gritty fabric, fired terracotta colour. Diameter: 24 cm.
Ill. ex. from IVB 3.1 (Room II)
Others from
IIIA 3.2 (Room V)
3.8 (Room V)
4.2 (Room VI)
5.3 (Room VIII)
6.1 (Room IX)
6.3 (Room IX - 4 ex.)
8.1 (Room IX)
IIIB 1.2 (Room XI)
IVB 3.1 (Room II - 2 ex.)
IVC 3.2 (Room II - 2 ex.)
IVD 1.3
IVB/IVD baulk
Comments: This coarse terracotta ware is the cooking vessel ware *par excellence*.

3. CN 20055 Cooking vessel. Diameter: 24 cm.
 Ill. ex. from IVB 3.1 (Room II)
 Others from
- | | |
|-----------------------|------------------|
| IIA 3.1 | IIID 1.7 (4 ex.) |
| IIIA 3.2 (Room V) | 2.3 |
| 6.1 (Room IX) | IVC 3.2 (Room X) |
| 6.3 (Room IX - 2 ex.) | 4.1 |
| IIIB 1.2 (Room XI) | IVD 1.3 (3 .ex.) |
| 3.3 | 1.4 (2 ex.) |
| IIID 1.3 | IVE 1.1 |
| 1.4 (2 ex.) | IVD/IVE baulk |
| 1.6 (2 ex.) | IVB 2.2 |
4. CN 20085 Storage bowl, coarse chaff-tempered fabric, fired red with
 red self slip. Diameter: 45 cm.
 Ill. ex. from IVC 1.1 (Topsoil)
 Comments: Many sherds of this coarse ware apparently used for
 storage bowls, were found. The form may be Byzantine.
5. CN 20051A Cooking vessel, ware as no. 2. Diameter: 21 cm.
 Ill. ex. from IVA 1.7 (Tumble)
6. CN 20050 Storage bowl, ware as no. 7. Diameter: 31.5 cm.
 Ill. ex. from IVA 1.7 (Tumble)
 Others from
- | | |
|-------------------|--------------------|
| IIIA 3.2 (Room V) | IVA 3.1 (Room III) |
| IIID 1.5 | IVB 1.1 (Topsoil) |
| 1.7 | 3.1 (Room H) |
| 2.1 ('chiselled') | 1.4 ('chiselled') |
- Comments: Unless stated otherwise, the examples
 listed are undecorated.
7. CN 20008 Storage bowl, well-levigated fabric, fired dark grey.
 Diameter: 43.5 cm.
 Ill. ex. from IVA 1.7 (Tumble)

B. THE POST-UMAYYAD DEPOSITS (Pl. VII)

In the post-Umayyad period a large part of the area excavated was used as a cemetery. Although burials were found in all the Area III and IV trenches with the exception of those on the steep southern slope of the *tell*, the graves were undoubtedly most dense in IIIA and IIIB. Characteristically, the post-Umayyad graves were shallow (0.50 - 1.00 m. deep), cut from the topsoil. The corpses were sometimes covered with a rough canopy of stones. All were oriented east-west; in general the bodies were buried on their backs or right sides with their heads turned towards Mecca, i.e. to the south. The condition of the bones of the skeletons was, without exception, poor. People of both sexes and all ages from neonates to mature individuals were represented. Personal adornments of bronze and stone rings, earrings and bead necklaces - were found in some graves.

The date of the graves is not altogether certain. However, several produced painted pottery of the kind usually classified as Ayyubid or Mameluke. From none of the graves came sgraffiato pottery of the type associated with the 13th and 14th centuries. In lieu of more precise information, therefore, we assume that these burials date to the 10th - 12th centuries.

A. McNicoll

AREA II

The Tombs (Pls XIV, XXIV)

Thirteen small trenches were opened up in Areas II, VI, and elsewhere in a search for tombs. Six of these trenches provided evidence of looted tombs; three trenches provided evidence of the initial cutting of tombs which had been abandoned because of the poor rock; three were blank and only in one area did the expedition partially excavate an intact tomb of the late Roman period. The tomb was initially recognised and partially excavated by representatives of the Department of Antiquities from Irbid in 1973. Hikmet Ta'ani, one of the Department representatives in the 1978/9 season at Pella, had found the entrance to the tomb in 1973 but the entire roof had collapsed soon after digging commenced. When the expedition commenced work on the site, the dromos was partially exposed and the door frame and blocking door clearly visible. The rock in the area is very poor and during the first season it was only possible to clear half the tomb, and a great quantity of loose rock overhang will have to be cleared before the other half of the tomb can be opened up in the next season.

The burials so far uncovered within this tomb are clearly of the 4th century A.D.,⁴⁰ but the tomb gives evidence of having been disturbed in antiquity and the full story of its occupation will not be clear until it is fully excavated.

The whole of the chamber area was covered by a heavy rock fall from the roof whilst there had been considerable modern wash into the grave loculus at the southern end of the tomb.

Beneath the rock fall there was a thick layer of heavy brown clay and silt showing two major periods of wash which had risen above the tops of the cut graves before the roof collapsed. Most of the finds came from within this wash (Pl. XXIV).

Only one of the three graves opened was still covered with the original capping stones, the other two at the southern end of the tomb had been looted and the broken capping stones were piled into the graves.

The one intact grave produced little in the way of finds but was stuffed with thirty-four skeletons, mostly adult, but some of them young children. The bones are still to be studied. The general impression was of little order, as though the bodies had been hurriedly dumped in, in many cases, after considerable decomposition had set in. A few poor bronze trinkets, a couple of lamps and a double glass bottle were the only grave goods. The lamps were the same as those found in the silt wash in the body of the tomb, late 4th century A.D. The mass burial suggests a plague or some natural disaster.

The vessels illustrated in Pl. XXIV are a selection of the major types from the tomb. A full description and analysis of the tomb's contents must await the completion of the excavation in the area.

J.B Hennessy

II. The Spring Session (Wooster)

by
Robert Houston Smith

The spring session commenced on March 17 and ended May 17. The staff consisted of twenty-one persons, mostly from the United States.⁴¹ A local labor force of 65 to 80 men was hired, some 15 of which were paid by the Department of Antiquities specifically for work carried out in the West Church.

AREA VIII (The West Cut)

The stratigraphic probe into the western side of the mound began as a series of 5 x 5 m. plots in a north-south row with balks of 1 m. It was hoped that at least one of the plots might intersect a major east-west street of Pella in Roman-Byzantine times. By halfway through the session the trench had been extended to 39 m., and in some places was approaching a depth of 2

m. Portions of three large, massively built adjoining houses were encountered as a part of the uppermost stratum (Pl. XXV). Pottery and coins dated these houses to the latter part of the Byzantine period, with continued utilization during much of the Umayyad period. The most interesting of the three structures was a large house that had a central courtyard with a veranda; the chambers of the house were arranged around the veranda (Pl. XXVI). The roof of the veranda had been supported by stone piers, and both the veranda and the (presumably unroofed) courtyard were paved with siltstone. The walls of the houses were all about 1 m. thick, probably in order to cool the interior during the summer's heat. In locus 108 a large storage jar of probable Late Byzantine date was found *in situ*, embedded in stones and cement, its base let into the packed-earth surface in the room (Pl. XXXVII). In loci 104 and 105, the potsherds found just above the floors was pure Umayyad; otherwise the debris that filled all three houses was mixed, consisting of sherds ranging in date from Middle Bronze II through Umayyad, with a preponderance of Late Byzantine wares.

Although it may be assumed, on the basis of the similarity of the latest ceramics in this stratum to pottery found in 1967 in the West Church, that these buildings were destroyed in the earthquake of ca. A.D. 746, there can be no doubt but that the buildings had ceased to be occupied by that time. Apart from the single large jar, which was apparently too massive to be moved, all household items had been removed from the buildings before the devastating earthquake. The potsherds found amid the debris filling the chambers was random fill rather than restorable vessels.

The sought-for street finally appeared at the southern end of the long trench. It consisted simply of packed earth, which at the threshold level of the Byzantine-Umayyad structures contained some irregular spots of low-grade cement. On its north side the street was bounded by parts of two of the late houses; on the south by a wall (Wall 21) which was presumed to belong to a similar house. From that wall came a drain made of mud bricks and covered with flat rubble stones. Below the Byzantine-Umayyad level there were, within a little over 1 m. of deposits, a succession of street levels: Byzantine, Roman and finally Late Hellenistic. In addition to a useful ceramic corpus, the Late Hellenistic level yielded a small group of loom weights and other small remains of everyday life (Pl. XXVIII). When the Late Hellenistic level was reached, excavation was halted until the next season.

There was ample evidence of the Late Hellenistic period throughout the entire length of the West Cut. It was found that the Byzantine-Umayyad houses had been constructed directly on top of Hellenistic-Roman levels. There was a thin layer of Early Roman date at the northern end of the trench; otherwise the Byzantine occupation lay directly above Late Hellenistic levels. Wall 11, at the northern end of the West Cut, though of low quality and probably a late replacement for the original north wall of the veranda, held back a large Late Hellenistic dump that contained thousands of potsherds, predominantly fragments of large jars. These jars were, for the most part, of local drab-colored wares without any ribbing; there were, however, a number of fragments of imported wine jars of the Rhodian type, and several stamped handles were recovered (Pl. XXXVII).

The Late Hellenistic stratum proved to lie quite close beneath the Byzantine-Umayyad houses; after only a relatively thin layer of mixed Byzantine and Hellenistic-Roman remains, pure Late Hellenistic pottery was found in all loci. The soil of this stratum was a distinctive orange-brown to gray-brown indicative of conflagration, and many of the potsherds in the stratum showed signs of burning. The few legible coins recovered from these levels, cleaned and identified after the end of the season, gave a narrow range of time for this stratum: approximately the last third of the second century B.C. down to the reign of Alexander Jannaeus of Palestine (represented by a single coin). Hence the statement of Josephus that Pella was destroyed by the Jews under Alexander Jannaeus is given strong archaeological support. The *terminus ante quem* for the corpus of artifacts found in this stratum is thus 83/82 B.C. Included prominently in this corpus is Eastern Sigillati A and thick, molded glass vessels of hemispherical shape. When the pottery of this stratum is fully published it will afford an important datum-point for other Transjordanian and Palestinian ceramics.

The architectural remains associated with the Late Hellenistic stratum were difficult to interpret. As the plan (Pl. XXV) shows, half of the long trench was taken up by walls or (as was often the case) rubblestone cobbling, the function of much of which was by no means clear. Walls 17 and 20 continued well down into the Late Hellenistic stratum, but it is not yet certain that the walls are of that later date. It may be that the builders of the Byzantine-Umayyad

structures dug through the accumulated Hellenistic debris in preparation for their own buildings, and that they filled in around their walls with soil containing Late Hellenistic potsherds. If this was indeed the case, then it cannot be expected that there be discernable foundation trenches. The question of the architectural remains that date from the Late Hellenistic phase in this area is one that will be given careful attention next season.

The West Cut thus yielded important archaeological information during the 1979 Woosten session. The uppermost stratum had relatively well preserved buildings of Late Byzantine and Umayyad times, while the Late Hellenistic stratum produced a narrowly datable, abundant corpus of potsherds and other artifacts. It is quite significant that the Sydney team, excavating on the eastern side of the mound, found very much the same kind of archaeological remains, as their report indicates. The two groups of evidence thus tend strongly to support one another.

AREA IX (The Civic Complex)

The Wooster contingent made a start in 1979 on the group of classical ruins lying on a small salient that extends from the southeastern lower corner of the mound into the Wadi Jirm, close to the spring of Pella. Even before excavation one could see a number of large column drums, smaller columns, bases, cornices and other architectural members lying as an earthquake had tumbled them down. Although some lines of walls were visible at several places, the present state of the ruins made impossible any coherent plan based only on visible remains.

Excavation began near the center of this cluster of ruins, where the flatness of the present surface tended to suggest that some kind of floor might lie beneath the debris. A group of 5 x 5 m. plots was laid out and the difficult work of excavating amid the tumbled stones began. All architectural stones were numbered and recorded on a plan, both those on the surface prior to excavation and ones uncovered during excavation. When possible, these stones were moved to storage spots some distance from the area of excavation, so that there would be room in which excavation could take place.

It soon became apparent that the place chosen for excavation was not, contrary to the expectations of many earlier visitors to Pella, a temple, but a courtyard with a colonnade on at least three sides (the fourth side not yet having been exposed). Found amid the debris above the courtyard were some Mamluk potsherds that indicated brief occupation of a part of the area centuries after regular occupation had ceased. Below this late occupation were sherds, and occasionally almost intact vessels, of Umayyad date (Pl. XXX), similar to those which had been found in 1967 in the West Church debris. Presumably, then, the earthquake of ca. A.D. 746 had been the cause of the final destruction and abandonment of this area, as elsewhere at the site. Clearly the courtyard and adjoining buildings no longer served their earlier purpose by the time of the earthquake.

As more of the architectural members of the colonnade were exposed, it became apparent that the courtyard had undergone considerable reconstruction during the Byzantine period, probably after earlier earth tremors had damaged it severely. Byzantine craftsmen may have replaced some of the columns with ones from elsewhere at the site. Two particularly crucial bases which they used to support a rebuilt Roman arch at the western end of the courtyard were entirely unlike in appearance; indeed, one of them was not a column base at all, but a pedestal for an altar or statue. Probably this work took place at a time when the courtyard and its adjacent buildings had been converted into an ecclesiastical complex, if one may judge from a rude inscription seen by Schumacher in the Nineteenth Century and still lying amid the Civic Complex ruins, which specifies that a particular place in the complex was "reserved for the elders" of the church.

Deep soundings made between key walls of the courtyard platform confirmed, through ceramics found, the extensive nature of the Byzantine rebuilding of the complex, but at the same time gave clear indication that the complex had had its origin, or at least a major phase of construction, in the Roman period, probably in the First Century A.D. It was at that time that the portico had been constructed, and quite possibly all of the structures that stood on the north, west and south of the courtyard; fuller information will be forthcoming in future seasons.

A wide, short flight of steps led from the western side of the courtyard to a large chamber that was found to be completely robbed or eroded away; only massive support-walls remained

(Pl. XXXI). This chamber had been entered through a huge doorway that stood between two widely spaced columns that had been surmounted by a shallow arch executed in simple Roman architectural style, consisting of thirteen well dressed stones, all of which lay close to the place from which they had fallen in the Eighth Century. It is hoped that, as the original positions of the column bases of the courtyard become more clearly known through excavation, the supporting columns and the stones of this arch can be reset in their original positions.

The temple, if indeed that is what it was, presumably was to the north of the courtyard. It is here that the large column drums lay prior to excavation. Toward the end of the 1979 field operations excavation proceeded into this location, where two bases belonging with the large drums were exposed, along with a much-damaged capital (Pl. XXXII). The two bases can hardly be in their original positions, but only further excavation can hope to reveal their original functions or locations. Close by are a number of smaller columns with Ionic capitals, which may prove to be connected with a temple or other structure. At present it cannot be said that any temple has yet been located.

As the Wooster session progressed I directed that work commence amid the tumbled stones that lie south of the courtyard, where the ruins drop off toward the Wadi Jirm. Here visitors in earlier decades noticed traces of some sort of semicircular architectural structure which they assumed was a Roman theater. Although only a single crew could, for the most part, be assigned to work in this location, a long, curving wall did indeed begin to appear. In due course the remnant of a semicircular vaulted passageway was exposed, and further inside was found a well dressed stone molding. By the end of field operations for the season, no seats had yet been discovered. At present the purpose of the building is still unexplained, for it is quite small for a theater and considerably too large for an odeon. Next season work will continue in this intriguing structure, where it is possible that significant architectural remains will be found approximately 2 m. below the present bed of the Wadi Jirm.

One of the deep soundings made during the 1979 work in this complex was in a small triangular space between the portico of the courtyard and the semicircular building. Near the surface, in a disused plastered drainage channel, a very well preserved female skeleton was discovered (Pl. XXXIII). The body had been buried on its right side, facing Mecca. The only artifacts interred with the corpse were a few beads and heavy bronze bracelets, one of the latter of which had fragments of cloth adhering to it. Nearby was situated a small, shallow, cylindrical footbath built into the floor; its flat bottom and sides were tiled with coarse white limestone tesserae. The bath had been constructed above a mosaic paving executed in coloured limestone tesserae, which parallels from other sites indicate dated from about the Sixth Century A.D. Beside this small room was an arch containing but a single course of stones; the function of the arch was not discovered, even though the sounding probed several meters deep. Byzantine sherds and considerable quantities of discarded decorative marble and limestone pieces, the latter presumably from the remodeling of nearby buildings, were found in the sounding (Pl. XXXIV).

During the recording week scheduled for the end of the Wooster session, after all excavation had ceased, several of the columns of the courtyard were reset in the places where they had stood during the structure's final phase of use (Pl. XXXV). This task was accomplished with the help of a large mobile crane provided by the Department of Antiquities. In order to make room for more extensive excavations next season, seven drums of one of the large columns were reset on the base from which they fell, and three drums were replaced on the adjoining base. This work, and some of that done in the colonnade, must be regarded as temporary, pending further archaeological investigations in the Civic Complex. If the Department can continue to offer material assistance in the work of restoration at Pella, more of the fallen architectural elements of the Civic Complex can be restored in seasons to come.

AREA I (The West Church)

The College's 1967 excavations in the West Church had provided enough information for a provisional history of that large structure to be given. Although some archaeological questions remained, the primary need in this area was for further clearing and ultimate restoration of some parts of the building. Many of the columns that had once stood in the atrium were

visible amid the soil that had accumulated over the centuries. Several courses of the wall between the atrium and the church still lay as they had fallen in the final earthquake in the mid-Eighth Century. Because we were not budgeted for restoration, I requested of Dr. Hadidi that the Department of Antiquities pay the wages of ten to twenty labourers who would clear the atrium of debris. Dr. Hadidi graciously agreed, and by the end of the spring session most of the south half of the atrium had been cleared to the level of the paving. Much of the paving had, however, been removed after the church had fallen into disuse.

The task of clearing away the debris proved to be more difficult than I had anticipated, for the reason that during the second half of the Seventh Century the atrium had undergone extensive alteration. The massive wall had been razed on the south, and in the southern colonnade builders had constructed a series of rooms of small, reused stones. These late walls, found tumbled down amid the soil, made the removal of soil difficult. Fortunately we had Wooster's old Ford tractor, a survival of the 1967 field operations, to help with stone-removal.

We found nothing during these activities to alter the history of the West Church that I proposed in *Pella I*. The late chambers in the south portico had already been abandoned at the time of the earthquake of A.D. 746, for all that was found amid the debris there, and elsewhere in the clearing operations, was early Umayyad pottery and occasional clusters of discarded pottery dating from about A.D. 725.

A sounding was carried out near the center of the atrium, where the paving was missing. The uppermost meter of earth was almost sterile, but then a productive layer of wash containing Middle Bronze II through Late Bronze I pottery was encountered. Although almost entirely horizontal across the 5 x 5 m. square, this stratum dropped off sharply on the eastern side of the sounding. A meandering, shapeless pocket of the same range of pottery went down into the soil more than a meter. It was hoped at first that this pit was the filled entrance shaft to an LB tomb, but eventually the vein of MB-LB pottery terminated. Interestingly enough, this pocket showed no evidence whatever of being an occupation spot. The artifacts beneath the MB-LB stratum of the sounding proved to be much earlier than anything previously excavated at the site, dating back as far as *ca.* 5000 B.C., but also ranging forward into EB III times. Most of the early pottery was simple; none of it was painted, and only a very few sherds had incised or impressed patterns on the surface. Like the stratum above it, this early stratum showed no stratigraphy within the soil of the stratum, and no sign of domestic utilization of the spot. Many worked flints were found, but only a few of these were intact, fine-quality specimens. All of the ceramics, stone and bone found in this early habitation-spot must be studied in detail before fuller interpretation can be given.

During the final week of the session, while the Department's crane was still at Pella, three of the columns on the east side of the atrium were reset to the positions they had occupied before the final collapse of the structure (Pl. XXXVI). The three columns had been found lying close to their bases, with their capitals beside them. There can be no reasonable doubt about their positions while the church was still being used by Byzantine Christians. Next season, if the Department can once again extend its cooperation, we shall try to complete the clearing of the atrium, to reset other columns, and to reset as many courses of the east wall of the atrium as possible. In subsequent seasons we may be able to devote some attention to the interior of the church, where some archaeological questions remain to be answered.

AREA VIII (The South Cemetery)

The crew assigned the task of finding tombs first probed a location on the lower slopes of Tell el-Husn, close to the Wadi Jirm. There one could see, on the steep hillside, the remnants of several walls, one of which showed the stubs of doorways. Recalling that one of the coins of Pella shows, at about that spot, small buildings that might be mausoleums, the crew commenced operations there. What they found proved to be not a Roman mausoleum but a Byzantine house. The archaeological information about the structure went into field records as Area X, but then the spot was abandoned, since we did not wish to undertake excavation in a Byzantine residential area at that time.

The crew moved to a more promising location far to the south at the site, past Tell el-Husn and behind yet another large hill, where there is a narrow, steep canyon. The crest of the hill had been occupied in Roman and Byzantine times, as occasional potsherds lying on the surface

indicated. There were a few signs that the slope might have been used for tombs, but the only way to find out was to dig. Starting at one small opening in the hillside that looked as if it might be the eroded top of a tomb-chamber, the crew probed horizontally into compacted soil seeking a cliff. This they eventually found, but there were no tombs.

The next probe, made only a short distance away, exposed a cutting in the rock that proved, when the excavators came upon clusters of bones, to be a tomb. Encouraged, they probed deeper and found other burials, and a few objects; among these were some small beads and a bit of twisted gold foil that looked as if it had been ripped from a cadaver by a robber and then lost by him amid the dust.

Another probe into the hillside was more productive. The excavators found a part of a stone door, pushed out of place by tomb robbers, and behind it an opening leading into a chamber. Inside was a simple, massive sarcophagus, half buried in fallen rock from the ceiling and soil that had washed in from the doorway. It was soon apparent that the ceiling of the tomb had originally been the floor of a tomb above it. Before long the workmen accidentally broke through the floor of the lower tomb with their picks and discovered another tomb at a lower level on the slope. The floor of that tomb, in turn, had collapsed into a tomb at a yet lower level, in which there were two sarcophagi. In this way, four tombs, one approximately above the other, were discovered.

All of the tombs were of the loculus type. Each had a rectangular chamber, on one side of which was the door and occasionally a single loculus; radiating out from the other three sides were loculi. Many of the loculi had not been used, but in those that had been used there were typical funerary offerings, all dating from the late First Century A.D. into the early third century: glass vessels of various kinds (Pl. XXIX), some small ceramic vessels (including a rare Hellenistic survival, a molded gray-ware bowl with delicate fluting (Pl. XXXVIII), found in fragmentary condition); a few lamps, some beads, a couple of gold earrings and bits of leather, wooden and floral objects placed in the sarcophagi or loculi. Most unusual was a cookpot of approximately Second Century date that contained the bones of a newborn child and two hens' eggs, the latter apparently placed unbroken into the pot. Most of the skeletal material was greatly deteriorated. Some bones had been cut through by the hoe of the robbers. Still, some dozens of skeletons were obtained for anthropological study.

The Wooster session of the 1979 season of the Joint Expedition to Pella was quite productive, and paves the way for future archaeological work at the site. Already new light is being shed on both the important transitional Byzantine-Umayyad period and the Late Hellenistic era at Pella. The discoveries in the Civic Complex have begun to open significant new possibilities for the study of civic planning at the site, and the discovery of very early artifacts deep beneath the West Church has extended our knowledge of the occupation of Pella by a millennium and a half. We can expect some continuing illumination of the city's past from the excavation of tombs, although the prospect of the discovery of major undisturbed tombs in any given season is probably slight. With the assistance of the Department of Antiquities, we hope to continue to re-erect some of the city's fallen architecture. Once again, but in new and different ways, Pella will live.

NOTES

1. In this article the following abbreviations are used.

- Ancient Pottery:* Amiran, R. *Ancient Pottery of the Holy Land* (Jerusalem, 1969).
Beth Shan: Rowe, A. and Fitzgerald, G.M. *Beth-Shan Excavations I-III* (Philadelphia, 1930-1940).
Dhiban: Winnett, Fred V. and Reed, William, L. *The Excavations at Dhiban (Dhībân) in Moab, A.A.S.O.R. XXXVI-XXXVII* (New Haven, 1957 - 1958).
Heshbon: Sauer, J. *Heshbon Pottery 1971* (Michigan, 1973).
Khirbet Kerak: Delougaz, P. and Haines, R.C. *A Byzantine Church at Khirbat al-Karak* (Chicago, 1960).
Khirbet Fahil: Richmond, J. *Khirbet Fahil, PEFQS* 1934, 18-31.

- Lachish III*: Tufnell, O.C. and Harding, L. *Lachish (Tell ed-Duweir) III: The Iron Age* (Oxford, 1953).
- PCC*: Lapp, P.W. *Palestinian Ceramic Chronology 200 B.C. - A.D. 70* (Jerusalem, 1961).
- Pella I*: Smith, R.H. *Pella of the Decapolis I* (College of Wooster, 1973).
- Pella 1888*: Schumacher, G. *Pella* (London, 1888). Also published bound with two other surveys as *Abila, Pella and Northern Ajlun 'within the Decapolis'* (London, n.d.).
- Tarsus I*: Goldman, H. *Excavations at Gözliü Kule, Tarsus I: The Hellenistic and Roman Periods* (Princeton, 1950).
- Sahab*: Harding, G.L. An Iron Age Tomb at Sahab, *Q.D.A.P. 13* (1948), pp. 92ff.
- Samaria-Sebaste III*: Crowfoot, J.W. Crowfoot, G.M. and Kenyon, K.M. *Samaria-Sebaste III: The Objects from Samaria* (London, 1957).
- TCHP*: Thompson, H.P. Two Centuries of Hellenistic Pottery, *Hesperia III* (1934), 311-480.
- Tel Anafa*: Weinberg, S.S. Tel Anafa: The Hellenistic Town, *IEJ 21* (1971), 86-109.
- Tell en-Naşbeh II*: Wampler, J.C. *Tell en-Naşbeh II: The Pottery* (Berkeley and New Haven, 1947).

The pottery citations in this report are, of course, not complete. They are attended as a guide only.

2. For a full history of literary reference to the site see *Pella I*, Chs I-II.
3. Richardson, H.N. Kh. Fahil (Pella), *RB 67* (1960), 242-243.
4. The Sydney expedition was mainly financed by The Australian Research Grants Council, The Australian National Gallery, The University of Sydney, The Foundation for Near Eastern Archaeology, The University of New England and The Ashmolean Museum.
5. Directors Dr. A.W. McNicoll and Professor J.B. Hennessy; Assoc. Director Mr. A. Walmsley; Registrars Lady M. Wheeler and Miss E. Roberts; Camp and Site Supervisor Mrs. J.P. Smith; Site Supervisors Mr. S. Hart, Mr. J. Hosking, Miss K. Kelly, Mr. D. Petocz, Mr. T. Potts, Professor J. Still, Dr. J. Tidmarsh, Miss L. Villiers; Ceramic Technologist and Site Supervisor Mr. W. I. Edwards; Photographers Miss J. Hall and Mr. M. Lorimer; Draughtsmen Miss J. Hall and Miss P. Seaton; Architect Mr. G. Martin; Department Representatives and Site Supervisors Mr. Hikmet Ta'ani and Mr. Ghassan Ramahi; Foreman Mr. Badri Madi.
6. The material from the house floor has parallels amongs the remains from Stratum V at Tel Goren, late 7th-6th centuries B.C. Mazar, B., Dothan, Trude, Dunayevsky, I. The Excavations at Tel Goren (Tell el-Jurn) in 1961-1962, *'Atiqot V* (1966), 13ff.
7. Hankey, V. Mycenaean Pottery in the Near East *BSA 62* (1967), 123, reports the discovery at Pella of '35-50' IIIAZ and IIIB pots in tombs along with a vast number of Palestinian LBII vessels. These vessels, stored at the Jerash Museum are reported to have been destroyed in the troubles of 1971.
8. Svoronos, N. *Τὰ Νομίσματα τοῦ Κρατοῦς τῶν Πτολεμαίων*. (Athens, 1904-1908), nos 712-715 for general type.
9. Cook, R.M. *Greek Painted Pottery* (London, 1960), Pl. 56A shows a complete vessel from the Athenian Agora with identical plastic and painted decoration, dated to the first half of the 2nd century. cf. *Tarsus I*, Pl. 124, no. 95, from the Middle Hellenistic unit (3rd century and early 2nd) and *TCHP*, 274-5, D25 and D26 (mid-2nd century).
Professor J.R. Green, who kindly examined a slide of the sherd, suggests that a date in the first quarter of the 3rd century might be appropriate in view of its quality.
10. cf. *Tel Anafa*, 103, and *TCHP*, fig. 117, D5 (shape).
11. Pausanias: Grace, V.R. *Hesperia III* (1934), 224-5, nos 36-37.
Charmocles: Grace, V.R. Timbres amphoriques trouves a Delos, *BCH 1952*, 530.
Artemidoros: *Ibid.*, 526.
Damocrates: *Hesperia III* (1934), 238-9, nos 90-92 and *BCH 1952*, 526.
12. *Tel Anafa*, 101.
13. *PCC*, 193, type 82.
14. *Tarsus I*, 100-6, groups III-VI; *TCHP*, 387, D54.
15. cf. *PCC*, 194, type 83.2A.
16. Josephus *Antiquities XIII*, xv, 2-4.
17. Merrill, S. *East of the Jordan* (London, 1881), 184.
18. *Pella (1888)* Frontispiece.
19. *Pella (1888)*, 56.
20. *Khirbet Fahil*, 28.
21. *Pella (1888)*, 51.
22. *Khirbet Fahil*, 31.
23. *Khirbet Fahil*, 26.
24. *Pella (1888)*, 55.
25. *Pella I*, Ch. IV.
26. General types as in Bellinger, A.R. *Catalogue of the Byzantine Coins in the Dumbarton Oaks Collection I: Anastasius I to Maurice* (Washington, 1966). Precise identifications have not yet been made.

27. cf. Grierson, P. *Catalogue of the Byzantine Coins in the Dumbarton Oaks Collection II, 1: Phocas and Heraclius* (Washington, 1968), 109a.
28. Walker, J. *Catalogue of Muhammedan Coins in the British Museum II: Arab-Byzantine and Post-reform Umayyad* (London, 1956). The coins are both badly corroded and may prove impossible to identify precisely.
29. cf. *Pella I* Pl. 30.
30. Hayes, J.W. *Late Roman Pottery* (London, 1972), 130-1, 329, African Red Slip Ware, Form 83, and Late Roman C Ware, Form 3.
31. It must be emphasized that for none of the wares or forms found in the large building can we assert that we have a complete horizon. Any of these shapes or wares may be found in earlier desposits in future seasons.
32. *Khirbet Kerak*, 37-39, Pl. 40.
33. *Heshbon*, 41 (with refs) and fig. 3, nos 123-5; *Heshbon*, 38; *Pella I*, 224 and 231, pl. 29, no. 1195.
34. *Pella I*, 235.
35. *Heshbon*, 44-48.
36. *Khirbet Kerak*, 34; *Pella I*, 234.
37. *Pella I*, 225; Pl. 90D, nos 1204 and 1216.
38. *Pella I*, 229-230.
39. *Heshbon*, 48.
40. For comparative material see Sussman, Varda, *A Burial Cave at Kefar 'Ara, 'Atiqot XI* (1976), pp. 92ff.; Iliffe, J.H. Rock-cut Tomb at Tarshina, *Q.D.A.P. III* (1933), pp. 9ff.; A Tomb at El Bassa of c. A.D. 396, *Q.D.A.P. III* (1933), pp. 81ff.; Hussein, S.A.S. A Fourth Century A.D. Tomb, Beit Fajjar, *Q.D.A.P. IV* (1935), pp. 175 ff.; Hussein, S.A.S. and Hamilton, R.W. Shaft Tomb on the Nablus Road, Jerusalem, *Q.D.A.P. IV* (1935), pp. 170ff.; Hussein, S.A.S. A Rock-cut Tomb-Chamber at 'Ain Yabrud, *Q.A.D.P. VI* (1936), pp. 54ff.; *Pella I*, Tomb 2.
41. Dr. Richard Whitaker, Dr. Leslie Day and Ruth Rodrigues were area supervisors; working under them were six College of Wooster students: Lynne Bauer, Mary Gledhill, Harry Mergler, Eric Pearson, Donald Rice and Fawz Schoup. Also assisting in field excavation were two representatives of the Department of Antiquities, Sultan H. Shraideh and M. Omar Reshaidat. Pierre Bikai was in charge of technical operations involving architectural remains. Brian Cannon was surveyor. William Fisher was staff botanist and Ilse Koehler zoologist. Dr. Ahmad Disi of the University of Jordan served as consultant on physical anthropology. Marian Ronsheim was registrar, Karen McDiarmid photographer and Joyce McKay camp manager. Badri H. Madi was foreman and Muhammad Abu Aref was cook.

LA TRIBU DES BANI 'AMRAT EN JORDANIE DE L'EPOQUE GRECQUE ET ROMAINE

par
J.T. Milik

En bon souvenir — dkrwn tb weslm — de G. Lankester Harding, fondateur de l'“épigraphie archéologique” des Safaïtes, grâce à *The Cairn of Hani*, 1953, et (en coéditeur) des *Inscriptions from Fifty Safaitic Cairns*, 1978.

Un galet basaltique, provenant sans aucun doute de la région de Qasr Burqu'tout au nord de la Jordanie, révèle pour la première fois parmi plusieurs milliers de pierres inscrites, des épigraphes safaitiques¹ et nabatéennes et qui sont bilingues de surcroît; voir fig. 3.

Je rappelle d'abord les inscriptions en écriture safaitique (alphabet d'origine sud-arabe).

MST 6, sur deux faces de la pierre:

lyslm bn' n' m bn q'sn bn šhr d'l wrqn w

šty bh'bl fhlt slm wgddf mgdt

“(Ecrit) par Yaslîm²... de la tribu de Warqân. Il est (venu ici) pour passer l'hiver avec les chameaux. Qu' Allat (accorde) la paix et Gadd-Ḍaf l'abondance”.

MST 11, au “revers” de ce galet (sur la face opposée au début du n°6):

lhn' bn m'n bn hn' bn šhtr w'wr b'abl fhgddf slm wmgdt w'wr mhbl m'l hmq³.

MST 9, au-dessus du précédent, en lettres plus petites, et un peu en retrait par rapport à la signature du père:

l'qrb bn hn' bn m'n bn hn' bn šhtr.

MST 13, en bas de cette face en lettres de même taille que celles de son frère:

lm'n bn hn' bn m'n bn hn' bn šhtr.

Nous sommes donc en présence d'un document enregistré et paraphé au moment même où l'on installe le troupeau au pâturage; y signent quatre éleveurs chameliers, le deuxième (Hânî' du n°11) étant subalterne de Yaslîm, mais avantagé par l'aide de ses deux fils, 'Aqrab le premier-né et Ma'n le puîné. Ils relèvent de l'ethnie nord-arabique Ḍafaïte (et non pas de l'ethnie soeur 'Awidhénienne), car ils invoquent, aussitôt après la déesse panarabe 'Allat, leur dieu ancestral Gadd-Ḍaf, fortune de Ḍaf, celui-ci étant leur premier patriarche.

Les deux épigraphes qui suivent ne sont guère faciles à placer dans le contexte des autres.

MST 7, au-dessus de la première moitié du n°6 en lettres plus petites:

l šmt bn ḡt bn slm d'l hzy wwgd 'tr 'lh f b's...⁴

MST 14: *l bnt bn dh.*

Ce qui nous intéresse directement ici, c'est le troisième groupe des signatures sur cette pierre, où l'on trouve les noms des trois membres de la tribu de 'Amrat.

MST 8, en écriture monumentale (“carrée”) au-dessous de la première moitié du n°6, mais tracée de gauche à droite:

l hnn bn 'dr'l bn gbnyn d'l 'mrt wnzr.

MST 10, à la suite du n°9, entourée d'un cartouche incomplet: *lm'n bn s... d'l 'mrt wqşş fhlt wdšr slm.*

MST 12, au-dessus du n°13:

lgnm bn šmt d'l 'mrt wqşş fhlt slm.

Chacun des trois 'Amraïtes précise bien la fonction qu'il exerce au sein du groupe d'hommes hétérogène qui vivront ensemble la saison des pluies et le printemps sur des pâturages fort éloignés de l'oïkoumène proche-orientale. Le premier, Ḥanîn, exerce le métier de nâzîr, “veilleur” autrement dit il est chargé de la sécurité au campement d'hiver que dressent les bergers. Les deux autres, Ma'n et Gânîm, désignent leur occupation par le terme qşş “traqueur”. Je vois là, en ces veilleurs et suiveurs, une escorte, presque certainement montée à cheval⁵, qui accompagne (“suit à la trace”) un grand troupeau de chameaux, veille sur la bonne marche des transhumances, patrouille en permanence aux alentours du territoire de pâture choisi, pour parer aux dangers éventuels, venant des hommes et des animaux. Noter enfin que

ces miliciens, aussitôt après la déesse guerrière ‘Allat, invoquent Dûšarâ, le patron céleste du chef-lieu et de la dynastie nabatéens. Ceci indique nettement leur allégeance au roi des Nabatéens, plus contraignante que celle de leurs compagnons ressortissant de la tribu Warqân; disons, en gros, les citoyens de plein droit et les habitants libres nomades ou semi-nomades du territoire royal.

C’est justement un Nabatéen dans le sens le plus strict de ce terme politique à savoir Gânim fils de Sâamit de MST, 12, qui répète sa signature en caractères nabatéens très cursifs, au-dessus (cela veut dire en premier lieu, quoique en second temps) de son épigraphe safâitique, juste à la hauteur de la mention tribale (ethnonyme’) de celle-ci; fig. 1-2.

MNT (6) 1: *nmw br šmtw*
Animu fils de Šamitu .

Rappelons — fait évident pour un linguiste épigraphiste — qu’une telle transcription est seulement graphématique et ne tranche guère des problèmes, morphologiques ou phonétiques, concernant les anciens parlars nabatéens, qu’ils soient araméens ou bien arabes. Dans ce cas précis, il s’agit de la graphie araméenne d’une unité syntactique essentiellement arabe, malgré bar, “fils de”. A l’époque où les Nabatéens avaient emprunté l’araméen impérial comme leur idiome officiel, à la période perse certainement, sinon plus tôt, leur langage arabe possédait encore, aussi bien dans les appellatifs que dans les anthroponymes, les désinences flexionnelles u, i, a. En écrivant les noms propres, ils laissaient l’“accusatif” au zéro graphique (tout comme les Phéniciens, les Safâïtes, les Thamoudéens,...), mais marquaient bien le génitif par -y et le nominatif par -w. Cette coutume orthographique se perpétuait, sans être constante, bien au-delà de la période où l’on avait perdu, dans la prononciation courante, les voyelles courtes finales et quelques unes des courtes internes. A la même période, le jeu quantitatif des voyelles longues et brèves s’effaçait au profit de l’accent expiratoire, de sorte qu’il n’y avait plus, en principe, qu’une seule syllabe accentuée longue et une ou quelques syllabes courtes ou même extra-courtes (“muettes”). Par ailleurs, et à l’opposé du vocalisme, le système consonantique arabe se conservait fort bien, à peine ébranlé par la chute phonétique de -’- ou par la confusion occasionnelle des morphèmes apparentés tels -z- et -ṭ-, -ḏ- et -š-,... Si l’on se rappelle enfin les transcriptions grecques anciennes, en principe phonétiques, des anthroponymes sémitiques en Syrie et en Arabie — dans notre cas Anemos et Samethos — on transcrita notre inscription MNT 1 par Gânem bar Šâmet.

L’inscription nabatéenne n°2 (fig. 4) se situe au-dessous de MST11 en commençant à la hauteur du nom du grand-père de Hânî, et forcément au-dessus de la seconde moitié de MST 6; la taille des lettres de MNT 2 paraît lilliputienne par rapport à celle de la signature de Yaslîm. Tracée avec le même outil que celui de MNT 1, mais par une autre main; parcours de l’épigraphe en faible courbe, env. 30 cm de long; hauteur moyenne des lettres 0,5 cm. Ecriture très cursive, en fait la première inscription nabatéenne en cursive populaire aussi poussée (à distinguer de la cursive notariale, utilisée par des scribes professionnels); de nombreuses ligatures, même en passant d’un nom à l’autre, et d’une signature à la suivante. Je subdivise cette longue inscription en quatre unités épigraphiques; voir fig. 5 — 8.

MNT 2a: *mnw br ’ln.’ br mlys br .dnw dy mn ’l ’mlt*
“Mannû fils de... de la tribu de ‘mlt”.

Cette transcription, et les suivantes, sont exactes, à condition de ne pas oublier que dans la cursive de ce genre (il y en a d’autres échantillons sur quelques tessons inscrits à l’encre, trouvés aux fouilles de Pétra), le tracé de b, de d/r et de n, éventuellement de k et l, se réduit souvent à un simple trait, de hauteur presque égale, recourbé en bas.

mnw: nom essentiellement safâitique (un exemple thamoudéen qui va être publié par Winnett); en principe un hypocoristique de mn’l, Mann’el, “Faveur de Dieu”, ce nom théophore étant exclusivement safâitique.

’ln.’: probablement un théophore “‘El a...”.

mlys : cet anthroponyme m’est inconnu par ailleurs; il est peut-être d’origine grecque.

.dnw: le sommet de la première lettre semble brouillé. En lisant kdnw on aurait Kudn, “Mulet”, nom proposé attesté deux fois en safâitique et une fois en nabatéen, en graphie pleine, kwdnw: *ADAJ* XX, 1975, p.39 (ce graffiti pétréen est sans doute contemporain de la dédicace voisine, datant de l’an 25 av. J.C.).

’mlt: pour cet ethnonyme voir la note au n°2c.

MNT 2b, en lettres un peu plus grandes que celles de 2a:

nmw br šmtw

“Gânimû fils de Šâmitû”.

L’auteur de la bilingue nabatéo-safaitique, MNT1 + MST 12, apparaît ici pour la troisième fois, cette fois-ci encadré par ses compagnons. Or, en MST 12 Gânem se dit appartenir à la tribu de ‘Amrat; voir la remarque au n° suivant.

MNT 2c, lettres de même taille qu’en 2b:

hn’w br knw dy mnhm

“Hânî’û fils de knw, qui fait partie des mêmes (gens)”.

En d’autres termes Hânî’ appartient au même groupement ethnique que les deux précédents⁷, et, puisque, d’après sa signature safaitique, Gânim de 2b est membre de la ‘al ‘Amrat, je considère la graphie (’1) ‘mlt comme une variante phonétique de ‘mrt, due à l’assimilation partielle et régressive de -mr- à -ml-. Même faute de prononciation en ‘mlt de ISB 60?

MNT 2d, en petits caractères; maladresse du ‘ain, provoquée par la fatigue de l’écrivain:

m^cnw ktb ydh

“Ma ‘nû a écrit de sa main”.

La même formule solennelle, d’origine juridique sans aucun doute; *katab-be-yadeh*⁸, “a écrit, signé de son nom (dans un document), de sa propre main”, se lit dans un graffiti nabatéen du wâdi Ram⁹. Ailleurs, on n’a que le verbe *ktb*, parfois avec le complément: *ktbh*, “a écrit cela”:

A première vue on serait tenté de considérer ce Ma’n comme un esclave (*undum nomen*) qui aurait accompagné — en prêtant, entre autres, ses services de scribe — le groupe de cinq miliciens ‘amraïtes: Hânî MST 8, Mann.MNT 2a, Ma’n MST 10, Gânim / ‘Animû de MST 12 /MNT 1 et 2b, Hânî, de MNT 2c. A la réflexion on choisira l’autre terme de l’alternative, à savoir qu’il s’agit d’un membre de la patrouille même, celui de MST 10. Il arrive, en effet (j’en connais quelques exemples à Pétra), que le signataire d’un graffiti, où il donne son patronyme, répète, à côté, son premier nom accompagné du nom d’une autre personne. C’est donc, de préférence, le Ma’n de l’épigraphe safaitique n°10, qui d’un seul trait d’outil à pointe acérée, trace son propre nom, précédé dans l’ordre hiérarchique, familial ou militaire, des noms de ses contribules.

Il nous faut chercher et examiner d’autres inscriptions safaitiques du Désert syro-jordanien qu’avaient laissées pour la postérité les ressortissants de la même tribu de ‘Amrat. Deux d’entre eux, chacun sur son galet, avaient gravé les textes, au contenu plutôt inhabituel, dans les parages du tumulus pierreux qui couvre les ossements d’un saint homme et héros national nommé Hânî¹⁰. Les deux épigraphes sont tracées en alphabet monumental, et toutes les deux en boustrophédon de droite; fig. 11 — 12. La lecture et l’interprétation de ces inscriptions qui sortent de l’ordinaire ne sont pas faciles¹¹.

HCH 191: *lgt bn hn’ d’l ‘mrt iswq¹² lkll ‘fr šd q [n].[..]dbq*

“Par Gôt fils de Hânî’ de la tribu de ‘Amrat: il se sent ému (en songeant) aux cendres de tous les Justes, qu’on peut? toucher”.

Il y a certainement ici, à mon avis, un témoignage fort précieux sur le culte des Justes, ancestraux et/ou nationaux, chez les Safaïtes. Une telle vénération suppose diverses manifestations religieuses et sociales: pèlerinages, surtout anniversaires, réunions culturelles avec un repas sacré, l’assemblée s’éparpillant par groupes de dix ou douze personnes dans le rayon relativement grand autour du lieu saint, sans oublier les divertissements¹³; prières et ex-votos, et — si l’on croit le dernier mot de HCH 191 — jusqu’au culte des reliques: en touchant aux pierres recouvrant la tombe d’un Juste on se recharge de l’énergie sacrée que communique la dépouille accumulatrice, inépuisable. Un culte analogue se constate, déjà à l’époque perse, chez les juifs tobites dont le chef-lieu se situait à ‘Iraq el-’Emîr à l’ouest de ‘Amman: “Sois prodigue de pain et de vin sur le tombeau des Justes, mais non pas sur (celui) du pécheur”, Tob. 4,17.

HCH 194 cf. ib., p.49 et photo pl. VI):

l’n’m bn qymt d’l ‘

mrt wnzr f’slm w

bn h’ zlt snt ‘š

4- *rq rg^t ‘l hdy*

hmt, sept traits verticaux assez longs unis en haut par une barre.

‘Par ‘An ‘am fils de Qayyâmat qui est de la tribu de ‘Amrat: il est chargé de surveillance et (maintenant tout) lui va bien, car il vient de construire un bon abri (contre le soleil et le vent),

en l'an de la transhumance orientale sous la conduite, pour une seconde fois, du guide Ḥumat'.

L'éponymie annuelle des Guides safaitiques est bien attestée dans les inscriptions; la préférence récente (WH) pour un nom propre Hdy n'est pas du tout justifiée. Un haddây (à ne pas confondre avec un chef de caravane) était le principal responsable d'un grand troupeau d'animaux et de sa suite d'hommes, que ce cheptel soit propriété communale ou tribale d'un groupe ethnique, ou bien qu'il constitue un haras d'Etat (cet Etat pouvant être nabatéen ou romain, selon la date de l'épigraphe): le troupeau en mouvement des centres habités vers le désert (parfois plusieurs centaines de kilomètres), en station sur un espace choisi avec un point d'eau indispensable, en transhumance d'un pâturage à l'autre, et peut-être même — au cas du service militaire — qu'il s'occupât d'un tel troupeau dans les écuries des casernes.

La présence des 'Amraïtes plus au nord du groupe épigraphique précédent, en Syrie du Sud-Est, sur la rive gauche du wâdi Šâm env. 3km en amont de Zilaf, a été signalé par les copies (en général très bonnes) de Dunand; voir les fig. 9 —10. D'abord un témoignage direct, inscription tracée en beau boustrophédon monumental de gauche.

C 2947 (Dun 741, pl. LXXXI):

lškr̄l bn r̄myn bn ġt d'l 'c
mrt w̄ndm 'l 'h̄h ml̄t m̄qtl bhld fh
lt w̄dšr n̄qmt mn mn m̄srh

“Par Šakarel f. Ramyân f. Ġôt de la tribu de 'Amrat. Il se sent désolé à cause de son frère Mil̄t tué lors d'une lutte (ici-même). 'Allat et Dûšarâ, (accordez-moi) la vengeance sur celui qui l'avait acculé (à la mort)”.

Une pierre voisine, Dun 755 (pl. LXXXII), semble avoir contenu quelques détails relatifs à cet événement tragique, mais vu le mauvais état de conservation des inscriptions ou bien de leur copie, ses circonstances me restent obscures.

C 2988 (Dun 755a):

lb't bn š'm bn r̄gl bn 'q [rb] bn mlk bn q̄hs bn ḥḍg bn swr bn ḥmyn w [.] q. [.] wlf⁴
wbn 'mrt

Pour Lab'at f. Šam'am f. Ragil f. 'Aqrab f. Malik f. Qaḥaš f. Ḥaḍag f. Sawwar f. Hamyân: il a...; de même que les fils de 'Amrat.

L'auteur est un Ḍafaïte de la 15^e génération, lui-même et le proto-patriarche Wabh'el inclus. Dans le registre généalogique, ici, il ne remonte qu'au 7^e descendant de Wabh'el, car Ḥamyân était à son tour le père de tribus, dont celle des Sawwaréniens.

C 2989 (Dun 755b) ḥg bn rb (pierre / copie: lb) bn hmlk wwḡd 'tr 'mrf wbn 'mr [t]¹⁵.

***“Par Hagg f. Rabb f. Ha-Malik, qui retrouva les vestiges de'mrf et des fils de'Amrat”.

L'écrivain est un Ḍafaïte de la 11^e génération; pour son clan, voir les inscriptions C 1648, 1511, 1687, 1998, etc.¹⁶.

C 2990 (Dun 755c), dont le début doit se lire:

lhdl [n] lswr bn ḥmyn

En l'honneur des disparus d'entre les (gens de) Šawwâr fils de Ḥamyân”.

C'est sûrement l'épigraphe principal du galet, une sorte de plaque funéraire commémorative déposée sur le lieu même de la bataille. A mon sens, elle est bien antérieure à l'inscription de Hagg de la tribu Nâhid, qui a gravé son épigraphe au bas de ce titre, de même que quatre générations plus tard, le fera Lab'at le Šawwarénien, sagement aligné sur les précédents et traçant son texte dans le même sens, de gauche à droite.

Si maintenant, dans nos déplacements, nous quittons le Désert Syrien, Badiet eš-Šâm, nous dirigeant vers le Sud-Ouest de l'oïkoumène, c'est à 200 km au SW de Zilaf et à 230 env. au WSW de l'étang de Qasr Burqu', à peu près à mi-chemin de la route menant vers Pétra, que nous arriverons dans une bourgade importante, si l'on veut une métrokome, qui porte le nom de Mâdabâ. Or, c'est justement dans cette localité que les fils rares et épars de l'histoire d'une tribu nord-arabe ancienne se transforment en une trame solide grâce à un texte épigraphique et à un témoignage historiographique. La dernière pièce du dossier inscriptionnel des 'Amraïtes est la bilingue nabatéo-grecque de cette ville, datant de l'an 108-109 de notre ère¹⁷; voir notre fig. 13:

d' m̄qbrt' wn̄fš' dy 'l / mn̄h dy 'bd 'bgr dy mtqr' / 'yšywn br mn̄'t dy mn̄ d'l 'mrt lšlmn brh / bšnt tlt lhfrk bsr'.

Selaman. chreste kai alupe chaire. Abgar ho kai Eision Monoathou huios. huiô teimiô to

mnêma epoiesen. etous tritou eparcheias.

“Ce tombeau et la pyramide qui le surmonte (en texte grec: “le monument commémoratif”) a été fait par ’Abgar surnommé ’Isiyôn¹⁸ fils de Mun’at de la tribu de ’Amrat pour son fils Selâmân, en l’an trois de l’Eparque de Bosra (en grec: “en la troisième année de l’Eparchie”)

Selon l’un des chroniqueurs maccabéens, après la mort de Juda en mai de 160, Jonathan son successeur prend le maquis dans le désert de Juda. Il s’installe à l’Est de Téqoa avec des effectifs réduits et envoie le reste de la “foule”, avec les bagages les plus précieux, chercher refuge à Pétra. La capitale nabatéenne jouissait en effet du droit d’asile, sinon impérial, tout au moins royal et traditionnel. Ce convoi guidé par Jean¹⁹ sera intercepté par “les Fils de ’Amrei résidant sur le territoire de Mâdabâ”²⁰, massacré et pillé. Peu après, Jonathan et Simon prennent leur revanche du sang sur un cortège nuptial, où une fille d’un riche villageois de Nabatha²¹ devait épouser un ’Amraïte princier. Le guet-apens et la bagarre meurtrière qui s’ensuivit eut lieu à l’ombre du mont saint de Nébo.

Malgré un long intervalle chronologique, de plus de deux siècles et demi, je n’hésite plus à identifier l’épigraphique tribu de ’mrt avec les Fils de Amrei / Am (a) rai²², attestés littérairement, tous les deux du territoire madabien. A la famille nabatéenne de ’al-’Amrat à Madaba viennent s’ajouter plusieurs ’Amraïtes, écrivant en nabatéen et safaitique à Qasr Burqu’; d’autres gens des Banî ’Amrat n’écrivent apparemment qu’en safaitique. Rappelons, en passant, que l’adjectif gentilice tiré d’un anthroponyme affixe ignore, en règle générale, l’affixe. Ainsi, par exemple, du nom royal nabatéen Ḥaritat on a fait dériver le nisbé araméen ḥaretay (ḥrty), fréquent dans les textes funéraires de Hegra. Du nom ’Amrat provient donc ’amray, aussi bien nabatéen que safaitique (p. ex *hdfy*, à vocaliser *had-dafay*), contre ’amriy cananéen et arabe classique.

Si l’unité ethnique de la tribu en question me paraît hors de doute, ce sera la datation, même approximative, de trois ensembles épigraphiques la concernant qui s’avérera bien ardue, sinon désespérée, et exigera d’autres considérations.

Il y a quelques années, j’avais essayé de dresser des tableaux généalogiques à partir de six à sept mille inscriptions safaitiques connues à cette date; les recueils publiés depuis lors ont confirmé l’essentiel d’un tel registre et l’ont étoffé d’une façon évidente²³. D’après mon estimation, le premier ancêtre de cette nation arabe s’installa dans l’immensité du Désert syro-iraqien et jordanien aux environs du début du 5^{ème} siècle av. J.C. De cette manière, en partant du calcul par générations, on devrait en principe pouvoir placer chronologiquement des personnages et des événements cités dans les épigraphes des Safaïtes. Par ailleurs, plusieurs dizaines de dates explicites en marge de quelques hauts faits de l’histoire générale, précisent parfois cette chronologie approximative à une année près.

Pour ce qui est des inscriptions citées plus haut et provenant du Zilaf, situé à une centaine de km. au NE de Bosra, il y est question d’une bataille où périrent des hommes de Ṣawwâr et de ’Amrat. Le frère d’un des ’Amraïtes y vint en pieux pèlerinage et grava une inscription commémorative²⁴. Quant à la tribu de Ṣawwâr, on s’étonnera en constatant qu’elle n’apparaît presque jamais, d’une façon explicite, dans l’épigraphie safaitique. A cela il n’y a qu’une réponse: cette tribu était sédentaire depuis fort longtemps et ses ressortissants n’apparaissent sur les galets inscrits du Désert que sporadiquement. Par contre, c’est dans les inscriptions grecques contemporaines qu’on rencontre des Saouaréens dans le Sud de la Syrie. Dans un village hauranais, nommé Busân, ils occupent un quartier: *hoi apo Bousanôn Saouarênoi*²⁵. S’agit-il encore du même quartier, ou bien d’un arrondissement dans une ville grecque de Syrie méridionale, dans la légende d’une niche dédicatoire qui abritait le buste de l’Athéna casquée: *Athênâ / ampho / dou Sau / ar êno n*, “A Athéna du Quartier des Saouaréniens”²⁶. Un particulier Saouarénien fait dresser un autel en l’honneur d’Athéna dans les villages de Tharba²⁷. D’autres dédicaces à cette déesse grecque, devenue arabe par excellence se retrouvent sur la lisière orientale du Legâ, et c’est justement là que se situent deux villages, Souaret el Kebire et Souaret el-Seghire, qui sont sans aucun doute la patrie de la tribu de Sawwâr, qui fondait, déjà à l’époque hellénistique, une zone villageoise qui portera désormais leur appellation ethnique, Sawwârat.

La lutte où une petite force arabe composée de plusieurs guerriers sawwaréniens et ’amraïtes combattait un ennemi non déterminé se place au plus tard dans la 11^e génération wahbelite, la 9^e dafaïte. Cela nous mène vers le milieu du 2^e siècle av. J.C. où il ne manquait point d’occasion d’histoire locale et internationale, pour se faire tuer. Ce champ de bataille

restera gravé dans la mémoire collective des congénères des héros, puisque quatre générations plus tard on s'y rend en visite religieuse et patriotique.

Ce qui nous intéresse davantage, ce sont les fonctions exactes qui faisaient sortir les 'Amraïtes de leur territoire de sédentaires pour séjourner dans le Désert, qui reflleurissait à chaque hiver et printemps. Ils nous le disent eux-mêmes. Sur la pierre safaité récemment publiée (MST), deux 'Amraïtes donnent leur nom de métier qss, "traqueur", tandis que le troisième est nZR, "veilleur, sentinelle". Il s'agit donc, comme je le suggère plus haut, d'un petit détachement de patrouilles armées, autant dire de la milice nabatéenne des archers montés, cavaliers plutôt que chameliers. Celle-ci, entre autres devoirs, avait à escorter les "centuries" (m't en safaitique) de chevaux et de chameaux en déplacement. Je discute en détail ailleurs²⁸ de la vie des Arabes safaites dans les pâturages saisonniers, qui s'étendent en arc depuis Qasr el Burqu'en Jordanie jusqu'au Gebel Seis en Syrie (et d'une certaine façon jusqu'à er-Ratba en Iraq), tout au long du chapelet d'étangs et de mares. C'était le domaine d'Etat appartenant à la maison royale des Nabatéens. Les rois en disposaient à leur gré, en exploitant une partie pour leur intérêt, laissant une autre aux transhumances des nomades, cédant enfin des terrains, à titre gracieux, à des clans et tribus qui désiraient avoir un centre sédentaire. Sur les pâturages en question, hivernaient les troupeaux de haras nationaux nabatéens, les chameaux et les chevaux indispensables pour le trafic caravanier et pour l'armée royale. L'organisation du personnel qui entretenait les animaux, qui se recrutait en majeure partie parmi les Arabes 'awidhénien et dafaites, est illustrée fort en détail par les épigraphes des Safaites à partir du règne d'Arétas III. Evidemment son père, l'immortel Obodas, faisait déjà de même, puisque sa double victoire sur le Séleucide Antiochus XII suppose une cavalerie nombreuse, bien entraînée et entretenue.

Quant aux inscriptions HCH 191 et 194, leur datation me paraît assez incertaine. Si l'on admet qu'elles sont contemporaines de l'ensemble épigraphique constituant le cairn de Hâni (voir la note 10), on les mettra déjà à l'époque romaine de la Province d'Arabie, vers le 2^e siècle, en suivant d'ailleurs la suggestion de H. Seyrig qui a étudié l'inscription latine recueillie dans ce tumulus²⁹. Car, à vrai dire, un généalogiste safaité se sent bien désemparé devant ces presque 200 épigraphes déposées sur le tombeau de Hani (c'est la transcription latine de son nom), le Juste. On dénombre une vingtaine de "tribus" ('al), et aucun personnage ne semble pouvoir se rattacher, par ses signatures en général très courtes, à des registres généalogiques dressés à partir d'autres groupes d'inscriptions. Cela signifie, à mon sens, qu'à partir du 1^{er} siècle avancé de notre ère, les tribus 'awidhénien (d'abord) et les dafaites (ensuite) étaient quasi complètement sédentarisées. Des fractions de cette population, en principe villageoise, nomadisaient encore, tout au moins par des sorties saisonnières. Ce mode de vie faisait progressivement disparaître l'organisation sociale et religieuse centrée sur l'entité d'un clan, d'une tribu, d'une ethnie, de même qu'il transformait la mentalité, les attitudes, et les comportements qui en découlaient. Désormais on ne pouvait se réclamer socialement que de l'appartenance à de grandes familles – désignées pourtant du même terme générique 'al – lesquelles occupaient sans doute des quartiers déterminés dans les villages et les métrocomes de plus en plus nombreuses en Syrie et en Jordanie.

Nous avons signalé plus haut que la "tribu" de Hazzay apparaît à la fois au cairn de Hâni et sur le galet qui nous intéresse en premier lieu dans cet article. Nous avons souligné en outre que le Hazzaité de Qasr Burqu' y commémora son passage à une date très postérieure à celle de la rédaction simultanée des MST 6 — 14 et MNT 1 — 2; enfin, l'agencement de ces inscriptions correspond bien, à mon avis, à l'existence d'une organisation rigide, quasi militaire, à laquelle se pliaient les Dafaites de la "tribu" de Warqân et les 'Amraïtes (qui étaient de l'ethnie 'awidhénien, selon toute vraisemblance). Ces indices, si minces et tenus soient-ils, me font songer à la fin du royaume nabatéen, disons la 2^e moitié du 1^{er} siècle ap. J.-C. comme l'époque approximative de nos épigraphes.

La poignée de Bani 'Amrat que nous retrouvons dans le Désert syro-jordanien et dans une ville de la Jordanie centrale nous frappe. Ils se servent à l'époque gréco-romaine de trois langues et de trois écritures, ces dernières en deux types principaux: calligraphique et cursif. La bilingue de Mâdabâ est rédigée d'abord en langue et écriture araméo-nabatéennes, modes d'expression littéraires propres à l'Arabie du Nord, depuis les abords de Damas jusqu'aux oasis de l'Arabie Saoudite durant cinq siècles; en deuxième lieu, ce texte funéraire du début de la Province romaine d'Arabie, donne la traduction grecque raccourcie, puisque la langue grecque restait et restera pour longtemps la langue véhiculaire du Proche Orient. Les miliciens 'amraïtes, provenant de l'oïkoumène jordanienne, n'oublie pas leur langue et leur

écriture ancestrales. Lorsqu'ils s'engagent dans la milice des rois nabatéens, du 2ème siècle av. au 1er siècle ap. J.-C. et se meuvent dans les zones désertiques qui longent le territoire habité de Syrie-Jordanie, ils s'expriment en écrivant sur le basalte, le support d'écriture le plus durable au monde, à la fois en nabatéen cursif et en deux espèces d'écriture safaitique. Ils en préfèrent, pour des raisons de tradition, le type monumental ("oncial") à la "minuscule" plus répandue. Celle-ci d'ailleurs atteint le canon immuable très tôt dans l'histoire de la nation issue du Wahb'el mythique, de sorte que pendant plus de six siècles de son existence cette écriture classique n'évolua pratiquement pas.

* * * * *

Paris, Mai, 1979

Le dossier épigraphique de la tribu 'Amrat, que je viens de présenter, s'enrichit à cette heure de cinq nouvelles inscriptions safaitiques. Deux épigraphes, gravés sur un galet ébréché, proviennent de Deir el-Kahf à l'ouest de Jawa, des abords du castellum romain qui s'y dresse encore aujourd'hui. Les deux inscriptions³⁰ sont tracées en spirales, dans le sens des aiguilles d'une montre:

(1a). *l'lg bn hlht b [n..] m d'l 'mrt wwgm 'l 'mr wrgm mny*

"Par 'Ilg fils de... Hlht fils de... m, de la tribu de 'Amrat: il est en deuil de 'Amr, et déteste le Destin", à comprendre: "il lance le défi verbal à l'inévitable".

Le sentiment d'horreur face à une mort violente ou précoce est plus habituellement attribué à la victime elle-même, homme ou femme. Le vocable *mny* provenant de * *mnw* (cf. *rdy*, de *rdw*), est à identifier avec le nom de la déesse nabatéenne Manwt; dans les deux cas il s'agit du même morphème, mais en nabatéen arabe, renforcée de l'affixe féminisant. En ce qui concerne les Safaites, toutefois, on ne peut pas du tout parler de "la personnification arabe du Destin"³¹. L'appellatif *mny* n'est point chez eux la désignation d'une divinité personnelle, mais il exprime une notion plutôt abstraite, relevant du comportement social plus que d'une attitude religieuse; ceci révèle un trait fort remarquable et spécifique de la pensée des Wahbelites.

(1b). *[..]zz bn mn't d'l 'mrt w w[gm 'l 'mr]r bn 'hh mnqtl*

"Par...zz fils de Mun'at, de la tribu de 'Amrat: il est en deuil de 'Amr fils de son frère, tué"; le mot "deuil" est surmonté des sept traits symbolisant le monde divin. Le nom Mun'at est, pareillement, le patronyme du constructeur du tombeau, à Madaba, qu'honorait la bilingue nabatéo-grecque, citée plus haut; en grec, Monoathos. — Lire[.]r, et non pas[.]b de l'éd., car il doit certainement s'agir, dans les deux inscriptions, d'une même personne, disparue et pleurée par deux hommes de la même tribu, voire de la même famille. A la fin, on n'a pas une clause relative, *mnqtl*, mais un attribut. Nous connaissons donc, actuellement, trois participes du verbe safaitique *qtl*: 1) participe passif de la conjugaison simple, *qatûl*, écrit *qtl*; 2) participe passif d'une conjugaison "intensive" ou causative, écrit *mqtl*; 3) participe de la conjugaison à n préfixé. Dans ce dernier exemple, le nôtre, à la passivité de l'action subie s'ajoute peut-être une connotation de la mort par surprise, sans occasion de se défendre.

Le découvreur de cette pierre inscrite, S.T. Parker, signale la présence de tessons romains anciens qu'il a recueillis à Qasr Hallâbât et à Deir el-Kahf, d'où "the possibility of earlier Nabataean forts and garrisons"³². C'est un contexte approprié pour expliquer l'accident tragique survenu à ce ressortissant de la vaillante tribu des 'Amraïtes, qui endeuilla son oncle paternel et un autre parent ou compagon. Les trois 'Amraïtes ont très bien pu être des soldats d'une garnison locale, nabatéenne ou romaine.

Privées de leur *in-situ* géographique et archéologique, les trois pierres du Musée d'Ammân qui suivent, présentent un intérêt fortement amoindri³³. Les deux premières, en belle écriture monumentale, ont peut-être été exécutées par deux coéquipiers d'une brigade de bergers:

(10), Amman Museum J. 13967; inscription tracée en spirale dans le sens contraire des aiguilles d'une montre:

l'bgr bn t' d'l 'mrt wqss wswy wnsb wwgm 'l 'hh d'b

"Par 'Abgar f. de Muqim f. de Ta', de la tribu de 'Amrat il est traqueur; il vient d'ériger un cairn et une stèle (funéraire), car il est en deuil de son frère D'ib".

C'est de cette façon que j'articule la séquence propositionnelle paratactique, "interesting and rather puzzling", de ce texte commémoratif. L'auteur donne d'abord ses coordonnées

personnelles: son triple nom de famille, son ethnonyme, son métier (permanent ou saisonnier); noter que dans l'inscription suivante il n'y aura que des précisions sur l'occupation exercée sur le moment. Ensuite notre scripteur enregistre des actions liées aux funérailles de son frère, ces actions, aussi bien que l'acte même de l'enregistrement (n'oublions pas que les épigraphes de la Badiyet eš-Sâm sont les archives des Wahbelites), ayant pour but de perpétuer le nafs de Dīb.

(11), Amman Museum J. 13944; incscription tracée en spirale dans le sens des aiguilles d'une montre:

ls' d bn mlh d'l 'mrt wqss mn[.]db 'l hswt.

Il n'y pas de place pour deux ou trois signes alphabétiques après le t final, pour obtenir le verbe supposé par l'éd; il y en a en revanche, d'après la photo, pour une ou deux lettres devant le deuxième d.

Si on retient le sens de "traquer, suivre, accompagner, le troupeau" pour le prédicat qss³⁴, le reste de la phrase me semble fournir l'indication d'ordre géographique: "depuis, à partir d'un lieu... jusqu'à un autre lieu" la préposition 'al exprimant l'étendue du pâturage. Lire une précision analogue, p.ex. en WH 161: *wtrd mn hrn fr'y kll 'rd*, "il suivait le troupeau³⁵ depuis le Hauran, trouvant de bons pâturages en chaque région", à savoir à chaque halte du trajet parcouru. Le terme *hswt* pouvant donc être le nom d'un lieu-dit³⁶, sinon l'appellation géologique du terrain où arrivait le convoi transhumé, le vocable mutilé doit forcément indiquer le point de départ, livrer un toponyme. N'est-ce presque à coup sûr, (m) db³⁷, "Mê dabâ", dont le territoire était habité par des 'Amraïtes, comme j'ai essayé de le dire plus haut, "Mêdeba, ville des Nabatéens," chez Etienne de Byzance, qui puisait dans une source ancienne?

(23) Amman Museum J. 13952; à droite du dessin d'un animal; *lhnn bn dbr d'l 'mrt.*

Par-dessus, en palimpseste, une épigraphe au trait arachnéen?

J.T. Milik
Paris, mars 1980

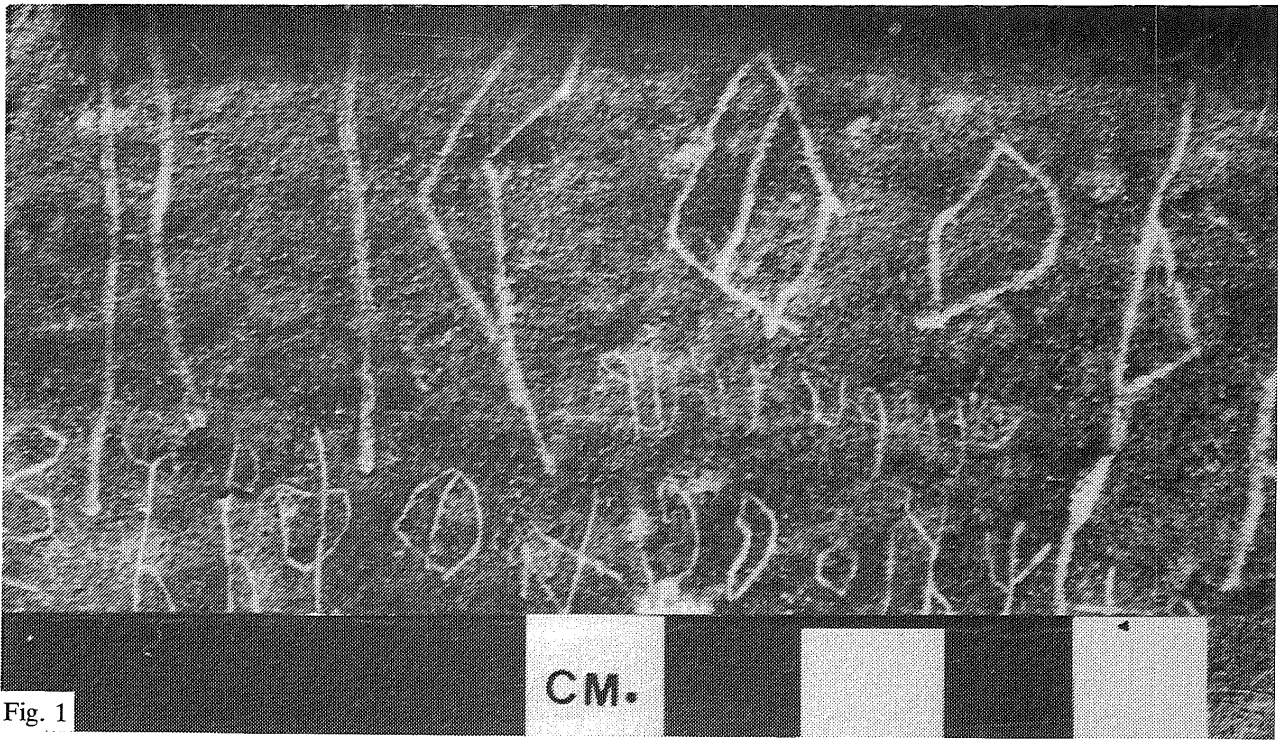


Fig. 1

Fig. 1-2. Bilingue safaitique et nabatéenne (celle-ci au-dessus de l'ethnonyme safaitique), MNT 1.

Fig. 3. Détail de deux inscriptions nabatéennes, pierre Musée d'Amman n° inv. J 13206.

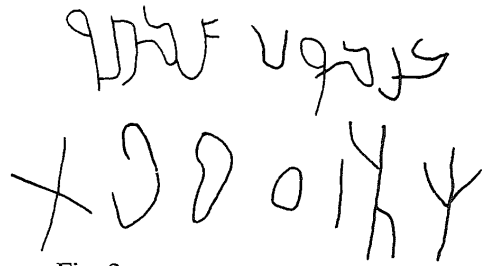


Fig. 2

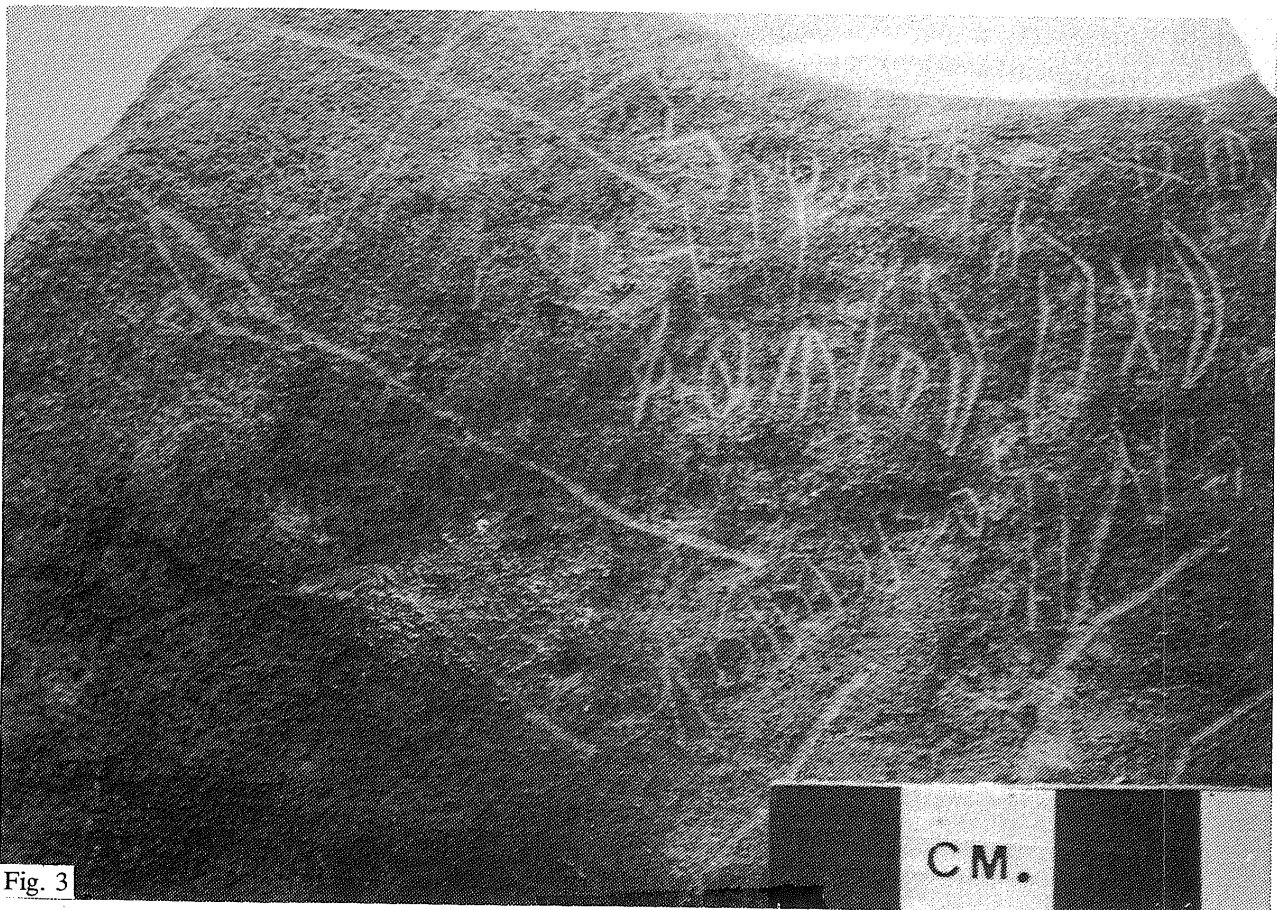


Fig. 3

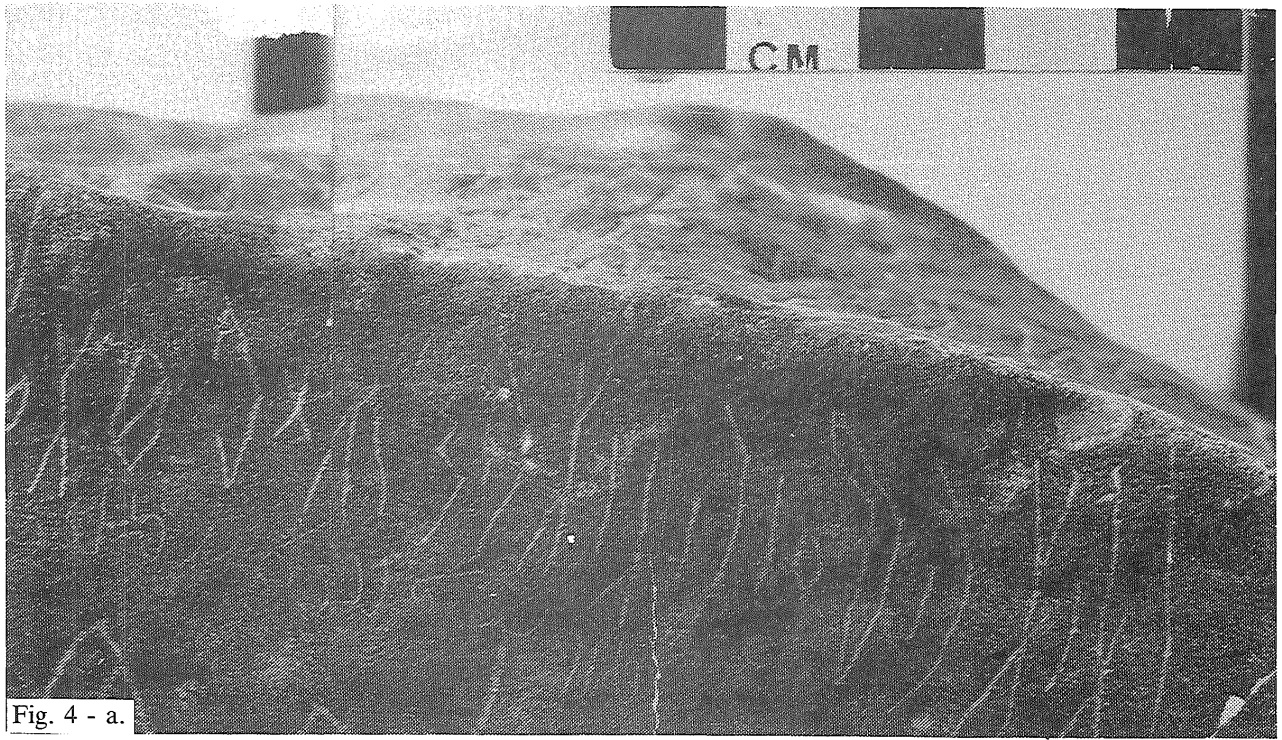


Fig. 4 - a.



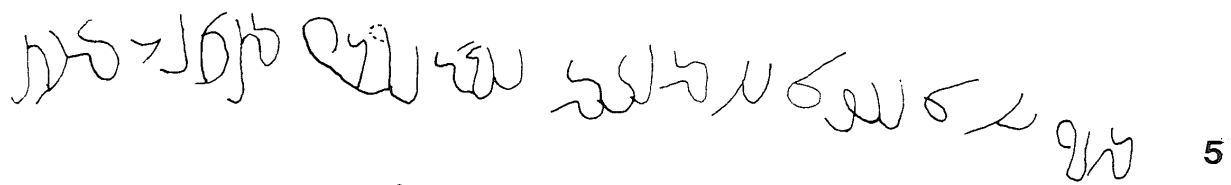
Fig. 4 - b.



Fig. 4 - c.

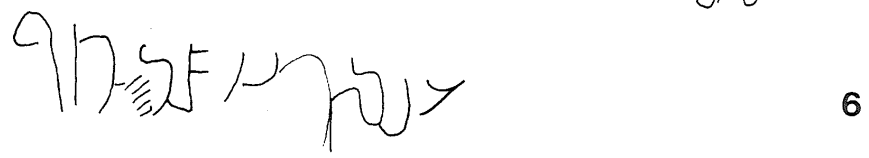
Fig. 4- Inscription nabatéenne MNT 2.

5



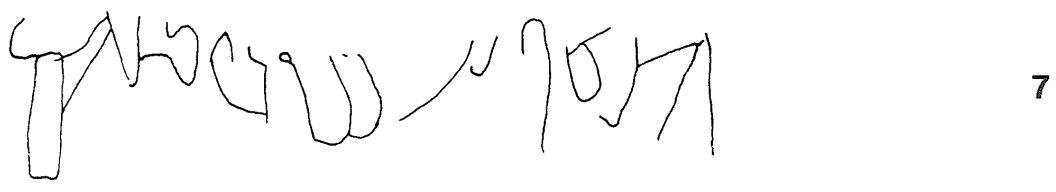
Handwritten Nabatean script, line 5.

6



Handwritten Nabatean script, line 6.

7



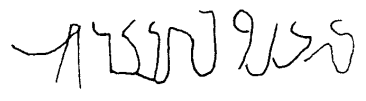
Handwritten Nabatean script, line 7.

8



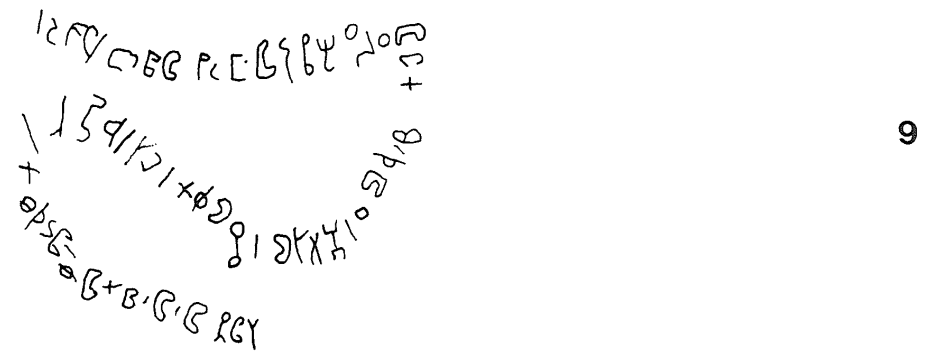
Handwritten Safaitic and Nabatean signatures, line 8.

9



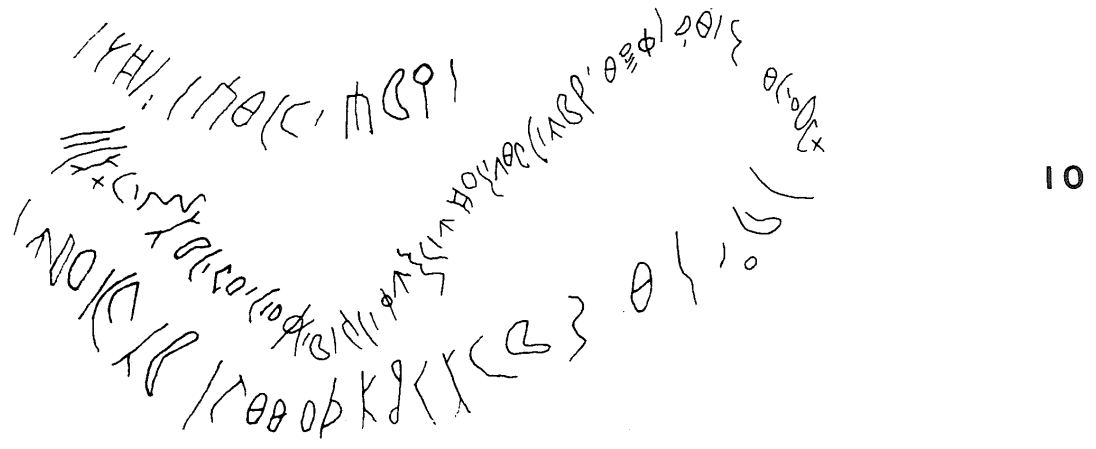
Handwritten Nabatean script, line 9.

10



Circular Nabatean inscription, line 10.

10



Another circular Nabatean inscription, line 10.

Fig. 5, 6, 7- Epigraphes nabatéennes MNT 2 a-c.

Fig. 8- Signature safaitique (déplacée) et nabatéenne de Ma'an, MNT 2d.

Fig. 9, 10- CIS V 2947 et 2988-2990.

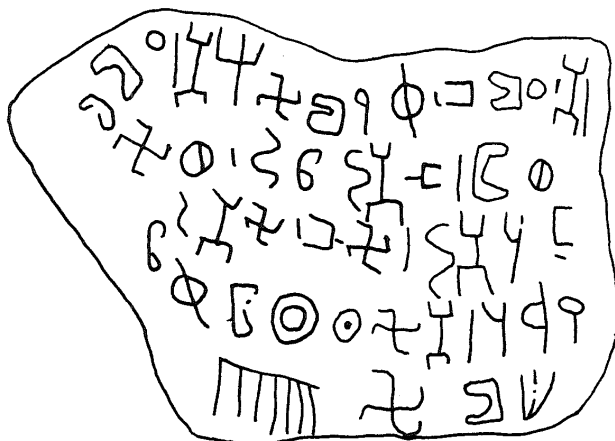


Fig. 12

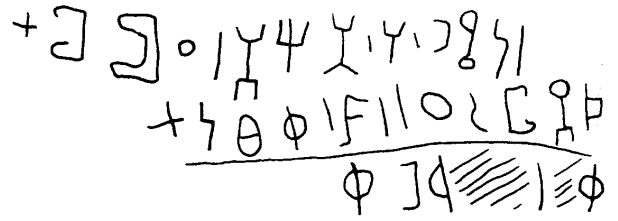


Fig. 11

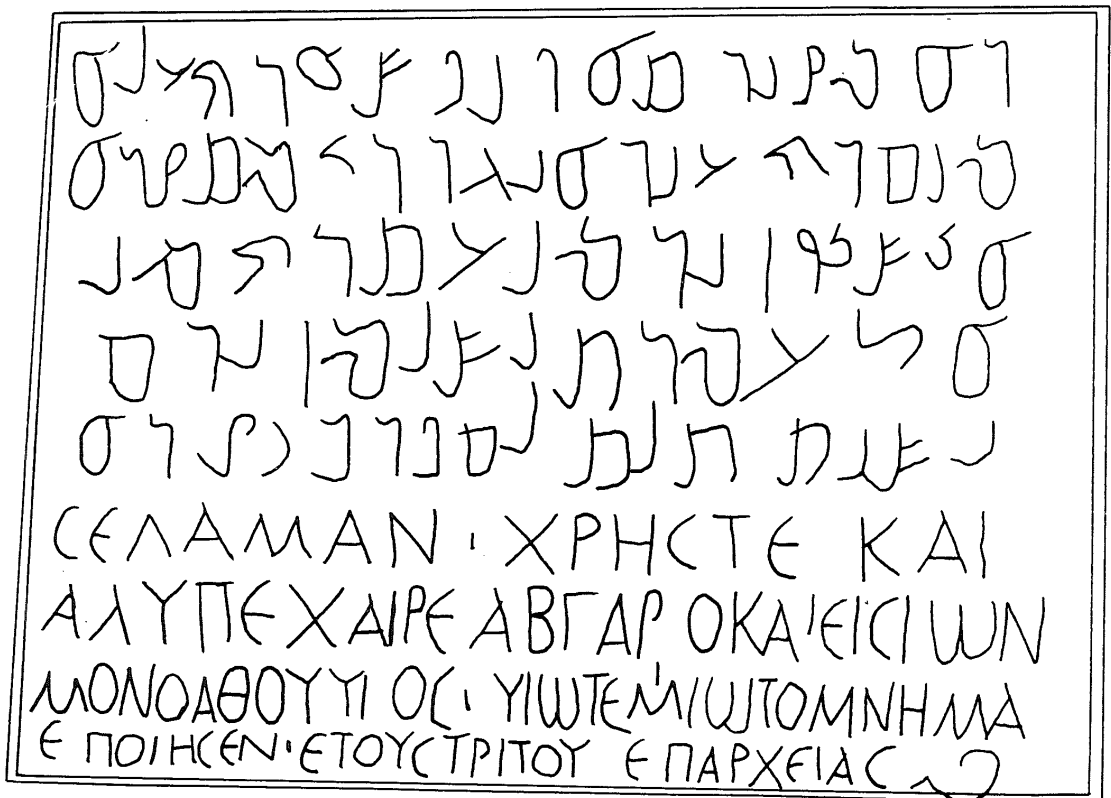


Fig. 13

Fig. 11, 12- Cairn de Hâni' 191 et 194.

Fig. 13- Titre funéraire bilingue de Mâdabâ, Syria 1958, p. 243.

- * Abréviations des recueils safaitiques, d'après G.L. Harding *An Index and Concordance of Pre-Islamic Arabian Names and Inscriptions*, Toronto 1971 P.P. IX-XXXIII, et *Inscriptions from Fifty Safaitic Cairns*, pp. XI-XIV; pour l'épigraphie grecque, D. Sourdel, *Les cultes du Hauran à l'époque romaine*. Paris 1952, pp. XV-XVI.
1. Publiées par M.C.A. Macdonald et G.L. Harding, *More Safaitic Texts from Jordan*, en *ADAJ*, XXI, 1976, pp. 121 — 124 nos 6 — 14, phot. à la p. 132, copie p. 133. Abréviations, MST.
Je signale que "l'inscription de son grand-père" que mentionne l'auteur du n° 21 (p.125): *lmsk bn 'bgr bn mqlt bn lb't wwg'd sfr' mh fwg'm*, est soit, l'inscription WH 1504 : *lmqtl bn lb't* (cairn 17; d'autres membres du même clan au cairn 17, WH p.222), soit, si l'on accepte la correction, l'inscription WH 2440: *lmqtl bn lb't* (cairn 34).
 2. La vocalisation des noms propres safaitiques, sauf mention contraire, est toujours conventionnelle, surtout à cause de l'orthographe strictement consonantique, sans graphies pleines ni internes, ni même finales.
 3. Le premier verbe et la finale restent énigmatiques; voir les édd.
 4. Cette épigraphe est postérieure aux autres, puisque son auteur dit avoir trouvé, sur la pierre même selon toute vraisemblance, des "vestiges" (épigraphiques) de sa tribu et en avoir mal au coeur. Je pense même que l'intervalle chronologique doit couvrir plusieurs générations, car on ne cite pas un nom de personne déterminé qui pourrait se lire sur le galet, et serait un ancêtre assez proche de Sâmit f. Gôt.
Sur la tribu safaitique 'al-Hazzay voir déjà les édd., p.122. Je précise que mis à part l'apparition à Tell el-'Abd d'un hazzaité qui parle de sa fille, SIJ 909, et de la visite religieuse au tombeau de Hâni d'un berger de moutons HCH 105 et d'un autre contribule, HCH 162, cette tribu chamelière (SIJ 295, ce qui se confirme par notre pierre) restait confinée au lieu-dit de Jâwâ. Un endroit à 2 km à l'ouest de Jâwâ, sur le crête à l'est du fortin, se nomme Abri de 'al-Hazzy: *ḏ str, fhlt slm, ḏ'lhzy*, "Ceci l'abri, qu' Allat (y accorde) la tranquillité, de la tribu de Hazzay, SIJ 342 a + b.
En SIJ 288 un Badarel remonte, en dix générations, jusqu'au phylarque Hazzay. C'est encore le même scribe, lequel, après un blanc (? : partie mal, ou non pas, copiée), continue par un *whb'l*, etc. 289. Ce dernier est sûrement Wabh'el le premier gènarque des Safaites.
 5. Comparer en nabatéen: ... *fršy nṭry*..., "... cavaliers chargés de la garde auprès de...", Sav. 246. Le *nṭr* araméen est évidemment égal au *nṣr* safaitique. Une troisième forme phonétique de la même racine, *nṣr*, se retrouve en thamoudéen "taimanite". Ainsi, p ex., sur la paroi d'une tour de garde près de l'oasis, à Mantar Banî 'Atiya (Harding, Bull. Inst. Arch. Univ. London 10, 1972, p. 41n°21) on lit *šmkfr b'gl nṣr lšlm*, que je comprends; "Sammkafir fils de 'Igl, veilleur au (service de) Šalm". Ce dieu principal de Taimâ présidait les forces confédérées en guerre contre Dédan, Nabayât, Massâ', etc.; cf. ARNA, p. 90.
 6. Abréviations de "More Nabataean Texts". Les deux inscriptions nabateennes ont été exécutées avec une pointe fine, d'un outil métallique sans doute; trait évanide. MNT1 est plus de 3 cm de long, hauteur moyenne des lettres 0,5 cm. — Le déchiffrement fait sur les photos a été vérifié, pour quelques lettres, sur la pierre par M.F. Zayadine; je l'en remercie.
 7. Le pluriel du pronom, qui renvoie au singulier collectif 'al est tout à fait normal. Cf. p. ex. sur un autel de Sî: *dy'qymw 'l 'byšt* (ho demos ho tôn Obaisênôn) C 164; à Simg la tribu 'lqšyw érige le temple l'lhbm, "à leur dieu (tribal)", LP II (R 2042).
 8. Le monographisme des consonnes doubles est bien attesté dans les inscriptions et les textes araméens et cananéens. pour le nabatéen, voir p. ex. btt, égal à bebêt "au temple", dans une dédicace hauranaise; Dédicaces, p.341.
 9. Voir mon article ici-même, pp.47 - 48
 10. Les inscriptions HCH 182 194 proviennent d'un petit cairn distant d'un km et demi au SW du cairn de Hâni', au Sud de la route de Bagdad. Seul le n° 188 (*lbnt bn šll bn mḥnn*) se trouve inscrit sur une pierre du tumulus; les autres sont gravés sur les galets jonchant le sol. Il se peut que ce cairn couvre un mort (titulaire de 188?). Cependant, la mention de pèlerinage en 184 (*fšyr ḥg*, "et il fit ce voyage en pèlerin") me fait pencher vers le "rattachement de ce petit groupe au grand ensemble de Hâni, le tombeau de ce Juste ayant été grandement fréquenté. Il pouvait s'agir d'ailleurs des pèlerinages qui cumulaient la commémoration de plusieurs personnages du passé.
 11. Pour HCH 194, cf. l'essai d'interprétation (plutôt fantaisiste, si j'ose dire) de Littmann, l.c.
 12. L'ommission de la copule *w* devant le verbe est bien insolite.
 13. Des bons parallèles pour ce genre de fêtes, à Pétra, au wâdi Abû Olleqa Sud, au wâdi Ram, à Eboda ('Ubdât); voir aussi Dédicaces, Passim.
 14. Entre cette lettre et la suivante à détacher la lettre *t* qui fait parti de la signature *l tm*. "Par Têm", tracée en diagonale je la cote C 2988 bis.
 15. La finale de ces deux inscriptions reste incertaine; dommage surtout que le verbe de la première ne soit pas lisible. Le nom qui précède la mention des *bn 'amrt*. est incomplet dans la première (où d'ailleurs le trait transcrit comme la consonne *l* n'est peut-être pas une lettre) tandis qu'il est de lecture polyvalente dans la seconde: *'r / b-m-f / š*.
 16. En C 1687 un Nâsir, un arrière petit-fils, de notre Hagg était déjà lettré (p. ex. C 49700) et descendait de Ḍaf au 5ème échelon, et au 7è de Wabh'el: *ḥmyn ḡḏḏt 'ndt wšyt ḏf gn'l whb'l*.
 17. *Syria*, XXXV, (1958) pp. 243-246 n°6, pl. XIXb fig. 2.
 18. Etant donnée cette transcription grecque, isîôn, je renonce à l'explication de ce surnom proposée en *Syria*, l.c., p. 245, car *'yšw* se prononçait 'Iyyâšû, le caractère consonantique de-y- étant d'ailleurs bien marqué en orthographe arabe de ce nom, 'ys. Les anthroponymes parallèles que j'y cite, Malkôn et Mariôn, me permettent maintenant de comprendre le surnom de la bilingue. Qu'on se rappelle que dans l'araméen impérial le substantif *îs* ne désigne guère un homme quelconque (comme c'est le cas en hébreu), mais, parallèlement p. ex. à l'amêlu akkadien, un homme du souverain, du roi, autrement dit un fonctionnaire de la cour, un gouverneur, etc.

19. Le texte grec de la Bible le qualifie de hêgoumenon (tou ochlou), 1 Macc 9, 35; ce terme de fonction correspond exactement à hdy safaitique. Un tel Guide, en bon protecteur de la troupe ou du troupeau, ne se met guère en tête du convoi, mais à son arrière-garde. C'est pour cette raison que le vingtième et dernier ange civilisateur d'Hén 6-7 s' appelle Yhdy'l; Milik, *The Books of Enoch*, Oxford 1976, pp. 154 et 156.
20. hoi huioi Amrei (variantes: Iambri, Ambrei, Ambri, etc.) hoi ek Médaba, I Macc 9, 36 s; cf. Josèphe. *Ant.* XIII 11, 18, 21: Amaraïou, Amarei, Amri, ... Je rappelle que Josèphe se permettait parfois d'insérer entre deux consonnes, un-a-superflu dans ses transcriptions des mots sémitiques; p. ex. Tadamora au lieu de Tadmor (a), "Palmyre".
21. C'est le grand village de Nébo, très opulent à l'époque byzantine; S. Saller et B. Bagatti, *The Town of Nebo*, Jérusalem 1949. Le toponyme araméen Nabatâ abrège le nom plein du village, * Qaryat Nabâ, ou plutôt désigne le territoire du village et de la montagne de Nabâ; en arabe nabatéen al Nabât, en arabe safaitique (et 'amraïte) han-Nabât.
22. Je suppose que l'original hébreu du premier livre des Maccabées contenait la forme adjectivale plurielle de cet ethnonyme, donc (ha-) amrîm. Le traducteur grec l'avait rendu, un peu librement, par "les Fils de Amri"; il garde pourtant la désinence hébraïque du gentile. Flavius Josèphe s'était servi de la version grecque de 1 Macc, mais dans son original araméen des Antiquités il remplace, forcément, le Amri par l'araméen () Amray, d'où le grec Am(a)raïou.
23. Sur les trois premiers ancêtres de la nation "Safaité", Wahb'el, Awîd et Daf, voir déjà mes dédicaces, pp. 99-101. Rappelons, et précisons à la fois, que la transcription grecque de l'ethnyme, 'al-'Awîd, Aouidênôï, se lit p. ex. en Wadd 2236 (Râma): Odainathou Saoudou /statêgêsanti Aoui/dênôn... Quant aux Dafaites, leur nom se conserve jusqu'aujourd'hui dans le toponyme de Safâ, qui continue l'ancien haḏ-Ḍafat, "le territoire de 'al-Ḍaf". Le dieu-génie de cette région désertique est évidemment Zeus Saphatênos d'un autel de Bosra; SP IIIA, 558 (cf. Sourdel, L.C., pp. 86, 120). Le dieu topique 'elâh had-Ḍafat s'identifie à son tour avec la Fortune de Ḍaf, gadd-Ḍaf. Pareillement chez les Nabatéens, le dieu ancestral H gadd Nebât est aussi le génie protecteur d'une région, 'elâh Sa'bû (étymologiquement, le terrain Difficile); cf. Dedicaces, pp. 211s et 101. Le Gentilice Ḍafay se repère aisément dans le nom grec tardif d'un village du Legâ, Borekath Sabaôn, à comprendre Sapaïôn ou Saphaïôn (la beta indique la prononciation arabe d'une labiale). Tout récemment, Winnett et Harding ont trouvé le nom de ce bourg cité une quinzaine de fois dans leur lot d'inscriptions safaitiques, WH 289 (p. 91), etc.; déjà dans l'Antiquité ce toponyme avait la forme diminutive, Buraitkat, prononcée en safaitique Burêkat.
24. Le verbe tronqué de C 2988 nous aurait renseigné sans doute si les corps des tombés avaient été enterrés sur place ou bien transférés au cimetière tribal.
25. Dunand, NI 136 (RB 1932, p. 580): hoi apo Bous (a) nôh Sa ouarêno (i the) ô autôn|ton bômon anêgei [ran] eusebe [i] as [cha] r [in].
26. Niche en basalte; C. Watzinger et K. Wulzinger, *Damaskus die antike Stadt*, 1921, p. 108 n°10.
27. Wetzstein 16 (Wadd 2203a); Athênâ tê [Ku] ria Raesos|Oualou Sauarênos [m] nêmosunon huper heautou ka [i]|teknôn ton bô [m] on anethêken.
28. Dans un mémoire sur l'Histoire des Nabatéens, en rédaction.
29. *Syria* XXXI, 1954, pp. 357-359. Il lit les deux premières lignes: Hani feci (?)|Iulius Extricatus|... et conclut: "Some toute, le III siècle, sinon même le IIe, est de beaucoup la date la plus plausible que l'on puisse donner au cairn".
30. Ed. V.A. Clark, *Abr-Nahrain* XVII (1976-1977 [1978] pp. 35-38 fig. 1.1 et pl. I, 1.
31. M. Rodinson, *GLECS* 8, pp. 53-56.
32. *ADAJ* XXI (1976) p.26.
33. Ed.M.C.A. MacDonald, *ADAJ*, XXIII (1979) pp. 104-106: n° 10 et 11, pl. XXVs, et pp. 109s : n°23, pl. XLIs.
34. Ed. "he retaliated". Personnellement, je me sens un peu las de n'entendre parler, par les interprètes modernes, que de pillages et de règlement de compte parmi les Safaites et autres, pendant l'époque gréco-romaine. Ils traînent ainsi avec eux l'optique post-romantique que s'étaient fait de l'essentiel de la vie bédouine contemporaine les voyageurs occidentaux durant le 19^e siècle. Je me demande même si existaient réellement "the Safaitic Bedouin".
35. Evidemment en transhumance hivernale (cf. WH 3049), et non pas "to drive away beasts captured in a raid".
36. A comparer l'arabe classique hisay, etc., "sol sablonneux où l'on trouve de l'eau".
37. Sur la photo publiée il me semble apercevoir la partie droite de la lettre m, tournée à gauche.

**EXPLORATIONS IN THE UMM AD-DANĀNĪR REGION
OF THE BAQ'AH VALLEY
1977 - 1978**

by
Patrick E. McGovern

INTRODUCTION

Late Bronze Age pottery appeared on the antiquities market in Amman in the winter of 1975-76, and was ultimately traced back to a robbed-out burial cave (Cave A2) on Jebel al-Hawāyah in the Umm ad-Danānīr region of the northwestern Baq'ah Valley, ca. twenty kms. northwest of Amman (see Figs. 1, 2, 4, and Pls. XXXVIII, 1 and XXXIX, 1; general geographic coordinates for the region are 35°, 40', 20" E, 32°, 5', 10" N, and Cave A2 is located at 228.19E, 166.28N on the Palestinian grid). Dr. James A. Sauer, director of the American Center of Oriental Research (ACOR) in Amman, informed me of this discovery and suggested that I carry out a trial sounding in the cave, with hopes of finding an undisturbed stratigraphic sequence of LB pottery and artifacts, still badly needed for Transjordan. My interest in the project was further heightened when I learned that a nearby "megalithic" building at Rujm al-Ḥenū had a surface ground plan very similar to the Amman Airport Building (cf. Fig. 7). However, a sounding near the building might easily develop into a major project, and at the time we did not have the financial backing or personnel to attempt anything on a large scale. It was thus decided to limit the project to the cave sounding, which should at least provide us with a preliminary assessment of the potential of the region.

The cave sounding was carried out in June 1977 with the sponsorship of the Jordanian Department of Antiquities, ACOR, and the Kyle-Kelso Archaeological Fund. Robin Brown and I served as co-directors, and were assisted by Ali Sa'idi (district inspector), Jane Muhawi, local workers, and numerous volunteers. Jim Sauer, who has constantly aided the project from its inception, advised on pottery and stratigraphic matters. Dr. Adnan Hadidi, Director-General of the Department of Antiquities, and his staff are also to be greatly thanked for smoothing the way to bring the project into the field at the earliest possible date and for always being ready to aid the project as the need arose.

The cave sounding produced some remarkable results. In contrast to earlier surveys which had found no evidence for LB in the valley (Glueck 1939:191-200; de Vaux 1938: 417 - 22), a very extensive and representative collection of local and imported pottery (including Mycenaean IIIB, Cypriote Base-Ring II, Chocolate-on-white, and bichrome wares), along with accompanying grave goods (scarabs, cylinder seals, toggle-pins, many types of beads, etc.), were recovered from two disturbed strata. The high quality and quantity of the pottery and small artifacts (ca. 10,000 sherds, 52 whole vessels, and 290 small finds were registered), coming from a sounding limited to less than a quarter of the cave, strongly suggested that LB settlement(s) and other burial caves existed nearby. A limited search in the vicinity of the cave confirmed the existence of at least three more LB burial caves, which appeared to be part of a larger series along the northwestern slopes of the valley, where the strata of limestone and sandstone can easily be hollowed out. It also appeared probable that one of the many "megalithic" buildings, which exist within a kilometer of the caves, might be connected with LB occupation, a prime candidate naturally being Rujm al-Ḥenū.

Because of the high probability of finding more LB remains, it was decided that the next logical step towards developing a well thought-out and economical excavation strategy should be to carry out a thorough archaeological survey of the Umm ad-Danānīr region using geophysical prospecting instruments (cesium magnetometer and electrical resistometer), in order to gain a full picture of these remains. This survey was carried out in October-November 1978 with the financial support of the Department of Antiquities, the National Geographic Society, and the Museum Applied Science Center for Archaeology (MASCA) of the University Museum, University of Pennsylvania. The project was headed by myself (principal

investigator) and Dr. Bruce W. Bevan, who were assisted by Ibrahim Haj Hasan (Department conservationist), Susan M. Balderstone (architect), Mohammed Salem, Susan Spencer, Jenine Howard, along with local workers and volunteers. All the major goals, which had been set for the survey, were achieved, including the location of many more LB burial caves and two probable LB settlement sites.

The obvious success of both the sounding and survey in revealing the abundance of unique LB remains in the Umm ad-Danānīr region has led to a formal affiliation of the Baq'ah Valley Project with MASCA, with the goal of exploiting the full scientific potential of the archaeological materials. Besides the continued use of highly sensitive geophysical prospecting tools to inform excavation strategy, a whole battery of scientific techniques (neutron activation analysis, argon beam microprobe, thin-section analysis, thermoluminescent and radiocarbon dating, etc.) are being or will be employed to glean as much information as possible from the materials now available and those that will hopefully be recovered in future seasons.

A number of specialist reports have already been prepared on excavation and survey materials, viz., stratigraphy (Robin M. Brown), faunal and human skeletal remains (Drs. Michael Finnegan and Jack J. Husted of Kansas State University and the University of Kansas, respectively), scarabs (Dr. James M. Weinstein of Cornell University), lithics (Dr. Gary O.

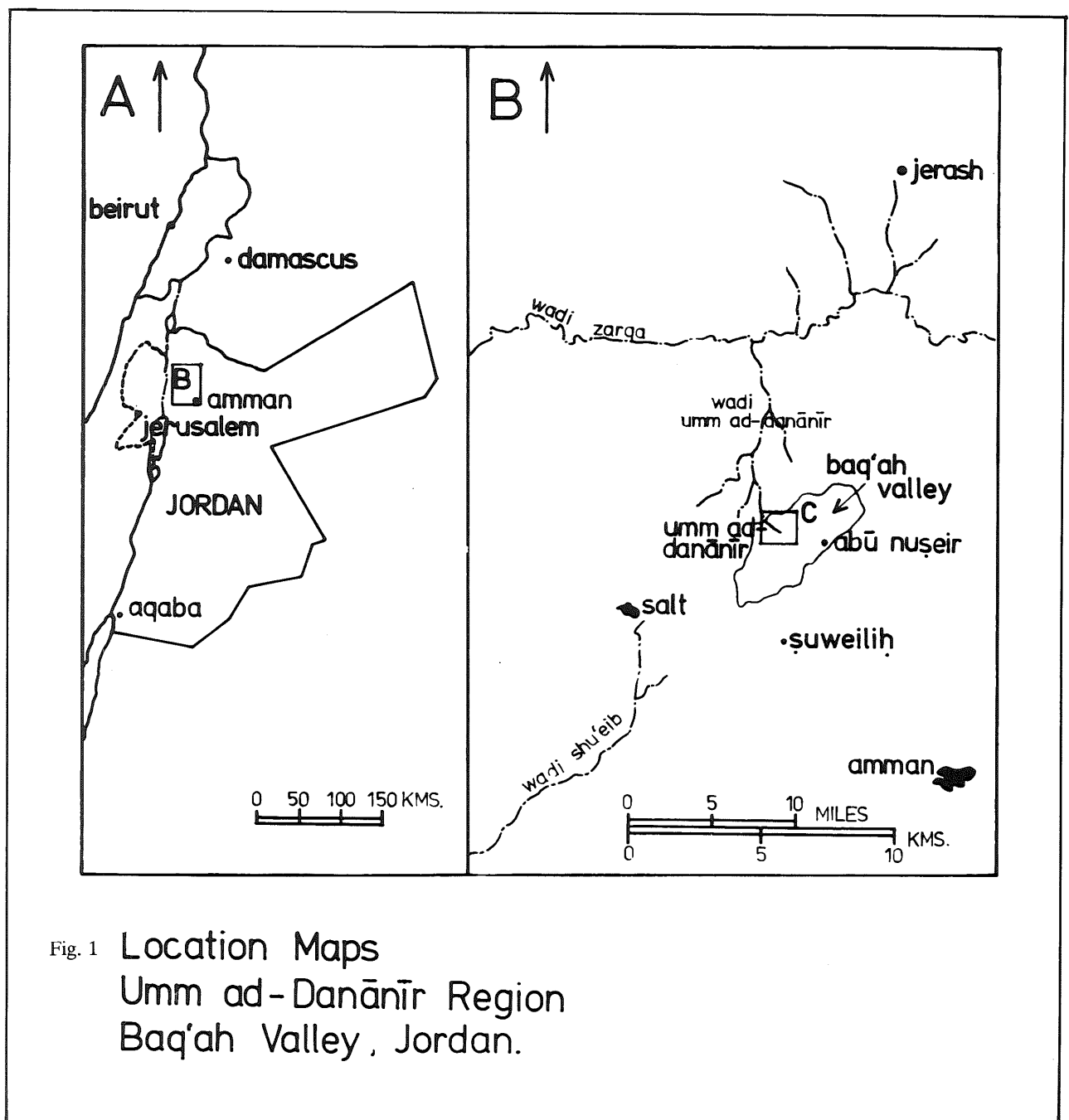


Fig. 1 Location Maps
Umm ad-Danānīr Region
Baq'ah Valley, Jordan.

Rollefson of Professional Analysts), glass and faience (Dr. Sidney M. Goldstein of the Corning Museum of Glass), and Mycenaean and Cypriote imports (Robert B. Koehl of the University of Pennsylvania). The results of these studies, which have contributed some very important and detailed insights to the overall picture, are freely drawn upon in the rest of this report, and this writer would like to express his gratitude to these scholars for their excellent reports.

BURIAL CAVE SOUNDING

As mentioned above, Cave A2 had been partially robbed-out in 1975-76, and we had no idea how much of the cave deposit had been disturbed when we began excavating. The cave is quite large and comprised of eastern and western chambers (each ca. 5 m. in diameter), and is hollowed out of soft limestone and sandstone strata on the lower slopes of Jebel al-Hawāyah. It is not clear whether the cave was naturally formed, but some man-made adaptations are at least suggested by the smoothed-off walls and the division of the cave into two chambers of roughly equal size. The robbers' entrance to the cave was through a hole in the roof, although there was probably a cave mouth further downhill, now covered over by colluvium, as is the case with another very extensively robbed-out LB burial cave (A1 -- Pl. XXXIX, 2), 15 m. to the southwest of Cave A2.

To have completely excavated Cave A2 would have taken many months, and we were forced to limit our investigation to a sounding in the northern half of the eastern chamber and in the northeastern part of the western chamber, covering an area of ca. 20 sq. m. of the estimated 80 sq. m. of the total cave. Fortunately, this was enough to give us a reasonably clear picture of the cave deposits.

In extremely difficult working conditions of high humidity and a meter high working space, we first had to isolate and dig out about a meter of recently disturbed debris (layer 1), with robbers' pits sometimes dipping down another half meter to the floor of the cave. This was a critical and time-consuming operation, since any material from this layer could easily contaminate the presumed undisturbed levels below.

Over 5000 sherds came from this layer, amounting to 56% of the total number of sherds recovered from the sounding. The overwhelming majority of the diagnostic sherds (primarily bowl, lamp, jug, and juglet types) could be dated to LB IA (63%), while another 29% were LB IB and only 8% could be dated to LB II. Several Early Roman I-II and Late Roman III-IV sherds from this layer indicated that the cave must have been used during this period for some undefined purpose.

A unique find from layer 1 was a body sherd from a Mycenaean IIIB squat, biconical stirrup jar. It is comparable in shape and decoration to stirrup jars from the Amman Airport Building, the Deir 'Alla sanctuary, and Level VIII at Beth Shan, and suggests that a trade route from the Jordan Valley passed through the Baq'ah Valley on its way to Amman.

Despite the modern disturbance, all soil from layer 1 was sifted for small artifacts, and this effort was amply rewarded. Glass, faience, copper/bronze, and semi-precious stone beads of many types were recovered, e.g., following the bead classification proposed by Beck (1927), circular oblate and barrel discs (Beck Types I.A.1.a. and I.A. 1.b.), circular oblate (Beck Type I.B.1.a), circular circular (Beck Type I.C.1.a), and fluted spheroid (Beck Type XXIII.A.2.a). Other important finds included complete and fragmented copper/bronze drop earrings, hoop earrings or bracelets, and regularly ribbed toggle-pins without heads (Henschel-Simon's Type 6a), a fragment of an ostrich egg, and two white faience cylinder seals. While one of the cylinder seals has a simple sacred tree motif and may be of local manufacture, the other is very similar to an unpublished LB example from Nuzi and is almost certainly an import from northern Mesopotamia (Pl. XLIII, 1).

A large quantity of faunal and human skeletal material came from layer 1, none of which was from articulated skeletons. The highly alkaline and moist soil conditions of the cave had also left many of the bones in extremely poor condition. Nevertheless, careful analysis of the bones revealed that at least three human adults, three sub-adults, and one infant are represented in layer 1. Although it was difficult to assign genus and species because of the lack of comparative material, it could be determined that frog, turtle, bird, rat, sheep, goat, dog or jackal, donkey, and four varieties of snails were present.

After carefully excavating layer 1, our hope had been to find undisturbed LB levels below. This hope was frustrated by a clear disturbance in antiquity. Layer 2 showed signs of this

disturbance in every locus dug. Whereas the modern debris so prevalent in layer 1 was noticeably lacking here, small artifacts, sherds, whole vessels, and disarticulated bones were found in jumbled heaps under and around many cobbles and boulders.

Some measure of the extent of the disturbance could be gleaned by drawing up distribution charts of artifact types. For example, beads of the same type, which would presumably be found together on the same necklace, were an especially good indicator of how once discrete burials must have been mixed up some time after they were laid out. An extensive pottery reconstruction program provided added confirmation, since some reconstructed whole vessels were comprised of sherds coming from loci which covered the entire area of the sounding and from both layers 1 and 2.

Layer 2 could be divided up into sub-layer 2a, a thin (ca. 25 cm.) multi-coloured sandy layer, and sub-layer 2b, which was thicker (up to a half meter) and made up of a granular brown soil. Sub-layers 2a and 2b are most likely the result of disturbances associated with the laying out of multiple burials, since it was generally the practice to push aside and pile up the bones and goods from earlier burials to make way for the new.

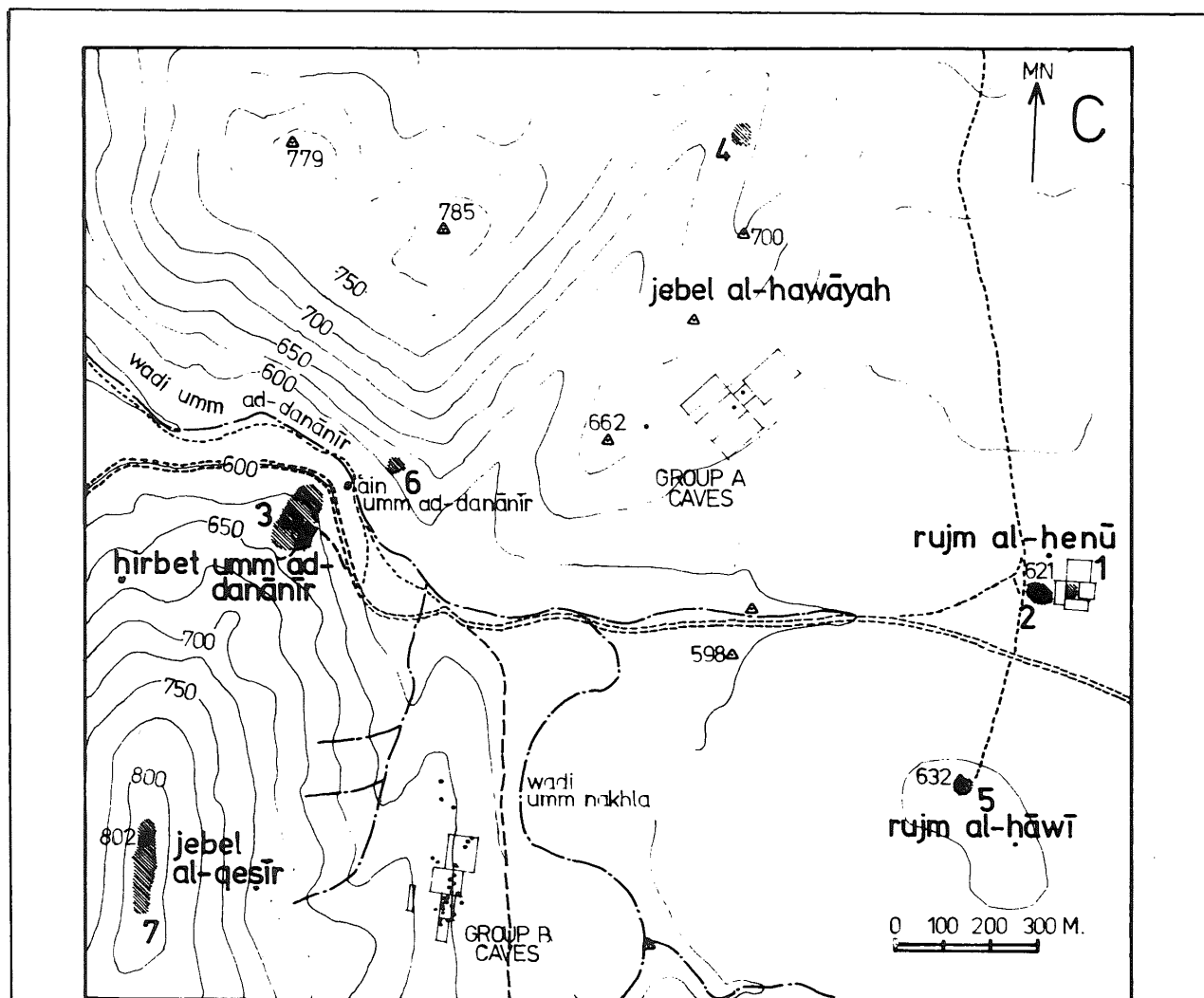










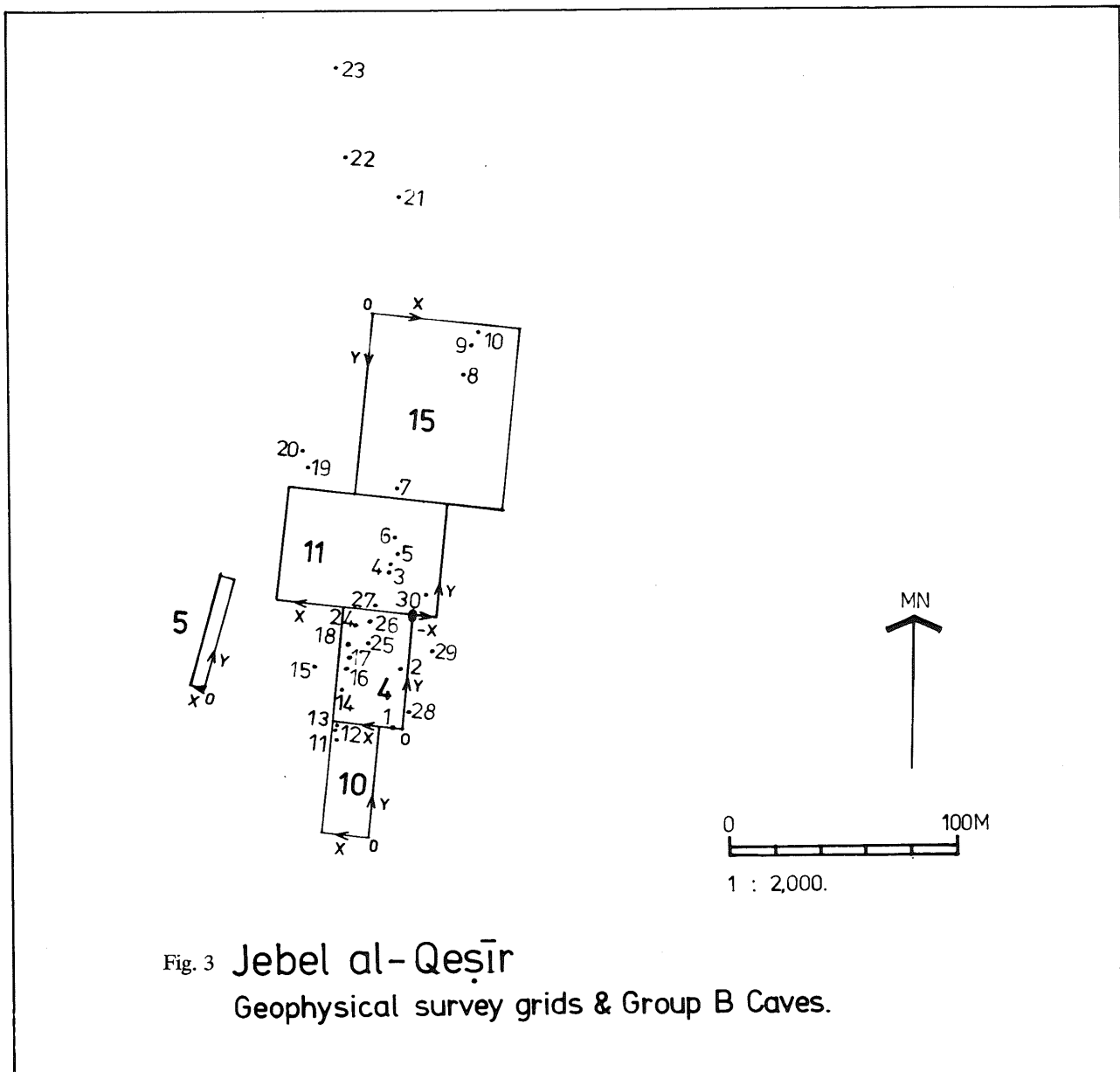
Fig. 2 Umm ad-Danānīr Region
Baq'ah Valley, Jordan.

Ref: 1 : 10,000 Zarqa Basin sheets 27/64 & 19/64.
Jordan Department of Lands & Surveys, 1950.

- Legend**
- Site 
 - Grid 
 - Caves 
 - Roads  (main)
 (secondary)
 - Wadi  (track)
 - Spring 
 - Trig. Point 

Sub-layer 2a was much poorer in cultural and material remains than 2b, mainly owing to its smaller dimensions. While ca. 3000 sherds (35% of the total) were recovered from 2b, only about 500 (5%) came from 2a. The relative percentages of LB IA, IB, and II sherds were roughly the same in each sub-layer (2a -- LB IA 60%, IB 35%, II 3%; 2b -- LB IA 69%, IB 22%, II 8%), and closely matched the percentages for layer 1. However, only one whole vessel (an LB IB lamp type) was found in sub-layer 2a in contrast to 2b which produced no less than 37 jugs (Pl. XLII,5), juglets (Pl. XLII,3-4), lamps, (Pl. XLII,2), and bowls (Pl. XLII,1), of which 27 could be assigned to LB IA, 6 to IB, and only 1 to LB II (a chalice), another three vessels being transitional LB types. Included among the sherds and whole vessels of layer 2 are some particularly fine examples of Chocolate-on-White (Pl. XLII,6), burnished white slip (Pl. XLII,1), and local bichrome pottery (Pl. XLII,5), in addition to rim, base, and body sherds from three Cypriote Base-Ring II jugs.

The small finds from sub-layer 2a numbered only 7 (4 beads, a drop earring, a toggle-pin fragment, and a green stone drop pendant) as opposed to 196 objects from 2b. Beads from the latter sub-layer accounted for most of this difference, which included another 17 types not represented elsewhere in the sounding. Of special interest were the glass crumb (Beck Type XLVI.A.2.d), spot (Beck Type XLVI.A.2.b.1), and multiple stratified eye (Beck Type XLVI.A.7.a.) beads (Pl. XLIV,1). Since glass was probably invented ca. 1600 B.C. in northern Mesopotamia, the glass beads from our cave sounding, which are most likely from LB I contexts, are very near the beginning of glass-making in the Near East and are some of the earliest glass artifacts recovered to date from a Transjordanian site. It is not impossible that the



glass and faience beads were produced locally, as molds found in other Palestinian excavations suggest.

Copper-bronze finds were also plentiful, including 2 complete drop earrings and 3 toggle-pins of Henschel-Simon's Type 6a (most often found in MB IIC-LB IA contexts). One toggle-pin has a ring passing through its eyelet, which is uncommon for Palestinian toggle-pins but known to occur in Cyprus and at Ras Shamra in the Late Bronze Age.

Two more white faience cylinder seals of probable local type (showing sacred tree and joined standing figure motifs) were found in sub-layer 2b. A green stone scaraboid and 4 glazed steatite scarabs (Pl. XLIII, 2), with close Egyptian and Palestinian parallels from MB IIB-C and LB I contexts, clearly point to Egyptian contacts whether by trade or through a tradition of manufacturing technique. Five wood inlay fragments again most likely suggest an MB IIC or LB I context, as does a hollow pottery bull figurine of crude type (Pl. XLIV, 2), which is very similar to an example from the MB IIC-LB IA burial tomb on Jebel Jofeh el-Gharbi in Amman (Harding 1953: Fig. 9, 105).

The faunal and human skeletal material from layer 2 does not differ greatly from the layer 1 material, but did provide some important new information. The minimum number of humans represented is 6 adults, 3 sub-adults, 2 children, and 3 infants. Arthritic lipping on vertebrae and limb bones, coupled with carious lesions and the degeneration of a considerable number of teeth, follows the pattern in pathology of other agricultural groups, and is a definite indicator that the LB peoples in the Baq'ah Valley were engaged in some type of agricultural activity (unfortunately, pollen and flora, which are poorly preserved in an alkaline environment, were absent in the soil samples examined). Except for the possible presence of cattle and no rodent bones, the fauna represented in layer 2 is identical to that in layer 1. Apart from the snails, over 50% of faunal material was from sheep and goat for both layers, clearly pointing to animal husbandry as another part of LB Baq'ah Valley economy.

Although it would have been more desirable to have recovered intact burials from the various sub-phases of the Late Bronze Age, our limited cave sounding did provide detailed evidence for an extensive LB I presence in the valley, which to a lesser extent continued on through the rest of LB. Moreover, the great quantity of exceptionally well-made local pottery and artifacts and good evidence of contacts to the north, south, and west are virtually impossible to reconcile with Glueck's hypothesis that only nomads and/or "semi-nomads" inhabited Jordan, south of the Wadi Zarqa, in the Late Bronze Age (Glueck 1940:124-25, later modified 1970:141). Evidence for animal husbandry and agriculture, which should not be unexpected for such a highly fertile and well-watered valley as the Baq'ah is today, are additional strong arguments for fully sedentary LB occupation in the region.

* Pl. V Pl. XLII

CESIUM MAGNETOMETER AND RESISTIVITY SURVEY

Assuming the excavated cave to be representative, it appeared likely that other burial caves in the region would be silted up and their mouths covered over by soil eroded away and washed down from the hill above. Obviously, surface exploration would then be of little use. Even where a cave entrance might be partially visible, there would be a high probability of modern disturbance. Completely filled-in caves, on the other hand, could be expected to have intact burials, and might produce the much-needed stratigraphic sequence of Transjordanian LB pottery and artifacts.

Earlier MASCA cesium magnetometer surveys had been successful in detecting graves (Ralph 1969). In order to test the magnetometer's usefulness for the Umm ad-Danānīr region, the magnetic susceptibilities of stone and soil samples from the 1977 cave excavation were measured using a single sensor, with frequent checks on the background field intensity. The difference in average magnetic susceptibility between the cave fill (0.005 nT m³/kg) and the sandstone and limestone bedrock, which showed a slight susceptibility, was statistically significant. Assuming an 8-50 m³ volume range for the filled-in caves, magnetic anomalies between 10 and 50 nanotesla (nT) could be expected. The cesium magnetometer (with its 0.1 nT sensitivity) would detect the complete range of projected anomalies.

Our expectations appear to have been completely justified. Another 32 partially or fully robbed-out burial caves were located on Jebel al-Hawāyah and Jebel al-Qeṣīr (Figs. 2-4). Of

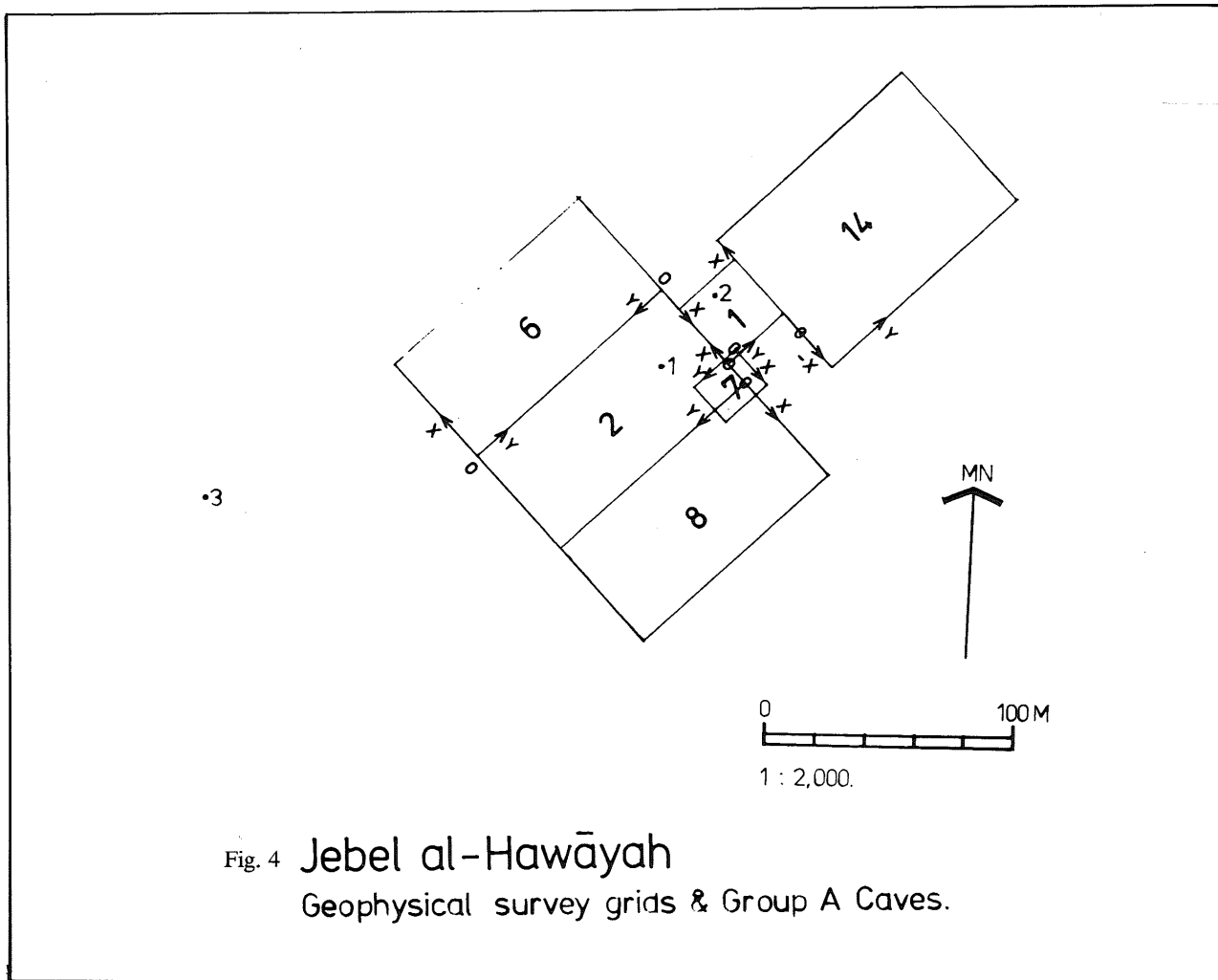


Fig. 4 **Jebel al-Hawāyah**
Geophysical survey grids & Group A Caves.

those caves whose robbers' dumps could be surface sherded (total of 23), 19 were LB in date (5 MB IIC/LB IA, 3 LB 1A, 3 LB II, 7 LB, and 1 LB II/Iron IA). Three burial caves were Byzantine, and one was Mamluk. In between these robbed-out caves, no less than 18 significant anomalies in the 10-50 nT range were located and mapped. Since these anomalies are near the robbed-out caves and in the same soft limestone-sandstone strata, some of them undoubtedly represent filled-in LB burial caves.

On Jebel al-Qeṣīr, the robbed-out burial caves and the anomalies run in lines along several tiers (Pl. XL,1), which may be naturally formed or possibly cut by man as roads or terraces since large boulders appear to have been intentionally placed along the tiers in places. Although natural processes could easily have hollowed out the soft limestone, smoothed-off cave walls, one two-chambered cave, and well-cut elliptical, square, or rectangular entrances (occasionally recessed, perhaps to hold a blocking stone) argue for human agency or at least adaptation in the formation of the caves.

Two-thirds of the caves had been extensively robbed out (cf. Pls. XLI,1 and XLI,2), so that a good idea could be gained of the sizes and shapes of caves from the various periods represented. LB caves varied in size from a maximum dimension of ca. 10 m. down to 1 m., and were circular, elliptical (both horizontally along the hill and vertically into the hill), or two-chambered in shape. Many of the robbers' dumps associated with these caves had large quantities of pottery and bones, probably attesting to multiple burials over several generations. From the more than 270 diagnostic sherds collected from the robbers' dumps came some unique finds, including complete profiles of LB I and II vessels, an MB IIC black cylindrical juglet, and 3 sherds of at least two more Mycenaean IIIB stirrup jars, similar in type to that found in excavated cave A2.

The three Byzantine caves and one Mamlūk cave, in contrast to the LB caves, produced only 18 diagnostic sherds, and only one of these caves (Byzantine) had a considerable number of bones in its robbers' dump. While the Mamlūk cave was large (maximum dimension of 4.5 m.) and irregularly shaped, the Byzantine caves varied in shape (circular and irregular ellip-

tical) and were quite small (average dimension of ca. 2 m.), which suggested their use for only a single burial.

Since Early Bronze Age, Iron Age, and Roman remains are also known to exist in the region, cemeteries for these periods should be close by. However, nothing to date has been found of them.

The cesium magnetometer was used to survey 3.4 hectares of ground in the immediate vicinity of the robbed-out caves on Jebel al-Hawāyah and Jebel al-Qeṣīr (Figs. 2-4). Grid 11 (Fig. 5) on Jebel al-Qeṣīr provides a good example of the type of data we obtained. As is readily apparent, there is a great deal more magnetic activity near the robbed-out caves on the lower part of the hill in contrast to further up the hill where there is virtually no activity. Each of the robbed-out caves had an associated robbers' dump downhill from the cave entrance, and predictably these show up as magnetic highs (X14, Y0; X10, Y16; X8, Y24; X9, Y32; X - 9, Y10). The robbed-out caves themselves show up either as lows (B3 and B30) or blend in with the background intensity (B27, B5, and B6), depending upon the amount of magnetic soil fill which has been removed and the size of the air cavity (with no magnetic susceptibility) thus created. When the air void is large enough, it is possible to have a low anomaly relative to the slightly magnetic bedrock.

A number of magnetic highs on the grid, which are not due to robbers' dumps, are very likely filled-in burial caves. Anomalies of 15 nT (X14, Y7) and 10 nT (X14, Y40), both 2 m. x 4 m. in area, are equivalent in size and located on the same line as robbed-out caves B27, B5, and B6, so that they are probably best explained as burial caves, missed by the robbers.

A 15 nT high (X17, Y22), 4 m. x 6 m. in area, with a 10 nT reverse anomaly to the north, may represent an extension of Cave B3, since this cave appears to have been only partially robbed-out. Other highs occur further downhill along another line of robbed-out burial caves, which includes Cave B30, e.g., a 15 nT anomaly at X1, Y27, and a 10 nT one at X-6, Y32.

Magnetic lows are also of potential importance, since they could in fact turn out to be caves or parts of caves that have large air voids, which would naturally be much easier to excavate than filled-in caves. For example, a 10 nT anomaly at X22, Y20, 2 m. x 2 m. in area, could be a further extension of Cave B3. The 20 nT low at X-5, Y16 may be a large unfilled cave with only its mouth covered over, although the high gradient dipole, which showed up even more clearly in a high resolution grid with a 1 m. spacing of measurement, suggests surface iron.

The same pattern of magnetic highs and lows near robbed-out burial caves repeats itself in the other grids on the lower slopes of the two hills. However, only future excavation of various types of magnetic anomalies can enable one to interpret the results more exactly.

The average intensity of the Earth's magnetic field for the Umm ad-Danānīr region was about 43,850 nT, which normally decreased slightly during the morning hours. Since the variation was always quite slow and did not show any disturbances, a single sensor in its absolute mode was used for the survey. This speeded up operation over difficult terrain, even though two sensors in the differential mode would have eliminated all variations, including the diurnal one.

We were also successful in locating two Late Bronze Age settlement sites, again fulfilling our prior expectations and matching the size and richness of the LB cemetery.

Ḥirbet Umm ad-Danānīr (Site 3--Fig. 2) is a large (ca. 1 hectare), multi-terraced site, strategically located above the strong, perennial spring of 'ain Umm ad-Danānīr (Pl. XL,2). It is situated on the northern side of Jebel al-Qeṣīr, and would have guarded the northwestern pass of the Baq'ah Valley, where a trade route between the Jordan Valley and Amman may have run. The site had previously been explored by Glueck (1939:197 - 98) and de Vaux (1938:421), who noted the ancient walls and structures still visible on the surface and assigned them largely to the Iron Age (some Early Roman and Byzantine sherds were also found). According to our systematic surface sherding (total of 306 diagnostics), however, LB II turned out to be a main period of occupation, along with Iron IA and IC, Iron IIA-C, Early Roman III, Early Byzantine, and Mamlūk. Thus, besides having been occupied during LB II, Ḥirbet Umm ad-Danānīr is important as a transitional site from LB II to Iron IA, when a major cultural change occurred in Transjordan with the arrival of the Israelites, Ammonites, etc.

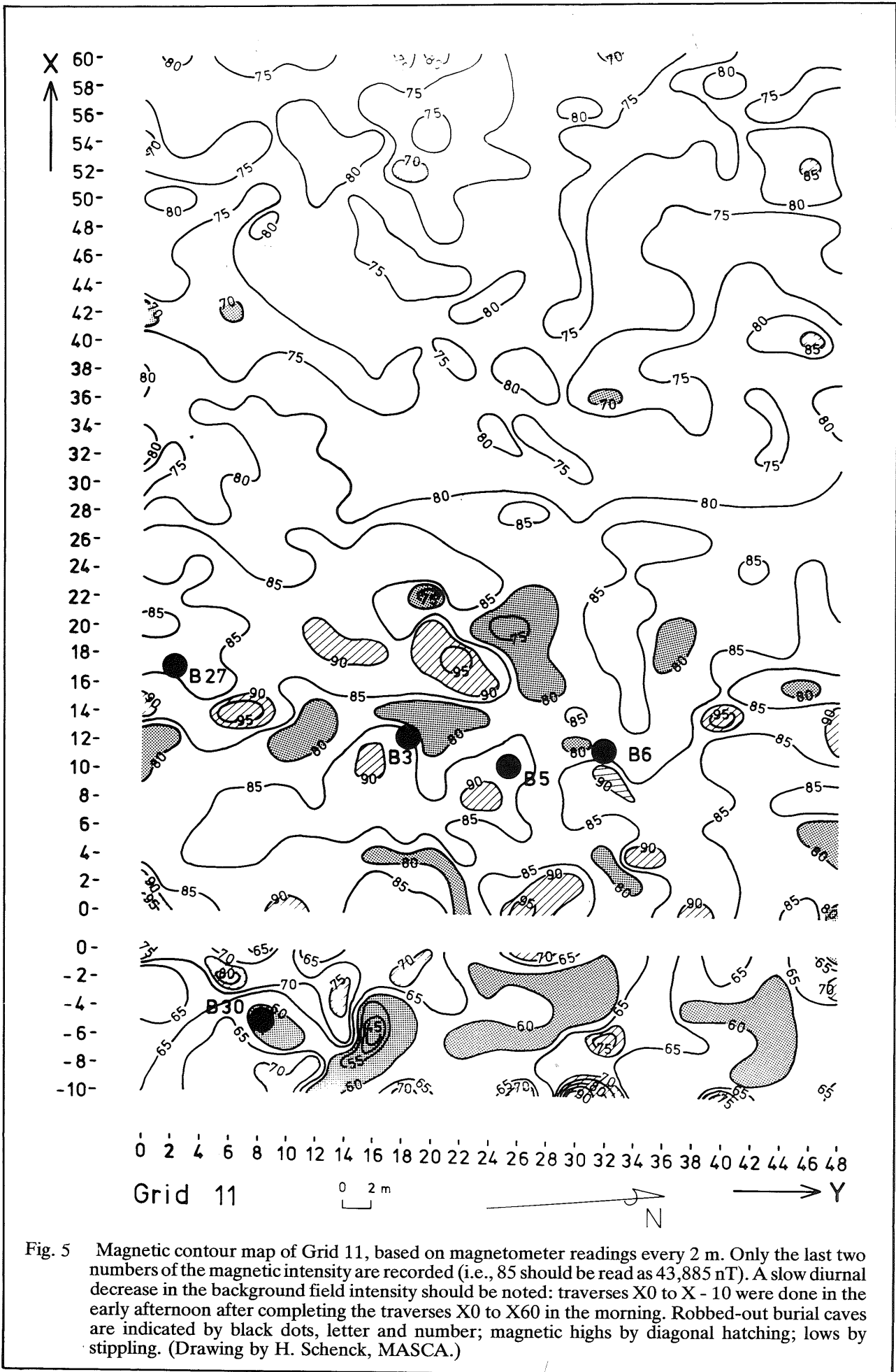


Fig. 5 Magnetic contour map of Grid 11, based on magnetometer readings every 2 m. Only the last two numbers of the magnetic intensity are recorded (i.e., 85 should be read as 43,885 nT). A slow diurnal decrease in the background field intensity should be noted: traverses X0 to X - 10 were done in the early afternoon after completing the traverses X0 to X60 in the morning. Robbed-out burial caves are indicated by black dots, letter and number; magnetic highs by diagonal hatching; lows by stippling. (Drawing by H. Schenck, MASCA.)

The other LB site, Rujm al-Ḥenū, located ca. 650 m. southeast of the line of Jebel al-Hawāyah burial caves in the middle of the valley (Sites 1 and 2--Fig. 2 and Pl. XXXVIII,2), is comprised of two "megalithic" buildings with very clear surface ground plans (dated by Glueck [1939:194] to the Iron Age). The eastern rectangular building (ca. 25 m. x 30 m.), with a central courtyard surrounded by other rooms, is similar in structure to the LB Amman Airport Building (cp. Fig. 7). Besides Iron IIC, Late Roman/Early Byzantine, Umayyad, Mamlūk, and modern sherds from the various rooms, MB IIC/LB IA sherds were discovered in the central courtyard of the building. Since no MB IIC/LB IA sherds were found within 500 m. of the structure after systematic traverses of the region, it now appears highly probable that we have located another example of a characteristic MB-LB architectural type, which also occurs west of the Jordan River. Secondary constructions in the corners of several rooms indicate that the building was used by later inhabitants of the region. Although no exact determination was possible, the soil accumulation within the building appears to be considerable.

Surface sherding of the western "megalithic" building of Rujm al-Ḥenū (Site 2), which is actually situated on a small tell ca. 3 m. high, suggests that it may have been constructed during LB II, although most of the evidence points to Iron IIC as the main period of occupation. The main rectangular structure (46 m. x 14 m.) has a rectangular tower on the south and a circular tower, which appears to run over an earlier wall, on the west.

In order to determine whether occupation at Rujm al-Ḥenū was more extensive, a Gossen Geohm resistometer was used in an attempt to locate buried walls and structures. The specific resistivity of soil samples from the valley, collected in 1977, had previously been found to vary between 20 and 60 ohm-m., which was much lower than the values for limestone and sandstone (about 5000 ohm-m.), used in the construction of the "megalithic" buildings. Therefore, stones of buried structures should be detectible. A four-probe Wenner configuration with a 1 m. probe separation was used and found to be quite suitable for our purposes. Grids were run on each side of the eastern building and between the two buildings of Rujm al-Ḥenū, covering a total area of 0.62 hectares (Fig. 6). A number of fairly large, diffuse areas of higher resistivity were located, which are very suggestive of a larger area of settlement. However, as with the magnetometer results, the various types of resistivity patterns will have to be tested by excavation.

Sites of other periods were located and explored in the Umm ad-Danānīr region. The most impressive of these is the large Early Bronze II-IV site of al-Qeṣīr (Site 7--Fig. 2), which Glueck (1939:198-200) dates to the same period. It covers the entire top of Jebel al-Qeṣīr, and has many structures and an encircling defensive wall still visible on the surface.

Three Iron II sites were investigated. Two of these were newly discovered, but had been almost totally destroyed by modern earth-moving. Rujm 'ain Umm ad-Danānīr (Site 6--Fig. 2), located about 100 m. northeast of the spring, may have been a "megalithic" building, since sherds were found within a 20 m. diameter area and a 5 m. line of limestone and sandstone boulders within this area could be an ancient wall. Only Iron IIB-C sherds were found, suggesting that the site was an offshoot of Ḥirbet Umm ad-Danānīr in prosperous times. Rujm al-Hawāyah (Site 4--Fig. 2), located up a side valley behind Jebel al-Hawāyah, also appeared to be a "megalithic" building and another offshoot of Ḥirbet Umm ad-Danānīr. Its main period of occupation was Iron IIC.

The third Iron II site, Rujm al-Hāwī (Site 5--Fig. 2) had been previously explored by Glueck (1939:194) and de Vaux (1938:420), who also assigned dates within the Iron Age. A large (ca. 50 m. x 30 m.) "megalithic" building is situated on a small tell 5 m. high, and two circular towers (*rujm malfūf*) are located to the south and one to the west of the main structure and separated from it. Surface sherding indicates an Iron IIC date for construction with later uses in Early Byzantine and modern periods. It is very plausible to view Rujm al-Hāwī and the western building of Rujm al-Ḥenū (Site 2), which are ca. 350 m. apart, as examples of Iron Age forts which were advanced positions guarding routes to Amman. Many other Iron Age forts of the same type exist in the Amman area, and indeed there are several more scattered in other parts of the Baq'ah Valley, which we were not able to fully explore during the 1978 survey. Ḥirbet al-Mudmār (Glueck 1939:192-94), located a half kilometer south of Rujmal-Ḥenū, is one of the largest and best preserved of these, with standing walls up to 5.5 m. in places.

A very important addition to our knowledge about the Baq'ah Valley, totally missed by earlier explorers, comes from a collection of 250 lithic artifacts concentrated in nine of the magnetometer grids on Jebel al-Hawāyah and Jebel al-Qeṣīr. Seventeen implement and five

core types, dating to the later Middle Palaeolithic (ca. 45,000 B.C.), Upper Palaeolithic, Epi-palaeolithic, and Neolithic periods, greatly push back man's earliest presence in the valley. The flints may have been deposited on the lower slopes as colluvium. Alternatively, the flints may mark the sites of encampments along the shore of a lake which filled the valley in the Pleistocene and immediately post-Pleistocene periods.

SCIENTIFIC STUDIES

The LB burial caves and probable settlement(s) in the Umm ad-Danānīr region promise to fill in a large gap in Jordan's cultural history, since to date only a few small LB sites have been excavated on the Transjordanian plateau and much of this material is still unpublished. With the Department of Antiquities' encouragement, MASCA has launched an ambitious program of scientific analyses, which will take full advantage of the many tools that modern science has made available to archaeology. The uniqueness and importance of the archaeological materials already available for study, as well as what can reasonably be expected to be recovered in future seasons, make it imperative that as much information as possible be derived from these materials. MASCA is an ideal home base from which to develop and coordinate such a programme.

Pottery, the main evidence for chronology and the most abundant cultural material, needs to be studied utilizing every available resource. Beyond the standard typological distinctions of shape, decoration, ware description, etc., mineralogical and chemical composition analyses are needed to fully characterize the pottery. Thin-section mineralogical studies (for the identification of inclusions, precise determination of the presence or absence of a slip, etc.) are a *sine qua non* and a basic starting-point for the use of more sophisticated methods of chemical analysis. Fourteen pottery sherds from the 1977 cave sounding, representing the spectrum of LB ware types (from fine Mycenaean, Cypriote, and Chocolate-on-White to the coarser local wares), have been thin-sectioned and are now being studied. Concurrently, 200 mg. samples from the same sherds have been submitted to Brookhaven National Laboratory for neutron activation analysis. The chemical "fingerprints" of the wares will be statistically compared with the results from other analyses stored in a computer data bank and the best matches found for determining the origin of the pottery. The thin-section and neutron activation studies may eventually be complemented by other types of analyses (e.g., electron microscopic and x-ray studies), which could shed light on the provenience and technological aspects of the pottery.

Despite their chemical complexity, the glass and faience beads also warrant analyses, in order to elucidate the provenience and technology required for some of Jordan's earliest glass. A new technique, an argon-beam microprobe, will be tried for a start.

Similarly, for elucidating Jordan's early metallurgical history, the copper/bronze artifacts are presently being analyzed by two basic techniques: proton-induced x-ray emission spectroscopy (PIXE) at the Atomic Energy Research Establishment in Harwell, England, and

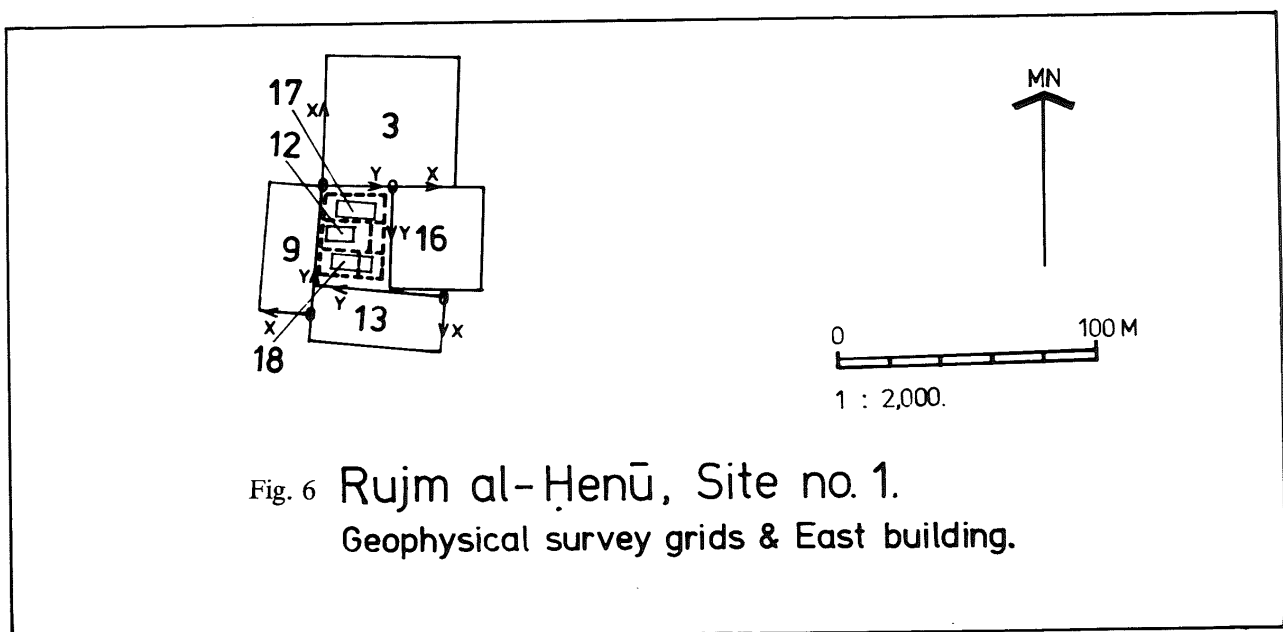


Fig. 6 Rujm al-Henū, Site no. 1.
Geophysical survey grids & East building.

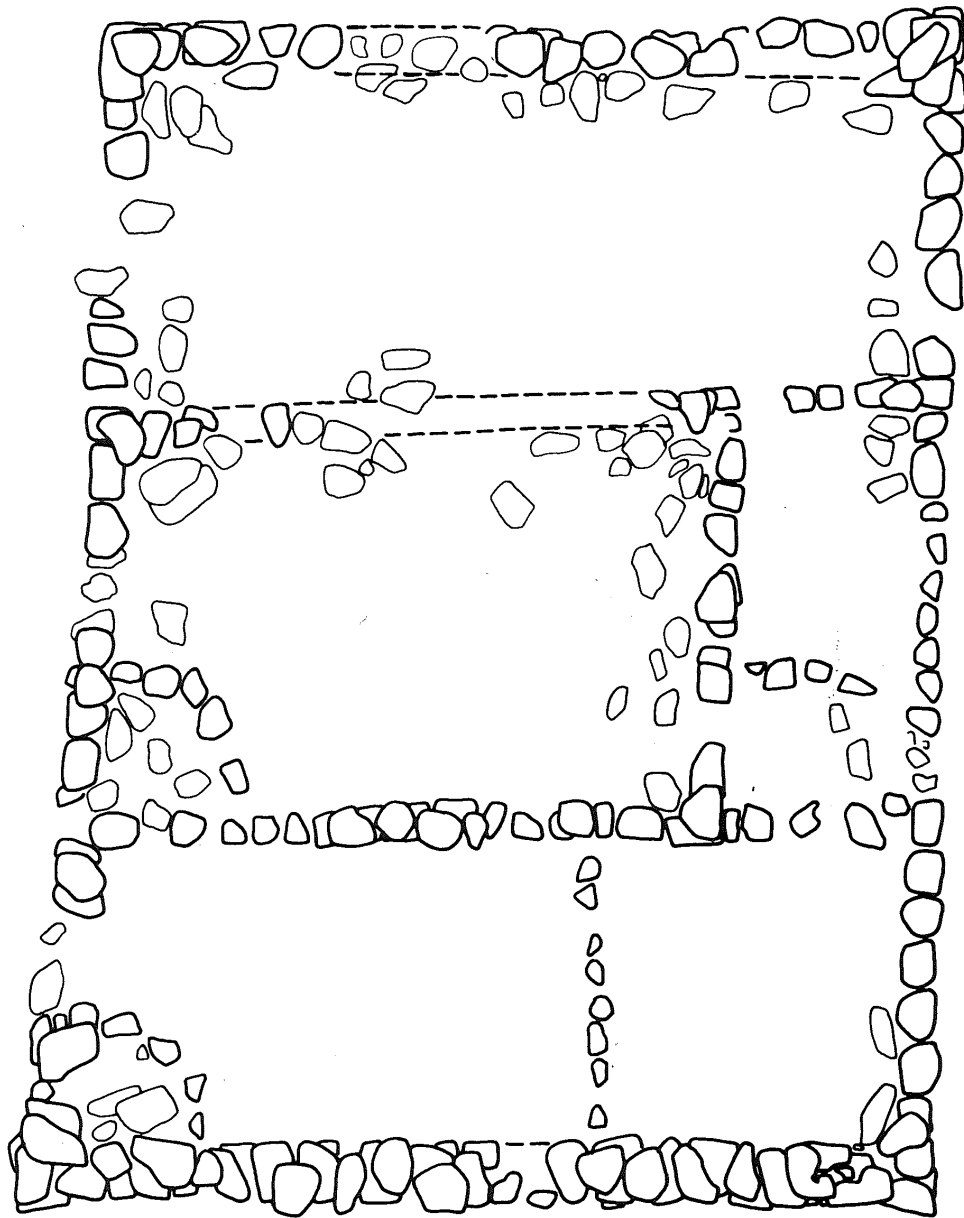
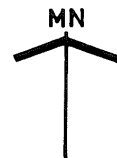
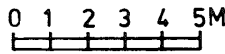


Fig. 7 Rujm al-Henū
Plan of East Building.
Scale - 1 : 100

Susan M. Balderstone A.R.A.I.A. Architect.



6.11.1979.

electron microscopic studies at the Laboratory for Research on the Structure of Matter, University of Pennsylvania.

This is only the tip of the scientific "iceberg," and other types of analyses will be employed as the occasion demands. Thermo-luminescent and radio-carbon dating, an important part of MASCA's research thrust, can help in establishing and testing the LB pottery chronology for Transjordan, where one should expect the pottery traditions to be different from sites west of the Jordan River and where Egyptian synchronisms may be more difficult to establish.

MASCA has also been a pioneer in the fields of geophysical prospecting and aerial photography as applied to archaeology, and these will continue to be important adjuncts to any future excavation or survey in the Baq'ah Valley. Experiments with new equipment could

prove them to be even more productive than equipment used in the past. For example, ground-penetrating radar could probably detect burial caves in the Umm ad-Danānīr region more precisely than the cesium magnetometer, and hang-gliders and kites are possible inexpensive alternatives to planes for aerial photography.

Virtually nothing is known about the vegetational, agricultural, and related environmental conditions of LB Transjordan. Since it is not unreasonable to assume that the Baq'ah was as fertile and well-watered in antiquity as it is today, we plan to continue to collect soil samples in future seasons for pollen and palaeobotanical analysis. MASCA's earth auger will also be used to take corings in various parts of the valley.

With the projected recovery of more faunal and human skeletal material, hopefully articulated, a fuller picture of LB animal and human population should emerge. Together with the palaeobotanical data and the judicious use of ethnographic parallels and historical sources, LB environmental and ecological conditions in the valley and man's adaptations to such can be reconstructed.

CONCLUSION AND FUTURE PLANS

Excavation at the earliest possible date is now of top priority, before more robbing and development in the area occurs. Various types of magnetic anomalies should be tested to exactly define the magnetic "signatures" of LB burial caves, and undisturbed burial caves will need to be fully excavated to recover more artifactual material for scientific analysis and study.

Soundings must also be made at Ḥirbet Umm ad-Danānīr and Rujm al-Ḥenū, particularly the latter, in order to verify the LB surface sherding evidence and to move one step closer to a more extensive excavation of these potentially important settlement sites.

Landowner approval has already been obtained for excavating the burial caves and the settlement sites. It is hoped that the same institutional support and affiliation will continue, since this will expedite getting back into the field soon.

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EXCAVATIONS AT QASR AL-HALLABAT, 1979

by
Ghazi Bisheh

Excavations were carried out at Qasr al-Hallabat,¹ from the 16th June to the 20th July 1979 with the express purpose of uncovering as many of the Greek inscriptions scattered throughout the castle as possible². Altogether ninety-five Greek inscriptions engraved on regularly dressed basalt stones were uncovered. The vast majority of these inscriptions form a part of an edict issued by the Byzantine Emperor Anastasius (491 - 581 A.D.) for the administrative and economic re-organization of *Provincia Arabia*. In addition, numerous pottery sherds, fragments and coloured mosaic tesserae from the Umayyad period, were unearthed. These finds together with the architectural evidence, clearly indicated the extensive reconstruction of the castle and the remarkable development of the site during the Umayyad period. Although the excavations did not solve the problem of the precise architectural phases of the castle, yet they provided a new perspective for solving it.

The Castle: The castle which is situated some 25 kms. northeast of Zarqa, north of the highway which connects Zarqa with the oasis of Azraq, was built on the usual lines of Roman military posts in southern Syria. The plan (Fig. 1; Pl. XLVI,1), is a square of 44.00 m. The angles are strengthened by square towers, originally three stories high and measuring 5.70m. to the side. They project from the line of the side walls by 2.20 - 2.40 m. Entrance to the building is gained by a single doorway, 1.25, wide, in the middle of the northeast wall. The entrance opens into a passageway measuring 4.10 x 3.90 m. In the middle of this passageway is located an arch springing from piers, evidently to facilitate the roofing of the passageway with corbelled courses of stone.³ At the far end of the passageway is another entrance surmounted by a semi-circular arch. It was originally 2.50m. wide but was later narrowed to 1.50m. by adding a pier to each side of the entrance. (Pl. XLVI:2). This entrance opens into the courtyard which is paved with flagstones. In the courtyard is a cistern.

A series of oblong and square rooms, originally two stories high, surrounds three sides of the central courtyard.⁴ All rooms on each side have interconnecting doors. The north-west side is occupied by an inner structure measuring 16.25 x 16.20m. built of roughly quadrated limestones which are laid in courses without mortar. The inner structure also consists of a central courtyard surrounded on all sides, except the south-east where the main entrance to the structure is situated, by a series of parallel rooms. In the courtyard is another cistern.

The enclosure wall, which is about 1.25 m. thick, consists of an inner and outer facing of smooth quadrated limestone and basalt with a core of lumps of stones, rubble and mortar.

THE ARCHITECTURAL PHASES OF THE CASTLE:

There are only two clear documents for dating the castle: one is a latin inscription on a lintel which referred to the construction of a *novum Castellum* during the reign of the Roman Emperor Caracalla,⁵ and the second is a Greek inscription from the reign of Justinian dated specifically to the years 529-30 A.D.⁶ However by comparing the evidence of the inscriptions with that afforded by inspection of the building and its masonry, we may distinguish three principal stages in the construction of the castle:-

I- In the first stage the small inner structure was built, a point which has already been acknowledged by Butler.⁷ Although we have no concrete evidence for dating this phase, yet it is obvious that it ante-dates the enclosure wall and the rooms inside it. There are several reasons for this conclusion:-

- A) There are two qualities of workmanship within the castle. In the inner structure the masonry is of roughly quadrated limestone laid in courses without mortar, and with average measurements of 0.80 x 0.60 x 0.30m.; whereas in the outer enclosure the masonry consists of smoothly squared blocks of basalt and limestone which average 0.50 x 0.35 x 0.30m.
- B) Whereas the thickness of the partition walls of the inner structure averages 1.17m., it is only 0.93m. in the partition walls of the larger enclosure.
- C) The northwest outer wall is not bonded with the northeast wall of the inner structure but merely abuts against it. This suggests that the inner structure existed before the larger enclosure.

The original date of the inner structure remains as yet uncertain. It is likely, however, that it was built as a military post or watch-tower to provide an indepth protection for the Via-Nova TRAJANA which was constructed between 111-17 A.D. The fact that some of the basalt stones bear Nabataean inscriptions does not permit us to conclude automatically that the inner structure, which was built exclusively of roughly quadrated limestone, had been constructed by the Nabataeans. The basalt stones were used only in the second phase of construction when the larger enclosure with its square towers was built between 212-15 A.D. This fact may indicate that the submission of the Nabataean kingdom and its annexation to the newly founded *Provincia Arabia* in 106 A.D. did not put an end to the Nabataean trading activities which continued at least down to the first quarter of the third century.

II- In the second phase the enclosure wall together with the rooms inside it and the corner square towers were constructed. Its plan is similar to that of many Roman castles to be found in Syria. ⁸ This phase might be dated by the latin inscription which refers to the construction of a new castle to the years 212-13 A.D.⁹ Tribal unrest might have prompted the enlargement of the watch-tower and the construction of the castle, for it was in this period that new forts were constructed and existing ones were enlarged, for example Qasr Uwaynid and Usaykin. ¹⁰ It seems that the castle continued in use down to the 6th century when some restoration works were carried out in the year 529-30 A.D.¹¹ However, the castle was apparently abandoned and fell into disuse during the first half of the seventh-century, perhaps as a result of the Persian invasion (614-40 A.D.) which undermined the military structure of the Byzantine empire in Syria and Palestine.

III- In the third phase, which is assigned to the Umayyad period (640-750 A.D.) on the evidence of pottery sherds and carved stucco (see below), the castle underwent a massive repair. It would appear that the layout and wall divisions of the earlier structure were retained, though in the course of this reconstruction the basalt stones which bear Greek inscriptions were removed from their original location, inserted in the walls and covered with a thick coat of plaster.¹² Actually the archaeological evidence points to a remarkable new development of the site, because we find not only the rebuilding of the castle, but also the appearance of new structures such as the extra-mural mosque situated 15m. to the southeast of the castle, and a bath, Hammam al-Şarāḥ.¹³ Situated some 2 kms. to the east at the castle, as well as five cisterns and huge water reservoir¹⁴ to the west and southwest of the castle respectively. The reservoir (Pl. XLVII), which is much silted up, is built of well-squared blocks of limestone. A few sherds of the Umayyad period were extracted from the mortar between the stone courses.¹⁵ This indicates that the reservoir was reconstructed, if not actually built, during the Umayyad period. In addition to these monuments, there are also signs of rudely built ancillary structures which might have been temporary living quarters. The most important feature of the site, however, is an irregularly shaped enclosure — some 300m. long from south to north — gradually narrowing towards the north. The walls which are flush with the ground and visible from an aerial photograph¹⁶ (Pl. XLVIII) are strengthened by semicircular buttresses on their outer and inner faces. This enclosure can be compared to the large enclosures at Qasr Al-Ḥīr al-Sharqī and Qasr Al-Ḥīr Al-Gharbī in Syria, the walls of which exhibit the same alternation of semicircular buttresses on either side¹⁷. Since this enclosure at Hallabat has not been investigated properly, it is difficult to decide at present for what purpose this walled enclosure was built.¹⁸ It might however be tentatively related to some kind of concern with water and irrigation or animal husbandry.

The castle's occupancy seems to have ended with the fall of the Umayyad dynasty. This abandonment of the castle was quite final, for there is nothing to indicate a later reset-

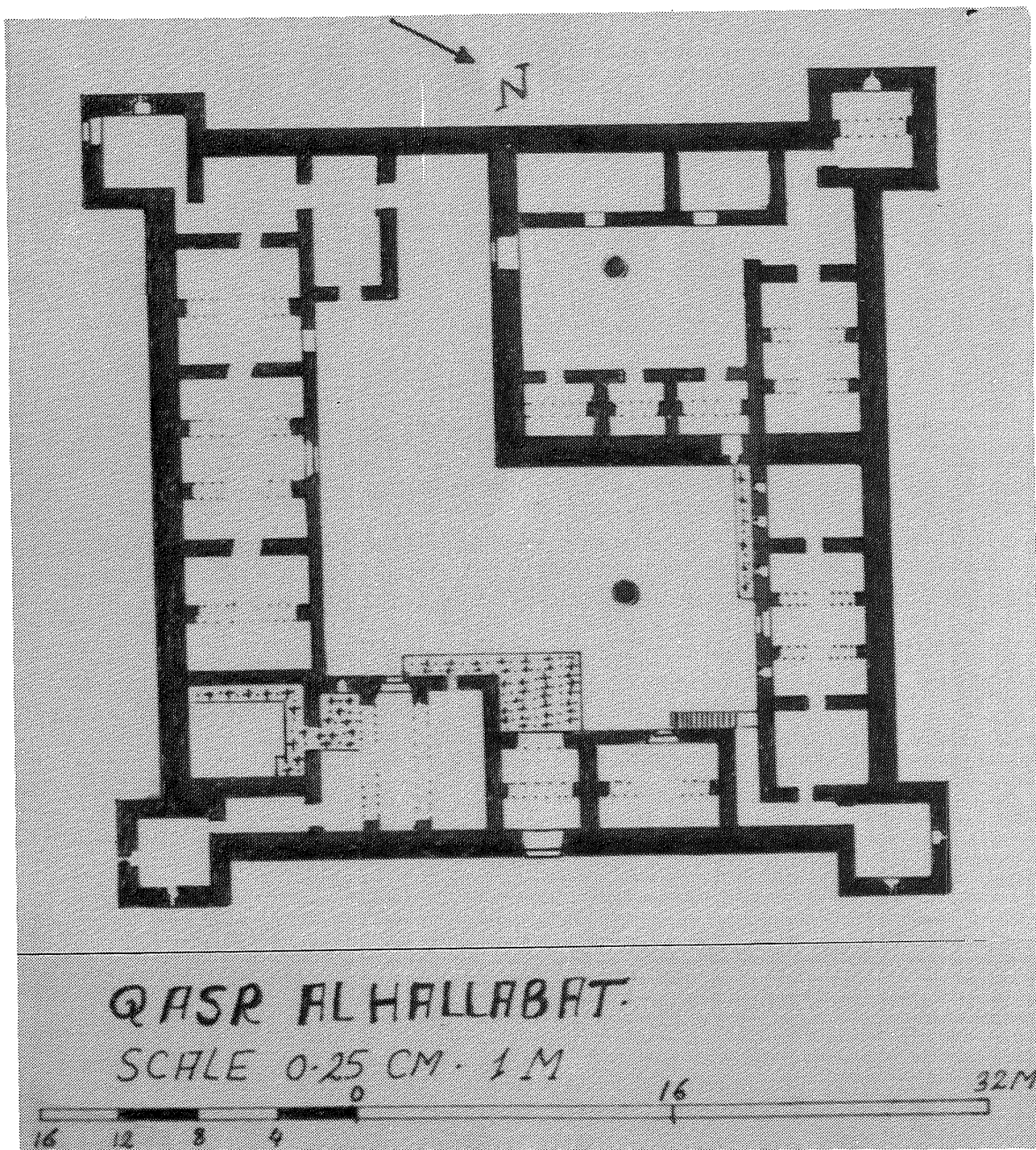


Fig. 1 Qasr al-Hallabat. Ground plan; after Butler.

tlement with the possible exception of squatters' settlements or passing bedouins.¹⁹

The Pottery:- The area outside the castle has produced quantities of pottery sherds dating principally from the third to the eighth centuries.²⁰ Excavations within the castle, however, tend to present a different picture, for the pottery sherds uncovered are reasonably representative of the types in use throughout the Umayyad period with exterior ribbing, combing, incising, and painting.²¹ It would thus appear that the massive restoration works carried out by the Umayyads had removed all traces or material remains of earlier occupations.

For purposes of convenience pottery sherds can be divided into four major groupings:-

- A) Low, flat-bottomed, flaring-sided basins with blackened cores and surfaces. Most of these basins have slight ribbing and a combed wavy band around the middle or neck (Pls. XLIX: 1-3). Good parallels appear among the pottery from Mt. Nebo, kh. al-Mafjar,

- Heshbon, Pella, Amman citadel and Amman Forum.²²
- B) Sherds of dark grey ribbed body painted over with white lines. In some instances the body is also decorated with carinated undulation (Pl. XLIX: 4). Vessels of this kind, which appear to be one of the most characteristically Umayyad types, have been found at a number of sites in Jordan and Palestine, e.g. Mt. Nebo, kh. al-Mafjar, kh. al-Nitlah, Amman citadel, and Pella.²³
 - C) Smooth, well-levigated creamy-coloured ware with red paint on the surface (Pl. L:1). This type also appears to be particularly characteristic of the Umayyad period.²⁴ Close parallels are found at Mt. Nebo, Amman citadel, Amman Forum, Heshbon, and Pella.²⁵ A possible variation of this type, though less common, is a gritty orange ware with creamy paint on its surface. (Pl. L: 2-3,)²⁶
 - D) Sherds of hard buff-ware, generally well fired.

THE CARVED STUCCO:-

The use of basalt stones would not have affected the aesthetic appearance of the building, for these were placed in string courses on the outside²⁷ while inside, the building depended for its effect of beauty upon a coating of carved stucco and painted plaster, which covered the basalt stones and concealed them from view.

Apart from a fragment of carved stucco which was found *in situ* adhering to the outer face of the northeastern wall facing the courtyard, all the stucco was recovered in small fragments mixed with rubble and fallen stones. These were found in two distinct contexts:-

- A) In the oblong room and the smaller adjacent to it, situated at the eastern corner of the castle. These fragments apparently had fallen when the upper storey gave way, because the lower oblong room was coated with a layer of painted plaster, traces of which can still be seen on parts of its southwestern and southeastern walls.
- B) In the trench along the northeastern wall facing the courtyard.

For purposes of convenience the stucco fragments can be divided into the following groups:-

- 1) **Borders:-** These consist of the following patterns:-
 - A) Guilloche or interlacing double bands (Pl. LI:1).
 - B) Heart-Shaped petals with drilled eyes (Pl. LI:2). This is a common border at Kh. al-Mafjar.²⁸
 - C) Egg-and-Leaf pattern (Pl. LI: 3). Here the three-pointed leaves make this pattern different from the classical Egg-and tongue.
 - D) Bead-and-reel (Pl. LI: 3), with horizontal and double vertical groovings respectively. This pattern which is drawn schematically, is derived from the repertory of, classical ornamentation and occurs at Kh.al-Mafjar²⁹
- 2) Narrow bands or stripes. Virtually all the band patterns are derived from vegetal or leaf motifs. Simple lines or interlacing bands are used to determine triangular or circular compartments which are filled with some kind of vegetal motif.

The band patterns can be divided into the following groups:.

- A) Narrow band divided into upright and inverted triangles by a double band which runs in a zigzag fashion. Each upright triangle is filled with a trefoil rising upwards, and in the inverted triangles are trefoils hanging downwards with a hole drilled in the middle of the side leaves (Pl. LI: 1;4).
- B) Band divided into loops by interlacing triple bands; each loop is filled by a six-lobed rosette; the space above and below the intersection of the bands is occupied by a trilobate leaf. (Pl. LI:2; LII:2).
- C) Band decorated with lively palm leaves bent at an angle around a central unit of similar leaves. (Pl. LII:4).
- D) Asplit-palmette framing a floral volute with a deep groove in its centre forming a sort of vertical axis. At the corner is a bunch of elongated grapes which are drawn in a summary manner with two shallow grooves or notches in the middle of each grape. Another version of this pattern shows a bulbous floral motif. (Pl. LIII: 3).

- 3- Window-grills and frames (Pls. LIII: 1-2)
- 4- Curved surfaces and arches:- these exhibit scale - pattern decoration (Pl. LIII: 4). A similar pattern was found at kh. al-Mafjar and Hammam al-Sarkh.³⁰

PAINTED PLASTER:-

That there were mural paintings at Hallabat is indicated by the finds of fragments of painted plaster in the debris of the eastern oblong room (Pl. LIV: 1-3), and by the fact that sections of this plaster with faint traces of paint are still preserved on the walls of the same room.³¹ However owing to the fragmentary condition of this plaster, no complete design can be reconstructed.³² They are only useful insofar as they provide a range of colours which include: red, dark brown, yellow ochre, and blue.

It should be mentioned that one painted fragment was found *in situ* attached to the outer face of the northeastern wall of the inner structure near its northwestern end (Pl. LIV: 3). This may indicate that the courtyard was originally surrounded by porticos, because it is unlikely that the painted plaster would have been left exposed to the elements.

THE MOSAICS:-

The two rooms in the eastern corner had mosaic pavements. The pavement in the long room with two transverse arches was entirely missing with the exception of two rows of plain white tesserae along the northeast and southeast walls, while the floor in the innermost eastern room was fairly well preserved.³³ It was paved by intersecting diagonal rows forming indented squares, each enclosing a diamond pattern (Pl. LV: 3).

MISCELLANEOUS FINDS:-

Other non-ceramic objects recovered from the two rooms in the eastern corner include a few wood and glass fragments (Pl. LV: 1-2; 4). The latter consists mostly of fragments from windows of the building.³⁴

The Extra-mural Mosque³⁵ (Fig. 2).

At a distance of some 14.00m. to the east of the castle is a small rectangular mosque measuring 11.77m. internally. The walls, which are 0.86-0.88 m. thick, are built of finely dressed limestone blocks on their inner and outer faces with a filling of limestone rubble and mortar. The interior is divided into three aisles by two arcades of three arches each.³⁶ The arches rest on two columns and two wall piers. Of the columns of the Mosque only their square plinths (0.53 m. to the side) and bases (0.40 m. in diam.) remain (Pl. LVI: 1). No column drum or capital has been recovered. A possible explanation for this lack of column drums may be that these columns stood for some considerable time after the arches and tunnel-vaults had fallen, and were thus prey to later stone robbers. The floor is paved with mortar and pebbles with a thin layer of plaster above. The aisles were roofed by tunnel-vaults running parallel to the *qibla* wall, and resting on the north and south walls and the two intermediate arcades. In order to diminish the thrust on the arcades, a filling of concrete composed largely of light volcanic scoriae was used for the roofing of the tunnel-vaults.³⁷

Access to the Mosque was given by means of three entrances. The principal entrance, in the centre of the north wall opposite the *Mihrāb*, was partially blocked up (Pl. LVI: 2). It is 1.80 m. wide and was spanned by a single monolithic lintel which was found partially broken outside the north wall near the entrance. The door-sill is composed of six separate slabs carefully laid and fitted with sockets for door pivots on either side (Pl. LVI: 3).

The lateral entrance in the centre of the west side is still well-preserved. It is 0.96m. wide and 1.90m. high from the door-sill. The door jambs are surmounted by a lintel above which is a relieving cusped arch (Pl. LV). That a similar arch existed above the doorway in the centre of the eastern side is attested by the recovery of two voussoirs with billet underneath.

The most important part of the Mosque, the *Mihrāb*, in the centre of the south wall, is still

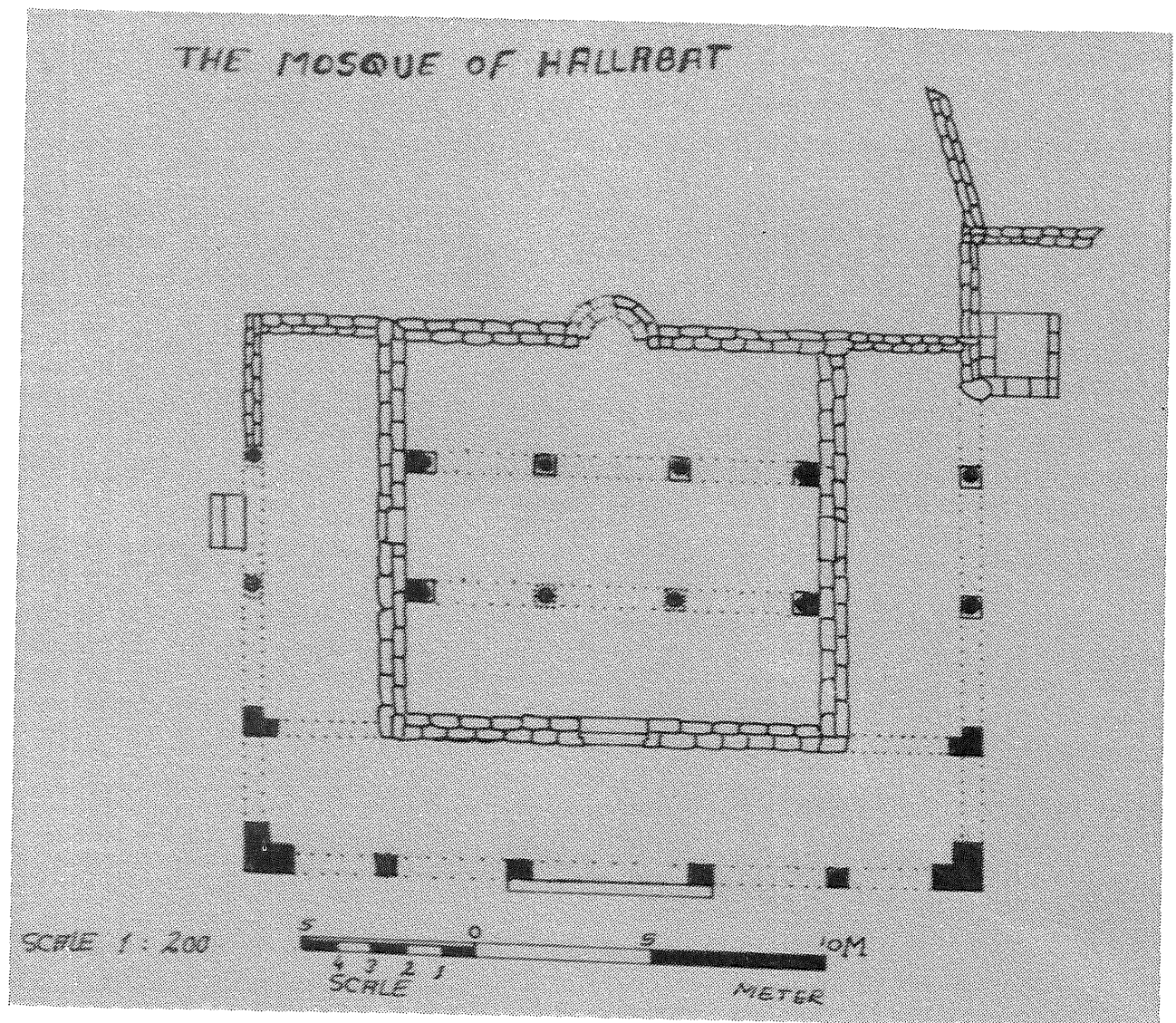


Fig. 2 Ground plan of the Mosque of Hallabat.

preserved two courses high, and it clearly forms one with the south wall of the Mosque. Its concave part measures 1.78 m. in width and 1.50m. in depth. On both sides of the *Mihrab* are square-section recesses, 0.30 m. deep, for the flanking colonettes which have long since disappeared.

The Mosque was surrounded on three sides by porticoes consisting of arches on columns and L-shaped piers at the corners as shown in the plan (Fig. 2). This arrangement of columns and piers is ascertained in the western portico where two column bases were found *in situ* at a distance of 3.10 m. and 6.25 m. respectively from the inner L-shaped corner pier. A splayfaced capital at the northern end of the west wall of the Mosque shows that it must have been connected with the western portico, which averages 3.40m. in depth excluding the column bases, by an arch. The same arrangement of columns and piers must have existed in the eastern portico, though here, because the ground slopes towards the east, a wall was built to retain a platform and raise its floor to the level of the Mosque floor. This retaining wall formed a kind of stylobate which supported the eastern colonnade. A deep sounding was made in the south-eastern corner of the eastern portico. From this it became evident that the lower layers had been filled from the foundation up to the floor level with rubble and stone chips. The eastern portico was approached by a flight of two steps. Of the supports of the northern portico our evidence is scanty, for the column bases and their emplacements have disappeared without any trace. It is likely, though by no means certain, that the central arch facing the principal entrance was wider than the rest. This would have given added emphasis and elegance to the principal entrance. The surrounding porticos must have had a flat wooden roof, for a series of beam holes are still to be seen along the extant parts of the west and north walls of the Mosque.

The eastern and western porticos terminate towards the south in a solid wall. At a distance of 3.40m. the western extension of the *qibla* wall makes a right angle turn and abuts another structure further to the south.

A stepped platform was built against this southern extension as shown in the plan. The lower platform is a square measuring 2.30 m. to the side, and the upper one measures 1.93 x 1.35 m. The only possible explanation for this feature is that it might have served as an elevated place for the call to prayer (*Adhan*).³⁸

Two kufic inscriptions engraved on two blocks of limestone were recovered. The first consists of a common pious formula and reads:

“Oh God, forgive your servant, Jābir son of..... the client of.....”

The second inscription is less clear and could not be read. Though these inscriptions cannot be precisely dated, the absence of diacritical marks and the square form of the letters point to a date consistent with the pottery i.e. the Umayyad period. Unfortunately no concrete evidence for dating the mosque precisely was found. However, since the *Ṣihrāb* (concave niche) was first introduced in the Umayyad mosque of Madinah in A.H.91³⁹ we thus obtain A.H. 91 as a *terminus a quo* for the construction of the little Mosque of Hallabat. And since the carved stucco fragments are more rigid and repetitious than the stucco panels from khirbet al-Mafjar and Qaṣr al-Hīr west which were built during the caliphate of Hisham (A.H. 105-25/A.D. 724-43), we may hazard the guess that the reconstruction of the castle and the building of the mosque took place sometime between A.H. 91-125/ A.D. 709-43.

The question of Hallabat's exact social or historical significance must be left for further excavations to answer. The point to be stressed here is that the elaborate decorations in stucco, painted plaster, and mosaic point to a princely sponsorship. The transformation of the castle into an elaborately decorated residence was only natural, for Jordan in the Umayyad period was no longer part of the insecure region of the limes, but rather it became the district from which the Umayyads drew support and manpower for their army.⁴¹ This may partially explain why most of the Umayyad palaces were built in the Jordanian *bādiya*.

Ghazi Bisheh

Footnotes

1. Hallabat was rapidly investigated by H.C. Butler in the winter of 1904 - 5. His investigation, however, focused attention on the specifically Pre-Islamic character of the building. More recently the site of Hallabat was the subject of a detailed study by Dr. Fawwāz Toukān, who rightly emphasized the Islamic character of the site without, however, taking into sufficient consideration the earlier architectural phases of the castle. H.C. Butler, *Ancient Architecture in Syria*. Div. 2 sect. A (Leyden, 1909) pp. 70-77. F. Toukān, *Al-Hā'ir, Baḥṭh fī al-Quṣūr al-Amawiyyah fī al-Bādiyah*, (Amman, 1979) pp. 405 ff.
2. The excavation was part of a project to collect all the Latin and Greek inscriptions in Jordan for the forthcoming publication of a corpus of Latin and Greek inscriptions. The inscriptions from Ḥallābāt will be published by Prof. Jean MARCILLET-JAUBERT of Lyon University, who was present at the site during the first three weeks of the excavation, and took active part in the work. My sincere thanks are due to him for his constant help and advise.
3. This system of roofing with corbelled courses and stone slabs was quite common in the buildings of southern Syria. For the roofing of narrow rooms, corbel courses and flat slabs were employed. However, for covering wide spaces, an arch or more - depending on the width of the space - was thrown across to support ceiling slabs. H.C. Butler, *Ancient Architecture in Syria*, Div. II sect. A, p. 68. K.A.C. Creswell, The vaulting system of the Hindola Mahal al Mandu *The Indian Antiquary*. July 1918, pp. 169-77. I would like to thank my friend Steven Urice who was kind enough to provide me with an x-rax copy of this article.
4. There is a marked difference between this arrangement of rooms and what is commonly known as the *Bayt* system (self-contained units of habitation consisting of several rooms opening into and communicating with a central larger room or hall) which is typical of the Umayyad buildings such as Harraneh, Minyah, and Mshatta.
5. Butler, *op. cit.* p. 71, Div. III, pp. 21 f. The inscription is specifically dated to the year 212-213 A.D.
6. Butler, *Ibid.* p. 71, note 2.
7. *Ibid*

8. *Ibid.* pp. 82, 146
9. cf. note 5.
10. S.T. Parker, "Archaeological survey of the limes Arabicus: A preliminary report," *ADAJ*. vol. XXI (1976) p. 27.
11. cf. note 6.
12. In many instances the Greek inscriptions are placed upside down. Therefore, one cannot conceive of this reconstruction as being done in the Byzantine period.
13. Although the castle and the Mosque are usually discussed alone, it should be noted that they are related to the bath building of Ḥammām al-ṣaraḥ, and thus the three monuments should be discussed together. In other words Ḥammām al-ṣaraḥ with its elaborate heated rooms and elegant decorations in carved stucco, mosaic, and fresco paintings was evidently part of a much larger complex of buildings. The contemporaneity of the castle and the Mosque with Ḥammām al-ṣaraḥ can be demonstrated in more than one way. First, the local stone used in the construction of the Mosque is identical to that used in the bath. Second, their roofing system with parallel tunnel-vaults built of light volcanic scoriae is also identical. Third, both monuments yielded the same types of pottery sherds and stucco fragments.
14. H. Field, *North Arabian Desert Archaeological Survey, 1925-50*, (Cambridge, 1960) p. 17
15. I wish to thank my friend Alastair Northedge for kindly drawing my attention to this point.
16. Reproduced from *Antiquity*, vol. III, (1929), Pl. VIII facing p. 401.
17. K.A.C. Creswell, *Early Muslim Architecture*, Pt. II, pp. 533 - 36.
18. O. Graber, et-al, *City in the desert, Qaṣr al-Ḥayr East*, (Cambridge, 1978) pp. 98ff.
The purpose of such enclosures has been the subject of much debate among scholars. They were variously interpreted as gardens, artificial lakes, and animal-preserves. It is likely that the walled enclosure at Hallabat, which is much smaller than those in Syria, was used for hunting and trapping animals. Though the U-shaped earthwork in the middle of the enclosure has the appearance of a crude dam, and might have served as a water-catchment.
H. Seyrig, *Les Jardins de qaṣr el-Ḥeir*," *SYRIA*. Vol. XII (1931) pp. 316 - 18.
Idem, *Retour aux jardins de qaṣr el-Ḥeir*," *SYRIA* vol. XV (1934) pp. 24-32.
A. Gabriel, "A propose de qaṣr el-Ḥeir, à L'est de Palmyre" *SYRIA*, vol. XIII (1932) pp. 317-20.
K.A.C. Creswell, "Another word on Qaṣr al-Ḥair," *SYRIA*, vol. XVIII (1937) pp. 232-33.
For the various meanings and interpretations of the word *Ḥa'ir* or *Hir* cf. F. Toukân, *op. cit.* pp. 195-400.
19. Although it is not yet certain whether the site of Hallabāt could have supported other occupations than pastoral farming, the fact that the site was abandoned after the fall of the Umayyad dynasty may indicate that Ḥallābāt did not constitute a viable economic unit. It could have only functioned as long as the funds and investments were coming from the outside.
20. S.T. Parker, "Archaeological survey of the limes Arabicus: A Preliminary report," *ADAJ*, vol. XXI (1976) p. 23.
21. I would like to express my gratitude to Dr. Jim Sauer, director of ACOR, for his help in the identification of pottery sherds. He, however, bears no responsibility for the shortcomings or mistakes in the discussion of the pottery.
22. H. Schneider, *the Memorial of Moses on Mt. Nebo, Pt. III. the Pottery* (Jerusalem, 1950) pp. 47, 74. Fig. 7; Pl. 152 nos. 20 A-B.
D. Baramki, "The pottery from kh. al-Mafjar," *QDAP*, vol.x (1940 - 42) Figs. 2:4; 10: 2,6.
J.A. Sauer, *Heshbon Pottery 1971*, (Berrien Springs, 1973) Fig. 3: 133
R.H. Smith, *Pella of the Decapolis*, (The college of Wooster, Ohio, 1973) Pls. 33: 504, 1144; 92.
G.L. Harding, "Excavations on the citadel, Amman," *ADAJ*, 1 (1951) Figs. 2: 53, 57; 3: 50; 4: 38
A. Hadidi; "The pottery from the Roman Forum at Amman," *ADAJ*, XV (1970) Pl. VI. B: 2.
23. H. Schneider, *Ibid.* pp. 42 - 46; pls. 149; 150: 14-15.
D. Baramki, *Ibid.* Fig. 3: 1-3.
J. Kelso and D. Baramki, "Excavations at New Testament Jericho and kh. en - Nitla," *AASOR*. vols. XXIX-XXX (1955) pp. 35; 39 pls. 16; 28: N51, N53.
Harding, *Ibid.* Fig. 4: 41, 66.
R.H. Smith, *Ibid.* pls. 31: 405; 92A.
24. For the dating of the red-painted ware cf. J.A. Sauer, *op. cit.* pp. 45; 47-8, and note 113.
25. Schneider, *op. cit.* pl 148: 15-17
Harding, *op. cit.* pl. 4: 61
Hadidi, *op. cit.* p. VI, B: 4-6
J.A. Sauer, *Ibid.* Fig. 3 nos, 131-32
Smith, *Op. cit.* p. 234: pl. 30: 492; 1101. 45: 488
26. R.H. Smith, *Ibid* pls 92A: 1139; 1156; 91C: 1100
27. Such decorative use of two different colours of stones brings to mind the striped-house (*al-Dār al-Raqṭā'*) built to Mu'awiyah at Mecca with red baked brick and white plaster.
al-Azraqī, *Akhbār Mecca*, (Mecca, 1965) vol. 11, p. 237
28. R.W. Hamilton, *khirbat al-Mafjar, An Arabian Mansion in the Jordan Valley*, (Oxford, 1959) p. 212; fig. 156.
29. Hamilton, *Ibid* p. 213: Fig. 157.
30. *Ibid.* p. 223; Fig. 172
31. The painted plaster was applied in three coats: A coarse coat 2 cms. thick of greyish colour and replete with gritty inclusions; over this a hard coat, 1 cm. thick, of lighter colour scratched with chevron patterns to provide a grip for the final smooth coat which was painted.
32. Insofar as one can judge from these fragments, the decorations consisted mainly of geometrical designs and possibly some floral motifs. None of them seem to show human or animal representations.

33. Owing to the enormous number and size of the blocks of stones, as well as the lack of the necessary lifting machines, only a portion of the mosaic floor was uncovered; and this had to be covered up to protect it.
34. Small fragments of window glass still fitted into the slots of the fine-grained stucco frames were uncovered.
35. Butler, *Ancient Architecture in Syria*, pp. 74-77: Appendix, pp. XVII-XIX.
Creswell, *Early Muslim Architecture*, pt. II, pp. 502-3. Since the Mosque had been adequately described by Butler and Creswell, our work consisted only in clearing it anew. In most essentials Creswell's plan and elevation are basically correct, though minor modifications in the details, especially the number of columns and measurements, are needed.
36. The same roofing system was also used in the audience hall of Quṣair 'Amra and Hammām al-ṣaraḥ.
37. It should be mentioned here that the idea of uttering the call to prayer from an elevated place was already current when Islam emerged from the confines of the Arabian peninsula. According to one tradition, when the *Adhan* was ordained in the year 1 or 2 A.H., Bilāl b. Rabāḥ used to recite the call to prayer from a square pillar called *al-Mitmār*, which was reached by a flight of steps. cf. al-Samhūdī (Nūr al-Dīn 'Alī b. 'Abd-Allāh), *'Wafā' al-Wafā bi-Akḥbār Dār al-Muṣṭafā*, (Cairo, 1326 A.H.) vol. 1.p. 375.
38. Similar inscriptions were found at Jabal Says in Syria. cf Al-'Ush (Abū al-Faraj), "Kitābāt 'Arabiyyah," *Majallat al-Abḥāth*, vol. XVII (1964) pp. 227 - 305 Sourdell-Thomine, J. "Inscriptions et graffiti arabes d'époque Umayyade, 'á propos de quelques publications recentes," *Revue des Etudes Islamiques.*, vol. 32 (1964) pp. 115 - 20.
39. After the death of Yazīd I, the situation became very precarious. Iraq, Hijaz, Egypt, and even some Syrian cities renounced their allegiance to the Umayyads. Thus the Umayyad dynasty was on the verge of collapse when suddenly the tribesmen of Kalb from the district of Jordan, under the leadership of Ḥassān b. Baḥdal, rushed to support the Umayyads and re-establish their authority.

ON THE STRUCTURE OF THE SAFAITIC INSCRIPTIONS*

by
R.M. Voigt

1. The Safaitic inscriptions which are found in some parts of North Arabia are attributed to Arab tribesmen who resided there some centuries before the Prophet Muḥammad.

About 10000 such inscriptions are presently known. The script is a branch of the South Semitic scripts and represents their northernmost extension, whereas the most southern extension is marked by the Ethiopian script, the only South Semitic script still in use.

The similarities between the two scripts are extensive not only in regard to the shape of the letters but also to the characteristic feature of the Semitic script system. That is to say there are, in general *no matres lectionis* (consonants without value of radicals) (see WH p.12)

2. One should therefore read, as Littmann does, 'aTaY 'he came' not as in Classical Arabic 'atā (أتى). It is worth mentioning that the Old Ethiopic form (as the Epigraphic South Arabian) in question (ʔatāwā) also shows a strong third radical. Concerning the different third radical in Safaitic and Old Ethiopic one must bear in mind that the Safaitic perfect does not reveal any difference between verbs ending in w or y, whereas in Arabic only the pronunciation but not the graphic representation is identical (cf. Saf. NaGaY (or NaGiY) Arab. naḡā (نجا), see Ch. Rabin: *Ancient West-Arabian*, London 1951, p. 160-166).

The material which is far from being exhausted may be mastered in the following three steps:

- 1) edition and, if necessary, re-edition of texts,
- 2) comparative treatment (e.g. grammar, dictionary),
- 3) comprehensive description of the culture, religion and history or of the aspects of the Safaitic world revealed in the inscriptions.

Here a contribution to step two will be made by setting up a classification of inscriptions according to their structure.

Indeed, there have been classifications from the beginning of the decipherment. Thus E. Littmann¹ distinguishes between:

memorial inscriptions,
claims to property,
documents of sale,
inscriptions with signatures of draughtsmen,
funerary inscriptions and
prayers.

A first formal treatment of some inscriptions, namely those containing elements of the Classical Arabic poetry (Nasib of the Qasidah, see K. Petráček: *Die Vorebereitungsperiode der arabischen Literatur, Acta Universitatis Carolinae, Philologicae* 3 (1964), p. 35-51), was undertaken by Petráček². According to their prevailing semantic elements, these inscriptions are, in his opinion, characterized by the kernel structure.

“finding of inscription(s) ---> feeling of affliction”

that can be extended by several non-terminal elements (as invocation, protection).

In contrast, I intend to provide a classification according to formal criteria. The inscriptions are considered to be composed of certain UNITS. Unit means a sequence of words that is formally marked. The marking is made by the word class of the relevant element of the second subunit and the introducing element (first subunit) applied to. Therefore, each unit consists of two subunits:

[subunit 1]
 'introducing elem.':
 one or two of the
 following elements

/L—/
 /W—/
 /F—/
 /H—/

[subunit 2]
 'relev. elem.': 'compliment'

/PN/
 /V/
 /D/
 /S/

The 'relevant element' can be regarded as a 'free form'³ and if consisting of only one word 'minimum free form', the 'introducing element' as a 'bound form' (thus indicated by a hyphen). Together they constitute a 'non-minimum free form', a unit. The 'compliment' may be zero.

Since every combination of these elements is not possible, one can, for the time being, differentiate between the following units:

L—unit	or [L—],
W—unit	or [W—],
F—unit	or [F—],
H—Deity-unit	or [H—D],
W—H—Deity-unit	or [W—H—D],
F—H—Deity—unit	or [F—H—D],
H—Substantive-unit	or [H—S] and
W—H—Substantive-unit	or [W—H—S] and also
Adverbial-unit	or [A]

The subunits form the units in the following way, e.g.

/L—/ — /PN/ = [L—]
 /W—/ — /V / = [W—]
 /W—/ — /H—/ — /D/ — /S/ or /V/ = [W—H—D.]

There is at least one unit which occurs in inscriptions that is not taken into account in this analysis, the

SNT—unit or [SNT—]

Since it can appear as a complement of various units.

A further division of the subunits, which should be based on their extensions, is not undertaken here.

Another criterion for grouping arises from the ORDERING of the units. A H—D—unit on the end of an inscription, for instance, has to be valued differently than at its beginning. In the same way a W—unit following a L—unit must be considered for the most part in another way than following a F—unit. Therefore, a W—unit which is following a W— or F—unit need not constitute an independent unit. We write

F-(W) - unit or [F—W—],
 W-(W) - unit or [W—W—].

In connection with this one has to bear in mind that a grammatical analysis that is based on formal criteria cannot dispense with taking the significance of elements into consideration. Even the decipherment of an inscription is not possible without reflecting on the meaning of the elements in question. Equipped with these prerequisites we can venture upon a formalized description and classification of the Safaitic inscriptions.

How do these units come together to form texts?

A. According to the first element we may distinguish between inscriptions beginning directly with a personal name (/PN/) and those beginning with a prepositional element.

A.1. / [PN] /

The type/[PN]/ must be considered as somewhat different from the other types of texts, since it does not reveal well-formed and highly structured sentences. Although it is not justified to restore an apparently missing *lām*⁴ which marks the beginning of most texts the number of inscriptions without *lām* may be reduced by correcting misinterpretations.

So, from the relevant inscriptions in *WSIJ*⁵, that is 2, 84, 502, 512, 569, 603, some may be read in another way. The *lām* of *WSIJ 84* according to *Jamme (Notes p. 42)* is “clear in the copy”. *WSIJ 512* may be the end of the foregoing inscriptions (see *Jamme Notes p. 46*). Instead of the name *ḤNFṢ* (*WSIJ 569*) *Jamme (Notes p. 112)* reads *Ḥall FukK* “*H. was freed!*” which brings forth another problem (new type of text). Therefore in this corpus *WSIJ 2* (?*WS BN—?DM BN—Ṣ ḤD*), 502 (*Ḥ ḠZT*) and 603 (*H—MWT*) remain.

Also the reading of *LSI*⁶ 262 (*BQL F—H—YTḡ...*) must be corrected to *L—QLF H—YTḡ...* (see *Jamme Notes p. 83*) thus fitting a well attested pattern.

The occurrence of this type is restricted and can be regarded as influenced by Thamudic inscriptions consisting of only a personal name⁷.

On the other hand, this feature does not require an external influence, for this sort of one-component utterance seems to be a universal of human language.

Behaghel in his book on German syntax⁸ discerns four sentence types:

1) primitive (non-verbal) single-element sentences (“ur-sprünglich eingliedrige Sätze”, p. 435) such as interjections, vocatives, prepositions (as ‘On!’, ‘Off!’) and cases like ‘Fire!’, ‘Attention!’,

2) verbal single-element sentences (“verbale eingliedrige Sätze”, p. 439) such as imperatives, impersonal constructions (as ‘It’s raining!’) and probable infinitives as in Arabic *sukūt* ‘Silence!’.

3) non-primitive single-element sentences (“unursprüngliche eingliederige Sätze”, p. 439) that arise from reduction of multiple-element sentences (anacoluth, aposiopesis) as in Latin ‘*Quos ego!*’.

4) multiple-element sentences (“zweigliedrige Sätze”, p. 468) which consists of subject and predicate.

The first two types can not be conceived as incomplete sentences or emphatic ellipses, as Noreen supposes⁹.

A correct indication is given by Ries¹⁰ for distinguishing incomplete sentences (cp. no. 3 and 4) from incomplete sentences which do not in fact have their origin (by shortening) incomplete sentences.

Therefore, it is best to follow Jespersen¹¹ who distinguishes three sentences types:

I) inarticulate sentences coinciding with no. 1 and 2 of the Behaghel classification,

II) semi-articulate sentences, e.g. ‘Thank you!’ abridged from ‘I thank you!’, corresponding to no. 3,

III) articulate sentences corr. to no. 4.

According to this terminology the Safaitic [PN] — type represents inarticulate sentences. If one thinks rather of semi-articulate sentences, one has to bear in mind inscriptions containing the independent pronoun of the 1. person and a personal name. Together with the mostly preceding element *W*-the type */W—?N [PN]/* emerges.

Such texts occur not infrequently in Thamudic¹², Syriac, Moabite and Phoenician¹³ and so on.

A unit with these two nominal elements may be posited in Safaitic (see C.3.c.)

A.2. / [PN] [...]/

Not well-attested is the type [PN] followed by a verbal form. An example is found in *Jamme*’s emendation of the text *WSI 569*. He reads *HL FK* ‘Hall was freed!’ instead of *ḤNFṢ*. As to Thamudic cp. van den Branden (*Inscriptions p. 477*) *ḤRB ḤB* ‘*ḤArb aime!*’, which can be read also as *ḤR B-ḤB* ‘*Ḥlrr fils de Ḥubb!*’. Another obscure instance is *WH*¹⁴ 2444 or 2827.

B. / [H-D] /

The first major criterion for the classification of the texts was the occurrence of a personal name at the very beginning. The second one concerns the preceding prepositional element which is either *H*-or-*L*-/. The text *LSI 273* displaying the preposition *bā?* is clearly Thamudic

“The letters of these inscriptions look Thamudic rather than Safaitic”, p. 67 and should not to be taken into account here.

The only prepositional element apart from *lām* in this connexion is the vocative particle *Hā—/HaY-* (or *HaYā*, see WH p. 47) always followed by the name of a deity. This constitutes the second main type of Safaitic inscriptions: / [H-D] /. The relevant deities are usually *Ruḏā* and *Allāt* ¹⁶.

The god *Ruḏā*, who is conventionally read as *Raḏu*, exhibits two variants: *RDW* and *RDY* (possibly representing the evening and morning star or generally a masculine and feminine deity ¹⁷).

In the most cases the names of gods are followed by the imperative of the verbs *Sa aD* ‘to help’ and *FaLLaT* ‘to deliver from’:

(LSI 495) H—RDW FLT—N M—B?S...,

(LSI 505) H—?LT S^dD ĠWT BN-?BRR...,

(WSIJ 863) H—RDW̄ RWH̄ (see *Jamme Notes* p. 92).

Other deities are rarely found:

(LSI 1067) Hā-NuHaY SāⁱD GaLS ...

(WSIJ 516) Hā-KāHīL FaLiT... (?) this reading being uncertain.

The name of a deity (H-?LT) not followed by an imperative is found in the obscure inscription CIS ¹⁸ 2372 (s. *Jamme Notes* p. 93).

Although texts with deities at the outset occur several times, this type seems to be archaic or perhaps Thamudic influenced (cp. the remarks of Littmann to the above-mentioned inscription LSI 495 ¹⁹).

C. The remaining type with L- beginning dominates in most texts. The Safaitic inscriptions are, therefore, more uniform than other North Arabic inscriptions, that is to say the alternative ways to formulate a text is in Safaitic more restricted.

Well, how can we classify these numerous inscriptions ranging in their extent from one up to some thirty words?

C.1. / [L-] /

The first subdivision contains inscriptions having only a L—unit (that is *lām* plus a personal name). Since this unit is part of all texts of the C-type (and any following type), it may be appropriate to treat it here without regard to the fact that it can occur alone or together with other units.

The personal name complex consists maximally of the following parts.

The *first name* can be:

- a) a name fulfilling a nominal pattern (e.g. *MuḤaLLim*, *ʿaQRaB*, *?aN ʿaM*, *ḤaBīB*),
- b) a laqab containing the article H- (e.g. *Hā-ḤaG-īY*, *Hā-?aSaD*, *Ḥaf-FaTaY*),
- c) composed names (as *ŠāNi?* *Has-SvBv?*, *?aBū-?aNas*, *BiN-?aŠYaB*, especially theophorous names (e.g. *WaHB-aLLāH*, *Qain-?īL*) (see LSI p. xxv),
- d) names with prefixed or suffixed elements as B-, L-, K-, and -Y, -H (e.g. *Li-ŠaMS*, *Bi-ʿamMi-H*, *KauKaB-īY*) ²⁰.

The *filiation* (*nasab*) that sometimes indicates ancestors up to ten or more generations is expressed by BN- plus a name which can be formed like the first name illustrated above or by elements equivalent to a BN-filiation. This case arises when the father unknown (or should not be known):

(CIS 2214) *Li-?aSHaM BiN-YaHūD* ‘By A., son of a Jew!’

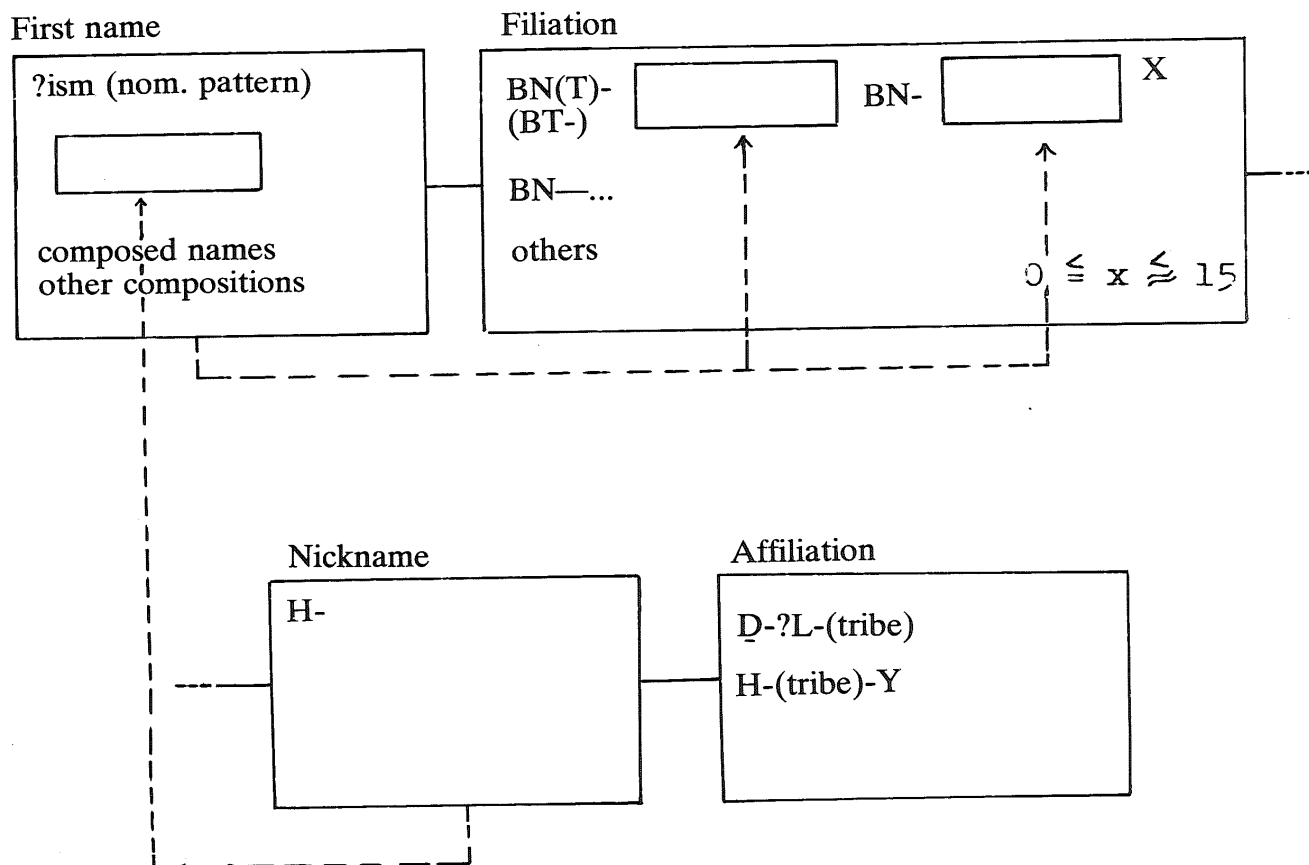
(HCH ₂₁ 193) *Li-ʿaDāR FuTaYY Hani?-īL...* ‘By A., the young servant of H.’

I do not think that the second *yā?* is erroneously written as *Harding* suspects, for it may be an indication to read the diminutive *futaiy* and not the form *fatay* which are in Classical Arabic rendered graphically in the same way (فٲٲ) or to read the diminutive *futaiyyi* not attested in Classical Arabic from *fatīy* conceived as having four radicals.

The *nickname* (*laqab*) is formed by means of the article (see above).

The *affiliation* (*nisbah*) to a tribe or occasionally to a location (s. HCH 82: *Li-ʿaZīZ BiN-HaNi?* *Dī-ʿāL-NaMāRaT*) is indicated by the relative pronoun *Dū—* followed by the substantive *?āL-* plus the tribal name, including names of peoples, clans or even families (many instances in HCH) ²².

Another way to express affiliation is by forming a nisba (in the literal sense of the word) that is together with H- and -Y (cp. in Classical Arabic e.g. almakkī 'the Meccan').



By combining these various elements one gets a vast number of personal name complexes which form together with lām a main type of texts:

(LSI 52) L-ḤNN '(This inscription is) by Ḥuanain!' (The discussion concerning the meaning of iām is left out here!)

(WSIJ 376) L-BLS BN-... (12 time)

(LSI 72) L-?KMD BN-WR? BN-H-ʿBD H-SLM-Y ... (Thus the nisba belongs to Akmad, not to Hā-ʿabd as indicated by Littmann.)

(WSIJ 195) L-?B-?NS BN- ʿLYN BN-?B-?NS

(CIS 3031) L-ḠDN BNT-M?QN

and so on. An unusual position of the filiation is reported in F.2. Very striking on the other hand is the lack of the kunyah which is an integral part of the Classical Arabic name. But there are some names having ?B- as the first element (besides others with ?B as a second element)²³.

If this ?B is not derived from the root ?bb 'to yearn' or ?wb 'to return', it forms a kunyah. However, ?abū in classical Arabic does not only indicate the fatherhood (of the person whose name is following) but also a characteristic feature of the person (cf. names like Abū-Hurairah or Abū-Šamah). At any rate, in Safaitic the kunyah does not work as a grammatical device in the field of onomastics. Its function may be that of a name of honour, thus comparable with the laqab functioning as a first name (cp. BN-?B-?NS with BN-H-ʿBD and BN-BN-ʿQBN).

C.2 / [L—] [H—S] /

A great portion of the Safaitic texts including the most interesting one, contains other units after the L-unit. A first division is immediately distinguishable, i.e. those texts with a substantive determined by the article. This substantive may denote

- 1) the inscription (as ḤṬṬ, SFR, HY),
- 2) an accompanying drawing (as ḤṬṬ or more specified: GML, BKR, BKRT, ʿR, NQT, FRS, ZBYT) or

- 3) also locations near the place where the letters (and drawings) were scratched (as DR, D?RT, BNYT, BHRT, NSB, M^cMR, SR, WSD, WQ?T, DRH), sometimes with specifications (as R^cY RHB ‘spacious pasture’ in WG30) and
- 4) property.

As to the third subtype, our interpretation differs from that of Littmann and others. E.g. (LSI 38) Li- [PN] Had-DāR has to be translated not as ‘This place belongs to PN!’ but as ‘(This inscription is) by PN (when he was) at this place!’ This view is supported by more elaborate texts as:

(LSI 379, 396, WH 1096b) Li- [PN] Wa-ḤallāL Had-DāR... ‘(This text is) by PN when he stayed at this place...!’ (cp. the indication of place in ‘Kilroy was here!’²⁴).

This is, however, not valid for nouns of section 1 and 2:

(WSIJ 258) Li- [PN] Hag-GaMaL (By PN (is drawn) this camel!’,

(LSI 349) Li- [PN] Has-SiFR ‘By PN (is) this inscription!’.

This type can be continued (see below).

It is not evident to what extent inscriptions with a substantive of 2 or 3 may denote a claim of property; see the discussion in LSI p. ix and WH p. 28 and inscriptions as (WH 1943, 2196) Li- [PN] BT, the last form being rendered as BitT ‘(PN has a daughter!)’. I would prefer to see here an adjectival or participial form of the verb BāT ‘to spend the night’ (according to LSI p. 302).

C.3.a. / [L—] [W—] /

The usual continuation of the L-unit, however, is made with the W-unit which expresses various notions. Generally speaking it indicates the circumstances of scratching the inscription.

a) They are the wandering and all that is connected with change of place or, with other words, all *external circumstances* or activities in connection with scratching the inscription:

(LSI 434) Li- [PN] Wa-ḤaḍiR Had-DāR ‘(This text is) by PN when he was present at this place!’,

(LSI 87) Li- [PN] Wa-NaFaR MiN-RūM ‘... when he escaped from the Romans!’,

(LSI 343) Li- [PN] Wa-Ra^caY... ‘...when he pastured...’.

Others verbs used in this context are ḤLL ‘to stay’, MT^c ‘to bring away’, ṢYR ‘to journey’, ḤRṢ, NZR, TZR ‘to be on the look-out’, NŠT ‘to journey’, TRD ‘to drive away’, RDF ‘to follow’, BNY ‘to build’. Widespread is the verb WGD ‘to find (the inscription of a relative or friend)’, as in

(CIS 2769) Li- [PN] Wa-WaGaD SiFR ?aBī-H Wa-^camMi-H... ‘(This text is written) by PN when he found the inscription of his father and his uncle!’,

and the controversial verb WGM ‘to lay stones on a tomb’ or as the case may be ‘to mourn’²⁵.

b) Mentioned are also *internal circumstances* as longing, grief and sadness (WLH, WG^c, TŠWQ, NDM, as to others see WH p. 29). Pertinent to this section may also be the above-mentioned verbs WGD and WGM which have a very marked emotional meaning.

(LSI 28) Li- [PN] Wa-WaLiH^c aL(ā)-[PN] ‘...when he yearned for PN!’,

LSI 680) Li- [PN] Wa-TaŠauWaQ ?iL(ā)-Rā^ci-H ‘...when he longed for his fellow!’.

c) other events are referred to for instance in

(LSI 419) Li- [PN] Wa-WaLaD Ham-Mi^cZaY ‘...when the goats brought forth young!’,

(WH 148b) Li-ḤadD Wa-Ba?iS ‘... when he was miserable.’,

(WSIJ 716) Li- [PN] Wa-?aMiN Hā-?aRD ... ‘...when the land was felt to be safe...’.

C.3.b / [L-] [W-H-S] /

In WH another construction is found where a L-unit is followed by W-and a substantive with article ([W-H-S]). The subtypes are according to the substantives that can occur in this positions (see C.2.), i.e.

- 1) the inscription (not possible),
- 2) an accompanying drawing (as ḤTT or more specific: BKRT) and
- 3) (locations near) the place where the inscription was scratched (as DR),
- 4) property (not possible).

Quite clear is subtype 2 (s. WH p. 15), the translation of which is given correct in WH:

(WH 353) Li- [PN] Wa-Hā-Ḥuṭūṭ ‘(The inscription is) by PN and also the drawing!’,

(WH 2562) Li-[PN]Wa-Hab-BaKRaT ‘(The inscription is) by PN and (the drawing of) the she-camel (too)!’.

This interpretation would be corroborated by

(WSIJ 436) Li- [PN] Wa-LaHu Has-SiFR... ‘(The inscription is) by PN and by himself (is written) the inscription...’,

if the rendering of this text is correct, cf. the postponed L-H H-ḤṬṬ in WSIJ 607. More problematic is the third subtype with a local designation. The interpretation of WH is as follows:

(WH 1924)Li- [PN] Wa-Had-DāR ‘By PN. And the camping-place (is this).’.

I would think rather of the shortening of a fuller text that contains a verbal form, e.g.

Li- [PN] (Wa-ḤalLaL (or NaŠaT) Has-SvR (or similar)) Wa-Had-DaR (or simply: Li- [PN] Wa-ḤalLaL Had-DāR)

‘(This inscription is) by PN (when he encamped in this valley) and (even) at this place.’ (or: ‘(...) by PN when (he encamped) at this place.’).

C.3.c. / [L-] [W - NS] /

Unusual is WH 1001 with a nominal sentence after W-, but see WSIJ 436 (C.3.b.). Problematic is also the inscription type

Li- [PN₁] Wa-? aNā [PN₂].

see the inscription WH 1403 b and the discussion in WH p. 17

C.4. / [L-] [W-H-D] /

Another continuation of the L-unit is produced by W-followed by a H-D-element (that is the vocative particle plus a name of a deity) and an imperative (as in the type B.) or a substantive. The texts of this type are prayers:

(LSI 293) Li- [PN] Wā-Ha-RuḌāY SaLaM ‘(This inscription is) by PN (when he prayed:) O RuḌā, (give) peace!’,

(WSIJ 63)Li- [PN]Wa-Ha-Yiṭa⁶ ʿauWiR MuʿauWiR Hā-Ḥuṭūṭ ‘(...) by PN! O Yiṭa⁶, blind anyone who effaces the inscription (and drawing)!’, cf. LSI 282, 303, 380, 393, 418, WSIJ 49, 63, 125. The invocation of more than one deity and also the addition of another is possible:

(WSIJ 700)Li- [PN]Wa-Hā-ILāT ĠaNīMaT Wa-RuḌāY... ‘(...) by PN! O Allāt, (grant) plunder! O RuḌā, ...!’ (type / [L-] [W-H-D-W-(H-) D] /).

The vocative particle is lacking also in LSI 286 (/ [L-] [W- (H-) -D] /).

C.5. / [L-] [F-] /

There remains only the way to continue the L-unit with F- to be discussed. The type with a F-unit is more rarely found than one with a W-unit. Since the F-unit denotes the succession of an action, as we will see below, one has e.g. to translate:

(WSIJ 453) Li-Han-NvGvŠ BiN-Ka-ʿamMi-H Fa-SaRaY ‘(This text is) by H. b.K.! Then he was again on journey!’,

(WH 2399) Li- [PN] Fa-QāZ or Fī Qaiz ‘(...) by PN, then he spent the summer/in the summertime.’.

C.6. / [L-] [F-H-D] /

More easily explicable is the occurrence of a F-H-unit instead of a W-H-unit, for the invocation can be interpreted without effort as the result or intention of the inscription:

(LSI 380) Li- [PN] Fa-Hā-ILāT NvQā? aT Li-... ‘(...) by PN! So, O Allāt, (send) ejection upon...!’,

(LSI 348) mentions five deities, but brings only one invocation (F-H-D₁ (W-D₂ W-D₃....) X, X being the content of the invocation, cp. in contrast the above-mentioned sequence W-H-D₁ X₁ W-D₂ X₂).

Since these two types (C.5.6.) are not so well-attested, they are presumably reduced from more elaborate types:

[L-] [F-H-D] ← - - - - [L-] [W-] [F-H-D]

As to / [L-][F-]/, however, the terminal feature of the integral type / [L-] [WS-] [F-] / seems to be conveyed to the only unit standing behind the L-unit.

[L-] [F-] [] []

Then F-has to be conceived as W- resulting in a more ordinary translation.

In (LSI 331) Li- [PN] SaNaT Ra^aY Hađ-Da?N Fa-Hā-ILāT SaLāM '(...) by PN in the year which he tended the sheep! So O God, (give) peace!' the terminal F- is invoked by the SNT-unit which acts here as a substitute for a W-unit.

See the continuation of this type in D.3.

C.7. / [L-] [...] /

There seems to occur another type of text containing an adverbial expression after the L-unit which tells about the circumstances of scratching the inscriptions. This would present a further argument for rendering the W- of the W- unit as 'where, while'.

(WSIJ 745) Li- [PN] SvYvR Ba^aD ĤaiL... '(...) by PN journeying after some horses ...!' (Since the part. act. should be written with ?alif, one has to consider vocalizations as SaiYaR or similar.):

(Jamme Notes p. 138) Li-GaiY GvWvĤ '(...) by G. deviating from the road!'.

Thus, in this connection I assume adjectival forms instead of a perfect which cannot, however, be excluded from the outset.

This unit which may be called Adverbial-unit is controversial since some texts which have after the initial L-unit an element not beginning with W-, H- or F- are not quite clear, see e.g. WH 2322, 2657, 3116, 3197b, 3282, 3463. Others are, in fact, very instructive, especially those forming a minimal pair distinguishable only by W-:

(WH 3407) Li- [PN] QāTiL : (WH 3417) Li- [PN] Wa-QaTaL,
(WH 168) L- [PN] ĠāNiM ...: (WH 679) Li- [PN] Wal-ĠaNiM.

For other examples of this type see C.2. and C.5. and WSIJ 351.

D. Now we may turn to elaborate inscriptions which consist of *three units*. There are, however, no new units used. (In the enclosed scheme arrows are used to indicate the units of which the texts could be regarded to be developed from.)

D.1. How can we continue a [L-] [H-S-] sequence?

D.1.a. / [L-] [H-S] [W-] /

The first manner is by means of a W-unit, as in:

(WSIJ 996) Li-[PN] Had-DāR Wa-TaGaR ... '(...) by PN at this place when he dealt in...!',

(WH 300) Li-[PN] Hab-BaRKaT Wa-ĤauWaB Ham-MaR?aT 'The she-camel (is drawn) by PN, when he grieved for the woman.'

D.1.b. / [L-] [H-S] [W-H-D] /

(LSI 329) Li- [PN] Hā-ĤuTūT Wa-HaY-?alLāT NvQā?aT Li-... 'By PN (are drawn) these lines! O Allāt, (send) ejection to...',

(LSI 333) has in contrast Wa-Hā-ILāT without ?alif., see LSI 482.

D.1.c. / [L-] [H-S] [F-H-D] /

(no example available)

D.2. The sequence of a L- and W-unit can be pursued in the following ways.

D.2.a. / [L-] [W-] [W-] / or / [L-] [W-W-] /

The second W-unit brings further circumstances for scratching the inscription, mostly as a consequence of time or as a result of the foregoing W-action:

(LSI 332) Li- [PN] Wa-WaGaD SiFR ?aBī-H Wa-WaLiH KaBīR ʿaL(ā)-?aBī-H Wa-ʿaL(ā)-DāDi-H '(This text is) by PN, when he found the inscription of his father and he was therefore very much grieved on account of his father and of his uncle!'

(WSIJ 818) Li- [PN] Wa-ḤaLLaL Wa-TaŠauWaq '(...) by PN when camped (at this place) and was therefore filled with longing!', LSI 183, 234, 254, 255, 334, 341, 350, 369, 406, 409, WSIJ 90.

D.2.b. / [L-] [W-] [W-H-D] /

This type is rarely found:

(LSI 72) Li-[PN] Wa-WaGaʿ Wā-Hā-RuḌāW RaWāḤ '(...) by PN, as he was grieved and (implored thus) O Rudā, (give) rest!' (possible is also the reading RauWiḤ),

(LSI 308) Li- [PN] Wa-WaGaM ʿaL(ā)-[PN] Wa-ʿaL(ā)-[PN]⁵ Wa-Hā-iLāT ʿauWiR Dū ... '(...) by PN, when he ..., O Allāt, strike blind him who...!'

D.2..c. / [L-] [W-] [F-] /

The most common tripartite type has an F-unit as terminal element. In Classical Arabic it denotes an action subsequent to the former action (expressed by W-) and generally "connected with it by some internal link, such as that of cause and effect"²⁶.

The verbs mostly involved are NG^c, WGM and B?S MzLL:

(LSI 382) Li- [PN] Wa-WaGaD SiFR ?aBī-H Fa-NauGaʿ '(...) by PN, when he found the inscription of his father, thus he longed (for him)!' (the last verbal form may be vocalized also (i) NGaʿ),

(WSIJ 819) Li-[PN] Wa-WaGaM ʿaL(ā)-?uḤTi-H SauDaT MaḤaT Fa-ḤabBaLa-H '(...) by PN, when he grieved for his sister S., who has passed away, thus it has mentally deranged him',

(WH 1275) Li- [PN] Wa-WaGaM Fa-WaGaD SiFR ?aBī-H '(...) by PN, when he grieved, thus he found the inscription of his father' (cp. the more natural text (WH1273) Li- [PN] Wa-WaGaD SiFR ʿamMi-H Fa-WaGaM!). Cf. e.g. LSI 10, 150, 154, 157, 299, 313, 328, 399, 416, WSIJ 819.

D.2.d. / [L-] [W-] [F-H-D] /

This type is very well-attested (see e.g. LSI 160, 180, 184, 237, 245, 308, 326, 374, 403, WSIJ 37, 39, 58, 59, 73, 78, 80, 132, 134, 716):

(LSI 155) Li- [PN] Wa-Ra ʿaY Hab-BaQaR Fa-Hā-iLāT SaLāM '(...) by PN, when he tended the cattle, so, O Allāt, (grant) security!'

(LSI 415) Li- [PN] Wa-BaʿiS ... Fa-Hā-Šaiʿ-Haq-QauM SaLāM '(...) by PN, when he mourned, so, O S., (grant) security!'

(WSIJ 45) Li- [PN] Wa-ʿaŠRaQ Fa-Hā-iLāT SaLāM '(...) by PN, when he has gone eastward, so, O Allāt, (give) peace!'

D.3. / [L-] [W-H-D- (] [] W- (H-) D] /
(see C.4.)

D.4. [L-] [F- (H-D)] ...

sequence of a L- and F- or F-H-D-unit is seldom followed by an other unit:

(WH 135) L- [PN] F-H-LT QBL L ?HL (or QBL...) SLMF-NNGY '(...) PN, so, O Allat, ..., then let us escape!'

E. Some text types contain four units. It seems that only the [L-] [W-] sequence can be supplemented in this way.

E.1. [L-] [W-] [W-]... or [L-] [W-W-] ...

Two W-units after a L-unit may according to their meaning be regarded as an extended unit [L-] [W-W-] or as two separate units ([L-] ([W-] [W-]). In fact, there is no / [L-] [W-] [W-] [W-] /-text, one or two W-units has to be combined in a foregoing W-unit:

(LSI 407) Li-[PN] Wa-ḤallLaL Had-Dār Wa-Ra^ʿaY ... Wa-NaGaY ... Fa-Hā-Ba^ʿaL-SaMīN RaWāḤ Li-... '(...) by PN encamping at this place, when he tended flocks... and he rushed forth...! So, O. B., (give) rest to...!'. Cp. the numerous W-units in LSI 406 and WSIJ 688.

E1. a. / [L-] [W- ()] W-H-D] /

(WSIJ 87)L- [PN]W-?ḤD H-NHY W-ḤRṢ W-H-LT NQ?T L-... '(...) by PN, when he ...(?) and he was on the look out, and, O Allāt, ...'

E.1.b. / [L-] [W-()] W-] [F-H-D]

This type is well-attested (moreover, the various combinations of the double W-unit verbs should be compiled, see D.2.a.):

(LSI 404) Li-[PN]Wa-WaLiH ^ʿaL(ā)-[PN]Wa-ḤallLaL Had-Dār Fa-Hā-ILāT SaLāM '(...) by PN, when he was sad on account of PN and encamped at this place. So, O Allāt, (give) peace!'

(LSI 330) Li- [PN] Wa-QaiYaZ ^ʿaL(ā)-Han-NaMāRaT Wa-QaNiṬ Haš-ŠāNi? Fa-Hā-ILāT SaLāM '(...) by PN, when he spent the summer in front of N. being afraid of the enemy, so, O Allāt, (grant) protection!' cp. LSI 189, 325, 407, WSIJ 295).

E.2. [L-] [W-] [F-]...

Where as the inscriptions of the foregoing E.1. -type could also be explained as three-unit texts, the types with a [F-] or F-H-D-unit in third position after [L-] [W-] are well-distinguished and unequivocal.

E.2.a. / [L-] [W-] [F-] [F-H-D] /

With a F-H-D-unit as terminal element one gets the semantic structure:

- (I.) "writing of inscription ←--- finding of inscription(s) →--- affliction →--- invocation" or
 (II.) "writing of inscription ←--- circumstances of writing →--- special event →--- invocation".

(LSI 146) Li- [PN] Wa-ḤallLaL Had-Dār Fa-Ra^ʿaY Hā-?iBiL Fa-Hā-ILāT Wa-Ba^ʿaL-SaMīN ŠaiYi^ʿ... '(...) by PN, when he encamped at this place, then he tended the camels, so, O Allāt and B.-S., help...',

(LSI 342) Li- [PN]Wa- WaGaD SiFR ?aŠYā^ʿi-H Fa-NaDiM ... Fa-Hā-GaD-^ʿaWiD Wa-DūŠaRā Wa-Hā-ILāT ... '(...) by Pn, when he found the inscription(s) of his fellows, thus he was sad ...! So, O G. and D. and A., (grant) ...!' (the same structure exhibits WSIJ 56, cf. LSI 161, 357, 385, 415, WSIJ 911).

E.2.b. / [L-] [W-] [F-] [F-] /

Rare is a terminal F-unit:

(WSIJ 730)Li- [PN]Wa-^ʿaLaY Hag -GuDaRī Fa-DauWaQ Fa-Ba?iS MuZalLaL '(...) by PN, when the smallpox broke out, thus he experienced (it), so he was miserable, completely overwhelmed!'

E.3. / [L-] [W-] [F-H-D(-)] W-H-D] /

The terminal invocation of the / [L-] [W-] [F-H-D] /-type (see D.2.d.) can be extended by a W-H-D-unit and has, properly speaking, to be taken for a F-H-D(W-H-D)-unit:

(WH 367)Li-[PN]Wa-WaGaM ^ʿaLā-GaLS Fa-Hā-ILāT Ta?R Wa-Hā-ILāT NvQ(v)?aT Li-... '(...) by PN, when he grieved for G., so, O Allat, (grant) blood-revenge, and, O Allāt, ejection to...'

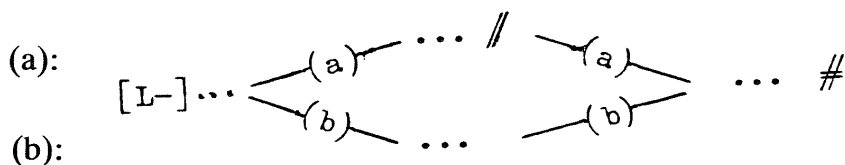
F. Composite texts

There are also texts not fitting the above given patterns.

F.1. Bipartite texts

Most of them can not be considered to exhibit an appendix which brings forth elements

previously forgotten, but to comprise of two texts (a) and (b) written by the same author at the time and place:



In their linear representation elements of set (a) and (b) which are not identical (i.e. $(a) \cap (b)$, the average of both) are written only once whereas non-identical elements of (a) and (b) (i.e. (\bar{b}) and (\bar{a}) , the remainder sets of (a), resp. (b), on (\bar{b}) , resp. (\bar{a})) are put one after another. Elements which may be zero are indicated by ...

If $(a) \cap (b) = \emptyset$, there are two entirely different texts (a) and (b),

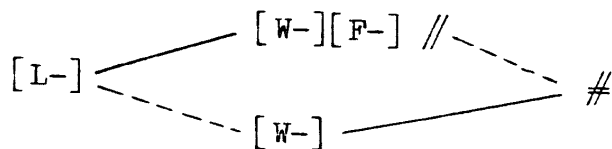
if $(a) \cap (b) = (a) \cup (b)$, the two texts coincide ($a=b$).

The breach in the text between (a) and (b) is marked by //.

F.1.a. / [L-] [W-] [F-] // [W-] /

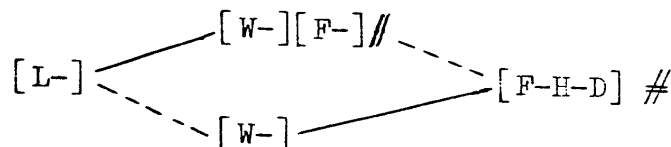
Sometimes the text is continued after a terminal F-unit by means of a W-unit. Apparently the writer forgot a detail to be related in one of the preceding W- or F-units and therefore placed it at the bottom of the inscription (...// [W-] /):

(LSI 4) Li- [PN] Wa-WaGaD SiFR ?aN^{ca}M Fa-NvGa^c Wa-Ra^{ca}Y Hā-?iBiL ... '(...) by PN, when he found the inscription of A., so he longed (for him)! (And this happened) when he tended the camels?'

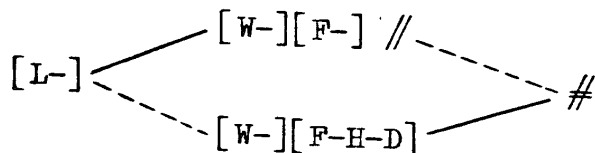


F.1.b. / [L-] [W-] [F-] // [W-] [F-H-D-] /

Somewhat different is the following inscription which shows an extension of a four-unit text (/ [L-] [W-] [F-] [F-H-D-]/) by a W-unit being equivalent to the [W-] [F-] sequence:



Or rather the text is structured in the following way:



(WH 595) Li-[PN] Wa-WaGaD SiFR ṬvrVd Fa-Ba?iS MuZ(al) LaL Wa-WaGaM ^{ca}Lā... Fa-Hā-ILāT ... '(...) by PN, when he found the inscription of Ṭ., so that he was miserable overshadowed (with grief), and (when) he grieved for..., so, O Allāt,...'.

F.1.c. / [L-] [W- (W-)] [F-H-D-] // [W-] [F-] /

(LSI 306) Li- [PN] Wa-TaQuL ^{ca}L(ā)-?aḤī-H... Wa-QaNiṬ Haš-ŠāNi? Fa-Hā-ILāT Wa-GaD-^{ca}WiD WiQāYaT Wa-WaGaD ?aTaR ?aŠYā^{ci}-H Fa-Ha-NvGa^c '(...) by PN, when he was heavy-hearted on account of his brother... and was afraid of the enemy, so, O Allāt and G., (grant) protection! (By the same) when he found traces of his fellows, thus he longed (for them)?'

(LSI 344) Li- [PN] Wā-Ra^{ca}Y Haḍ-Ḍa?N Fa-Hā-ILāT SaLāM Li-... Wa-WaGaM ^{ca}L(ā)-

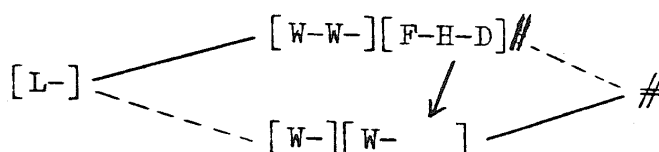
?aBī-H Fa-NvGaḡ ʕaL(ā)?aBī-H... '(...) by PN, when he tended the sheep, so, O Allāt, (give) peace to...! (Further on) when he laid a stone on the tomb (?) of his father, thus he felt sorrow over his father...!' (cp. WSIJ 85).

F.1.d. / [L-] [W- (W-)] [F-H-D] // [W-] [F/W-H-D-] /

In this type too the second part is not connected with the first one by the content, but through the same authorship and environment i.e. time and place:

(LSI 233) Li- [PN] Wa-WaGaM ʕaL(ā)-?aHī-H QaTīL Fa-Hā-ILāT Ta?R Miš-ŠāNi? Wa-HāRaṢ ?aHāWai-H Fa-Hā-ILāT ... '(...) by PN, when he mourned (?) over his killed brother, so, O Allāt, (grant) blood-revenge on the enemy! And (also) He was looking out for his two brothers, so, O Allāt, (send) ...!' (cp. LSI 305 with a W-H-D-element instead of the second F-H-D-element),

(LSI 243) Li- [PN] Wa-BaKaY WaGaM ʕaL(ā) ?aBī-H QaTīL Fa-Hay-ālLāT Ta?R Wa-TaŠauWaQ ?iL(ā)-.... Wa-ʕaWāR Li-...', the last element being from the functional point of view a W-H-D-unit:



F.1.e. / [L-] [W-] [F-] [F-H-D] // [W-] /

(LSI 156) Li-[PN] Wa-WaGaD ?aTaR DaDi-H Fa-NvGac KaBiR Fa-Hā-ILāT SaLaM Li-... Wa-WaGaM caL(a)-... (with only one post-terminal unit).

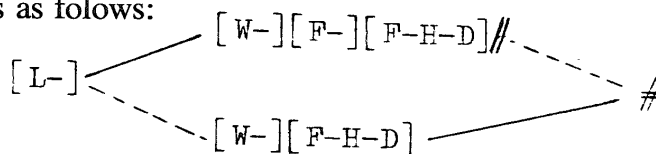
F.1.e. / [L-] [W-] [F-] [F-H-D] // [W-] /

(LSI 156) Li- [PN] Wa-WaGaD ?aTaR DāDi-H Fa-NvGaḡ KaBīR Fa-Hā-ILāT SaLāM Li-... Wa-WaGaM ʕaL(ā)-... (with only one post-terminal unit).

F.1.f. / [L-] [W-] [F-] [F-H-D-] // [W-] [F-H-D] /

(WH 999) Li-[PN] Wa-WaGaD ?aTaR ʕamMi-H Fa-WuLiG ... Fa-Hā-ILāT ... Wa-Ra ʕaY... Fa-Hā-ILāT SaLāM '(This inscription is) by PN, when he found the inscription of his grandfather, thus he felt pain..., so, O Allāt, (grant) ...; (and the continuation of the inscription is by the same) when he pastured..., so, O Allāt, (give) security!'

The set-up of the inscription parts is as follows:



F.2. Texts with postposition/insertion

Other texts show intrusions of elements or units which regularly do not occur in this place. The characteristic feature of these types results from setting up two breaches embracing the out-of-place unit or element.

F.2.a. / [L-] // [W-] // [W-] [F-H-D] /

The inscription

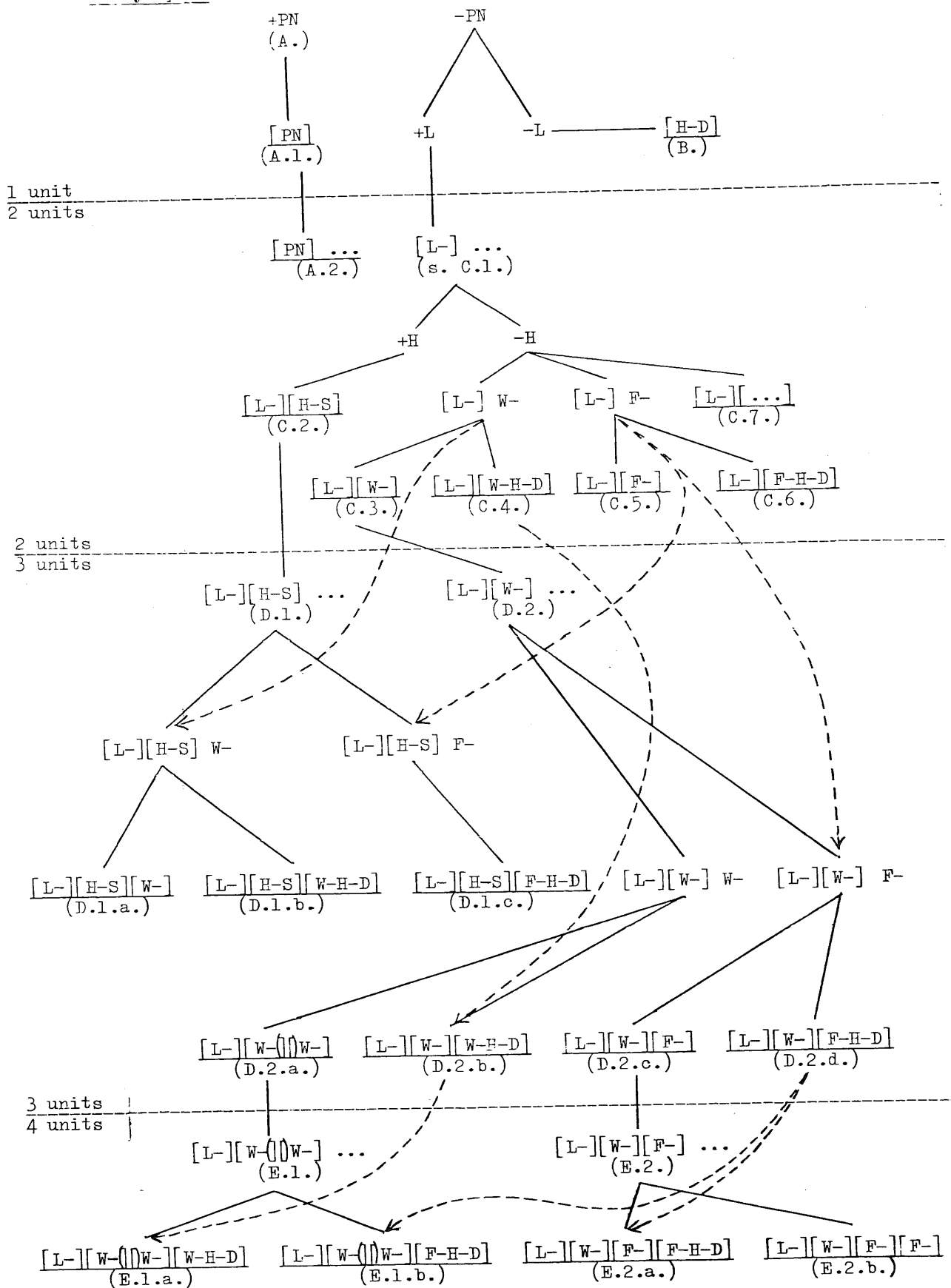
(LSI 179) Li- [PN] Wa-ʕaWāR Li-Dī Yu ʕauWiR Has-SiFR Wa-Ra ʕaY Hā-?iBiL Fā-Hā-ILāT SaLāM Miš-ŠāNi? '(...) by PN, - and (O Allāt) blindness to him who effaces this inscription when he tended the camels, so, O Allāt, (grant) protection from the enemy!' (cp. LSI 210) shows the intrusion of an element that belongs to the terminal unit:

/ [L-] // [W-] [W-] [F-H-D] /

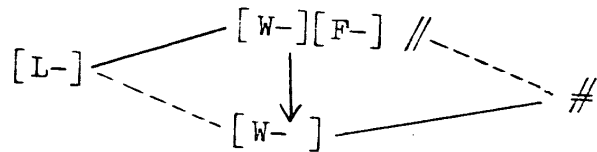
F.2.b. / [L-] [W-] // [F-] // [W-] /

A normally final F-unit intruded here into the preceding W-unit of a three unit text (/ [L-] [W-] [F-] , see D.2.c.):

2. Synopsis



(LSI 443) Li- [PN] Wa-WaGaD SiFR ŠamMi-H Fa-NvGaš Wa-SiFR DāDi-H'(...) by PN, when he found the inscription of his grandfather, thus he longed (for him)! And (he found also) the inscription of his uncle!'.
Another way is by positing a bipartite texttype with an omission of the (b) verb which is the same as in the (a) part of the text:



F.2.c. Inversion inside a unit

Some metatheses occur in even very short inscriptions when the filiation of the writer is put afterwards (see WH p. 90):

(WH 3166) Li-?aŠHaB//Hab- BaKRaT // BiN-?aMR-?iL, 'This she-camel (is drawn) by A.b.A'.

See also the inverted invocations

(see WH p. 15) ... Fa-Hā-ILāT // Sa LāM // Wa-Šaiš-Haq-QauM,

(LSI 576) ... Fa- // Ra WāḤ // Ha-?alLāT,

(c 4961) ... Fa- // SaLāM // Hā-ILāT Li-Dī/ū Sa'?aR,

(see WSIJ 806, 836)

The consideration of further texts may bring about an elaboration and, if necessary, a revision of the here given classification of Safaitic inscriptions, as, in fact, was the case with the incorporation of the WH-collection.

3. Notes

1. Littmann: *Semitic Inscriptions, C: Safaitic Inscriptions*, Leyden 1943, P. viii ff.
2. Petracek: Zur semantischen Struktur der safaitenischen Inschriften, *Archiv Orientalni*, 41 (1973), p. 52-57.
3. The terminology is that of L. Bloomfield (A Set of Postulates for the Science of Language (Language, 2 (1926), p. 153-164), *Readings in Linguistics*, I. Ed. by M. Joos, 4. ed., Chicago 1971, p. 26-31). Strictly speaking, the definition of the 'minimum free form' (i.e. word) does not hold for Safaitic on account of its restricted utterances. To fit the description of word as "a form which may be uttered alone (with meaning)" (p.27) we have to enlarge the corpus of utterances by assuming the existence of some others in popular Safaitic (e.g. *SaLaM # # TaSauWaQ #) which are in fact hitherto not attested.
4. See. A. Jamme: *Safaitic Notes*, Washington, D.C. 1970, p. 15.
5. Fr. V. Winnett: *Safaitic Inscriptions from Jordan*, Toronto-London 1957.
6. See. note 1.
7. See. A. van den Branden: *Les Inscriptions Thamoudéenes*, Louvain 1950, passim.
8. O. Behaghel: *Deutsche Syntax, eine geschichtliche Darstellung*, 3: Die Satzglieder, Heidelberg 1928.
9. A. Noreen: *Einführung in die wissenschaftliche Betrachtung der Sprache*, Halle (Saale) 1923, p. 266.
10. J. Ries: *Was ist ein Satz*, Prag 1931, p. 123 ff.
11. O. Jespersen: *The Philosophy of Grammar*, London 1968, p. 308.
12. Fr. V. Winnett-W.L. Reed: *Ancient Records from North Arabia*, Toronto 1970, p. 74 and 83.
13. J.C.L. Gibson: *Textbook of Syrian Semitic Inscriptions*, 1-2. Oxford 1971-1975, H. Donner - W. Rölling: *Kanaanäische und aramäische Inschriften*, 1., Wiesbaden 1962, p.2.
14. F.V. Winnet - G. L. Harding: *Inscriptions from Fifty Safaitic Cairns*, Toronto (etc.) 1978.
15. See. *Jamme Notes* p. 109, 112.
16. See. LSI p. xi and E. Littmann: *Thamūd und Šafā*, Leipzig 1940, p. 105.
17. See. Winnett-Reed *Ancient* p. 75.
18. = G. Rychmans: *Corpus Inscriptionum Semiticarum*, 5: Inscriptiones Saracenicis continens, 1., Paris 1950.
19. and E. Littmann: *Semitic Inscriptions*, New York 1904, p. 110.
20. as to k-names see. *Jamme Notes* p. 139, some b-names may be shortened from the Runya, see. WH p. 19.
21. G.L. Harding: The Cairn of Hani', *Annual of the Department of Antiquities of Jordan*, 2 (1953), p. 8-56.
22. See. G.L. Harding: *The Safaitic Tribes, Al-Abhath*, 22 (1969), p. 3-25, G. Ryckmans: Les Noms de Parenté en Safaitique, *Revue Biblique*, 58 (1951), p. 377-392, cf. J. Ryckmans: Le Sens de d'L en Sud-Arabe, *Le Muséon*, 67 (1954), p. 339-348.
23. See. G.L. Harding: *An Index and Concordance of Pre-Islamic Arabian Names and Incriptions*, Toronto 1971.
24. W.H. Oxtoby: Kilroy in the Desert, *Annual of the Department of Antiquities of Jordan*, 15 (1970), p. 21-23.
25. See. A. Jamme: The Safaitic Verb wgm, *Orientalia*, 36 (1967), p. 159-172.
26. W. Wright; *A Grammar of the Arabic Language*, 1., Cambridge 1967, p. 291.

4. Index

1. A. The PN-(sub) unit
 A.1. / [PN]/
 A.2. / [PN] [...] /
 B. / [H-D] /
- C. One- and two-unit texts with L—:
 C.1. / [L—]/
 C.2. / [L—] [H—S]/
 C.3. a. / [L—] [W—]/
 C.3. b. / [L—] [W—H—S] /
 C.3.c. / [L—] [W—NS] /
 C.4. / [L—] [W—H—D] /
 C.5. / [L—] [F—] /
 C.5. / [L—] [F—] /
 C.6. / [L—] [F—H—D] /
 C.7. / [L—][...]/
- D. Three-unit texts ([L—] ...)
 D.1. / [L—] [H—S] ...
 D.1.a. / [L—] [H—S] [W—] /
 D.1.b. / [L—] [H—S] [W—H—D] /
 D.1.c. / [L—] [H—S] [F—H—D] /
 D.2. [L—] [W—] ...
 D.2.a. / [L—] [W—] [W—] / or / [L—] [W—W—]/
 D.2.b. [L—] [W—] [W—H—D] /
 D.2.c. [L—] [W—] [F—] /
 D.2.d. / [L—] [W—] [F— H— D] /
 D.3. / [L—] [W—H—D (—)] [W— (H—) D] /...
 D.4. / [L—] [W—] [F—H—D] /
- E. Four-unit texts ([L—] [W—] ...):
 E.1. / [L—] [W—] [W—]... / [L—] [W—W—] ...
 E.1.a. / [L—] [W—() W—] [[W—H—D]] /
 E.1.b. / [L—] [W—() W—] [[F—H—D]] /
 E.2. / [L—] [W—] [F—]...
 E.2.a. / [L—] [W—] [F—] [F—H—D] /
 E.2.b. / [L—] [W—] [F—] [F—] /
 E.3. / [L—] [W—] [F—H—D () W—H—D] /
- F. Composite texts
 F.1. Bipartite texts
 F.1.a. / [L—] [W—] [F—] // [W—] /
 F.1.b. / [L—] [W—] [F—] // [W—] [F—H—D] /
 F.1.c. / [L—] [W— (W—)] [F—H—D] // [W—] [F—] /
 F.1.d. [L—] [W— (W—)] [F—H—D] // [W—] [F/W—H—D] /
 F.1.e. / [L—] [W—] [F—] [F—H—D] // [W—] /
 F.1.f. / [L—] [W—] [F—] [F—H—D] // [W—] [F—H—D] /
 F.2. Texts with postposition/insertion
 F.2.a. / [L—] // [W—] // [W—] [F—H—D] /
 F.2.b. / [L—] [W—] // [F—] // [W—] /
 F.2.c. Inversion inside a unit
2. Synopsis
 3. Notes
 4. Index

R.M. Voigt
 Tübingen

THE 1978 EXCAVATION OF THE HESBAN NORTH CHURCH

by
J. Lawlor

INTRODUCTION

The 1978 Hesban North Church Project was sponsored by Baptist Bible College of Pennsylvania and endorsed by the American Schools of Oriental Research/American Center of Oriental Research and the Department of Antiquities of the Hashemite Kingdom of Jordan. The success of the project was due to the co-operation of many people. The major contributors to the project were Mrs. Dorothy Graham of Buffalo, New York; Mr. and Mrs. Lloyd Fuller of Sierra Vista, Arizona; Mr. and Mrs. Gary Doverspike of Mayport, Pennsylvania; Mrs. Ruth Rothberg of Hallstead, Pennsylvania and Mr. Devon Stryker of Elkart, Indiana. Their confidence and financial support were genuinely appreciated.

The core staff consisted of John 1. Lawlor, Director (Baptist Bible College of Pennsylvania); Lawrence T. Geraty, Senior Advisor (Andrews University, Berrien Springs, Michigan); Larry G. Herr, Archaeologist (Adventist Seminary, Manila, Philippines); Bert DeVries, Architect (Calvin College, Grand Rapids, Michigan); Mojahed Mohaisen, Department Representative (Madeba, Jordan); and Mohammed Adawi, Camp Manager and Chief Cook. The expertise of Drs. Geraty, Herr, DeVries, Mojahed Mohaisen, and Mohammed Adawi was a major contributing factor to the success of the field work.

Dr. Adnan Hadidi, Director General of the Department of Antiquities of Jordan, was of incalculable assistance both in the planning stage and the field work. Dr. James A. Sauer, Director of the American Center of Oriental Research (Amman, Jordan) gave valuable advice and assisted in making arrangement for the project. Personnel from the Department of the Army arranged for the use of tents during the four weeks of excavation.

Square supervisors were Eric Cuenin, Linnea Fagerberg, Dennis Gilliland, Andre Girgus, Beth Haley, Denise Herr, David Kemp, Al Leslie, Ray Meyer and Leino Pakala. They were assisted in the field work by twenty Jordanian workmen graciously provided by the Department of Antiquities. The field work began 19 June and ended 14 July, 1978.

The existence of a Byzantine church north of Tell Hesban was confirmed by a sounding done in 1976 as part of the Andrews University Expedition to Heshbon. The probe of 1976 had established the existence of three strata at the site: an Ayyubid/Mamluk cemetery, and Umayyad complex and the Byzantine church. While the church was the primary focus of attention, the extent of the Ayyubid/Mamluk cemetery and the nature of the Umayyad complex were secondary matters for investigation.

AYYUBID MAMLUK

The 1976 probe of the apse sector of the church produced a series of cist burials, some of which contained well-articulated, extended human skeletons. This season's work demonstrated that the burials were not confined to the apse sector of the church; numerous burials were located both to the north and the south of the apse in the region of the north and south side chambers, as well as throughout the nave. The majority of these cist burials, which were oriented generally east-west, were located from 0.5 m to 1.5 m above the Byzantine level although a couple were found immediately above the nave mosaic. The excavation of these burials produced a number of artifacts such as beads, rings, earrings, and ceramic pieces, (see Figs. 1, 2 for ceramic profiles and interior decorative patterns). At least three of the ceramic pieces bore the evidence of having been repaired in antiquity. Two of the burials were noteworthy in that bowls had been positioned at the right side of the head so as to allow the head to actually rest against the bowl, (Pl. LVIII, 1).

UMAYYAD

A two-course Umayyad wall running east-west was encountered during the 1976 probe. The lower course sat directly on the mosaic floor in the apse. This wall, Locus 29, butted against

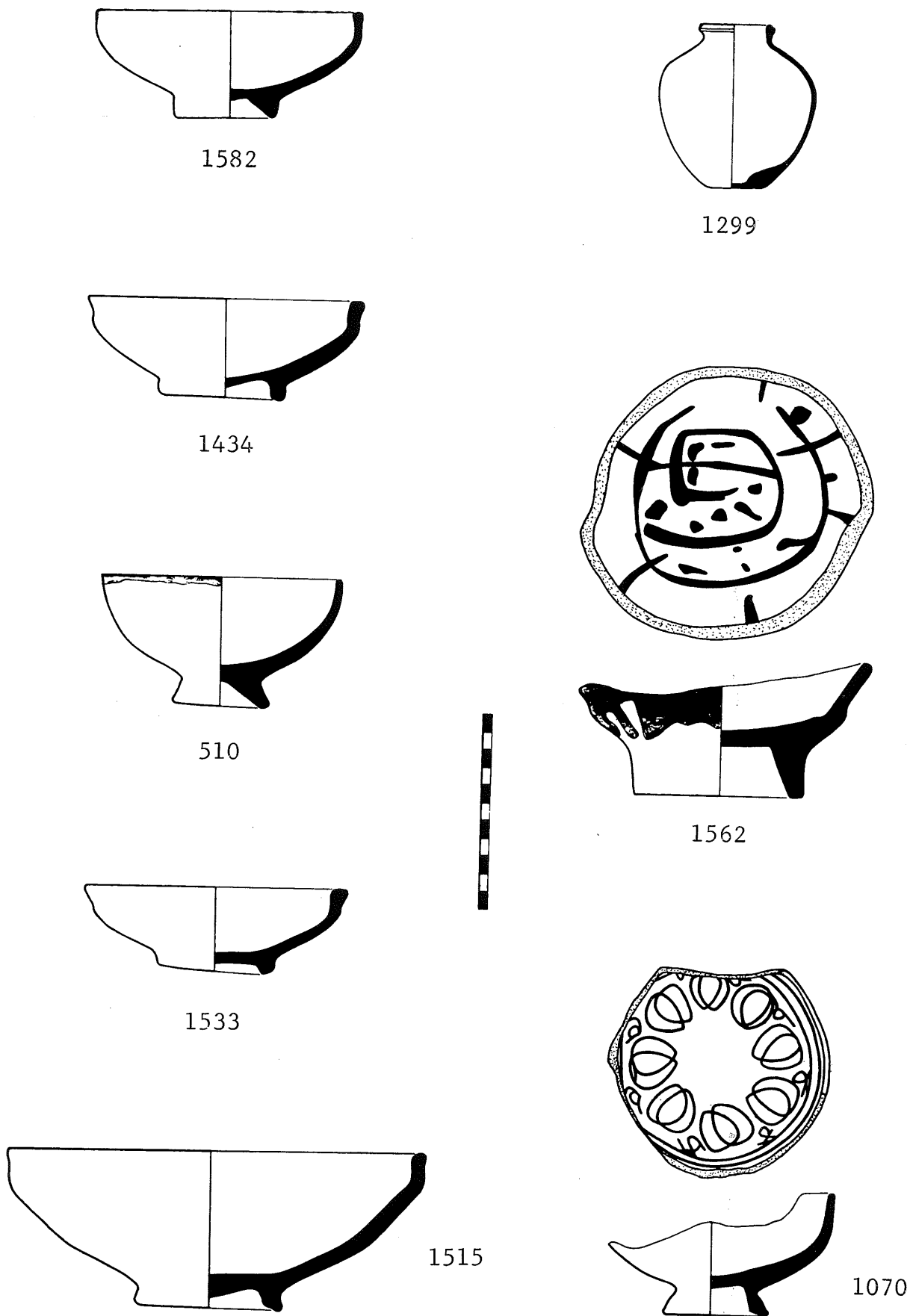
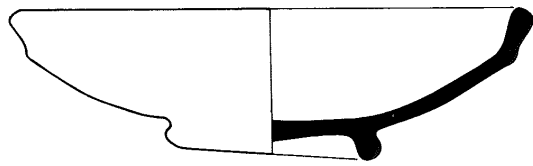
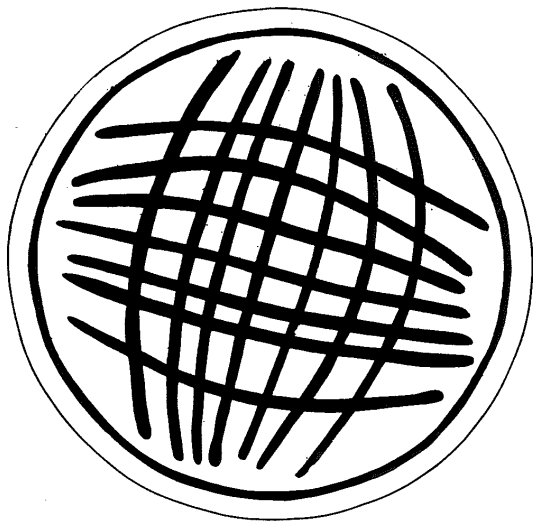
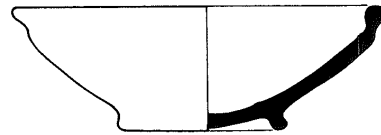
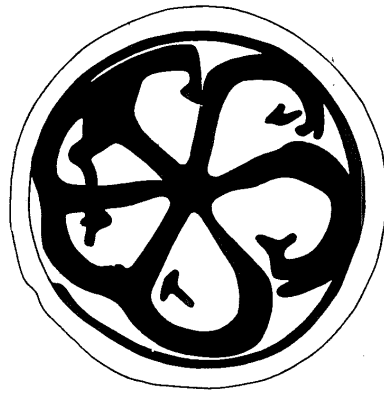


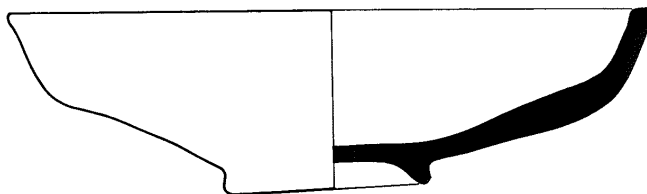
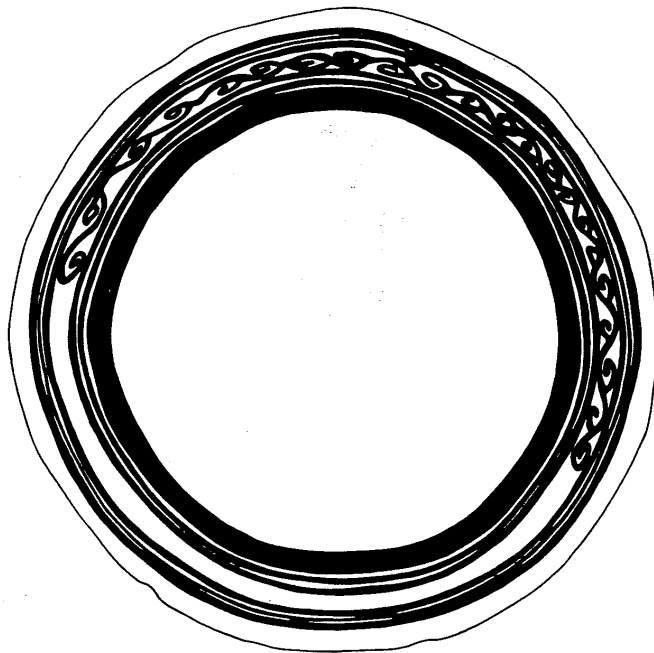
Fig. 1. Ayyubid/Mamluk and Umayyad pottery; mostly from cist burials.



975



575



1534

Fig. 2. Ayyubid/Mamluk pottery; mostly from cist burials.

another two-course Umayyad wall which lay in a north-south direction. This latter wall was designated Locus 28. In the squares which were laid out west of the 1976 probe, squares D, E, and F respectively, the east-west Umayyad wall was found to butt against the west face of Wall 28 and then continue running westward throughout the entire length of the church; its overall length was ca. 21 m. In each square the wall sat directly on the mosaic floor of the Byzantine church; however, it was not two courses high over its entire length. West of Wall 28 as far as the chancel steps it was one course; ca. 3 m of the wall at the east end of the nave were two courses; the remainder of the wall westward was one course. The greater part of the wall was made of semi-well-dressed stone although one complete column drum and three capitals were used in the construction of the western half of the wall. Shorter, one-course walls lay in a north-south direction between the north side of this wall and the south face of column bases four and six¹ in the northern half of the church. The facts that the south face of the dressed stones was laid quite evenly and that the capitals were laid on their sides with their tops in line with the south face of the wall would suggest that the south face of this east-west wall was intended as the exposed face (Pl. LVIII, 2).

The primary question for consideration in connection with this complex of walls has to do with their function. One possibility is that the Byzantine church was reused in the Umayyad Period as a domestic complex; the walls in question would then have served as house and room dividers. The major problem with this suggestion is the absence of domestic debris. A second possibility is that the earlier church was reused as an Umayyad mosque. Further analysis of the available data will perhaps yield some important clues to the solution.

One of the major achievements of 1978 season's work in connection with the Umayyad stratum was the identification of four Umayyad phases in the region of the south side chamber of the church (Pl. LVIII, 3). The earliest Umayyad use of the church was represented by the complex of walls immediately on top of the mosaic floor, Locus 39 in Square C, found throughout the church. The next three were represented by three plaster surfaces: Loci 29/31, 25/26, and 21 (bottom-to-top sequence), found only in Square C (Fig. 3). Closer analysis of the ceramic evidence may be helpful in dating more precisely the four Umayyad phases.

BYZANTINE

The existence of an Early Christian Church at this site was confirmed through the probe of 1976. Neither the extent nor the state of preservation of the remains was known. As a result of the work of the 1978 season, it was established that the architectural features of the church as well as its mosaic floors were very well preserved.

Architecture. The overall plan of the Hesban church was that of a typical basilical style church, complete with apse-chancel, side chambers, nave, side aisles and narthex (Fig. 4).

Apse/chancel. The inscribed apse which was preserved 3.12 meters above bedrock, contained fragments of three tiers of what probably was at one time a five-tiered synthronon. The five-tiered synthronon in the church at Siyagha provides a fine example of this particular architectural feature.² The apse was 3.0 m deep (from the chord to the west face of the apse wall), and approximately 6.0 m wide at the chord, (Fig. 4). The west face of the lowest course of the synthronon was plastered; three different layers of plaster were distinguishable.

The chancel which was elevated two steps (.52 m) above the nave measured 6.0 m deep (east-west) and 7.50 m wide (north-south). It extended westward from the chord of the apse 6.0m, the equivalent of two and one half bays (Fig. 4). Grooves and post holes for fenestrade and anchor posts, respectively, were present in the top step at the west end of the chancel.

The chancel contained evidence of an altar installation immediately west of the apse chord. Six altar post sockets, three on each of the north and south sides of a well-preserved reliquarium, were identified (Fig. 4). One of the marble altar posts was discovered in Square C, the area of the south side chamber.

Side chambers. The east end of the church contained two side chambers, one north of the apse and one south (Fig. 4). Both were approximately of the same size, ca. 4.50 m wide (north-south) and 2.50 m deep (east-west). The exposed plan clearly indicates that neither side chamber extended westward into either side aisles beyond the line created by the chord of the apse and the west face of the side chambers. Each opened upon its respective side aisle through what were probably arched entrances; neither side chamber opened directly into the apse. Both

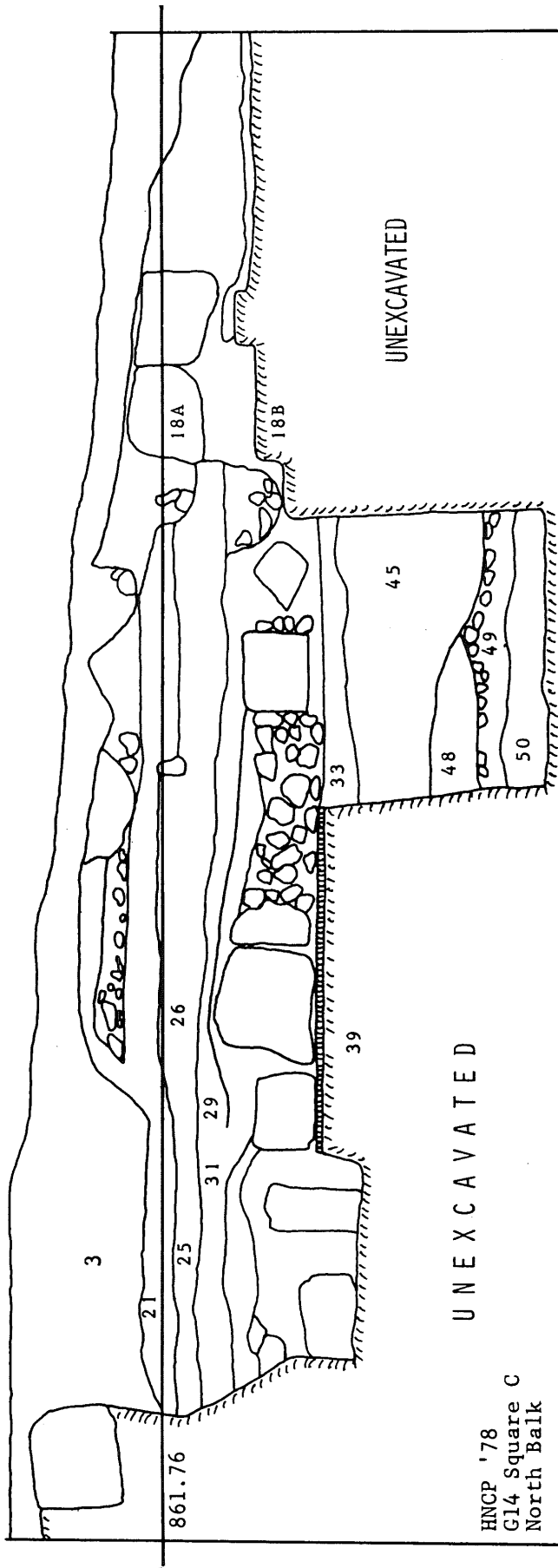


Fig. 3. North balkdrawing of Square C showing the four Umayyad surfaces.

side chambers had exits through the east wall of the church and there was clear evidence that each had a mosaic floor at the time the church was in use.

Nave. The width of the nave was 7.5 m; its length was 15.75 m. North and south stylobate walls, on east-west orientation, supported a total of 16 column bases — eight on each wall. Similarity between the Hesban and Siyagha churches was found to exist on this point.³ The entire length of the north stylobate wall was exposed; all eight column bases were *in situ* (Pl. LIX, 1), and the easternmost base had .75 m of its column still standing. Only the three easternmost bases on the south stylobate wall were exposed, but all three still supported fragments of their columns. The average distance between each column base was 1.5 m. The main entrance to the church was at the west end of the nave.

Side aisles. The north side aisle was 4.90 m wide, while the width of the south aisle was 4.50 m; both aisles were 21.30 m long. The width of the side aisles in relationship to the width of the nave was greater than in many fourth-sixth century churches.⁴ The entrance through the west wall of the church into the north side aisle was exposed. One was projected at the west end of the south side aisle also, although that particular region was not excavated (Fig. 4).

Narthex. A 4.3 m wide narthex was located outside the west end of the basilica (Fig. 4, and Pl. LIX, 2). Three column bases, .80 m square, were *in situ* in a north-south line 3.50 m west of the west wall of the basilica. Two of the column bases were located south of the east-west axis line, and one north. A plaster lined water channel lay between the two southernmost column bases, and sloped in a northeasterly direction, running under the main western entrance to the church (Pl. LIX, 3). This would suggest that a cistern was situated under the west end of the nave; this however, was not confirmed.

Mosaics. Two levels of mosaics were preserved in the apse and chancel. The upper mosaic was composed of two main panels ca. 4 m long and was divided by a single line Greek inscription stretching north-south across the chancel directly west of the altar. The eastern panel had interlocking cloverleaf patterns at both ends with a simple flower-bud design characterizing the mosaic of the altar area. The western panel featured large trees at both ends, with a large, well-executed urn in the center of the panel (Fig. 5). All this was bordered by a pattern of continuing and interlocking swastika-like designs. The lower mosaic was exposed in a 1.5 by 2.5 m probe in the apse. It was located ca. 0.10 m below the upper mosaic and featured a sevenline Greek inscription in a circle surrounded by a twisted rope-like pattern. Gazelle-like animals faced the inscription on the north and south, and gently bent trees hovered over both (Pl. LXIII, 1).

The nave mosaic featured a double border. The outer border was a series of interlocking circles ca. 0.25 m in diameter; a similar pattern was discovered in the mosaic in Room B of the church in Ma'in.⁵ The inner border was composed of a series of large (ca. 0.60 m in diameter) medallions in which birds of various kinds were featured (Pl. LXIII, 2). On all but two of those medallions which were uncovered, the birds had been defaced, with plaster or mosaic patch replacing them. This was thought to be the result of iconoclastic efforts. Another large urn was part of the nave mosaic, along with various geometric patterns and designs. At the east end of the nave, directly in front of the chancel steps, a four-line Greek inscription was uncovered.

Inscriptions. Three inscriptions were uncovered; two were located in the apse/chancel, the other at the east end of the nave. The first inscription was a seven line Greek inscription located in the apse on the lower mosaic (Pl. LXIII, 1). It read:

ΥΠΕΡ
ΣΩΤΗΡΙ
ΑΣΦΙΛΑ
ΔΕΛΦΟΥ
ΚΑΙ ΗΛΙΟΥ
ΥΙΟΥ Α
ΜΗΝ

In translation, the inscription reads: "For the salvation of Philadelphos and Elios his son, Amen."

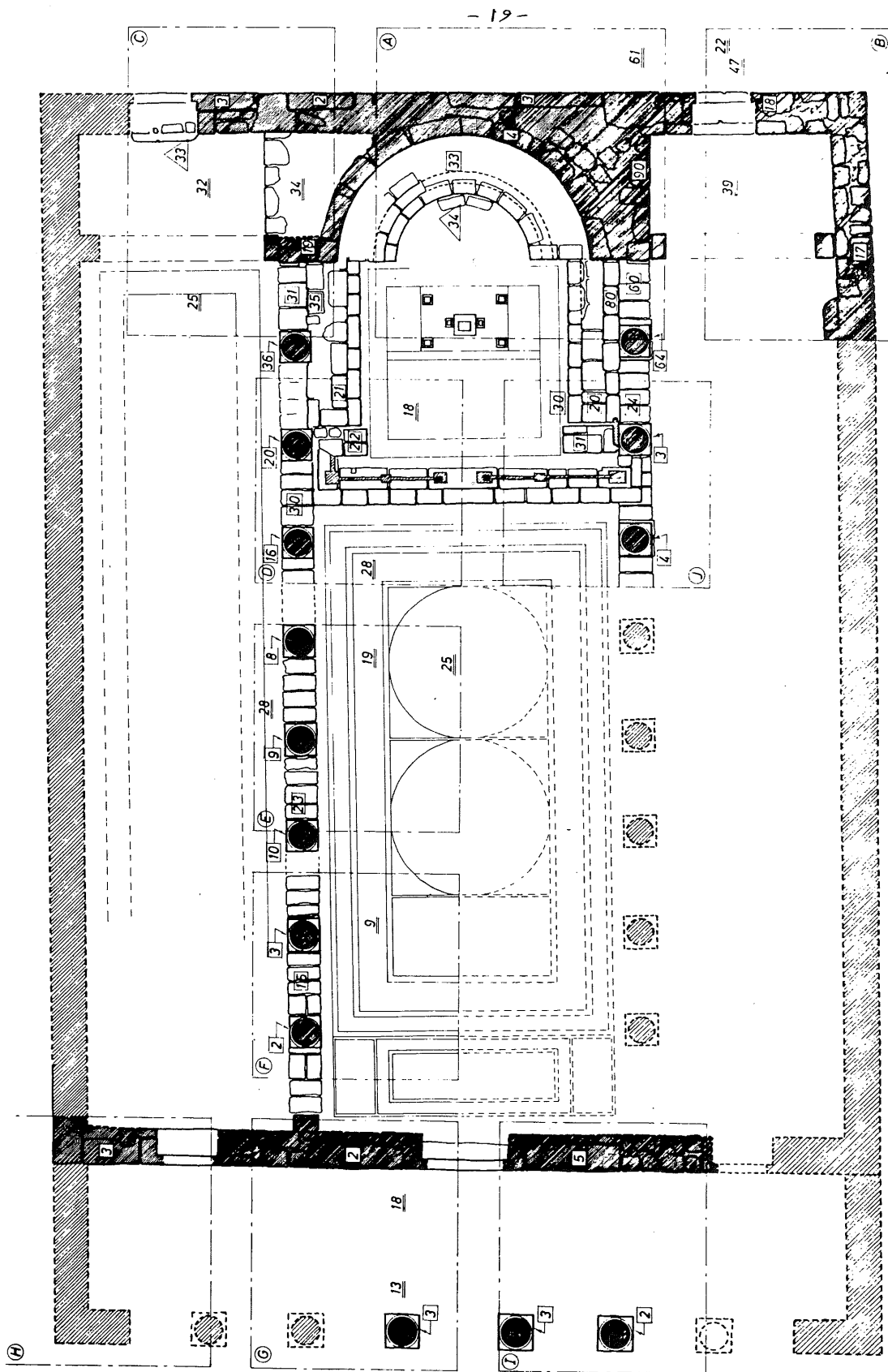
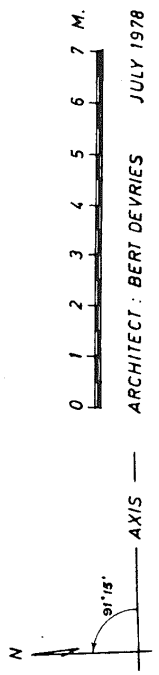


Fig. 4. Plan of the Hesban North Church.



ARCHITECT : BERT DEVRIES JULY 1978

— AXIS —

The second inscription was located at the east end of the nave, directly in front of (east of) the chancel steps. It was four lines in length; the first line was complete, the last three lines were broken in places (Pl. LXIII, 3). It read:

†ΥΠΕΡΣΩΤΗΡΙΑΣΤΟΥΕΥΛ^ς ΠΡΕΣ^ς
 ΠΑΠΙΩ(ΚΑΙ) ΠΡΟ(ΣΦΟΡ)Κ(ΑΙ)ΕΝΕΥΣΕΒΙΑ
 †ΙΧΘΥΣ(. . .)ΣΩ(. . . .)ΦΙΛΑΔΕΛ
 ΦΟΥΜΑΙ(ΚΑΙ)ΠΑ(ΝΤΟΣΤ)ΟΥΟΙΚΟΥΑΥΤΟΥ

While parts of it were missing, the majority of those parts can be reconstructed, based on comparative material from Siyagha,⁶ as well as the context of the inscription. A probable translation of the four lines would be:

“For the salvation of the blessed presbyter
 Papio and for an offering and in piety
 Christ (remember) Philadel-
 phos and all his house/family.”

Some observations are in order. First, the letter style of these first two mosaics was the same except for the ‘alphas.’ These two inscriptions were probably contemporary. Second, while the first inscription made no use of abbreviations, the second one did. The “slanted sigma” indicated that “ΕΥΛ” and “ ΠΡΕΣ ” were both abbreviated terms; the former an abbreviation for ευλογητος (blessed), the latter an abbreviation for πρεσβυτερος (elder/presbyter). Third, the use of ΙΧΘΥΣ in the inscription raises some questions. In light of its customary use at an earlier period (first and second century), what was the significance of its use in a probable mid-sixth century context? Does its use have any bearing on the date of the church?

A third inscription was found on the upper apse/chancel mosaic. It was nearly four meters in length, stretching across the chancel in front of (west of) the altar. A .95 m portion of it was broken out in the northern half and a .20 — .25 m portion of it was broken out at the south end (Fig. 5). As excavated, it read:

ΕΠΙ(ΑΝΕΝΕΩΘΗΚΑΙΕΤΕΛΕΙ)ΩΘΗΤΟΑΤ^ς ΘΥΣΙΑΣΤ^ς ΣΠΟΥΔΗΙΩΑΝΝΟΥΔΙΑΚΥΠΕΡΣΩΤΗ^ς ΤΩ
 (. . .) ΡΠΟΦΟΡ^ς

Once again, comparative materials,⁷ as well as context, suggest a possible reconstruction of the major segment that was lost. A probable reconstruction/translation would be: “At the time of the renewing and finishing of the holy altar by the zeal of John the deacon for the salvation of... and for an offering”. The existence of the upper mosaic approximately 10 cms. above an earlier one clearly indicated that the apse/chancel sector of the church had gone through a remodeling phase.

One further observation regarding this third inscription was that the style of lettering was noticeably different from that of the first two mosaics. The letters of this single line inscription were all the same height and were executed with much more style. This was particularly noticeable in the letters “ Ω”, “ Θ ” and “Υ ”. The letter style in this inscription was very similar to the letter style of the two inscriptions in the Theotokos chapel at Siyagha.⁸ No datelines appeared in any of the inscriptions.

Artifacts. A total of 269 objects were registered; the collection included pottery, stone, rings, beads, earrings, glass, ivory carvings and coins. Of note were some of the ivories, an altar post, the reliquary and some of the coins.

Ivory carvings. Well established Byzantine soil layers in Square C, the square in which the south side chamber was located, yielded numerous ivory carvings, many of which gave evidence of having been inlaid at one time. The corpus included five bishop heads with mitres, averaging 6 cms high and 3-4 cms wide (Pl. LX); four carvings of what appeared to be miniature columns varying in length from 9-13 cms and 1½ cms wide (Pl. LXI); and one 17 cms by 3½ cms showing a sea creature swallowing a fish (Pl. LXI). Its design was similar to that of the sea creatures leaping around Thalassa, the goddess of the sea, pictured in the center of the mosaic floor of the Apostle’s Church in Madeba.

Altar post. A marble altar post was recovered from the south-side chamber (Pl. LXII, 1). Its height was .93 m, the circumference near the bottom was 32 cm, and it tapered gently to a 28 cm circumference near the top. The motif at the top was that of a lotus plant on each of the four

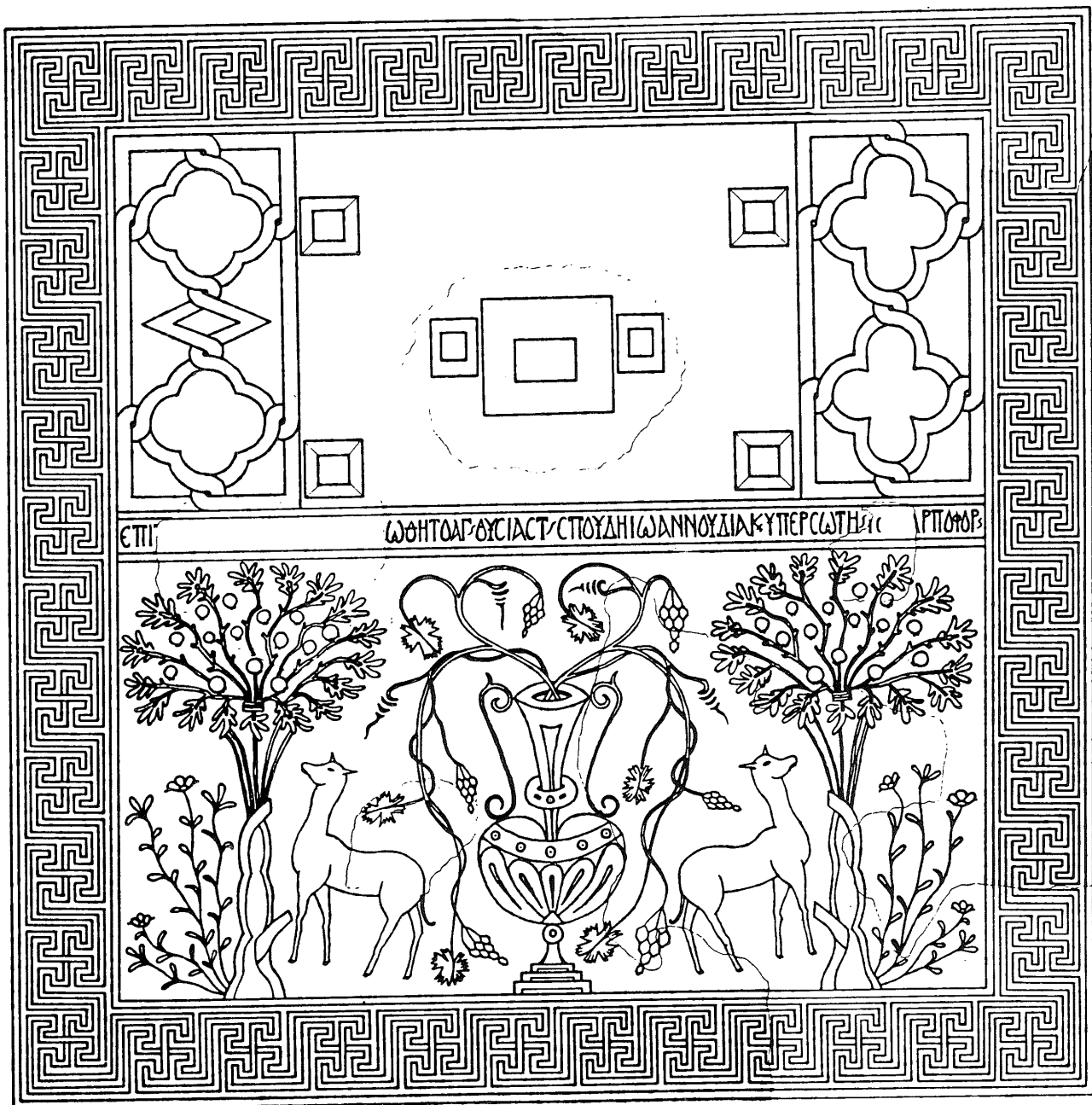


Fig. 5. Architect's drawing/reconstruction of the upper chancel mosaic.

sides. Exact parallels are to be seen in the Siyagha church⁹ and the recently excavated church at Ma'in.¹⁰

Reliquary. The reliquarium contained a marble ossuary (Pl. LX11, 2), the base of which was 24.6 cms by 17.3 cms¹¹ and was divided into two compartments, one was 9.2 cms by 11.1 cms, the other was 8.2 cms by 11.1 cms. Each corner of the 7.9 cms high gabled lid featured a "horn" and both sloping sides of the lid were decorated with raised crosses. The smaller of the two compartments contained a silver reliquary, oval shaped, 11 cms by 6.7 cms by 5.5 cms (Pl. LXII, 3). Its lid, decorated around its rim with a twisted rope pattern, also bore the image of a well-proportioned Byzantine cross. A cleaning of the lid revealed an inscribed "A" and "Ω" at the base of the cross and an inscribed geometric pattern beneath the cross. The contents of the reliquary were an ashy material, a human patella from a right leg, and a human tooth. Perhaps the kneecap belonged to a saint who was remembered as a person of prayer. Tests of the ashy substance have ruled out the possibility of their being cremation remains. The practice of depositing relics of saints under the altar was common during the fifth and sixth centuries; although the discovery of them *in situ* is unusual.

Coins. A total of fifteen coins was recovered during the 1978 season of excavation. Seven of those, after cleaning, were identifiable. Those seven have been catalogued as follows:

- Obj. 39: G14 A. 20:95
 Soil description: Light, yellowish brown (10 YR 6/4); slightly moist
 Pottery reading (pail 95): Um.; Byz.
 Coin description: Gallienus: 267 CE/Antoninianus; Mint of Asia
 REV.: LVNA LVCIF; Diana walking right
- Obj. 87: G14 A. 45:80
 Soil description: Pinkish grey (5 YR 6/2); sandy
 Pottery reading (pail 80): UD bods.
 Coin description: Justin II: 575/6 CE (Year XI)
 Follis: Mint of Cyzicus
 (remains of iron in hole at 12:00)
- Obj. 184 G14 A. 42:138
 Soil description: Reddish brown (5 YR 5/3); fairly loose, soft; moist
 Pottery reading (pail 138): Few Um./Byz.; Byz. dom.
 Coin description: REV.: type, SECVRITAS REPUBLICAE : 364-75 CE
 Victory to right, holding wreath
 Emperor and mint uncertain
- Obj. 186 G14 B. 10:18
 Soil description: Reddish brown (5 YR 5/4); gritty, silt loam
 Pottery reading (pail 18): 1 Ab.; Um.; Byz.
 Coin description: Justinian II: 538-40 CE (years XII and XIII)
 Follis: probably mint of Constantinople
- Obj. 187 G14 A. 42:138
 Soil description: Reddish brown (5 YR 5/3); fairly loose, soft; moist
 Pottery reading (pail 138): Few Um./Byz.; Byz. dom.
 Coin description: OBV. : obliterated
 REV. : type, CONCORDIA AVGG Cross
 ca. 400 CE
- Obj. 188 G14 C. 46:70
 Soil description: Yellowish red (5 YR 5/6); clayey; damp
 Pottery reading (pail 70): Byz. dom.; ER; 12P
 Coin description: Constantinian family: 341-46 CE
 REV. : type, VICTORIAE DD AVGGQNN
 Two victories, facing, holding wreaths
- Obj. 189 G14 E. 1:2
 Soil description: Grayish brown (2.5 YR 5/2); hard, clumpy; dry
 Pottery reading (pail 2): Ay./Mam.; Um.; few Byz.
 Coin description: Caesarea Maritina: 3rd cent. CE
 OBV. : Bust of emperor
 REV. : Eagle displayed, within wreath, SPQR

CONCLUSION

No dateline appeared in any of the three inscriptions, thus making the assignment of a firm date to the construction or remodeling of the church very difficult. Preliminary ceramic analysis as well as architectural similarities to the church at Siyagha and the Byzantine churches in the area of Hesban suggest an approximate date of A.D. 550 for the construction of the Hesban North Church. The remodeling of the apse/chancel area, represented by the upper chancel mosaic, perhaps occurred 25-50 years later (A.D. 575-600). Further and closer investigation of the available evidence should shed more light on this particular question.

Personnel from the Department of Antiquities have lifted the upper chancel mosaic and are presently working on its reconstruction at the Museum at Madeba. The remainder of the mosaic has been covered in order to protect it from weathering and vandalism. A second season of excavation for the purpose of completing the excavation of the church is presently under consideration.

NOTES

1. The column bases were numbered consecutively from east to west, first along the northern stylobate wall, and then along the southern stylobate wall.
2. S. J. Saller, *The Memorial of Moses on Mt. Nebo: Part I: The Text*, Jerusalem: Franciscan Press, 1941. (Publications of the Studium Biblicum Franciscanum, No. 1), p. 48. *Ibid: Part II: The Plates*, Pl. 39:1.
3. S. J. Saller, *Memorial of Moses* 1: pp. 59-64.
4. The ratio in the Siyagha church was that the combined width of the side aisles equalled the width of the nave.
5. M. Piccirillo and M. Roussan, "A Byzantine Church at Ed-Deir (Ma'in)," *ADAJ XXI* (1976): 181, Pl. XXVII: 1.
6. M. Piccirillo, "New Discoveries on Mount Nebo," *ADAJ XXI* (1976): 59, pl. XV.
7. S. J. Saller and B. Bagatti, *The Town of Nebo (Khirbet-el-Mekhayyat)*. (Jerusalem: The Franciscan Press, 1949) p. 173. Saller, *Memorial of Moses* I: 254; II: Pls. 109, 116.
8. S. J. Saller, *Memorial of Moses* I: p. 254; II: Pls. 109: 1, 2; 110:1; 116: 1, 2, 3.
9. These were shown to this writer by Michelle Piccirillo while visiting work at Siyagha in July 1978.
10. M. Piccirillo and M. Roussan, "Ma'in," *ADAJ XXI* (1976): 176, pl. XXII: 1.
11. Dr. A. Eran makes the following observation concerning these measurements: "Two of the measurements stated are easily interpreted in Roman units: 24.6 cm is a dextrans (exact value 24.67 cm) and 17.3 cm is a septum (exact value 17.27 cm) while 19.1 cm compares with 7¾ uncial (exact value 17.27 and 18.48 cm). The correlation might still more clearly appear for the last dimension if the lid of the reliquarium will be measured separately." Quoted from a letter received from Dr. Eran, dated June 19, 1979.

A SAFAITIC INSCRIPTION IN THE AMMAN ARCHAEOLOGICAL MUSEUM*

by
F. Zayadine

The inscription under discussion was noticed by the author, among others in the Antiquities shop of the late Mahmud el Afghani who generously gave the whole collection to the Museum.¹ He claimed it was found in the Umm el Jimal area but this origin cannot be confirmed. It is a basalt slab, measuring 32 by 18 by 8 cm. (Fig. 1&2), registered under the no J. 13157. The letters which are well engraved, average 3 to 7 cm. The inscription which runs from right to left, terminates with the seven symbolic strokes.

I'qrb bn hn't d'ltm wndm 'l mh trht wbnny 'lh

by 'Aqrab son of Hani'at of the tribe of Taim and he
grieved for his mother, she died and he built upon her.

All of the personal names occur in the Cairn of Hani.² According to G.L. Harding, Taim "is suggested as a possible tribe because of its wide distribution from Jebel Druze to Badana"³ (in Eastern Saudi Arabia, Tapline). It is known as a personal name in Nabataean, Thamudic Liḥyanite and Safaitic.



Fig. 1 Safaitic Inscription J. 13157.

* I am grateful to Mrs Randa Goussous for the drawing and to B. Darkejian for the photography;

trh is usually translated as a participle⁴: “stricken with grief,” as a verb “to mourn” or as a noun⁵. It appears here in the 3rd person, feminine perfect and relates in this case to the subject *'amh* and not to the writer 'Aqrab. Thus, the rendering of the form by the participle would be, unsatisfactory. A derivation from the 5th or 6th form of *ترو* “to be at rest” would refer to the deceased and correspond to Greek *ἀναπαύω* or Latin *requiescere*, both very common on the funeral texts. However, the absence of *waw* is problematic. An Ar. verb *تج*, meaning “he perished, or died: became cut off: was put an end to; or came to an end,” is quoted on the authority of Ibn al-Athir, el Jaziri and Taj el 'Arus.⁶

In the Cairn of Hani, *تج* is attested in 14 instances, 10 with the expression *bny 'l wwjm 'l*; in two instances, *bny 'l* is accompanied by the compliment *hrjm* “the cairn.” This new translation invites the specialists to reconsider the interpretation of the Safaitic cairns. Professor A. Jamme,⁷ relying on his excavations in the country of 'Ar'ar rejects the tomb explanation of these monuments. According to him, the cairns are “landmarks” or “rally signs”.⁸ To elucidate the significance of the cairns, he refers to modern usages: “The bedouins of today do the very same. According to where they happen to stop, they use a cairn, a boulder or the side of a mountain”.⁹ If modern Arab customs are relevant to interpret Safaitic monuments, it is certainly more appropriate to quote Archimandrite Boulos Salman in his interesting report on Transjordanian traditions:

“The bedouins used to build a great pile of stones for heros who fell in battle, which they call '*rujūm*.'... There is a *rujūm* in Wadi Mūjib to indicate the battlefield between the Sukhur and Beni Hamideh tribes.”¹¹ He then comes to '*rujaim el 'abd*': as believed by the bedouins, a negro ('abd) roams around, in the night, killing anyone he meets. “If a bedouin passes near the cairn, during the day, he takes a stone from the road and throws it upon the cairn, saying: ‘shut your mouth O 'abd.’”¹² This gesture is supposed to appease the spirit under the cairn. The same custom was practiced by the local bedouins when G.L. Harding excavated the Cairn of Hani¹³, and it was explained to him that the cairn was built “over those who were killed” only. Safaitic inscriptions which refer to killed tribesmen are very common¹⁴. Hani, a holy man of the desert, was killed by an arrow as demonstrated by the excavations. The finding of “perishable” objects

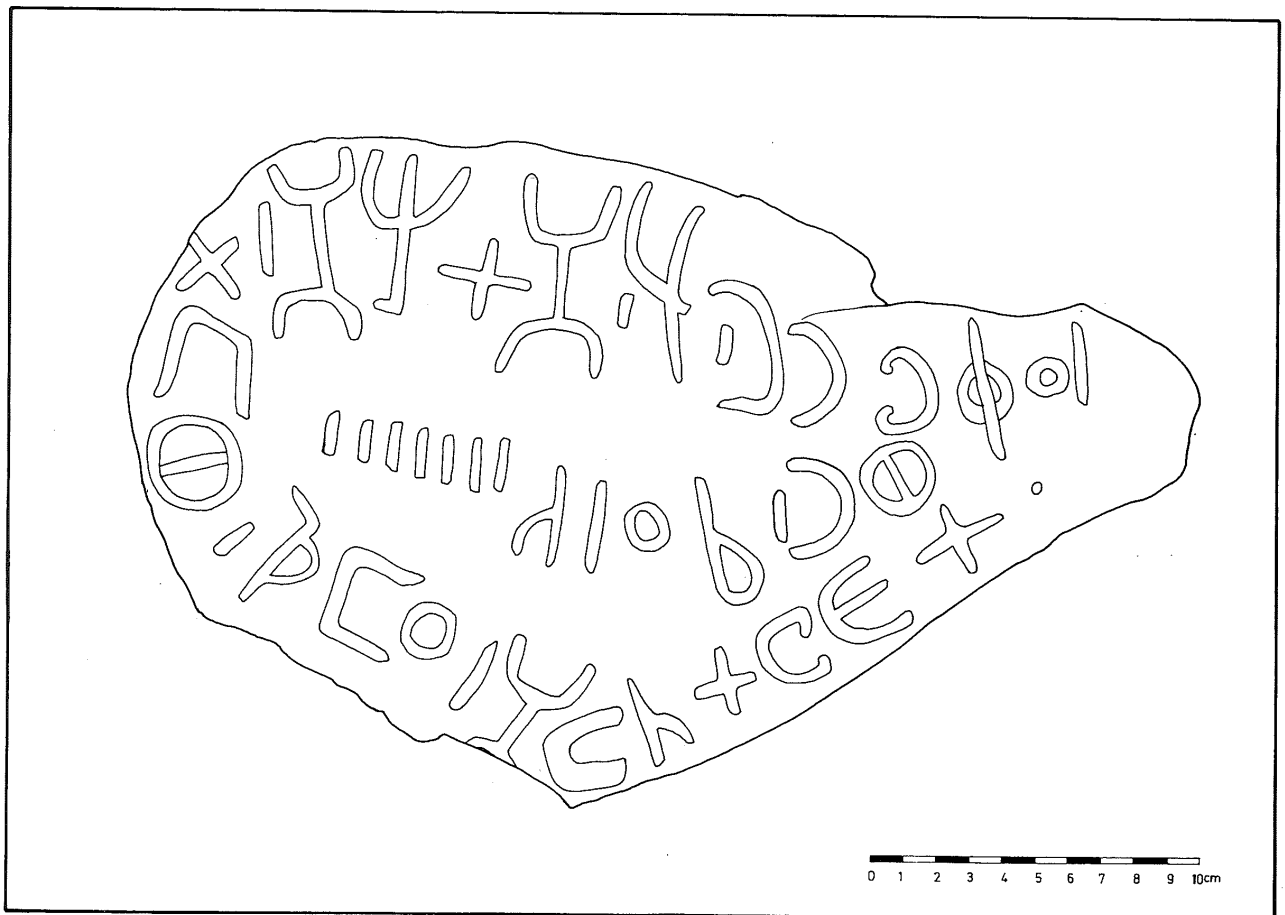


Fig. 2.

which are used as an argument by A. Jamme¹⁵ to defend his thesis is not an obstacle: I can provide him with fragments of leather discovered in Byzantine tombs of Muhayy in Southern Jordan. No doubt the dry climate of the desert favours the preservation of such material.

On the other hand, it is well known that cairns were built upon burials in the Prehistoric¹⁶ and Early Bronze periods.¹⁷ In the intermediate EB-MB period (2200 - 1900 B.C.) they are related to nomadic invaders. I see no objection why the Pre-Islamic tribes of the desert could not use a similar tradition, still alive in modern times.

F. Zayadine

Footnotes

1. Other inscriptions of the same collection have been published by M.C.A. Macdonald in *ADAJ* XXIII (1979) p.101ff.
2. G.L. Harding, *ADAJ* II (1953) p.8ff. Henceforth: *HCH*.
3. *Al-Abhath* XII vol. 3-4 (1969) p. 21.
4. Cf. *HCH* and F.V. Winnett, *Safaitic Inscriptions from Jordan*, Toronto (1957).
5. A. Jamme, *Orientalia*, 36 (1967) p.161.
6. E.W. Lane, *An Arabic-English Lexicon*, London (1863-1893) reprinted Librairie du Liban, Beirut (1968). I am indebted to M.C.A. Macdonald for this reference and many other suggestions.
7. In Franz Altheim und Ruth Stiehl, *Christentum am Roten Meer I*, Berlin-New York (1971) p.42.
8. *Ibid.* p.43.
9. *Ibid.* p.43; the author contradicts himself in *Orientalia*, 36 (1967) p. 170 when he states: "The whole question is to prove that the Saf population had the same custom"...
10. خمسة اعوام في شرقي الأردن - حريصا - لبنان ١٩٢٩
11. *Ibid.* p. 197.
12. *Ibid.* p.198.
13. *HCH* p.8.
14. For example *HCH* N°s 71, 126, 154, 72, 76, 103; V.A. Clark, *Abar Nahrain* XVII (1976-77) p. 37, re-examined by M.C.A. Macdonald in this issue: see also J.T. Milik, "La tribu des bani 'Amrat en Jordanie" in this issue.
15. *Al-Machriq* 64 fasc.3 (1970) p. 324.
16. V.A. Clark, *ADAJ* XXIII (1979) p. 60ff.
17. P.W. Lapp, *The Dhar Mirzbaneh Tombs*, New Haven (1966) p. 95.

THE PHOTOGRAMMETRIC SURVEY OF THE CITADEL OF AMMAN AND OTHER ARCHAEOLOGICAL SITES IN JORDAN

by
Antonio Almagro

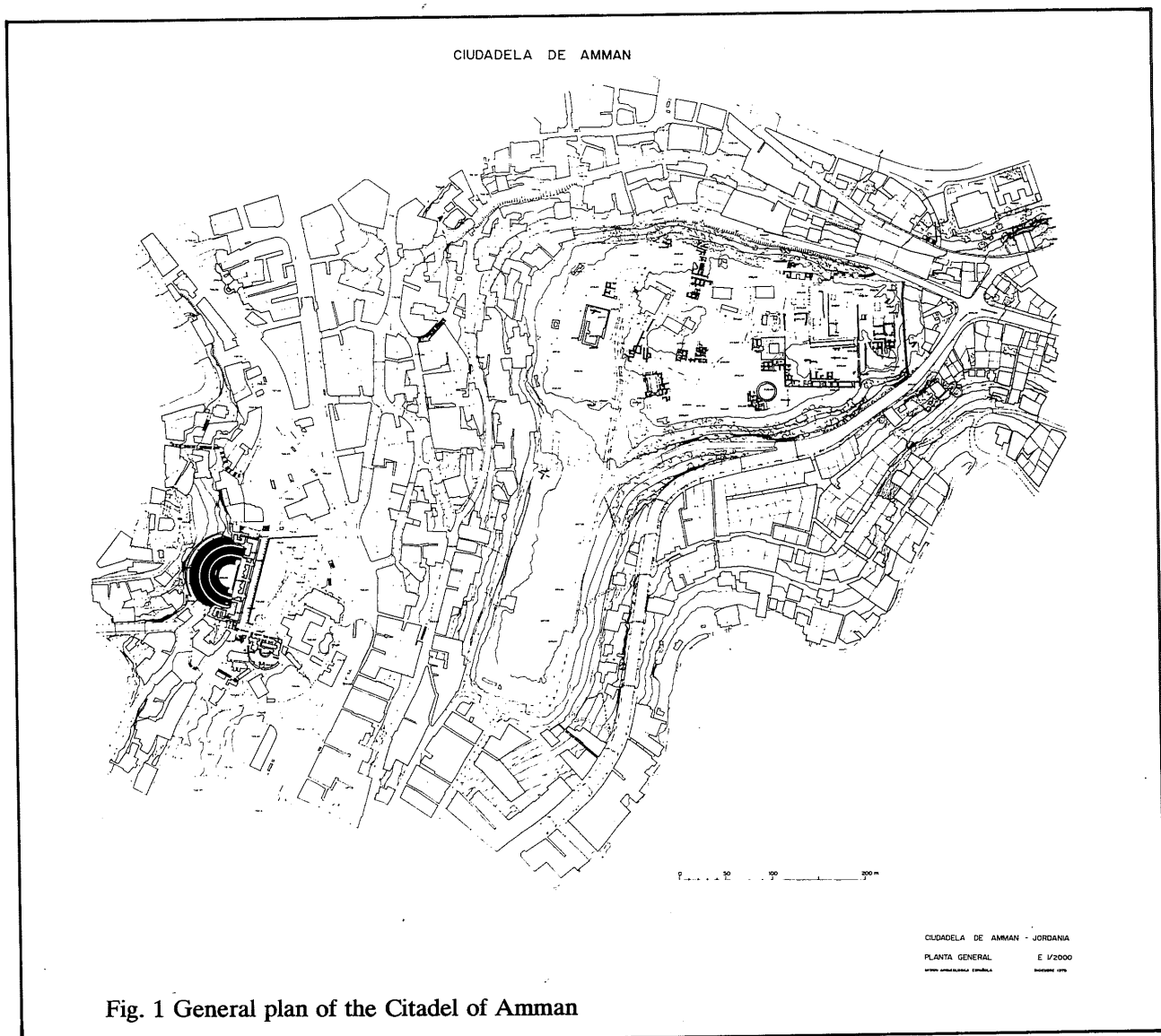
(Pl. L XIV - L XXVIII)

At the end of our work at the Umayyad monument of Qusayr 'Amra, the Spanish Archaeological Mission, with the cooperation of the Spanish Embassy in Amman, proposed to the Jordanian Government the initiation of an archaeological survey of the monuments preserved on the Citadel of Amman, beginning with the so-called Umayyad Palace, also known as "The Tomb of Uriah."

When the Spanish Archaeological Mission began its work on the Amman Citadel, an initial requirement was to have at our disposal comprehensive topographic maps of the entire Citadel region and in particular of the area in which the Mission anticipated developing its activities.

This need was difficult to satisfy primarily because of the almost complete absence of pre-existing relief maps. The largest plan at our disposal was of a scale of 1/5000; this was clearly insufficient except for determining general locations within the region.

Consequently it became necessary to create a cartographic plan. The documentation



which we considered essential as a point of departure for the Mission's project included: A) A general plan of the Citadel at a minimum scale of 1/1000 with contours recorded at one meter intervals. Such a plan was to include, if possible, the area of the theater and nymphaeum, and would thus provide a general archaeological map of the city of Amman. B) A plan of the area in which the Mission planned to pursue its studies and excavations, at a scale of 1/200 with contours drawn at 0,50 meter intervals. C) The recording of the different structures and archaeological remains through plans, elevations and sections at a scale varying from between 1/20 and 1/100.

The topographic plans referred to under (A) and (B) represented the greatest obstacle because of the large area which would have to be surveyed. From the outset it was not considered possible to conduct a survey through conventional topographic methods because it would require dispatching to Amman a team of at least two topographers - for several months duration thus presenting the difficulties of contacting capable personnel and meeting the high costs of the project.

For these reasons we sought to employ photogrammetric techniques which permit (with quality and precision of results superior to conventional methods) a notable reduction both in the time used for surveying and in the accommodation of technical personnel in Amman.

On the other hand, plotting and drafting, the slowest and most expensive aspects of the operation, could be done in Spain without haste and at a rate corresponding to the fluctuations of the Mission's budget.

Thus, the remaining problem was to obtain metric photographs and the few previously known measurements upon them.

In order to compile plan (A) it was necessary to have at our disposal aerial photographs taken at a minimum scale of 1/4500. An initial search was undertaken to determine if such aerial photographs of Amman existed at that scale. From the beginning we received maximum co-operation from the Jordan National Geographic Center, and in particular from its director, Lieutenant Colonel Ra'fat Majali. However the highest scale aerial photographs available were 1/8000 and thus impractical for our purposes.

It then became necessary, in order to obtain photographs at the correct scale, to commission them "ex professo".

To acquire such pictures we needed metrical cameras of high precision mounted upon a specially equipped airplane. These could be provided only at a very high cost.

We investigated as to whether the Jordanian Armed Forces or any private corporation located within Jordan or near by possessed this type of equipment. The results of our inquiry led us to conclude that it would be necessary to bring an airplane from Europe.

Thus, at the very beginning of the Mission's project certain aspects had to be delayed.

For plan (B) we considered two possibilities: either the utilization of aerial photographs at a minimum scale of 1/2000 (which were very difficult to obtain) or the employment of surface photographs, taken with cameras from the ground, with the latter offering even greater difficulties and inconveniences. Progress on this plan was therefore dependent upon the resolution of the obstacles to plan (A).

As to the scheme of documentation presented in (C), we had at our disposal all the necessary equipment.

When the necessary work of mapping the Citadel of Amman had been scheduled, we contacted the *Servicio de Fotogrametría y Fotointerpretación* at the *Universidad Politécnica de Madrid*, whose director, Mr. Fernando López de Sagredo, offered, with great enthusiasm, all his technical equipment for this project.

To all and in particular to the Excmo. y Magnífico Señor Rector de la Universidad Politécnica Mr. José Luis Ramos Figueras, who granted authorization and supported this collaboration we express our thanks and appreciation for the success of our work.

The Servicio de Fotogrametría had plotting equipment at its disposal for both aerial and terrestrial photogrammetry as well as terrestrial cameras for recording, at the required scale, the monuments and architectural elements on the Amman Citadel.

In the month of November, 1974, in agreement with the Director of the Mission, Professor Martin Almagro, the first mapping campaign was scheduled with the purpose of obtaining the necessary data for drawing plans of the so-called "Umayyad Palace".

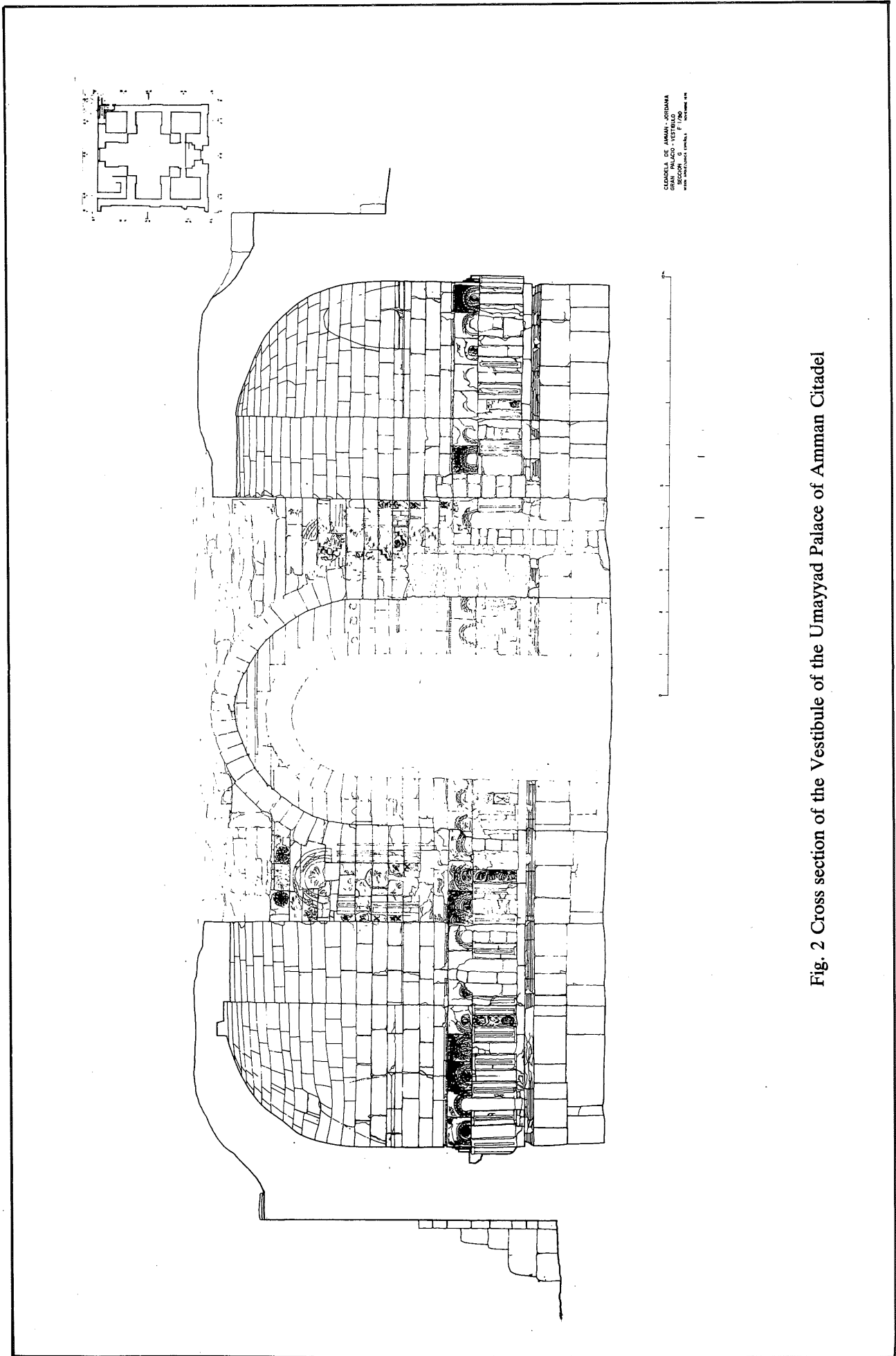


Fig. 2 Cross section of the Vestibule of the Umayyad Palace of Amman Citadel

Working together in this campaign were: the author, Director of the Mission, and technicians from the Servicio de Fotogrametría, Mr. Germán Roibas Pérez and Mr. José Iganacio Merino Sepúlveda.

For this objective the equipment which was shipped by air included the following apparatus:

- Bicamera: Galileo BMG 3 "VEROPLAST" with bases of 200 and 56 cms. Focal 150 mms. Photograph size: 13 x 18 cms.
- Theodolite: Wild T2 with *estadia de Imbar* and range rod.
- Level: Kern GK 1.
- Auxiliary photographic supplies and darkroom laboratory equipment.

In the course of this three week campaign we obtained all the data (photographs and measurements) necessary for 1/20 scale drawings and all the plans, elevations and sections of the monument, enabling all the wall faces, both interior and exterior, to be recorded.

The general plan was surveyed with the theodolite, but the exterior elevations, all of the interior faces of the central room and the vaults were recorded with stereophotogrammetry. The undecorated walls of the adjacent rooms were recorded with metrical photographs alone. Finally, measurements of the staircases, corridors and straight passages in which it was not possible to use normal photographic techniques were taken with a conventional meter tape.

Before the pictures were taken, the reference points were arranged with signs fixed upon the face of the wall at a minimum of at least 4 per photogram. Due to the strong limitations of the bicamera Galileo, including its short, reduced visual field which could not allow for wide angle perspective, it was necessary to fit the bicamera to a scaffold and take several pictures from above. This delay significantly impeded the progress of our project.

During the year 1975 and under the direction of the author, the compilation of the plans as scheduled was accomplished by using the documentation obtained in the first campaign. For this work we used the plotter Topocart B from Carl Zeiss (Jena) at the *Servicio de Fotogrametría y Fotointerpretación* of the *Universidad Politécnica de Madrid*.

The four external elevations were plotted at a scale of 1/20, as well as the four central sections of the monument (Fig. 2,3). A plan was also drawn at the level of the decorations, and a plan of the vaults with contour lines and a record of the stones which shape the vaulting. (Fig. 4) From this basic outline of the general plan, and with the photographs of the side room walls, two additional eight-sided sections were drawn, so that each wall of the monument was now fully recorded. The task of drafting and lay-out assembly was efficiently accomplished by Mr. José Sandoval, chief draftsman in the Servicios Técnicos de la Subdirección General del Patrimonio Artístico.

Although the work of the Spanish archaeologists was interrupted for two years, we sought to renew the Mission's project early in 1978 beginning with the restoration of the monument and the excavation of the surrounding outside area. At this time the unavoidable problem which still presented itself was the general mapping of the entire area and of the Citadel. Promises and agreements established with the Department of Antiquities of Jordan were contingent upon the accomplishment of these objectives which had furthermore drawn the attention of the Spanish Ambassador in Amman and the Ministry of Antiquities and Tourism of the Jordanian government.

In a last attempt, we exhausted all possibilities to obtain aerial photographs locally and began to look for a solution in Spain.

When we discovered, through the *Servicio de Fotogrametría* that the Spanish Air Force possessed equipment and airplanes suited to our needs, we decided to request the collaboration of the Ministry of Defense.

In his request to the Excmo. Sr. Minister of Foreign Affairs, Mr. Marcelino Oreja, the Director of the Mission, Professor Martin Almagro solicited the necessary assistance from the Excmo. Mr. Lieutenant General Manuel Gutierrez Mellado, Vicepresident of the Government and Minister of Defense.

With his immediate consent an airplane of national origin and sufficiently equipped, CASA C 212 from Squadron 403 based in Cuatro Vientos, was dispatched to assist the Mission. In this paper we wish to thank Lieutenant Colonel Mr. Francisco Javier Anadon and all of the team from Squadron 403 who assisted the Mission for their help and enthusiasm.

Having access to the plane and its equipment we desired to use the facilities to maximum

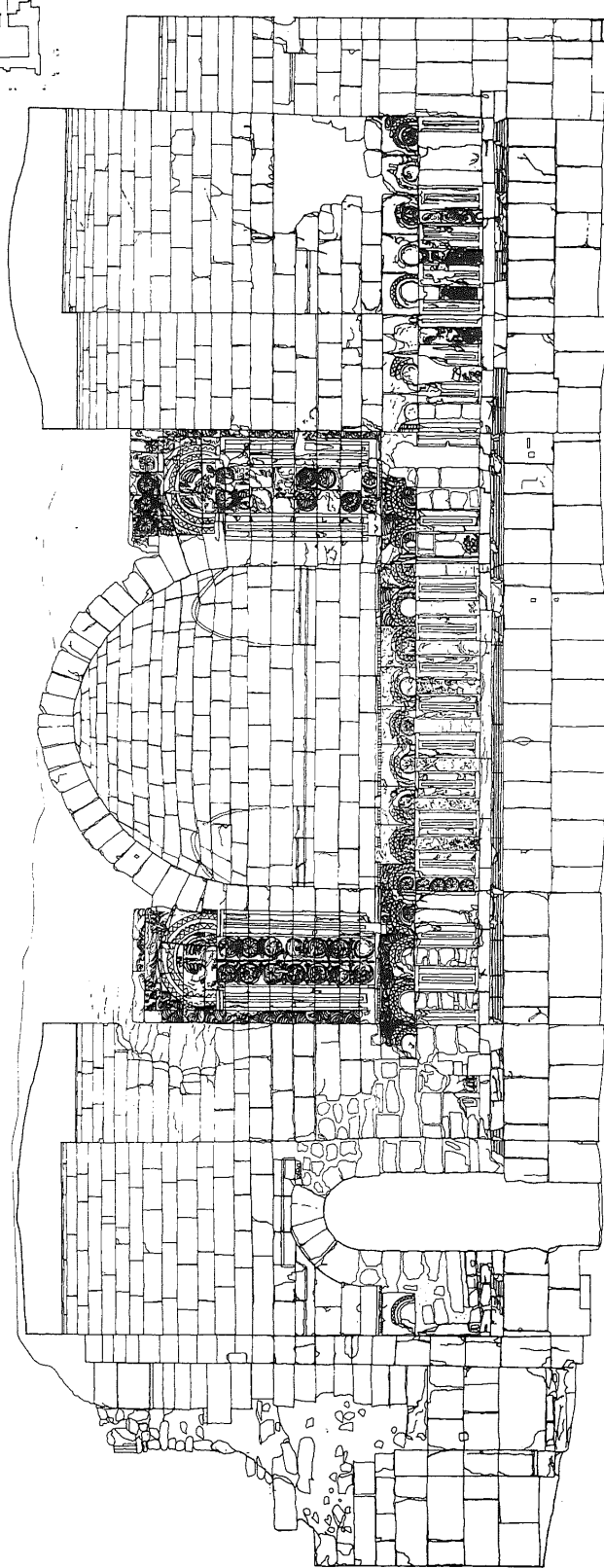
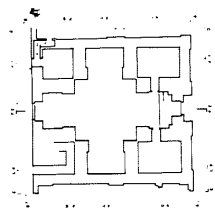


FIG 3

CRISTELA DE AMAMA - JORDANIA
GRAN PALACIO - VESTIBULO
1:100



Fig. 3 Axial section of the Vestibule

benefit and offered the Department of Antiquities of Jordan the possibility of documenting with aerial photogrammetry other sites in the country.

At the same time we decided to make further use of the plane's trip by transporting the terrestrial photogrammetric and topographical supplies with which we could complete the recording of that part of the Citadel under study by the Spanish Archaeological Mission. The presence of the airplane also enabled us to obtain reference points for the serial photographs.

Thus, in September of 1978 the new campaign of photogrammetric documentation was successfully launched with the assistance of airplane C 212 from Squadron 403 of the Spanish Air Force and its crew, Majors Jacinto Valor and Cándido Alvarez Paredes, Captain Diego Alonso and Corporals Julián Olalla and Carlos Alonso.

The airplane was equipped with two Wild RC 10 cameras of 152 mm. focal and 24 x 24 cms. negative size.

Travelling in the same plane were two technicians from the *Servicio de Fotogrametría*, from the *Universidad Politécnica de Madrid* who had participated in the initial campaign and were equipped with the following:

- Bicamera: SMK 120 of Karl Zeiss (Jena). Base 120 mm. Focal 60mm. Plate size 9 x 12 cms.
- Phototheodolite: Wild P 30. Focal 290 mms. Plate size 10 x 15 cms.
- Wild Distancemeter. Distomat A with Theodolite T 2.
- Laboratory supplies.

The airplane's journey lasted three days with stops in Palma de Mallorca, Palermo, Athens and Larnaca (Cyprus), and on the return trip stops were made at Larnaca, Athens, Rome and Palma de Mallorca. The airplane was in Amman for 10 days. The Mission team spent 5 days on photogrammetric flights, the remaining time being taken up with the unloading of equipment, flight preparation, developing of photographs, and finishing the remaining terrestrial photogrammetric work.

On the first day of flight, pictures were taken of sites in the Amman region including the Citadel. On the same day working contact prints were developed.

The second day concentrated on the Irbid region, the third day around Kerak, the fourth day in the area of Petra and Aqaba and on the last day photographs were taken of some of the Desert Castles and of sites in the Mafraq district.

In the appendix we refer to all of the areas photographed and the approximated scales of those pictures.

The plane made two flights over the Citadel, the first at an altitude of 1100 metres above sea level (250 metres over the surface of the ground) which resulted in photographs at an approximate scale of 1/1660 and the second at 1500 metres above sea level (650 metres over the surface of the ground) producing photographs at an approximate scale of 1/4500 (Pl. V)

In addition to the stereoscopic photographs to be used for reconstruction, we took color pictures of other sites at an oblique angle with a Hasselblad camera equipped with an 80 mm. lens and 6x6 cm. negative plates.

While the aerial documentation of the Citadel and other sites was being carried out, the team from the *Servicio de Fotogrametría* used surface cameras to record all the buildings and architectural remains in the area under study by the Mission and in particular the Roman enclosure wall encircling the "Temenos", or court, and the north fortification wall of the Citadel.

As soon as we obtained the first copies of the aerial photographs of the Citadel we began the task of establishing the photographic reference points necessary for later reconstruction.

In the autumn of 1978, having obtained all this data, we began the *restitution* of the aerial photographs with the purpose of making plans (A) and (B), which from the out set had been considered imperative for the logical development of the Mission's project.

The first finished plan was that of the area studied by the Spanish Mission and this was drawn at a scale of 1/200 with topographic contours at 0,25 metre intervals. At this scale we were able to show not only the overall plan, but also each individual stone of the walls, and pavements as well. Such detail was possible only because of the high quality of the aerial photographs.

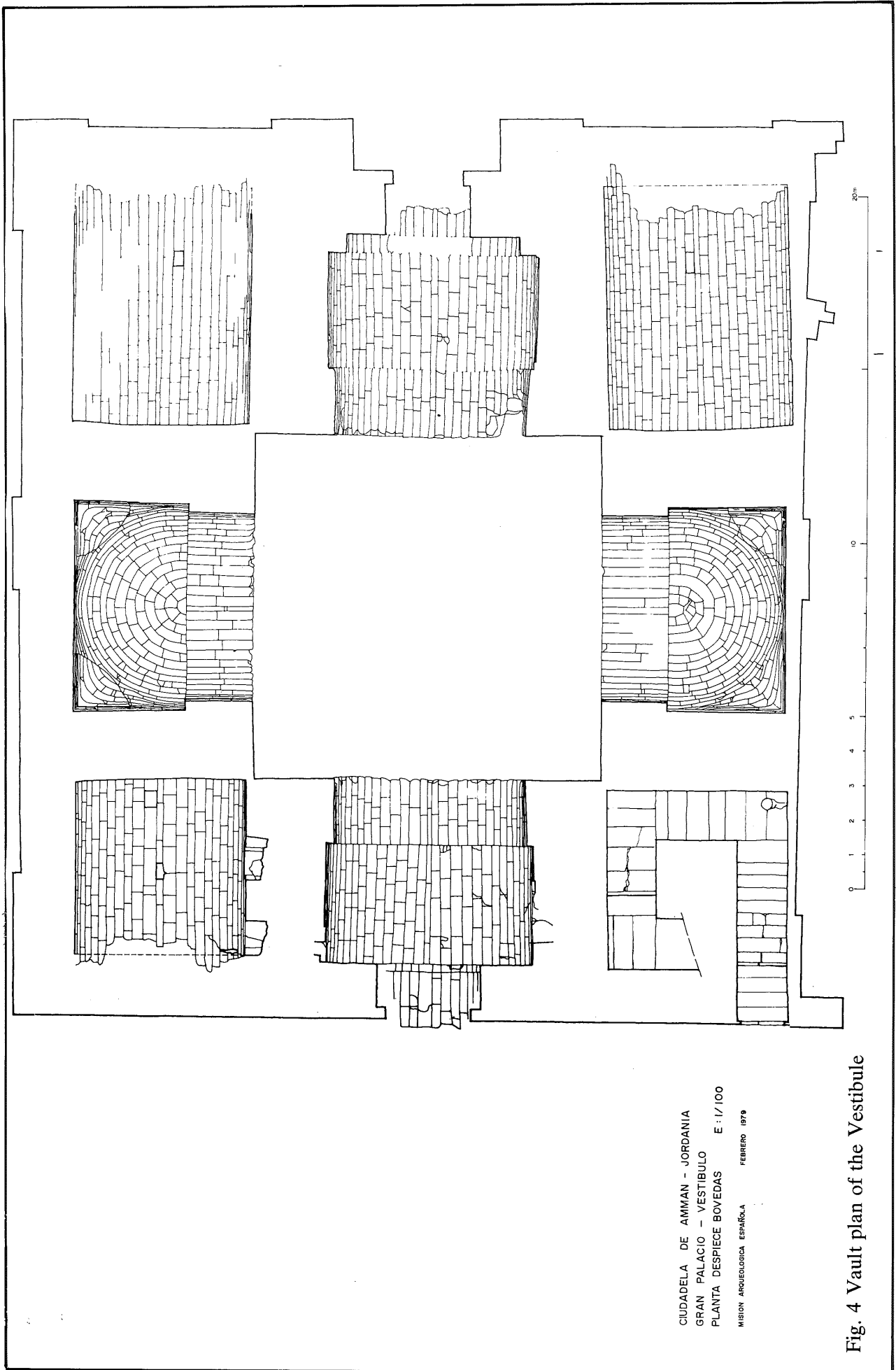


Fig. 4 Vault plan of the Vestibule

We were especially interested in obtaining a horizontal plan of the roof of the "Umayyad Palace", which previously had not been possible to survey.

Until now only the area of the Spanish Mission's study has been plotted at this scale, but in the future it will be possible to plot the remaining zones of excavation on the Citadel.

Using the plotting and the negative of the aerial photograph, a photo-plan was made of the great court, or "Temenos". This photo-plan has been of great benefit for the study of the area in that it permits observations with photographic detail of all the different elements at a pre-determined scale.

Finally, we finished the plotting of the general plan of the Citadel which includes the Theatre and Nymphaeum at a scale of 1/1000 with contour lines at 1.000 metre intervals. (Fig. 1)

This plan, which will be useful for general locations within the area, also has intrinsic value for use in developing an urban plan of the entire archaeological area of Amman.

Such topographic documentation is indispensable for any study which aims at the evaluation and preservation of the monuments which at present are standing on the Citadel. This documentation is also vital to any future arrangements for an archaeological park which could serve not only as a place for study and research but also as a place of leisure for the resident and tourist alike.

Antonio Almagro,
Architect, Spanish
Archaeological Mission

Monuments and Sites Documented by the Spanish Archaeological Mission in Jordan in September 1978.

Site	Approx. Scale	Negative No.
<i>Amman Area</i>		
RAJIB	1/5 000	5384
USAHAB	1/5 000	5404
EL MUWWAQQAR	1/5 000	5415
MUSHATTA	1/5 000- 1/1 600	5423 5430
HISBAN	1/5 000	5477
SIYAGHAH	1/5 000	5455
Mt. NEBO	1/5 000	5470
IRAK EL AMIR	1/5 000	5483
AMMAN CITADEL	1/5 000- 1/1 650	5490 5500-5501
<i>Irbid Area</i>		
JERASH	1/5 000	7977-7978-7988
BEIT RAS	1/5 000	7997-7998
SAMA	1/5 000	8012
AJLUN	1/5 000	5553
<i>Kerak Area</i>		
DHIBAN	1/5 000	8018
RAJIB	1/5 000	8012
WADI MUJIB AREA	1/5 000	8023
MEDEINEH S.	1/5 000	8030
MEDEINEH N.	1/5 000- 1/1 600	8036 8048
LAJJUN	1/5 000	8054
RABBA	1/5 000	8062
KERAK	1/5 000	8083
KHIRBET TANNUR	1/5 000	8092
BUSEIRA	1/5 000	8107
<i>Petra and Aqaba Area</i>		
SHOBAK	1/5 000	8119
PETRA	1/5 000	8131-38-58-60-67
TAWILAN	1/5 000	8174
BEIDA	1/5 000	8179
UDRUH	1/5 000	8185
AQABA	1/5 000	8190
<i>Mafraq and Desert Area</i>		
HALLABAT	1/5 000	8206
QUSAYR AMRA	1/1 600	8212-8215-8216
AZRAK	1/5 000	8221
UM EL JIMAL	1/5 000	5534
UM EL SURAB	1/5 000	5541
SAMA EL SARHAN	1/5 000	5547

RECHERCHES AU QASR EL HALLABAT

par
Jean Marcillet-Jaubert

A notre demande, et avec l'aide de la Maison de l'Orient Méditerranéen de Lyon, les autorités jordaniennes ont bien voulu ouvrir en 1979 un chantier de fouilles au Qasr el Hallabat; je tiens à dire toute ma gratitude aux Drs Adnan Hadidi, Directeur du Département of Antiquities, Fawzi Zayadine, et Ghazi Bisha, qui avait la responsabilité des recherches.

Le Qasr el Hallabat est édifié sur une colline auprès de la route qui conduit à Qasr el Hallabat ech Cherqi et à Kawther, à une trentaine de kilomètres au Sud d'Um el Djimal. Il a été étudié en 1905, le 1^{er} février et en 1909, du 27 au 30 mars, par Butler qui en a entre autre donné le plan dans *PAES*, II A 2, p. 72. On trouvera dans *Antiquity*, 3, 1929, pl. VIII, face à la p. 401, une vue aérienne de l'Armée de l'Air britannique, qui révèle de nombreux vestiges vers le Sud-Ouest (v. commentaire p. 405). Il n'y a pas lieu de tenir compte de la notice consacrée à ce site dans *Guide to Jordan* publié par les Pères Franciscains en 1977. Chronologiquement, nous savons par une inscription latine qui est réputée se trouver au Mess des Officiers de l'Armée de l'Air à Amman, et que je n'ai pu revoir (*PAES*, III A 2, n° 17), qu'un "nouveau fort" a été édifié en 212 (sous Caracalla et non sous Marc-Aurèle comme il est dit dans le *Guide...*p. 234), et qu'il a été restauré en 529 (*PAES*, III A 2, n° 18). A l'époque omeyyade, le fort a été transformé en château.

Le site est surtout connu pour les nombreux fragments d'un édit d'Anastase I, au début du VI^e s., relatif à l'administration de la province. D'autres fragments du même texte ont été retrouvés à Bosra (Wadd. 1906), à Imtan (Wadd. 2033, cf. Brünnow-Domaszewki, *Prov. Arabia*, III, p. 348), à Um el Djimal (Wadd. 2059-2060) et à Salkhad (Dussaud-Macler, *Mission dans les régions désertiques de la Syrie Moyenne*, N.A.M.S., X, 1903, p. 655, n° 35). Soixante-huit fragments ont été publiés par l'Expédition de Princeton (*PAES*, III A 2, n° 20), retrouvés soit au sol, soit en remploi. Notre propos était, en vue de la publication du corpus des inscriptions de Jordanie, d'accroître le nombre de ces vestiges. Mais le Qasr a souffert des injures du temps, et le séisme de 1927 a multiplié les éboulements (Pl. LXXVI, 1 - 2).

On verra sur le plan joint (fig. 1), inspiré de Butler et légèrement corrigé en A et en B, l'étendue de nos sondages. Pour limités qu'ils aient été, ils n'en ont pas moins permis de découvrir vingt-neuf fragments dont vingt-deux appartiennent aux pierres qui portaient le texte de l'édit. Celui-ci semble avoir été gravé sur les blocs appareillés en vue de construire un monument; nous avons en effet deux pierres qui forment respectivement des angles droit (79/23 - 27) et gauche (79/9 - 10) et qui sont inscrites sur deux faces. On en conclura que tout l'aménagement intérieur du Qasr au moins est d'époque omeyyade; les blocs de basalte, inscrits ou non, étaient recouverts d'un enduit de mortier qui supportait des panneaux de plâtre peint ou des stucs décoratifs. Les archéologues américains avaient déjà signalé que les inscriptions avaient été couvertes de plâtre, *PAES*, II A 2, p. 74 et *appendix*, p. XVII. Certains de ces stucs (Pl. LXXVII, 1) formaient des *claustra* à décor de verre dont de nombreux fragments, de couleurs diverses et parfois peints, ont été retrouvés. Tous ces éléments ont été conservés. On a également trouvé des morceaux de bois, parfois travaillés, qui appartenaient à des portes. Il convient de signaler, parmi les bois, un bloc, toujours intact, qui sert de seuil à la pièce A. On a de même conservé quelques fragments de métal appartenant au système des portes, en A et en E. Dans les décombres, de nombreuses tesselles de mosaïque blanche, d'environ 2 cm de côté, paraissent avoir appartenu à des pièces d'étage, ou à une terrasse. Les premières pièces fouillées, au sud de l'entrée, A et B, étaient mosaïquées. Le sondage auprès du seuil de la pièce A a révélé une zone géométrique encadrant un décor floral. En B également, mosaïque fine et deux tesselles de verre doré. Dans la pièce C, à l'angle Nord-Ouest, existe une tombe tardive que nous avons respectée; les deux supports d'arc de cette pièce sont des remplois de pierres qui semblent avoir appartenu à une chapelle chrétienne. Nos sondages ont porté sur :

- les pièces A, fouillée en partie jusqu'au sol;
- les pièces B-C, où nous avons atteint le sol en B dans l'angle sud-Ouest et trouvé de nombreux fragments de verrerie et de céramique;
- le mur D où l'on a découvert deux merlons de calcaire (Pl. LXXVII, 2) et un fragment de stuc en place sur la paroi;
- le mur F où l'on a notamment trouvé deux fragments de céladon. Sur tous ces points, dans les murs ou dans les éboulis, des inscriptions.

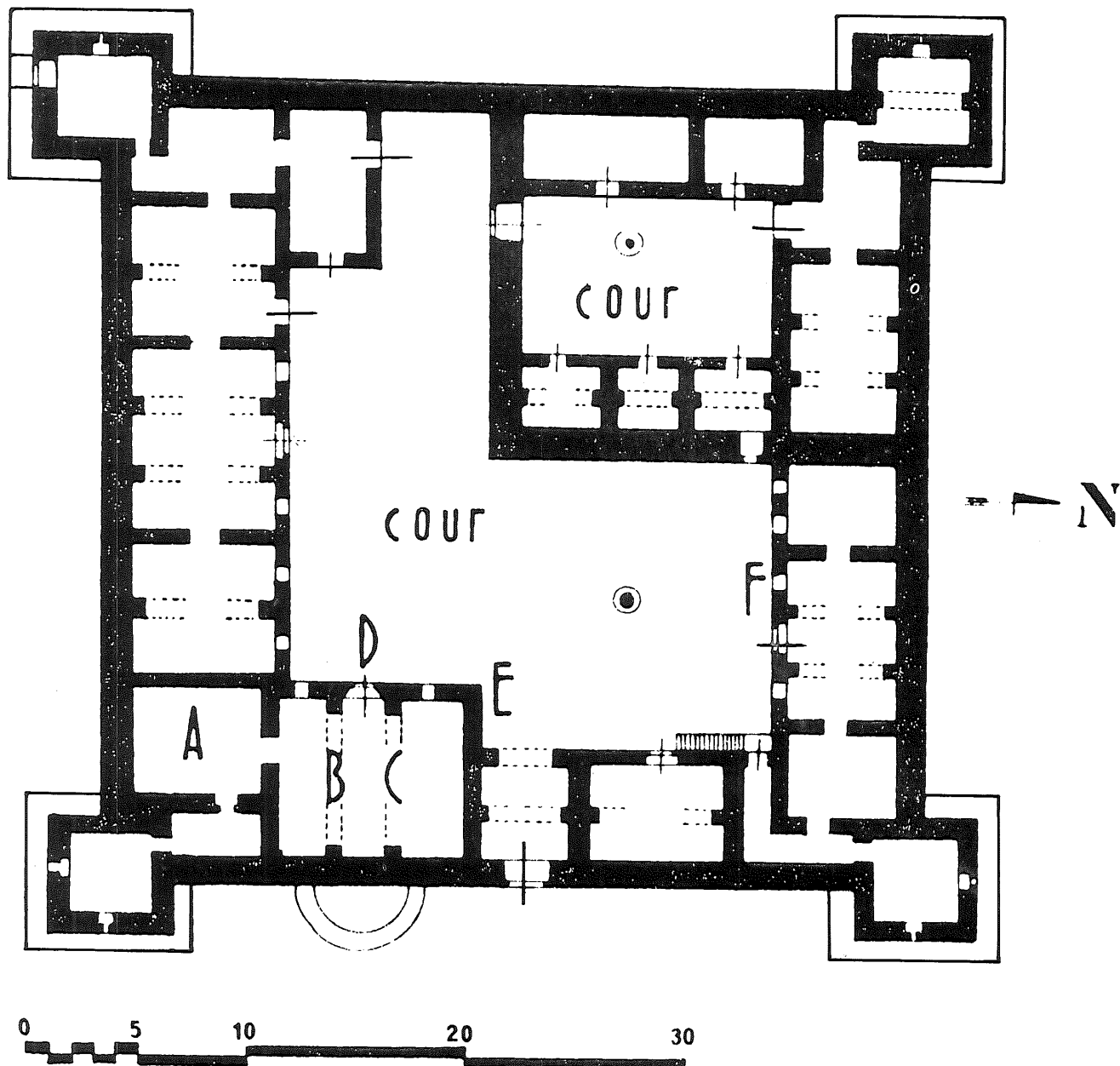


Fig. 1 Plan schématique du Qasr

Nous avons, d'autre part, trouvé plusieurs éléments de reliefs, l'un romain peut-être, avec queue d'aronde, les autres omeyyades; certains d'entre eux sont remployés dans les tombes bédouines qui jouxtent le château vers l'Est. On signalera aussi un milliaire de la Tétrarchie (79/14 et 15), sans indication de distance, milliaire de basalte, en deux fragments (Pl. LXXVIII, 1). Sur un socle parallélépipédique haut de 0,45 m, large de 0,21 m, fût de 0,91 m; diamètre de 0,22 m; lettres de 2,5 à 3 cm. Le milliaire est mutilé au haut, et brisé au-dessus de la dernière ligne. Il n'est que grossièrement datable, entre 293 et 305. On remarquera l'étrange faute ARC pour *Aug(usto)*. La confusion de R et de u ne s'explique pas dans l'écriture latine. Nous noterons cependant qu'en grec la faute inverse *upsilon* pour *rho* apparaît dans l'Edit de Ptolémaïs 1. 6 *μάτρικας* pour *μάτρικας*, cf. G. Oliverio, *Il decreto di Anastasio, dans Documenti antichi dell' Africa romana*, II, 2, Bergame 1936, p. 135 – 163. Mais il semble ne s'agir là que d'un fait de gravure: un *rho* non fermé au haut est un *upsilon*. En revanche, au Qasr el Hallabat, il faut envisager une faute commise en deux temps; d'abord, une confusion graphique entre un u d'écriture comme lu l, et nous avons, à la même époque, la faute inverse sur un milliaire de Numidie (à paraître dans *Antiquités Africaines, Hommages Lassus II*) où le nom de Maximien est écrit VAVERIO pour *Valerio*; puis une dictée avec confusion de L et de r, phénomène connu de rhotacisme. La rédaction est maladroite: après un pluriel *d.d.n.n.*, un singulier *imp. Caes.*, comme si l'on avait oublié le redoublement usuel de la consonne finale attesté pour *nobb C[aess]*, ou oublié de répéter ces titres avant le nom de Maximien. Nous

ignorons à quelle route a pu appartenir cette borne, rédigée comme il est fréquent, sous l'aspect de dédicace. On rappellera qu'il existe aussi un milliaire de la Tétrachie à Um el Qotein (Dussaud-Macler, *l.l.*, p. 671, n° 87), également rédigé au datif.

79/14 DDNN
 IMPCAES
 CAVRVAL
 DIOCLETIANOPF
 INVICTOARCET *sic*
 MARAVRVAL
 MAXIMIANOPF
 INVICTOAVGET
 FLAVALERIO
 CONSTANTIOET
 GALVALERIO
 MAXIMIANO

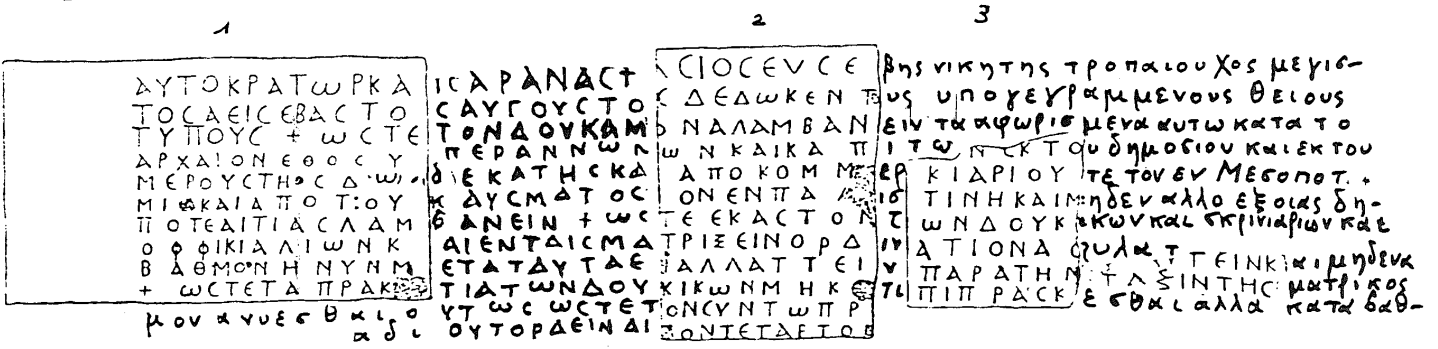
d(ominis) n (ostris duobus)
imp(eratori) Caes(ari)
C(aio) Aur(elio) Val(erio)
Diocletiano p(io) f(elici)
invicto A[ug] (usto) et
Mar(co) Aur(elio) Val(erio)
Maximiano p(io) f(elici)
invicto Aug (usto) et
Fla(uio) Valerio
Constantio et
Gal(erio) Valerio
Maximiano
nob(ilissimis) C[aes(aribus duobus)]

79/15 NOBBC [-

Parmi les nouveaux fragments de l'édit d'Anastase, dont j'ai retrouvé le n° 53 de PAES, 20 au Musée d'Amman, trois éléments ont pu être situés :

- un morceau de douze lignes (79/12) à placer entre les fragments 1 et 2 de PAES (Pl. LXXVIII, 2) ; il confirme les restitutions de Magie, fondées sur l'exemplaire de *Bostra*, pour les dix premières lignes, mais apporte du nouveau pour les deux dernières où il faut modifier légèrement la coupe et renoncer, l. 11 à τὸν παρέδρον σὺν τῷ πρ[ωμισακρινίω].. pour lire ὥστε τον σὺν τῷ πρ [... ; il semble qu'à la dernière ligne, 12, il soit question d'*adiutor* ; je corrige en outre dans les restitutions la ligne 5 γε en τε ;

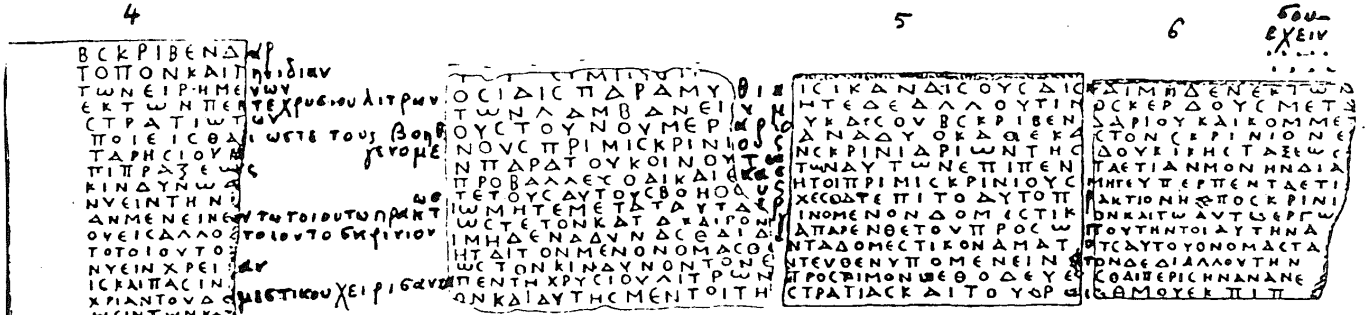
- un fragment de deux lignes (79/19), à placer aux lignes 8 – 9 des mêmes restitutions, après le n° 3 (Pl. LXXIX, 1). Pour des questions de lisibilité, je n'ai pas accentué les compléments proposés en minuscules.



79/12

79/19

- un morceau de treize lignes (79/16) à placer immédiatement avant le fragment 5 de PAES (Pl. LXXIX, 2).



79/16

Au début, je préfère ne pas décliner le σουβσκραβενδ[αρίου de la ligne 13 de PAES, 20, 4, et ne pas compléter, ligne 16 de PAES, 20, 4 ἐκ τῶν πέν[τε χρυσοῦ] λιτρῶν (?). La restitution que je donne de la ligne 11 (ligne 23 de PAES, 20) est fondée sur la présence d'un *epsilon* dans le dessin du frag-

ment *PAES*, 20, 4, qui me conduit à proposer ἐν et ainsi à corriger ἐ]χεσθαι en ἐ[ρ]χεσθαι. Χειριστήτα est fondé sur le χειριστήτα d'Imtan; on notera la faute πένη pour πέντε. Les six fragments d'Imtan vus par J.G. Wetzstein, consul de Prusse à Damas, lors de son voyage de 1858, et par Waddington permettent de constater que la disposition du texte y était toute différente : si la première ligne de l'édit comporte 56 signes à Qasr el Hallabat, elle devait en compter 250 à Imtan. Le fragment 79/16 de Hallabat donne la clé d'un morceau copié par le seul Wetzstein (Pl. LXXX,1).

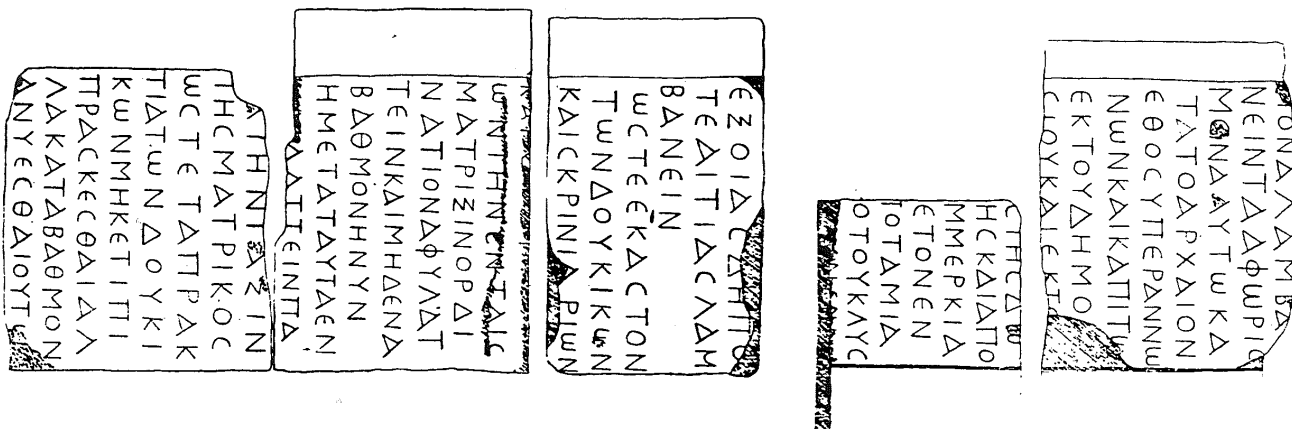
On corrigera :

ΗΣΡΘΡ ΣΤΟΝ ΤΙΚΩΗ ΙΡΙΣΩΗ ΧΙΤΡΩ ΔΡΟΤ ΠΟΤΟ	en	ΜΕΡΑΡ ΣΤΟΝ ΤΙΚΩΗ ΙΡΙΣΩΗ ΛΙΤΡΩ ΔΡΑΚ ΙΤΗΣΟ
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et l'on joindra comme suit trois fragments, où nous reconnaissons, avec une disposition matérielle différente, des lignes des fragments *PAES* 20, 4, 5 et 6.

ΩΣΤΕ ΤΟΥΣ ΒΟΗΘΟΥΣ ΤΟΥ ΝΟΥ ΜΕΡΑΡΙΟΥ ΚΑΙ ΣΟΥ ΒΣΚ
 ΠΡΟΒΛΑΛΕΣ ΒΑΙΚΑΙ ΚΑΙ ΚΑΙ ΣΤΟΝ ΑΥΤΩΝ ΕΠΙ
 ΚΑΤΑ ΚΑΙ ΡΟΥ ΓΙΝΟΜΕΝΟΝ ΔΟΜΕΣ ΤΙΚΩΗ ΚΑΙ ΤΩ ΔΥΤΩ ΕΡΧΩ ΤΟ ΤΟΛΟΥΤΟ
 ΤΗΝ ΧΡΕΙΣ ΤΟΥ ΥΔΟΜΕΣΤΙΚΟΥ ΧΕ ΙΡΙΣΩΗ ΤΑ ΠΕΝΤΕ ΧΡΥΣΙΟΥ ΛΙΤΡΩΝ ΠΡΟΣΤΙΜΟΝ
 ΤΩΝ ΠΕΝΤΕ ΤΟΥ ΧΡΥΣΙΟΥ ΛΙΤΡΩΝ ΠΡΟΣΤΙΜΟΝ
 ΤΗΝ ΠΡΟΣΟΤΗΤΑ ΤΩΝ ΔΡΑΚΩΝ ΑΡΙΩΝ ΚΑΤΑ
 ΤΗΝ ΑΝΑΓΚΗΝ ΕΠΙ ΤΗΣ ΟΥΣΗΣ ΔΙΟΠΙΣ

La disposition du même édit à Bostra était également différente, et formait des colonnes de douze signes environ comme on peut le constater sur les dessins que j'emprunte à *PAES*, III A 4, 562. M. Maurice Sartre doit d'ailleurs reprendre ce document dans le fascicule des *IGLS* consacré à la capitale de l'Arabie romaine.



Le site de Qasr el Hallabat nous permettra sans nul doute, à l'occasion des travaux projetés, d'accroître considérablement nos découvertes, tant archéologiques qu'épigraphiques. C'est du moins le vœu que nous formulerons à la veille de la reprise des recherches.

Université Lyon II
 Institut F. Courby

THREE SAFAITIC STONES FROM JORDAN

by
Vincent. A Clark

Presented here are three stones bearing pre-Islamic inscriptions of the type sometimes called "Safaitic/Thamudic". These are, it would seem, to be considered as Safaitic, not Thamudic. The writer is grateful to Dr. Adnan Hadidi, the director of the Jordanian Department of Antiquities, and to Mr. Umar Yunis of the Madaba office of the Department, together with the staff of that office, for making these stones available for study during December 1979.

1. An inscribed stone said to be from the vicinity of Dhiban in Moab. It was recently acquired by the Department of Antiquities. The stone is a rough limestone block, with one smooth face, on which is text 1a, and a rough face, on which is text 1b. (Amman Museum registration No. J14099) (Pl. LXXXI, 1, 3)

a. *l mkr bn rṣ't w ḏkrt lt jmr w s'ḏ'l w w'l*
w ḥlf w fṣ w ḥsm w lws w ḥzmt w 'sd w ṭrmlh
w 'ys w bn'mt

"By MKR son of RṢ'T. And may Lat remember JMR and S'ḏ'L and W'L and ḤLF and FṢ and ḥSM and LWS and ḤZMT and 'SD and ṬRMLH and 'YS and BN'MT."

This text has been enclosed by a fine line, which is intersected at one spot by seven short strokes, a typical Safaitic device. This is clearly a memorial inscription, calling upon the goddess Allat (Lat) to remember no less than twelve individuals.

MKR is found in C 387, and as an element of the compound name BNMKR in TIJ 496, which is Safaitic not Thamudic. RṢ'T is a new name; see the Ar. *raṣa'a*, "to bring forth (of a gazelle)". This name also occurs in CNSI 99.

The expression *w ḏkrt lt* is usual. Note here, however, that the letter *w* has been inscribed below the line. Evidently it was originally omitted by the scribe and inserted later. JMR is a well known Safaitic name, which does not occur in Thamudic. Although fairly certain here it is not read with absolute conviction. The letter *m* has been inscribed over a crack in the stone, while the letter *r* appears to have been inscribed over the top of another letter, possibly *z*, which may have been inscribed in error. One could also read ḥMR here, rather than JMR.

LWS is a new name. HIn lists a name LWSM for Minaean, which would be the equivalent of this Safaitic name. See the Ar. *lasa*, "to be fond of sweetmeats, to taste".

ḤZMT is likewise a new name; see the Ar. *ḥazama*, "to pack up, bundle", or *ḥazima*, "to choke".

ṬRMLH occurs only twice, both times in the same inscription, TIJ 483, which is Safaitic, not Thamudic.

BN'MT is new, although the element 'MT is found (HIn 73).

The script of this text is recognisably Safaitic, or what Winnett has termed "Tabuki Thamudic" (see F.V. Winnett and W.L. Reed, *Ancient Records from North Arabia*, p. 69-70). This differs from the more northerly Safaitic, script in the form of the letters *ḏ* and *z*, in this case. Here the letter *l* is of the hooked type, while *n* is a short horizontal stroke. *b* and *r* are virtually indistinguishable, except that *b* appears to be slightly larger. (Pl. LXXXI, 3)

b. *l ḡnm w bn'r*

"By GNM and BN'R".

This is on the reverse side of the stone. The text is partially enclosed by a line. It appears to represent a case of joint authorship, which is unusual in Safaitic. Alternatively we may read "By GNMW son 'R", considering GNMW to be a name of Nabataean type. The name BN'R would be new, although the element 'R is found in Safaitic and possibly in Thamudic (HIn 35, to which entry add WH 1813, 2731 and 2933). Note that the stance of the letter *m* has been reversed here.

The engraving of both of these texts is similar. The letters were formed by the incision of a close series of v-shaped cuts with a chisel-like implement. In text 1a this chisel appears to have slipped a number of times, resulting in a number of extraneous strokes on the stone surface.

2. An inscribed stone in the Madaba Museum, of unknown provenance. There are two texts on the same face of this stone but it has been so badly weathered that they are difficult to make out. The stone has evidently been standing upon its edge in the ground, probably as a gravestone. (Madaba Museum registration No. 297). (Pl. LXXXII, 1,3)

a. 1. (...) *b(n) byn ḏkrt l(t) jr w 'sll*
(w 'b. w) 'bṣr w (qr^c)

“By (...) son (of) BYN. And may Lat remember
 JD and 'SLL (and... and) 'BṢR(?) and (QR^c)”.

After the initial lam auctoris it is impossible to make out anything but slight traces of the letters of the initial name. The *b* of the following *bn*, if such it is, is clear but the *n* is not. The second name may be BYN, a name known only from WH 38. However, there may have been another letter between *b* and *y*, although no trace of one can be detected. The letter *n* of BYN and the following *w* have been inscribed one above the other in the space between *y* and *ḏ*, as if one of them had originally been omitted. As the *w* is small and cramped it would appear that it was originally overlooked. One would expect the divine name LT to follow. Here the 1 is clear but the *t* can only be read with difficulty. The peculiar sign on the stone at this point appears to be a combination of the letters *ḡ* and *t*. Presumably the *ḡ* was an error and the letter *t* was inscribed over it.

The name which follows is read here as JR (HIn 57) but it may also be read as ^cR (H1n (414)). Both names occur only in Safaitic. The letter read as *r* resembles some forms of *s* but it differs significantly from the following *s* of 'SLL. 'SLL is a new name; see the Ar, 'asalla, “to afflict someone with consumption (God)”.

The next line of the text is extremely difficult to make out, as it is badly worn. Another name, introduced by *w*, seems to follow. The initial letters of this may be 'B or 'S but the third letter is illegible. The following letters may be another personal name, 'BṢR, which would be new, a compound of a well known Arabic type. The end of the text is virtually illegible but it may contain another name, which may be read as QR^c, which is unknown; see the Ar. qara^ca, “to beat, hit”, or qari^ca, “to be bald”. (Pl. LXXXII, 1, 3)

b. 1 ^c*d w w^cd w yslm w '(ṭ)d w ^c(.ḏ.....)' (...)*

“By ^cD. And he was threatened and may he be kept safe. And (.....)”.

This text has been badly damaged. Much of the second line has been lost, as a piece has been broken from the stone. At least six letters are entirely missing here and as many as seven more have been more or less partially destroyed. The beginning has been damaged by the chipping of the rock surface but the author's name may be ^cD, which is Safaitic. The verb which follows appears to be *w^cd*, rather than the better known *wjd*, as the middle letter is rather small to be *j*. Furthermore the verb *wjd* would have no apparent object here. For *w^cd* see the Ar. *wa^cida*, “to threaten, make a promise”. In view of the following jussive verb *yslm*, “may he be kept safe”, the former sense of his verb seems appropriate. The author is appealing to some unnamed deity for protection. The remainder of the text is fragmentary.

3. An inscribed stone in the Madaba Museum, of unknown provenance. The flat surface of this limestone block has been damaged in a number of places by the scouring of the rock but the majority of the letters are clear. After being incised this stone was evidently left standing upon its edge in the ground, probably as a tombstone. (Madaba Museum registration No. 507). (Pl. LXXXII, 2, 3)

1 *ṣḥḥ bn wd dyl n'lt w ḏkrt lt kll rhḥ ṣdq*

“By ṢḤḤ son of WD, of the tribe of N'lt.

And may Lat remember the condition of the spirit of a true friend.”

This text presents a number of difficulties. The initial name has been clearly written as ṢHH, which is an impossible name. (On the photograph it looks like ṢYH, but an examination of the stone itself reveals that the fork of the letter *h* is not closed, there being a fortuitous mark on the rock here). It should probably be read as ṢYH, which is a well known Safaitic personal name, on the assumption that the author made a mistake while engraving the text.

The expression *dyl n'lt* is peculiar. No satisfactory sense can be made of it unless we read *dyl* as *d'l*, although the stone clearly shows *dyl*. Should we then assume that the author has made another mistake at this point? One hesitates to accept this explanation but, nevertheless, cases of error on the part of an ancient author are not unknown and it may well be that this author has confused the the letters 'alif, *h* and *y*, although 'alif appears quite normally in the tribal name N'LT. This is new a a tribal name, although it may occur in WH 2569 as a personal name. The expression *dkrt lt* is usual but what follows is again problematic. *Kll* may be equated with the Ar. *kalal*, "state, condition", or *kalal*, "weariness". A reading "all, every" is not likely. *rhḥ* should probably be read as *ryḥ*, assuming an error here similar to that in the initial name. This may be the equivalent of the Ar. *rūḥ*, "breath, spirit, soul". (Note that on the photograph this appears to be *r'h*, but the middle letter is clearly *h* on the stone. A chip on the stone surface at the top of this letter is not a part of it. Likewise the letter *h* appears to be *h* from the photograph. However, the diagonal mark is a scouring on the stone surface, which extends beyond the letter, which is faint).

ṣdq is to be compared to the Ar. *ṣadiq*, "a true friend", and to the Safaitic *ḥbb*, which is found in many texts with a similar meaning - "a loved one".

Does this text then provide evidence that at least some of the nomadic authors of these texts held a belief that the spirit of a deceased person continued in some kind of a post-mortem existence? Unfortunately, as the reading of the text cannot be made with absolute certainty we cannot be definite on this point. However, the oft repeated formula *dkrt lt*, in contexts which are apparently funerary, would tend to indicate that some such belief existed, among the southern tribes at least. As yet no similar conclusion can be drawn concerning the more northerly tribes, the traditional "Safaitic" bedouin. As such beliefs were prevalent among other peoples of the region at that time it need not to be surprising to discover such sentiments expressed as are postulated for this text.

Both of the Madaba Museum stones have been incised by pecking the surface of he stone with a chisel-like implement. In the case of most of the letters the marks made by this are very clear. Its end seems to have been about 1mm in width and it was employed so as to produce a series of short diagonal marks, thus : ///. Each blow lifted out a small piece of the stone face, leaving a low ridge between each mark. The thickness of each chip was approximately .25mm. These individual marks were then joined together by the drawing of the chisel point through them.

* * * * *

The question now arises as to whether these inscriptions should properly be considered to be Safaitic or Thamudic. Traditionally three factors would lead to their being classified as Thamudic:

1. Their geographical provenance, from a region considered to be at northern limit of the Thamudic "carrying rights" (see G.L.Harding, "Safaitic Inscriptions from Tapline in Jordan", *ADAJ*, Vol.XVII, 1972, p.5). Stone No. 1 is from the region of Dhiban, while Nos. 2 & 3 are presumably from the vicinity of Madaba, both of which areas are far removed from the traditional area of the Safaitic peoples in the basalt regions of the north.
2. The shapes of the letters, particularly *d*, *ḍ* and *z*, of these inscriptions are all shapes usually attributed to the Thamudic script but which are not usually found in the more northerly Safaitic script.
3. The nature of the inscriptions themselves tends to group them with the southern, Thamudic texts. Two of these were clearly gravestones, displaying clear signs of having been originally set upon edge in the ground. Such a practice is not usually found in the north, where cairns were

erected over the dead. Furthermore, texts 1a, 2a and 3 employ the expression *w dkr̄t lt*, which is not to be found in the more northerly, Safaitic inscriptions.

However, this type of text, which Winnett would classify as “Tabuki Thamudic” (see F.V. Winnett & W.L.Reed, *op.cit.*, p. 69-70), begin with the *lam auctoris*, a device employed almost universally in Safaitic. In this they differ markedly from many other Thamudic texts, some of which employ the word *zn* to introduce the inscription. Such texts are usually in Winnett’s “Hijazi” or “Najadi” Thamudic script, in which the letter forms and the contents of the texts themselves often diverge significantly from those classified as “Tabuki” Thamudic and any relationship between the two groups is a distant one. On the other hand, the relationship between the Safaitic and the “Tabuki” Thamudic inscriptions is very clear. The script is almost identical, as is the onomasticon, the expression and the content of the texts. Furthermore, the geographical division between them is more imagined than real. Many texts which are indistinguishable from Safaitic have been found in traditional “Thamudic” areas, in northern Saudi Arabia and Wadi Rum. The assumed geographical discontinuity between the two groups is due partly to lack of exploration in desert areas of Jordan between Azraq and Wadi Rum and perhaps partly due to a lack of suitable stone for the inscribing of texts in this region. Many of the texts published as Thamudic by Harding (see his *some Thamudic Inscriptions from the Hashemite Kingdom of Jordan*, Leiden, 1952) cannot be distinguished from others published as Safaitic. In fact no distinction is to be made. Harding himself was ready to admit this, at least in part, before his untimely death in February, 1979. In his “Safaitic Inscriptions from Tapline in Jordan” (*op. cit.*, p.5) he stated his belief that the texts “WTI 11, 12 ?, 16-17?, 18-19, 33?, 39 and 55 from Sakaka, and 81-84 from Ithrah are really Safaitic on the basis of their content”. In fact many more of these inscriptions published by Winnett should probably be considered Safaitic. The differences which may be observed in both script and content may be attributed to regional and tribal factors rather than to significant political, linguistic or ethnic divisions in North Arabian tribal society. The Safaitic and “Tabuki” Thamudic inscriptions form an homogeneous group.

Of course, neither the terms “Safaitic” nor “Thamudic” are entirely appropriate, “Safaitic” being of geographical rather than of ethnic or linguistic derivation, and “Thamudic” being derived from the association of the tribe of Thamud of the Qur’an with the originators of the inscriptions found in northern Arabia. There is no direct evidence that the Qur’anic Thamud did in fact ever use the Thamudic script. In our present state of knowledge, and in the absence of more appropriate nomenclature, it is this writer’s opinion that, in order to distinguish between the two widely different groups of inscriptions - the Najdi/Hijazi Thamudic and the Safaitic/Tabuki Thamudic - the term Thamudic should be applied to the former and Safaitic to the latter.

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Abbreviations :

- Ar. Arabic
- C. Corpus Inscriptionum Semiticarum, Pars V, Tomus I, Paris, 1950.
- CNSI V.A. Clark, *A Study of New Safaitic Inscriptions from Jordan*, Unpublished Ph.D. thesis, University of Melbourne, 1979.
- (HIn G. Lankester Harding, *An Index and Concordance of Pre-Islamic Arabian Names and Inscriptions*, Toronto, 1971.
- TIJ G. Lankester Harding, *Some Thamudic Inscriptions from the Hashemite Kingdom of Jordan*, Leiden, 1952.
- WH F.V. Winnett & G.L. Harding, *Inscriptions from Fifty Safaitic Cairns*, Toronto, 1978.
- WTI Thamudic inscriptions in F.V. Winnett & W.L.Reed, *Ancient Records from North Arabia*, Toronto, 1970.

THE PALEOLITHIC INDUSTRIES OF AIN EL-ASSAD (LION'S SPRING), NEAR AZRAQ, EASTERN JORDAN

by
Gary O. Rollefson

INTRODUCTION

The Pleistocene prehistory of Jordan has been largely ignored over the past several generations, and in view of the wealth of surface indications of paleolithic occupations throughout the country, it is difficult to understand the lack of attention prehistoric archaeologists have paid to the area. In the past few years, however, several surveys have been conducted (Garrard and Stanley Price 1977) or are currently in progress (Miller 1978, personal communication; Henry 1978, personal communication from Sauer) which have located considerable numbers of Lower, Middle, and Upper Paleolithic sites. Beyond providing useful data for the settlement pattern studies advocated by Garrard and Stanley Price (1977: 109), it is hoped that sites suitable for excavation will be located so that detailed information concerning the technological and typological developments of Pleistocene period cultures can be compared synchronically and diachronically across a variety of environmental settings.

On the basis of what little information has been published on paleolithic sites in Jordan, Ain el-Assad ("Lion's Spring") near Azraq (Figures 1 and 2) appears to be one of the most significant sites in terms of a potentially stratified sequence of culture-bearing Pleistocene deposits. For details on the geological and environmental setting of this site, the discussion provided by Garrard and Stanley Price is very useful (1977: 109-15). It is the purpose of this paper to present the results of a typological and technological analysis of a large sample of artifacts from Ain el-Assad and to relate the cultural and temporal implications they entail with other paleolithic sites in the Near East.

BACKGROUND

The spring at Ain el-Assad has been known to prehistorians at least since the survey conducted in the 1920s and 1930s by Field (1960), but it was not until sometime in the 1950s that the significance the spring played for prehistoric occupants became known. (This awareness must have occurred after 1955, for Zeuner [1957] made no mention of paleolithic artifacts in his survey report).

Harding reported that the site was discovered during an operation related to an irrigation project. Blocked by earth slumps and heavy vegetation, an attempt was made to increase the spring's discharge by clearing the vegetation and digging a collection sump approximately five meters by five meters in areal extent. In the course of this excavation, handaxes began to appear approximately a meter below ground level, increasing in number "until finally when it was about half a meter below water-level, hand-axes were being found by the bucketful" (Harding 1967: 155). With Harding's limited description of the operations in mind, a visit to the site indicated that approximately one meter or more of deposits produced artifacts. It could not be determined from Harding's description nor from casual site inspection whether the bottom of the sump excavations extended into archaeologically sterile sediments or if the artifact deposits continue deeper into the earth.

Approximately 400 bifaces were recovered during this operation, and with an unspecified number ("several hundred") of flakes, cores, and flake tools, the artifacts were sent to the national museum in Amman. Unfortunately, this sample has become misplaced within the last twenty years or so, so it is not possible to examine the specimens.

On a visit to the spring, it was noticed that artifacts were eroding out of the backdirt piles left from the sump excavations (Pl. LXXXIII). With permission from Dr. Adnan Hadidi, Director General of the Department of Antiquities, these backdirt piles were investigated to obtain a sample which, it was hoped, would be sufficiently large to make substantive observations and interpretations concerning the typological and technological statuses of the occu-

pational remains. After two short trips a sample of 538 artifacts was recovered, including 62 bifaces, 71 cores, and 112 flake implements.

METHODS OF ANALYSIS

The typological and technological compositions of the Ain el-Assad sample are presented in Tables 1-11. Before discussing these features, it is necessary to outline the various typologies and technological attributes used in the analysis.

The biface typology is based primarily on Bordes (1961), but modified to some extent. It was found useful to reduce the number of Bordes' types into several "classes" of bifaces (Rollefson 1978: 105-06). The classes are comprised of the following types: A) *Lanceolate Class*: lanceolates, ficrons, Micoquians, triangulars, and sub-triangulars (Pl. LXXXIV, 2); B) *Cordiform Class*: cordiforms, elongated cordiforms, amygdaloids, and subcordiforms (Pl. LXXXIV, 1); C) *Ovate Class*: ovates, limandes, and discoidals (Pl. LXXXV, 2); D) *Cleaver Class*: cleavers and cleavers on flakes (Pl. LXXX IV, 1 and LXXXV, 1); E) "Non-Classic" *Class*: lageniforms, lozengials, naviforms, and nucleiforms; F) *Other*: diverse; G) *Partial Class*: partials; H) *Abbevillian Class*: Abbevillians (Pl. LXXXV, 1).

Flake implements were typed according to Bordes (1961), and his procedure of providing *réel* and *essentiel* counts, relative frequencies, and indices is followed here.

Core typologies are problematic in the case of published paleolithic site reports in the Near East, although recently attempts have been made to standardize type lists with detailed definitions. The core typology used in this study follows the one developed by Jelinek for the analysis of the Lower and Middle Paleolithic industries at the Tabun Cave in the Wadi Mughara in Mount Carmel (Jelinek 1972, personal communication).

The technological aspects of paleolithic manufacture have been largely overlooked in studies of Pleistocene assemblages from the Near East, even though the choices made by the prehistoric flintknappers in the production of tools is a reflection of the functional constraints of the raw materials used, the resources to be procured and processed, and of cultural traditions and restraints (Jelinek 1976). The monitoring of technological features of implements, cores, and unmodified debitage for the assessment of prehistoric cultural development has been demonstrated to be of considerable value (Jelinek n.d.; Rollefson 1978). The technological attributes selected for the present analysis are slightly modified from those used in the analysis of the Tabun material (Jelinek n.d.).

RESULTS OF THE ANALYSIS

Typology

The composition of the biface component of the Ain el-Assad collection is presented by type in Table 1 and by biface class in Table 2. Two points stand out which are of particular importance. First, the relatively high frequency of the "diverse" type (nearly one-fourth of the classifiable bifaces) is an indication that Bordes' biface typology is not entirely appropriate for the classification of bifaces from the Near East (Rollefson 1978: 134). This not surprising, since Bordes' types were defined primarily on specimens from Lower and Middle Paleolithic assemblages from western Europe. Similarly high percentages of diverse types were noted in the Late Acheulian and Yabrudian assemblages from the Tabun assemblages, where they ranged from 9.1% to 27.0% (Rollefson 1978: 107).

Table 1. Absolute and relative frequencies of biface types from the Ain el-Assad sample.

<i>Biface Type</i>	<i>All Bifaces</i>		<i>Classifiable Bifaces Only</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Lanceolate	1	1.6	1	1.9
Ficron	2	3.2	2	3.8
Cordiform	1	1.6	1	1.9
Amygdaloid	5	8.1	5	9.4
Sub-cordiform	2	3.2	2	3.8
Ovate	8	12.9	8	15.1
Discoid	1	1.6	1	1.9
Cleaver	16	25.8	16	30.2
Diverse	13	21.0	13	24.5
Partial	3	4.8	3	5.7
Abbevillian	1	1.6	1	1.9
Disc	1	1.6		
Unclassifiable	8	12.9		
Total	62	99.9	53	100.1

It was found in the Tabun biface components that approximately 65% of the diverse category was composed of burinated bifaces, *biface-racloirs*, and bifacial knives (Rollefson 1978: 104-5). In the Ain el-Assad sample no bifacial knives were noted, but one burinated biface occurs as well as three *biface-racloirs*. Among the rest of the diverse bifaces, three handaxes and one cleaver were used as cores (presumably after their original functions as tools were exhausted), and two specimens were unfinished biface "blanks". One piece was a cleaver with both lateral edges fashioned into racloirs, another implement was "D-shaped" (also present, but rare, in the Tabun assemblages), and one biface was a short, spiky, chisel-ended piece.

Table 2. Absolute and relative frequencies of biface classes in the Ain el-Assad sample.

<i>Biface Class</i>	<i>n</i>	<i>%</i>
Lanceloate	3	5.7
Cordiform	8	15.1
Ovate	9	17.0
Cleaver	16	30.2
Diverse	13	24.5
Partial	3	5.7
Abbevillian	1	1.9
Total	53	100.1

Also of interest is the very high relative frequency of cleavers. Normally, cleavers account for less than 5% of the bifaces in Near Eastern assemblages, but at 30.2% the Ain el-Assad sample ranks among the highest cleaver percentages in the region. This peculiar feature suggests that the activities in which bifaces were used at Ain el-Assad were of a specialised nature compared to most other known open-air Acheulian sites in the Levant. However, caution should be used in ascribing the nature of the activities carried out at Ain el-Assad, since the missing sample of some 400 bifaces from the original excavations could radically alter the

nature of the sample analyzed in this study. It is possible, for example, that the selection of the bifaces in the 1950s was heavily biased towards long and pointed forms, artificially inflating the relative frequency of the generally shorter and squatter (and less appealing to the 20th century eye?) cleavers in the bifaces that were left behind.

A further comment on the cleaver types in the Ain el-Assad sample should be made. Bordes has suggested that there may be two distinct traditions of cleaver manufacture, with an African tradition specialising in the use of broad, thick flakes as the cleaver blanks, in contrast to the "European cleaver" which is commonly fashioned on a core (Bordes 1966: 52-3). None of the Ain el-Assad cleavers was made on a flake, perhaps indicating a cultural tradition divorced from those of the African continent.

Table 3. Absolute and relative frequencies of implements in the Ain el-Assad sample.

<i>Type</i>	<i>All Types</i>		<i>Essential Types</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Levallois flake	3	2.7		
Atypical Levallois flake	1	0.9		
Pseudo-Levallois point	2	1.8	2	3.3
Straight racloir	3	2.7	3	5.0
Convex racloir	11	9.8	11	18.3
Concave racloir	4	3.6	4	6.7
Double convex racloir	2	1.8	2	3.3
Double convex-concave racloir	1	0.9	1	1.7
Convergent convex racloir	1	0.9	1	1.7
Canted convergent racloir	2	1.8	2	3.3
Transverse straight racloir	1	0.9	1	1.7
Transverse convex racloir	3	2.7	3	5.0
Racloir on interior face	1	0.9	1	1.7
Thinned-back racloir	1	0.9	1	1.7
Bifacial racloir	1	0.9	1	1.7
Burin	1	0.9	1	1.7
Atypical burin	2	1.8	2	3.3
Naturally backed flake	7	6.2	7	11.7
Notch	2	1.8	2	3.3
Denticulate	4	3.6	4	6.7
Retouched on interior face	16	14.3		
Crudely retouched piece	25	22.3		
Marginally retouched piece	4	3.6		
Bifacially retouched piece	3	2.7		
Rabot	1	0.9	1	1.7
Diverse	10	8.9	10	16.7
Total	112	100.2	60	100.2

Table 3 presents the absolute and relative frequencies of flake tools in the Ain el-Assad sample. The implements, for the most part, are typical examples of the type definitions provided by Bordes. The diverse category is once again relatively large. Three specimens are too fragmentary to confidently assign them to a specific type: two are pieces of racloir edges (one is straight, the other convex) and the third may be part of an inverse chopper. Four of the diverse tools are "battered pieces", or "wedges" (*pièces esquillées*). Two pieces are probably

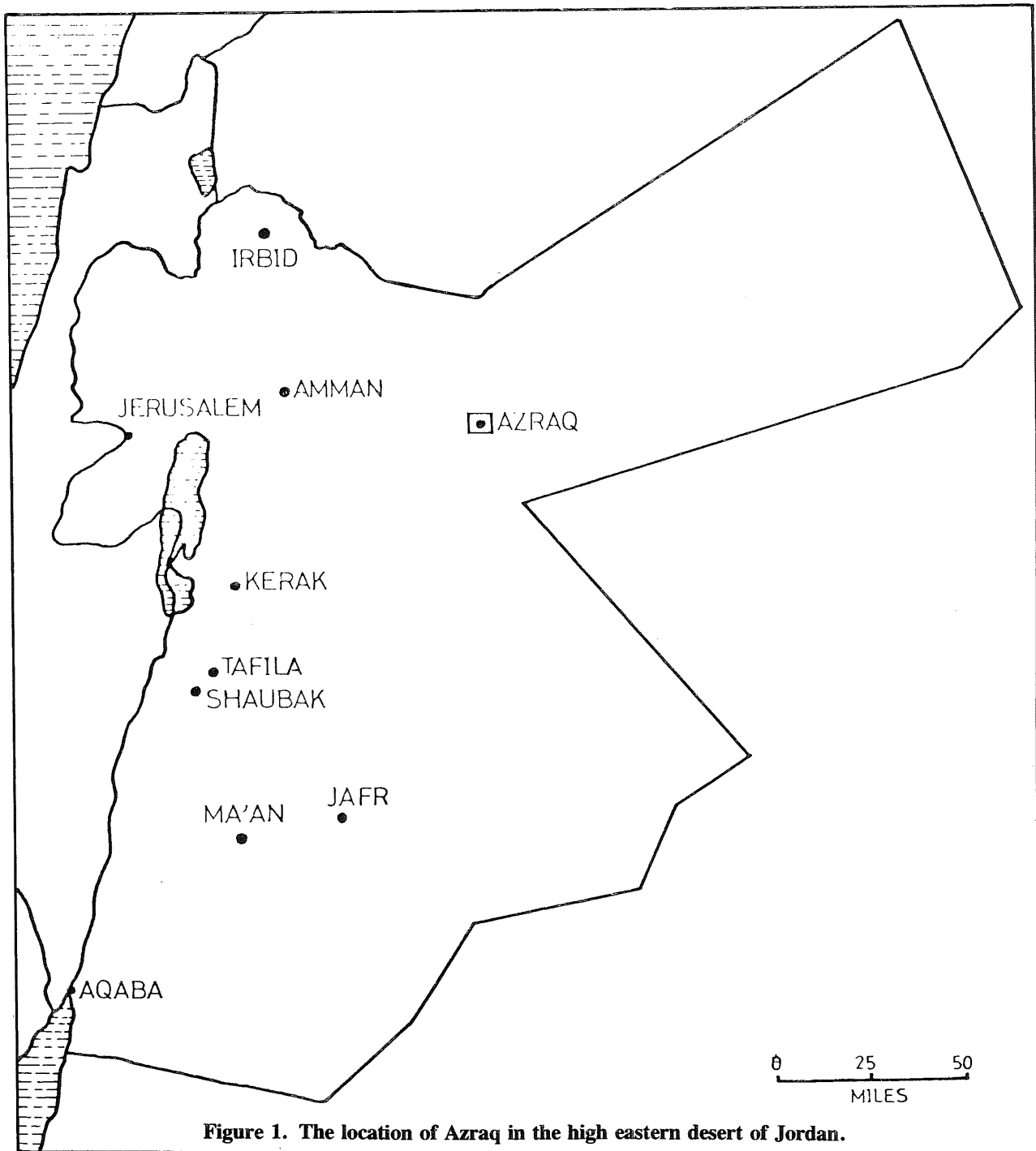


Figure 1. The location of Azraq in the high eastern desert of Jordan.

corescrapers, with portions of the working edges bearing denticulate areas. The final tool in this category has a denticulate edge which converges with another edge bearing bifacial retouch.

Several types in the *r el* ("overall") type list have been problematic for a long time in the classification of paleolithic implements. Specifically, pieces which bear irregular retouch on the interior (or bulbar) surface, crudely and marginally retouched pieces, and pieces with irregular bifacial retouch have generated much confusion in the interpretation of the nature of assemblages. The definition of the "Tayacian industry", for example, was based heavily on the presence of these "implement types", although as Bordes points out, the "retouch" on these flakes could well be due to post-depositional damage as the result of earth movement or trampling by hominids or animals on unretouched flakes (Bordes 1961: 49; Bordes and Bourgon 1951). In the case of Ain el-Assad, one can presume that mechanical shovels of some sort were used to excavate the sump, and it would be expected that a large amount of edge damage would result from this "careless" method of digging. Bordes developed an essential (*essentiel*) type list which excluded these "tools" of questionable origin to make interassemblage comparisons less confusing and less prone to error because of uncontrollable factors.

In subsequent discussions, only the essential type list will be considered.

Table 4. Essential typological indices for the flake implements in the Ain el-Assad sample.

<i>Index</i>	<i>Value</i>
Racloir Index	51.7
Charentian Index	25.0
Yabrudian Index	28.3
Backed-Knife Index	0.0
Group I	13.8
Group II	55.0
Group III	16.7
Group IV	10.0

The essential typological indices in Table 4 provide a summary of the general character of the Ain el-Assad collection of flake tools. The Racloir Index refers to all the racloirs divided by the total number of implements, multiplied by 100. The Charentian Index refers to a specific set of racloirs (Pl. LXXXVI, 1), as does the Yabrudian Index. In the first case, only simple convex racloirs (Pl. LXXXVI, 2) and all transverse racloirs are included in the numerator, while in the second case, these types are joined by canted convergent racloirs as well. The Backed-Knife Index refers only to intentionally backed flakes and blades, of which none occurred in the Ain el-Assad sample. (Naturally backed flakes have steep cortex forming a “natural backing” opposite a sharp edge). The Group I Index refers to all unretouched and retouched Levallois flakes, blades, and points in relation to the total number of tools. The Group II Index relates all racloirs, pseudo-Levallois points, and Mousterian points (none in the sample analyzed) to the total number of flake implements. Group III, or the “Upper Paleolithic Group”, includes all burins, endscrapers, borers, and backed pieces. The Group IV Index is referent of the number of notches and denticulates in relation to the total number of implements.

Table 5. Absolute and relative frequencies of core types in the Ain el-Assad sample.

Type	<i>All Types</i>		<i>Classifiable Types Only</i>	
	n	%	n	%
Levallois flake core	1	1.4	1	2.0
Discoidal core	11	15.5	11	22.4
Spheroidal/Globular core	1	1.4	1	2.0
Core on a flake	1	1.4	1	2.0
Formless core	6	8.4	6	12.2
Tabular core	3	4.2	3	6.1
Core-chopper tool	2	2.8	2	4.1
Single-face core	12	16.9	12	24.5
Demi-disc core	7	9.8	7	14.3
Diverse	5	7.0	5	10.1
Rejected core	8	11.3		
Core fragment	5	7.0		
Unflaked nodule	2	2.8		
Broken, unflaked piece	3	4.2		
Unclassifiable (too damaged)	4	5.6		
Total	71	99.7	49	99.7

In terms of scrapers, the Raclor Indices indicate that the Ain el-Assad sample is rich, especially in the types included in the Charentian and Yabrudian groups.

The absence of intentionally backed pieces is typical of Late Acheulian assemblages in the Near East. The low value for the Levallois Group (Group I) stands in contrast to the usually much higher values for Late Acheulian sites in the coastal areas of the Near East. The “Upper Paleolithic Group” is moderately represented at Ain el-Assad, but the Denticulate Group (Group IV) is relatively low.

It was mentioned earlier that core typologies for Lower and Middle Paleolithic assemblages have been poorly developed for the Near East, and detailed descriptions and counts are rare in the literature of the area. Of note in the breakdown of core types in Table 5 are the relatively high frequencies of discoidal, single-face, and demi-disc cores, which together account for 60% of the classifiable cores (Pl. XXXVII). Levallois cores, which are more prominent in the coastal areas of the Levant, especially in the Middle Paleolithic, are represented by a single specimen in the collection.

Technological Features

Relative and absolute frequencies of attributes relating to the method of the production of flakes in the Ain el-Assad sample are presented in tables 6-11. Each of the technological features will be discussed in turn.

The types of platform occurring on the flakes are tabulated in Table 6. Plain platforms have a single facet and may be either cortical or non-cortical; a particular kind of plain platform exhibits a pattern of ripples which crosses the platform from one lateral edge to the other, referred to as “transverse preparation” in the table. Dihedral platforms manifest two facets separated by a ridge that extends more or less perpendiculary from the exterior surface of the flake to the interior surface; dihedral platforms with one of the facets traversing part of the platform from a lateral edge were noted as a distinct category (“dihedral with one transverse scar”). Multiple facet platforms consist of three or more facets crossing the platform from the exterior surface to the interior surface of the flake. “Isolated point” types are unfaçeted, roughly triangular platforms which manifest a prominent projection on the exterior edge of the platform produced by the removal of one previous flake from the core or by the intersection of the negative bulbs of two previous flake removals. The “crushed/punch” type of platform consists simply of the point of percussion: the rest of the platform was shattered away in the course of the detachment of the flake from the core.

Table 6. Absolute and relative frequencies of platform types on the flakes in the Ain el-Assad sample.

Type	<i>n</i>	%
Plain	168	54.7
Transverse preparation	22	7.2
Dihedral	46	15.0
Dihedral with one transverse scar	13	4.2
Multiple facet	32	10.4
Isolated point: one flake	2	0.6
Isolated point: two flakes	3	1.0
Crushed/punch	21	6.8
Subtotal	307	99.9
Missing	98	(24.2)
Total	405	

Of the sample of 405 flakes, 76% were complete enough to classify the platforms. Plain platforms dominate the assemblage, especially when the transverse and “isolated point” types are included (totalling 63.5%). Since only 1.6% of all the platforms were classified as belonging

to the isolated point types, it seems that these varieties should be considered as artificially inspired categories and should be lumped with the plain platform type in future analyses.

Dihedral platforms form the next most popular type which, when “dihedral with one transverse scar” frequencies are included, account for almost one-fifth of the platforms. Multiple-facet platforms occur only once in every ten flakes, probably related to the low frequency of Levallois cores. The “crushed/punch” platforms are probably badly damaged plain platforms for the most part, although there is of course no way to demonstrate this assertion. In summary, little in the way of platform preparation on cores is evidenced in the Ain el-Assad sample.

Table 7. Absolute and relative frequencies of techniques of flake production in the Ain el-Assad sample.

<i>Technique</i>	<i>n</i>	<i>%</i>
“Normal”	112	32.8
Clactonian	99	29.0
Levallois flake	4	1.2
Levallois blade	2	0.6
Disc core	36	10.6
Normal blade	26	7.6
Bifacial retouch	41	12.0
Other	19	5.6
Punch	2	0.6
Subtotal	341	100.0
Indeterminate	64	(15.8)
Total	405	

Recognizable techniques of flake production, based primarily on patterns of flake scars observed on the exterior surfaces of flakes, conform nicely to what would be anticipated in a Late Acheulian assemblage (Table 7). “Normal” technique refers to an undifferentiated pattern of flake production; i.e., there is nothing distinctive about the flake to indicate a specialized method of manufacture. The Clactonian technique reflects the attitude of the platform in relationship to the interior surface: arbitrarily, if the angle formed between these two surfaces is equal to or greater than 110° it was considered to reflect techniques characteristic of the Clactonian Industry in Britain and northern Europe. It should be stressed here that the Clactonian technique as evidenced at Ain el-Assad is not to be taken as an indication of any “cultural connection” with the Clactonian industries found elsewhere; rather, the technique should be considered to be one of the extremes of the range of variation of the “normal” flaking technique.

The Levallois technique is well described by Bordes (1968: 27-30), and his criteria are used here. In some respects, especially the patterns formed by the ridges left from previous flake scars on the exterior surface, the discoidal technique could be confused with the Levallois technique. However, in the latter method the negative ripples are centripetally oriented, while in the former they trend toward a tangential vector.

Levallois blade, “normal” blade, and “punch” techniques are distinguished solely by the platforms manifested on the blade. Levallois blades have multiple facet platforms, normal blades have plain or dihedral platforms, and punch blades have crushed platforms. All three blade techniques, apart from the platform type, are evidenced by generally parallel edges on the blank with one or more longitudinal ridges on the exterior surface that parallels the lateral edges. (The definition of a “blade”, as it is used in this study, is discussed below).

The bifacial retouch technique is very recognizable in the association of the platform, exterior ridge pattern, and the flake profile (Bordes 1972: 86-7, fig. 26). The platform is usually lipped over the bulb of percussion and is normally multiple facet; the exterior flake

scars often converge towards the center (although often they do not); and the profile of the flake is generally quite in-curved.

The punch technique is defined here primarily on the basis of the platform as well as the normally curved profile of the flake or blade.

The "other" technique includes any pattern which does not conform to others mentioned above. Of the 19 instances of "other" technique, nine involved the removal of a core edge from a core, manifested by a central crest down the length of the flake, with negative bulbar scars radiating towards one or both lateral edges from this ridge. Three flakes exhibited two bulbs and points of percussion, one on each face, resulting from the removal of one flake from another near the original platform ("Janus" or "Kombewa" flakes); two other flakes were removed from other flakes, but the "opposed platform" phenomenon was not present. Three more pieces were flakes which removed, either intentionally or by accident, retouched edges from an implement (included as "diverse" tools on the type list). The last two instances of "other" technique apparently reflect efforts to remove angular and convoluted areas from a core to provide better surfaces for subsequent flake production.

The absolute and relative frequencies of flake forms, the products of flaking techniques, are shown in Table 8. "Normal" flakes, in this case, is misleading and refers to two general concepts of the results of flaking procedures. In one case, normal flakes are the products of the "normal" flaking technique; that is, non-descript pieces of more or less irregular outline shapes with no particular pattern of scar ridges on the exterior face. But in another sense, normal flakes also refer to flake forms that would be *expected* from a particular technique of flaking. For example, the Levallois flake technique produces a "normal" Levallois flake; or, the bifacial flaking technique produces a normal flake of bifacial retouch. The confusion engendered by this category is an unfortunate oversight, and, apologetically, a better method of discriminating flake form is called for in the future.

Table 8. Absolute and relative frequencies of flake form in the Ain el-Assad sample.

<i>Form</i>	<i>n</i>	<i>%</i>
"Normal"	320	79.0
Angular	36	8.9
Second-order point	2	0.5
First-order blade	6	1.5
Second-order blade	19	4.7
Formless debris	2	0.5
Other	15	3.7
Overshot	5	1.2
Total	405	100.0

Angular flakes are defined as those pieces which have two or more exterior scars whose surfaces converge to an angle of less than 90°. The "other" technique which removed core edges invariably fit into this category of flake form, and the Clactonian technique often produced angular flakes.

Before describing first- and second-order blades and points, it is necessary to present the definition of blades used in this analysis. Bordes defines a blade as "a flake more than twice as long as it is wide..." and goes on to note that, under this definition, "of course there may always be the chance of *accidental* blades from the earliest period onwards" (Bordes 1968: 27, emphasis added). Although this is a popularly used definition in the Lower and Middle Paleolithic, the accidental production of long flakes would appear to be a quite different conceptual thing from the consistent and intentional manufacture of long, regular, parallel-sided pieces which bear evidence of the removal of similar pieces by long parallel-sided ridges on their exterior surfaces. It is this latter product of lithic manufacture that is defined as a blade in this study, and no matter what the relative dimensions of the flake may be, if it bears convergent or haphazardly-oriented flake scars on the exterior surface, it is simply considered a flake of one kind or another, but not a blade.

First-order blades have two parallel blades scars on the exterior surface separated by a single longitudinal ridge; second-order blades have two or more such ridges on the exterior. First-order points have two convergent flake scars separated by a single medial ridge (e.g. Fleisch 1970: 83, Fig. 17-11); second-order points have three or more convergent flake scars on the exterior surface separated by a “Y-pattern” set of ridges (Fleisch 1970: 83, Fig. 17-17).

Overshot pieces are flakes or blades which “misfired” upon detachment from the core, removing the distal end of the core in the process. “Other” flakes are comprised of nine core edges, three Kombewa flakes, and three flakes detached from larger flakes.

There is an apparent discrepancy in the comparison of the frequencies for Levallois and normal blade techniques in Table 7 (n=28, or 8.2% of the recognizable techniques) with the number of blades produced (n=25, or 6.2% of the total in Table 8). This difference is explained by the fact that although a blade technique was used, a blade did not always result; instead, either an overshot piece or a non-parallel-sided form resulted. In general terms, the Ain el-Assad collection is not distinguished by large numbers of blades or points, but is characterized by flakes produced by “normal” methods.

Table 9. Absolute and relative frequencies of artifacts in the cortex categories in the Ain el-Assad sample.

<i>Cortex Category</i>	<i>n</i>	<i>%</i>
	<u><i>Flakes</i></u>	
Cortical	10	2.5
Cortical with cortical platform	5	1.2
Partially cortical	131	32.3
Partially cortical with cortical platform	12	3.0
Naturally backed flake	6	1.5
Naturally backed flake with cortical platform	3	0.7
Naturally backed blade	1	0.2
No cortex	220	54.3
No cortex except on platform	17	4.2
Total	405	99.9
	<u><i>Bifaces</i></u>	
Partially cortical	38	61.3
No cortex	24	38.7
Total	62	100.0
	<u><i>Cores</i></u>	
Cortical	5	7.0
Partially cortical	48	67.6
No cortex	18	25.3
Total	71	100.0

The categories for the amount of cortex remaining on flakes, cores and bifaces are arbitrarily defined as follows: cortical flakes and cores are pieces whose surfaces are covered by 90-100% cortex; partially cortical flakes, cores, and bifaces bear cortex on 10-90% of their surfaces; and non-cortical pieces have less than 10% cortex on their surfaces. Naturally backed flakes and blades are partially cortical pieces where the cortex covers a perpendicular lateral edge opposite a sharp lateral edge.

The very low incidence of cortical flakes in the collection (Table 9), which number far fewer than the number of cores, is a very good indication that much of the lithic manufacturing processes took place somewhere beyond the area excavated at the spring. Even just the fashioning of bifaces from this sample would lead one to expect a much larger number of cortical flakes. Additionally, the number of flakes of bifacial retouch is very low compared to the number of bifaces, further suggesting off-site manufacturing. The picture portrayed in Table 9 suggests that the occupants of the site produced the bifaces somewhere else, bringing them and a relatively large number of already reduced cores to this particular area to accomplish those activities which were carried on; those tasks for which bifaces were inappropriate could be accomplished with flakes struck off the cores.

The extent of the patination of artifacts from the excavation is tabulated in Table 10. Although a variety of factors control the development of patina, one probable chemical agent indicated by a slight sulfurous order was noticed while examining the sediments underwater in the sump. The vast majority of the artifacts in the Ain el-Assad sample appear to be covered with patina, and two pieces have become so altered by physical and/or chemical changes that they are desilicified into a white, chalky texture. Rates of patination are extremely difficult to assess (if not impossible), but several examples provide some insight into the process. Two typical Upper Paleolithic punch blades were completely patinated to a dark matte black, as were many of the Lower Paleolithic specimens, but two rectangular scrapers characteristic of the Bronze Age (James Sauer, personal communication) retained their original color of reddish- to slightly pinkish-brown).

Table 10. Absolute and relative frequencies of artifacts in patina categories in the Ain el-Assad sample.

<i>Patina Category</i>	<i>n</i>		<i>%</i>	
	<i>Flakes</i>			
No patina	27		6.7	
Overall patina	377		93.1	
Desilicified	1		0.2	
Total	405		100.0	
	<i>Cores</i>			
No patina	4		5.6	
Overall patina	67		94.4	
Total	71		100.0	
	<i>Bifaces</i>			
Overall patina	62		100.0	
	<i>Implements</i>			
	<i>AllTypes</i>		<i>EssentialTypes</i>	
No patina	8	7.1	7	10.9
Overall patina	103	92.0	56	87.5
Desilicified	1	0.9	1	1.6
Total	112	100	64	100.0

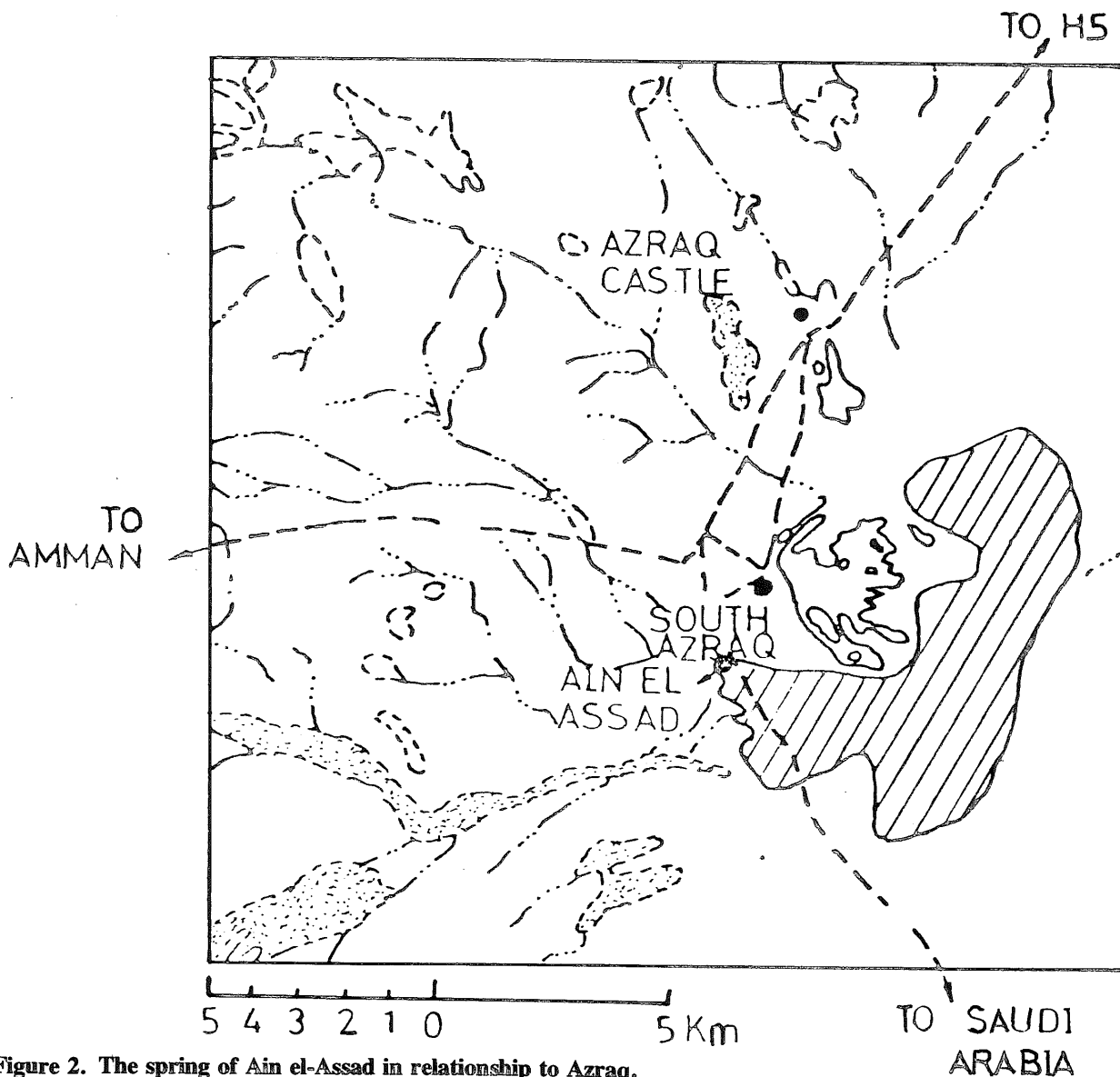


Figure 2. The spring of Ain el-Assad in relationship to Azraq.

Different patina colors have been used to demonstrate temporal distinctions in mixed assemblages (Bordes n.d.; de Lumley 1969). This seriological use of patina color is based implicitly on the assumption that as the patination processes continue to operate through time, the patina will change from one color to another. This assumption, in turn, rests on another: that flint as a physical/chemical entity reacts homogeneously in similar environments of physical and chemical reagents, despite slight differences in the crystalline structure of the raw materials. Finally, it must be assumed that the physical and chemical agents responsible for patination are distributed homogeneously throughout the surfaces and sediments on and in which the artifacts lie. Obviously, any one of these assumptions is difficult to uphold, and the combination of all three presents very high odds against satisfying all the requirements of all the assumptions. Nevertheless, in the absence of other kinds of data, it is not entirely inconceivable that different colors of patina might indicate periods of differential exposure to patinating elements. With the caveats pointed out in mind, the implications of the figures in Table 11 will be discussed.

Three general patina colors were noted in the Ain el-Assad sample. The unpatinated materials mentioned earlier were reddish- or pinkish- brown in color and matte in texture; the two Bronze Age scrapers and several flakes were of similar color, but because they had lain in a small stream leading out of the spring, they had developed a high luster as the result of "stream polish". Although this stream polish constitutes patina of a sort, artifacts bearing it and artifacts with no patina of any kind were lumped into the "other" patina category.

The second major patina category consisted of a coal-black color with either matte or

lustrous textures, presumably depending on exposure to stream polish. The last major category was termed the "Gray Series", although the colors ranged from a very dark gray to off-white. No examples of lustrous texture were noted in this category.

Returning momentarily to the assumptions underlying the seriological use of patina color, two points should be mentioned which tend to substantiate its use in the case of Ain el-Assad. First, a number of the artifacts in the Gray Series were damaged recently, and in the recent fractures a dark black color stood out. Conversely, damaged artifacts in the Black Series showed the same black color in the recent fractures, but never gray. Secondly, the two Upper Paleolithic punch blades were black, but no evidence of techniques typical of later manufacturing traditions appeared on gray specimens.

Table 11. Absolute and relative frequencies of artifacts in the patina color categories in the Ain el-Assad sample.

<i>Patina Color</i>	<i>n</i>	<i>%</i>			
		<u><i>Flakes</i></u>			
Gray Series	124	30.6			
Black Series	249	61.5			
Other	32	7.9			
Total	405	100.0			
		<u><i>Cores</i></u>			
Gray Series	32	45.1			
Black Series	35	49.3			
Other	4	5.6			
Total	71	100.0			
		<u><i>Bifaces</i></u>			
Gray Series	19	30.6			
Black Series	43	69.4			
Total	62	100.0			
		<u><i>Implements</i></u>			
		<u><i>All Types</i></u>		<u><i>Essential Types</i></u>	
Gray Series	32	28.6	21	32.8	
Black Series	70	62.5	35	54.7	
Other	10	8.9	8	12.5	
Total	112	100.0	64	100.0	

(It must be admitted that the original color of the paleolithic artifacts remains in question: although the Bronze Age scrapers and flakes were brown in nature, it might be that the Bronze Age flintknappers brought the raw materials to Ain el-Assad from an outcrop not available to the earlier inhabitants. It might be, for example, that the local flint was black in color, and that patination of this flint resulted in a gray color).

For these reasons it appears that at least two major periods of occupation occurred during Lower Paleolithic times (based on the two series of color among the bifaces), with subsequent minor occupations during the Upper (and Middle?) Paleolithic and post-Pleistocene periods. In the culture-bearing deposits at Ain el-Assad, it is quite possible that stratified assemblages occur, which would constitute the only such paleolithic site known east of the Jordan River.

An examination of the figures in Table 11 reveals a curious feature in the relative stability of the percentages of the patina categories across artifact classes. The only exception to this

pattern is the cores, where the Gray Series is higher than would normally be expected. The reasons which might explain this phenomenon are conjectural at present, but it may indicate that the general function of the site in Lower Paleolithic times remained essentially unchanged. If the Gray Series artifacts are indeed older than the Black Series, whatever general activities were carried out in the earlier occupation(s) were also pursued in the later one(s).

The specific activities carried out at Ain el-Assad at any time will probably never be determined, but by comparing the biface types of both the Black and Gray Series, it is evident that there was some variation in the specific tasks performed. (A similar comparison of flake tools has not been attempted). Although the sample sizes are fairly small, Plate LXXXVIII indicates major differences between the biface patina series in the lanceolate, cordiform, and ovate classes, although the remaining classes are more comparable, including the cleaver class. Whatever activities these biface classes entail, there was apparently a different focus on them between the two occupations.

The relative age of the material from Ain el-Assad is difficult to determine in the absence of any geological, climatological, and palynological information. In terms of technological and typological comparisons with other sites in the Near East, stratified *in situ* Acheulian assemblages are not numerous, which emphasizes the potential value of Ain el-Assad. Furthermore, site reports on Acheulian materials are largely devoid of detailed information to facilitate interassemblage comparisons. In general, "we know the Lower Paleolithic of this region only in its broadest outlines" (Hours 1975: 252). Although taxonomic distinctions have been presented delineating the differences within the Acheulian, it has been stated that there is insufficient evidence to discriminate between Middle and Late Acheulian assemblages (Hours *et al.* 1973). On the other hand, Clark (1976:637) has noted that the relatively high frequencies of the ovate types indicate a Late Acheulian association, although the low numbers of the Micoquian type suggests that the Final Acheulian is not the case. The presence of two patination series in the Ain el-Assad samples may reflect the extreme ends of the temporal range of the Late Acheulian, but the possibility that both Middle and Late Acheulian occupations are represented (the Gray and Black Series, respectively) cannot be overlooked.

Summary and Conclusions

The Late Acheulian site at Ain el-Assad, in the oasis setting in the eastern desert of Jordan, presents the first potential glimpse at stratified *in situ* deposits of late Lower Paleolithic assemblages from the high desert environs of the Near East. The large numbers of artifacts from a relatively small (uncontrolled) excavation appear to span a long period of cultural development, although artifacts from the Lower Paleolithic predominate. Although no means of geological relative or absolute methods of dating are presently available, typological considerations indicate that Ain el-Assad was occupied during the late Penultimate Glaciation and/or during the Last Interglacial. Currently known information regarding the environmental parameters of the occupation(s) at Ain el-Assad is negligible; consequently, little can be said at present to place the typological and technological data in perspective both to the contemporary environment at the site and compared to contemporary environments elsewhere in the Near East.

The current economic situation in Jordan is one of rapidly expanding scope, resulting in widespread construction activities throughout the countryside. The sump at Ain el-Assad is located only 50-75 meters from one large construction project, and the availability of this site is in grave jeopardy. A concentrated investigation of the Ain el-Assad deposits is urgently needed to salvage to the greatest extent possible the information lying at this consistent focus of paleolithic habitation. The data available now are suggestive, and the inferences they entail are tantalizing, but the general picture they convey is much too vague compared to the potential this site possesses.

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THE SANCTUARY OF ARTEMIS AT JERASH

An Architectural Survey

by

Roberto Parapetti

The work of the Italian Mission in Jordan, promoted by the "Centro Ricerche e Scavi di Torino per il Medio Oriente e l'Asia" within the framework of the Cultural Agreement between the two countries¹ has been undertaken, particularly at Jerash, with the intention of making clear the architectural significance of the Sanctuary of Artemis, the most important complex of buildings in the city.

To the American and English expeditions between 1928 and 1935² we owe, apart from the outline of the ancient city's history, (above all through the numerous inscriptions found), the credit for the first major field work, although many questions about the city layout as a whole, and the single monuments, are still unanswered.

Such is the case with the Sanctuary of Artemis, one of the least known of the major complexes. Although evidently of the greatest interest because of the variety and richness of its architectural design, which is for the greater part decipherable due to its relatively good state of preservation, there had been little excavation to date.

Our work is being directed to making a "Reconstruction on Paper" of the whole complex, to producing a final plan of restoration for the consolidation of the structure, and to give a clearer presentation and appreciation of the monument.

The campaign started in the spring of 1977 with 4 weeks field work, followed by a second season in 1978 and we are now at Jerash for our third season³.

Together with the plans made of what was visible above the ground, we dug stratigraphical trial trenches this year and the last.

This account is therefore a brief outline of some of the tasks lying ahead.

After measuring and drawing a large contoured site map, as a base, we made the photogrammetric survey of the temple and of the monumental approach west of the *cardo*. For the temple we made the survey by means of four external elevations, and, for the interior we surveyed the rear and the north wall of the *cella*.

For the *propylaea* we surveyed the only *façade* toward the temple while the opposite one, onto the *cardo*, was concealed by a massive ramp, built for the reconstruction works in the 1960's of the colonnaded road, and the four giant columns facing the *propylaea* itself.

The drawings of the Sanctuary structures, related to an area of 320 metres east to west, and 120 metres north to south, were done by traditional methods based on the same contour map.

The monumental complex develops along a main axis at right angles to, and astride the *cardo*, with successive vistas from the changing levels, each framed along the ascending approach. The temple is built on a rock platform on the brow of a hill which rises up from Wadi Jerash (classical *Chysorhoas*), and was reached by a range of terraces.

Of the street plan of the city, at present only the *cardo*, running roughly north to south parallel to Wadi Jerash, and the *decumanus* crossing its southern stretch, are uncovered. At the crossing of both these colonnaded streets was a monumental *tetrapylon*. Another colonnaded street, crossing the *cardo* at its northern stretch, is identifiable but not yet uncovered.

Furthermore, the latest excavations⁴ allowed us to deduce evidence of a smaller scale subdivision of building land, which may give us a lead for further studies of the growth and change of the ancient urban fabric.

West of the *cardo*, at the south end, two side street entries regularly spaced south and north of the south *tetrapylon*, show space of 350 Roman feet "pedes" (about 103.30 metres) from street to street. A third street on the same side of the *cardo* and 175 "pedes" north of the last mentioned street, marks the south side of the ground covered by the Sanctuary of Artemis.

A final street, discussed below, can be seen again 175 "pedes" east of, and parallel to the *cardo*.

The main frontage of the Sanctuary, onto the west side of the *cardo*, does not however fit the same land division as the street above described, being about 122 metres wide (Fig. 1).

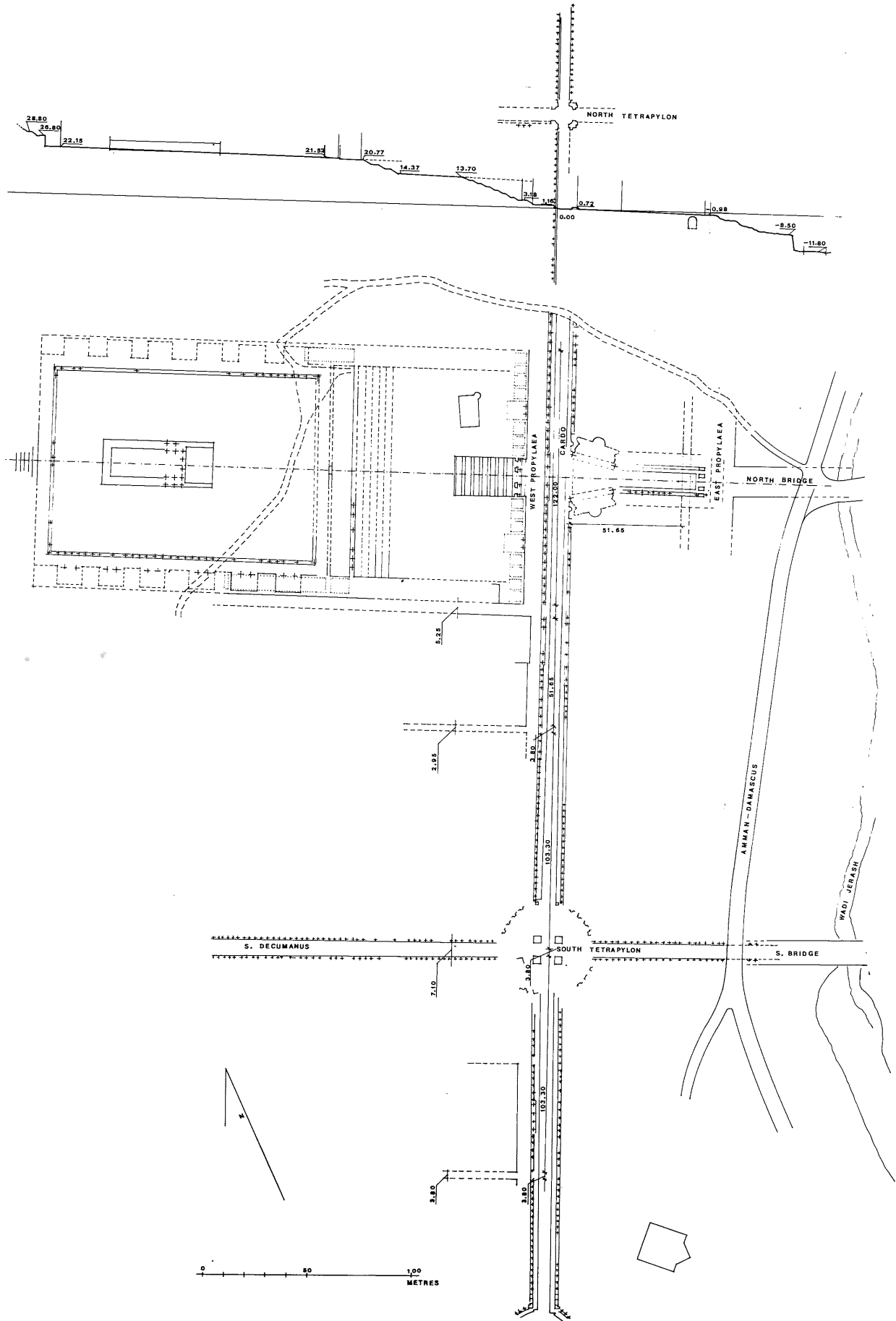


Fig. 1

Clearly this fact makes us question the land division of the second century A.D. to which most of the visible monuments belong, but to which the Sanctuary dimensions do not conform.

Further we must question the land division of the city of an earlier age since we know practically nothing about the Republican or Hellenistic city from excavations. Neither do we have data about whether the layout of the Imperial Gerasa superseded or reaffirmed the earlier one.

The northernmost bridge of the two which spanned Wadi Jerash, still recognizable, connected the east side of the city to a Sacred Way which rose up to the temple. What remains of it is only the west abutment, but enough to relate it to the same planning phase as the Sanctuary complex.

Its slight offset from the main axis may be explained by the need to connect to a pre-existing street on the east side of the wadi.

The Sacred Way started at its east end with a propylaea giving access to an inclined colonnaded street. This bridges the street parallel to the *cardo* previously mentioned, supporting the other observations about the evolution of the city plan. At the same time the unusual bridge-like solution emphasizes the intention of making a specialised route.

The Sacred Way next opens into a trapezium shaped square, opening into the *cardo*. The two flank walls are deepened by *exedras*, most probably for fountains, and they ended with detached columns symmetrical to the walls. Backing the columns are square pillars engaged to the wall, on which are visible, in shallow relief, smaller scale pilasters on bases, which in spite of later byzantine levelling, give the scale of ornament of the *exedras* (Pl. XC,1).

The long side of the trapezium matches exactly a second propylaea opposite.

This is set in a double storey parade of shops, imposingly designed, which forms the retaining wall of a terrace about 14 metres above the *cardo*.

The terrace, which is reached by a staircase (seven flights of seven steps) rising through the backfill, was probably framed by porticoes, yet to be uncovered, its floor being hidden by a great depth of overburden. From the terrace, rising up a second flight of stairs (three flights of nine steps each), we finally reach the *temenos* level, about 7 metres higher.

The enclosure, roughly rectangular, was framed with porticoes on all four sides.

The east side, next to the approaching staircase, must have had at least one or more portals. Standing parallel to this side is a row of columns at the top of the staircase, which suggests the image of an upper colonnade street parallel to the *cardo*. We found the threshold of the portal on the main axis and fragments of the stones of its flat-arch of the three band type.

The right side arch-stone abutment block, entirely preserved, shows that the flat-arch was presumably supported by pilasters engaged in the wall, rather than by the usual architrave-like jambs.

The west portico enclosing wall was a retaining structure for the hill behind. A staircase in the backfill has recently been brought to light⁵ on the main axis starting from a level 4.65 metres above the portico pavement.

The wall of the south portico is deepened by alternating *exedras* and rooms supported at the eastern end by vaulted structures accessible from the street adjacent that side of the Sanctuary. Most probably the north side of the enclosure, invisible at present was similar.

From studying the stone blocks found in the *temenos* we made deductions helpful in the reconstruction of the temple.

The temple, of the corinthian order, has columns on all four sides, with six columns on the short, and eleven on the long side; it was raised on a podium and supported by vaulted structures reached from the temple *cella*.

Dozens of pairs of segments of cornice-like architrave of the three-band type, have been identified. These have had to fit at the top of the *cella* walls corresponding to the architrave of the peristyle. One of the segments shows the lower two bands and the two *astragals* separating them. The other shows the upper band followed by a twisted ribbon decoration, egg-and-dart, and "cane corrente" patterns.

The height of the segments varies from 57 to 59 centimetres giving a total cornice height of about 118 cms. The length of the blocks found complete is 160 cms. maximum, while the depth varies from 50 to 90 cms. (fig 2/c8, d5; Pl. XC,2 and Pl. XCI, 1). A few of the segments were obtained from re-using older corinthian capitals, a fact that is remarkable but puzzling (Pl. XC1,2).

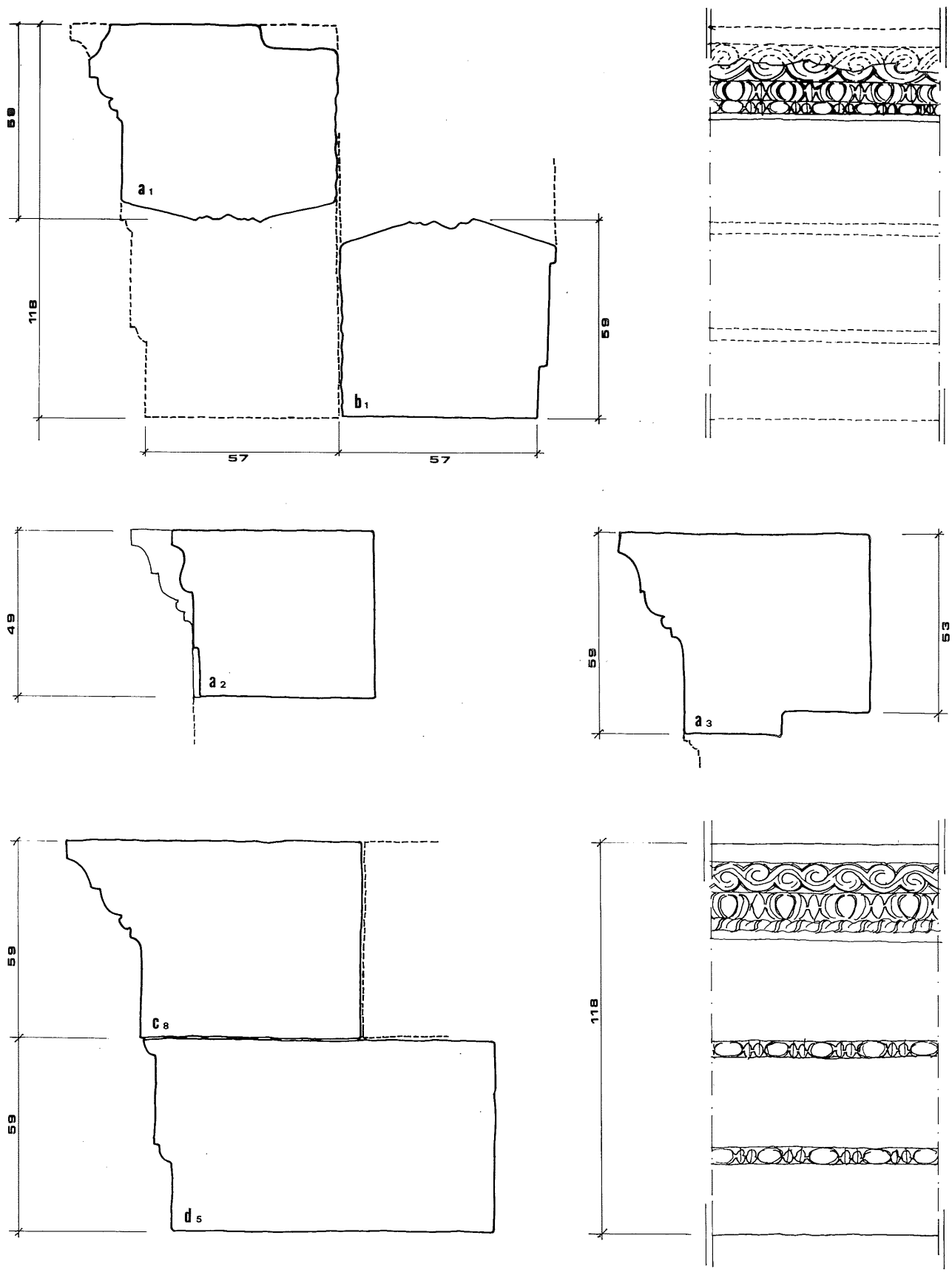


Fig. 2

The peristyle architrave was presumably made from two facing stones joined back-to-back along the center line of the columns.

Of these we identified only two fragmentary blocks near the temple. These were split in two, with the split face being left rough. One of the pieces shows the upper external face, similar in pattern to the above mentioned blocks, with a row of astragals instead of the twisted ribbon separating the upper band from the egg-and-dart (fig. 2/ a1). The other shows the lower part of the internal face, on which are recognizable three simple rebated bands. The dimensions of the first block are 59 cms. high x 63 deep x 150 long. The other is 59 cms. high x 63 deep x 120 long (fig. 2/ b1). The total height must originally have been about 118 cms. like the architrave finishing of the cella walls. The entire bottom bedding face must have been 114 cms. as shown by setting the two face stones back-to-back so that they fit the bedding face of the top of the capitals.

Other architrave blocks in great number have been identified already re-used or re-worked, or where the mason has started cutting them into smaller blocks (fig. 2/ a2; Pl. LXXXIX, 1); this is especially evident in St. Theodore's church. One of these pieces in particular was re-used as the lintel of the middle doorway of the church, and is the one showing inscription n° 300 in the publication already mentioned in note (fig. 2/ a3; Pl. LXXXIX, 2). Its length is 366 cms., and it must fit one of the corners of the temple. In fact its right end is cut as a 60° corner mitre joint.

No fragments of the cornice or frieze of the peristyle of the temple have been identified.

Comparisons of the elements of the Artemis temple, with that of the corinthian order of Zeus temple, contemporary to it, (even if capitals and architraves show slightly different ratios,) suggest that the frieze and the cornice of the Artemis temple would respectively be about 90 and 100 cms. high.

The lack of such elements however is rather difficult to construe, especially as cornice blocks are not readily re-used. This would be reasonably comprehensible if we conceive that the temple was never finished.

The lacy capitals of the pronaos columns still standing are largely intact, suggesting that the entablature, even if made, was never erected, since had it crashed down it would have broken off much delicate ornament.

Unfortunately most of the archaeological levels above the temenos floor have been removed, without an accurate record, in order to uncover the courtyard, so that it is now very difficult to reconstruct the full history of the area.

A small trial trench opened next to the north west corner of the temple, has exposed, below the sediments of the west hill occupations, fragments of bases and columns of the peristyle, partially re-worked, intended for re-use, and immediately above the court level, which, in that place is just above the bedrock.

Blocks in the same condition have been seen, even if out of their stratigraphical context, in other parts of the court, and show that the area of the temenos was used as a quarry and stone-cutter's yard very shortly after the temple was built.

On the north and south podium walls we noticed incised lines of particular interest, some of them showing long sequences of regular divisions corresponding to a "pes" of 29.45 cms.

These will be very useful in understanding the system of measurement underlying the planning and the building of the temple, particularly after we have the photogrammetric drawings of the façades at 1/20 scale.

For next season's work we are planning large excavations intending to bring to light those parts of the sanctuary still buried, and essential for a deeper understanding of the detailed design.

Among the first projects will be moving blocks that obscure the cella in order to put down the internal plan, and also to gather more pieces helpful to a "Reconstruction on Paper" of the upper and roof levels.

The final plan for any re-erection of fallen stones will result from these explorations on site and on paper.

NOTES

1. The Cultural Agreement was signed between the two governments on October 26th 1975. Prof. G. Gullini, director of "Centro Scavi di Torino", headed the entire project.
2. C.P.C. Kraeling, *Gerasa, city of the Decapolis*, ASOR, New Haven, Connecticut, 1938.
3. We thank the Jordan Antiquity Department and especially Dr. Adnan Hadidi and the late Dr. Jacoub Oweis, who made possible our work, for the support given in providing us with labourers and in helping in every circumstance.
Dr. G. Bergamini, archaeologist, Mr. G. Fino, surveyor, and Prof. C. Sena, cartographer, who planned the photogrammetric survey, were members of the first campaign. Dr. G. Barbieri, archaeologist, Mr. M. Musso, surveyor, were members of the second campaign. Dr. R. Pierobon, archaeologist, Mr. G. Fino, are members of the present campaign. The writer, Dr. R. Parapetti, architect, Field Director, supervised the works from the beginning.
4. The Jordan University Department of Arts, headed by Dr. Assem Barghouti dug between the south tetrapylon and the south plaza, west of the cardo.
5. The Jordan University Department of Arts, headed by Dr. Mohammed Haer Yaseen, made the trenches west of the western enclosure wall of the temenos.

A NOTE ON THE CHURCH OF THE VIRGIN AT MADABA, JORDAN

by
Michele Piccirillo

With the arrival of the 'Azizat of Kerak, who in 1880 occupied the abandoned *tell* of Madaba, began the discovery of the ancient monuments of the city.

The news of the finding of a mosaic with inscriptions in the house of the Sunna' family, on the northern side of the Roman road which crossed the ruins from east to west, attracted the attention of scholars to Madaba.

The first to arrive was Germer-Durand in 1887. In the semi-darkness of the room, he saw for the first time the mosaic and inscriptions within a circular edifice.¹

Returning there in 1892, Séjourné succeeded in copying with greater care the three inscriptions of the church and even in photographing the central inscription.²

The dating proposed by Séjourné (312 A.D.) was questioned by Michon³ and by Clermont-Ganneau. The latter proposed the year 663.⁴

The inscriptions and a rough plan of the edifice were published once again in 1899 by don Manfredi, Roman Catholic pastor of Madaba⁵.

In 1905 Metaxakis drew up an accurate plan of the church in the urban context of the city.⁶

A synthesis research was prepared by Leclercq in 1931.⁷

The problems which arise for scholars with respect to the Church of the Virgin at Madaba are essentially three:

1. To define the plan of the edifice after a systematic excavation.
2. To put at the disposition of scholars a true and complete documentation of the dedicatory inscription from the outset of the discussion concerning the dating of the church and its mosaics.
3. To solve the problem of the strange letter or sign which in the inscription designates the hundreds.

The opportunity to obtain suitable documentation presented itself in 1973, when the Department of Antiquities bought and cleaned the room which until that time had been used as a garage.

The press-release which accompanied the end of the works, was used in 1975 for a somewhat polemic contre-note. This note went so far as to affirm, with great certainty, that the lines of the dedicatory inscription were seven, as stated by the scholars, and not eight as stated in the press-release.⁸

In 1979, with the help of the Department, I was able to clean the room once again and to take a general photograph of the mosaic and of the three inscriptions. Thus, I was able to verify that the lines were effectively eight in number and not seven, the first being hidden under the eastern wall of the Sunna' house.

The winter rains had necessitated the restoration of the monument. We decided to remove the ruins of the house built in the last century and to conduct a systematic excavation of the area in order to prepare a full restoration project (PL. XCII).

In July we succeeded in freeing the dedicatory inscription (PL. XCIII). Unfortunately the first five of six letters of each of the seven lines seen by scholars appear destroyed.

The first line, hidden under the wall, was fully preserved.

With probable restorations of the missing letters, we can translate:

1. At the time of our most pious father Bishop Theophane
2. was made this very beautiful mosaic work
3. for the glorious and sacred house of the holy and immaculate
4. queen mother of God through the zeal and attention of the loving people of Christ of this
5. city of Madabites, for the salvation, resurrection and pardon
6. of sins of those who have offered and those who

7. offer to this holy place. Amen., Lord. Completed
8. by the grace of God in the month of February of the year .74, the fifth indiction.

To what has already been said by scholars, we stress the historical importance of the discovery of the first line which gives the name of Bishop Theophane to whom, in all probability, belonged the bronze cross found in Madaba, now in the collection of the Ecole Biblique of Jerusalem, which bears his name along with that of the donor, Paul.⁹

We already know of four bishops of the city, whose chronological order has been well established by the discoveries at Madaba and Nebo. Besides GAIANUS, who in 451 had participated in the Council of Chalcedon, we have ELIAS (531/32) JOHN (562) SERGIUS (576-596) and LEONTIUS (604-608).

Stylistically and on the basis of the inscription, I believe that the mosaic is to be dated to the seventh century. Thus, Theophane would occupy the last place after Leontius. We do not have sufficient evidence to establish a fixed date for him, thereby solving the problem of the strange sign which designates the hundreds in the inscription which bears his name.¹⁰

My opinion is that too many hypotheses have already been put forward to offer yet another: a future discovery may, we hope, clarify the situation.

Michele Piccirillo

NOTES :

1. J. Germer-Durand, "Nouvelles archéologiques de Jérusalem". *Le Cosmos*, XVII, Nouv. Ser.n.298, 1890, pp. 286-7.
2. P.M. Séjourné, "Medeba, coup d'oeil historique, topographique et archéologique", *Rev. Bibl.*, 1892, pp. 638-644.
3. E. Michon, "L'inscription en mosaïque de la basilique de Madaba et la mosaïque de Kabr-Hiram", *Rev. Bibl.* 1896, pp. 263-267.
4. Clermont-Ganneau, "La Mosaïque de Medaba", *Rec. Arch. Or*, II, 52-55. The scholar proposed two alternative solutions. The first, normally accepted by successive authors, sees in the strange sign which indicates the hundreds, a *sampi* with the value of 900, hence 974. Using the Seleucid era (never used in the mosaic inscriptions of the region) we have 663 with which, however, the fifth indiction given by the dedicatory inscription does not fit. The second, suggested in a footnote (page 53), is based on an improbable era of Madaba. Reading the strange sign as *sigma* or *taw*, we would have 274 or 374 which, with the supposed era of Madaba fixed at 183 A.D., would give 457 or 557 respectively.
5. G.Manfredi, "Piano generale delle antichità di Madaba," *Nuovo Bollettino d'archeologia cristiana*, 5 (1899) 149-170.
6. M. Metaxakis, "Madaba" *Nea Sion*, 1906, pp. 460-465.
7. H. Leclercq, "Medaba", *DACL* X,I, 1931, pp. 860-867.
8. C. Dauphin, "A note on the Church of the Virgin at Madaba Jordan", *PEQ* 1975, pp. 155-157.
9. F.M. Abel. "Croix Byzantine de Madaba", *Rev. Bibl.* 1924, pp. 109-111.
10. As we have stated there are two more inscriptions in the church. One in a medallion in the centre of the geometrical composition, which reads: "Looking to the Virgin Mary, Mother of God, and to whom she bore, Christ, supreme king, only son of the only God, purify the mind, flesh and deeds, so that you may purify with prayers the divine people". The second is only a line at the left side of the main entrance between the column and the wall: Holy Mary help your servant Menas".

THE ANTIQUITIES OF RIHAB OF THE BENE HASAN

by

M. Piccirillo

As part of its plan to develop for tourism some of Jordan's less famous sites, the Department of Antiquities has encouraged its archaeological investigation of Rihab of the Bene Hasan. This is a village on the Jerash-Mafraq road, rising on the east side of a fertile plain, which from its height of 900 m, overlooks the Jordan-Syrian border: 26 km. west of Jerash and 40 km south of Bostra.

The village was visited in August 1900 by Schumacher², who noted among the ruins of the Roman, Byzantine and Arab periods two fragments of Greek inscriptions thereafter published by Rohrer.³ Steurnagel⁴, republished Schumacher's notes and confirmed the historical identification of Rihab proposed by Guthe⁵, as the capital of the Aramean state of Beth Rehob (2 Sam.10,6ss:1 Sam.14,47, LXX).

Albright passed through Rihab in August 1931 and singled out ceramic fragments of the Late Bronze or First Iron Age⁶.

Alt carefully reviewed the ruins in September 1932 and, in one of the small stone houses which the Bene Hasan were constructing, he was the first to see a mosaic pavement and to identify the plan of a three-nave church. Moreover, he copied the inscriptions of two other fragments of funerary stele.⁷

Glueck questioned the historical identification accepted by German scholars, having failed to find amongst the ruins any ceramic fragment older than the Roman period.⁸

To the dedicated vigilance and indefatigability of the late Lankester Harding of the Department of Antiquities of Transjordan, we owe the registration of the new discoveries made in the thirties and forties, and which opened a new chapter in the history of the village.

Avi-Yonah, publishing the six inscriptions of pavement mosaics photographed and placed at his disposal by Harding, was able to identify the four churches accompanied by their respective dates of construction, and to read, together with the names of the benefactors two new names, Polieuctos and Theodore, to be added to the list of archbishops and metropolitans of Bostra of which Rihab formed a part⁹.

The discovery made it possible for Alt to fix with more exactitude the south-western confines of the diocese of Bostra in the VI-VII century.

In 1958, the discovery of a new church dedicated to St. Mena and built during the time of Archbishop Theodore in the year 634 was published by Lux and Mittmann.

During his field investigation conducted between 1963 and 1967 in northern Transjordan, Mittmann visited Rihab and along with ceramics of Late Bronze and Iron Ages, he discovered and read the inscriptions of four other funerary steles and a fragment of dedicatory inscription on an architrave of an edifice not otherwise identifiable¹².

A sixth church dedicated to St. Paul was excavated by the Department of Antiquities in 1970 but, until now, has remained unpublished.

Two other churches were brought to light during the summer of 1979.

Churches Previously Noted:

1. St. Sofia; finished in February 499 of the 8th indiction 604 A.D. at the time of Archbishop Polieuctos.¹⁴
2. St. Basil; finished in 489 of the 12th ind. = 594 A.D. at the time of Archbishop Polieuctos¹⁵.
3. St. Stephan; finished in May 515 of the 8th ind. = 620 A.D. at the time of Archbishop Polieuctos¹⁶.
4. St. Isaia the Prophet; finished in the month of Distro of the 8th ind. of the year..... at the time of Bishop Theodore¹⁷.
5. St. Mena; finished in March 529 of the 8th ind. = 634/35 A.D. at the time of Bishop Theodore¹⁸.

New Churches:

6. St. Paul; finished in June 490 of the 13th ind.=596 A.D. at the time of Archbishop Polieuctos. (Pl. XCVI, 1).

This is of the three-nave type with a single step raised bema. The central carpet has a composition of octagons flanked by intertwined rings and squares, and is enclosed by a broad border consisting of a motif (which is repeated 6 times) of two vine shoots issuing from amphorae. In one of the octagons, whose figuration was destroyed during the iconoclastic crisis, there remains the name of a person called: Summa of John.¹⁹

The four-line dedicatory inscription runs the length of the step:

“At the time of the most holy and most blessed Polieuctos, Archbishop, and of Bassus, the most illustrious *Paramonarius*, this temple of St. Paul²⁰ was finished and covered with mosaics, thanks to the offerings of John and Elia, sons of Martyrius, in the month of June of the thirteenth indiction of the year 490 of the Province” (596 A.D.).

7. St. Peter; finished in the month of Loos of the year 518 of the 11th indic. = 624 A.D. at the time of Archbishop Polieuctos (Pl. XCIV, 1).

This church has the usual chancel with raised bema, closed by socketed foundations of the screen which extended the entire width of the building.

The carpet of the central nave is enclosed by a double-return swastika meander and is decorated with a composition of rings and ellipses alternating with squares, once decorated with the benefactors' images of which nothing more remains than traces of the names (Pl. XCV and Pl. XCVI,2).

The dedicatory inscription runs the length of the step: (Pl. XCIV, 2) “At the time of the most holy and most blessed Polieuctos,²¹ Archbishop and Metropolitan, this temple of the apostle Peter²² was finished and covered with mosaics as a result of the zeal and work of Georgio of Martirus, the most illustrious lector,²³ in the month of Loos, at the time of the 11th indic. of the year 518 of the Province” (624 A.D.).

8. St. Mary; constructed on the 9th of the month of Panemos of the year 428, the 11th indic. = 534 A.D. (Pl. XCVII,1), and restored in the year 476, the 1st indic. = 582 A.D.

The church is found at the entrance of the village near the townhall, as one approaches from Jerash. It has an elongated (21 x 14 m.) triple-nave construction with the walls still standing to the height of a meter. A border of circles and squares encloses the central carpet which is decorated with six series of octagons in a composition of interlaced squares and rings.

The iconoclastic intervention spared a few secondary elements of the figurative decoration which centre upon the themes of the crafts or the months: within the second series of octagons, the scythes, hammers, saw, hoes, and axes ordinarily associated with such themes are visible (Pl. XCVII,1,2).

A cistern was found inside the western wall, which perhaps, once served as the façade.

We have two inscriptions: the dedicatory inscription in front of the chancel screen; the second located between the third and fourth pillar of the southern aisle.

- A. The Dedicatory inscription: (Pl. XCVIII,1).

“This temple of St. Mary was finished and covered with mosaics at the time of Martirius and Elia and Olefus²⁵, the blessed sons of Olefus, for their own repose and that of their parents in the year 424, the 9th of the month of Panemos of the 11th indic. Now, however, these mosaics have been restored at the time of Elia of Bassus, the most pious presbyter and *Paramonarius*, in the year 476 of the time of the indic.”²⁶

- B. Inscription between the pillars (Pl. XCVIII,2):

“Lord give repose to John of Azizeus²⁷. Lord God of St. Mary and of all the saints²⁸ have pity on all the world and aid the benefactors and John of Anaelus the most illustrious deacon. In the month of Xanticus of the first indic.”²⁹

Conclusion:

We leave the problem of the historico-geographical identification of Rihab unsolved. We do not have sufficient elements to confirm or deny the Guthe hypothesis, who, basing himself on homonymy, associated the village with the capital of the Aramean state of Beth Rehob. No document whatsoever exists for the identification of the site in the Roman-Byzantine epoch.

From an historical point of view, the inscriptions discovered in the village up to now have contributed to the addition of two more names to the episcopal list of archbishops and metropolitans of Bostra and to the clarification of their chronological placement (Polieuctos 594, 596, 624) and Theodore (634) besides specifying the territorial limits of the diocese which extended to within a few kilometres of Jerash.

The datings of the churches cover a long period of history stretching from 534 (St. Mary) to 634 (St. Mena); but of particular historical interest are the last four. Two (St. Stephan in 620 and St. Peter in 624) were built during the period of the Persian occupation of the region (614-627)³⁰. This is first-hand evidence of the normalization of relations between the Persian forces of occupation and the local population - after an initial period of conflict and persecution.

Two others (St. Mena and St. Isaia in 634) were terminated on the very eve of the conquest of Damascus by Muslim troops.³¹ The two churches demonstrate that the struggle in progress between the Byzantine Empire and the Arab tribes of the Arab Peninsula was not felt in the village in its dramatic character; the military upheaval was as surprising to them as it is for us distant spectators of an undertaking considered impossible.

The discoveries have brought to life, if only partially, a small town (whose name is yet unknown), which was relatively well-off and economically prosperous during the VI-VII centuries A.D. on the road, which like today, must have united Jerash to Bostra.

Michele Piccirillo.
(Trans. Antonio Parisio)

NOTES:

1. My thanks go to Dr. Adnan Hadidi, Director of the Jordanian Department of Antiquities for the trust he has shown me and to those who have collaborated in various ways in the realization of this work: Hussein Qandil, Dr. Ghazi and Muflih Muhammad el-Frabiyan of the same Department; the Rev. Franciscan Fathers Jouseph Farrayeh, Filippo Manzo, Hanna Jalluf and Antonio Parisio of Terra Sancta College, Amman; Rev. Fathers Lino Cignelli and Adolfo Pinto of the Franciscan Biblical Institute; Hanan Kurdi, Salem Da'ja and Boghos Darakjan of the Registration and Research Centre of Amman. For more complete information c.f. my article in *Liber Annus* 1980.
For the location of Rihab see "The Hashemite Kingdom of Jordan-Archaeological Map - Amman Sheet 1, Scale 1:250,000, 192-252.
2. G. Schumacher, "Unsere Arbeiten im OstJordanlande", *MuNDPV* 1900, 73-76.
3. C. Rohrer, "Bemerkungen zu den gefundenen Inschriften", *MuNDPV*, 1901, p.19, nn.8-9.
4. C. Steuernagel, *Der Adschlun*, *ZDPV* 48 (1925) 354-357.
5. H. Guthe, *Geschichte des Volkes Israel*, 1914³; p. 108; *Bibelatlas*, Leipzig 1911, Sheet 2 and 4.
6. W.F. Albright, "Explorations in Transjordan", *BASOR*, 49 (1933) 29: "At the northern end we finally picked up a few earlier sherds (Late Bronze or Early Iron) but nothing characteristic".
7. A. Alt, "Das Institut in Jahre 1932", *PJB* 1933, 24-25.
8. N. Glueck, *Explorations in Eastern Palestine*, IV, Part I: *Text*, New Haven 1951, 81 (*AASOR* XXV-XXVIII): "Numerous Roman Byzantine and Mediaeval Arabic sherds were found there, but nothing earlier. From this point of view alone, it would be impossible to identify this site with the Bet-Rehob of II Sam. 10,6 as Steuernagel does, aside from all other considerations".
9. M. Avi-Yonah, "Greek Christian Inscriptions from Rihab", *QDAP* XIII (1947) 68-72, Pls. XXVII,4, XXVIII.
10. A. Alt, "Das Territorium von Bostra", *ZDPV* 68(1951) 235-245.
11. U. Lux, "Der Mosaikfussboden der Menas-Kirche in Rihab", *ZDPV* 83(1967)34-41; S. Mittmann, "Die Mosaikinschrift der Menas-Kirche in Rihab", *ibi*, 42-45, Taf. 13-17.
12. S. Mittmann, *Beitrage zur Siedlungs und Territorialgeschichte des Nordlichen Ostjordanlandes*, Wiesbaden 1970, 120-21, 187-190, Taf. XXI, 42, XXIV, 47: "Das ein wenig nach Westen einbeugende Nordende dieses Hangabschnittes ist, wie auch die ubrige Oberflache des Siedlungsgelandes, ubersat mit byzantinischer (4-7 Jh.n. Chr.) und frumischer Keramik, dazu nicht weniger dicht mit eisenzeitlichen (12-9 Jh. v. Chr.) Scherben; und sogar spatubronzezeitliche (I-II) Stucke treten in diesem Bereich, wenn auch in geringerer Zahl, zutage" (p. 120).
13. A photo in "The Archaeological Heritage of Jordan", Part I, 1973, p. 43, Pl. XI,b.
14. Avi-Yonah, *QDAP* XIII (1947)69. From the mention of three monks in the first inscription, Avi-Yonah

- deduced the existence of a monastery in the vicinity. It is, however, doubtful whether the *monk and paramonarius* refer to all three benefactors or solely to Cosma, the last of the series.
15. According to Avi-Yonah, *ibi*, the martyr to whom the church was dedicated and whose relics were still supposed to be in the reliquary shrine beneath the altar at the moment of rediscovery, is St. Basil of Ancyra, martyred during the persecution of Julian the Apostate. It is more probable, given the relative nearness of Rihab to Scythopolis Beit Shean, that we are dealing with the St. Basil who was martyred at Scythopolis and who was venerated during an annual feast in the church which was dedicated to him. (A. Row, *The Topography and History of Beth-Shan*, Philadelphia 1930, p. 52, fn. 106; F. Halkin, "Inscriptions Grecques relatives a l'Hagio-graphie", *Analecta Bollandiana*, LXIX (1951) 75.
 16. The cult of the protomartyr had extended both east and west of the Jordan and Syria (H. Vincent-F.M. Abel, *Jerusalem Nouvelle*, IV, 1926, pp. 766-804; B. Bagatti, "Nuove testimonianze della lapidazione di S. Stefano", *Antoniano* 49 (1974) 527-532; F. Halkin, *Anal. Boll.*, LXIX (1951) 71-72.
 17. Avi-Yonah, *ibi*, suggests that the 8th indic. was of the year 574/75 and places Theodore before Polieuctos in the list of bishops of Bostra. The inscription of the church of St. Mena (c.f. n. 5) constructed in the 8th indic. the year 534/35 at the time of Bishop Theodore, obliges us to shift the date of the church of St. Isaia to the same year, as Mittmann justly noted, and, consequently, to inverse the order of the archbishops in the list.
 18. I believe that Mittmann's translation and interpretation and comment (*ZDPV* 1967,45) ought to be looked at once again. It is not a question of a sacred edifice (the *martyrion of Procopius*) but simply of a person, i.e. of *Procopius (son) of Martyrius*, a proper name which occurs frequently in other inscriptions of Rihab.
 19. If our reading is correct, we have here the name of the person with the fluttering mantle fringe who is represented once in the octagon (Saller-Bagatti, *The Town of Nebo*, plate 23,2 or 25,1). A *Summus dux Palaestinae* in 531 A.D. is mentioned in the life of St. Sabas written by Cyril of Scythopolis (E. Schwartz, *Kyrrillos*, Vita S. Sabae, LXVII,10).
 20. A church dedicated to Sts. Peter and Paul was found in the vicinity of Jerash (C.H. Kraeling, *Gerasa City of the Decapolis*, 1938, p. 484, no. 327). Various churches and monasteries bore the name of the apostle in Damascus and surroundings, in a region tightly linked to the life of the same (J. Nasrallah, *Souvenirs de St. Paul*, Harissa 1944).
 21. From a historical point of view the inscription adds another four years to the long episcopate of Polieuctos.
 22. The term *apostile* without further addition highlights the place of Peter in the veneration of the Christians (B. Bagatti, "S. Pietro nei monumenti di Palestina", in *Studia Orientalia Christiana* (Collectanea n.5) Cairo 1960, 454-466).
 23. The *lectorship* of George fills a gap in the ecclesiastical orders known from the inscriptions from the transjordan area until now.
 24. A church was dedicated to the Virgin in Madaba (P.M. Séjourné; "Medeba, coup d'oeil historique, topographique et archeologique," *R.B.* 1892,636-637, and a small edicula was located on the first terrace of the cathedral complex in Jerash (Kraeling, *Gerasa*, 473, no. 288).
 25. The name *Olefus* was found in two inscriptions of Hauran (Brunnow-Domaszewski, *Die Provincia Arabia*, III, 314 and 334).
 26. From the dedicatory inscription of the sanctuary of St. Job at Bostra, we know that at the time of Justinian, Jordan was a bishopric, and in 539, the bishop was John (R. Devrèese, *Le Patriarcat d'Antioche*, 1945, pp. 227). From an inscription found in Jaber (Mittman, *Beitrag*, 190-194), we know that in 531, Agapius was bishop, and that he might have been bishop at the time the church of St. Mary was constructed. About 570, we have Simeon and Dositeus. From 594 to 624 Polieuctos.
 27. Azizos is a relatively common name amongst the population of the semitic tribes, as is Anaelos of lines 5-6 (*AAES*, III,A, nos. 62, 616).
 28. For the use of *agioi* as a substantive see Kraeling, *Gerasa*, p. 482, no. 314.
 29. Given the identity of the inscription, we are forced to presume that the mosaicist wanted to complete the dating of the dedicatory inscription where the month is missing. The work was probably brought to completion in the month of Xanticus in the Year 582.
 30. For a general perspective of the Persian invasion see A.A. Vasiliev, *Historie de l'Empire Byzantin*, 1932, pp. 257-262.
 31. Vasiliev, *Histoire*, 264-282 and Ph.K. Hitti, *History of the Arabs*, London 1943, 147-159. Bostra was taken by Khalid ibn el-Walid, in the year 634.

**A PRELIMINARY REPORT ON THE EXCAVATIONS
AT GADARA (UMM QES)
IN JORDAN FROM 1976 TO 1979**

by
Ute Wagner-Lux
and Karel J.H. Vriezen

In preparation for a series of excavations at the ancient city of Gadara in Jordan, present-day Umm Qes, a surface survey of this site was carried out in 1974 by the members of the German Institute of Archaeology (Deutsches Evangelisches Institut für Altertumswissenschaft des Heiligen Landes)¹. From May 8 to June 21, 1976, and from May 4 to July 1, 1977, two major seasons of excavation were conducted in an area between the upper and lower cities. Two shorter excavating seasons followed in 1978, from August 2 to August 9, and in 1979, from July 9 to July 24.² In 1977 a Danish group from the University of Copenhagen led by Professor Svend Holm-Nielsen undertook an independent excavation in the lower city, some 90 metres further to the west. In 1978 they continued their work there.

The German team began excavating in 1976 near the middle of the long NS terrace separating the upper city from the lower city. To the north the terrace is bounded by the main EW street and to the south by the west theatre. The upper portion of the 1.70m wide basalt western terrace retaining wall was uncovered. It was capped by a row of c. 0.90m wide, 0.55 m high, right-angled basalt blocks supporting five column bases (B 11—B 15; see plan). Other than the 3.8 m between B 14 and B 15, the distance between the column bases' centres was 3.15 m. Column bases B 11 through B 18 had the same profiles and (except for B 16's rounded plinth) the same square plinths, and belonged as a unit to the same column row. However, to the south of column base B 15 several changes were noted: 1) The row of basalt foundation blocks from B 11 to B 15 did not continue beyond column base B 15. 2) Column bases B 16, B 17, and B 18 were set on 0.36 to 0.38 m high pedestals. 3) Between column bases B 15 and B 16, and B 16 and B 17 a 0.76 m wide wall had been constructed out of reused basalt and limestone.

At an average distance of 4.24 m to the east of the column base row and parallel to it is the west wall of a square building which by various criteria can be interpreted as a church. Between the row of column bases and the church's west wall, two superimposed floors were detected. Directly above the upper floor, composed of reused building stone and architectural fragments, a considerable number of hewn stones that had fallen from the west church wall were found. This was especially the case to the east of B 14-B 16, where a complete 7.70 m section of collapsed wall lay toppled over in its original order, one course next to the other. The lower floor was composed of large limestone slabs with a minimum measurement of 0.68 by 0.80 m. An identical floor came to light outside the north and south church walls, where it had been broken through during the church's construction. The same type of flooring was also found to the north beneath the present floor of the colonnaded courtyard and to the south of the church. Thus it can be provisionally stated that, prior to the construction of the church and prior to the latest phase of the colonnaded courtyard, the entire terrace area was paved with these large limestone slabs. Both the west wall of the church and the still more westerly row of column bases (B 11—B 18) had a length of 23.23 m. In the middle of the west church wall there was a large entrance with a total width of 3.73 m including the door jambs. A smaller entrance, which lay tumbled to the west, had been built into the larger entrance. To the south of this entrance one could still see six courses of wall stones lying on the ground in header-stretcher fashion. Of these, the two lowest courses were composed of basalt, the upper four of limestone. The same construction method was used for the east wall of the church as well as elsewhere in ancient Gadara.

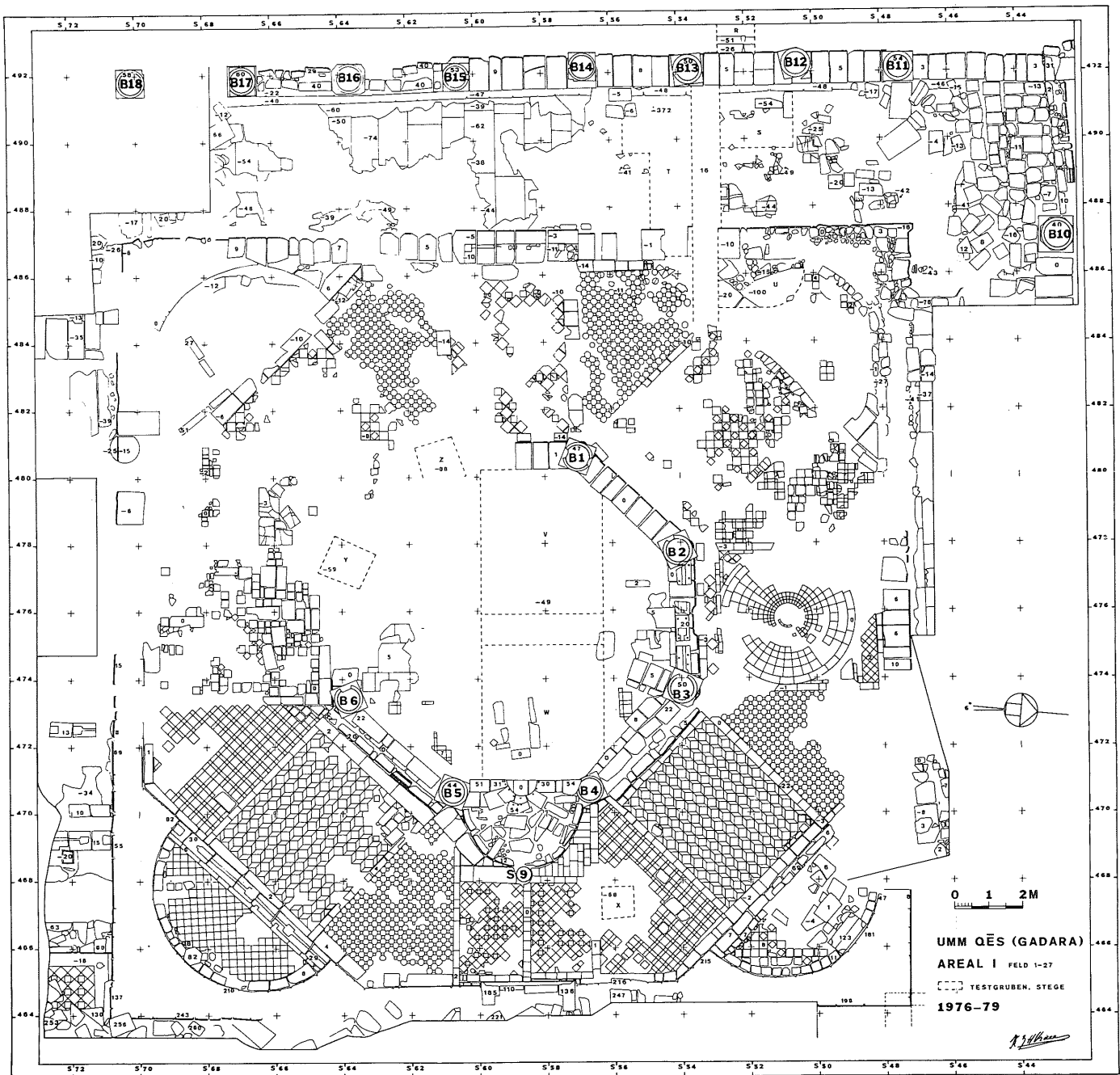
Of the western part of the north church wall (length: 23.15 m) only the foundations and a row of basalt stones protruding slightly above the floor level were preserved. Toward its eastern end, on the other hand, c. 2 m high remains of the north wall could be detected.

A similar picture applies to the south wall (length: 23.12 m), which revealed only a few remains of reused material at its western end but at its eastern end was preserved to a height of c. 2.40 m. The better state of preservation of the eastern parts of both walls and floors (see plan)

is attributable to the slope of the terrace, which rises sharply to the east. The eastern sector was consequently better protected by layers of fill and fallen building remains than the western sector, where fill had covered the ruins to a lesser extent.

This also explains the preservation of the east church wall (length: 23.70 m) to a height of 1.98-2.43 m. The installation of four apses in the four corners had determined the arrangement of the church interior. The ground plan of the southeast apse, partitioned off from the rest of the building by chancel screens, was perfectly preserved (width: 6.02 m; depth: 3.00 m). The floor was covered with white and brown tiles. On the interior wall face remnants of plaster could be seen. Centered at the back of the apse stood a 0.74 m high hexagonal basalt column decorated on all sides with geometrical patterns in relief (a reliquary stand?)³. The northeast apse was likewise separated from the main room of the church by a step. A row of building stones placed in the middle of the step apparently formed part of a partition wall. The apse's yellow, red, and black floor tiles were arranged in a geometrical pattern. A basalt sarcophagus (1.12 x 0.59 x 0.59 m) had been set against the back wall. On its facade part of a cross applied with plaster was preserved. Inserted into the floor of the apse in front of the sarcophagus were two graves (0.52 x 1.72 m and 0.60 x 1.74 m) with soft limestone cover slabs.⁴ Found in the grave debris were countless tiny glass mosaic tesserae of the same type as those unearthed in other areas of the church ruins; these tesserae may have been used to decorate the church walls. The outlines of both western apses could only be partially determined.

The octagonal room formed by the installation of the four apses also had an octagonal centre. The total floor width between the outer and inner octagons (c. 5.50 m) was covered with stone tiles. The tiles were arranged in various geometrical patterns set within rectangular and rhomboidal (kite-shaped) fields and surrounded by a border. With the exception of a few slate-colored tiles, the floor tiles were yellow, red, and white. The inner octagon was separated from the rest of the building by a row of 0.80 m wide, 0.04 m high basalt stones. From column base B 6 nearly to B 1 the basalt stones were missing (see plan). Column bases were found *in situ* in six corners of the central octagon. Their square plinths indicated, however, that they were not originally intended for use in an octagonal structure. Vertical grooves could be seen on two sides of column bases B 1 and B 2, but only on the west sides of B 3 and B 6. Between B 2 and B 3 a 0.24 m wide limestone threshold was preserved in which horizontal slots for chancel posts and screens had been cut exactly in line with the vertical east groove of B 2 and the west groove of B 3. Apparently there was once a chancel screen between B 2 and B 3 and presumably also between B 1 and B 2, B 1 and B 8, and B 6 and B 7 and B 8. On the north side of the octagon between B 2 and B 3 there was a narrow (c. 0.51 m wide) entrance (see plan). The eastern portion of the octagon was set apart from the outer isle behind it by: 1) two walls, 0.94 m wide and preserved to a height of 0.20 m above the floor, erected on top of the basalt stone rows running between B 3 and B 4, and B 5 and B 6; and 2) a semicircular, step-like structure, 3.50 m wide, 2.62 m deep, and 0.54 m high, oriented to the east (Pl. XCIX,1). A reused limestone column shaft, c. 0.45 m in diameter and standing 2.03 m above the floor, leaned against the east side of the semicircular structure. A cross had been chiseled into it at eye level. Two types of tiles were evidently used as flooring for the central octagon: in the western part only remnants of a simple stone paving were found, but on the east side fragments of square and rectangular tiles laid in a repeated cruciform pattern with a border along their eastern edge were preserved; similar tiles were encountered elsewhere in the building. In the eastern portion of the inner octagon, c. 0.62 m west of the semicircular structure and in line with the church's EW axis, two parallel rows of elongated rectangular stones were uncovered a few centimeters below the level of the floor tiles. We assumed that these stones were the tops of the walls of a sunken grave. In order to further examine this grave and to investigate the general nature of the inner octagon, fields V and W (see plan) were laid out in 1979. After the removal of the earthen fill under the floor in field V, a 0.35 m thick layer of stone fill came to light. It consisted of architectural fragments plus stone rubble and had apparently served as a foundation for the church floor. This stone layer was piled directly on the large-slabbed limestone floor beneath (minimum slab size: 1.54 x 0.63 m). It was this second floor that had previously been uncovered in various places outside the church in connection with the foundation trenches of the church walls. We observed that the basalt stone rows (upon which stood column bases B 1 through B 6, plus the hypothetical bases B 7 and B 8) also rested directly on this limestone slab floor. Under the floor, functioning as its foundation, was a stone rubble fill, which extended to bedrock at 0.49 m below floor level. The same picture applies beneath the church floor in field W: a thin earthen



layer, a stone fill made up of architectural fragments and stone rubble, a limestone slab floor (the so-called second floor), a stone rubble fill as foundation, and bedrock. Also uncovered in field W were the two parallel rows of elongated rectangular stones — reused architectural fragments of varying sizes set up on end. Except toward the west where they were missing, the tops of these vertically erected stones formed the outline of the sunken grave (Pl. XCIX, 2). They were at the same level as the stone fill beneath the church floor ($\pm 0.00\text{m}$). Within this outline and under a very hard, chalk-plastered stone layer, a stone chest was found, which would have contained a secondary burial. The chest itself stood directly on bedrock, and the space between it and the walls of the grave was filled with small stones. In contrast to the finely hewn chest were its two roughly worked stone cover slabs ($0.75 \times 0.30 \text{ m}$). An irregular stone slab and a well-worked, semicircular limestone disc lay directly on top of the two cover slabs. The chest (exterior measurements: $1.62 \times 0.52 \times 0.40 \text{ m}$) was filled with a loose, fine soil and produced no special finds. The interior bottom of the chest was not flat but curved, sloping up on either side (in cross section a hemispherical depression). Across the interior at its midpoint ran a groove into which the semicircular disc would have fitted, dividing the interior of the chest into two sections.

Outside the south wall of the church parts of various rooms were uncovered, one of which was subdivided by chancel screens. Further details concerning these rooms can only be given

after continued excavation. In the area between the south wall of the church and the theater, several fields were excavated down to the level of the extensive limestone slab surface. These slabs were similar and at the same level as those mentioned in connection with the excavation of the church.

The results of our excavations to date make it clear that this church belongs to the central-building type. It was built of robbed-out architectural elements on a previously existing terrace that extended beyond the church precinct. Approximately comparable Byzantine churches of the central-building type are found principally at Zor'a (the Church of St. George: 515 A.D.)⁵ and Bosra (the Cathedral: 512 A.D.)⁶ in Syria, as well as at Gerasa (the Church of St. John: 529-533 A.D.)⁷ in Jordan. However, these examples all have a main apse on their east side, which is not the case at Gadara, where there is simply an east entrance.

In this preliminary report no attempt is made to establish a date for the erection of our church. This must await the completion of the study of the finds.

The central octagon is remarkable in that so far only one access to it has been discovered. Located on the north side, the access aligns with the NS axis of a floor panel on which concentric circles are represented. The central octagon is composed of two parts: a western section with chancel screens and simple flooring, and an eastern section where, in place of chancel screens, walls have been incorporated and inlaid patterns appear on the floor. The semicircular structure at the eastern end, with the cross-incised column standing behind it and the grave lying to the west in front of it, may indeed be seen as the major element of the inner octagon. Noteworthy in this connection are also column bases B 14 and B 15, which lie along the church's EW axis. Not only is the interval between them greater than that between the other bases in the B 11 — B 18 row, but also these two bases still bear traces where chancel screens were once inserted. The two eastern apses may have had a special function, too.

The church was evidently destroyed by an earthquake. This is indicated first by the remains of the west wall, which lay on the ground, collapsed to the west but still assembled in their original order, and second by the column shafts, which fell next to their bases.⁸ For example, base B 2 and the column shaft fallen to the west of it both had the same mason's mark, a P. Likewise the two column shafts fallen to the west of B 1 and the capital that lay on the threshold of the west entrance were all marked with a B. Masons' marks were also found on other column shafts, bases, and capitals lying in and around the church. The date for the destruction of the church was ascertained by finds from the Umayyad period associated with a light brownish-gray soil layer deposited on top of the tile floor of the church. The building stones had collapsed onto this soil layer.

With the support of the Jordanian government and under the direction of the architect Ernst W. Krüger, the following architectural features have been restored insofar as possible: 1) the colonnaded courtyard (previously excavated and cleared) to the north of the church, 2) the columns of the inner octagon, 3) the columns of row B 11—B 18, and 4) the west wall of the church (which had collapsed to the outside, i.e., to the west) including the west entrance with its two door frames, one set within the other (Pl. XCIX, 3).

NOTES

1. U. Wagner-Lux, E. W. Krüger, K.J.H. Vriezen and T. Vriezen-van der Flier, Bericht über die Oberflächenforschung in Gadara (Umm Qes) in Jordanien im Jahre 1974, *Zeitschrift des Deutschen Palästina-Vereins* 94 (1978) pp. 135-144; and *ADAJ* 23 (1979) pp. 31-39.
2. The director of the excavations was Dr. Ute Wagner-Lux. The staff included Geoffry Adams - London (1976), Gjalb Blaauw - Groningen (1976), Drs. Paul H. de Boer - Utrecht (1977/79), Dr. Auguste Bruckner - Basel (1976), Dr. Christel Kessler - Cairo (1976), Thilo Khres - Irbid (1977), Abu Habib Kort - Jerusalem (1977/79), Ernst W. Krüger - Amman (1976/77/79), Dr. John Landgraf - Jerusalem (1979), Adam Nicolsen - London (1976), Markus Ryser - Basel (1979), Dr. Bruce E. Schein - Jerusalem (1976), Marianne Vogelzang - Groningen (1976/77/78), Tootje Vriezen-van der Flier - Vleuten (1976), and Drs. Karel J.H. Vriezen - Vleuten (1976/77/78/79). Omar Rshedat and Sultan Shraide from Irbid served as the representatives of the Jordanian Department of Antiquities. We would like to take this opportunity to sincerely thank each of the participants. We are especially grateful to the director of the Jordanian Department of Antiquities in Amman, Prof. Dr. Adnan Hadidi, who in numerous ways has so generously supported our work. The excavations in 1976 and 1977 were financed by the Deutsche Forschungsgemeinschaft. The institute itself was able to finance the shorter seasons of 1978 and 1979.
3. On the cultic use of apses see J. Lassus, *Sanctuaires Chrétiens de Syrie* (Paris 1947) p. 183.
4. For burials within church buildings see J. Lassus, op. cit. pp. 162 - 183 and especially for graves in the NE portion of churches see J. Lassus, op. cit. p. 168 and R.H. Smith, *Pella of the Decapolis I* (Wooster 1973) pp. 143 - 149 and also A. Grabar, *Martyrium I* (Paris 1943 - 1946) pp. 437-441.
5. H.C. Butler, *Early Churches of Syria* (Princeton 1929) pp. 122-125 and E.M. de Vogüé, *La Syrie Central I* (Paris 1865 - 1877) p. 61f., Pl. 21.
6. J.W. Crowfoot, *Churches at Bosra and Samaria* (*Brit. School of Archaeol. in Jerusalem Suppl. Paper 4*, 1937).
7. C.H. Kraeling, *Gerasa, City of the Decapolis* (New Haven 1938) p. 241ff.
8. For earthquake destruction in Transjordan in the 2nd half of the 7th and first half of the 8th centuries A.D. see, e.g., R.H. Smith, op. cit. pp. 164-166, C.H. Kraeling, op. cit. pp. 69 and 247 ff.

FIRST REPORT ON PALAEOLITHIC SAMPLING AT ABU EL KHAS, PELLA

by
Linda E. Villiers

Introduction

This is the first of two reports on a probable Lower Palaeolithic site in North Jordan. The Abu el Khas site was accidentally stumbled upon in February 1979 when the writer and Ms. K. Kelly, members of the University of Sydney team, excavating at Pella of the Decapolis, were exploring the environs of the Classical site. Time only permitted the collection of a small selective sample which included four roughly worked hand axes and a number of flake artefacts. Some of the material appeared to exhibit a crude Levallois technique and the site was tentatively assigned a Middle Palaeolithic provenance.

Acknowledgements

I would like to thank Prof. J.B. Hennessy, Co-Director of the Pella Expedition for his agreement to the project, for providing the logistic support without which nothing could have been done and for his kind patience. I am also indebted to Dr. Adnan Hadidi, Director General of the Dept. of Antiquities, for his invaluable encouragement and assistance in my work. Thanks to Mr. Sami Abaddi, representative of the Dept. of Antiquities for his good humour in the face of often rough conditions; to Dr. Nicholas Stanley-Price and Dr. Gary Rollefson for their long-standing interest and pertinent advice; and to Dr. James Sauer, Director of A.C.O.R. and his wife Sue for their warm hospitality and helpfulness. I owe much to Prof. John Mulvaney, Chairman, Dept. of Prehistory, ANU, for first suggesting the project and for making it a reality.

In January 1980, with a grant from the Australian National University to investigate the Abu el Khas as partial fulfilment of an M.A. degree in prehistory, I returned to undertake intensive statistical sampling of the site, a small test excavation and a restricted survey for further sites in the vicinity of Pella. After a field season of three weeks the post-excavation recording and processing took a further four weeks. A detailed analysis of the lithic material and of the geomorphic problems encountered during the excavation is currently in progress and will constitute the second report on this project.

Site Setting and Features

The area bounded by the Wadi Jirm, Wadi Hammeh and the rise to the highlands in the east forms a convenient physiographic unit within which the site may be analysed (Fig. 1).

The ancient city of Pella lies on the south-eastern edge of this area, next to the broad Tabaqat Fahl plain, and was in a favoured position in relation to several nearby valleys and passes which provide natural routes of movement (Smith 1973: 83). The hills above and around Pella are roughly segmented by deep wadis draining down to the Jordan River in the west and the city itself was constructed around the plentiful springs of the Wadi Jirm.

The Abu el Khas site is situated 1.3km north-east of Pella, above the Wadi Hammeh drainage system at an elevation of 0-45 metres above sea level.

This wadi has long been known for its hot springs and itself contains ruins from an as yet undated period. The site consists of a scatter of artefacts over the slopes of Tell el Ba'ab and Tell abu Ramileh, which rise on either side of the dirt road leading from Meshara and Pella to the hot springs and beyond into the mountains. This drop down into the Wadi Hammeh system forms the northern boundary of the site. In the east the limit appears to be a line of outcropping limestone on the upper part of Tell el Ba'ab. Above it is a rocky terrain with perennial vegetation while below, the hill has been cultivated over the years and when lying fallow (as most of it was this year) presents a barren stony appearance. The southern limit is the Wadi el Khas and the steep rise on the other side. On the western side of the road to the hot springs, the wadi cuts through a small semi-enclosed plain lying at the base of the Ramileh ridge, before

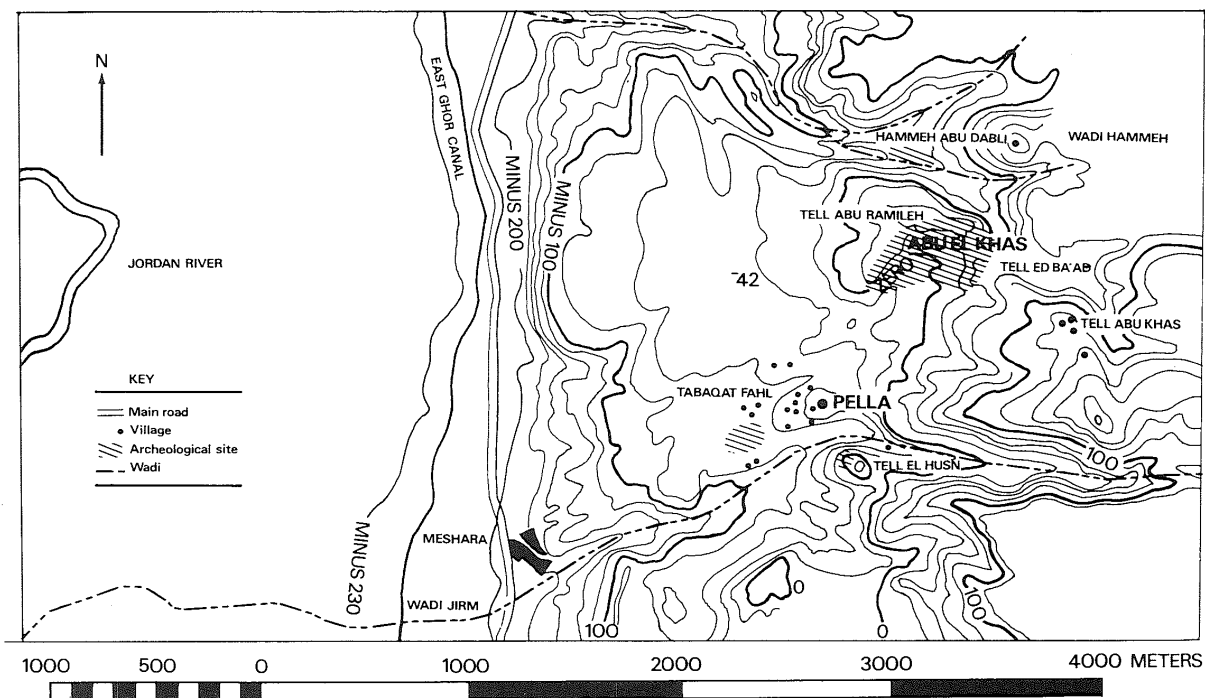


Fig. 1 : Topographic Map of Pella - Abu el Khas region

passing through two spurs to debouch on the Tabaqat Fahl plain just below. The Ramileh ridge curves around from north to west to form one of these spurs (Pl. C,1).

Artefactual material covers most of this area although finds are rare above the el Ba'ab limestone line and on the western sections of the Ramileh ridge. The site limits, as far as they could be distinguished were plotted with the assistance of Mr. Sami Abaddi of the Dept. of Antiquities, and on the basis of this the present area of the site was calculated to be over 60,000 sq.m. Erosion and slope wash have evidently effected a much wider spread of the material than was the original case.

Above the pass down to the Wadi Hammeh the British Army had erected fortifications (which are now just rubble) and on the upper slopes of el Ba'ab are the remains of three ancient agricultural terraces. Two are oriented NW-SE, and one on the slope down to the Wadi el Khas, within the collection grid, is oriented E-W. They are constructed from large plane-faced limestone blocks (each approx. 35cm. wide) laid side by side. These remains probably relate to the Romano-Byzantine occupation of the area, as sherds of this period occur over most of the site, as they do throughout the Pella region.

Site Sampling

The selection of a sampling strategy was guided by the need to move away from the selective surface collecting of artefacts which has predominated in Palaeolithic work in the past. As my aim was to collect a large enough sample to allow discernment of the nature of the evident mixing of cultural material on the site I could not afford to be selective in my recovery of artefacts. Accordingly I took a total collection (i.e. all stone worked and unworked) from randomly selected squares located in a grid over the site as this method produces a truer picture of the range of variability present (Mueller 1975).

A 6,000 sq.m. area extending from the eastern rock-line on el Ba'ab, across the tributary gully running to the Wadi el Khas, and including a flat-topped hill and part of a ploughed field, was selected for sampling and pegged out on NS/EW axes (Fig. 2). A plan of this area was drawn up and overlain by a 2m. x 2m. grid. Reasons for deciding to sample this area included: its extension over a variety of local terrains; the eastern rock line presenting a clear site limit; the appearance of artefacts throughout; and the fact that the flat hill in the west section of the grid had not been ploughed in living memory, unlike most of the rest of the Abu el Khas site.

Considerations of time and logistics suggested dividing the area into two 1,500 sq.m. strips, one along the north sector of the grid and one along the south, and collecting a 10% sample from this 3,000 sq.m. area. In this manner, all variations in terrain and aspect were retained.

Lack of time and resources prohibited the random selection of a number of sample areas and the approach adopted above represents a stratified random sample.

The 2m. x 2m. squares on the plan of the sample area were numbered consecutively and from a table of random numbers 75 were allocated for sampling. These squares were then measured off from the NS and EW axes of the grid and pegged out.

A total collection method requires the collection of all rock as well as more obvious stone artefacts from each square, including chips often less than 2cm. in size. A preliminary sorting beside each square discarded the larger non-artefactual rock and gravels and the remainder was transported back to camp.

The disturbed and culturally mixed nature of the site suggested adoption of a 'minimalist' approach to the post-washing sorting of the material. Further non-artefactual material as well as pieces of dubious artefactual status were discarded after sorting according to the criteria listed below, due to the impracticality of transporting them further. The remaining flints were individually numbered and bagged according to their squares.

The random sample yielded a total of 1,575 pieces of which 405, mostly cores and debitage were left with the Dept. of Antiquities. The remaining 1,170 were sent to ANU. Of this number a further 728 were then set aside since they did not exhibit any of the following criteria:-

- (1) presence of a bulb of percussion and/or striking platform;
- (2) external facets from prior or subsequent flake removal;
- (3) clear signs of secondary retouch on a functional edge.

This approach was necessitated by the presence of thermal and starch fractures amongst the flint, as well as by the fact that the site has been cultivated for a long period, exposed to erosion and the constant passage of goats, all of which are potential contributors to the natural fracture of flint (Pl C,2). Since this problem of eoliths is ubiquitous (Hazzeldine-Warren 1923; Hayward 1913-14; Reid-Moir 1917-18) analysis was restricted to pieces that were clearly artefactual according to the above criteria. This remaining group of 442 artefacts was then separated into two, based on freshness of edge and degree of patination, and analysis is being undertaken on each separately.

Test Excavation

As mentioned the flat-topped hill in the western section of the grid had not been ploughed in recent times, the owner preferring to use it as a collection area for his harvest. Remains of a recent campfire were noted on this level, grassed areas, and in the hope of minimal disturbance here, as compared to the rest of the site, it was decided to dig a 1m. x 1m. test trench in this area in an attempt to clarify the depositional events of the site.

The results were unexpected, especially as three sections cut elsewhere on the site revealed the surficial nature of the lithic deposit. Artefacts were recovered throughout but at a depth of approximately 20cm. a solid conglomerate platform was encountered. This same feature is exposed on the southern (weathering) side of the hill and appears to overlie limestone base rock. Cemented into this conglomerate were artefacts which could only be removed with the aid of a hand-pick. The calcereous concretion had formed casts around some which could be broken open, while others were quite solidly cemented into the matrix.

The trench was excavated by trowel and following natural stratigraphy. Facilities were not available to sieve the material so each fistful of soil removed was picked through by hand for possible artefacts.

In this excavation sequence depths are approximate only as excavation followed the uneven stratigraphy which, however, rises towards the west:

- Layer 1: 0cm. to 5cm. - 22 items recovered
- Layer 2: 5cm. to 12cm. - 20 items recovered plus 4 sherds
- Layer 3a: above conglomerate, 12cm. to 20cm. - 28 items recovered
- Layer 3b: in conglomerate, 20cm. to 36cm. - 10 items recovered

Layer 1, a dark brown clayey soil (7. 5YR3/3) and possibly colluvial, merged diffusely with Layer 2, a mixed orange-brown soil (7. 5YR6/6) with numerous stones and fine gravels. Both layers contained organic material and had a soil Ph of 8½. Layer 3a showed an intensification

of the orange discolouration of the soil which formed pockets and filled interstices around the rocks, and which probably arises from the conglomerate underneath. Large cobbles of flint and chunks of limestone were the major constituents of this layer. Layer 3b was the conglomerate platform with artefacts cemented into its upper surface. This was broken up and removed after their extraction and excavation ceased when no further artefacts were discernable (Pl. CII). Subsequent sorting of the items recovered, according to the criteria listed above, gave the following result:

- Level 1 - 7 artefacts
- Level 2 - 12 artefacts + 4 Late Roman/Byzantine sherds
- Level 3a - 15 artefacts
- Level 3b - 7 artefacts

The artefacts from Levels 3a and 3b included flake and pebble tools, with the flakes ranging in size from small to massive (4cm. to 12cm. length). All have a heavy white patina and are rolled and/or much weathered.

The origin of the gravels forming the conglomerate, its possible existence as an erosion surface, the times of artefact deposition and the cementation event, as well as the history of the colluvium covering them, constitute major problems in the interpretation of the site, which, although under investigation is hampered by the lack of any detailed Quaternary geological and geomorphological studies in this northern region. It is hoped that geological analysis of conglomerate samples may provide some clues to the nature and origin of this deposit.

Selective Surface Samples

Throughout the field period artefacts which 'caught my eye' were collected from the middle unsampled section of the grid, from the ploughed field below the el Ba'ab hill, from the slopes of Ramileh and from the bed of the Wadi el Khas. In all 73 artefacts were collected including a fine biface with a globular, cortical base and worked by the hard-hammer technique (Pl. CI,1); a trihedral pick; a bifacial cleaver; 2 hammerstones; 2 late Neolithic chisels; a

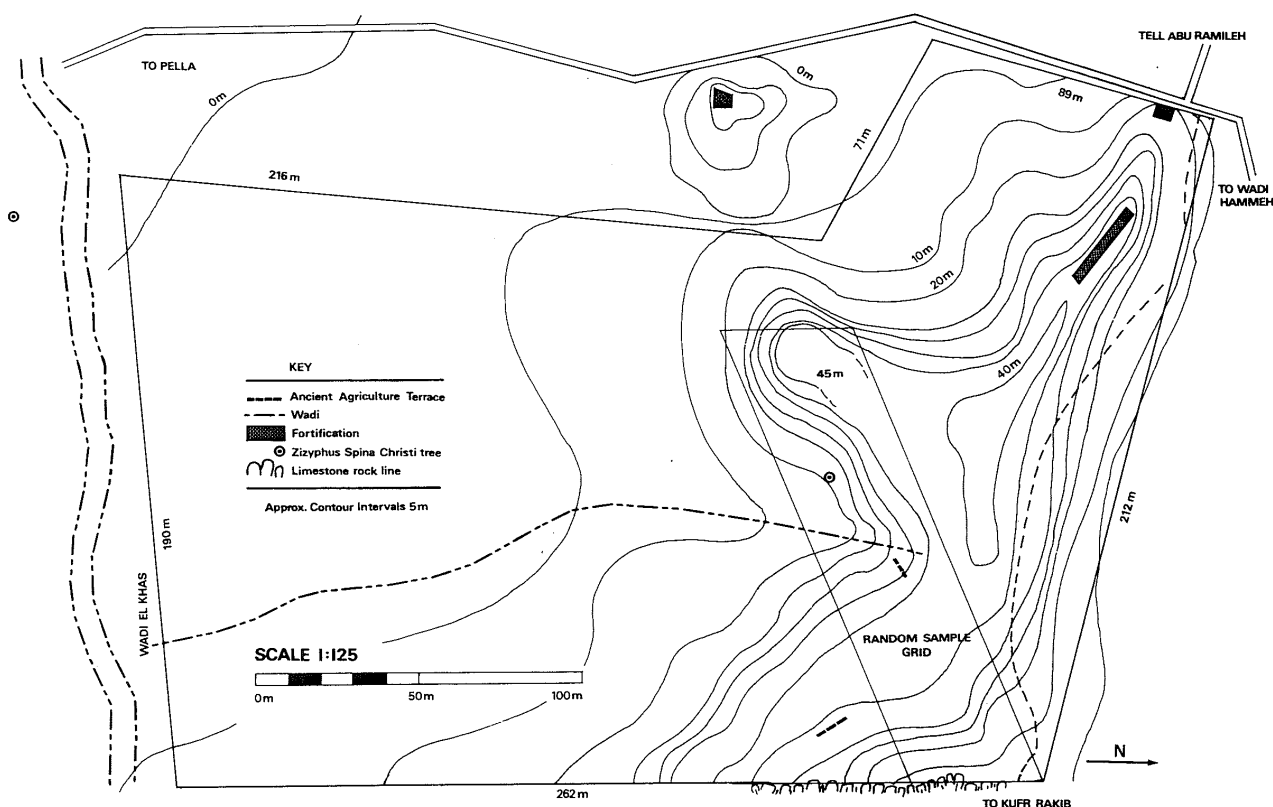


Fig. 2 : Topographic sketch map (approx. contour) of the el Ba'ab sector of the site showing position of collection grid and trench.

discoïd and a number of retouched flake implements. This collection stands in contrast to most of the random sample material, being a finer quality and workmanship. It also confirms that original impression of cultural mixing which, even if not extensive, is present on the site.

Other Sites in the Area

Unfortunately time did not permit the implementation of the intended survey in the region for further sites. However, a late Neolithic, possibly P.P.N.A., site was found on Tell el Husn, opposite the main mound of Pella, and provisionally Middle Paleolithic artefacts were noted in the area of the hot springs baths, as well as on the ridge east of Tell el Husn. Prof. J.B. Hennessy collected an excellent sample of a Neolithic blade industry from a field next to the village of Tabaqat Fahl. R. Smith, Director of the American team excavating at Pella, reported the recovery of Neolithic material (crude pottery, an incised stone, grinding stones, sharpened bone fragments and other material) beneath Middle and Late Bronze Age potsherds (Smith 1979: 8-9). Such finds of Neolithic remains centred around Pella substantiate previous suggestions of very early settlement in this area (Hennessy, et al. 1980: in press).

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THE WADI EL HASA SURVEY 1979: A PRELIMINARY REPORT

by
Burton MacDonald

Introduction

The original intention was to do an archaeological survey of the south bank of the Wadi el Ḥasā from the western edge of the plateau leading down to the southeastern plain of the Dead Sea as far east as the Desert Highway at El Ḥasā close by Qal'at el Ḥasā. The survey work was to be carried out southwards from the Wadi el Ḥasā a distance of approximately 10 kilometres. The first days in the field, however, showed us that we had proposed to survey an area that was much too large. The archaeological richness of the area made it practically impossible for us to do an intensive survey of all the area. We had to make a decision to survey only the major sites in the proposed area or do an intensive survey of a much smaller area. We chose the latter and concentrated our efforts on the area from the ridge just to the west of the Wadi el La'bān, that is, Jebel eth Thamad, westward to where the plateau begins its descent to the southeastern plain of the Dead Sea. The main Karak-Ṭafīla road served as our southern boundary. We did not survey as far south as Ṭafīla, but concentrated our efforts to the north and northeast of that town.

The actual in-field work took place between October 28 and December 8, 1979. During this period the team which consisted of Burton MacDonald, E.B. Banning, L.A. Pavlish, and Nabil Begain, representative of the Department of Antiquities of Jordan, surveyed 214 sites. The sites were discovered, or if already known visited, described, photographed, and "sherded", mostly for pottery and flints as a help in determining the age of the settlement or settlements at the site. Each site was plotted on either a 1:25,000 or 1:50,000 scale map. (1:25,000 scale maps are not available for the western extremity of the area.) The "reading" of the sherds and lithics was done by Dr. James A. Sauer, Director, American Centre of Oriental Research (ACOR), in Amman. While in the field the team stayed at a rented house in Ṭafīla. The week-ends were spent in residence at ACOR.

For the purposes of this report a site is any *place* where *man* has left *evidence* of his activity. The types of sites surveyed include open-air stations, caves, tells, rujms, khirbets, roads, cemeteries, agricultural, pastoral, and hunting installations, water facilities, and major cities. Thus the sites discovered range from lithic and sherd scatters with no accompanying architectural remains to very large architectural sites with artifacts representative of several different periods. The occupation at these sites ranges from prehistoric to modern times, ranging in date from about 400,000 B.C. to the end of the Ottoman period in Jordan in 1918 A.D. Generally speaking the sites are not one period sites. Most sites represent several periods of occupation.

No one had previously found prehistoric sites in the area. During his survey of Eastern Palestine in the 1930's Nelson Glueck reported 20 sites from the area¹. A team from the Department of Antiquities made a sounding at Site 6, Majādil, in 1973.²

Environment

The survey area is located on the highlands at the eastern rim of the Wadi 'Arabah-Jordan Graben, bracketed by the Wadi el La'bān and the Wadi el Ḥasā on the east and north respectively. Its southern limit is the main road between the Wadi el La'bān and Ṭafīla.

The present physical appearance of the survey area is largely the result of anthropogenic alteration of Mediterranean woodlands and Irano-Turanian steppe-land. Evidence for the palaeoenvironmental history of the area is at present very limited, but it is likely that before human intervention became so extensive most of the plateau area was occupied by forest of the *Quercus calliprinos-Pistacia atlantica* association, while the slopes and valleys trailing off to the Wadi el Ḥasā probably showed much as they do today the transition to Irano-Turanian dwarf shrub *Artemisetum* steppe.³

The climax vegetation⁴ is a reflection, in part, of the geology and climate. For the latter,

precipitation is of prime significance, and the survey area receives at present a mean annual rainfall between 200 and 300 mm, lying as it does at an elevation of 200-1,250 m above sea level. Precipitation is almost entirely a seasonal phenomenon, being restricted to the months of October through May.⁵ Structural movements associated with the tectonically active Rift Valley have generated drainage base levels (e.g. Dead Sea, —392 m) which, combined with high surface water runoff, have caused extensive erosion that is expressed clearly in the landscape relief.⁶ The most striking geomorphic phenomena in the survey area are the deeply entrenched consequent wadis resultant from complicated drag fault systems (e.g. Hasa, 'Afra, eth Thamad).⁷ Tributaries of Wadis dissect the rolling high tablelands creating a stark, rugged landscape.⁸ Microclimatic regimes are distributed over this landscape in thin, elevation-dependent bands which are largely a function of orographic effects on the terrain. Over 1,000 m of stratigraphy are exposed in the survey area. The two most important strata are the exposures of Mesozoic Era Kurnub sandstone of the Upper Jurassic to Lower Cretaceous periods (140-125 myBP), and the Ajlun and Balqa marine limestone sediment series of the Upper Cretaceous period (80-60 myBP)⁹. Also important are intrusive volcanic basalts that form isolated plateaux and dikes in the area. It is on the Ajlun-Balqa limestone cap that one would expect to find the oak stands (juniper, on the other hand, would occur on the Kurnub sandstone) where the water from winter rains is held through the year and weathering has produced fertile *terra rossa* soils of good structure.¹⁰ The degeneration of this oak woodland has resulted not only from the clearing of farmland on the water-sherds, but also from its exploitation for timber and charcoal. Uncontrolled grazing, especially after the Byzantine period, has prevented regeneration of forest while reducing the brush cover, so that the water table has dropped and soil has suffered erosion.¹¹

Both the limestone and the sandstone are aquifers, and springs are sometimes associated with deep exposures, although one of the consequences of the lowered water table has been the loss of some of these. The volcanic sediments provide the structural basis for both cold and hot springs.¹² These water sources create pockets of hydrophilic vegetation in an otherwise arid landscape composed of such secondary geomorphic features as talus slopes, colluvial fans, sheetwash erosional features, deflation pockets, chert desert pavement, and ancient alluvial terraces.¹³

The natural resources in the region include workable chert, gypsum, bitumens, building stone, phosphate, and the raw materials for glass and cement.¹⁴ In antiquity, tree cover to retard water runoff rates and a rich soil were probably the survey area's most valuable resources.¹⁵

Description of the Main Sites and Findings by Periods

The intention in this Report is to proceed in a chronological fashion. Representative sites from the various periods will be briefly described. The *Field Reading* for each site will be given in the order of the periods best represented by the number of sherds or lithics. A report such as this makes no pretense at being either final or definitive.

Artifacts from all the Palaeolithic periods - Lower, Middle and Upper - dating from ca. 400,000 - 14,000 B.C. - were found in the area. The sites at which these artifacts were present were found mainly during our periods of walking. Many lithic sites were discovered in areas where today there is little or no habitation. These sites were found in such various or different locations as along the banks of wadis, in areas where there is running water, around springs, on high points or lookout spots, in agricultural fields, in conjunction with architectural remains such as stone enclosures, and in association with major architectural sites. Almost everywhere we surveyed we found at least some lithic materials. Only three of the many-discovered Palaeolithic sites will be described.

Site number 38:	Jeradin
Map Sheet:	210/025
Co-ordinates:	143/345
Elevation:	1100 m.
Estimated area:	50 x 50 m.

Site number 38, Jeradin, is a lithic site, located on the plateau northeast of Ṭafīla. The area of maximum density of lithics is in a plowed field. The site is located in a hanging valley with gentle sloping walls. The floor of the valley has experienced erosion in the form of sheetwash. The Lower to Middle Palaeolithic stone tools collected included hand axes, side and end scrapers, and awls.

Field Reading: LPL-MPL (134); Late Isl (Ott) (2); Nab (1); Ud Sherd.

Site number 40

Map Sheet: 210/035
Co-ordinates: 141/393
Elevation: 718 m.
Estimated area: 300 x 100 m.

Site number 40 consists of a stone enclosure, stone piles, and a lithic scatter located on the west side of the Wadi eth Thamad. The circumference of the stone enclosure is about 57 m. while the diameter is about 19 m. The thickness of the wall collapse is one meter. Deposition within the enclosure appears to be at least 30 cm. The extensive lithic scatter was associated with both the enclosure and the stone piles. Lower to Middle Palaeolithic materials including burins, end scrapers, blades, cores, and flakes were collected along with Late Ottoman - Modern sherds.

Field Reading: LPL-MPL (108); Late Ott-Mod (23);
Ud Flakes (19); Ud Sherds (8).

Site Number 42: Umm Qreiqarah
Map Sheet: 210/035
Co-ordinates: 152/388 - 153/385
Elevation: 735-745 m.
Estimated area: 400 x 120 m.

Site number 42, Umm Qreiqarah, consists of a very large stone enclosure and a cemetery situated on a basalt plateau on the east side of the Wadi eth Thamad (Pl. CIII,1). The stone enclosure is located at 152/388 while the cemetery is located to the southeast at 152/386. The dimensions of the four sides of the enclosure are irregular. The side walls are preserved to a height of 0.5 - 2.0 m. Unidentified structures appear within the enclosure. The cemetery to the southeast consists of two rows of graves roughly oriented in a north-south direction. Upper Palaeolithic (?) flint tools along with Iron I indicator and body sherds as well as one Nabatean and one Late Islamic sherd were collected in the vicinity of the stone enclosure. Seventy-four Lower Palaeolithic to Early Neolithic flints, along with two Early Bronze I sherds and a fragment of an Ottoman smoking pipe, were collected in the cemetery area.

Field Reading: UPL (?) (25); LPL-ENL (74); Iron I (35); EB I (2); Nab (1);
Late Isl (1); Ud Sherds - saved (178);
Ottoman pipe fragment.

Several Epi-Palaeolithic period (ca. 14,000 - 8,000 B.C.) sites were surveyed. Materials found at these sites are characterised for the most part by a microlithic flint industry composed especially of lunates, small blades, and small circular scrapers. Generally these artifacts were found in areas devoid of architectural remains. However, evidence of modern Bedouin encampments were frequently noted in the immediate vicinity. The Epi-Palaeolithic materials were usually associated with Early Neolithic materials. One such site is Site number 194.

Site Number 194
Map Sheet: 210/025
Co-ordinates: 120.5/308
Elevation: 1170 m.
Estimated area: 30 x 30 m.

Site number 194 is located on the plateau to the northeast of Ṭafīla in the Ṣalākhid region.

It is situated on a gentle slope in a cultivated area. The site consists of a moderate lithic scatter near the remains of a recent Bedouin encampment. A small chert outcrop exists about 30 m. to the south.

Field Reading: EPL-ENL (33); MPL (1).

Only materials from the Early Neolithic or pre-pottery Neolithic period (8,000 - 6,000 B.C.) were found. At this early stage of the study of the artifactual materials we have not identified any pottery Neolithic (6,000 - 4,250 B.C.) materials. The materials we did find included borers, blades and scrapers. These were generally found in association with stone enclosures, at or near caves, or devoid of any architectural remains such as Site number 62.

Site Number 62

Map Sheet: 210/035
Co-ordinates: 112/409
Elevation: ca. 600 m.
Estimated Area: 100 x 30 m.

Site number 62 is one of our best Early Neolithic or pre-pottery Neolithic sites as far as materials found are concerned. The site is situated on the western slope of the Wadi 'Afrā, northern segment. No structures were visible in the immediate vicinity of the site. Materials collected include chisels, thumbnail and pushplain scrapers, graters, blades, and waste flakes.

Field Reading: ENL (83); PL (8); EB I body sherds, possible (5); Nab (3); Ud sherds - discarded (3).

No recognizable material, either lithics or sherds, were found which are at this stage of our study attributable to the Chalcolithic Period (4,250 - 3,300 B.C.). The chief or major Chalcolithic site in Jordan is Ghassul, which is located near the northern end of the Dead Sea. Neither architecture, lithics, nor sherds of the Ghassulian assemblage were discovered in the area.

Several Early Bronze I-III (3,300-2,300 B.C.) sites were surveyed. The most important of these sites are Sites number 61, 181, and 165.

Site Number 61: Khirbet 'Ain Saubalā
Map Sheet: 210/035
Co-ordinates: 112/403
Elevation: 569 m.
Estimated area: 300 x 200 m.

Site number 61, Khirbet 'Ain Saubalā, is situated on a plateau on the west side of the Wadi 'Afrā, northern segment. It is an extremely large site with many features. There are traces of stone walls along the western and southern segments of the plateau. Stone piles are also present in the same areas. At the northeast edge of the plateau there is a structure that may be a tower or stone platform (Pl. CIII, 2). It measures approximately 31 x 14 m. The pottery associated with this structure is Late Bronze or Iron II, more probably Iron II. What may be the remnants of an ancient aqueduct, measuring one meter wide by approximately 48 m. long, was noted on the western slope of the site. A stone building is situated across a small wadi further to the north. There is a spring just to the south of the site.

Field Reading: EB I (444); EB I, probable, but definitely EB (12); EB juglet base (1); LB (?) or Iron II (?), shapes are LB, however, cooking pot looks Iron II (22); Iron II (135); Nab (4); Byz (2); Ud sherds, mostly LB (?) - saved (109); Ud sherds, saved (13); Ud sherds - discarded (117); EB flints - saved (19); EB flints, probable - saved (2); EB waste flakes and chips, possible (5); Ud flakes - discarded (23); PL flints, period undetermined - saved (16).

Site Number 181: Al Manaqid
Map Sheet: K737, 3151 IV
Co-ordinates: 452.5/263
Elevation: ca. 760 m.
Estimated Area: 100 x 50 m.

Site number 181, Al Manaqid, is located on a spur between forks of a wadi on the northwestern extremity of the area. It could have been a village or town at one time but now all that remains on the surface is an Early Bronze I-II (3,300 - 2,700 B.C.) sherd scatter in the midst of stone piles and terraces in a cultivated area. Three Bedouin tents were located about 1 km. to the north.

Field Reading: EB I-II (222); Byz (2).

Site Number 165: Beider Rādwān
Map Sheet: 210/035
Co-ordinates: 125/443
Elevation: 233 m.
Estimated Area: 45 x 18 m.

Site number 165, Beider Rādwān, is located on a limestone shelf on the edge of the Wadi el Ḥasā. It is comprised of two rectangular structures: one to the northeast and the other to the southeast (Pl. CIV, 1). The former is aligned southeast-northeast and measures approximately 15 x 13 m. It is founded on flat bedrock. Limestone blocks measuring approximately 70 x 35 x 30 cm. constitute the structure. A plaza of flat bedrock measuring about 11 x 18 m. separates this structure from the one to the southeast. The second structure measures about 7 m. along the plaza, 8.5 m. on the perpendicular, and 9 m. along the back wall. A central aisle has two large standing stones and considerable modern additions of field stones making a small room. The north wall is preserved to a height of 1.0 m. while the tallest standing stone projects about 1.5 m. from the soil. The stone blocks making up this structure are rough and unequal in size. It is difficult to determine the date of the structures on the basis of the sherd and lithic collections from the site. Early Bronze I (3,300 - 2,900 B.C.), Nabataean, and Iron Age sherds were associated with the northwest structure while Early Bronze I-III, Iron Age, possible Late Bronze, and Nabataean sherds were collected from the southeast building. Early Bronze flints were found at both structures.

Field Reading: EB I-III (19); EB I (4); Iron Age (23); Nab (12); LB, possible (3); Byz (1); Ud sherds - saved (91); Ud sherds - discarded (43); EB flints (2); EB flints, possible (4); Ud flints - saved (15).

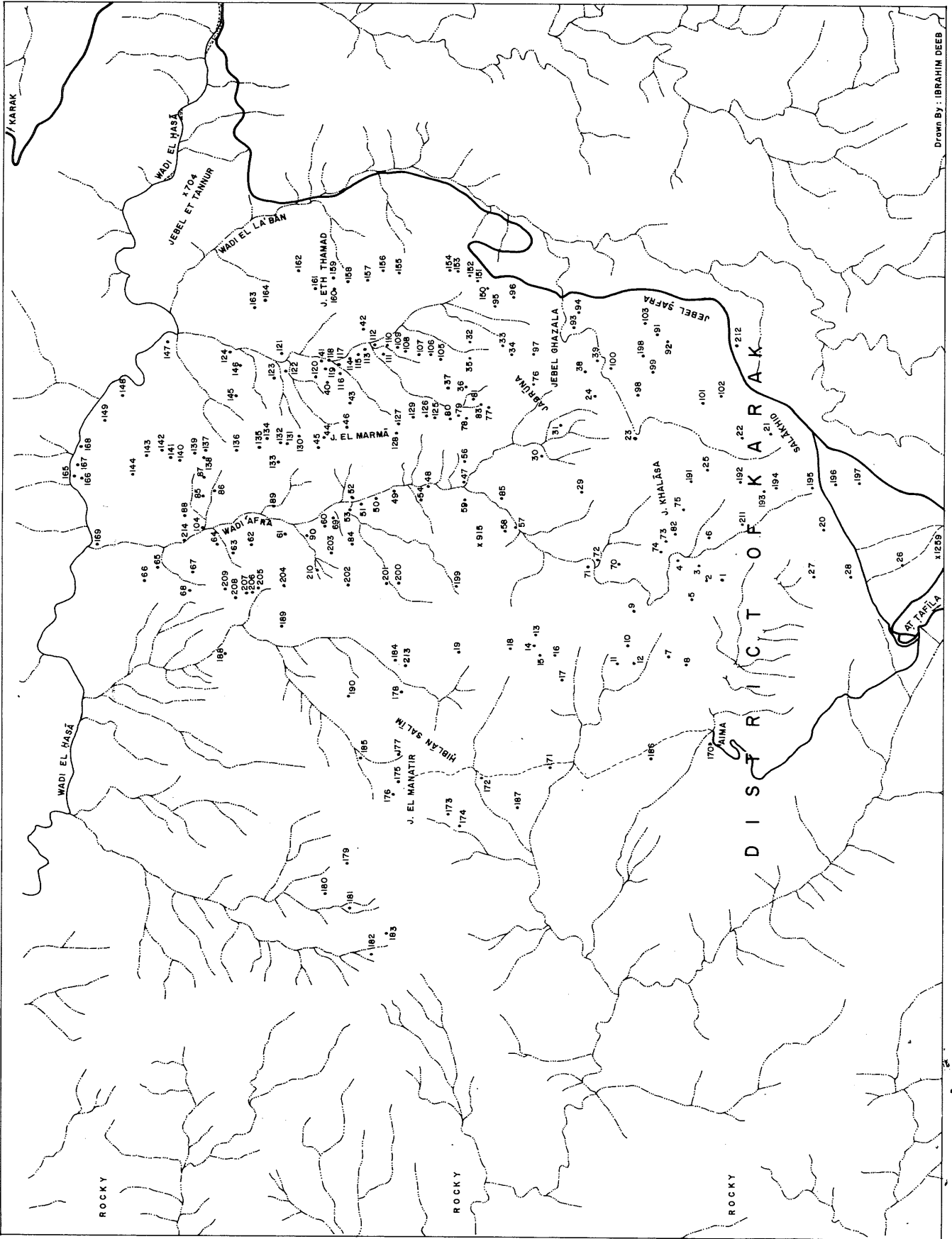
Early Bronze IVA pottery was found at several sites, the most important of which is Site number 23, Mashmil/El Mushimmīn, where eighteen Early Bronze IVA sherds, mostly indicators, were collected. The pottery at this site is predominantly Byzantine and thus this site will be described in conjunction with our treatment of the Byzantine period.

The Middle Bronze period (1,950 - 1,550 B.C.) is poorly represented in the area. Sherds from this period were found in small quantities at two sites, namely Site 64, where the reading is Middle Bronze - Late Bronze, and Site 172, Rebabeh, where the reading is Middle Bronze - Late Bronze - Iron Age.

Site Number 64:
Map Sheet: 210/035
Co-ordinates: 112/416
Elevation: 510 m.
Estimated Area: 100 x 60 m.

Site number 64 consists of a stone enclosure and numerous stone piles. The stone structure, located on the west side of the Wadi 'Afrā, northern segment, is situated on a small ledge bordered by a low retaining wall on three sides and a cliff on the west. The enclosure has a

SCALE 1:50,000



Drawn By: IBRAHIM DEEB

circumference of approximately 58 m. and the inside diameter is from 12 to 19 m. It is abutted by a platform 2.5 x 6.0 m. on the southeast and by another platform of approximately the same size on the northeast.

Field Reading: MB-LB (15); Nab (13); Late Isl (7); EB I (2); PL flints, probably (8); Ud sherds - discarded (82).

The Late Bronze I-II period (1,550 - 1,200 B.C.) is somewhat better represented by artifactual materials than the Middle Bronze period. However, there is no site in the area which has a predominance of Late Bronze pottery. Pottery of this period was found at several sites besides the two mentioned above and generally in association with Iron I pottery, for example at Site 147, Ash-Shorabat, Site 178, Ras Riḥab, and Site 106 located in the Wadi eth Thamad. Possible Late Bronze pottery was found at such sites as Site 28, Site 144, Al Qasrein West Site 145, Khirbet 'Ain el Ghuzlan, Site 169, Mu'afā, Site 146, Site 148, Al Burbeita, and Site 165, Beider Rādwan. All these sites, with the exception of Sites 28, 178 and 106, are located close to the Wadi el Ḥasā.

The presence or non-presence of Late Bronze pottery at Site 61, Khirbet 'Ain Sa-ubalā, requires further study. Only one Late Bronze - Iron I site will be described.

Site Number 147: Ash-Shorabat
Map Sheet: 210/035
Co-ordinates: 150.5/424
Elevation: 315 m.
Estimated Area: 50 x 50 m.

Site number 147, Ash-Shorabat, is located on a terrace next to the Wadi el Hasa. It is situated in a tomato patch and it is possible that the tomato formers have cleared away many of the stones from the site to plant their crop and to build their modern house. The site presently consists of a platform which measures about 35 x 15 m. on its southern half. Other stone foundations occupy the northern part of the platform and the sherd scatter continues into the surrounding tomato fields, especially on the northern side.

Field Reading: Iron IA (35); LB-Iron (15); Byz (7); Late Isl (6); Ud sherds - saved (72); Ud sherds - discarded (115).

The Iron I period (1,200 - 918 B.C.) is well represented in the area. Many Iron I sites were surveyed and some of these date to Iron IA (1,200 - 1,000 B.C.), or to the earliest part of the Iron Age.

Site Number 212: Khirbet Abu Bannā
Map Sheet: 210/025
Co-ordinates: 147.5/316
Elevation: 1,172 m.
Estimated Area: 175 x 70 m.

Site number 212, Khirbet Abu Bannā, is located in the Ṣalākhid region just to the south of the main Taḥīla-Karak road. It may be that this road has destroyed the northern segment of the site. The entire site is constructed of large chert blocks. The north, south, east and west walls of some of the ancient buildings are still standing, some to a height of 1-2 m. A wall in the center of the complex still stands to the same height. There is a great deal of evidence of rooms and building foundations even though it is apparent that some of the structures have been cleared away on all sides. On the east side there are the remnants of a wall, at least 1 m. thick, cornering on the southeast.

Field Reading: Iron IA (61); Iron I (151); Iron Age body sherds, mostly Iron IA - saved (150); Byz (16); Late Ott-Mod (4); Nab (2); Late Isl (1); Ud sherds - saved (174); Ud flints - saved (2).

Site Number 10: Umm er-Riḥ
Map Sheet: K737, 3151 IV
Co-ordinates: 502/210
Elevation: 1,182 m.
Estimated Area: 350 x 125 m.

Site number 10, Umm er-Riḥ, is located on a hill in the plateau region north of Taḥīla. The

site has many walls of chert and limestone blocks and at least two caves. There are possible towers or tombs around the periphery of the site. One large, flat-lying stone on the north side of the site bears a *wasm*. Stones from the ancient structures have been re-used for modern sheep pens.

Field Reading: Iron IA (19); Iron I (67); Iron II(9); Byz (10); body sherds, many Iron Age-saved (64); Nab (1); Mod (1); Ud sherds - discarded (277); PL flint: Ud flakes and debitage - saved (18).

Other sites that have predominant Iron I pottery are Site 28, (Iron IA or Early), Site 18, Huboul el-Ḥardhoun, Site 86, 'Ain ad-Dahs South, Site 179, Umm Suwwaneh. There are many other sites where Iron I pottery is present.

Besides the above-listed sites there are many sites at which Iron I pottery is found in association with Iron II pottery. Three such sites are Site 173, Al-'Addanin, Iron I - Iron IIA (1,200 - 721 B.C.), Site 24, Rujm Karaka, Iron Ic - Iron IIA (1,000 - 721 B.C.), and Site 211, Khirbet el Bureis, Iron I - Iron II (1,200 - 539 B.C.).

Site Number 173:	Al-'Addanin
Map Sheet:	K737, 3151 IV
Co-Ordinates:	472/245
Elevation:	920 m.
Estimated Area:	125 x 125 m.

Site number 173, Al-'Addanin is located to the west of the main 'Aima-Riḥab road (Pl. CIV, 2). It is situated on a hill giving the impression of a "citadel" measuring approximately 100 x 100 m. The hill is strewn with stones, large and small, and on its west end of foundation walls for buildings are visible. A modern paddock is located on the southeast of this hill along with some low stone fences. A sherd scatter was mainly concentrated on and around this "citadel". Sherds and lithics were also found in the surrounding agricultural fields but they were of low density. More lithics were found in fields to the east.

Field Reading: Iron I-Iron IIA (187); Ud sherds, mostly Iron I-Iron IIA - saved (114); Late Isl (Late Ott-Mod) (6); Byz (5); EB, possible (2); Ott-Mod, possible(1); Ud sherds - saved (12); Ud sherd - discarded; MPL, probable (8); Ud flints - saved (22).

Another equally important Iron I- Iron IIA site is 190, Heblan Salim. Among the sherds collected at this site were 78 identifiable sherds from this period.

Site Number 24:	Rujm Karaka
Map Sheet:	210/025
Co-ordinates:	138/343
Elevation:	1,148 m.
Estimated Area:	20 x 20 m.

Site number 24, Rujm Karaka, was probably a signal or communications tower. The structure is built of chert blocks. It is visible from almost any point on the plateau northeast of Tafila. This is surprising since it is no more than 3 m. high and not a large structure by any means. It provides a spectacular view of all the surrounding area. Many graves are located around its base and several are presently a part of its lower area. A hugh cistern cut into bedrock and stone aqueducts at ground level directing or channelling rain runoff into the cistern are located to the north of the stone pile or structure.

Field Reading: Iron IC-Iron IIA (71); Iron II (11); Late Rom (8); Byz (6); Late Isl (10) Ud body sherds - discarded (283).

Site Number 211: Khirbet el Bureis
Map Sheet: 210/025
Co-ordinates: 114/314.5
Elevation: 1,145 m.
Estimated Area: 180 x 150 m.

Site number 211, Khirbet el Bureis, is situated on sloping land just above the Wadi el Bureis in the Salākhid region. It consists of a heavy sherd scatter, many buried or at least partially buried walls, and the remnants of rectangular structures. The entire site has been disturbed by field clearance and by the robbing of stones from the ancient structures. The complex is made of chert blocks. A modern spring or well is located in the Wadi just at the southwest corner of the site. A stone wall was noted just to the north of this water source.

Field Reading: Iron I-Iron II (72); Iron II (38); Iron I, probable (6); Byz (86); Nab, possible (11); Late Rom (3rd c. A.D.) (6); Hell (2); Ud indicator sherd - saved; Ud sherds - discarded (419); Ud flints - saved (2).

Besides the Iron II (918 - 539 B.C.) sherds associated with the above-described or - mentioned sites, there were some sites at which Iron II pottery was predominant. One such site was 187, Al-Maqḥaz.

Site Number 187: Al-Maqḥaz
Map Sheet: K737, 3151 IV
Co-ordinates: 472/231
Elevation: 745 m.
Estimated Area: 215 x 150 m.

Site number 187, Al-Maqḥaz, is located on a spur approximately 1 km. downslope from Site 171, Dhibā'a. It is clearly visible from the latter and looks from a distance as nothing more than a modern animal pen. It presently consists of a heavy stone scatter surrounding a paddock. What appears to be a stone platform is located just to the west of the paddock. An olive grove to the southeast is irrigated by a modern aqueduct from a spring in the same direction. Another possible seasonal spring is located to the northeast. The site commands an excellent view of the area around the southeast end of the Dead Sea.

Field Reading: Iron II (32); Iron I (28); Ott (22); Late Isl (19); Byz (8); Hell, possible (1); Ud sherds, possible EB (3); Ud sherds - saved (51); Ud sherds - discarded (198); Ud flints - saved (2).

Another clear Iron II site is Site 71, Al Habes North. The only identifiable pottery at this site was Iron II. Generally speaking, at all the Iron II sites the earlier part of the period is better represented than is the latter part.

The period (539 - 332 B.C.) when the Persians dominated the Near East is one which is still scantily understood. Little or nothing is known of the Persian control of Southern Jordan during the period under question. Not one identifiable Persian sherd was collected in the area.

Alexander the Great conquered the Persians in 332 B.C. and Jordan became part of the Greek world. In Southern Jordan the Nabataeans, who are generally believed to have settled down near Petra during the Persian period avoided the Greek armies and remained independent throughout the period. None of the sites surveyed in the area south of the Wadi el Ḥasā produced Hellenistic architectural evidence. A few Hellenistic sherds were found at several sites, including Site 148, Al Burbeita, and Site 178, Ras Rihab.

Pompey conquered Syria-Palestine in 64 - 63 B.C. In Southern Jordan the Nabataeans avoided conquest in 63 B.C. and they remained completely independent of Rome until 106 A.D., when they were annexed by Trajan.

There is abundant evidence of Nabataean culture in the area. On the plateau just north and northeast of Ṭafila there is evidence of Nabataean civilization. Nabataean pottery is predominant at Site 76 - in the Karaka region - as well as the tower/tomb (?) sites along the northern edge of the plateau, namely Sites 29, 32 and 96. It is also present at several other sites,

for example Site 27, Buṭeina and Site 16, Khirbet Jumah, in the same region. In the Wadi 'Afra region there is evidence of extensive Nabataean settlement at such major sites as Site 84, Bahlūl, Site 85, 'Ain ad-Dahs North, as well as at Sites 88 and 90. Close to the Wadi el Hasā Nabataean pottery is predominant at such major sites as Site 143, Al-Qasrein East and Site 144, Al Qasrein West. At Site 145, Khirbet 'Ain el Ghuzlan the predominant pottery is Nabataean/Late Roman. On the western edge of the survey area Nabataean sherds were found at several sites but only at one, namely Site 183, Meghaeir al Qof, was it predominant.

Site Number 85: 'Ain ad-Dahs North
Map Sheet: 210/035
Co-ordinates: 121/418
Elevation: 610 m.
Estimated Area: 50 x 50 m.

Site number 85, 'Ain ad-Dahs North, is situated on the western slope of the Jebel el Marma ridge overlooking the northern section of the Wadi 'Afrā. The summit area of the site measures approximately 25 x 25 m. but the sherd scatter continues down the slopes, especially toward the spring in the wadi to the south. There are terrace walls on the slope near the spring. Robber trenches on the summit reveal a large millstone along with buried stone rooms. Some of these rooms show plaster on the inside. There is at least 1 m. of deposition on the summit of the site. Pieces of red flat tiles litter the ground, especially at the southern and western sides of the site. The site commands an excellent view of the Wadi 'Afrā and in general the area to the southwest and the west.

Field Reading: Nab (64); Late Rom (14); PL (2); Ud sherds- discarded (214); pieces of red flat tile.

Site Number 145: Khirbet 'Ain el Ghuzlan
Map Sheet: 210/035
Co-ordinates: 140/411
Elevation: 635 m.
Estimated Area: 200 x 150 m.

Site number 145, Khirbet 'Ain el Ghuzlan, is located on the eastern slope of Jebel el Marma and to the west of the Wadi eth Thamad. The presence of a spring, now quite weak, seems to have encouraged occupation of this site during several different pre-historic and historic periods. The spring-head has at least six descending pools and a stone spout, with other pools about 150 m. farther down-slope. It appears that an aqueduct led from the upper spring along the side of the spur to the citadel of the site, where it meets a large stone structure 370 m. along its course. (Pl. CV,1). The aqueduct then continues down-slope to the north, presumably to irrigate the fields below. The stone structure is preserved several courses high and there seems to be a great deal of deposition around it, as evidenced by a robber-trench on the western wall. A number of stone enclosures are located to the southwest and to the north of the main structure. Parts of an extensive outer wall suggest the existence of a lower town.

Field Reading: Nab/Late Rom (122); Nab (31); LB-Iron, Ud (12); Iron I (6); Late Isl (4); Mod (4); Ud sherds, Nab/Late Rom period - saved (102); Ud sherds - saved (5); Ud sherds - discarded (183); LPL- MPL (7); MPL (11).

At many of the above-listed Nabataean sites along the Wadi el Hasā Late Roman pottery is present as well. Besides being associated with Nabataean at Site 145, Khirbet 'Ain el Ghuzlan, it is also found in the same combination at such sites as Site 163, approximately 1 km. southeast of Site 145, at Site 162 on Jebel eth Thamad, and at Sites 150 and 200. Late Roman pottery is predominant at Site 100, Rujm al Qiṭṭah on the plateau and at Site 167, Al-Ma' deh, the remnants of a possible mill, by the Wadi el Hasā. Moreover, at several sites Late Roman pottery is associated with Byzantine pottery.

The Byzantine Period (ca. 324 - 640 A.D.) was apparently the one of greatest population and the greatest number of settlements in the area surveyed. On the plateau major Byzantine settlements were located at Site 1, Es Sab'ā, Site 6, Majādīl, Site 16, Khirbet Jummah (Pl. CV,2), Site 23, Mashmil/El Mushimmīn, and Site 70, Al Habes South (Pl. CVI, 1). Down along the Wadi el Ḥasā Byzantine pottery is predominant at such sites as Site 148, Al Burbeita, and Site 169, Mu'afā (Pl. CVI,2), where the Wadi 'Afrā enters the Wadi el Ḥasā. On the western side of the area Byzantine pottery is predominant at such major sites as Site 172, Rababeh, Site 177, As-Sarab, Site 178, Ras Riḥab, and at Site 182, Khirbet Mleiḥ. Moreover, many Byzantine sherds were found at other major and minor sites throughout the area. Here only two major Byzantine sites will be described.

Site Number 6: Majādīl
Map Sheet: 210/025
Co-ordinates: 111/322
Elevation: 1,157 m.
Estimated Area: 200 x 200 m.

Site number 6, Majādīl, is a multicomponent site on a spur between the Wadi el Bureis and Jebel Khalāsa, (Pl. CVII,2). This large site has very good wall preservation, many caves, and what appears to be underground tombs. About 2 m. of deposition are visible in the excavated and robbed-out areas of the site. Modern orchards, vineyards, and a chicken farm now occupy the site. Islamic structures at the center of the site are largely intact and incorporate a cornice block taken from an older structure. Samples were taken from both the west and the east side of these structures. On the west side the pottery was predominantly Byzantine but there was a high concentration of Ayyubid/Mamluk, along with two Nabataean and four possible Iron I sherds among the identifiable sherds. In the two samples from the east side the predominant pottery was still Byzantine. However, there was not one Ayyubid/Mamluk sherd collected. On the other hand, 22 Iron I and one Nabataean sherds, along with 104 unidentifiable sherds, were found.

Field Reading: Byz (175); Ayy/Mam (30); Iron I (22); Iron I, possible (4); Nab (3); Ud sherds - saved (104); Ud sherds - discarded (11); Ud flints - saved (2).

Site Number 23: Mashmil/El Mushimmīn
Map Sheet: 210/025
Co-ordinates: 131/322; tower to the northwest: 129/334
Elevation: 1,155 m.
Estimated Area: 300 + x 200 + m.

Site number 23, Mashmil/El Mushimmīn, is a very large site situated on the plateau northeast of Ṭāfila, (Pl. CVII,1). There are many standing walls, some of which are probably rebuilds. The tops of buried walls are visible. The site, like many others in the area is presently used to paddock sheep and goats. Orchards are located on the north slope. Many caves and cisterns are located on the site. A possible tower is positioned about 200 m. northwest of the main area of the site. More caves and/or cisterns are found to the east and south of this structure. Some of the cave/cisterns are still used as animal pens. There is a sherd scatter in the valley to the south of the main area of the site with a cistern and stone enclosure and there is evidence of more structures - possibly a lower town - to the west. A quarry for building stones is situated on the east point of the site.

Field Reading: Byz (187); Iron I (21); Iron I, possible (8); Ayy/Mam (21); EB IVA (18); Late Isl (14); Late Rom (1); body sherds, mostly Byz - discarded (123); Ud body sherds - discarded (177); MPL flakes (2); roof tile fragments - saved (5); glass fragment, not modern.

Between 630 and 640 A.D. all of Jordan fell to Islam. Shortly thereafter Arabic replaced Greek as the dominant language, and Islam replaced Christianity as the major religion. The Umayyad dynasty was established in Damascus in 661 A.D. Jordan was close to the centre of

power and was also positioned on the pilgrimage route to Arabia. Thus, during the Umayyad period Jordan continued to flourish. However, in the surveyed area it appears that the region became almost desolate. No major sites and very, very little pottery was found that can be attributed to the Umayyads.

The defeat of the Umayyads in 750 A.D. by the 'Abbasids was a major blow to Jordan. The 'Abbasid, Fatimid, and Seljug-Zengid periods (750 - 1,174 A.D.) are very poorly represented in the archaeological evidence from Jordan. In the area surveyed there is neither pottery nor architecture that can be attributed to these periods.

Between 1099 and 1187 A.D. the Crusaders of Europe built and maintained two castles in Jordan, one at Karak and the other at Shaubak. Aside from these castles, the Crusaders probably had little impact on the occupation of Jordan, which was apparently slight when they arrived anyway. In 1187, the Ayyubid leader, Saladin, defeated the Crusaders at the Battle of Hattin, and from that time on Jordan was in Arab hands. The Crusaders remained in Palestine until 1291 A.D., when they were ultimately thrown out completely by the Mamluks. The defeat of the Crusaders and the uniting of Egypt and Syria under the Ayyubids and Mamluks led to a great revival of occupation in Jordan, because Jordan was now a link between those two regions.

Ayyubid/Mamluk Period (1187-1516 A.D.) pottery is represented in the area at such major sites as 6, Majādil, 23, Mashmil, 13, Gnan el-Qarn, and 20, Naukha. It is the predominant type of pottery at these two latter sites.

Site Number 13:	Gnan el-Qarn
Map Sheet:	K737, 3151 IV
Co-ordinates:	505/288
Elevation:	ca. 1,190 m.
Estimated Area:	225 x 100 m.

Site number 13, Gnan el-Qarn, is a very large site situated on the plateau north of Ṭafīla. It is constructed of chert blocks. It is presently occupied by a shepherd who lives in a cave which has a well-built front wall, windows and door, (Pl. CVIII, 1). Corrals are located in front of the cave. The recent constructions on the site probably utilize older material. Two wells were noted in association with the site and many caves and/or cisterns are located on the south and east sides of the structures. We counted over fifty rooms or structures of various sizes. A possible gateway with a tower is located on the north-east side of the site overlooking the Wadi 'Afrā.

Field Reading: Ayy/Mam (110); Byz-Mam body sherds - discarded (53); Byz (38); Mod (1); Ud Sherds - discarded (198); MPL (6); Ud flakes (5); stone bowl fragment, possible.

Site Number 20:	Naukha
Map Sheet:	210/025
Co-ordinates:	114/300
Elevation:	1,220 m.
Estimated Area:	145 x 100 m.

Site number 20, Naukha, is situated on a hill just to the north of the main Ṭafīla-Karak road (Pl. CVIII, 2). It commands an excellent view of the region to the north, to the northeast, to the east and to the south. The site is presently used as a place to keep sheep and goats and thus the area of the site is covered with animal pens. Many of the stones from the ancient structures have been used to make the walls of these pens. In places it is difficult to distinguish ancient from modern walls. There are at least six caves and cisterns on the summit of the site and additional ones on the south and north slopes. A modern well - dry at the time of visit - is located at the east end of the site.

Field Reading: Ayy/Mam (109); Byz (54); Iron I (12); Iron II (3); Late Rom (4); Ud sherds - saved (2); body sherds - discarded (603); sling stone.

In 1516 A.D. the Mamluks were easily defeated by the Ottoman Turks, and Jordan

became part of the Ottoman Empire in which it remained until 1918, World War I. During this period Jordan was chiefly of interest to the Turks because the pilgrimage route to Arabia passed through it. Most of Jordan's villages and towns were either abandoned or greatly reduced in size during most of the Ottoman period. In the area in question, however, there are a number of important settlements which date either to the Late Islamic period (1174 - 1918 A.D.) in general, or to the Ottoman period (1516 - 1918 A.D.) in particular. The predominant pottery at Site 31, Khirbet Karaka, Site 39, Khirbet Jeradin, Site 55, Khirbet al-'Oran, Site 99, Umm Buweir West, Site 170, 'Aima, Site 184, Khirbet Riḥab, Site 185, Miḥraq (Pl. CIX, 1), and Site 188, Ṣabrah, is Late Islamic. Site 56, Sadir 'Afrā, Site 27, Buṭeina, and Site 171, Dhibā'a have Ottoman-Modern pottery as predominant.

Site Number 27: Buṭeina
 Map Sheet: 210/025
 Co-ordinates: 103/302
 Elevation: 1,193 m.
 Estimated Area: 100 + x 50 + m.

Site number 27, Buṭeina, is a well-preserved, Late Ottoman-Modern site to the west of Site 20, Naukha. The site probably extends well beyond the area of standing walls and stones as evidenced by the sherd scatter in the surrounding cultivated fields. It is probable that some of the site has been destroyed by field clearance. There is a good deal of evidence that building stones and possible old walls have been used to strengthen the present standing structures which appear to be used primarily as barns to house animals and store fodder. Several collapsed roofs and arches are visible. One cave has an arched doorway and an arch on the inside. An orchard is located to the east and south of the buildings. A modern pipeline brings water to the site and there is one modern cement building on the site. Roads leading away to the south, west, and northeast are lined with neat stone fences.

Field Reading: Late Ott-Mod (93); Byz (46); Nab (37); body sherds, mostly Byz (47) - saved (5); Ud sherds (203) - saved (18).

Site Number 56: Sadir 'Afrā
 Map Sheet: 210/035
 Co-ordinates: 127/368
 Elevation: 832 m.
 Estimated Area: 200 x 200 m.

Site number 56, Sadir, 'Afrā, is a modern as well as ancient site. There are several modern buildings on the site in which the members of two farming families live. These buildings are probably constructed from the stone of the ancient buildings. One ruined room at the summit of the hill on which the site is located still has well-built walls of two outer stone faces with rubble fill in between. A recent grave occupies the centre of this room. The tops of buried walls are visible near the summit and have an orientation which is different from the modern structures. There are four caves on the site. One of these caves is presently used to store fodder and it has a beautiful arched entrance. Two possible oil presses and one grinding installation were noted on the site. Stone wall collapse is present all down the slopes of the hill to the south, west and east. The sherd density is heaviest on these slopes. The site, situated on a high hill on the east side of the Wadi 'Afrā, commands an excellent view of the entire northern segment of the Wadi.

Field Reading: Ott-Mod (431); Byz (15); Byz, possible (6); Mod (12); Ud Sherds - discarded (466); Ud flints - saved (3).

There are many sites which we surveyed and which are not as yet datable because of the lack of artifactual material or because of the fact that more study is required of the artifacts collected at the site. Some of the most important sites in this category are Site 26, an ancient road which was noted near Site 20, Naukha, and 23, Mashmil. Other interesting sites are a series of mills surveyed in the Wadi 'Afrā. The most impressive of these mills is Site 52, Ṭawaḥin al-'Oran, located in the central segment of the Wadi (Pl. CIX, 2). Also in the Wadi

'Afrā an extremely interesting site is 104, Hammam 'Afrā. This is the location of several hot springs with many caves. Two of the caves have paintings and inscriptions associated (Pl. CX). A separate study of this site is required.

Summary

Two hundred and fourteen sites were surveyed in a six week period. We do not claim that we have discovered all the sites in the area. However, we are quite confident that we have discovered over 90 per cent of the major sites. Every square meter of the area would have to be gone over thoroughly before all the minor sites such as lithic and sherd scatters can be discovered. Other survey teams using a different definition of site, a different methodology, and working under different human and physical conditions will find additional sites in the future.

At this stage of the study of the materials we have not identified any artifactual material from the pottery - Neolithic, Chalcolithic, Persian, with very little material from the Early Islamic period. There is very little evidence from the Middle Bronze period. The Late Bronze period is better represented than many people would have thought. There is evidence of a great deal of artifactual material from the Iron I period. There is no evidence for the Persian occupation of Jordan and little from the Hellenistic period.

Our survey area included only a small part of Southern Jordan. It is but one geographical region of the country. Therefore, it is not possible to draw conclusions for all of Southern Jordan on the findings of this survey. The lack of evidence for some periods could merely mean that we have missed the evidence.

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SAFAITIC INSCRIPTIONS IN THE AMMAN MUSEUM AND OTHER COLLECTIONS II

by
M.C.A. Macdonald

In memory of Gerald Lankester Harding,
with gratitude and affection.

In the first article under this title¹ I published some thirty-five Safaitic inscriptions from the Amman Museum and elsewhere.² The present work completes this series and is in three sections. In the first the publication of the new material is completed. The second part consists of a re-examination of some of the previously published inscriptions now in the Amman Museum; while the third section is a concordance of the museum registration numbers and the publication numbers of all the North Arabian texts at present in the various museums of Jordan.

It is in many ways appropriate that this article should appear in the volume of ADAJ dedicated to the memory of Gerald Lankester Harding. For Gerald Harding founded both this journal and the Amman Museum. Moreover, some of the Museum's earliest acquisitions³ were Safaitic inscriptions while many of his works on Safaitic, including the masterly *The Cairn of Hani'*, were published in this journal. In addition, the majority of the texts dealt with in section two of this article are ones which he himself originally published, while the third section may be considered as bringing up to date a tiny portion of his *Index and Concordance of Pre-Islamic Arabian Names and Inscriptions*. Finally, I would add that though the faults in this article are entirely my own, any success I have had in dealing with these texts is due to the inspiration and example of Gerald Harding. No one could have asked for a more gifted or more generous teacher.

No. 36:

Irbid Museum Registration No. 2003a.

A basalt boulder inscribed on one face, provenance unknown. (Plate CXI)

l jrm bn dmsy d'l 'mrt w ndm 'l 'bh w 'l jrm bn 'qrb bn 'm

By Jrm s. Dmsy of the tribe of 'mrt: and he grieved for his father and for Jrm s. 'qrb s. 'm.

Another text in the square script by a member of the 'mrt tribe (see Nos. 10 and 11). Gerald Harding was one of the first to point out that this form of the script need not be palaeographically older than the other varieties⁴ and to suggest that it could equally well be indicative of the regional and/or tribal connections of the author. He also noted, some years ago, the consistent use of this form of the script by the 'mrt. Recently, more and more evidence has appeared to confirm these insights. We now have twelve texts by members of this tribe, seven of which are in the square script, a vastly higher proportion than for any other tribe with a similar, or greater, number of texts to its credit.

J.T. Milik has suggested, elsewhere in this volume⁵, that the 'mrt were a semi-settled tribe who made seasonal excursions from "leur territoire de sédentaires pour séjourner dans le Désert"⁶. While I cannot agree with Milik's extreme position on the settled state of the Safaitic authors⁷, a view for which I can find no concrete evidence, his basic thesis that the 'mrt were a semi-settled tribe, probably based in the Madaba area⁸ is most attractive. The "Amraïtes" appear to have been conversant both with the languages of the settled lands, Nabataean and Greek⁹, and with the Safaitic of the bedouin and may well have been in much closer contact with the cultures of the settled area than most of the other Safaitic authors. If this is so, it might account for the 'mrt's penchant for the more "monumental" square script¹⁰. It is worth noting that among the Safaitic inscriptions from the Palmyra region¹¹ there is also a high proportion of square script texts and texts with a mixture of square and other letter-forms. It is, of course, dangerous to draw conclusions based on such a tiny corpus of texts, but their presence in the neighbourhood of a great metropolis is, at least, suggestive in this context.

The present text could be seen as lending weight to this theory, insasmuch as the author's father bears the unusual name *dmsy*. This name stands out in contrast to all the other names in the text, which are well-known in Safaitic¹², and immediately calls to mind the two other occasions on which it has been found in these texts (SIJ 287 and 823). If one accepts Winnett's case¹³ that the *dmsy* of the two SIJ texts was *Damasî*, son of the Nabataean *Strategos* of Hegra, and that he led a rebellion in which several of the Safaitic tribes were involved, then the occurrence of the name in this text could be taken as another piece of evidence for the 'mrt's involvement in the Nabataean sphere. I am not, of course, suggesting that *Jrm*'s father was the leader of the rebellion, though he may have been named after him, but merely that his name, with its apparent Graeco-Nabataean overtones, suggests a fairly close association with the Nabataeans. However, it should not be forgotten that there is an Arabic root *damaṣa/damiṣa* from which the name could be derived and that, therefore, the Graeco-Nabataean connection cannot be taken for granted.

The text, which is a fine example of Safaitic boustrophedon, follows a well-known pattern, though the mention of the father and grand-father of the person for whom the author *ndm* is very unusual (cf. No. 5 and see SIJ 50 for an even more extreme example). In this case it may have been occasioned by the fact that both the author and the person for whom he grieves are called *Jrm*.

Nos. 37 and 38 are one stone. Irbid Museum Registration No. 2003b. A basalt boulder inscribed on one face. Provenance unknown. No. 37 is written in fairly large letters around a very crude drawing, possibly of a human figure, with four small loops projecting from one side of it. No. 38 is in finer letters beside the beginning of No. 37. The "magic sign" of seven dots appears beside No. 38 and again beside the end of No. 37. (Plate CXII).

No. 37:

l šhl bn bs' bn šddt bn bjt bn tr̄n

All the letters are clear with the exception of the *h* of the first name where an imperfection of the stone makes it look a little like a *y* on the photograph. However, it is clearly a *h* on the stone. The *m* of the last name has been somewhat rubbed but is still legible. All the names are known.

No. 38:

l rb bn swd bn bjt

There is an imperfection of the stone before the *s* which, on the photograph, resembles, a *n* but on the stone it is clear that it is not part of the text. Apart from this all the letters are clear and the names known.

No. 39:

Amman Museum Registration No. J 379. A rectangular slab of sandstone similar to RVP 3a-c. It is inscribed on one face and has markings, possibly *wusûm*, on another. It was brought into the Museum in about 1942-1943. Provenance unknown. (Plate CXVI,2)

(a) *l wd'tlt bñ ml̄t*

(b) *l'̄'̄tnl bn šln*

This seems the simplest reading of a very problematic text. Part of the inscription has suffered from over-scorings which have effectively obscured the middle letter of the second name of text (a) and the *lam auctoris* (?) of text (b). These over-scorings have been shown as dotted lines on the copy for the sake of clarity. Near them there are several signs which may or may not be letters but which do not seem to make any sense if taken as part of the text. In addition, at the end of the text there is a collection of scratches which look intentional and which may represent a crude drawing the subject of which escapes me. Text (b) continues beneath these marks one of which joins the hook of the *l* of the last name. I have taken the

vertical line after the first name in text (a) as extraneous to the inscription since it seems to be of a different character to the letters of the texts and is, I think, accidental. The *ns* of the *bns* in both texts are slightly suspect since they also look more accidental than intentional. The *t* of *'tnl* does not project much below the cross-stroke and could be a *z*.

Wd'tlt is a new name, though it is presumably the equivalent with *lt* of such names as *wd'l* and *wd'lh*. *Mlt*, if such it is, is known. *'tnl* has been found once in WHI 86, though the name *'znl*, if that reading is preferred, is unattested. *Šln* has not been found before.

No. 40:

Amman Museum Registration No. J 14183. A piece of basalt inscribed on two faces. The "text" on one face, which consists of apparently random scratches, is, to me at least, illegible. A reading of the text on the other face will be found below. The stone appears to have been brought to the Museum by the Winnett and Harding expeditions of 1958-1959 since there is a photograph of it in the archives of the Department of Antiquities of Jordan in amongst photographs of the other WH stones in the Museum. If this is the case, it almost certainly comes from the Burqu' area since all the other stones brought to the Museum by that expedition were from that region. It does not seem to have been published in WH. (Plate CXIII).

l 'h bn tmn'l

The text is extremely faint, carelessly carved and is covered with extraneous scratches. This reading is, therefore, not entirely certain. The first name is known but the second is not, though *tmn* is attested.

No. 41:

Amman Museum Registration No. J. 14217. A large block of pale yellow limestone inscribed on one face. It was found during restoration work in the castle of Qatranah which is some ninety kilometres south of Amman on the Desert Highway. The stone has been broken in several places since it was inscribed and this has badly effected the interpretation of the text. Some of the letters in the first line, particularly the *d* of the second name, have been damaged by small chips along the upper edge of the stone. However, more serious than this is a break all along the left-hand side and an enormous chip which has removed over half the bottom line. In view of these breaks, which involve the loss of the central part of the text, the interpretation of the inscription must remain somewhat tentative. Indeed, one cannot be sure that it *is* one text rather than two, though the hand of each line is so similar that it would seem more likely that it is one. If I am right in this, the inscription would start in the top right-hand corner of the stone, run along the top line, turn down the left-hand side and along the bottom line and finally turn up into the middle line. (Plate CXIV).

l wtr bn zd̄lh bn whbl̄h... 'l̄ jf mñ 'l lh̄tn w lh 'tm w̄...

By Wtr s. Z(d)lh s. Whbl(h)... the (tr)ibe of Jf o(f) the clan of Lht̄(n) and Lh he has sinned (and)....

A sign, consisting of a circle and a cross, occurs twice: once below the second name and once at the junction of the second and third lines. It appears to be extraneous to the text and I have taken it to be a *wasm*. The script of the text is interesting with its square, almost monumental, character. For other examples of texts with hooked *ls* and square letters see MSTJ 15-16 and 19-20. Apart from the doubtful letters mentioned above, it should be noted that the *ns* of *mn* and *lh̄tn* are not entirely certain and could be imperfections of the stone. The interpretation offered above is only one of several which are possible. *Wtr* and *Whblh* are both known in Safaitic, while *Zdlh* is known from Lihyanite. Of the tribal names *Jf* has possibly been found in C. 2209, but *Lh̄tn* is new. If I am correct in my interpretation, this text would present a similar example of the subdivision of a tribe to that found in WH 21 and one should probably restore a *d̄* before the first *'l*. I have taken *'tm* to be Arabic *'atīma* "to sin". For the omission of the vocative *h* in the invocation see No. 6.

No. 42:

Jordan University Archaeological Museum Registration No. P.U. 107 (formerly in the collection of Dr. Yusef Shweihat). Provenance unknown. It is a piece of tabular flint with a red-brown crust. The inscription has been scratched into this crust on one face. The text begins in the middle line, running from left to right, continues in the top line from right to left and ends in the bottom line running from left to right again. (Plate CXV).

l 'ws bn 'bd fty mn't d'lt̄s w wjm 'l mm'

By 'ws s. 'bd the young servant of Mn't of the (tribe of) (T) ts: and he grieved for (M) m'.

The *l* of *d'lt̄* and the first letter of the tribal name have been damaged by a chip, though I think enough survives of them to make the reading reasonably certain. The only other letter about which there is any doubt is the first *m* of *mm'* which has a cross-stroke making it look like a very peculiar *w*. If the author intended it to be a *w*, it is possible that he first wrote a *m* and then realising his mistake tried to alter it. The author also omitted the *y* of *fty* and inserted it below the line. The *ss* are worthy of note with their square South Arabian look.

'*Ws*, '*bd* and *mn't* are all known names and *ts̄s*, though unattested as a tribe, is known as a personal name. Neither *mm'* nor *wm'* is attested. The expression *N. fty N.* has been found before in several texts either in this form or in the form *N. fty N. bn N.*¹⁴ However, this is, I think, the first example of a text where the name of the *fty*'s father is given. It is, unfortunately, impossible to establish whether *d'lt̄s* refers to the *fty* or his master.

I would classify *No. 44* (and, by inference, what is left of *No. 43*) as Winnett's "Thamudic E" or "Tabuki". However, in view of Mr. V.A. Clark's assertion, in his article in this volume, that "The Safaitic and 'Tabuki' Thamudic inscriptions form an homogeneous group" to be called Safaitic, I feel that some explanation may be called for. Mr. Clark appears to be confusing three types of inscription: (i) the Safaitic, (ii) the most northerly Thamudic (which Winnett labelled "E" or "Tabuki") and (iii) the mixed texts which are found where the Tabuki and Safaitic texts meet. Considering the size of the area which they cover, the Safaitic texts do form a remarkably "homogeneous group" and, as such, are quite distinct in form and content from the Tabuki texts (as represented, for example, by the majority of the inscriptions in TIJ). The fact that we also find texts which display a mixture of the forms and content of both these types does not invalidate the distinction. Some sort of overlap is surely exactly what one would expect. It is true that virtually all of the inscriptions published as "Tabuki" in ARNA are Safaitic or mixed texts, but, in fact, they come not from the area of Tabuk but from around Ithra and Turaif much further North, not very far, indeed, from where the mixed texts published in SIT were found. They are quite distinct in form and content from the vast majority of the inscriptions published in TIJ which come from much further South. Winnett's script-table for "Tabuki" (ARNA Pl. I), which was based on the texts published in ARNA (see ARNA p. 70), might better be described as a script-table for the mixed texts. The script-table in TIJ (Pl. XXVI) is more representative of Tabuki since the majority of the inscriptions published there were Winnett's Thamudic E (see TIJ p. 3) which he renamed Tabuki. A glance at the forms of such letters as *z*, *š*, *t̄* and *ḡ* in this latter table shows little that is representative of Safaitic.

Nos. 43 and 44 are on one stone in the Museum at Petra (no registration no.). It was brought there from Basta, a village to the East of the road between Petra and Ma'an (Grid reference approximately 202960 on sheet 3, Ma'an, of the 1:250,000 maps of Jordan). It is a block of hard yellowish limestone. I should like to thank Dr. Fawzi Zayadine for allowing me to publish his photograph of these texts which is a great deal clearer than my own. Unfortunately, this photograph has no scale. However, there is a scale in the copy which was made from my photograph. (Plate CXVI, 1).

No. 43:

l tmkt̄b̄....

The stone has been broken along this edge and this has removed the tops of the four letters after the *m* and all but the odd scratch of anything that followed. However, I think that enough

survives of the *ktb'* to make the reading virtually certain. Although the name *Tmktb'* has not yet been found in Thamudic or Safaitic, Milik and Starcky have found the name *tym'lktb'/tymlktb'* in a group of Nabataean graffiti in Petra¹⁵. The absence of the article before the divine name should be noted, however compare J. Strugnell's reading *Grmktbh* in JS. Lihyanite 279 (see BASOR No.156, Dec.1959, p 31, note 12 and Milik and Starcky op. cit. p. 119, note 23). Finally, it is interesting that this text should be found so close to Petra which has furnished most of the other examples of this name.

No. 44:

š^hhm qdy z qr hwl

(š) hm came from the desert and settled down to live in this cultivated land. He (cau)sed terror.

A difficult text. All the letters are clear, with the exception of the *h* the top of which is obscured by a chip, though the *m* and the *r* are pointing in unusual directions. However, it is difficult to make satisfactory sense of the text. The stone does not appear to have been broken at the corner between the *h* and the *w*, so the text is presumably complete. At first sight it looks as though it should be read in the opposite direction, i.e. starting with a *lam auctoris*. However, apart from the fact that it appears to make no sense at all when read that way, it seems to me inherently unlikely that the author would choose to begin his inscription in such a cramped place when most of the rest of the stone was free. The interpretation offered above is only a suggestion, far from satisfactory, and might well be accused of being a mountain produced from a molehill! I have taken the first sign as a š (for other examples of this form of š see TIJ), though it could also be a *n*. In either case the name produced would be new. I would suggest that *qdy* represents Arabic *qadâ* which, according to Lisan (vol. 15, p. 172/1-2), is used of a tribe coming out of the desert and gradually infiltrating the country and settling down in it. Kaz. (vol. II, p.693/2) is even more specific and translates "Arriver et se fixer quelque part, après avoir émigré de son pays par suite de la disette (se dit d'une tribu)". However, for the last part of this I can find no confirmation. I have taken *z* to be a demonstrative adjective "this" (cf. its use as a demonstrative pronoun in for instance WTI Nos. 62, 65, 67, 70), though I have not found it used as a demonstrative adjective elsewhere. See below for remarks on the construction. *Qr* could be Arabic *qurr* "resting-place" (Lane p. 2501/1 s.v. *qarâr*.) However, Professor Mahmud al-Ghul has pointed out to me that *qr* here could have been used in the sense of *qarâr/qarârah* in such phrases as *qarâratu mina l-'ardi* i.e. land in which water settles and which therefore produces plants. Lisan (vol. 5, p. 85/2) has several quotations on this meaning which are interesting in this context.¹⁶ There are several possible interpretations of *hwl*. I have taken it as the II form of Arabic *hâla*, i.e. to strike with fear, terrify. Professor al-Ghul has suggested to me, however, that the Arabic word *hawl* "an abundance (of vegetation)" or its adjective *hawlî* would be very appropriate in view of the meaning he suggests for *qr*. There are, however, two difficulties in such a translation: (a) vowels and diphthongs seem rarely to be expressed in these texts and (b) the lack of the article before *hwl* which would be necessary whether it was a noun or an adjective. If these difficulties could be solved this translation would be much more satisfactory than the one I have offered.¹⁷

I am aware that my interpretation presents many problems, not least syntactically. The structure *Name + verb + predicate*, ie. without either an introductory particle or a connective, is not unknown in Thamudic (see, for instance, WTI Nos. 2, 44, 72 and WTay Nos. 3, 16, 33a, etc.), but this text presents a somewhat more extreme example than those quoted. Again, there is the problem of the absence of the article after *z*. C. Rabin¹⁸ has gathered together what scanty evidence survives for this feature and suggests that Ancient "West Arabian said not *hâdhâ l-baitu* but *dh(î) baitu* or *dh(î) baitun*". As Rabin notes, this phenomenon may also occur in Mishnaic Hebrew, where the demonstrative would be *zeh*, so the present text would fall between two areas where this usage was known (see Rabin's Map 10).

If I am right in this interpretation -- and I repeat that it is purely a suggestion -- this text would reveal what must have been a fairly common pattern of events: the gradual infiltration of tribesmen into the settled lands and, possibly, the terror (no doubt satisfactory to the tribesmen) caused among the settled people by this invasion. It is interesting to note that the *Via Nova Traiana* appears to have run very close to Baṣṭa. The area in which this inscriptions was

found would therefore have been right on the edge of the *limes* ¹⁹ Although, since we cannot date the inscription, we have no means of telling whether it is contemporary with the Roman occupation, its provenance provides matter for interesting, if at present inconclusive, speculation.

INDEX

N.B. For notes on the index see the first article (ADAJ, vol. 23, 1979, p. 116)

- 'b: sb.: father: 36
 'tm: vb.: to sin: 41
 'h: N.Pr.: b. tmn'l: 40
 'l: sb.: tribe: 41, x 2
 'ws: N.Pr.: b. 'bd: 42
 bjt: N.Pr.: b. tmn: 37
 fa. swd: 38
 bs': N.Pr.: b. šddt: 37
 tts: N.Tr.: 42
 tmktb': N.Pr.: 43
 tmn.: N.Pr.: fa. bjt: 37
 tmn'l: N.Pr.: fa. 'h: 40
 jf: N.Tr.: 41
 jrm: N.Pr.: b. dmsy: 36
 b. 'qrb: 36
 dmsy: N.Pr.: fa. jrm: 36
 d'l: of the tribe of: 36, 42
 rb: N.Pr.: b. swd: 38
 z: dem adj: this: 44
 zdlh: N.Pr.: b. whblh: 41
 swd: N.Pr.: b. bjt: 38
 šhm: N.Pr.: 44
 šddt: N.Pr.: b. bjt: 37
 šln: N.Pr.: fa. 'tnl: 39b
 šhl: N.Pr.: b. bs': 37
 'bd: N.Pr.: fa. 'ws: 42
 'tnl: N.Pr.: b. šln: 39b
 'qrb: N.Pr.: b. 'm: 36
 'l: prep.: for: after ndm: 36, x 2
 after wjm: 42
 'm: N.Pr.: fa. 'qrb: 36
 'mrt: N.Tr.: 36
 fty: sb.: young servant: 42
 qdy: vb.: to arrive...: 44
 qr: sb.: cultivated land: 44
 lh: N.Div.: 41
 lhtn: N.Tr.: 41
 mlt: N.Pr.: fa. wd'tlt: 39a
 mm': N.Pr.: 42
 mn: prep.: from: 41
 mn't: N.Pr.: 42
 ndm: vb.: to grieve: + 'l = for: 36
 -h: enclitic pron. 3 sg.m.: his: 36
 hwl: vb. II. to cause terror: 44
 w: conj.: and: 36, x 2; 41, x 2; 42
 wtr: N.Pr.: b. zdlh: 41
 wjm: vb.: to grieve: + 'l = for: 42
 wd'tlt: N.Pr.: b. mlt: 39a
 whblh: N.Pr.: fa. zdlh: 41

The second section of this article consists of a study of some of the previously published inscriptions in the Amman Museum, as well as two stones in the Palestine Archaeological (or Rockefeller) Museum. I have limited myself to those texts where there is a significant difference between my reading and that of the original editor and to cases where there is an unpublished inscription on the same stone ²⁰. In offering these readings I am very sensible of my good fortune in being able to work under infinitely easier conditions than most of my predecessors. Due to the outbreak of World War II, Msgr. G. Ryckmans was not able to examine the originals of the texts which he published in RVP and had to work from photographs and hand-copies. Mr. Lankester Harding and Professor Winnett worked under field conditions, with all the attendant difficulties, on all but a handful of the inscriptions they published. It is a mark of the skill and thoroughness of these three great scholars that, even when these texts are studied under much easier conditions, there is so little to be added to their work.

Unfortunately, the following texts have been mislaid in the Amman Museum and I have, therefore, been unable to examine them.

HCH 104 = J.1900
 139-140 = J.1879
 173 = J.1896
 NST 7 = J.1815

RVP 1 = J.14
 2 = J.15
 8 = J.12
 10 = J.16

Mr. Clark has asked me to refrain from commenting on these texts until his thesis has been examined.

CSP 1a+b: (see Plate CXVII).

This large slab of basalt is interesting in several ways. Its shape is unusual, being roughly 85 x 75 cms. at the widest points across its face but only 3 to 20 cms. thick. Apart from the inscriptions the stone shows no signs of being worked. Since the texts were inscribed the stone must have been in an exceptionally exposed position since the texts have patinated to exactly the same colour as the surrounding stone. This together with the undulations and roughness of the surface make it virtually impossible to achieve a photograph which shows all the letters clearly. The break which has carried off part of *CSP 1b* is modern, but the chip affecting *CSP 1a* is ancient. The inscriptions are particularly interesting since they belong to the minority of 'mrt' texts for which we have a definite provenance²¹.

CSP 1a:

The third letter of this text is identical in shape to the *b* of *bn*. *CSP*'s copy shows only the lower curve of this letter whereas both arms are clear on the stone. The *n* of *bn* is of the "dot" variety and is identical to the second letter of the text. The *n* of *mny* is also of this type, though somewhat obscured by a chip in the stone. Both these latter *ns* are shown as lines on *CSP*'s copy. It is difficult to be sure whether the last letter of the first name is a ' or a *j* since it is of a roughly similar size to both the ' in 'mrt' and 'l' and the *j* in *wjm*. In view of these points it is difficult to endorse *CSP*'s reading of the first name as 'lj and I would suggest reading *nb'* or *nbj*²². Neither of these names is known²³ though both have Arabic roots from which they could be derived. The second name is quite definitely *hlst* rather than *hlht*²⁴. There are traces of two letters on the edge of the chip, but too little of them survives for any certain identification. It should be noted that *ḏ* in both these texts has a hook to its tail, a feature not shown in *CSP*'s copy.

CSP 1b:

There are, in fact, sufficient traces of the ' of the first name on the edge of the break to make the restoration virtually certain. There are also traces of a letter after the second *w* which could be those of a large *j*. *Milik*²⁵ is quite right to read *r* where *CSP* reads *b* on the edge of the break where the text resumes. On the stone the hooks of the *r* are clear. At the end of the text Mr. Clark reads *mn qtl* and translates "who was killed". As Professor Beeston has pointed out²⁶, such a translation is quite impossible since *man* is not used in this way in Arabic and we have no evidence that Safaitic had a different usage from Arabic in this respect. However, I have to admit that on examining the stone I could find no evidence for the *n* following the *m*. There are various small shallow scratches, of quite different form to the two other *ns* in the text, at this point on the stone and I think one of these must have been taken as a *n*, despite the fact that these scratches appear to cross each other and, if taken as a letter at all, look more like a *t*. If I am right in this, the problem of this expression disappears and we are left with the passive participle *mql* "killed" which is well-known from other texts (e.g. HCH 72, 76, 103, 126).

HCH 23: (see Plate CXVIII).

There are four letters at the end of this text which are not shown on *HCH*'s copy (fig. 4). They appear to read *wḏll*. The first two letters have been very heavily scored over and the *w* is not entirely certain. It is presumably the *ḏ* of this word that Mr. Harding placed at the end of *HCH 114* in his copy (see my comments on that text, below). *ḏll* could be a verb, though none of its meanings in Classical Arabic appear to be appropriate in this context. It therefore seems more reasonable to take it as the name of another person for whom the author *wjm*. It is more usual for 'l' to be repeated in these circumstances, but, for other texts where it is not, see for instance WH 63, 151a, 956, etc.

HCH 31: (see Plate CXXIII).

There is a second text on this stone which is not shown on the copy (HCH fig. 5). It reads:

l 'ts

It is not followed by *bn* (as in HCH 61) and is apparently unpublished. I would number it *HCH 31bis*. Also missing from HCH's copy is the "magic sign" of seven parallel lines. There are texts on three other faces of the stone but they are so faint that I can make nothing of them.

HCH 34: (see Plate CXIX).

There are, I think, two texts here. HCH 34 begins

l ymlk bn 'tm...

The *lam auctoris* is very clear on the stone, though missing from the published copy (HCH fig. 5). The other text, which I would number *HCH 34bis*, is to the right of and lower than HCH 34 and only four of its letters appear on HCH's copy where it is taken as the beginning of HCH 34. I would read it as:

l 't^oh bn

Although this text has been scored over, all the letters are clear with the exception of the *b* which could be a *r*, or even in some lights a *s*. In any case it produces a new name.²⁷ The mark which, on the photograph, makes it appear as a *h* is purely superficial and is part of the over-scoring.

HCH 42:

There is a discrepancy in HCH between the copy of this text (HCH fig. 5) and the transcription (p. 23). The former has *w* introducing the invocation while the latter has *f*. The transcription is correct, *f* is clear on the stone.

HCH 85: (see Plates CXX and CXXI).

There are two interesting drawings on this stone which are not mentioned in HCH. One is immediately below the text, though it does not show up on HCH Pl. VII. It shows a standing man, with wild hair, wielding a sword (?) and a round shield. Next to him is a drawing which seems to represent a camel upside-down in relation to the man. The other drawing is on another face of the stone and shows another man, with even wilder hair, again armed with a sword (?) and a round shield, with an animal running towards him. Just above the animal and at right angles to it is a very crude drawing of a human figure with arms raised. A series of lines runs across the first figure converging at a point near the second.

HCH 102:

Unfortunately, this stone has been broken at one end since HCH was published and the missing piece lost. The break involves the loss of the first two names, so what is left begins *bn 'tk*. The *k* of this name has a peculiar backward kick (not shown in HCH's copy) similar to the *ks* in MSTJ 23. The expression *w hrs' l 'hh* should be added to the list in the commentary to SIAM 35.

HCH 108: (see Plate CXXII).

The fourth name must be *'ktb*, see below under HCH 137, though the shape of the *k* is most peculiar. It looks as though the two bars of the *k* have been accidentally joined to form a

loop, hence making it resemble a y. On the side of this stone there is another text, not published in HCH, which I have numbered *HCH 108bis* It reads:

l tr̄ bn 'rmt

The text is marred by several extraneous scratches but is fairly clear. *Tr̄* is a known name and *'rmt* has been found once in LP 1292a (see SMPU).

HCH 114: (see Plate CXVIII).

HCH (figs. 4 and 11) shows the second name in this text as *znlh*. However, on the stone it is clearly *jn'l*. He also places a *d* at the end of the inscription after *t̄swq 'l* and comments that “the text is incomplete”. But, as I noted in my comments on HCH 23, the *d* actually belongs to the end of that text. HCH 114, on the other hand, ends with the name *ĵf't* which is not shown on either of the copies. The *j* is not entirely certain since one half of it is very faint, as is one of the side-strokes of the '. The name does not appear to be attested and it is possible that one should read *rf't*. It should also be noted that the ' of 'l is almost entirely obscured by an abrasion, though enough of it survives to make the restoration certain in the context.

HCH. 118: (see Plate CXXII).

Perhaps one should read:

l̄ ṣh' fty 'ws bn 'mmt h s'l

(By Ṣh) the young servant of 'ws s. 'mmt the seeker after knowledge.

This is essentially the reading proposed privately by Mr. Harding after the publication of HCH, though the interpretation is mine. *Ṣh'* is unattested and is indeed not at all certain since the stone is badly rubbed at this point. The ' of 'ws looks more like a ṣ on the photograph but it is clear on the stone that this is because of a stray mark between the lower prongs of the '. The last word of the text is also not clear, particularly the final sign (shown as *h* in HCH's copy, fig. 11). On examining the original it seems that this sign has too many strokes for a *h* and, indeed, it appears to resemble no known Safaitic letter. I have therefore regarded it as extraneous to the text. If the final word is *h s'l* as I have suggested, then it could be Arabic *sâ'il* “a beggar” or possibly “a seeker after knowledge” (Lane p. 1283/3). If I am right in this interpretation and the epithet is to be applied to *'ws bn 'mmt*, then it is possible that he was some form of wandering darwish similar to Hani'. It would be appropriate that such a man was among the mourners, though it is odd that he apparently left no inscription himself. In this case *fty* might be better translated “young disciple” perhaps. For other examples of the expression *N.fty N.* see note 14.

HCH 130:

The second name is clearly *n̄sr* rather than *nhr* as in HCH's transcription) or *nhr* (as in HCH's copies, figs. 3 and 11), (see J. Saf N. note 91, p. 69).

HCH 134:

The *m* of *slm* which, though given in the transcription, is absent from both copies (HCH figs. 3 and 11), is clear on the stone just over the edge.

HCH 137:

The fourth name must, I think, be *'ktb* (as suggested in J. Saf. N. note 27, p. 41), though the shape of the *k* is certainly very odd. There is an abrasion over one fork of the ' making it resemble a ṣ. Confirmation that the name is *'ktb*, both here and in HCH 108, comes from WH 367 which must be by *mty*'s father²⁸.

HCH 158: (see Plate CXXIII).

The second name in this text appears to be *hkm*. The *h* has been omitted from both HCH's copies (figs. 3 and 12) while the second letter looks more like a *k* on the stone than in these copies²⁹. The name has been found once before, in WH 281.

Apart from HCH 7 and 158, there are two more texts on the same face of this stone, neither of which is shown on HCH's copy (fig. 3). The first, which I have numbered *HCH 158bis*, runs at right angles to the beginning of HCH 7 and reads:

l jhš

It is possible that this could be HCH 160, though HCH gives no indication of this and the shapes of the letters (see HCH fig. 12) are somewhat different. The second text, which I have numbered *HCH 158ter*, starts just below the *h* of the previous text and has been scratched over. It reads:

l s'd

RVP 3b:

The first name is definitely *tmm* as shown in HIn. and J. Saf N. note 85 (P. 67)^{29a}

RVP 9b:

The reading *šwf* for the second name does not seem to be possible on the stone where it looks more like *snšf*. However, neither the name nor an Arabic root from which it could be derived appear to be known.

RVP 9c:

On the stone it can be seen quite clearly that the final word of the text is neither *hrs* (as in RVP) nor *zhl* (as in J. Saf. N. note 14, p. 34), but *tzr*. The *z* is somewhat encumbered with stray scratches but both it and the two horizontal strokes of the *r* seem clear.

RVP 11c:

The portion of the stone bearing this text and part of 11a has broken off and has disappeared.

SIT 12: (see Plate CXXIV).

I would suggest reading the third name as *'rš* rather than *'lf* (as in SIT) or *'lg* (as in JMAA VIII, p3). The second letter is definitely a *r* (cf. the *r* in *mgyr*) and the third, though somewhat odd, is, I think, a *š*. It is certainly quite different from the *g* in *mgyr*. The last four letters are written in a completely different manner to the rest of the text and I am not certain that they really belong to it. However, Jamme's assertion that the final letter is *g* seems highly unlikely both on the stone and in SIT's copy. There are some finely scratched letters beside the third name of this text. The first letter I can make nothing of but the remainder appear to read *bhyt*. There is also a *t* and a *y* below the second name of the text. These seem to have nothing to do with any of the inscriptions on this stone.

WH 28: (see Plate CXXIV)^{29b}

The last name of the text (i.e. after *wjm 'l*) is clearly *mrt* on the stone, not *mmt* as in WH. It is possible, therefore, that the author was grieving for his brother who wrote SIJ 7 (see the family-tree under WH 28). There are various stray letters on an adjacent face of the stone which appear to make no sense by themselves and seem to have nothing to do with the texts.

WH 34: (see Plate CXXIV).

The second name appears as *wrd* on the stone, the *d* being in the space left blank on WH's copy between the ends of WH 28 and 34.

WH 37: (see Plate XXV).

There is another inscription on this stone, not published in WH. I have numbered it *WH 37bis*. It reads:

l jdn bn qdm'

The text is rather carelessly hammered over two faces of the stone and is very difficult to photograph adequately. *Jdn* is known and *qdm'* has been found once before, in MSTJ 1.

WH 178: (see Plate CXXV).

The inscription as published is incomplete. After *h bkrt* the text continues at right angles with *w tgr*. This can be seen quite clearly on the stone in the space occupied by the four strokes on WH's copy.

WH 182: (see Plate CXXVI).

Unfortunately, at some time after Winnett and Harding copied this text the stone was broken at a point just behind the camel's hind legs. This break has removed parts of the first three letters, the *bn* and the first letter of the second name. The missing piece has disappeared. However, in the archives of the Department of Antiquities of Jordan there is a photograph of the stone taken before the piece was lost.³⁰ This photograph also shows that there was another, uninscribed part of the stone which has also disappeared. When I first saw the stone, parts of the text were covered with lime³¹ and it will be seen from the Department of Antiquities' photograph that much of the text on the missing piece was also encrusted. Fortunately, enough is visible for there to be no doubt of the reading of that section of the text. However, as will be seen from my photograph of the surviving portion of the stone, the removal of the lime reveals that the second name consists not of two letters, *rh*, but of three and that it can only be *rhṛ*. The name has not been found before and there does not seem to be an Arabic root from which it could be derived. However, I cannot see what else the name could be since both *rs*, though of the elongated variety, are quite clear and both are distinct from the *l* at the beginning of the text. The second point in relation to this inscription is that it seems highly probable that the last word is not *bkrt* but *bkrtn*, the *n* being behind the camel's head. It is possible that a scratch between the *t* and the camel's neck is the *n*, but this looks less deliberate than the other. Such a reading would, of course, also be more appropriate to the drawing which shows two camels.

WH 403:

As mentioned in WH, this stone is in the Palestine Archaeological (Rockefeller) Museum³². The second name is, I think *m'd* rather than *m'll*, though the cross-strokes of the *d* are extremely faint. I also think that one can just see a *w* after this name. Unfortunately both these features are so faint that they do not show up on a photograph.

WH 1273-1275: (see Plate CXXVII).

The commentary to WH 1275 mentions "several more inscriptions scratched on the stone...." However, the only other text that I can find on the stone, which is covered in apparently random scratches, occurs between the two lines of WH 1275. It is very faintly and carelessly scratched and appears to read:

wjjs^odjhm'kw

I can make nothing of this.

WH 1853:

Following HIn. I would suggest that the first name is *šb'n* (as in WH 1854)³³. On the stone

one can see the full curve of the *b*, only part of which has been reproduced on WH's copy (WH Pl. 71), and it seems to be very similar to the other *bs* in the text. At the end of the inscription the whole word *mzll* can be seen on the stone in a good light and in fact the final sign on the copy on WH Pl. 71 is part of the *m* of this word rather than the *ll* as suggested by the transcription.

WH 1859:

The first name is quite clearly 'n'm not 'mm as in WH's transcription or 'm as in the copy on WH Pl. 35.

WH 1864: (see Plate CXXVII).

Although WH's copy (Pl.35) and transcription give the text as *l mny bn shl bn jrm'l*, the stone actually has *l mnh bn 'hl bn jr'l*. However, since it seems virtually certain that the authors of WH 1863-1866 were all brothers, it would appear that we have another example of "errors in the inscriptions" to add to the interesting list on WH pp. 16-17.

WH 1897: (see Plate CXXVIII).

WH split this into two texts 1897a and b. However, I can see no justification for this on the stone. Moreover, I would suggest that their reading requires some revision. I would read:

... n't bñ m'n bn r'bt bn šf... bn rsl bn 'mrt bn 'dn bn 'šr^{oo}. bn yhld w wj... 'ty

The stone has been badly chipped at the corner where the text begins and this has removed the first letter(s) of the text and parts of the last two letters of the seventh surviving name. However, in the latter case I think enough survives of the *d* to make it virtually certain, though the following letter could, of course, as well be a *h* or *y* as a *n*. There are also abrasions on the stone which obscure the text in two places. The first partially covers the *n* of the first *bn* and the *m* of *m'n*, though these letters are still visible. The second covers the latter part of the penultimate name, partially obscuring the *r* (enough of which is visible, however, for there to be little doubt of its value) and totally destroying anything that followed it. Finally, it should be noted that the stone has been broken very cleanly along one edge and this has interrupted the text at the points marked in my transcription by three dots (...). This means, of course, that *šf*, which WH note is "not in HIn.", need not be a new name but only part of a name such as *šfr*. Of the other names *n't* is well attested in Safaitic which might suggest that only the *lam auctoris* has been lost at the beginning of the text. Of the names which are certain, all but *r'bt* are well-known. *R'bt* has been found once before in LP 1295.

WH 1898: (see Plate CXXX).

On the stone the fifth name looks more like *hyn* and the last name like *sb*. In the case of *hyn*, however, comparison with the other texts containing the relevant section of this genealogy shows that the name is almost certainly *hy* and that the apparent *n* is either an error on the part of the author or a stray scratch³⁴. On the other hand the case of *sb* is very different. I can find no evidence to support the reading *sr*³⁵ in any of the texts³⁶ containing this section of the genealogy. In seven of these texts³⁷ there is a *r* in the text for comparison and in each case it is clearly distinguished from the *bs* including that of *sb*³⁸. In the other six texts³⁹ there is no *r* in the text but there appears to be no distinction between the other *bs* and that of *sb*⁴⁰.

WH 1899: (see Plates CXXX and CXXXI).

It is sad that the authors of WH did not have the opportunity of studying the stone bearing this and the previous text at their leisure. Had this been possible WH 1899 would have presented no problems. What is published in WH is not "the continuation of 1898" but the end of an inscription running round two sides of the stone and ending on the face. It reads as follows:

l 'slm bn ršh bn šbh bn hy bn jn'l bn hb bn sb w r'y h 'bl f h lt slm

Most of the inscription is clear on the stone though, owing to its position, extremely difficult to photograph satisfactorily. The penultimate name is presumably an error for *whb* in view of the family-tree under WH 1026, to which this text should be added. This branch of the family has been omitted altogether from the tree. It appears again in SIJ 277, which is presumably by a nephew of the author of WH 1899. In view of this, it seems highly likely that the *bn sb*, which Winnett read as part of SIJ 278, in fact completes the genealogy in SIJ 277.⁴¹ One should also add to the tree C. 3905 (= LSI 48) which is by 'mrt's father and which may extend the genealogy to four generations above *sb*⁴². Another possible addition to the tree might be SIJ 275 + 276, if read as one text⁴³. However, since the reading of several of the names, particularly that between *rfdn* and *šbh*, is doubtful, it seems safer to omit it.

WH 1900:

The fourth name in this text is clearly 'sd on the stone. It seems highly probable that C 2615 is by the same author⁴⁴

WH 3792a:

Another of the stones in the Palestine Archaeological (Rockefeller) Museum. The fourth name is definitely *q'sn* on the stone. The š of *jšm* is not very clear but cannot, I think, be anything else. WH are undoubtedly right in ignoring the "dot (resembling 'ayin)" in the word *tmd* since this definitely does seem to be natural and it resembles neither ' nor *n* in the rest of the text.

WH 3792b: (see Plate CXXIX)

I would suggest that the final name is *hb* followed by *f* to introduce the invocation. The letter looks more like a *f* than a *k* on the stone. The *d* before *m'wr* is of a very curious form and looks more like an attempt to erase a letter.

WH 3792c:

Again, examination of the stone suggests that the "dot" in *tmd* is natural.

WH 3914: (see Plates CXXXII and CXXXIII).

I suggest reading the text⁴⁵ as:

I 'mr bn bhl bñ rh h dmy

By 'mr s. bhl s. rh are the pictures.

The text has been very effectively scored over⁴⁶ making the reading of parts of it extremely difficult. All the names are known, though *bhl* only once and in a rather doubtful reading (C. 3377). The *b* of this name is at a slight angle to the rest of the text and one of its arms is directly above the *h* which, consequently, looks like a *d*. Before the *b* there is a round hole in the stone which on a photograph can look like a ' , though on the stone it is obvious that it is natural. The following *bn* and the *r* of the third name are particularly difficult to photograph though visible in certain lights on the stone. I would suggest that *dmy* in this text represents Arabic *duman*, the plural of *dumyah* (Lane p. 917/2) which, if I am correct, would presumably have been pronounced with a consonantal *y* in Safaitic.

**CONCORDANCE OF NORTH ARABIAN INSCRIPTIONS
IN THE MUSEUMS OF JORDAN**

N.B. The abbreviations of publications follow the system used in HIn. Abbreviations of all works will be found in the list at the end of this article together with a reverse list by author.

AMMAN MUSEUM ⁴⁷

<u>Registration No.</u>	<u>Publication</u>
J. 9	RVP 4 = Stein 9 = HCH 54
J. 10	RVP 6 = Stein 10 = HCH 91 (N.B. not 56 as in HIn.)
J. 11	RVP 3a, b, c, (N.B. not merely 3b as in HIn.)
J. 12 (M)	RVP 8a, b, c,
J. 13	RVP 5
J. 14 (M)	RVP 1
J. 15 (M)	RVP 2
J. 16 (M)	RVP 10
J. 17	RVP 9a, b, c, (N.B. not merely 9c, as in HIn.)
J. 18	RVP 7
J. 19	RVP 11a, b, c, (N.B. not merely 11b, as in HIn.)
J. 379	SIAM 39 a + b
J. 1642	NST 1
J. 1815 (M)	NST 7
J. 1816	NST 3
J. 1817	NST 4-6
J. 1820	NST 8
J. 1821	SIAM 1-4
J. 1822	HCH 14, 16 (N.B. not 14-16, as in HIn.)
J. 1823	HCH 33
J. 1824	HCH 71
J. 1825	HCH 132
J. 1826	HCH 37, 137
J. 1827	HCH 52
J. 1828	HCH 10
J. 1829	HCH 25
J. 1830	HCH 78
J. 1831	HCH 74-76, 141 (N.B. add 141 to HIn.)
J. 1876	HCH 73
J. 1877	HCH 77
J. 1878	HCH 7, 158, 158bis, 158ter
J. 1879 (M)	HCH 139, 140
J. 1880	HCH 149
J. 1881	HCH 26
J. 1882	HCH 153
J. 1883	HCH 81
J. 1884	HCH 31, 31bis
J. 1885	HCH 80
J. 1886	HCH 79
J. 1888	HCH 43, 127
J. 1889	HCH 42 (N.B. not 80 as in HIn. p. 746)
J. 1890	HCH 85
J. 1891	HCH 94
J. 1892	HCH 44
J. 1893	HCH 69
J. 1894	HCH 103

Registration No.	Publication
J. 1895	HCH 93, 109-113
J. 1896 (M)	HCH 173 (Latin)
J. 1897 (M)	HCH 175 (N.B. not 174 as in HIn.)
J. 1898 (M)	HCH 178 (drawing) (N.B. not 179 as in HIn.)
J. 1899	HCH 2, 9
J. 1900 (M)	HCH 104
J. 1901	HCH 100
J. 1902	HCH 107
J. 1903	HCH 108, 108bis
J. 1904	HCH 118-119
J. 1905	HCH 34, 34bis
J. 1906	HCH 101
J. 1907	HCH 13
J. 1908	HCH 63, 105
J. 1909	HCH 88-90 (N.B. not merely 90, as in HIn.)
J. 1910	HCH 102
J. 1911	HCH 126
J. 1912 (M)	HCH 181 (drawing) (N.B. not 175 as in HIn.)
J. 1913 (M)	HCH 176
J. 1914 (M)	HCH 179 (N.B. not 177 as in HIn.)
J. 1915	HCH 180 (drawing)
J. 1916 (M)	HCH 177 (drawing) (N.B. not 178 as in HIn.)
J. 1917	HCH 125
J. 1918	HCH 194
J. 5115	SIAM 5
J. 13157	ZSI
J. 13206	MSTJ 6-14
J. 13207	MSTJ 22
J. 13209	MSTJ 21
J. 13210	MSTJ 15-20
J. 13211	MSTJ 3-5
J. 13212	MSTJ 2
J. 13213	MSTJ 1
J. 13214	Safaitic inscription from Jawa to be published by M.C.A. Macdonald in <i>Jawa Inscriptions</i> (forth- coming).
J. 13215	WH 1273-1275
J. 13366	WH 3914
J. 13367	SIAM 10
J. 13496	Thamudic inscription from Ziziya, to be published by Professor W. Röllig.
J. 13943	SIAM 12
J. 13944	SIAM 11
J. 13945	SIAM 13
J. 13946	SIAM 14
J. 13947	SIAM 15 a+b
J. 13948	SIAM 16
J. 13949	SIAM 17-18
J. 13950	SIAM 19
J. 13951	SIAM 20-22
J. 13952	SIAM 23
J. 13953	SIAM 24-25
J. 13954	SIAM 26
J. 13955	SIAM 6
J. 13956	SIAM 7
J. 13957	SIAM 8

Registration No.

Publication

J. 13958	SIAM 9
J. 13959	TIJ 466-470
J. 14099	CTSS 1a + b
J. 14168	WH 178-179
J. 14169	WH 1904a+b, 1905
J. 14170	WH 1862
J. 14171	SIT 12-14
J. 14172	HCH 1, 130, 133-134, 145-146
J. 14173	HCH 195
J. 14174	WH 1859-1861
J. 14175	TIJ 503
J. 14176	WH 1867a
J. 14177	WH 1852-1854
J. 14178	WH 1902-1903
J. 14179	HCH 196
J. 14180	WH 1900-1901
J. 14181	WH 1850
J. 14182	WH 1855
J. 14183	SIAM 40
J. 14184	WH 1897
J. 14185	TIJ 499-502
J. 14186	WH 1849
J. 14187	WH 182
J. 14188	WH 1851
J. 14189	WH 1868a-c
J. 14190	WH 1863-1866
J. 14191	WH 39-41
J. 14192	WH 7
J. 14193	WH 6
J. 14194	WH 36
J. 14195	WH 1898-1899
J. 14196	WH 28-29, 34
J. 14197	WH 38
J. 14198	HCH 72, 144
J. 14199	Stone tripod platter to be published by M.C.A. Macdonald in <i>Some stone dishes with North Arabian inscriptions</i> (forthcoming).
J. 14200	CSP 1a + b
J. 14201	WH 37, 37bis
J. 14202	Thamudic inscription from Wadi Rummân, to be published by Dr. W.J. Jobling M.C.A. Macdonald.
J. 14203	CSNS 423-424
J. 14217	SIAM 41
J. 14236	HCH 53
J. 14237	HCH 66
J. 14238	HCH 23, 114
J. 14239	HCH 59
J. 14240	HCH 174 (drawing)
IRBID MUSEUM	
1812	MSTJ 23-24
1955	An inscribed stone bowl to be published by M.C.A. Macdonald in <i>Some stone dishes with North Arabian inscriptions</i> (forthcoming).
2003a	SIAM 36
2003b	SIAM 37-38

JORDAN UNIVERSITY ARCHAEOLOGICAL MUSEUM

P.U. 107

SIAM 42

KARAK MUSEUM

320

SIAM 30

321

SIAM 31-33

MADABA MUSEUM

297

CTSS 2a + b

507

CTSS 3

PETRA MUSEUM

No number

SIAM 43-44

CONCORDANCE BY PUBLICATION*Publication**Registration No.*

CSNS 423-424	Amman Museum J. 14203
CSP 1a+b	" " " " J. 14200
CTSS 1a + b	" " " " J. 14099
CTSS 2a + b	Madaba Museum 297
CTSS 3	" " " " 507
HCH 1	Amman Museum J. 14172
HCH 2	J. 1899
HCH 7	J. 1878
HCH 9	J. 1899
HCH 10	J. 1828
HCH 13	J. 1907
HCH 14	J. 1822
HCH 16	J. 1822
HCH 23	J. 14238
HCH 25	J. 1829
HCH 26	J. 1881
HCH 31	J. 1884
HCH 31 bis	J. 1884
HCH 33	J. 1823
HCH 34	J. 1905
HCH 34bis	J. 1905
HCH 37	J. 1826
HCH 42	J. 1889
HCH 43	J. 1888
HCH 44	J. 1892
HCH 52	J. 1827
HCH 53	J. 14236
HCH 54 = RVP 4 = Stein 9	J. 9
HCH 59	J. 14239
HCH 63	J. 1908
HCH 66	J. 14237
HCH 69	J. 1893
HCH 71	J. 1824
HCH 72	J. 14198
HCH 73	J. 1876
HCH 74-76	J. 1831
HCH 77	J. 1877

<u>Publication</u>	<u>Registration No.</u>
HCH 78	J. 1830
HCH 79	J. 1886
HCH 80	J. 1855 (N.B. not 1889, as in HIn.)
HCH 81	J. 1883
HCH 85	J. 1890
HCH 88-90	J. 1909 (N.B. not merely 90, as in HIn.)
HCH 91 = RVP 6 = Stein 10	J. 10 (N.B. not 56, as in HIn.)
HCH 93	J. 1895
HCH 94	J. 1891
HCH 100	J. 1901
HCH 101	J. 1906
HCH 102	J. 1910
HCH 103	J. 1894
HCH 104	J. 1900 (M)
HCH 105	J. 1908
HCH 107	J. 1902
HCH 108	J. 1903
HCH 108bis	J. 1903
HCH 109-113	J. 1895
HCH 114	J. 14238
HCH 118-119	J. 1904
HCH 125	J. 1917
HCH 126	J. 1911
HCH 127	J. 1888
HCH 130	J. 14172
HCH 132	J. 1825
HCH 133-134	J. 14172
HCH 137	J. 1826
HCH 139-140	J. 1879 (M)
HCH 141	J. 1831 (N.B. add 141 to HIn.)
HCH 144	J. 14198
HCH 145-146	J. 14172
HCH 149	J. 1880
HCH 153	J. 1882
HCH 158	J. 1878
HCH 158bis	J. 1878
HCH 158ter	J. 1878
HCH 173 (Latin)	J. 1896 (M)
HCH 174 (drawing)	J. 14240 (N.B. not J. 1897 as in HIn.)
HCH 175	J. 1897 (M) (N.B. not J. 1912 as in HIn.)
HCH 176	J. 1913 (M)
HCH 177 (drawing)	J. 1916 (M) (N.B. not J. 1914 as in HIn.)
HCH 178 (drawing)	J. 1898 (M) (N.B. not J. 1916 as in HIn.)
HCH 179	J. 1914 (M) (N.B. not J. 1898 as in HIn.)
HCH 180 (drawing)	J. 1915
HCH 181 (drawing)	J. 1912 (M)
HCH 194	J. 1918
HCH 195	J. 14173
HCH 196	J. 14179
MSTJ 1	J. 13213
MSTJ 2	J. 13212
MSTJ 3-5	J. 13211
MSTJ 6-14	J. 13206
MSTJ 15-20	J. 13210
MSTJ 21	J. 13209

Publication	Registration No.
MSTJ 22	Amman Museum J. 13207
MSTJ 23-24	Irbid Museum 1812
NST 1	Amman Museum J. 1642
NST 3	J. 1816
NST 4-6	J. 1817
NST 7	J. 1815 (M)
NST 8	J. 1820
RVP 1	J. 14 (M)
RVP 2	J. 15 (M)
RVP 3a-c	J. 11
RVP 4 = Stein 9 = HCH 54	J. 9
RVP 5	J. 13
RVP 6 = Stein 10 = HCH 91	J. 10
RVP 7	J. 18
RVP 8a-c	J. 12 (M)
RVP 9a-c	J. 17
RVP 10	J. 16 (M)
RVP 11a-c	J. 19
SIAM 1-4	J. 1821
SIAM 5	J. 5115
SIAM 6	J. 13955
SIAM 7	J. 13956
SIAM 8	J. 13957
SIAM 9	J. 13958
SIAM 10	J. 13367
SIAM 11	J. 13944
SIAM 12	J. 13943
SIAM 13	J. 13945
SIAM 14	J. 13946
SIAM 15a+b	J. 13947
SIAM 16	J. 13948
SIAM 17-18	J. 13949
SIAM 19	J. 13950
SIAM 20-22	J. 13951
SIAM 23	J. 13952
SIAM 24-25	J. 13953
SIAM 26	J. 13954
SIAM 30	Karak Museum 320
SIAM 31-33	321
SIAM 36	Irbid Museum 2003a
SIAM 37-38	” ” 2003b
SIAM 39a+b	Amman Museum J. 379
SIAM 40	J. 14183
SIAM 41	J. 14217
SIAM 42	Jordan University Archaeological Museum P.U. 107
SIAM 43-44	Petra Museum, no number
SIT 12-14	Amman Museum J. 14171
TIJ 466-470	J. 13959
TIJ 499-502	J. 14185
TIJ 503	J. 14175
WH 6	J. 14193

<u>Publication</u>		<u>Registration No.</u>
WH 7	Amman Museum	J. 14192
WH 28-29		J. 14196
WH 34		J. 14196
WH 36		J. 14194
WH 37		J. 14201
WH 37 bis		J. 14201
WH 38		J. 14197
WH 39-41		J. 14191
WH 178-179		J. 14168
WH 182		J. 14187
WH 1273-1275		J. 13215
WH 1849		J. 14186
WH 1850		J. 14181
WH 1851		J. 14188
WH 1852-1854		J. 14177
WH 1855		J. 14182
WH 1859-1861		J. 14174
WH 1862		J. 14170
WH 1863-1866		J. 14190
WH 1867a		J. 14176
WH 1868 a-c		J. 14189
WH 1897		J. 14184
WH 1898-1899		J. 14195
WH 1900-1901		J. 14180
WH 1902-1903		J. 14178
WH 1904a+b, 1905		J. 14169
WH 3914		J. 13366
ZSI		J. 13157

ABBREVIATIONS:

ADAJ	Annual of the Department of Antiquities of Jordan
adj	adjective
ARNA	F.V. Winnett and W.L. Reed: <i>Ancient Records from North Arabia</i> , Toronto, 1970
b.	<i>ibn</i>
BASOR	Bulletin of the American Schools of Oriental Research
C	<i>Corpus Inscriptionum Semiticarum</i> , Pars V, Tomus, I, Paris, 1950
conj.	conjunction
CSNS	V.A. Clark: <i>A Study of New Safaitic Inscriptions from Jordan</i> : (a thesis presented for the degree of Doctor of Philosophy, Department of Middle Eastern Studies, University of Melbourne, 1979: at present under examination).
CSP	V.A. Clark: <i>Some New Pre-Islamic Arabian Inscriptions from Northern Arabia</i> : <i>Abr-Nahrain</i> , vol. 17, 1976-1977, pp. 35-42.
CTSS	V.A. Clark: <i>Three Safaitic Stones from Jordan</i> : ADAJ, vol. 24, 1980
dem	demonstrative
fa.	father of
Hava	J.G. Hava: <i>Al-Faraid Arabic-English Dictionary</i> , Beirut, 1970
HCH	G. Lankester Harding: <i>The Cairn of Hani'</i> : ADAJ, vol. 2, 1953, pp. 8-56.
HFSI	G. Lankester Harding: <i>Further Safaitic Texts in the Iraq Museum</i> : <i>Sumer</i> , vol. 26, 1970, pp. 179-185.
HIIn.	G. Lankester Harding: <i>An Index and Concordance of Pre-Islamic</i>

- Arabian Names and Inscriptions*, Toronto, 1971.
- HSIM G. Lankester Harding: *Safaitic Inscriptions in the Iraq Museum: Sumer*, vol. 6, No. 2, 1950, pp. 124-128.
- JMAA A. Jamme: *Miscellanées d'Ancient (sic) Arabe*. Vol. VIII, Washington D.C., 1979.
- JS Inscriptions published in Jaussen et Savignac: *Mission Archéologique en Arabie*, Paris, 1909-1922
- J. Saf. N. A. Jamme: *Safaitic Notes (Commentary on JaS. 44-176)*, Washington, D.C., 1970
- Kaz. A. de B. Kazimirski: *Dictionnaire Arabe-Français*, Paris, 1860.
N.B./ after the page number refers to the column.
- Lane E.W. Lane: *An Arabic-English Dictionary*, (8 volumes), London, 1863-1893. N.B. / after the page number refers to the column.
- Lisan Ibn Manzûr: *Lisân al- 'Arab*, (15 volumes), Beirut, 1955-1957
N.B. / after the page number 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, Leiden, 1943.
- LSI E. Littmann: *Safaitic Inscriptions: being chapter V of his Semitic Inscriptions =Part IV of the Publications of an American Archaeological Expedition to Syria in 1899-1900*, New York, 1904.
- 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
- NST G. Lankester Harding: *New Safaitic Texts: ADAJ*, vol. 1, 1951, pp. 25-29.
- N.Tr. Tribal Name
- p. page
- prep. preposition
- RVP G. Ryckmans: *Inscriptions Safaïtiques de Transjordanie: Vivre et Penser*, vol. 1, 1941, pp. 255-259
- s. son of
- sb. substantive
- sg. singular
- SIAM M.C.A. Macdonald: *Safaitic Inscriptions in the Amman Museum and Other Collections: Part I (Nos. 1-35) in: ADAJ*, vol. 23, 1979, pp. 101-119; Part II (Nos. 36-44) in the present volume.
- SIJ F.V. Winnett: *Safaitic Inscriptions from Jordan*, Toronto, 1957.
- SIT G. Lankester Harding: *Safaitic Inscriptions from Tapline in Jordan: ADAJ*, vol. 17, 1972, pp. 5-14.
- SMPU A. Jamme: *The Safaitic Collection of the Art Museum of Princeton University: Journal of the American Oriental Society*, vol. 91, 1971, pp. 136-141
- Stein Texts collected by Sir Aurel Stein and published in RVP.
- TIJ G. Lankester Harding with the collaboration of E. Littmann: *Some Thamudic Inscriptions from the Hashimite Kingdom of the Jordan*, Leiden, 1952.
- vb. verb
- WAM Saf Safaitic Inscriptions in: F.V. Winnett: *An Arabian Miscellany: Annali dell'Istituto Orientale di Napoli*, vol. 31 (NS 21), 1971, pp. 443-454
- WH F.V. Winnett and G. Lankester Harding: *Inscriptions from Fifty Safaitic Cairns*, Toronto, 1978.
- WHI F.V. Winnett: *The Hâ'il Inscriptions: in: F.V. Winnett and W.L. Reed: An Archaeological-Epigraphical Survey of the Hâ'il Area of Northern Sa'udi Arabia: Berytus*, vol. 22, 1973, pp. 53-100.
- WTay Taymanite Inscriptions in: F.V. Winnett and W.L. Reed: *Ancient Records from North Arabia*, Toronto, 1970.
- WTI Thamudic Inscriptions in: F.V. Winnett and W.L. Reed:

ZSI *Ancient Records from North Arabia*, Toronto, 1970.
 F. Zayadine: *A Safaitic Inscription in the Amman Museum*: ADAJ, vol. 24, 1980.

ABBREVIATIONS BY AUTHOR:

N.B. Only those abbreviations used in the Concordance will be found in this list.

V.A. Clark	Some New Pre-Islamic Arabian Inscriptions	CSP
V.A. Clark	A Study of New Safaitic Inscriptions	CSNS
V.A. Clark	Three Safaitic Stones from Jordan	CTSS
G.L. Harding	The Cairn of Hani'	HCH
G.L. Harding	New Safaitic Texts	NST
G.L. Harding	Safaitic Inscriptions from Tapline	SIT
E. Littmann	Some Thamudic Inscriptions from... Jordan	TIJ
M.C.A. Macdonald	Safaitic Inscriptions in the Amman Museum	SIAM
M.C.A. Macdonald and		
G.L. Harding	More Safaitic Texts from Jordan	MSTJ
G. Ryckmans	Inscriptions Şafaitiques de Transjordanie	RVP
F.V. Winnett and		
G.L. Harding	Inscriptions from 50 Safaitic Cairns	WH
F. Zayadine	A Safaitic Inscription in the Amman Museum	ZSI

NOTES

1. See ADAJ vol. 23, 1979, pp. 101-119 + Plates XXXV-XLIV. As in that article, all the photographs are mine unless otherwise stated.
2. In the first of these articles I expressed my gratitude to the Director-General of Antiquities of Jordan, Dr. Adnan Hadidi, for giving me permission to publish the texts in these articles and to his staff for their help and co-operation. I should also like to thank Professor F.V. Winnett and the University of Toronto Press, who hold the copyright on *Inscriptions from Fifty Safaitic Cairns*, for permission to print a re-examination of some of the texts published in that work. Finally, I am most grateful to Dr. Khair Yassine, the Chairman of the Department of Archaeology at the Jordan University, for giving me permission to publish No. 42 and to Dr. Asim Baghouti and Mr. K.W. Langer de Polacky of the University Museum for all their help while I was studying the stone.
3. Registration numbers J.9 to J.19.
4. See the commentary to SIJ 78
5. J.T. Milik: *La Tribu des Bani 'Amrat en Jordanie de l'Epoque Grecque et Romaine*. I am most grateful to Dr. Fawzi Zayadine, the editor of this journal, for allowing me to read Mr. Milik's article prior to its publication in this volume.
6. Milik, op. cit..
7. Milik goes so far as to suggest that "à partir du Ier siècle avancé de notre ère, les tribus 'awidhéniennes (d'abord) et les şafaites (ensuite) étaient quasi complètement sédentarisées. Des fractions de cette population, en principe villageoise, nomadisait encore, tout au moins par des sorties saisonnières" (op. cit.). He also says (op. cit. note 34) "Je me demande même si existaient réellement 'the Safaitic Bedouin' ".
8. Milik notes, at the end of the article cited above, that SIAM 11 mentions *Mdb* (i.e. *Madaba*). At his suggestion I have re-examined this portion of the stone and I would agree that the patch of abrasion which he mentions in his note 37 is definitely obscuring a letter. I find it impossible to read this letter with any certainty but it could be *am*, though of a different shape to the two clear *ms* in the text. I would also accept his comment that nothing has been lost after the final *t*.
9. J.T. Milik, op cit.; see also J.T. Milik: *Nouvelles Inscriptions Nabatéennes*, Syria, vol. 35, 1958, pp. 227-251: No. 6.
10. This pendant is also noted by Milik in *La Tribu des Bani 'Amrat....*
11. Published by G. Ryckmans in H. Ingholt et J. Starcky: *Recueil Epigraphique*, in D. Schlumberger: *La Palmyrène de Nord-Ouest*, Paris, 1951, pp. 139-187. Of these Safaitic texts Nos. 54b and 80 are in the square script, while 2 quater, 21bis, 8la, 8lb contain a mixture of square and other letter-forms.
12. However, they are also, of course, well-known in Nabataean.

13. See F.V. Winnett: *The Revolt of Damaš: Safaitic and Nabataean Evidence*: BASOR, No. 211, Oct. 1973, pp. 54-57
14. *N. fty N.* is found in C 3260, where I would read *l s' dlh fty hdr*, and HCH 193 (= HSI 49186 b) where I would read *l' dr fty yhn' l*. The form *N. fty N. bn N.* occurs in C 2076 where I would read *l l' fty j' d bn' btn* and in WAM Saf. 1 and HCH 118 (see below).
15. See J.T. Milik and J. Starcky: *Inscriptions récemment découvertes à Pétra*: ADAJ, vol. 20, 1975, pp 116-119. I am extremely grateful to Dr. Fawzi Zayadine for drawing my attention to this article.
16. Professor al-Ghul has also pointed out that this interpretation would accord well with the modern name of the village, Baṣṭa, where this inscriptions was found. It should be added that this village is situated in a depression in the hills. I am most grateful to Professor al-Ghul for his comments on my reading of this text and for his very helpful and enlightening suggestions.
17. One other possibility is that the phrase should be read *qr h wl* i.e. "the cultivated land of the government" (Arabic *Walā'*). This would, of course, involve proposing that the hamza disappeared in pause (see Rabin: *Ancient West Arabian*, London, 1951, pp. 140-141) as in Hijazi, so that *Walā' i* would become *walai* (see Rabin, op. cit. p.141). The final diphthong would not be expressed in this script so that we would be left with *wl*. However, such an explanation perhaps involves too much speculation and while the evidence for a demonstrative pronoun preceding a noun without the article is quoted below, I can find no evidence for the demonstrative preceding a noun in construct.
18. C. Rabin, op cit., pp. 75-76
19. I am grateful to Dr. David Graf for pointing this out to me.
20. Unfortunately, through lack of space, I am not able to publish photographs of all the inscriptions dealt with in this section. However, where there is an important point to be made, a photograph has been provided. Unless otherwise stated, the drawings are at the same scale as the photographs.
21. *Pace* Milik, *La Tribu....*, the provenance of MSTJ 8, 10 and 12 is not 'sans aucune doute.... Qasr Burqu'." This provenance is probable but not certain (see MSTJ p. 119).
22. These readings, if correct, would of course, render unnecessary many of Mr. Clark's very doubtful palaeographical remarks on p. 38 of CSP.
23. Dussaud's reading *nb'* in C 3808 (included, though questioned, in HIn.) is not, I think, very likely and C's reading, *lbn*, is preferable.
24. This was pointed out by the author in his letter to Mr. Clark of 12th. September 1978 and has also been noted by Jamme (JMAA VIII, p. 12).
25. Milik, op. cit.
26. In a personal communication. See also Milik, op. cit., for another interpretation of this expression.
27. HIn. shows *'trh* as occurring in Iraq Museum 46940a. However, the name (read in HFSI as *'lbh*) is in a damaged part of the text and it is difficult to be certain of the reading.
28. Although the name *'ktb* does not show up very clearly on WH's copy of this text (Pl. 9), it is absolutely clear on the photograph which Professor Winnett has kindly given me.
29. J. Saf N. p. 2 (and see note 45) claims that the two copies of this text "omit a dot after *b* (thus, *bn*) and reproduce as a short stroke the long letter *r* with the two diacritic, aslant and parallel to each other, appendices". As can be seen from the photograph, what Jamme took as "a dot after *b*" is a small hole in the stone above which the "small stroke" of the *n* can be seen as shown on HCH's copies. I can see absolutely no evidence on the stone for Jamme's "*r*" since the letter is clearly a *h*.
- 29a. In JMAA II (Washington, D.C., 1971, p. 142) Jamme "corrects" three of the names in RVP 6/HCH 91. His readings are not borne out by a study of the original which shows Ryckmans and Harding's readings to be correct. Jamme also claims (op. cit.) that the first name in RVP 7 should be read *'lhm* rather than Ryckmans' *'zhm*. However, this is incorrect: the second letter is clearly a *z* on the stone. The reference in HIn. (p. 432 s.v. *'lhm*) to JAM 18 should therefore be deleted. Jamme's reading of the second name as *rb's* is, however, confirmed by study of the stone and should be added to HIn.'s entry under this name (p. 266)
- 29b. This article had already gone to press before I was able to find a copy of A. Jamme's review of WH (*Orientalia*, vol. 48, 1979, pp. 478-528) or his "Complementary Memoir" on this review (privately duplicated, Washington, D.C., November 5, 1980). It was therefore too late to include any remarks on Jamme's treatment of some of the WH texts dealt with here.
30. This photograph can be seen on Plate CXXVI next to my photograph of the stone in its present condition.
31. I am most grateful to my wife, Mrs. Annie Searight Macdonald, for cleaning the lime and impacted mud off this stone and several others, as well as for mending several broken stones.
32. I am very grateful to Dr. L. Y. Rahmani for showing me this stone, as well as WH 568 and WH 3792a-c, and for allowing me to study them. A photograph of WH 402-403 is published (though not attributed) in E. Anati: *L'Art Rupestre, Negev et Sināi*, Paris, 1979, p. 61.
33. WH 1854 should be added to HIn.'s entry under *šb'n*.
34. However, it should be noted that all these texts exist only in copies, so that it is impossible to be absolutely sure. For the relevant texts see the family-tree below WH 1026, to which add SIJ 277 + 278 (see below).
35. The name has been read *sr* by all previous editors with the exception of Littmann (LSI 48 = C 3905) and Winnett in SIJ 278. See the similar case of *bdb/lbdr* discussed in the commentary to SIAM 1.
36. Again it should be noted that all these texts, with the exception of LSI 48 (= C 3905), WH 1898 and WH 1899, exist only in copies and that the accuracy of some of these (e.g. C 3700, 3774, LP 775) is rather dubious.
37. These are C 2561, 3702 (= LP 27), SIJ 277 + 278 (see below), WH 410, 1026, 1898, 1899.
38. However, compare C 3905 which is somewhat problematical. There are no *rs* in the part of the text before *sb* and the reading of the part of the text after *sb* (which appears to be in a different hand) is not entirely certain. If one accepts the readings proposed for this part of the text by Littmann and the Corpus, then there would be no distinction between *b* and *r* in this inscription.

39. C 3524, 3700, 3774 (= LP 68), 3834, LP 645, 775
40. The authors of WH have themselves noted (WH p. 9) that “*b* and *r* sometimes have the same form, but when they occur in the same inscription they are always differentiated in some way....”
41. It is possible that SIJ 847 should also be included in this “tree”.
42. I owe the reference to this text and SIJ 277 to Dr. Peter D.M. Macdonald’s *Computer Analysis of the Safaitic Genealogies*, (see WH pp. 20-21 for a description of this work). I am most grateful to Dr. Macdonald for allowing me to use this, as yet, unpublished work which I have found to be of great value.
43. They appear as one text in Dr. Macdonald’s *Computer Analysis* and since the data for this analysis was supplied by Professor Winnett it would seem that he now reads them as one.
44. C. reads the third name as *qbs*. However, in Dunand’s copy there is no distinction made between *b* and *r*, a curved angular form being used apparently indiscriminately for both letters. In view of WH 1900 where the *r* in this name is quite clear, the name should probably be read *qrs* in C 2615.
45. This text was one of those brought to the Museum along with the inscriptions published in MSTJ. It was wrongly referred to there (p. 119) as WH 3912.
46. The “long, upright object resembling a bundle of reeds” mentioned in WH’s commentary to this text is, in fact, the scratched-over inscription. It should be noted that, when this stone was brought to the Department of Antiquities, it was seen and recognized by Mr. Lankester Harding who wrote to Professor Winnett suggesting changes to the reading and commentary. Most unfortunately, however, the book had by that time gone to press and it was impossible to make the relevant alterations.
47. N.B. in the Amman Museum all registration numbers are preceded by “J”, while in the other Museums of Jordan only a number is used. “(M)” after the number signifies that the stone has been mislaid. In passing it should be noted that Jamme (JMAA II, Washington, D.C., 1971, p. 142) speaks of “douze pierres” from the Amman Museum as being published in RVP. In fact there were only eleven stones.

A GRAECO-NABATAEAN SANCTUARY ON UMM EL BIYARA

by
Crystal-M. Bennett

Umm el Biyara is a great rock massif (Plate CXXXIV,1), which rises sheer above the Petra basin for almost a thousand feet or nearly three hundred and thirty metres. It is a natural, almost impregnable fortress, the only approach to the summit being from the south east, and though some effort was made during the writer's excavations to lessen the difficulties of the climb, it still remains a long and arduous one and should certainly not be attempted without a guide. From the western edge, the whole panorama of the Wadi Arabah lies before one and from the north-eastern, eastern and southern sides, all the approaches to Petra are over-looked and therefore easily controlled. (Pl. CXXXV)

This difficulty of approach casts grave doubts on the story in the Bible, (2nd. Chronicles XXV, 11-12 and 2nd Kings XIV,7.) in which ten thousand Edomites were cast down by King Amazias of Judah from the summit of an Edomite stronghold called Sela. For many years, Biblical scholars equated Umm el Biyara with the Biblical Sela. There is no archaeological evidence for such an equation and the writer prefers an equation to be made with a village not far from Tafilah which, to this day, is called Sela'.

In 1960, during the course of Mr. P. Parr's excavations at Petra, the writer did two weeks' exploratory work on the summit of Umm el Biyara and, as a result of her findings, spent a

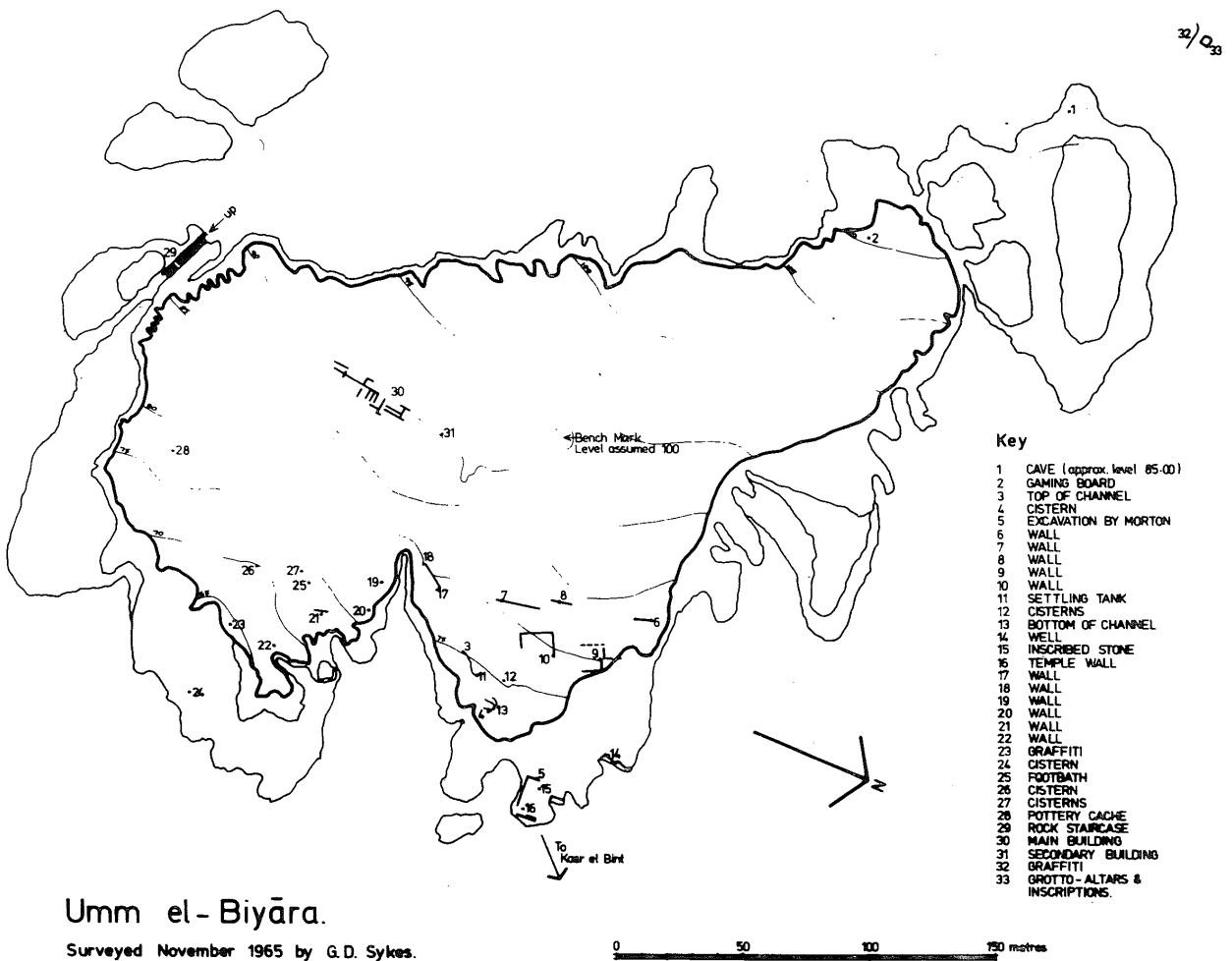
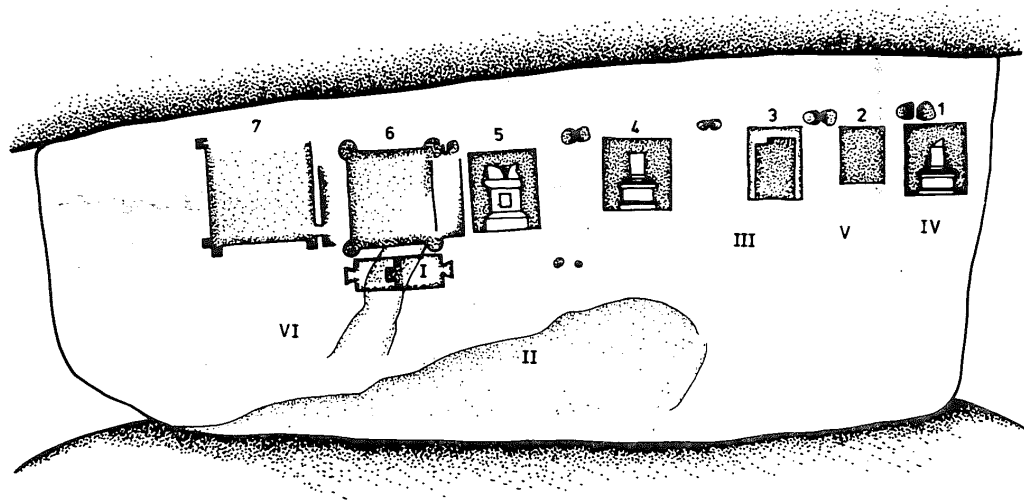


Fig. 1. General view of the summit of Umm el Biyara, with most of the buildings, etc. marked. No. 32/33 in the key marks the position of the grotto.

solitary seven weeks up there in 1963. In 1965, she received the help of the Ecole Biblique in Jerusalem.¹

Although a very small settlement, Umm el Biyara has made its mark in Jordanian history because of the finding there of a seal impression in a well and truly sealed level. It was of a King of Edom, (Pl. CXXXIV,2), Qos Gabr, who is mentioned twice in the Assyrian Annals, once under the reign of Esarhaddon, (680-669) and later under the reign of Ashurbanipal (668-633). This find enabled us to give a much more exact dating to the pottery of the 7th - 6th C.B.C.²

During the writer's work on Umm el Biyara, one of the local B'dul drew her attention to some rock carvings on the north west of the Mountain. (Figs 1 and 2). They were not easy of access; one slid down some rather steep gullies and then clambered up into a crevice. Obviously, at one time the rock had been upright. The writer passed on the information to Abbé J. Starcky, one of the leading scholars in Nabataean, who, in turn alerted M. Milik. It had been intended to produce M. Milik's article as an Appendix to the final report on Umm el Biyara, but because of reasons outside the control of the writer, this will not now be published until 1981. It was then hoped that M. Milik's article would have been published, together with this short note



Umm el-Biyāra - Grotto

Altars nos. 1 - 7, Inscriptions nos. I - VI
Drawn May 1980 by S. M. Balderstone.

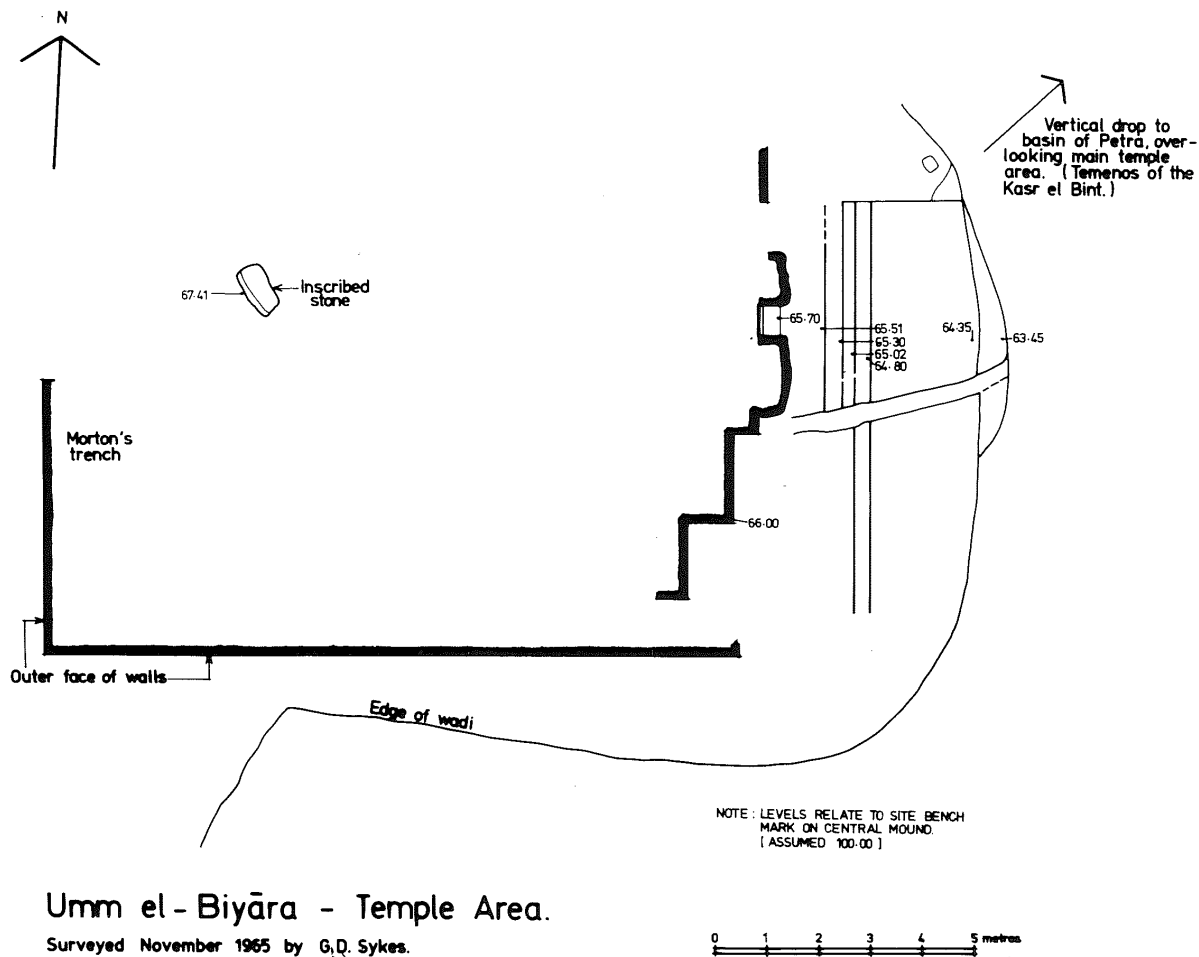
0 50 100 cm
(true elevation)

Fig. 2. The grotto showing the position of the altars and inscriptions.

in the *ADAJ*, as part of a joint tribute to that much respected and recently deceased scholar, Mr. Gerald Lankester Harding, who played such an important role in unravelling the archaeological history of Jordan. It was not to be.

M. Milik is publishing the inscriptions and graffiti in "Revue Semitique" and the writer has excluded deliberately therefore any photographs of them in this article. At least, however, from Fig. 2, their position in relation to the altars can be seen. The graffiti were discovered on a rock face *in situ* immediately to the south of the fallen "Inscription and Altar" rock, on the other side of the gully.

The drawing of the grotto (Fig.2) was done by Mrs. Sue Balderstone with the help of Her Royal Highness Princess Alia; the two of them sat long hours in very cramped quarters, getting exact measurements.



Umm el - Biyāra - Temple Area.

Surveyed November 1965 by G.D. Sykes.

Fig. 3. Location of a possible important Nabataean Temple overlooking the Petra basin.

M. Milik has ascribed this sanctuary to Saint Zeus Dousares, but as his article has not yet been published, the writer cannot make use of his very important interpretations. She can suggest, however, that the altars, Nos. 1, 4 and 5 bear a marked resemblance to many of the dedications to Dushara to be seen in the Siq on the way into Petra from Wadi Musa.

During the writer's excavations, a survey (Fig. 1) was done by Mr. Dennis Sykes of the mountain top and, as far as possible, we mapped everything that was visible on the surface. This included the foundations of a very large building with impressive steps leading up to it. (Fig. 3 and Fig. 1. No. 16 in key). The stones showed the typical diagonal tooling of the Nabataeans and what little pottery was found on the surface belonged to this period. Its dominating position, overlooking the main street of Petra and the Temenos of the Temple of the so-called Qasr el Bint, suggests that it might have had some connection with the latter, which was the major Graeco-Nabataean temple in Petra.

The little rupestrian sanctuary dedicated to Saint Zeus Dousares was probably an adjunct of the building overlooking Petra. What is its most interesting feature is the equation of Zeus with Dushara; a perfect example of syncretism of Hellenistic and Nabataean beliefs.

Crystal-M. Bennett.

19th September, 1980.

NOTES

1. See a Preliminary Report in *Revue Biblique*, Vol. 73, (1966) pp. 372-403.
2. The late Dr. Nelson Glueck, who excavated Tell el Kheleifeh down dated his period IV. See *B.A.S.O.R.* No. 188, December 1967.
3. I am most grateful to Her Royal Highness Princess Alia for suggesting to His Majesty that we should go to Umm el Biyara by helicopter. I am also equally grateful to Her Royal Highness and Mrs. Sue Balderstone for the work they did. Mrs. Balderstone also brought up to date Mr. Sykes's original map (Fig. 1.)

BOOK REVIEW

by
Adnan Hadidi

The Cemetery at Tell es-Sa'idiyeh, Jordan, by James B. Pritchard: *The University Museum Monograph, No. 41, University of Pennsylvania, Philadelphia, 1980. xii 104 pp. 2 tables. Frontispiece. 46 plates. 29 figures in text.*

One of the most outstanding archaeological sites in Jordan is Tell es-Sa'idiyeh. It is a large double mound situated immediately south of the Wadi Kufrinjeh, 1.8 km. east of the River Jordan (map reference 20461861). The Tell covers an area of about 75 dunums (=25 acres) and stands at a height of 42 m. above the plain of the Ghor. The ancient name of the site is not certain. Biblical Scholars must *a priori* identify this tell with some Biblical site. Both Abel and Albright identify it with the Biblical Zaphon (also mentioned in the Tell el-Amarna letters), but Glueck argued for an identification with Zarethan, mentioned in I Kings 7:46 as the locale for the casting of the bronze vessels for the temple of Solomon.

Excavations at Tell es-Sa'idiyeh first began in 1964 by the University Museum of the University of Pennsylvania in cooperation with the Jordan Department of Antiquities under the direction of Professor J.B. Pritchard. Early in the first season, while extensive excavations were being made on the top of the higher mound, a sounding was begun on the lower mound for the purpose of determining the sequence of the Early Bronze occupations. The sounding soon revealed that toward the end of the Late Bronze period this portion of the Early Bronze Age occupation site had been used for a cemetery. During the remainder of the 1964 and the 1965 seasons of excavations 45 tombs were discovered and their contents recorded. This elegant monograph of the final report on the cemetery at Tell es-Sa'idiyeh presents plans and photographs of the tombs, descriptions based on the notebooks of the supervisors and a catalogue of all objects found (exclusive of skeletal remains).

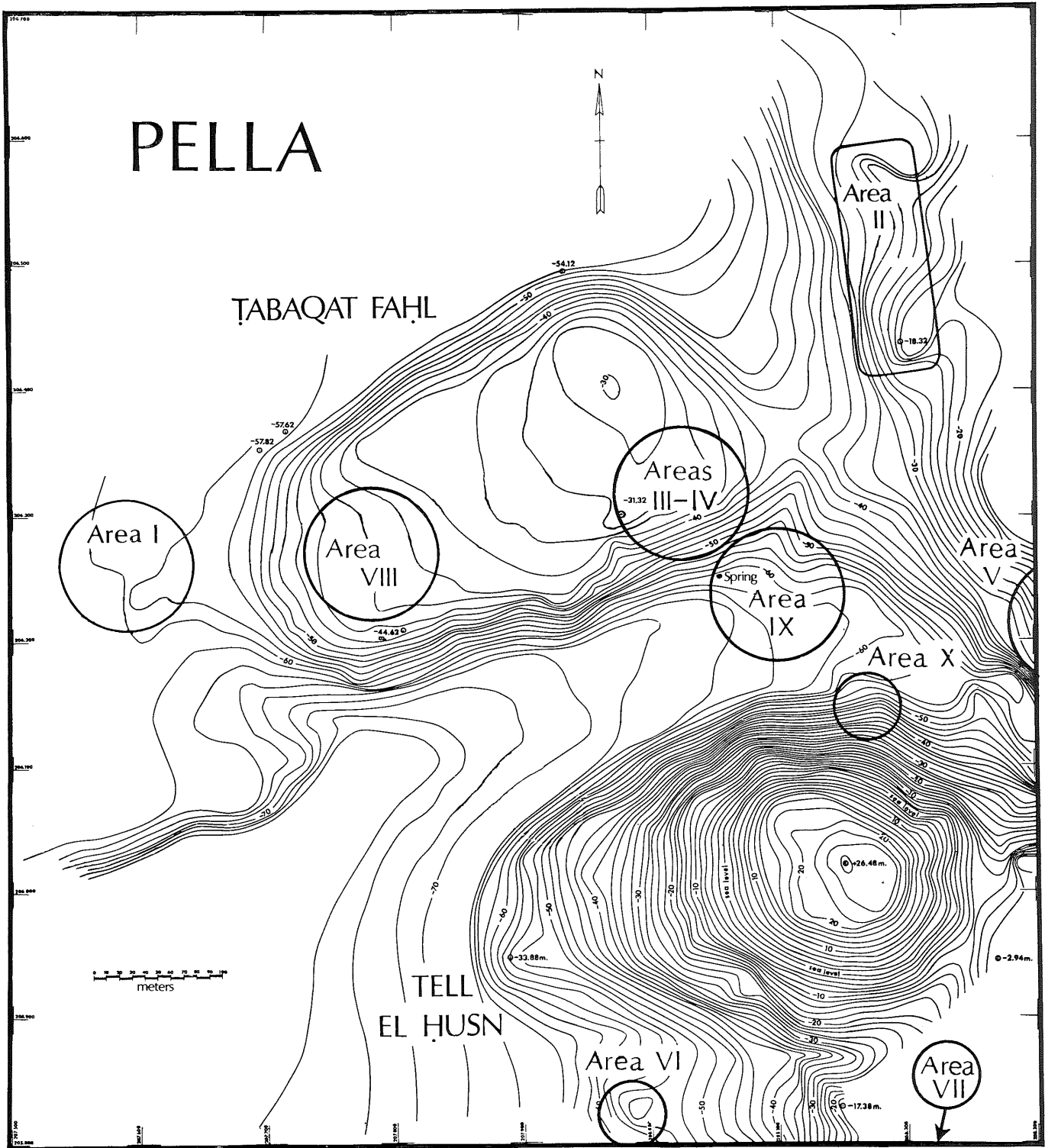
The ceramic repertoire of the cemetery can be seen in a series of 77 types and those which are most diagnostic as to date are discussed in the first chapter, "The Pottery." In the descriptions of the individual tombs, which follow in the second chapter, the author referred to the general discussion of the types without repeating the citations which are made there to comparative forms found at other sites. Artefacts other than those made of clay are dealt with in the descriptions of the individual tombs. In the final chapter, Professor Pritchard has assigned the tombs to earlier, intermediate and later groups of burials and suggested dates for the use of the area as a burial ground. Finally, some observations were made about the burial practices which are reflected in the cemetery.

This book, *The Cemetery at Tell es-Sa'idiyeh* is yet another example of Professor Pritchard's unsurpassed ability in clear, concise and highly competent archaeological writing. It is well illustrated with excellent photographs, clearly drawn and elegant ground plans and sections, typological tables and tables showing artefacts and pottery distribution and location, contour maps, measurements and other details of all stone and bone tools and ornaments. Burials and textile remains are fully described. A full specialised bibliography is included. This report is in fact of extraordinary value, out of all proportion to its size, not only to Syro-Palestinian archaeologists but also to archaeologists of the whole ancient world.

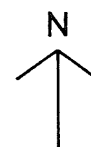
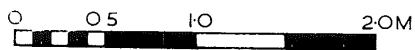
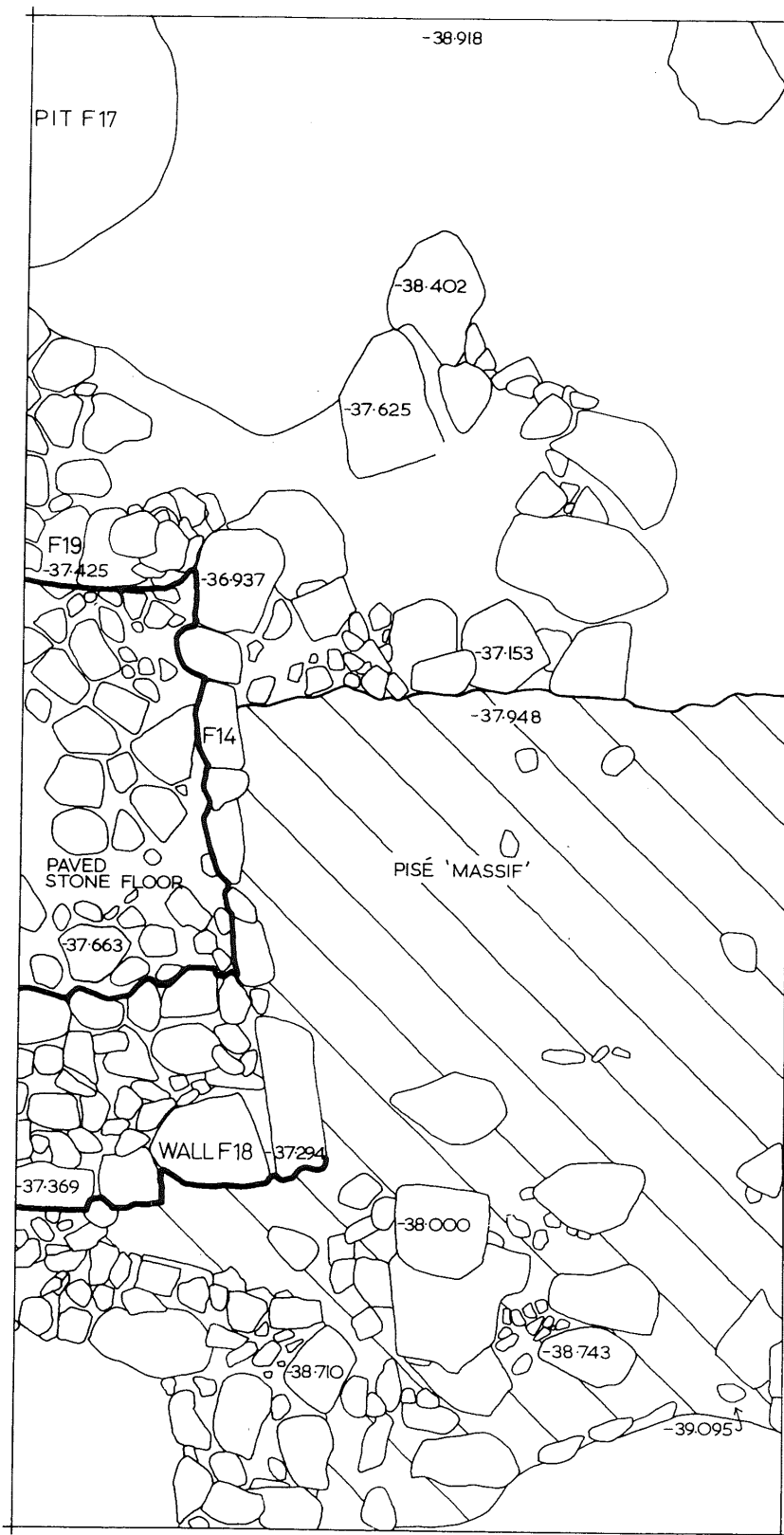
Professor Pritchard excavated at Tell es-Sa'idiyeh for four seasons until the 1967 Israeli War of aggression in Jordan terminated what was to have been a long range excavation. It is hoped, however, that he will resume his work at this very important site.

Adnan Hadidi

PLATES

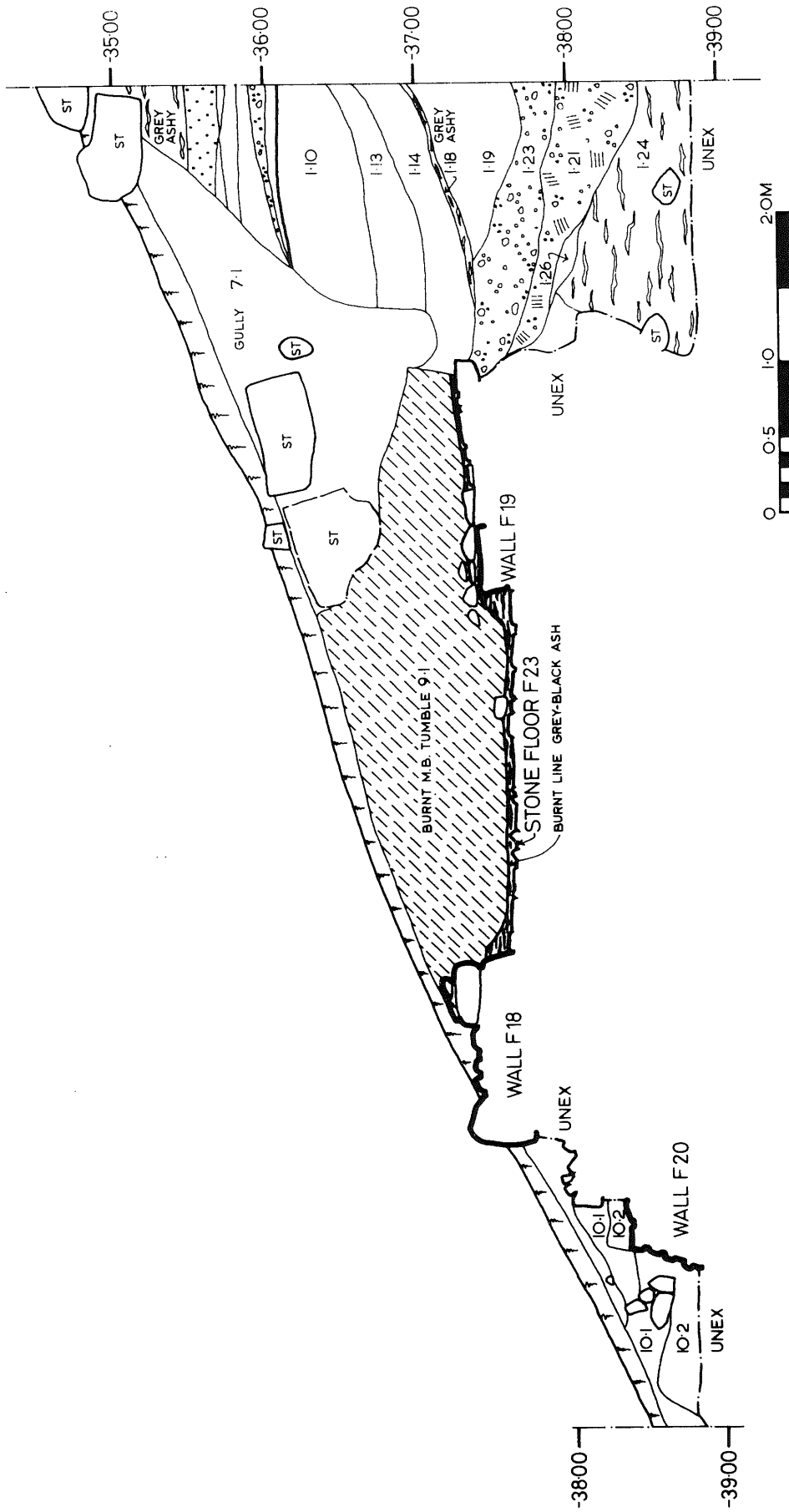


Pella: contour plan showing Area locations.

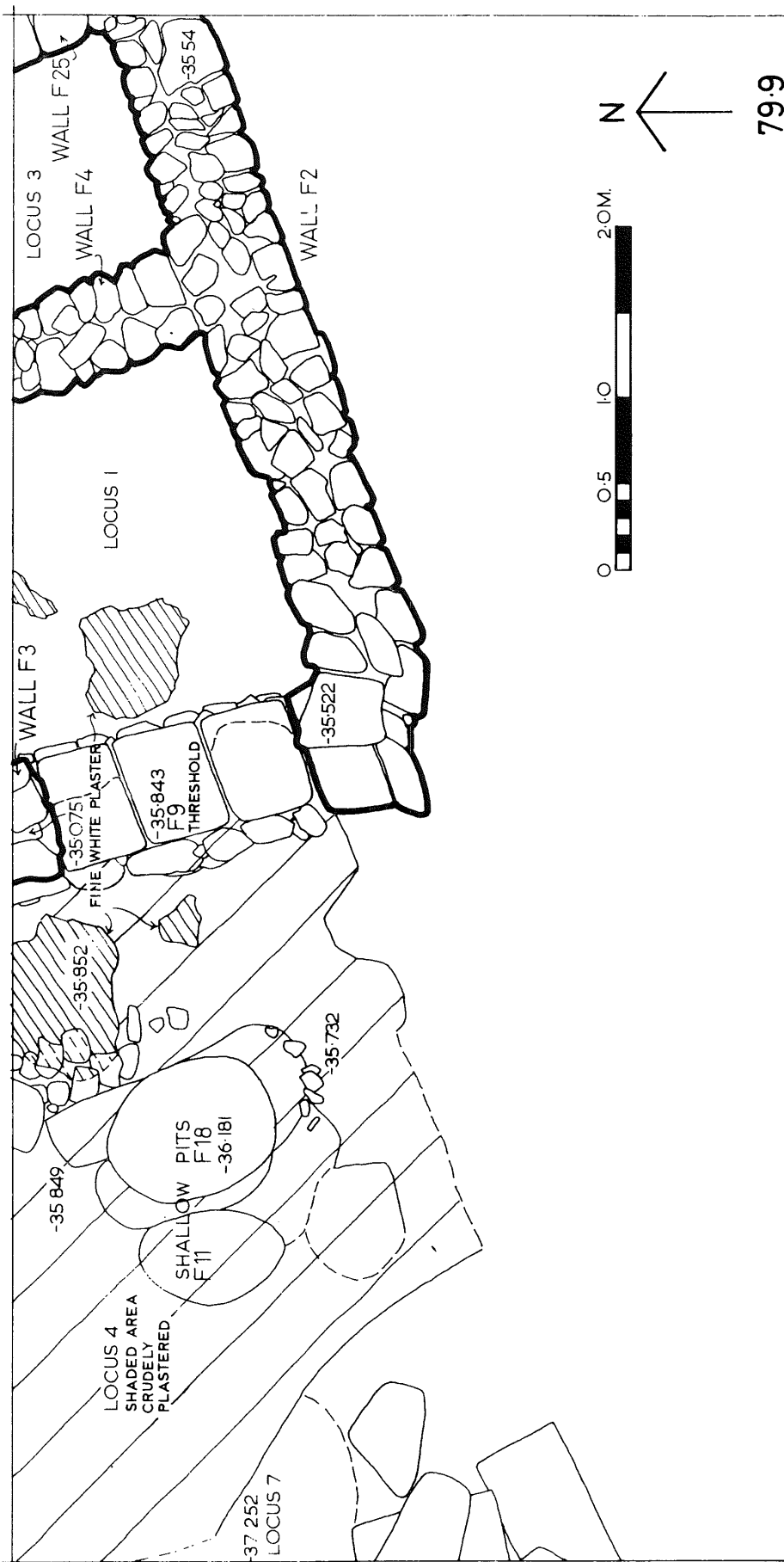


79.7

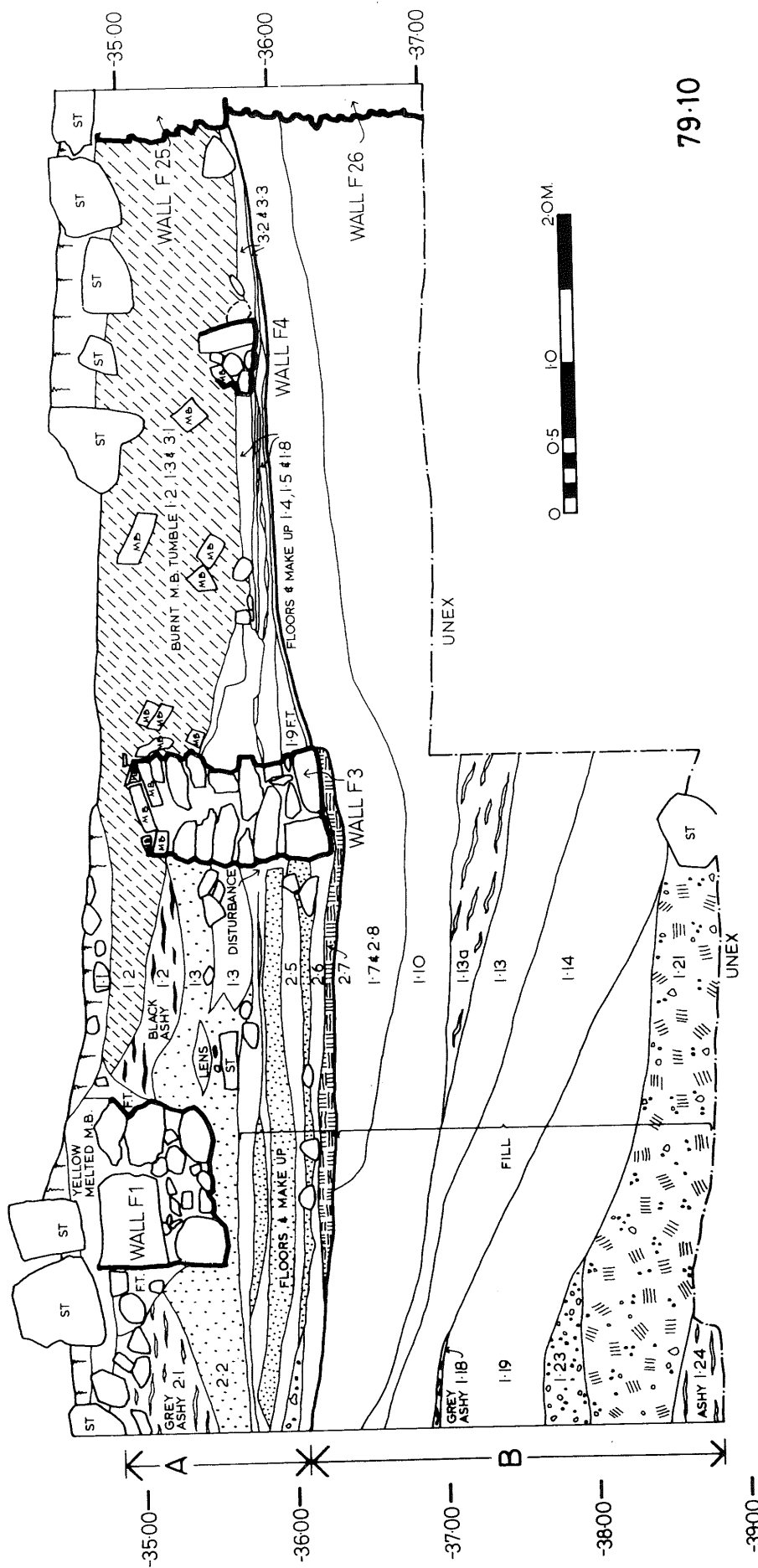
Area III Plot C: plan of part of Late Iron Age building.



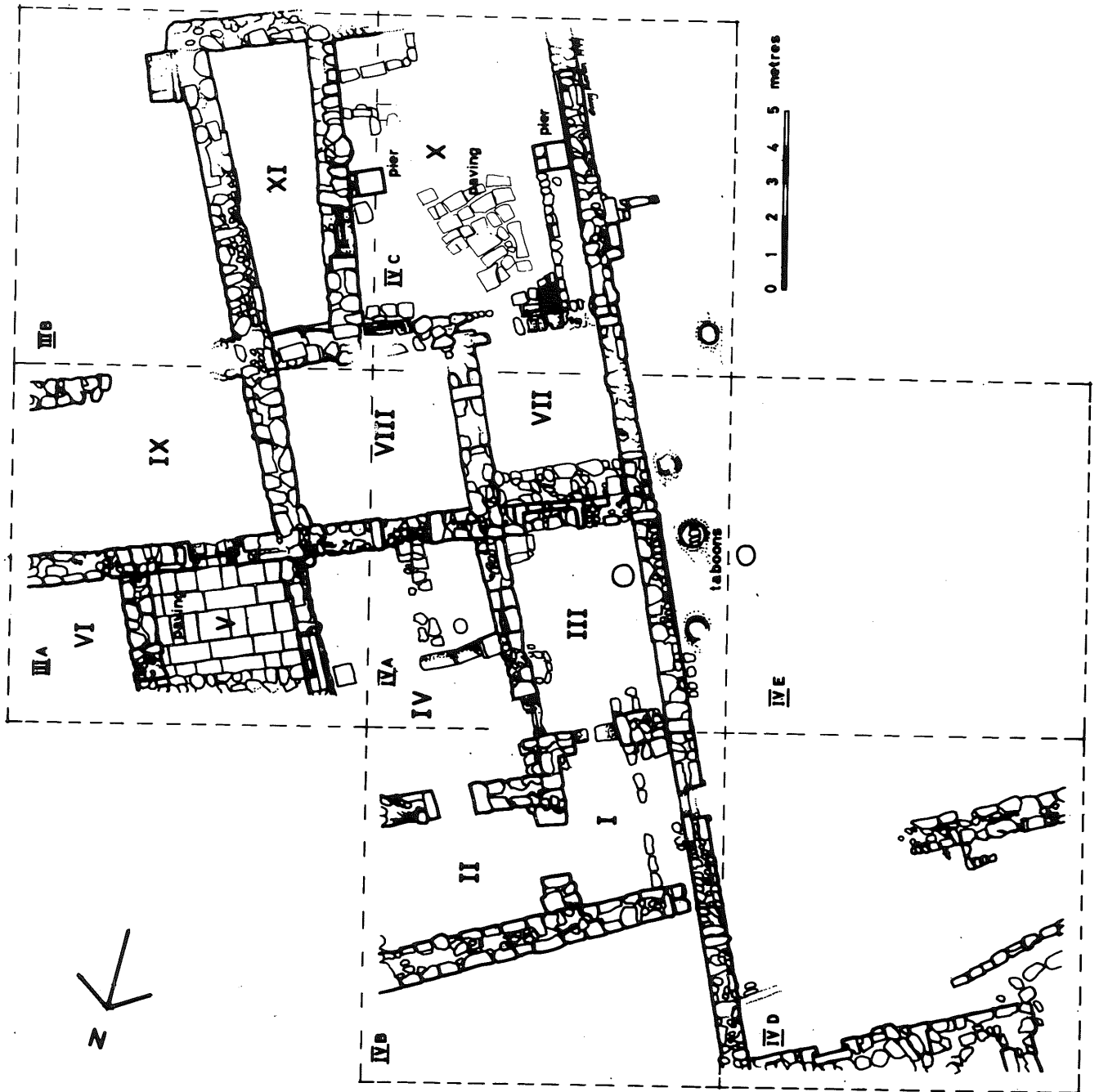
Area III Plot C: west section.



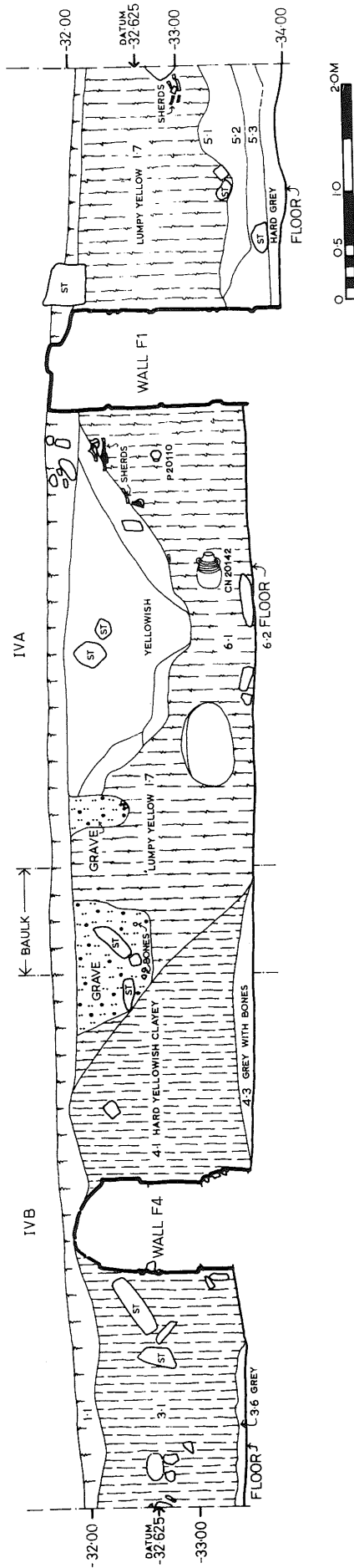
Area III Plot C: plan of part of Late Hellenistic building.



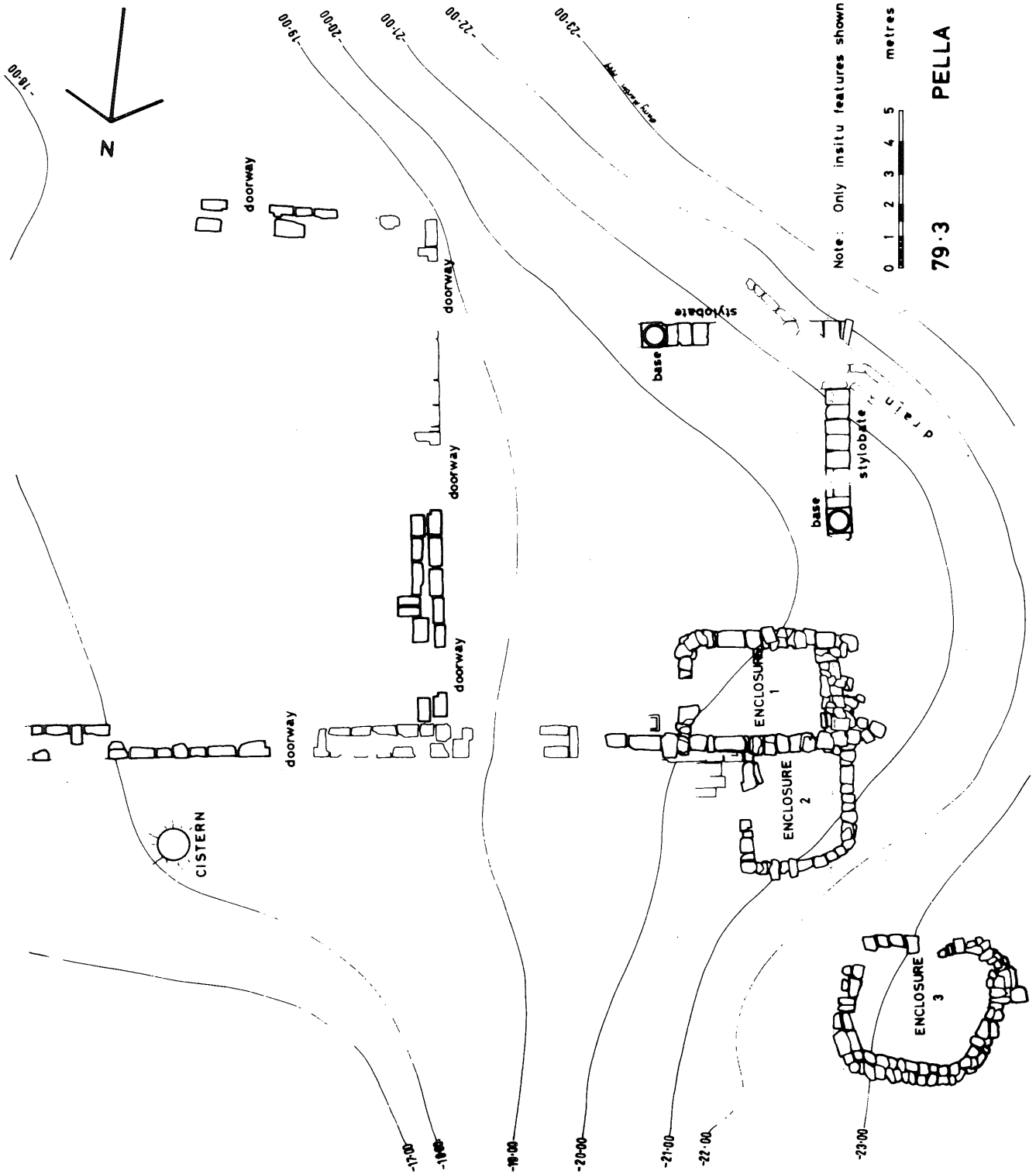
Area III Plot C: north section



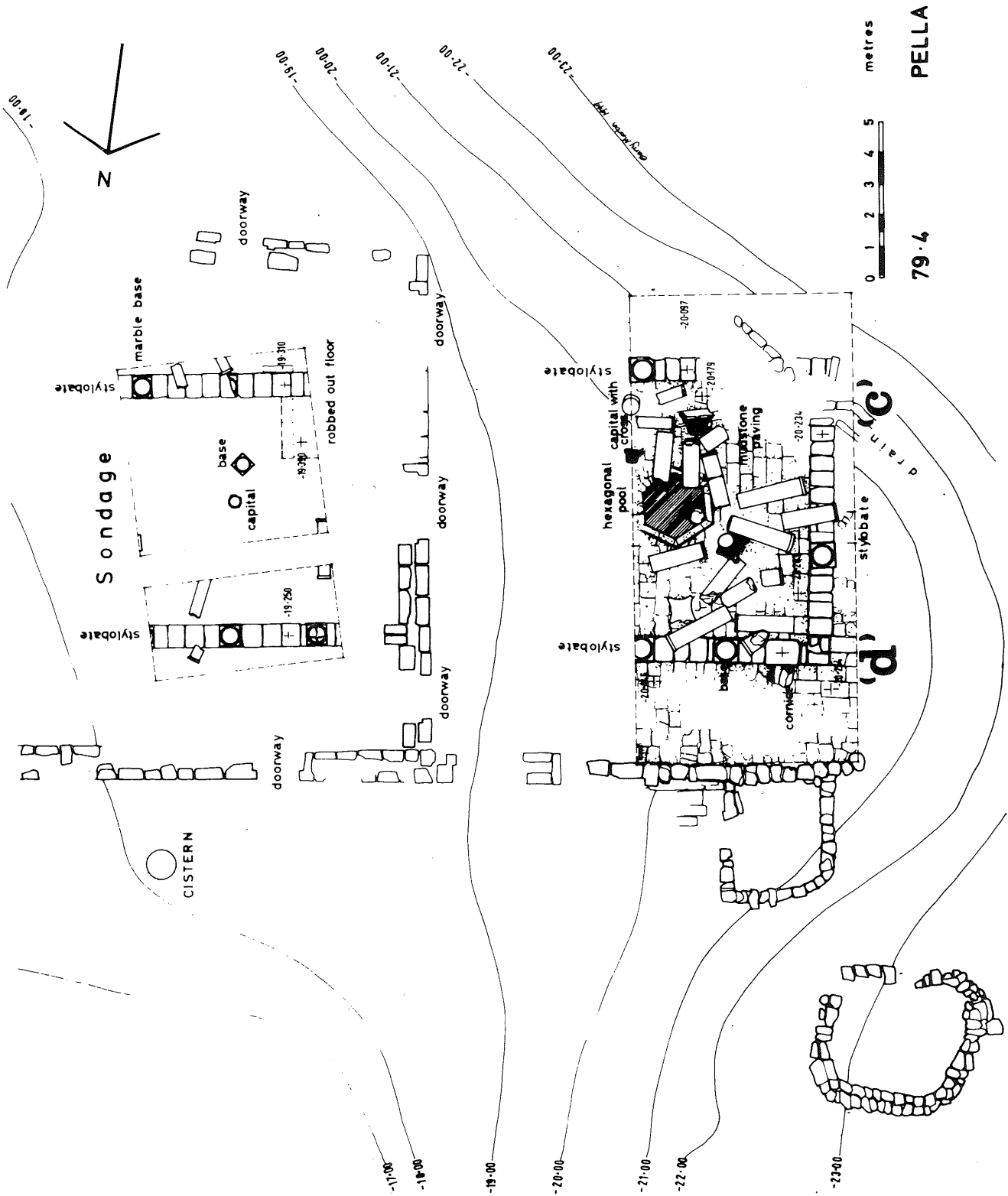
Area III/IV: plan of part of building of the Umayyad period.



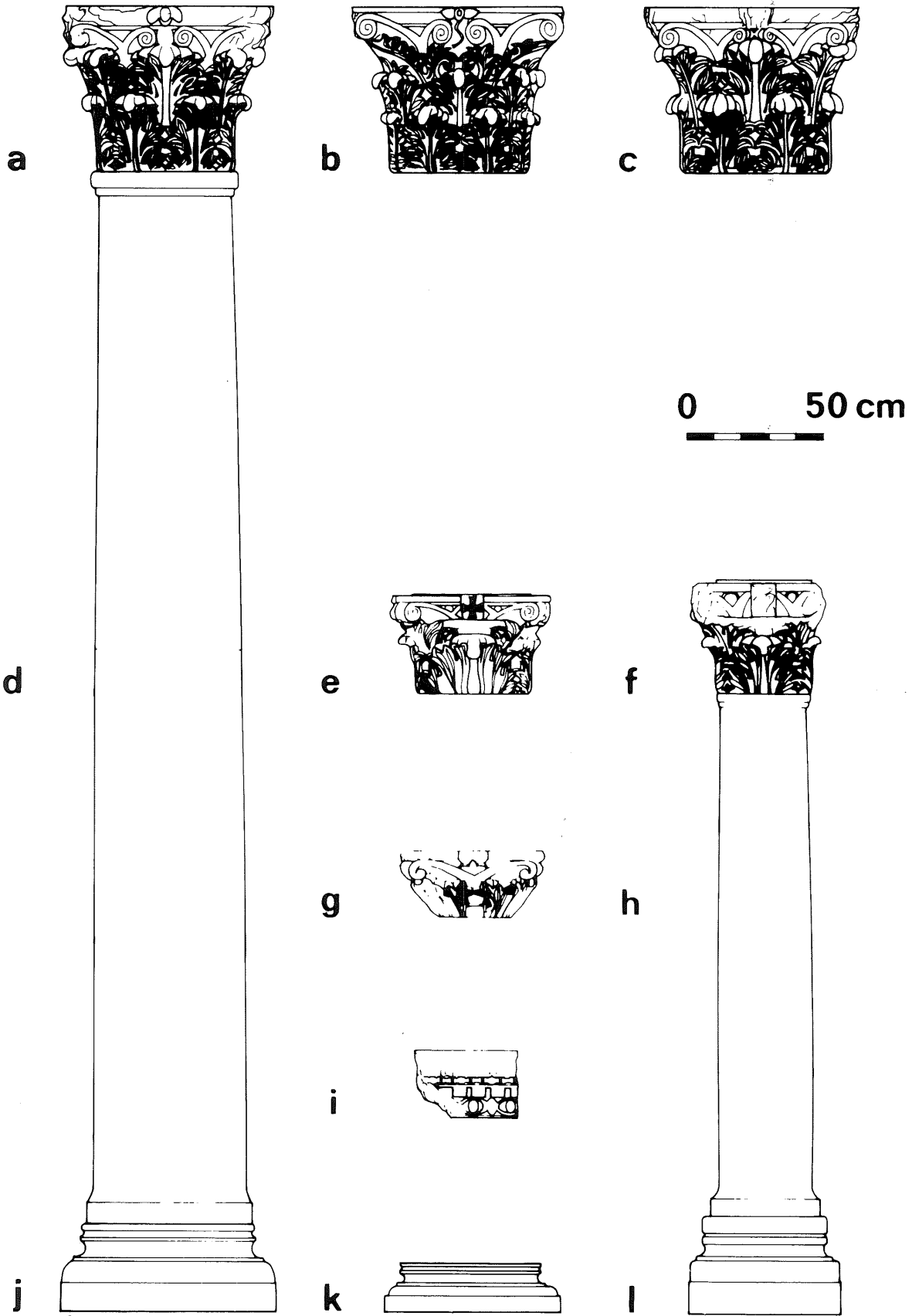
Area IV Plots B and A: part of east section.



Area. V: plan after excavation of late Classical remains.

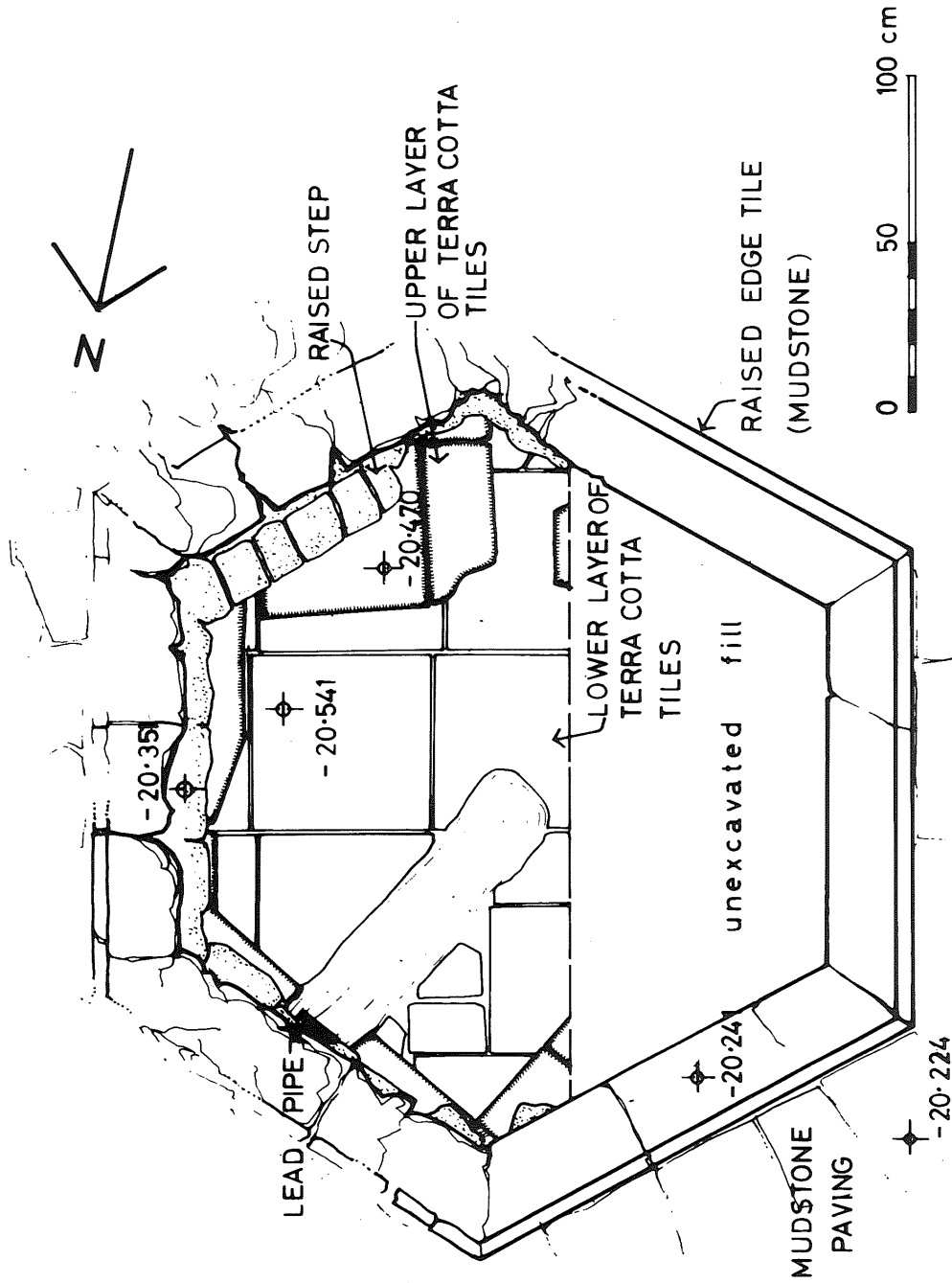


Area V: plan after excavation of late Classical remains.



PELLA 79.5

Area V: architectural details.



PELLA 79.6

Area V: hexagonal pool of the Umayyad period (?).

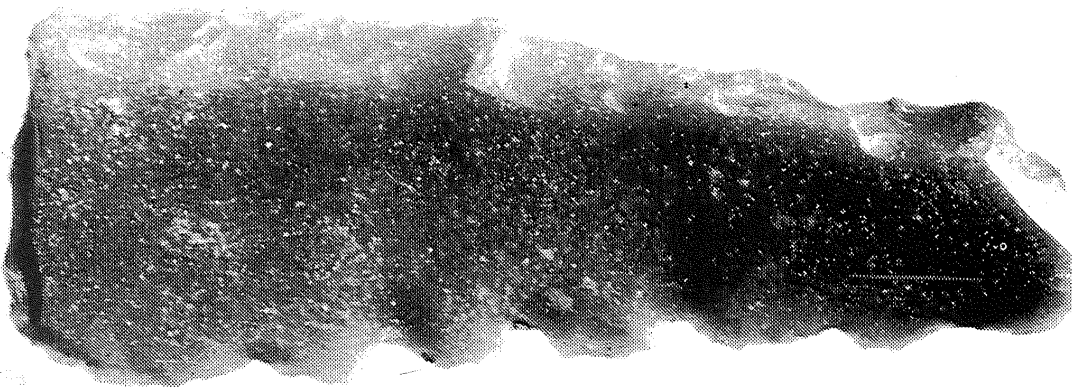


Surface finds

- 1- Gold solidus of Heraclius (610-641 A.D.)
Diameter: 21 mm; weight: 4.39 g.



2- Ghassulian chipped and ground chisel of tabular flint (7.8 x 3.2 cms.)

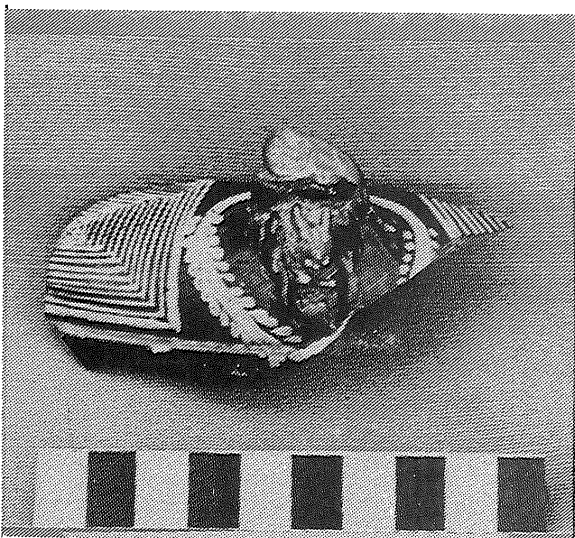


3- Neolithic B chipped blade of tabular flint (4.72 x 1.63 cms).

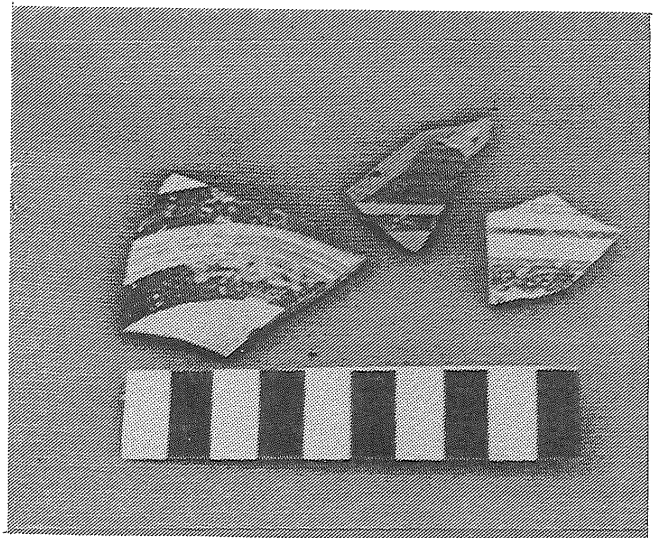
Finds from the fill under the Late Hellenistic building



1- Rhodian stamped jar handle.

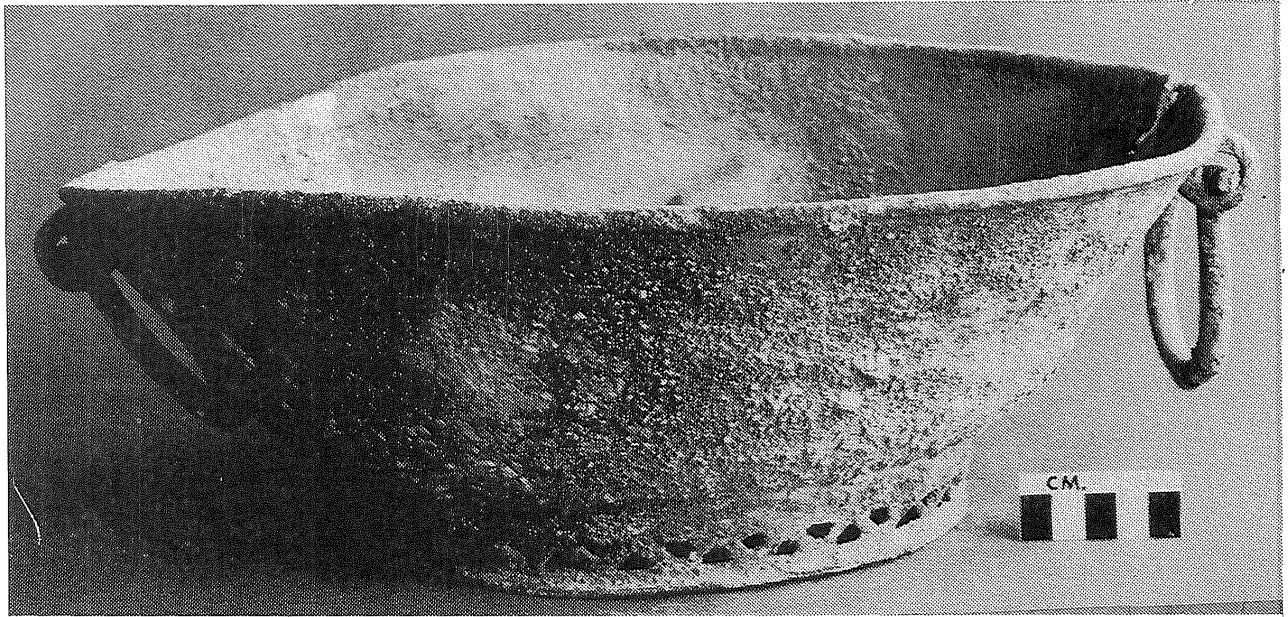


2- West Slope Ware sherd.



3- Mycenaean III sherds.

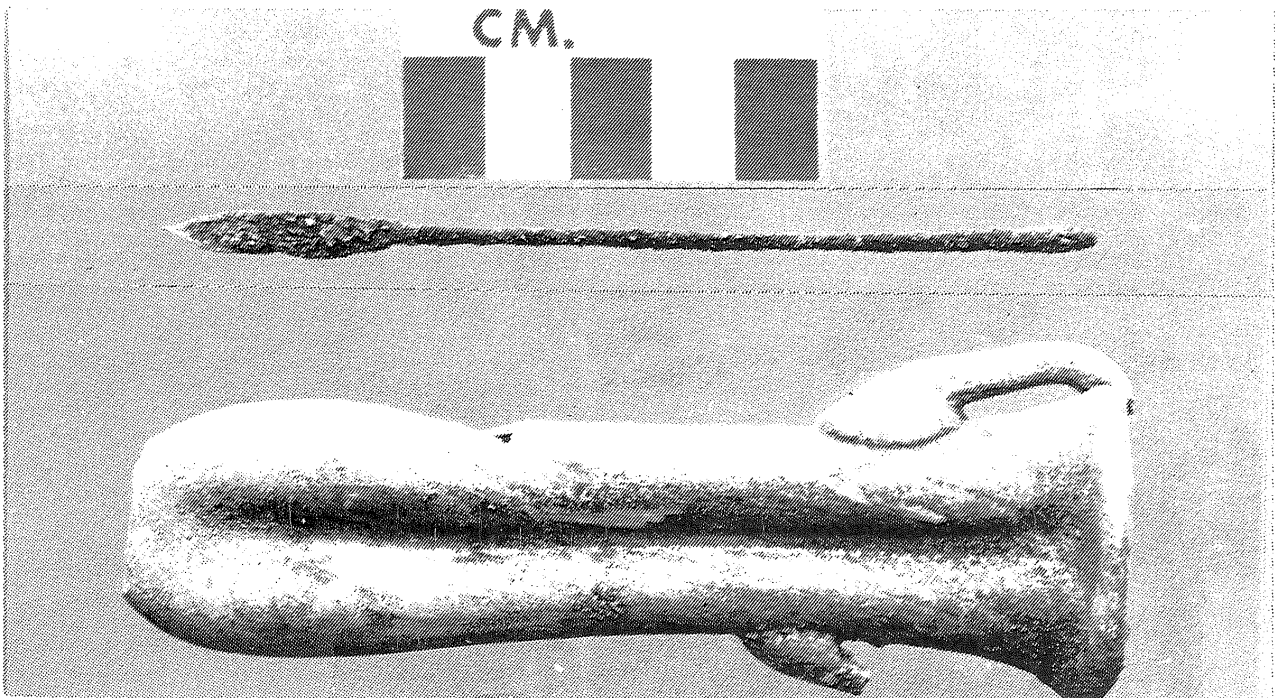
Finds from the Area III/IV building and tombs.



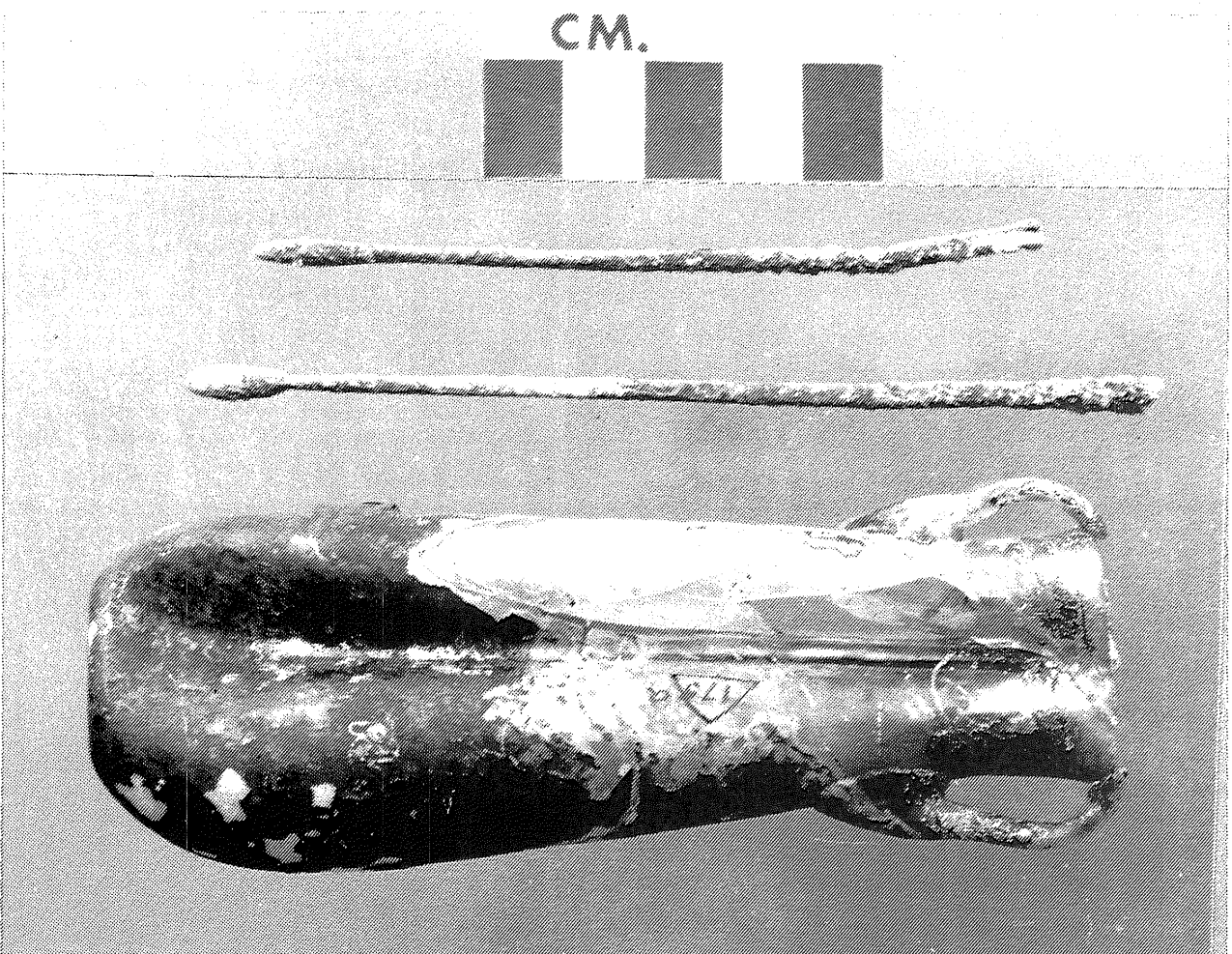
1- Bronze cauldron.



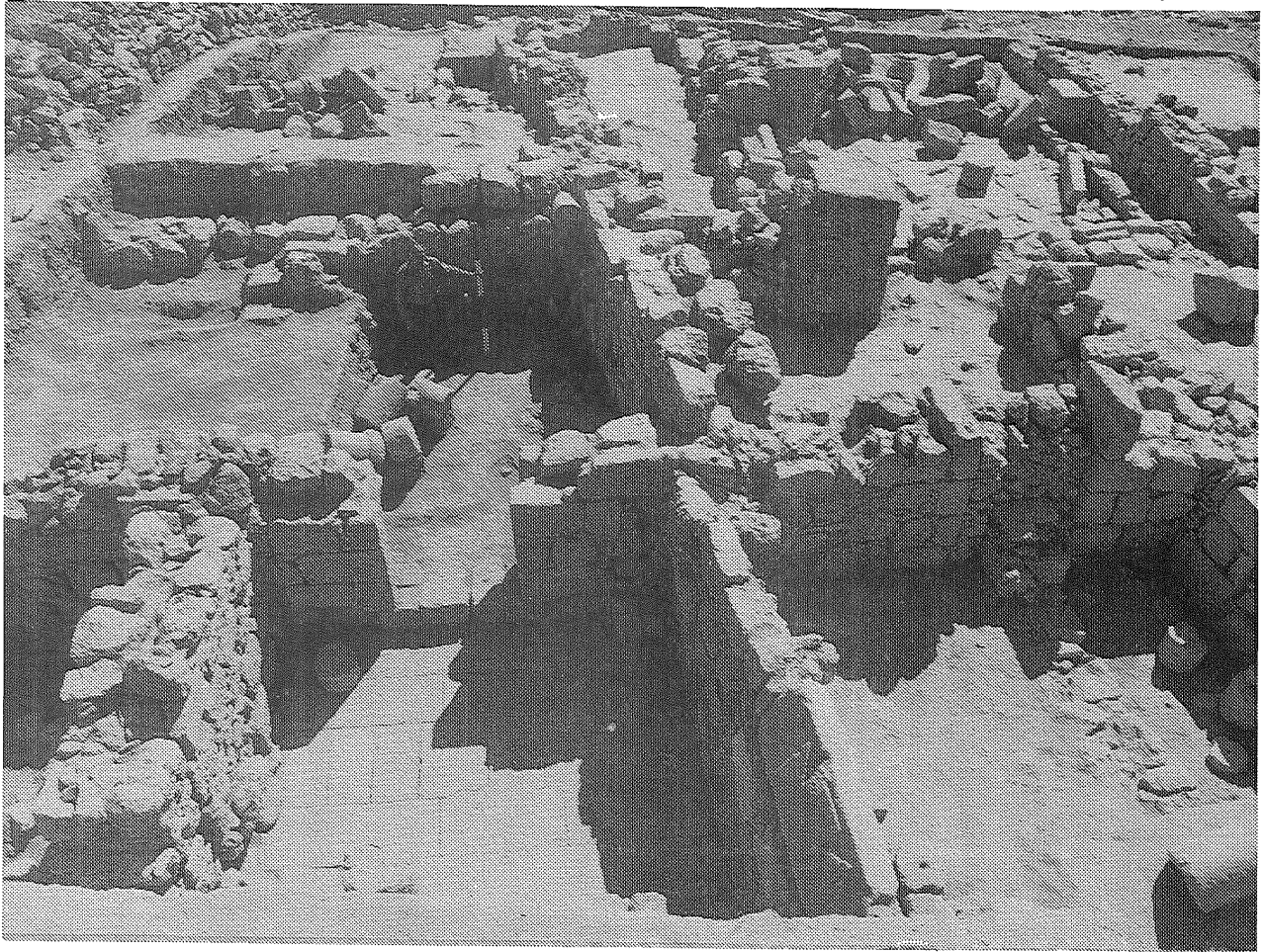
2- Glass juglet.



3- Glass unguent vessels and spatula from Tomb IIC.



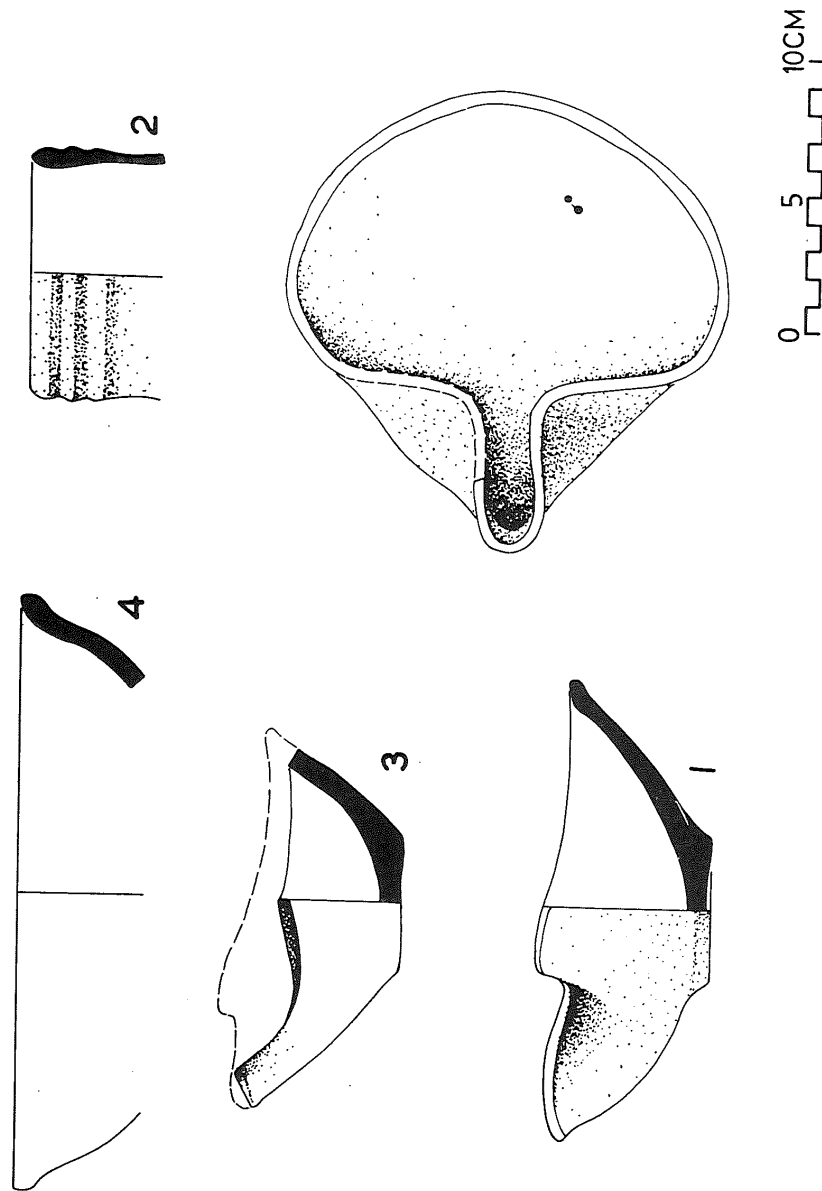
4- Glass unguent vessel with two spatulae from Tomb VIA.



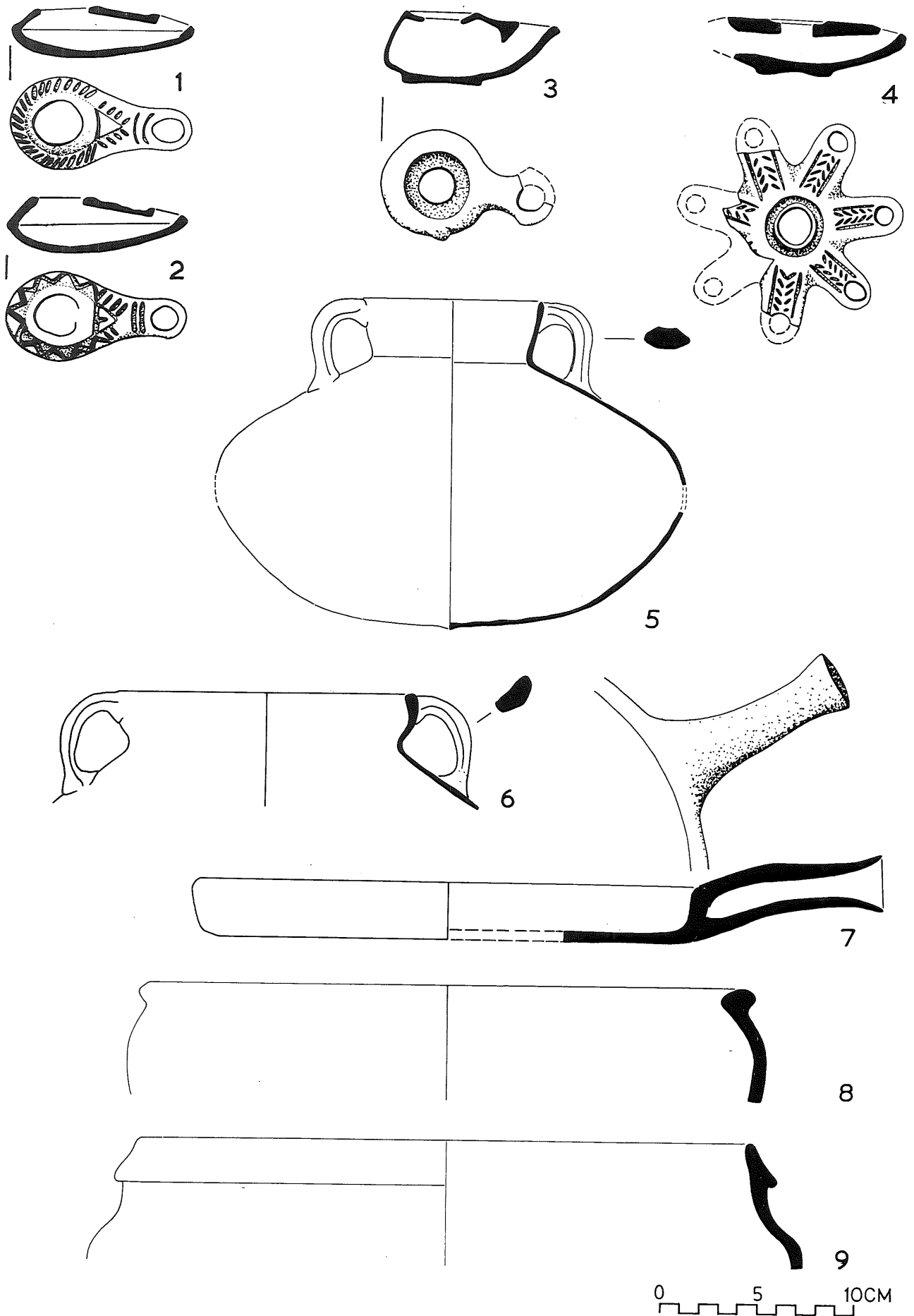
1- View south. Note doorway blocking, flagstone floor and earthquake tumble.



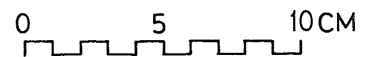
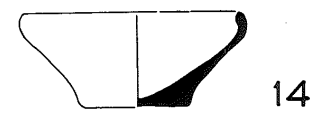
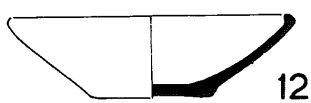
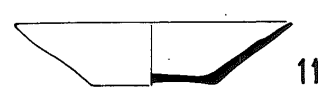
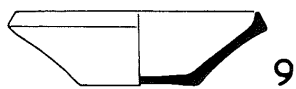
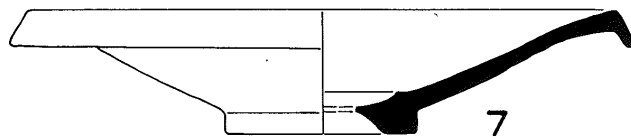
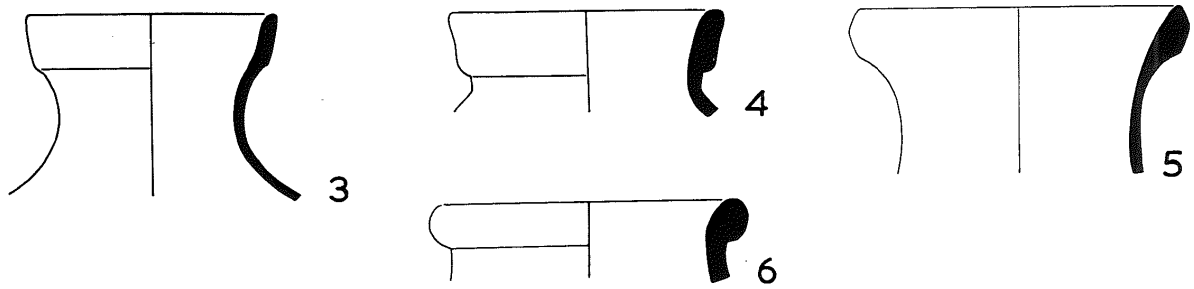
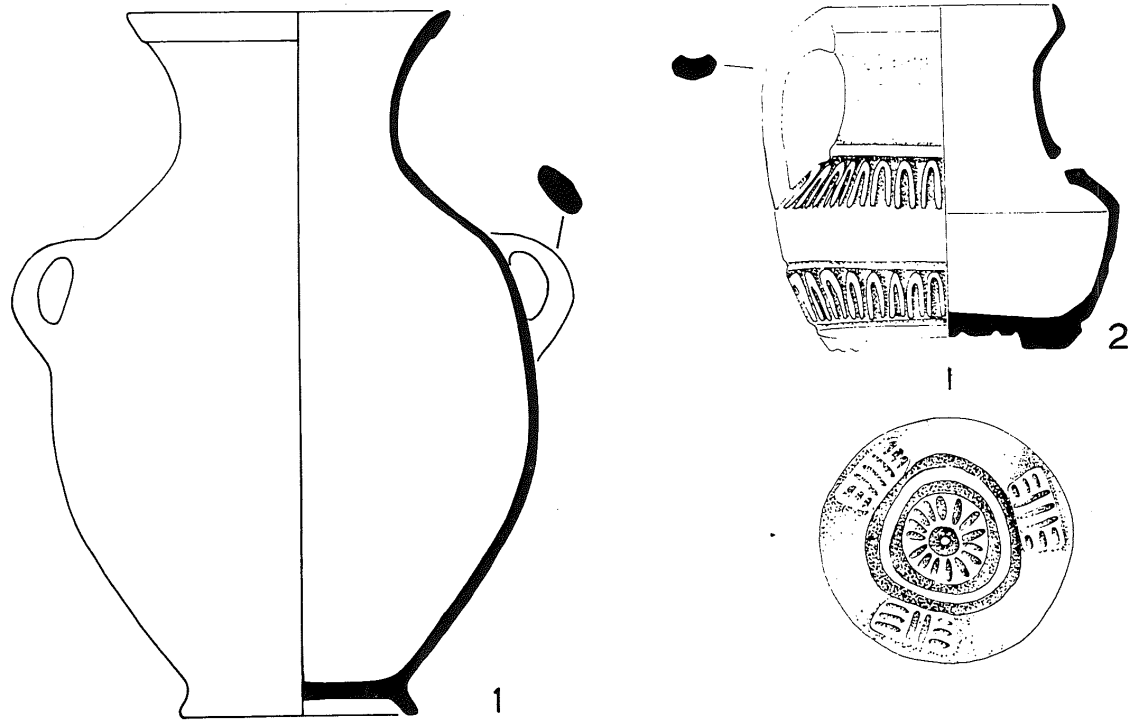
2- View south-west. Note collapsed column, late west wall and courtyard beyond.



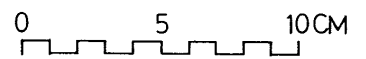
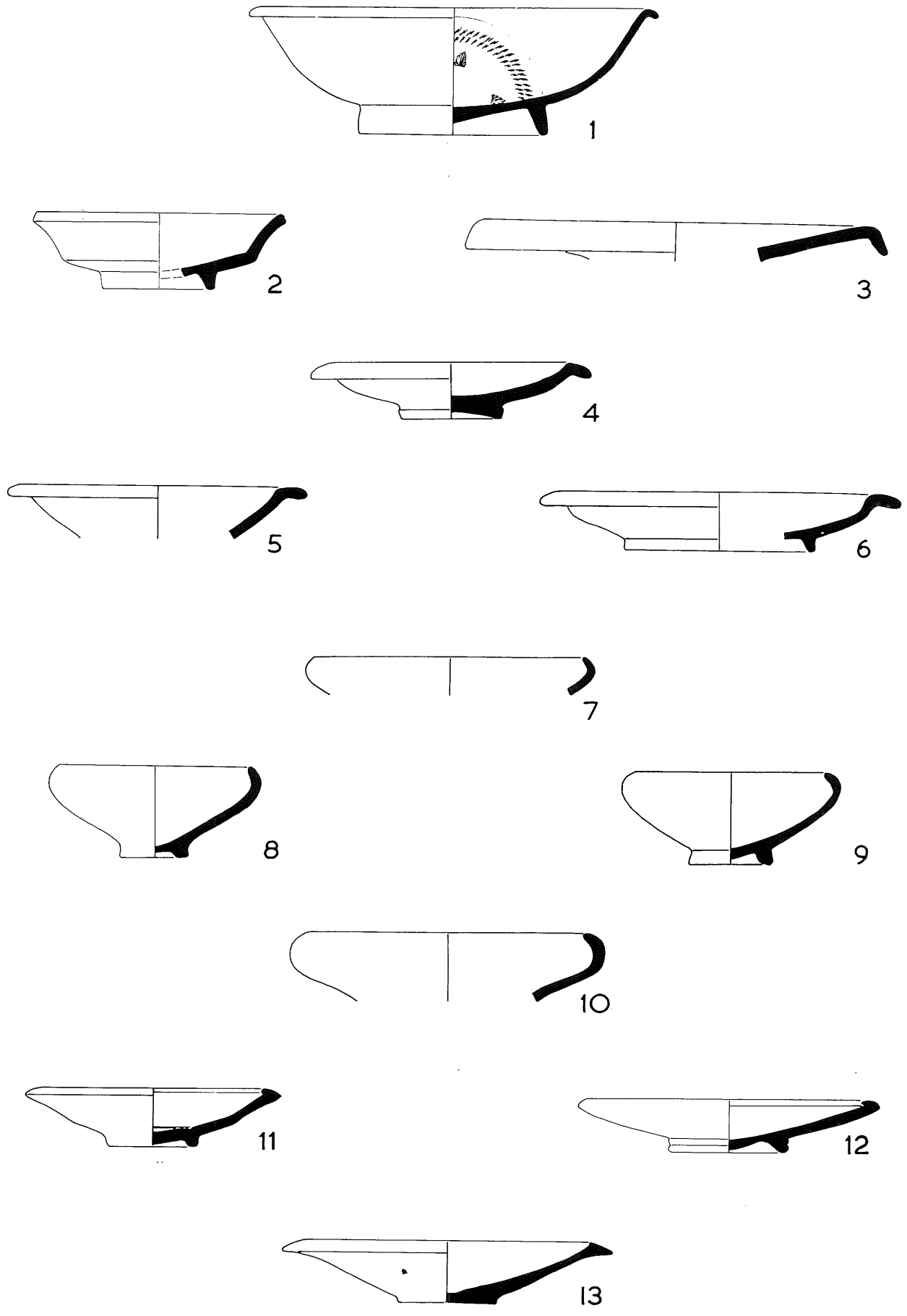
Iron Age Pottery.



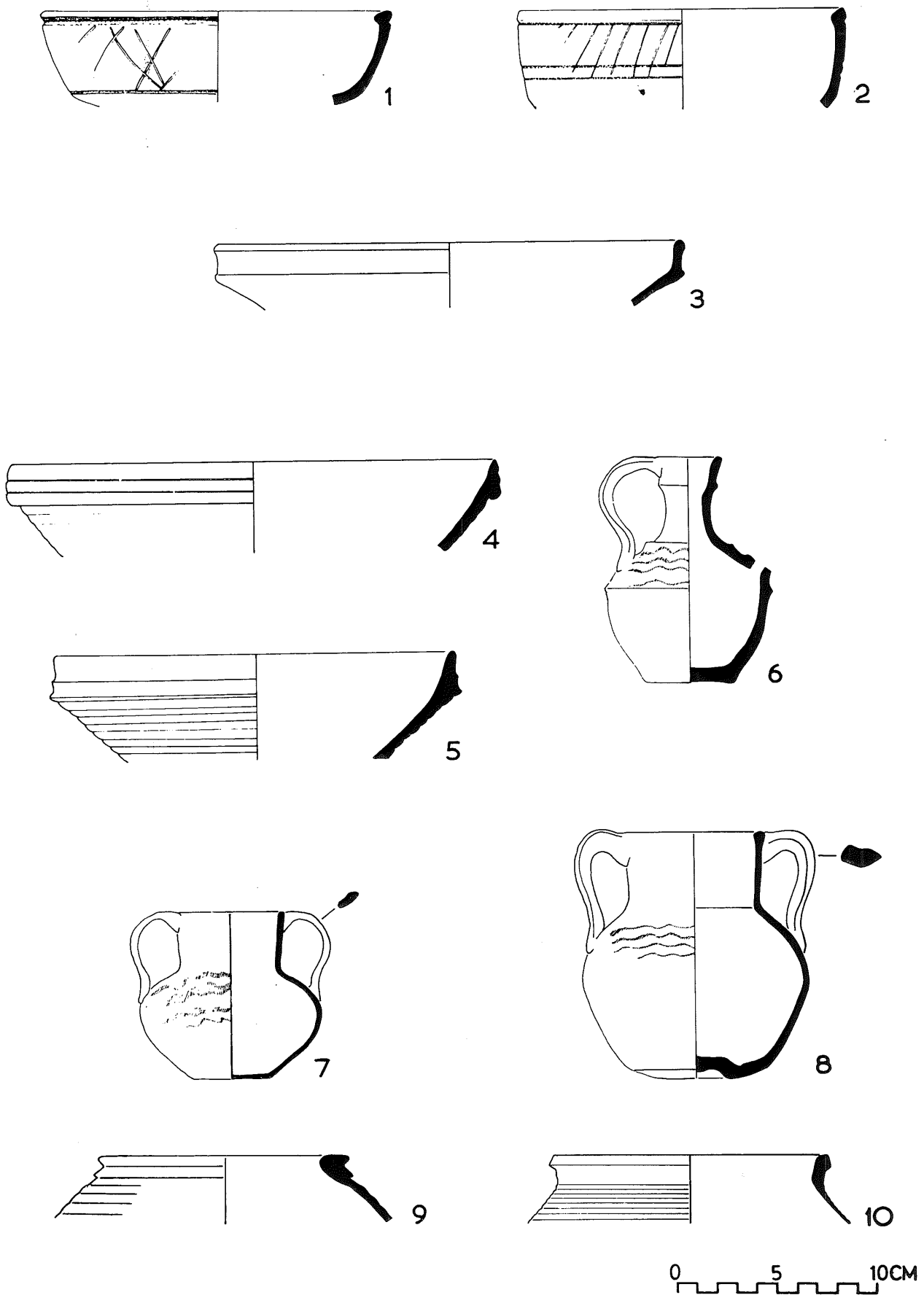
Hellenistic pottery: Lamps, cooking vessels and storage bowls.



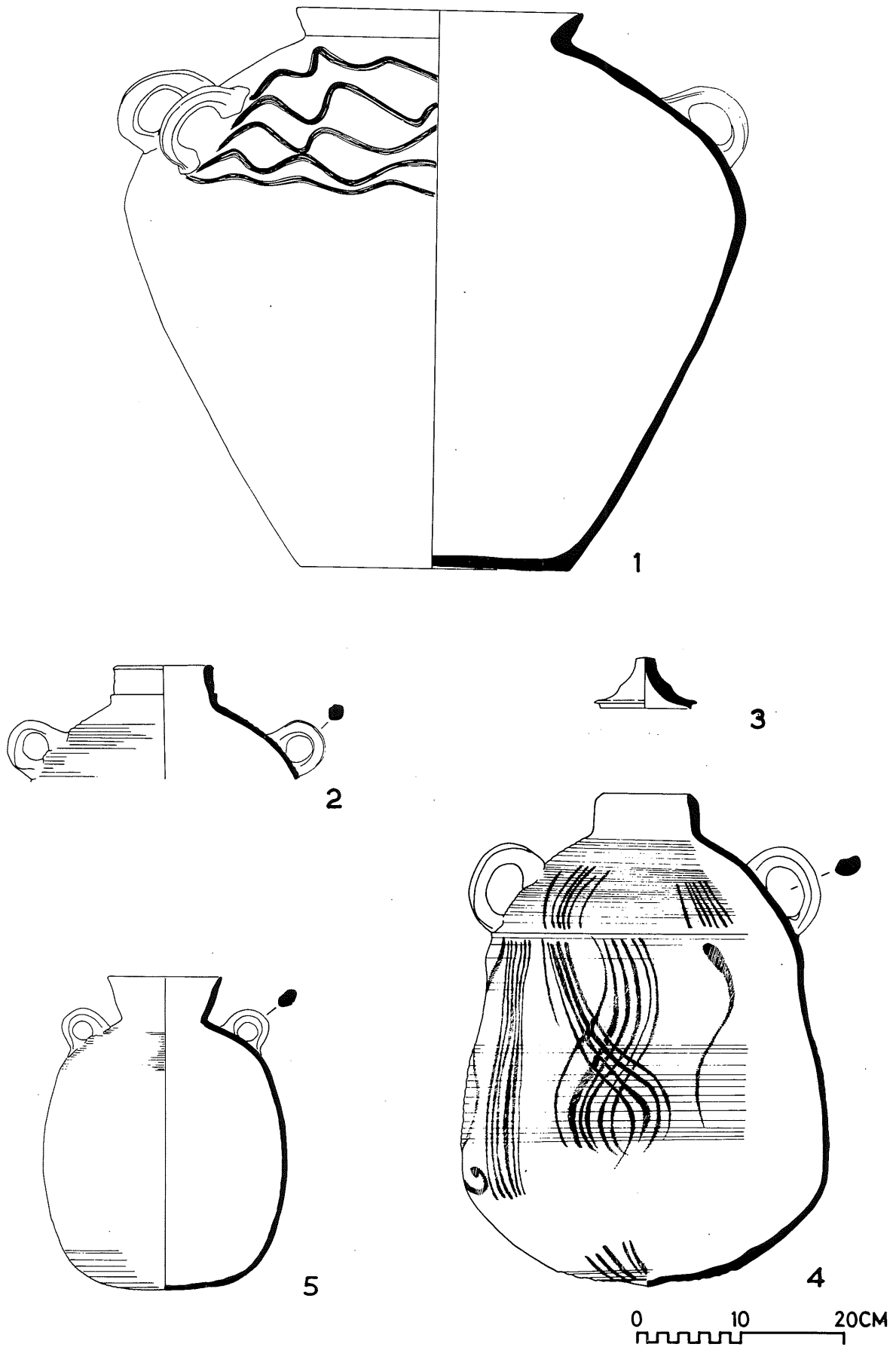
Hellenistic pottery: storage vessels, jugs and bowls.



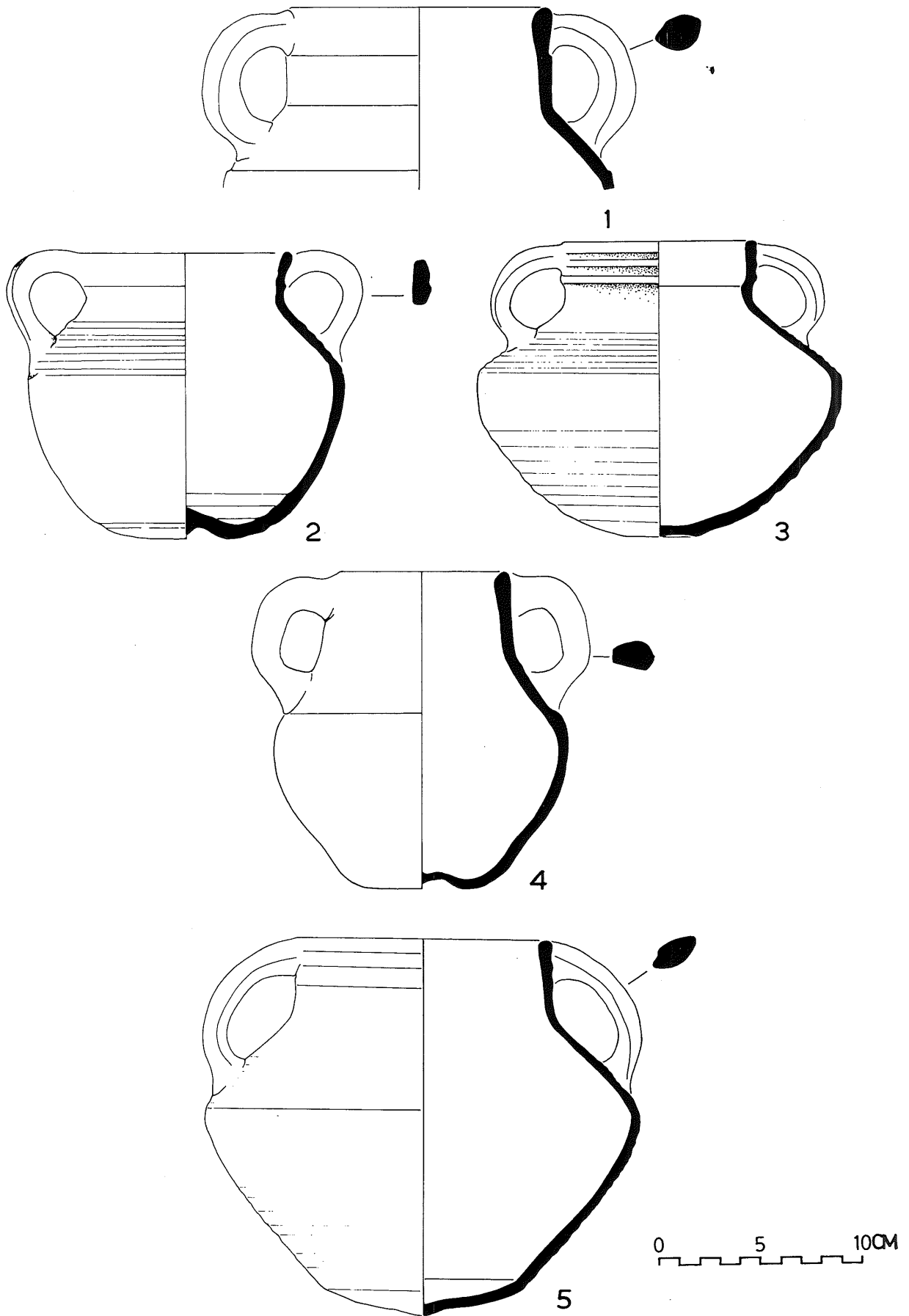
Hellenistic pottery: bowls and plates (Group B)



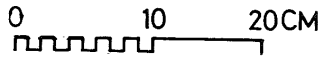
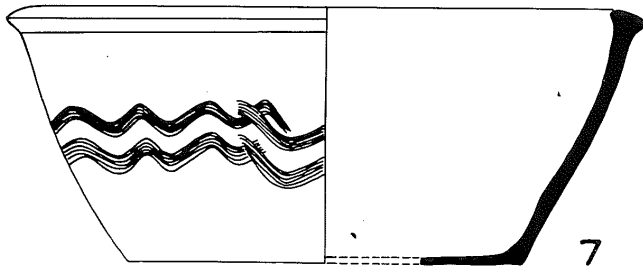
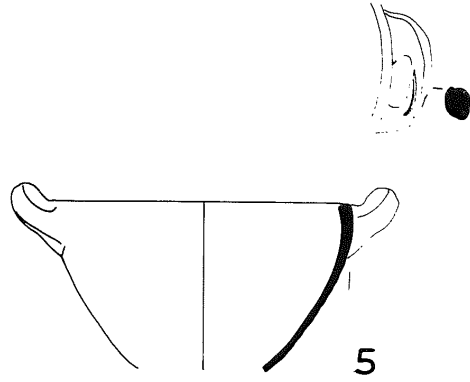
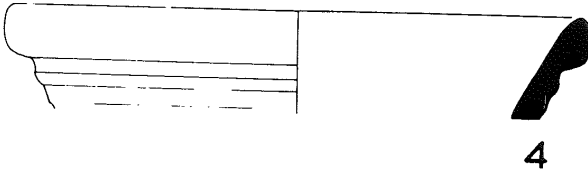
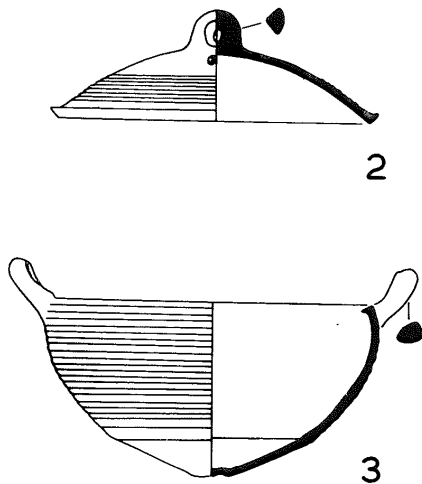
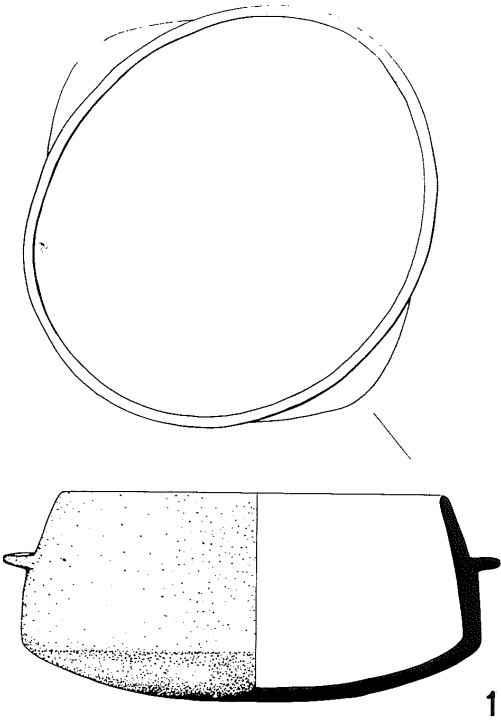
Bowls and small painted jugs and jars from the final phase of the Area III/IV building and from its collapse.



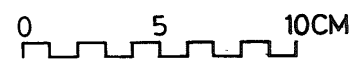
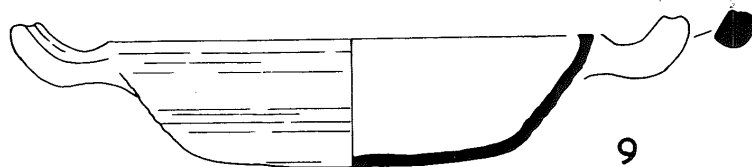
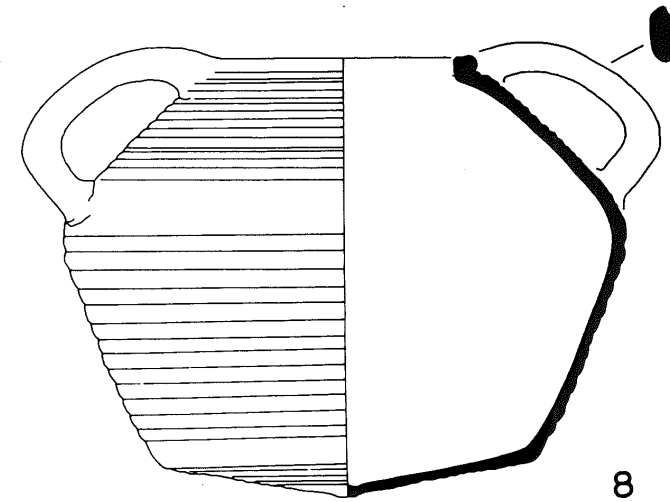
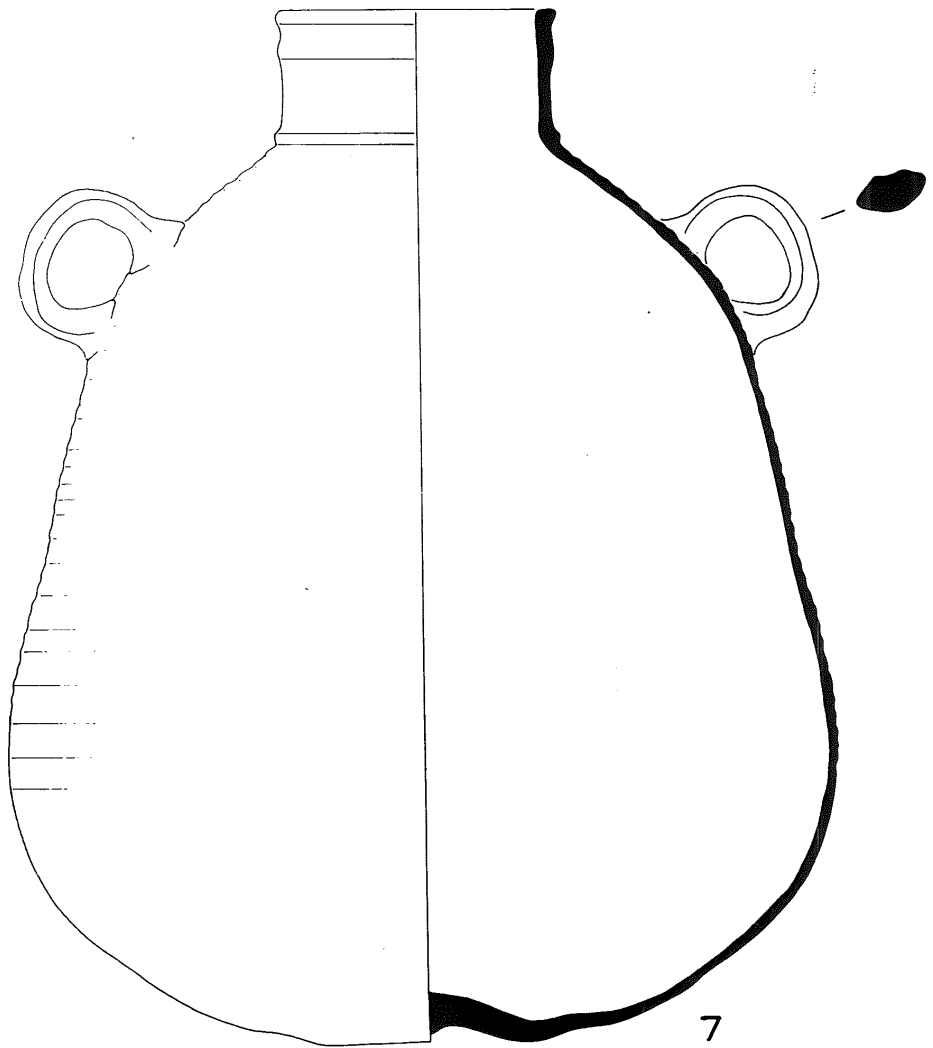
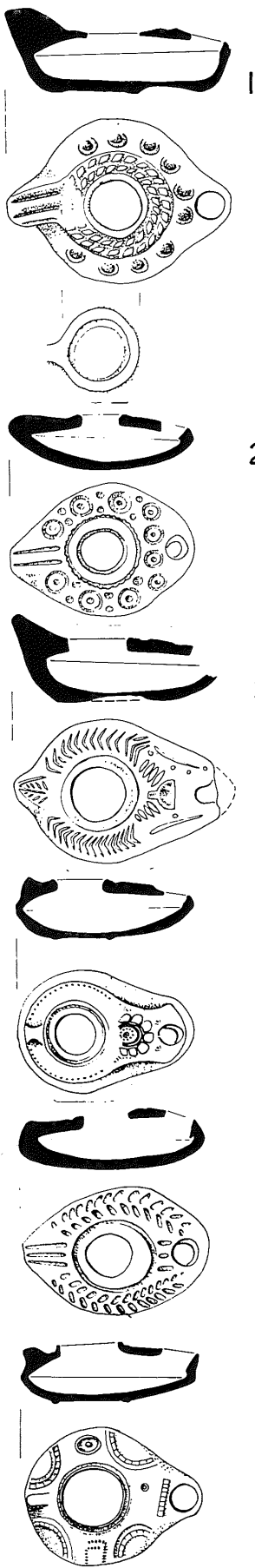
Storage vessels from the final phase of the Area III/IV building and from its collapse.



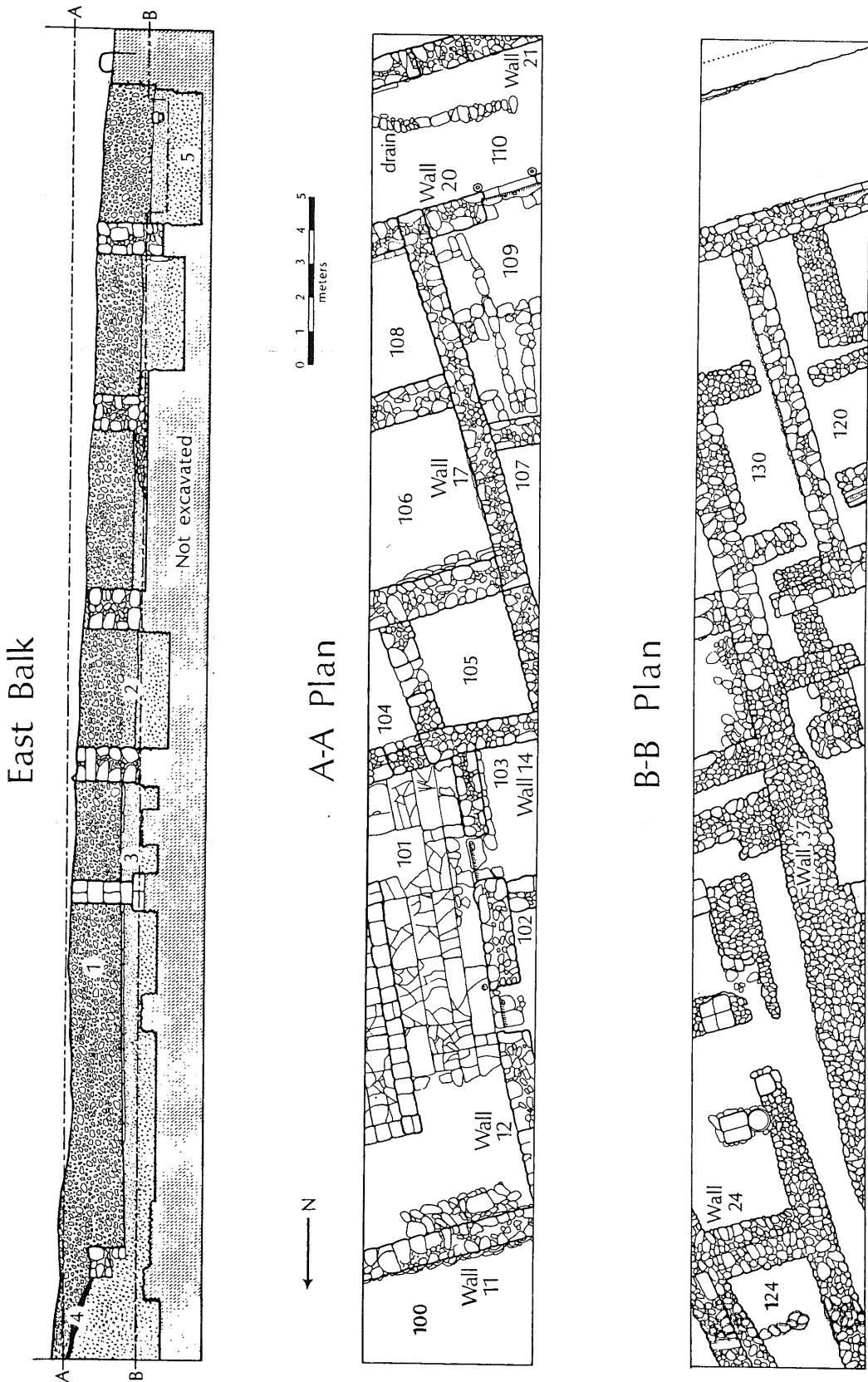
Jars/cooking vessels from the final phase of the Area III/IV building and from its collapse.



Cooking vessels, storage bowls and portable oven from the final phase of the Area III/IV building and from its collapse.



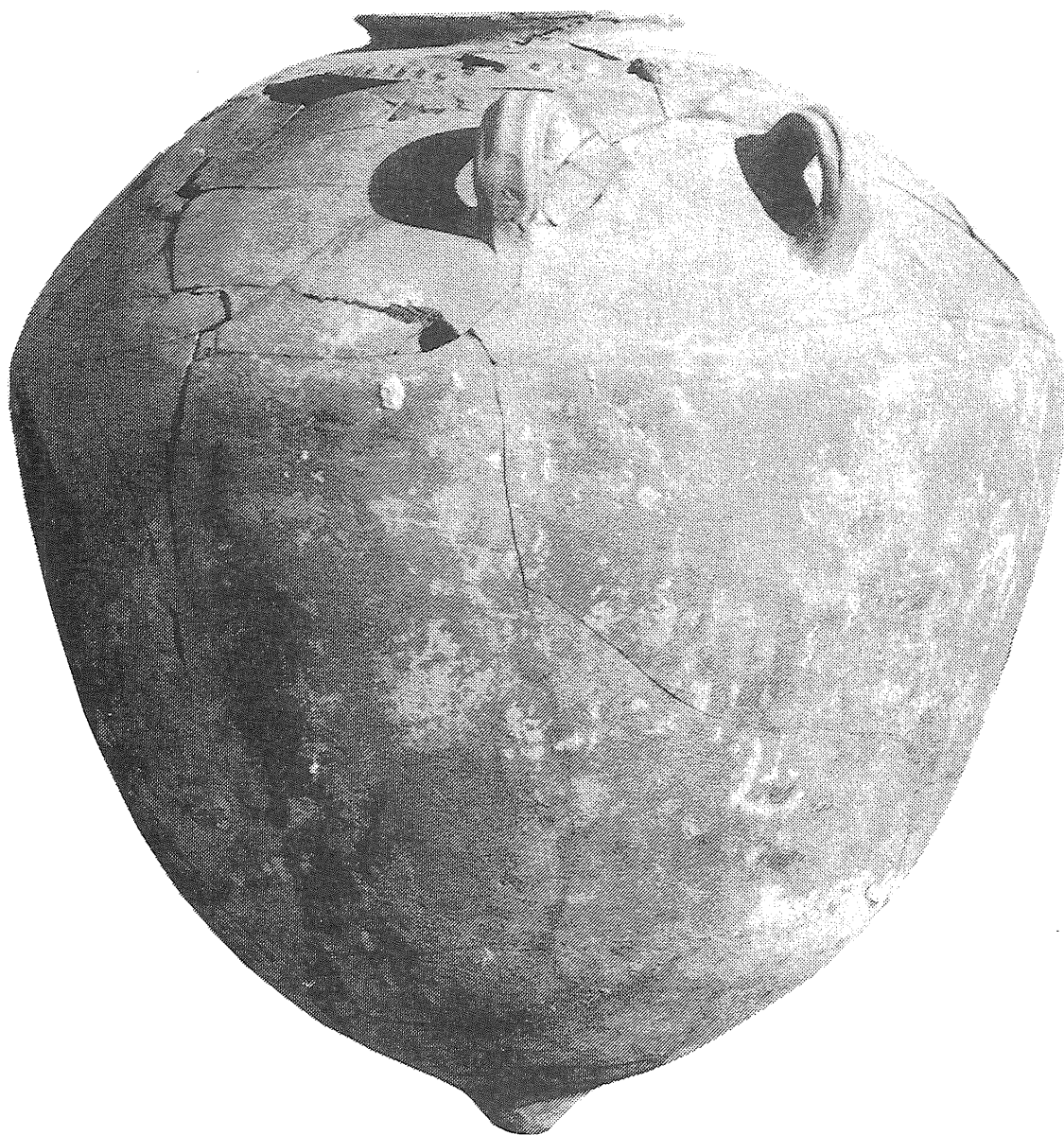
Pottery from Tomb in Area II



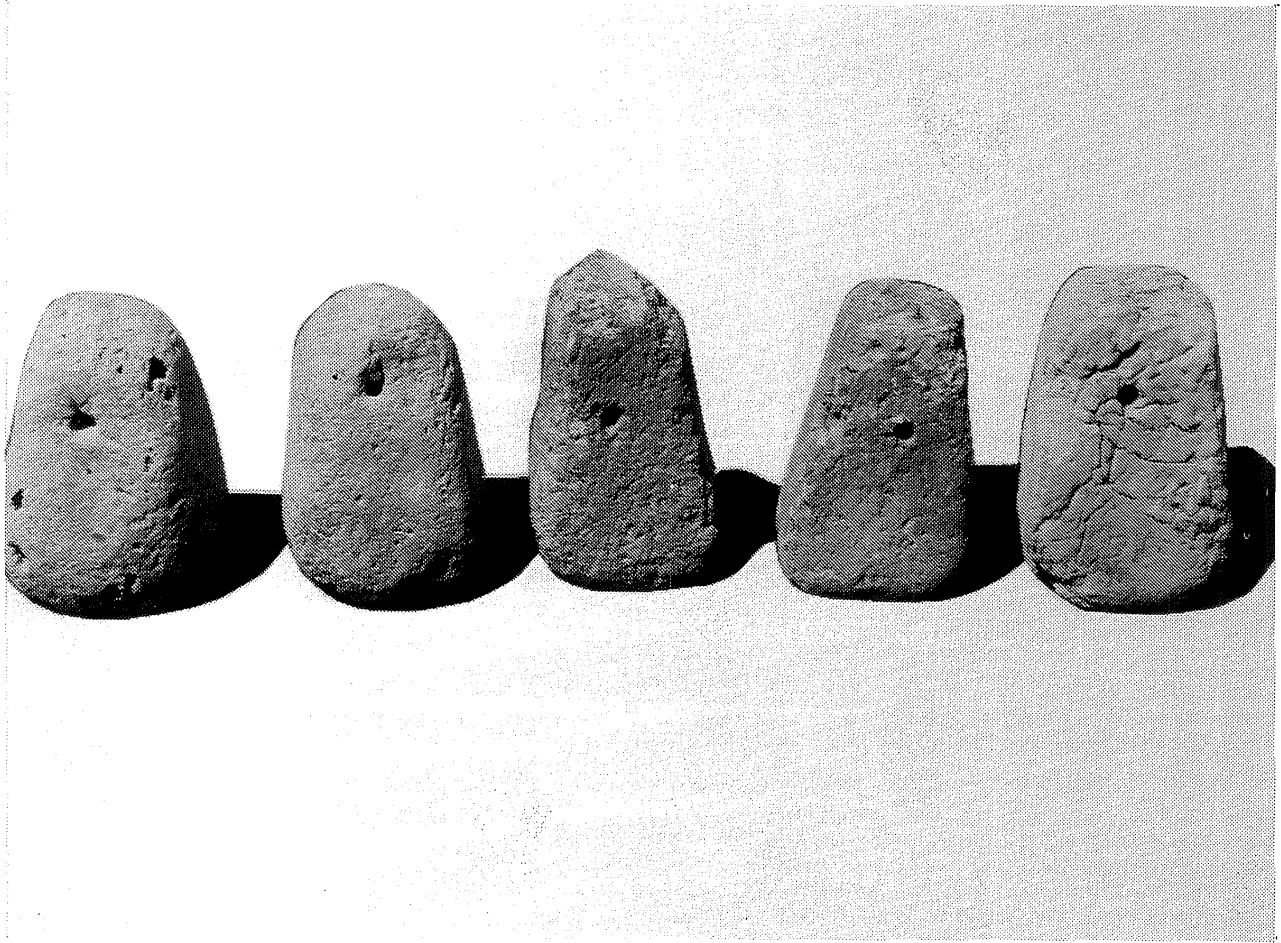
Plans and section of Area VIII, the West Cut. In the east balk, 1—debris ranging from MB through Umayyad; 2—pure Umayyad; 3—disturbed soil beneath houses, chiefly a mixture of Hellenistic, Roman and Byzantine (nothing later); 4—pure Early Roman; 5—debris from destruction of 83/82 B.C., almost pure Late Hellenistic with a few earlier strays. The A-A plan shows architectural features as they would be seen downward from a hypothetical line A-A after the removal of strata 1-2; the B-B plan shows architectural features as they would be seen downward from hypothetical line B-B after the removal of strata 3-5. On the B-B plan only some walls and loci are identified by number.



The West Cut, view toward the south. In the foreground is the Courtyard House with piers that supported the veranda around the courtyard. The steps on the far right were cut by the excavators to facilitate entry into the trench.



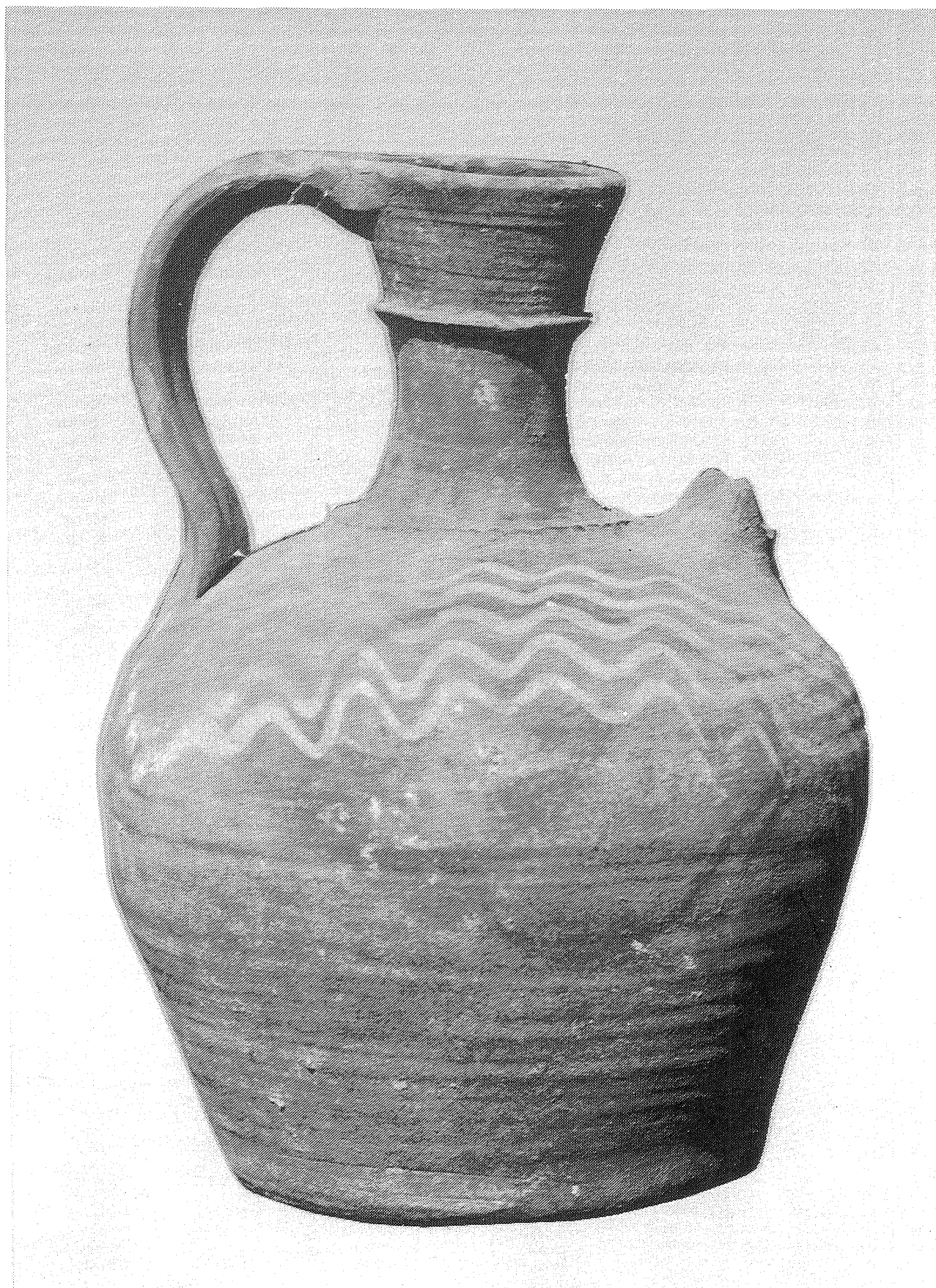
Byzantine storage jar found embedded in the floor of room 108. Diameter 80 cm.



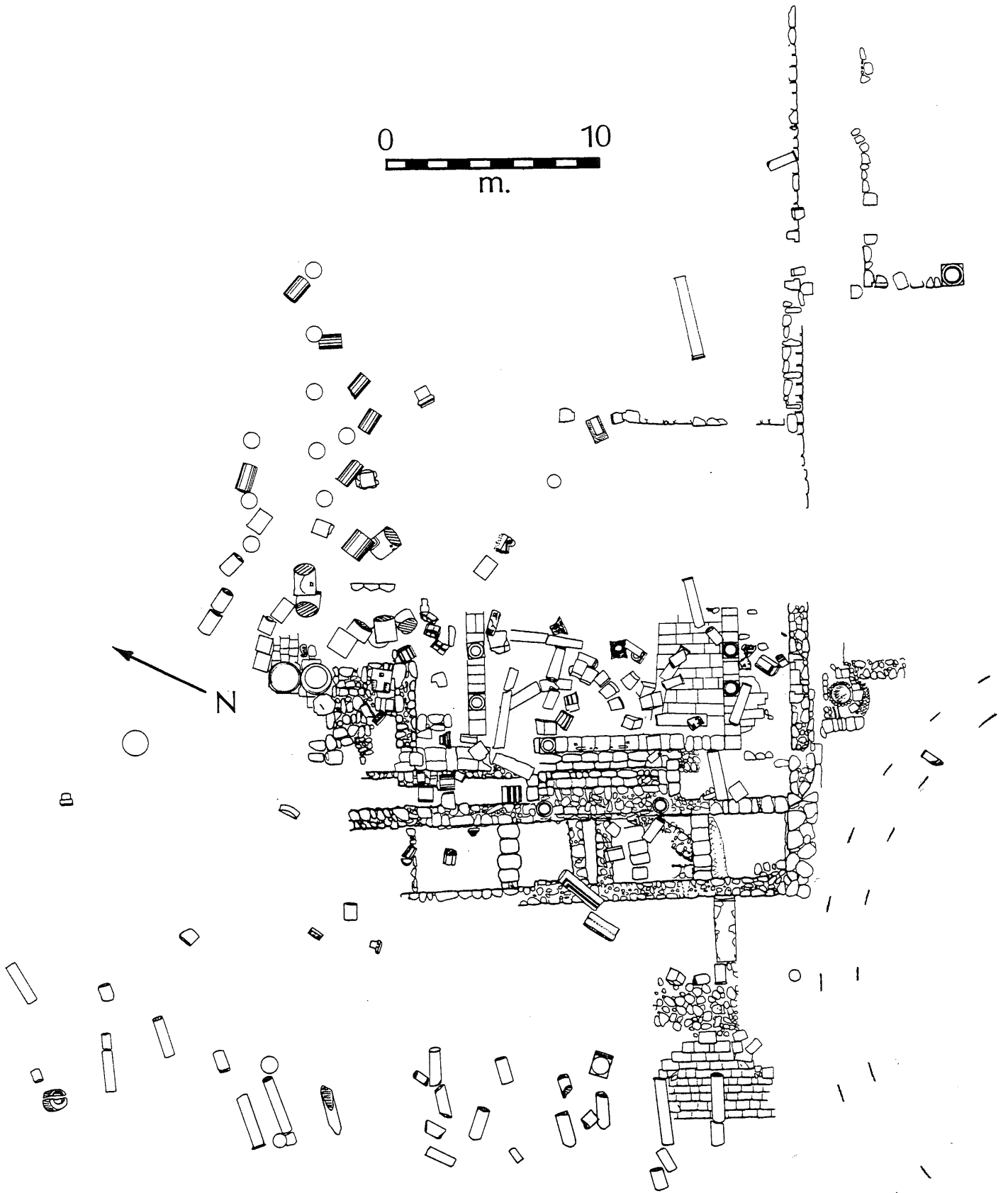
Late Hellenistic loom weights found on one side of the street at the southern end of the West Cut.



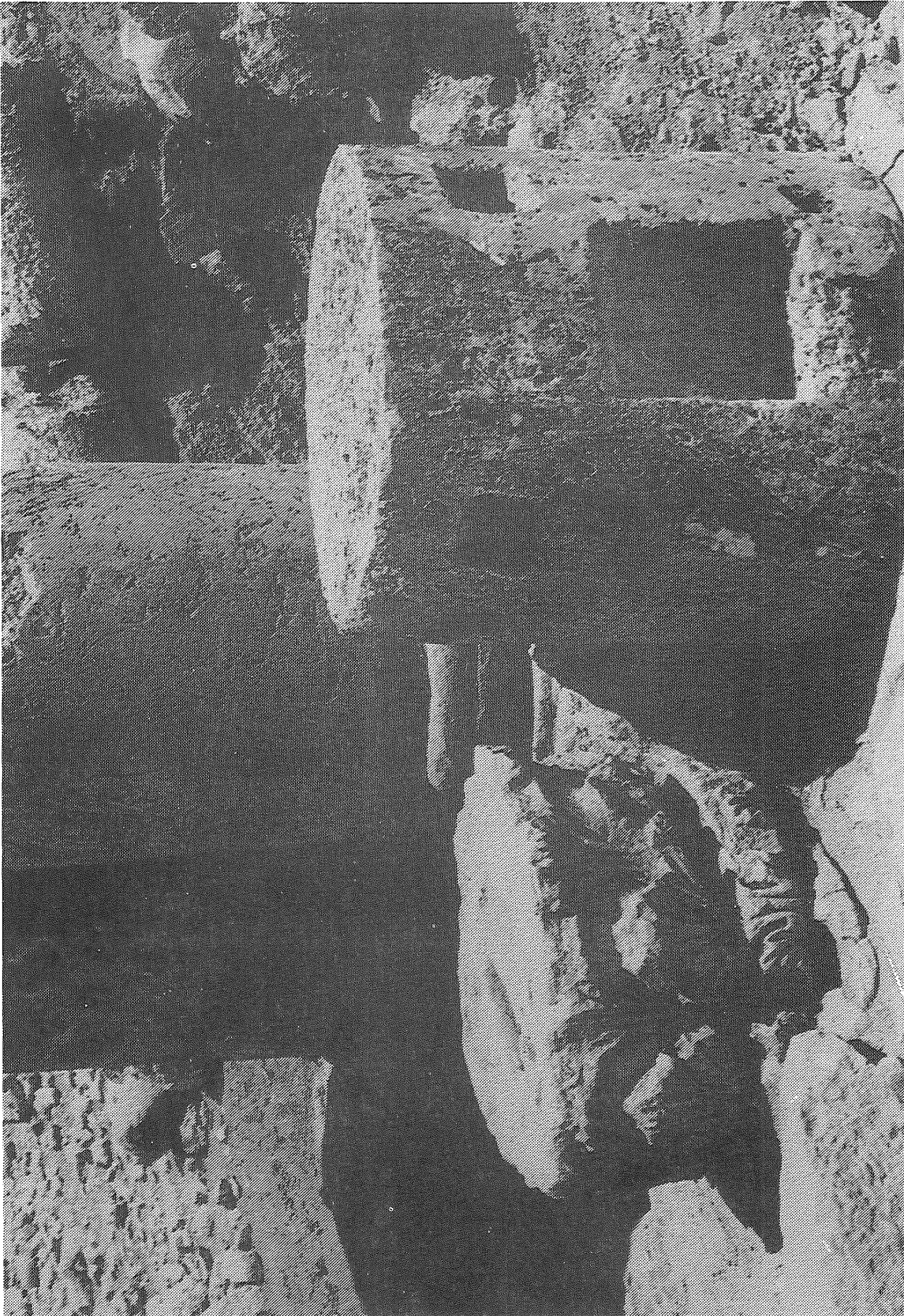
Glass goblet from a Roman tomb in the South Cemetery.



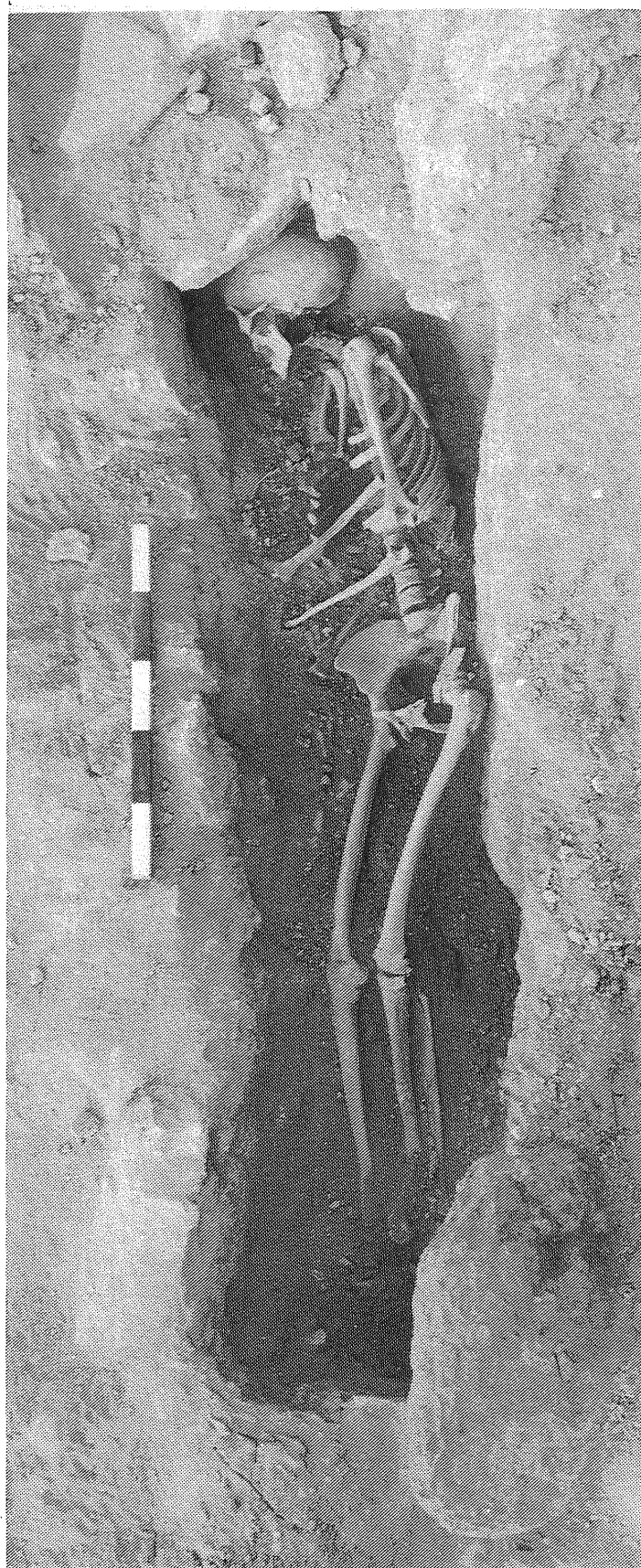
Umayyad jug, red ware with white decorative paint, from the debris above the courtyard paving in the Civic Complex.



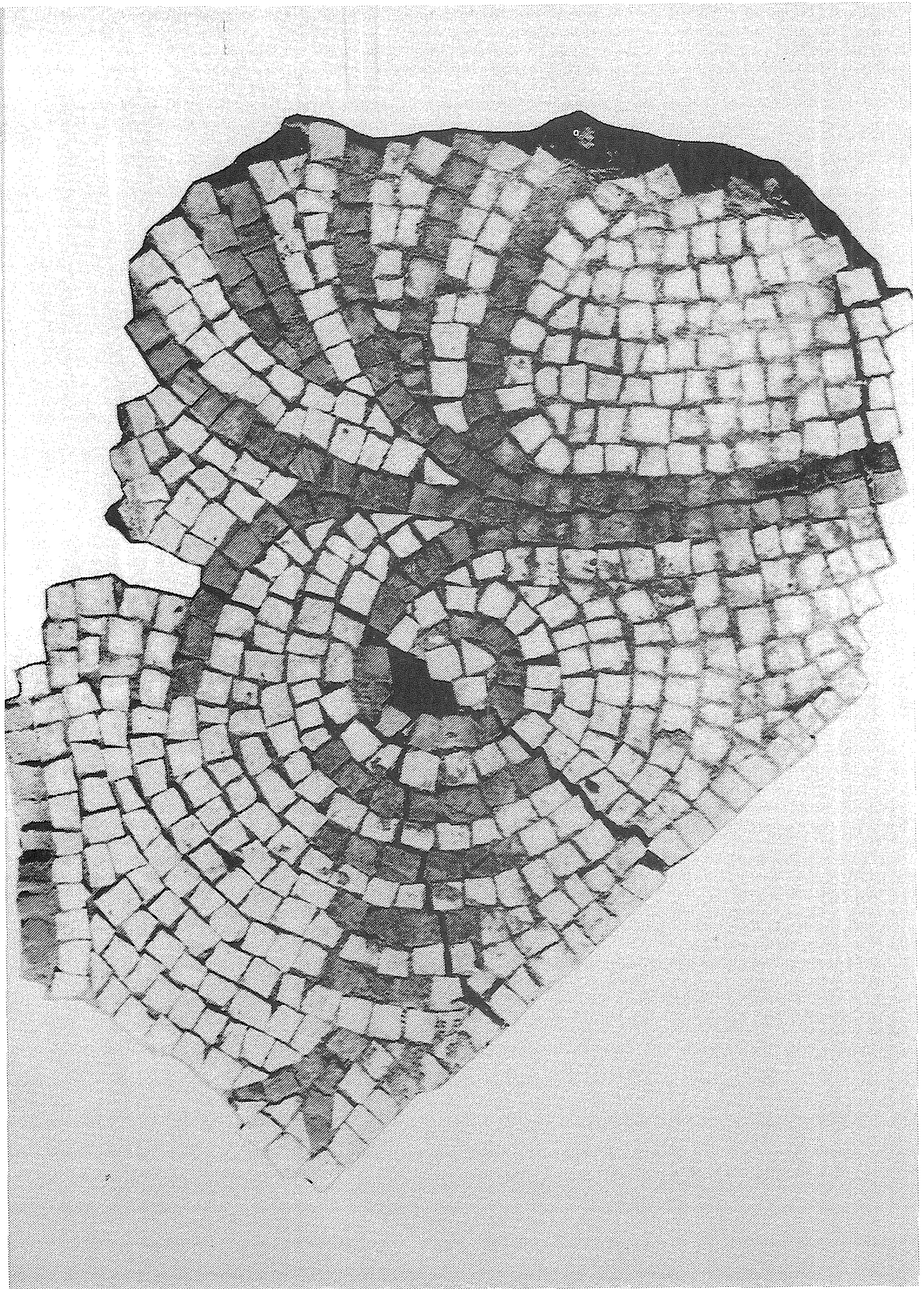
Plan of the Civic Complex as excavated in 1979. Some of the surface remains of unexcavated locations are also shown for general orientation.



Some of the large column bases and drums situated north of the courtyard of the Civic Complex. The cuttings in the drum on the right were to hold wooden beams, perhaps for some secondary use. On the left is a much-damaged capital for one of the large columns.



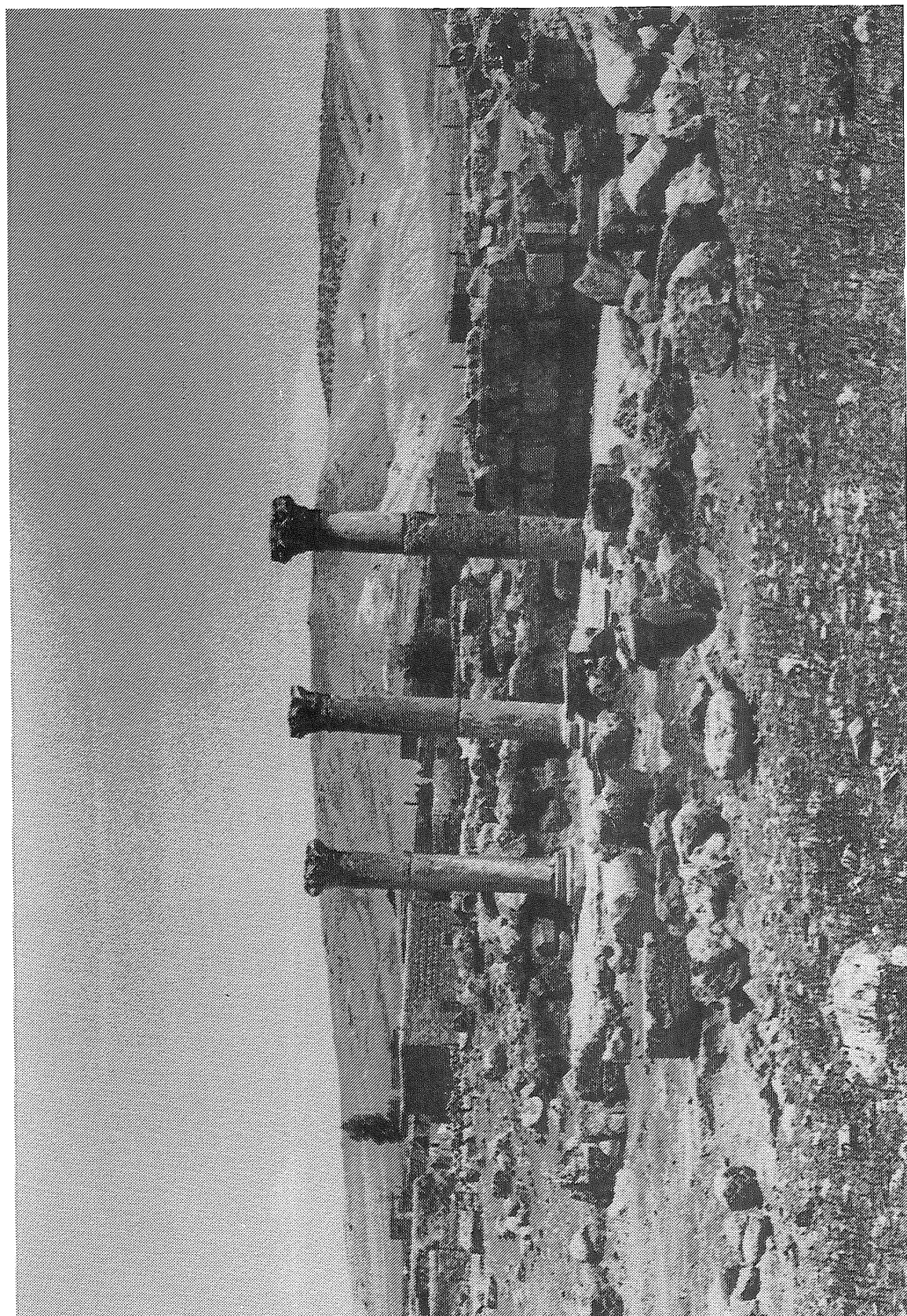
Medieval cist burial found on the southern side of the portico in the Civic Complex.



Fragment of Byzantine mosaic from the Civic Complex.



The Civic Complex at the end of the excavations of 1979, with some columns temporarily reset. The large semicircular structure south of the courtyard is plainly visible in the lower half of the photograph.



The eastern portico of the atrium of the West Church, with three columns reset and a portion of the church wall temporarily reconstructed.



Stamped wine jar handle found in the Late Hellenistic destruction debris in the West Cut, dating from shortly before 83/82 B.C.

Pl. XXXVIII



Molded gray-ware bowl with fluted body, from a Roman tomb in the South Cemetery.



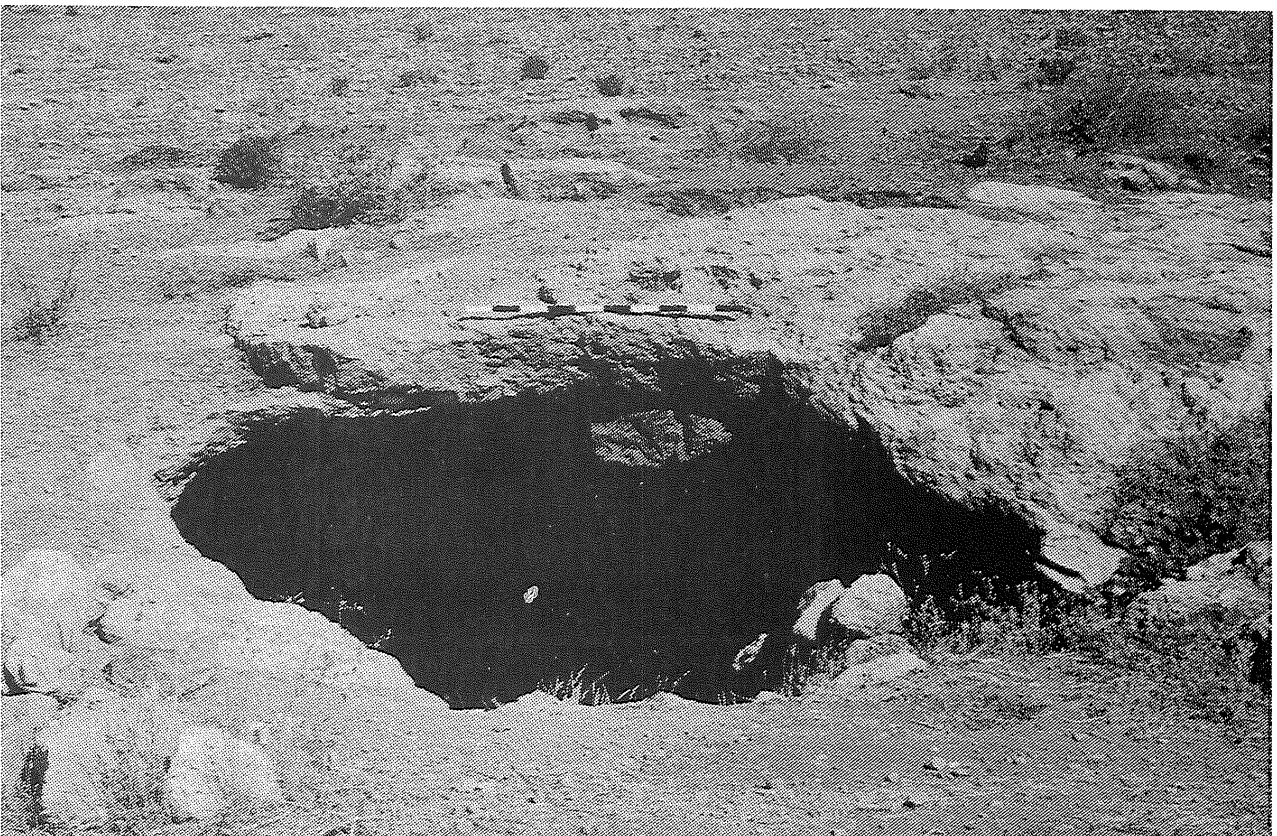
1 - General view of the Baq'ah Valley from Tell Şafūt, looking northwest.



2 - Eastern "megalithic" building at Rujm al-Ḥenū (Site 1) as seen from western building (Site 2), in foreground.



1 - Robbers' entrance to excavated Cave A2, looking south.



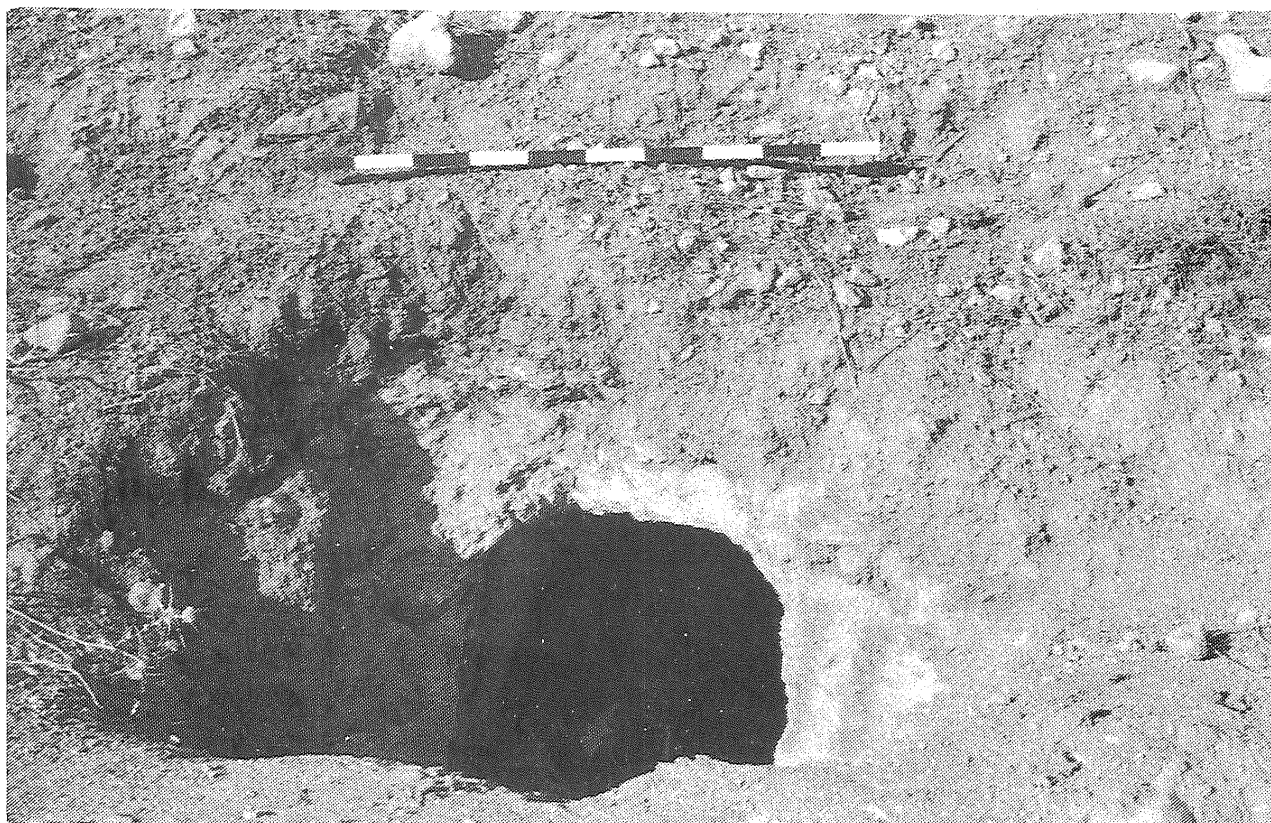
2 - Mouth of robbed-out Cave A1.



1 - General View of Jebel al-Qeṣīr, looking west. Group B caves can be seen at different levels along the lower slopes. Site 7 (al-Qeṣīr) is located at the top of the hill, above the tree line.



2 - Start of the Wadi Umm ad-Danānīr with Ḥīrbet Umm ad-Danānīr (Site 3) located in the centre background on the slopes below the modern building.



1 - Robbed-out Cave B11, which had MB IIC/LB IA sherds in its robbers' dump.



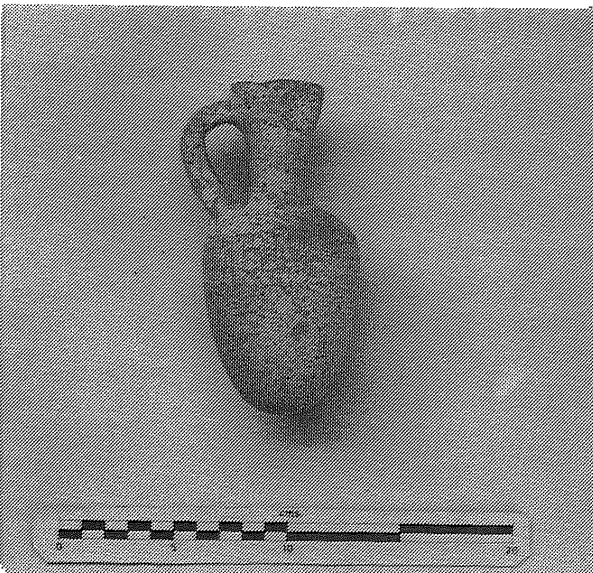
2 - Partially robbed-out Caves B12 and B13 (dated to MB IIC/LB IA) with considerable amounts of soil fill still remaining.



1 - LB IA open bowl with wheel-burnished white slip.



2 - LB IA lamp.



3 - LB IA juglet with hand-burnished white slip.



4 - LB IA juglet with white slip



5 - LB IA/IB amphoriskos with black and red (bichrome) decoration.



6 - LB IA Chocolate-on-White vase.



1 - Cylinder seal (impression), almost certainly an import from northern Mesopotamia, from layer 1. (photo by N. Hartmann, MASCA.)



2 - Scarabs from sub-layer 2b. (photo by R. Brown.)



1 - Examples of glass eye, crumb, spot, and variegated beads from sub-layer 2b. (Photo by R. Brown.)



2 - Hollow pottery bull figurine from sub-layer 2b.



1. General view from the NW.



2. The inner entrance.



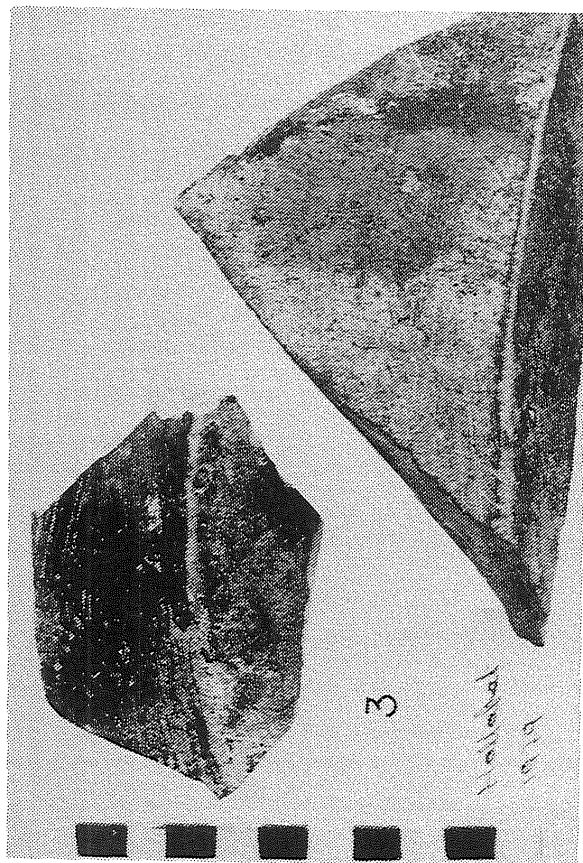
1. An aerial view with the reservoir in the background.



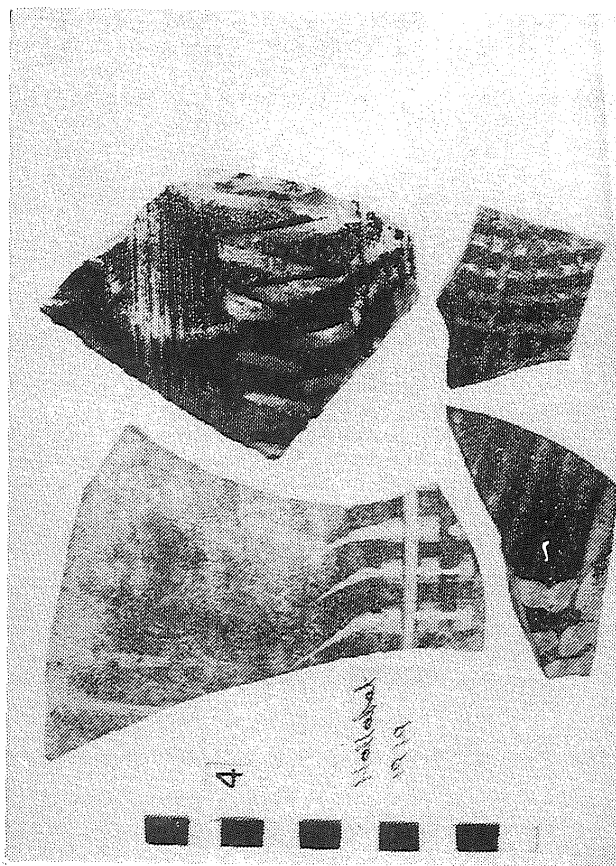
2. The reservoir and the castle in the background.



An aerial view showing the castle, the Mosque, the reservoir and the walled enclosure on the left hand side of the foreground.

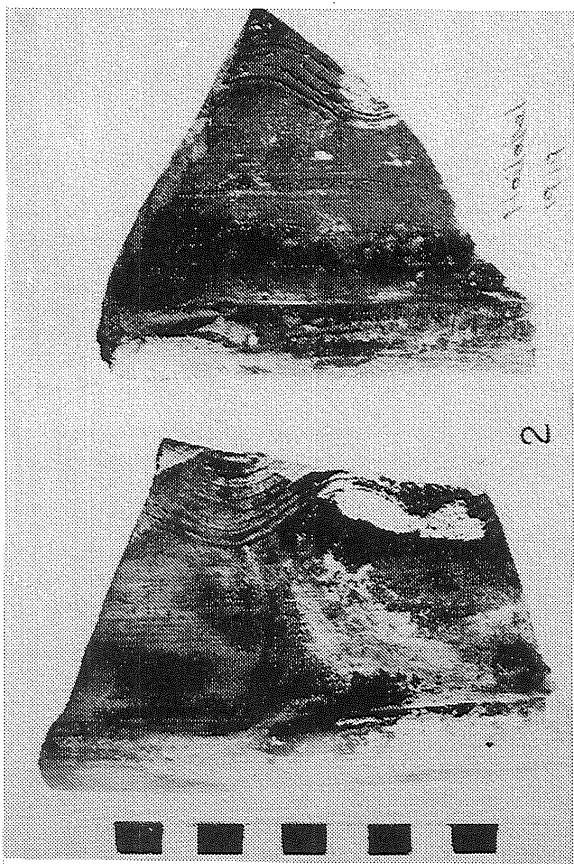


2.

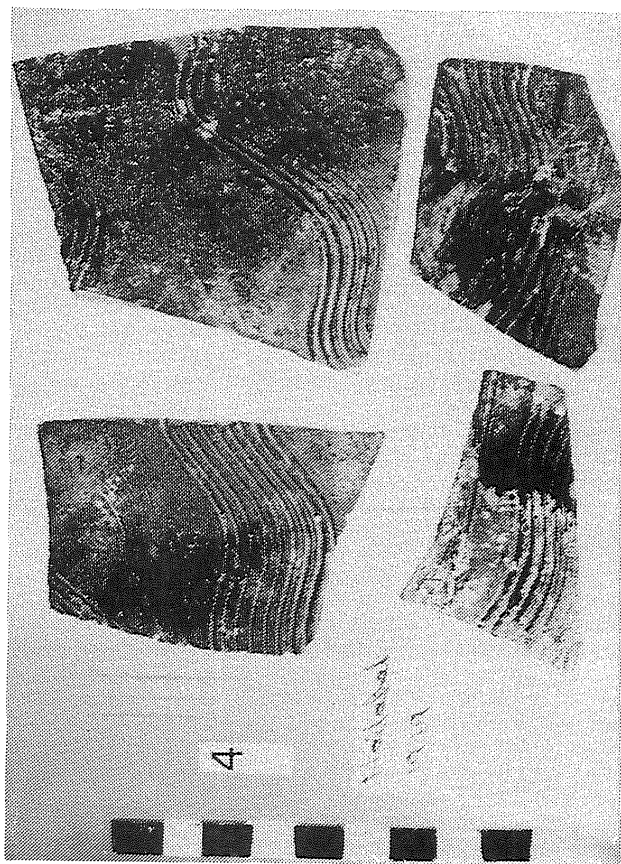


4.

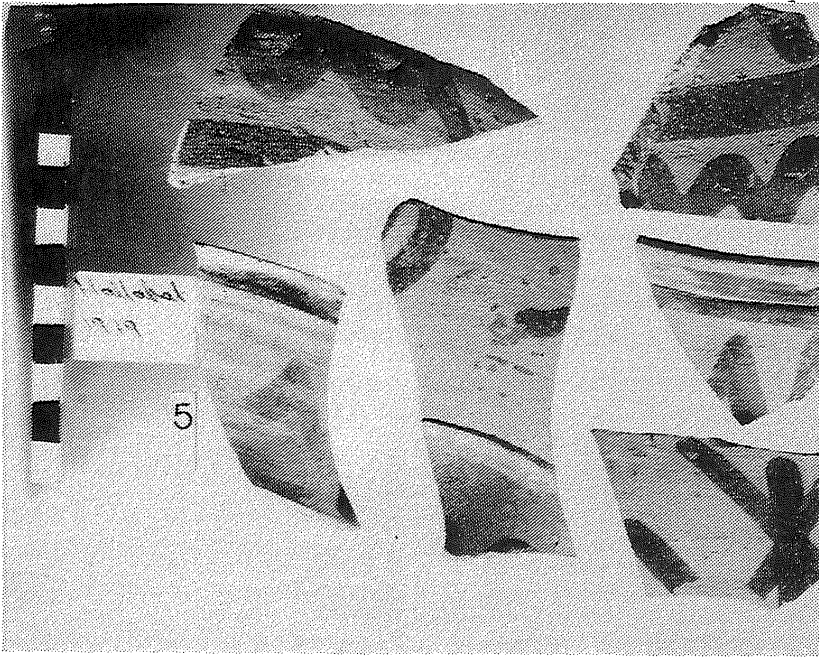
Umayyad Pottery sherds.



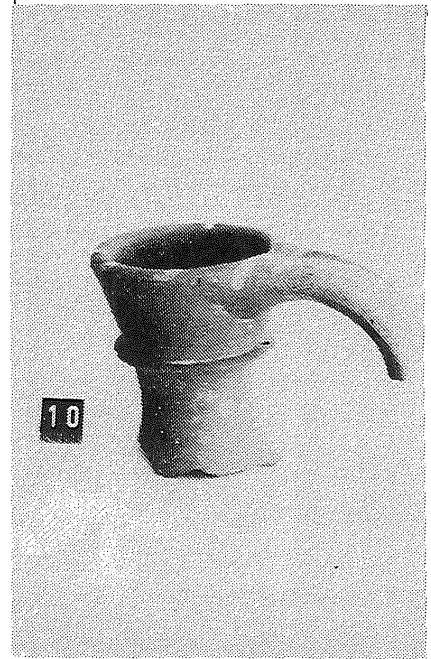
1.



3.

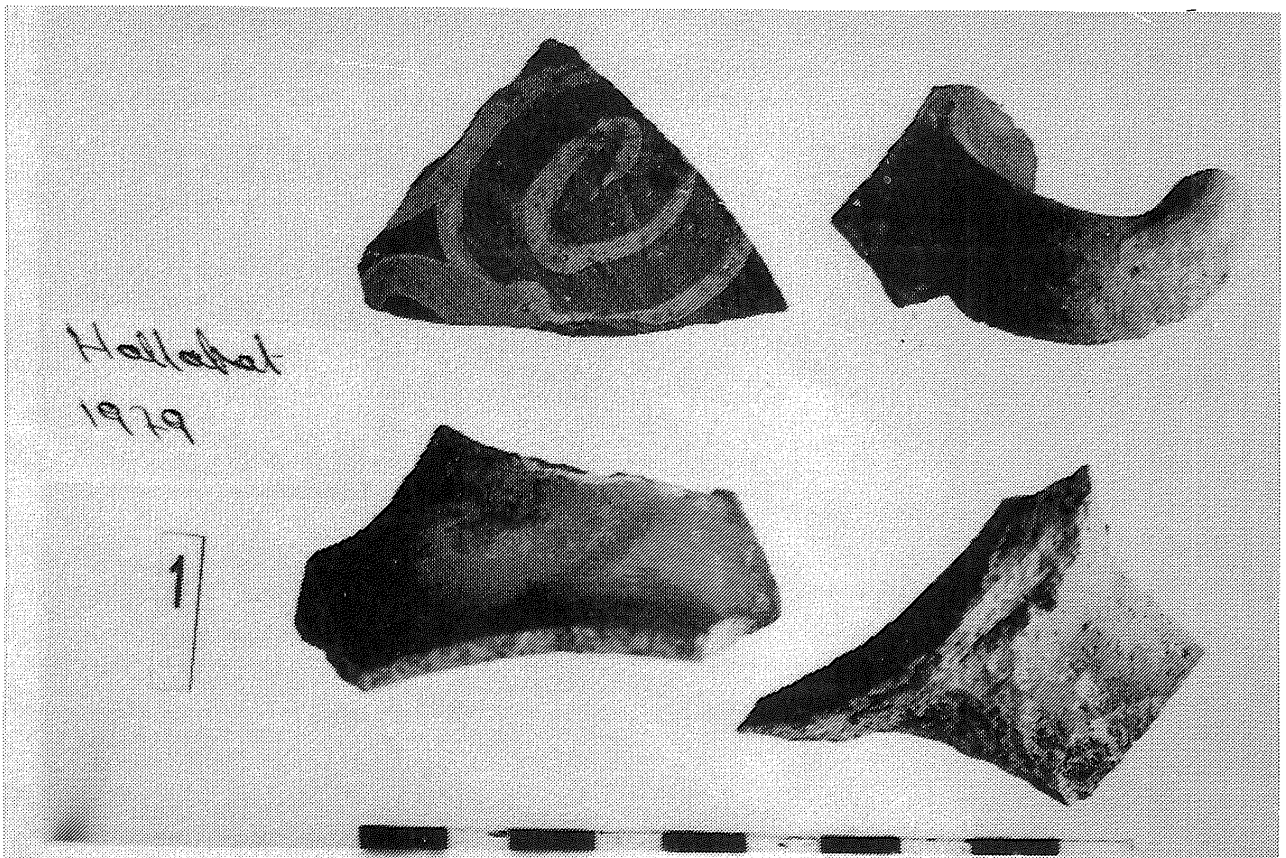


1.

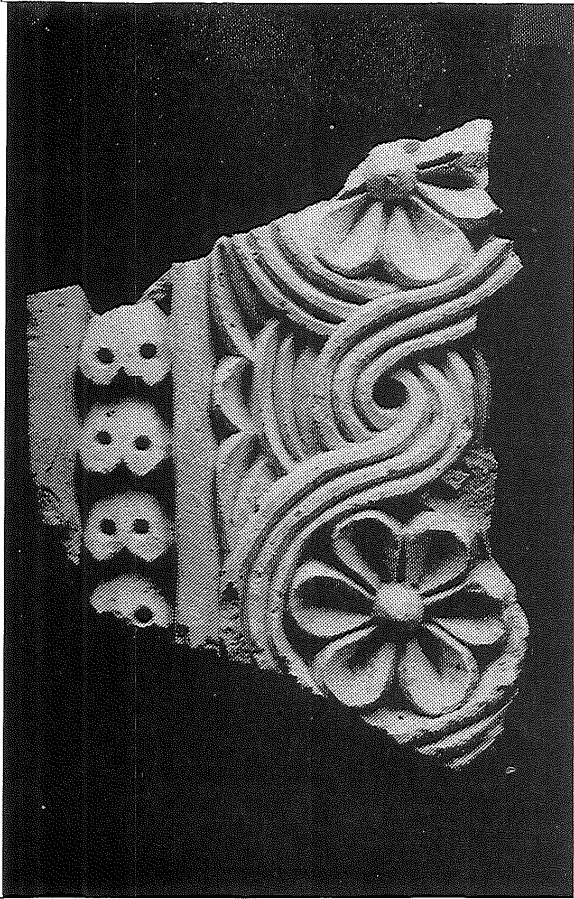


2.

Umayyad Pottery sherds.



3.



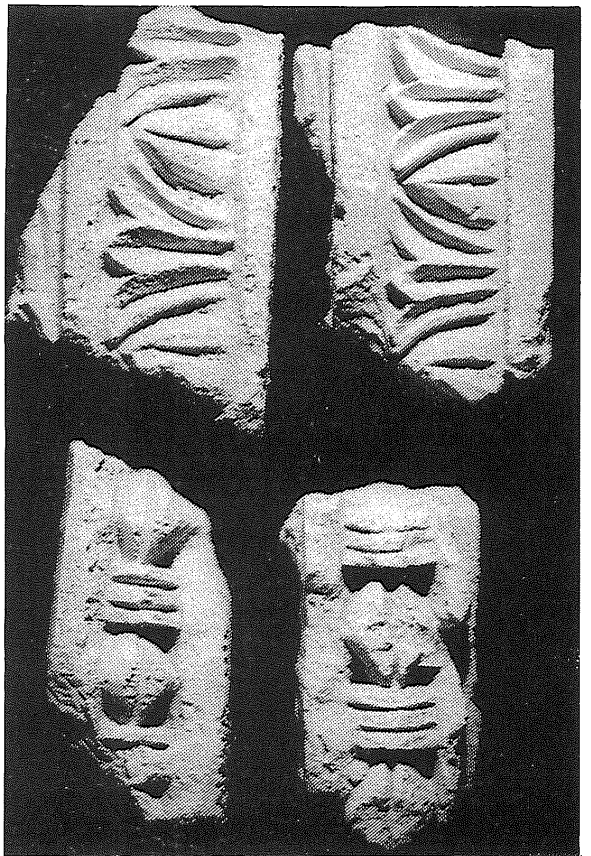
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4.

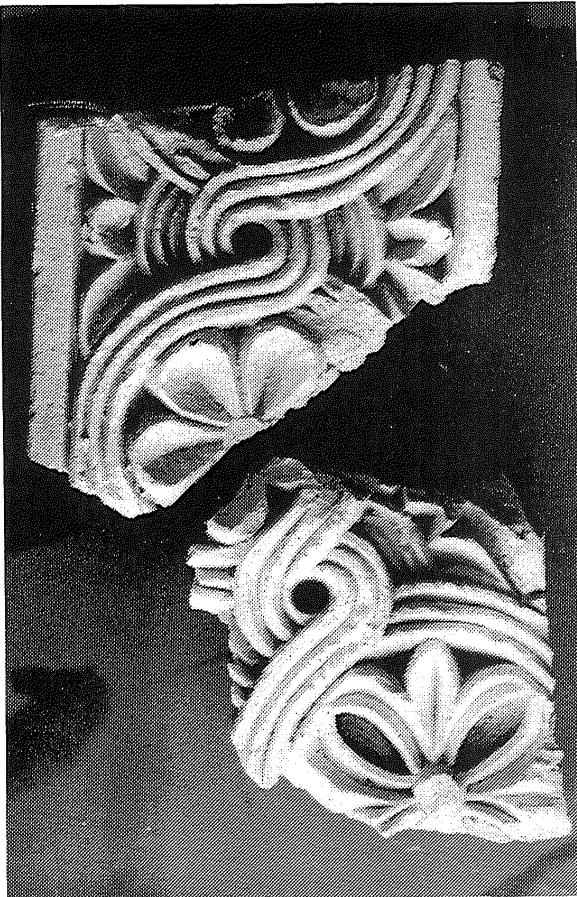


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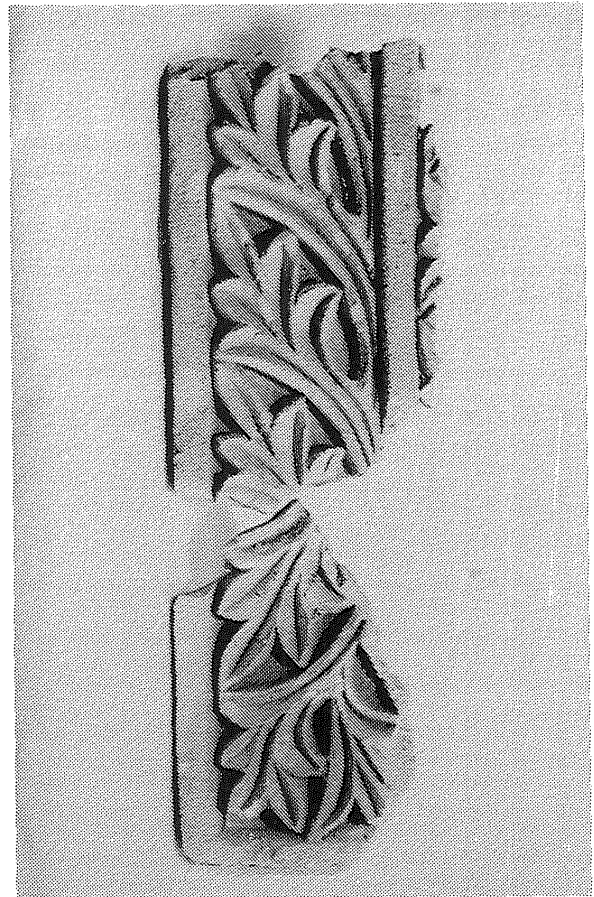


3.

Carved stucco.



2.



4.

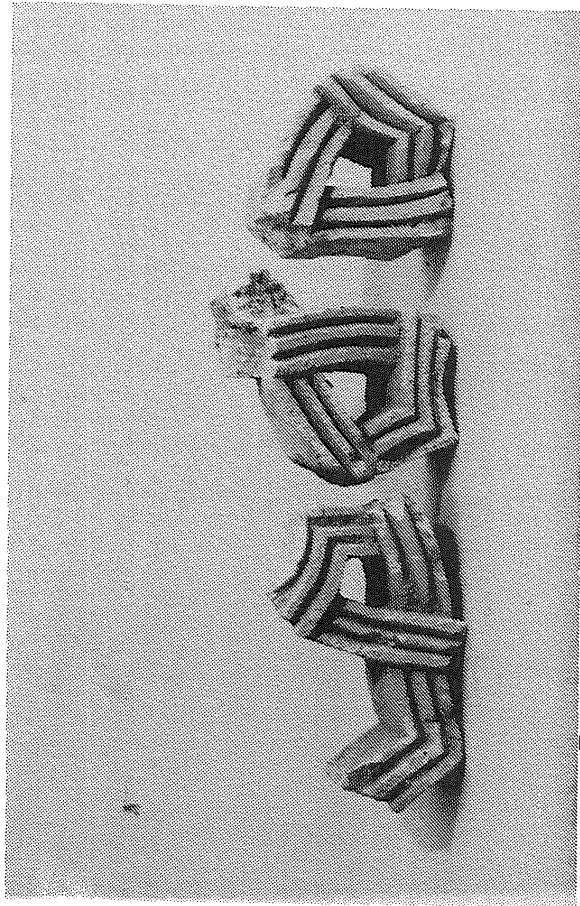


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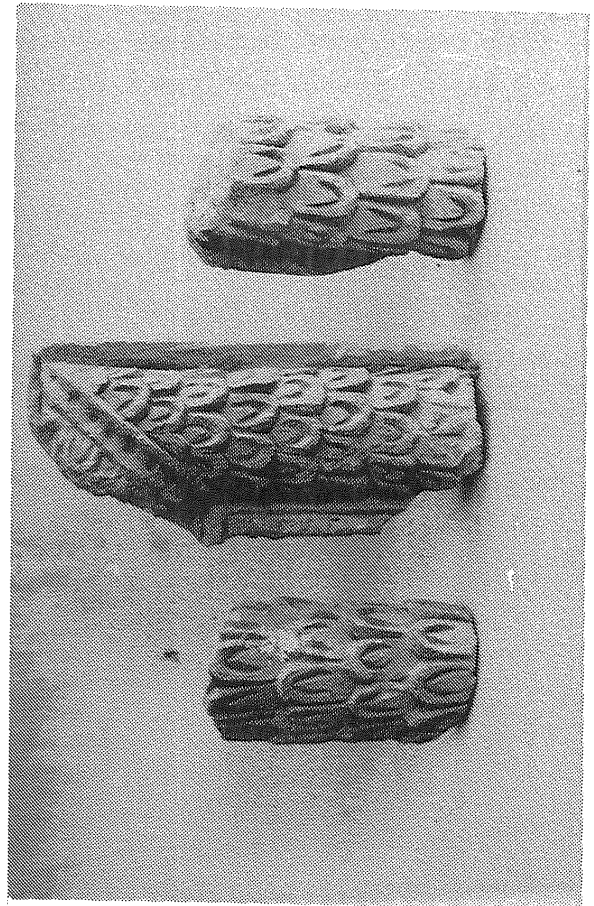
Carved stucco.



3.



2.

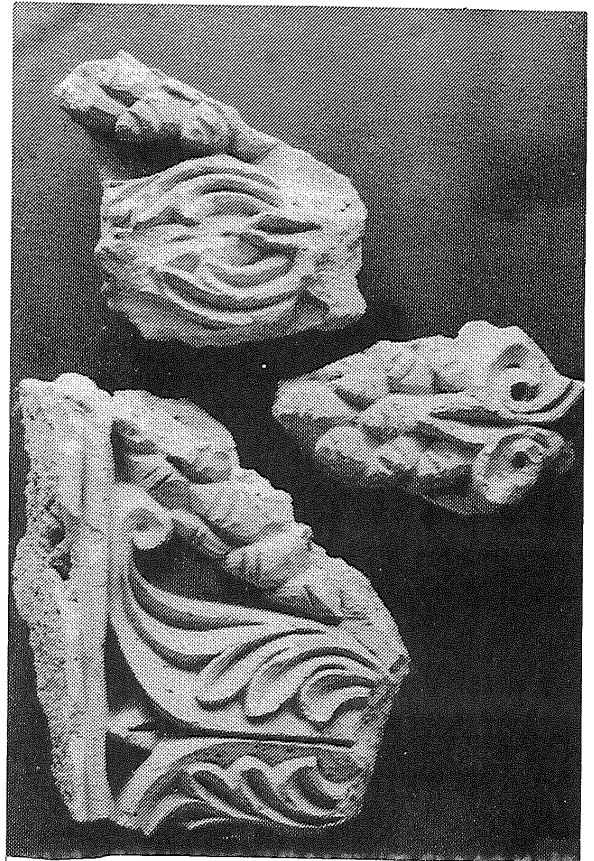


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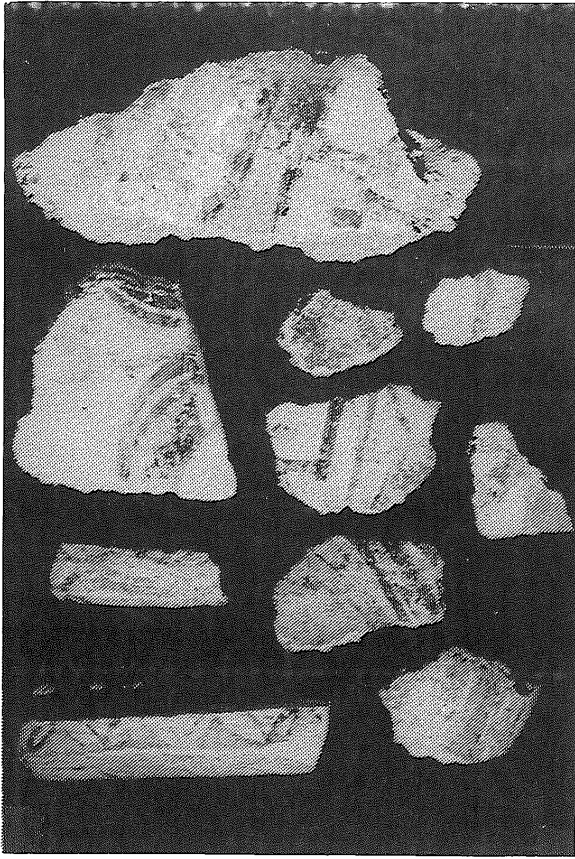


1.

Carved stucco.



3.

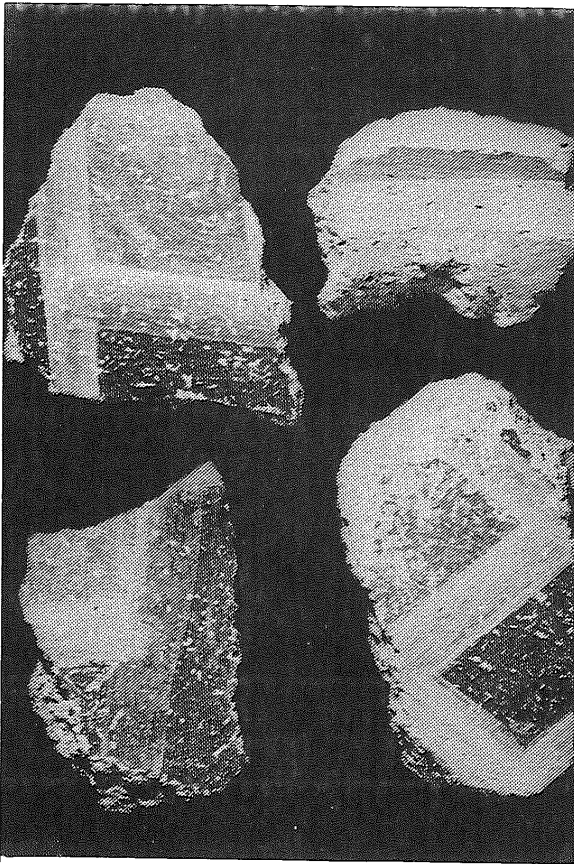


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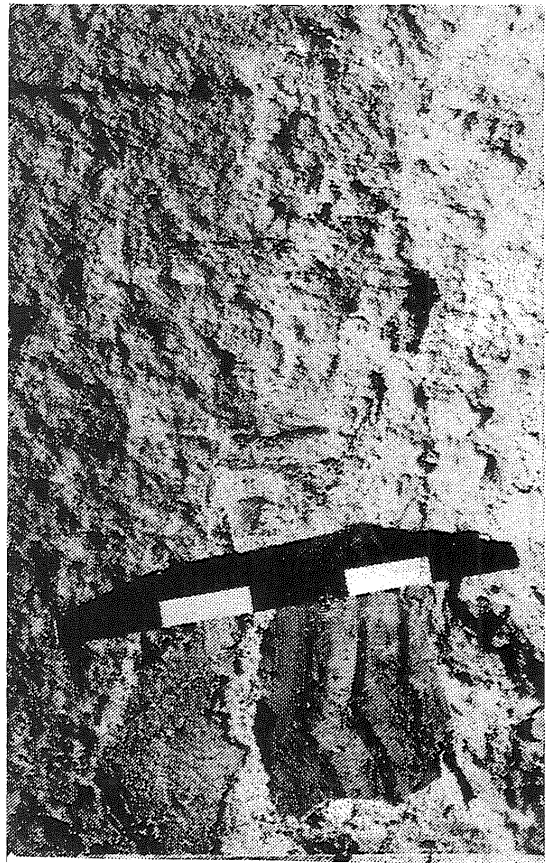


4.

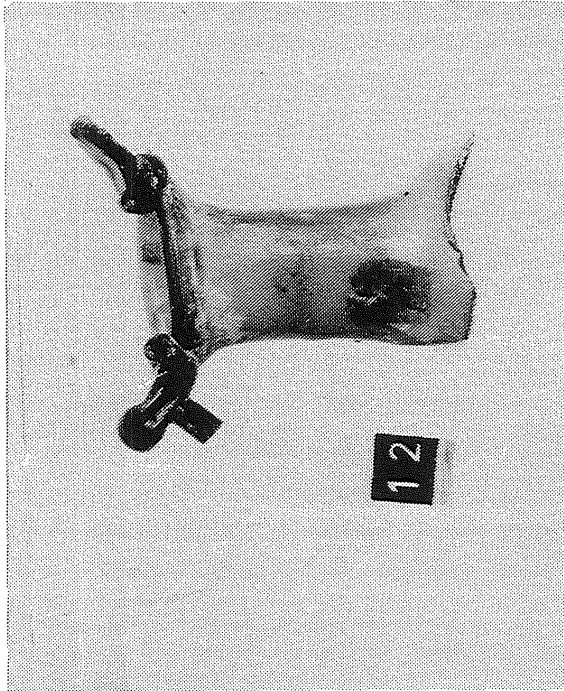
Fragments of
painted plaster.



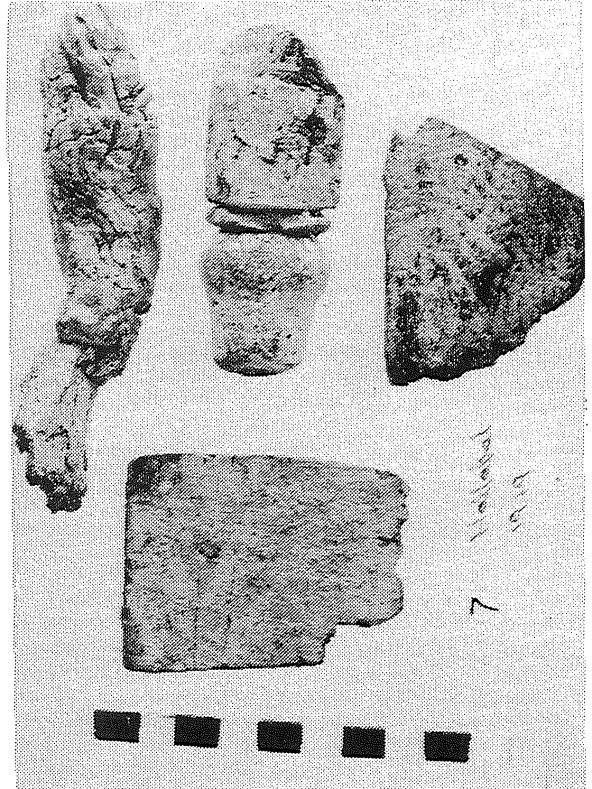
1.



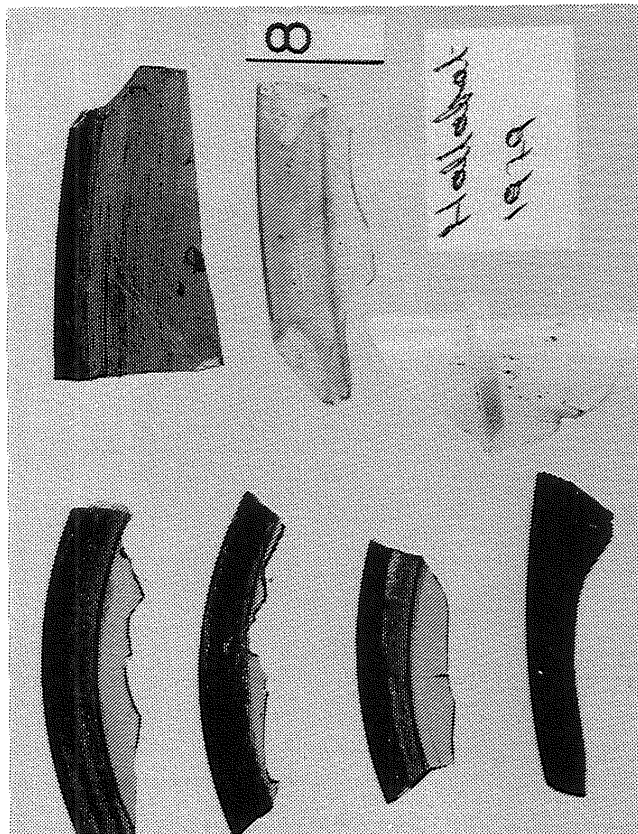
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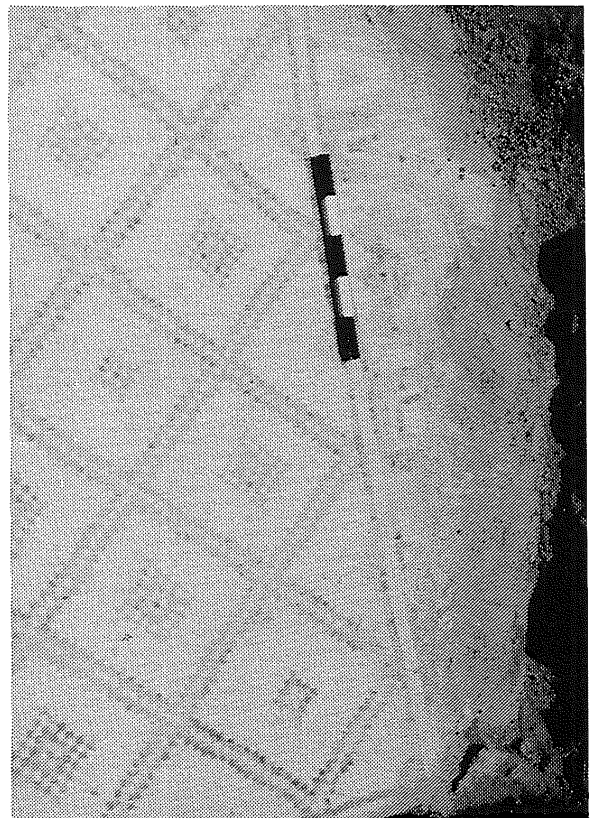
2. Neck of glass vessel.



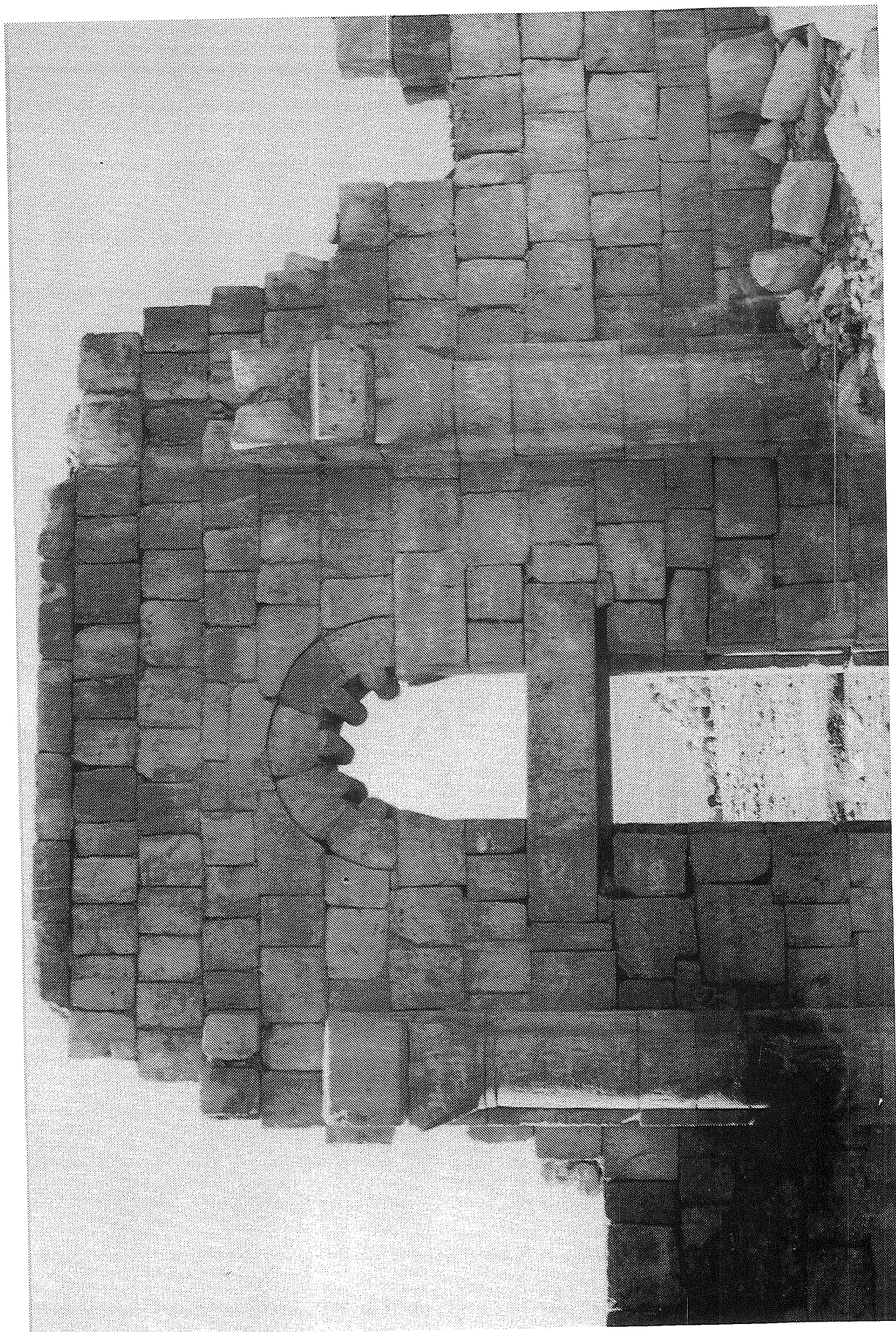
4. Wooden fragments.



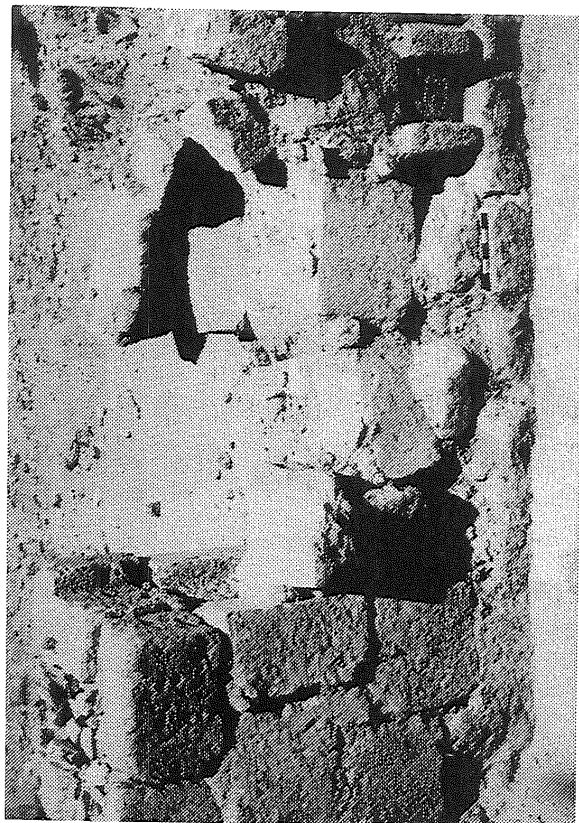
1. Glass fragments.



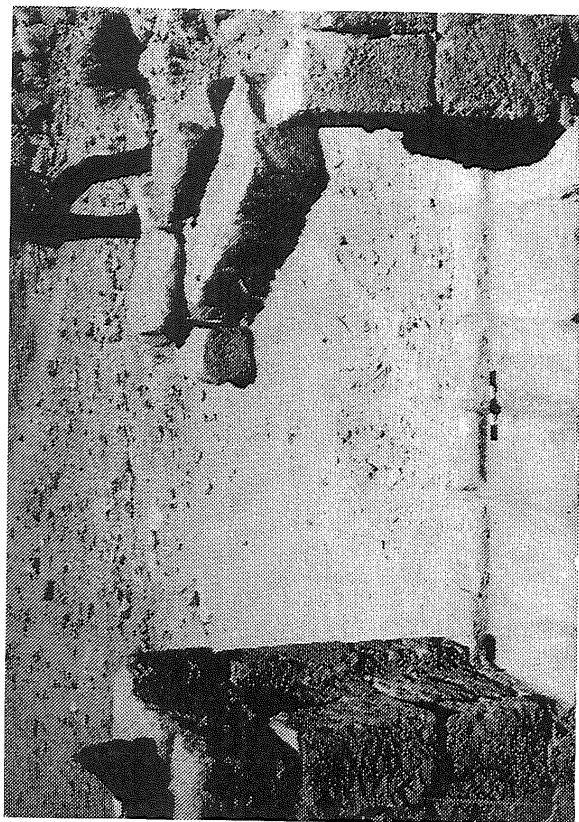
3. Mosaic pavement.



The Mosque of Hallabat; western entrance and relieving arch.



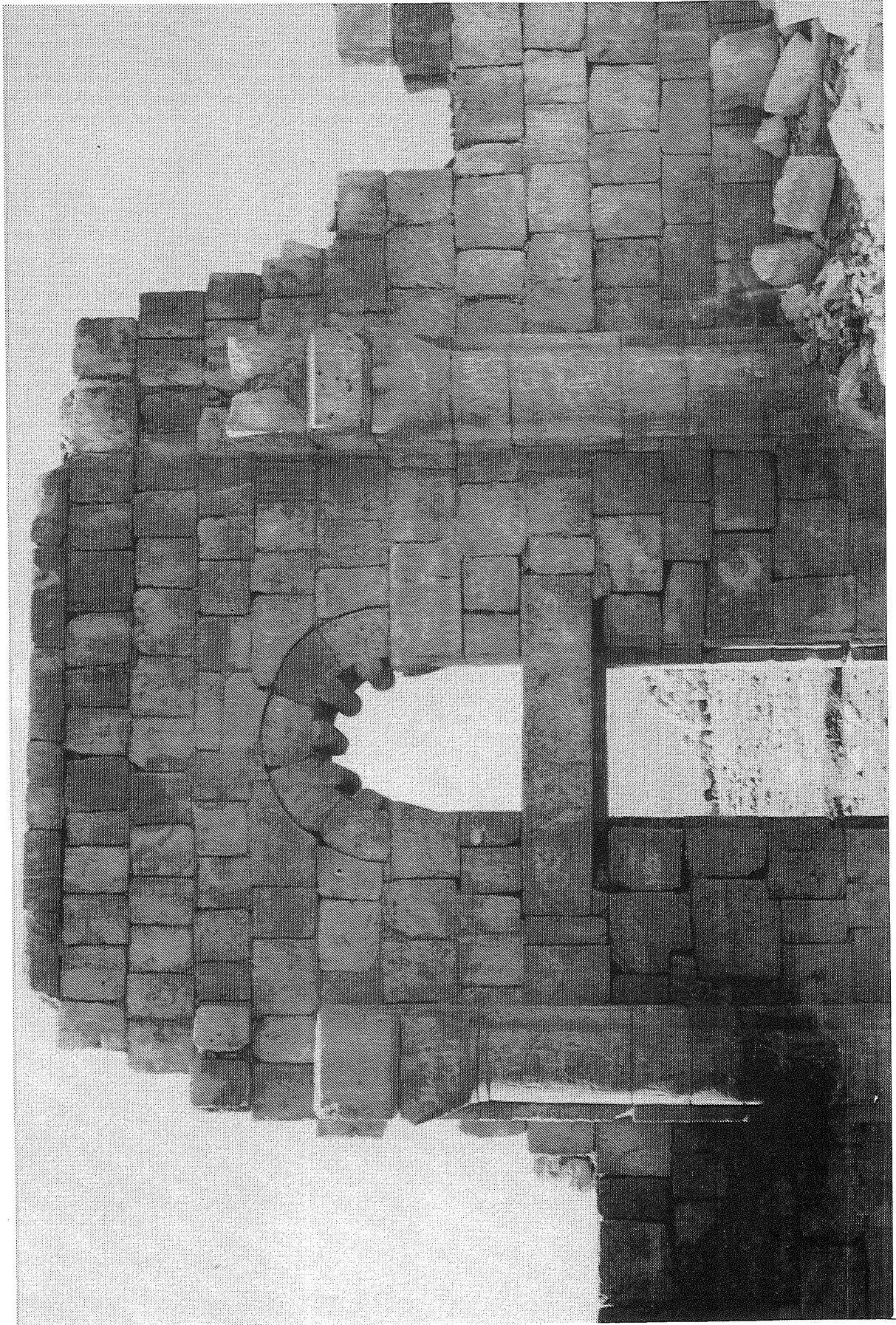
2. Mosque: Northern entrance.



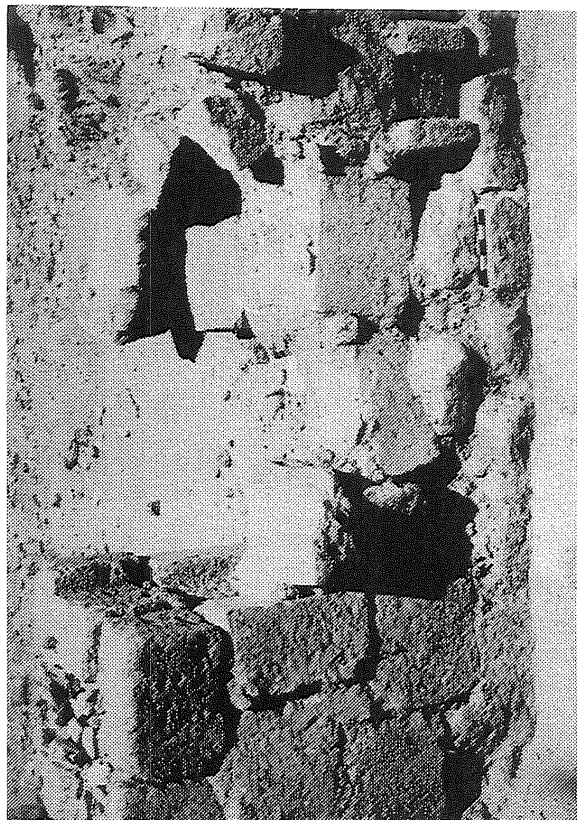
3. Mosque: Northern entrance.



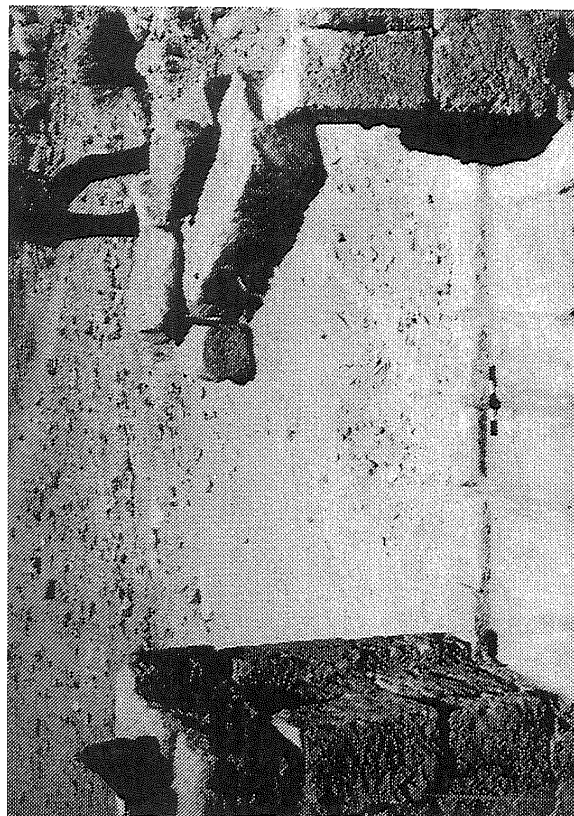
1. The Mosque: column bases of the southern arcade.



The Mosque of Hallabat; western entrance and relieving arch.



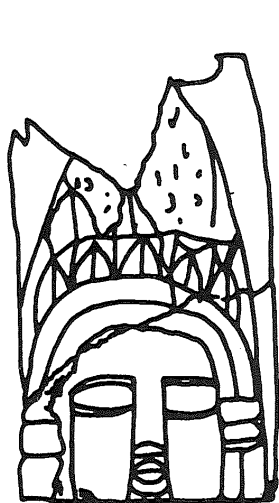
2. Mosque: Northern entrance.



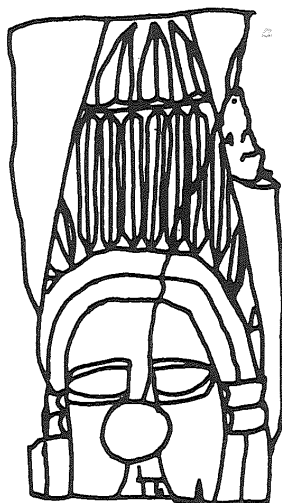
3. Mosque: Northern entrance.



1. The Mosque: column bases of the southern arcade.



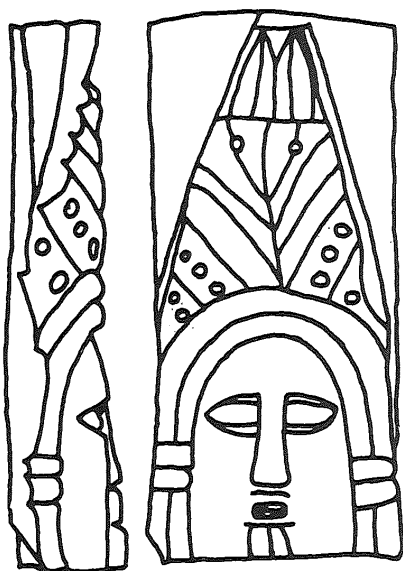
113



116



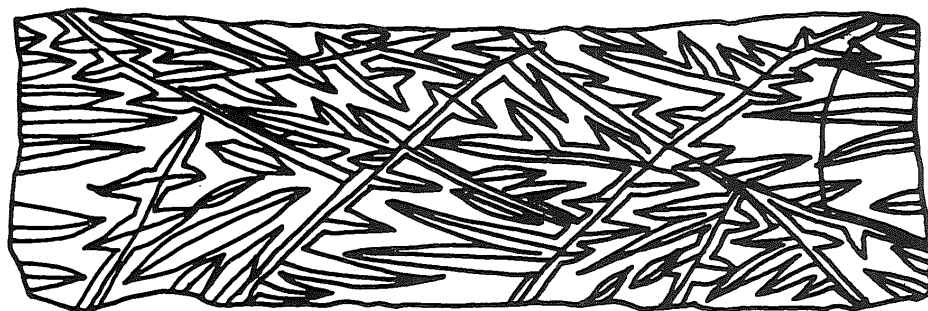
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123



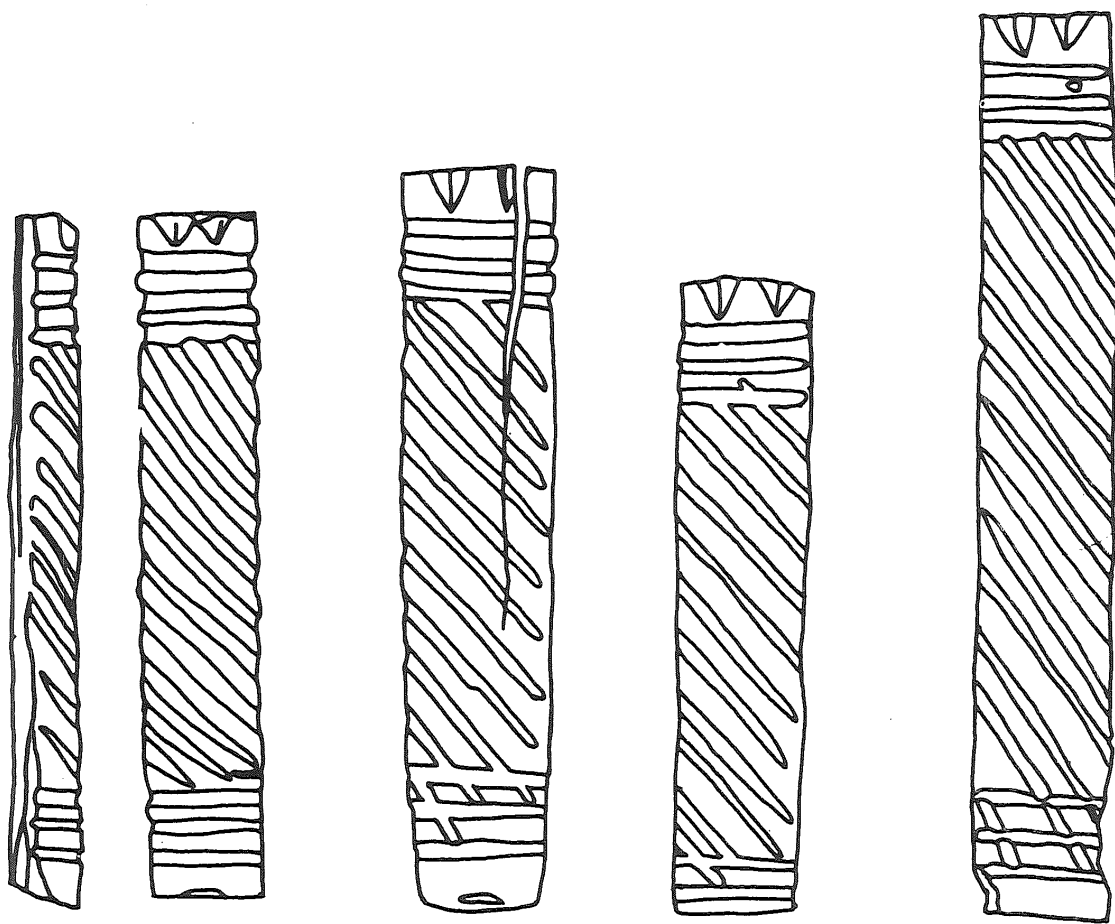
124



129



Ivory carvings of bishop's heads with mitres.

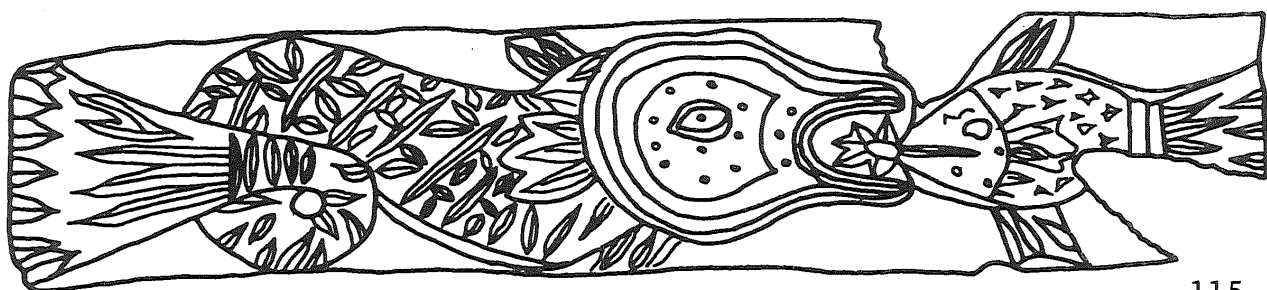


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125

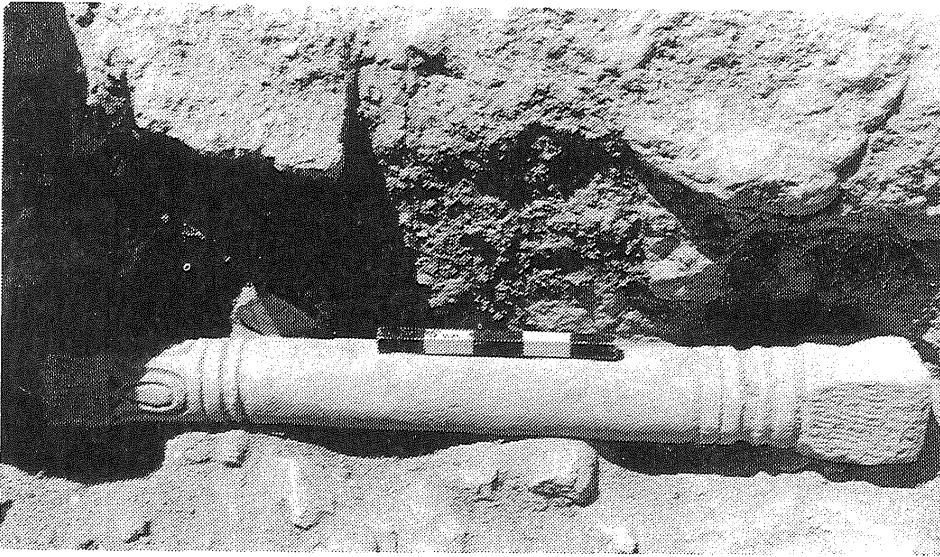
137

138

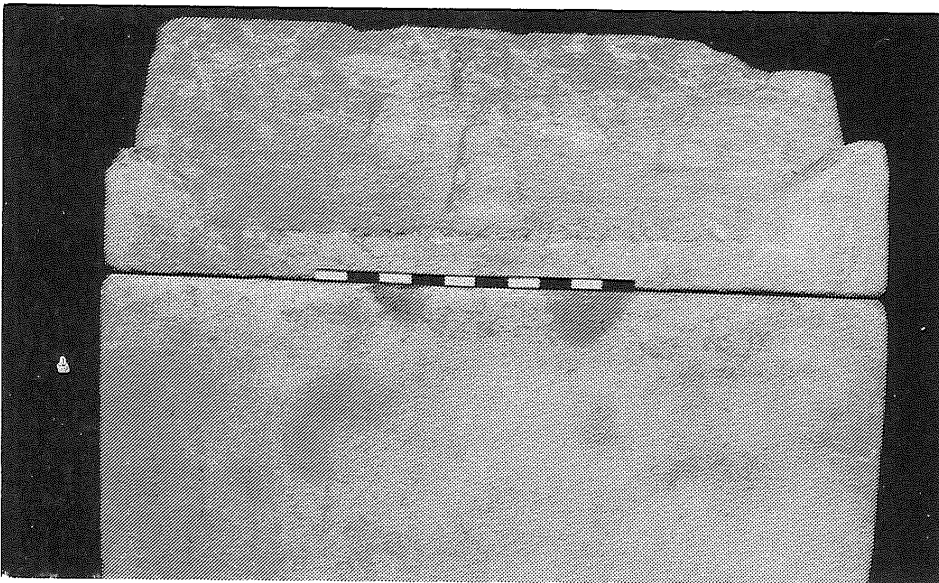


115

Ivory carvings of miniature columns and a sea-creature swallowing a fish.



1. Altar post as found in south side chamber of church.



2. Side view of marble ossuary found in reliquarium.



3. Interior of marble ossuary and silver reliquary.



1. Lower apse mosaic with inscription.



2. Nave mosaic showing outer border of interlocking circles and series of medallions featuring birds.



3. Inscription at east end.



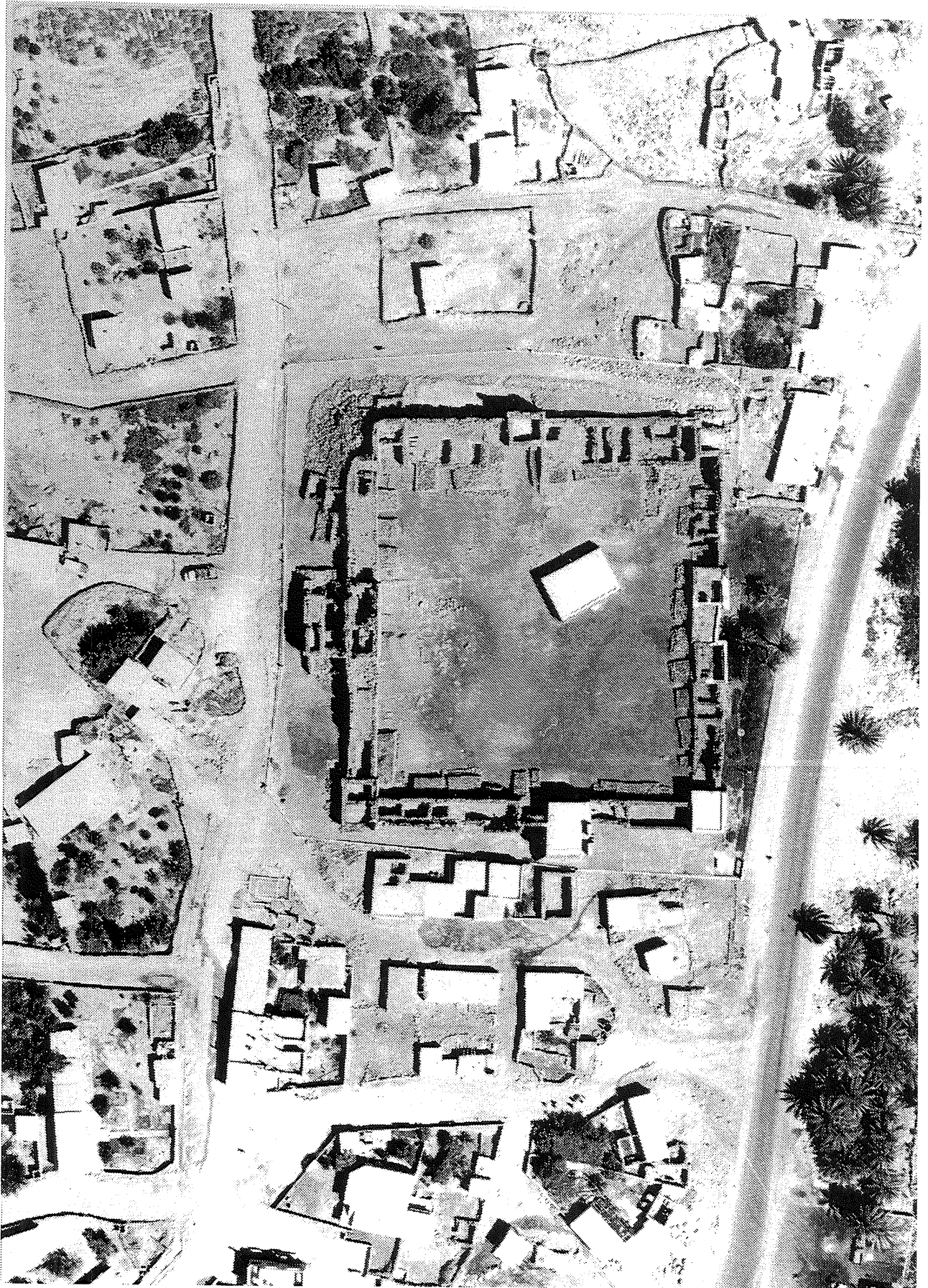
Irak el Amir



Amman Citadel



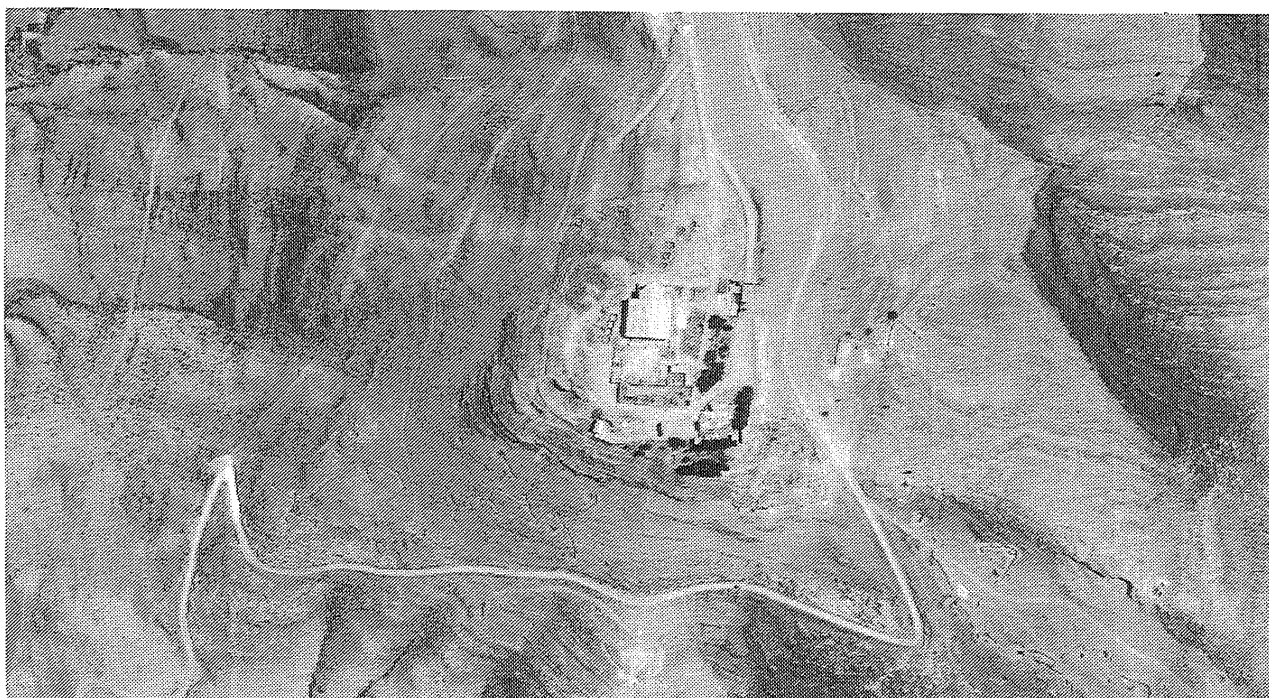
Jerash



Azrak



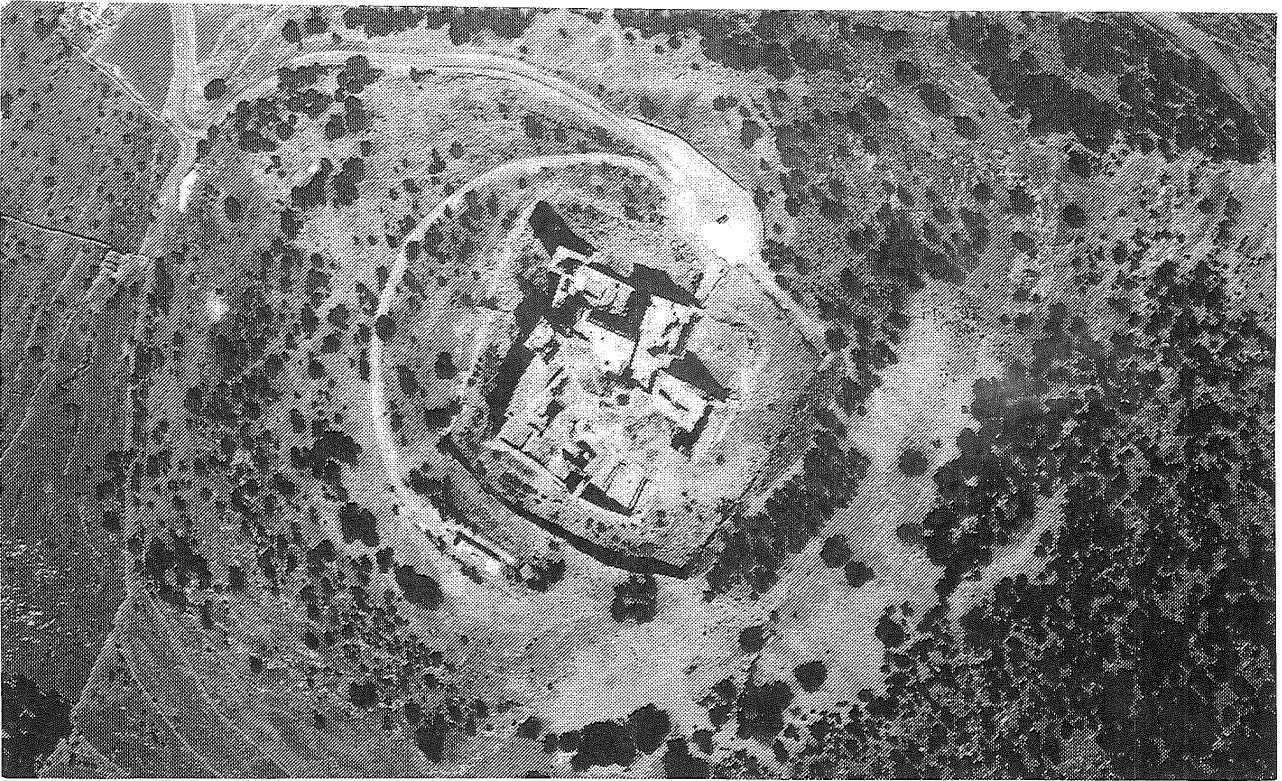
1. Aerial photograph of Hisban



2. Aerial photograph of Siyaghah



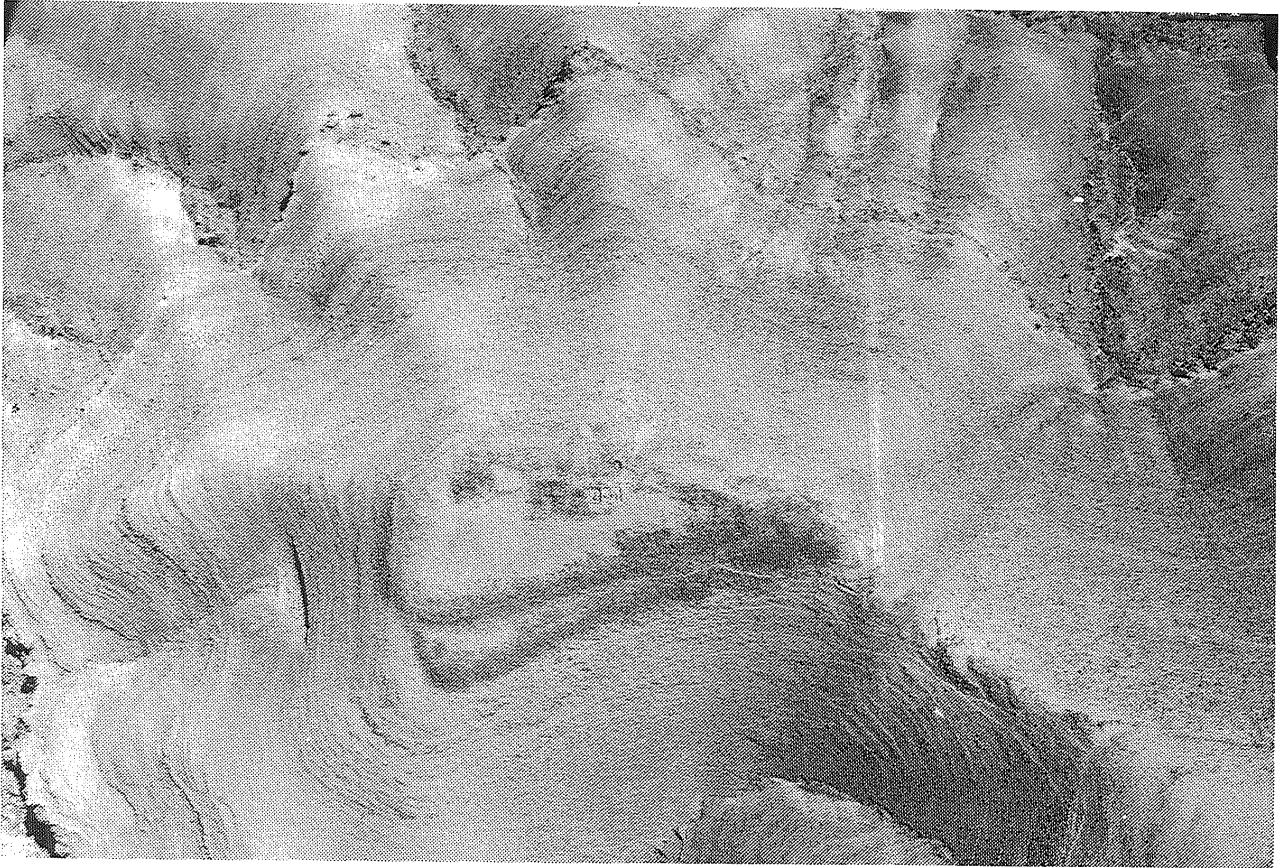
Aerial photograph of Mushatta



1. Aerial photograph of Ajlun



2. Aerial photograph of Beit Ras



1. Aerial photograph of Medeinek N.



2. Aerial photograph of Medeinek S.



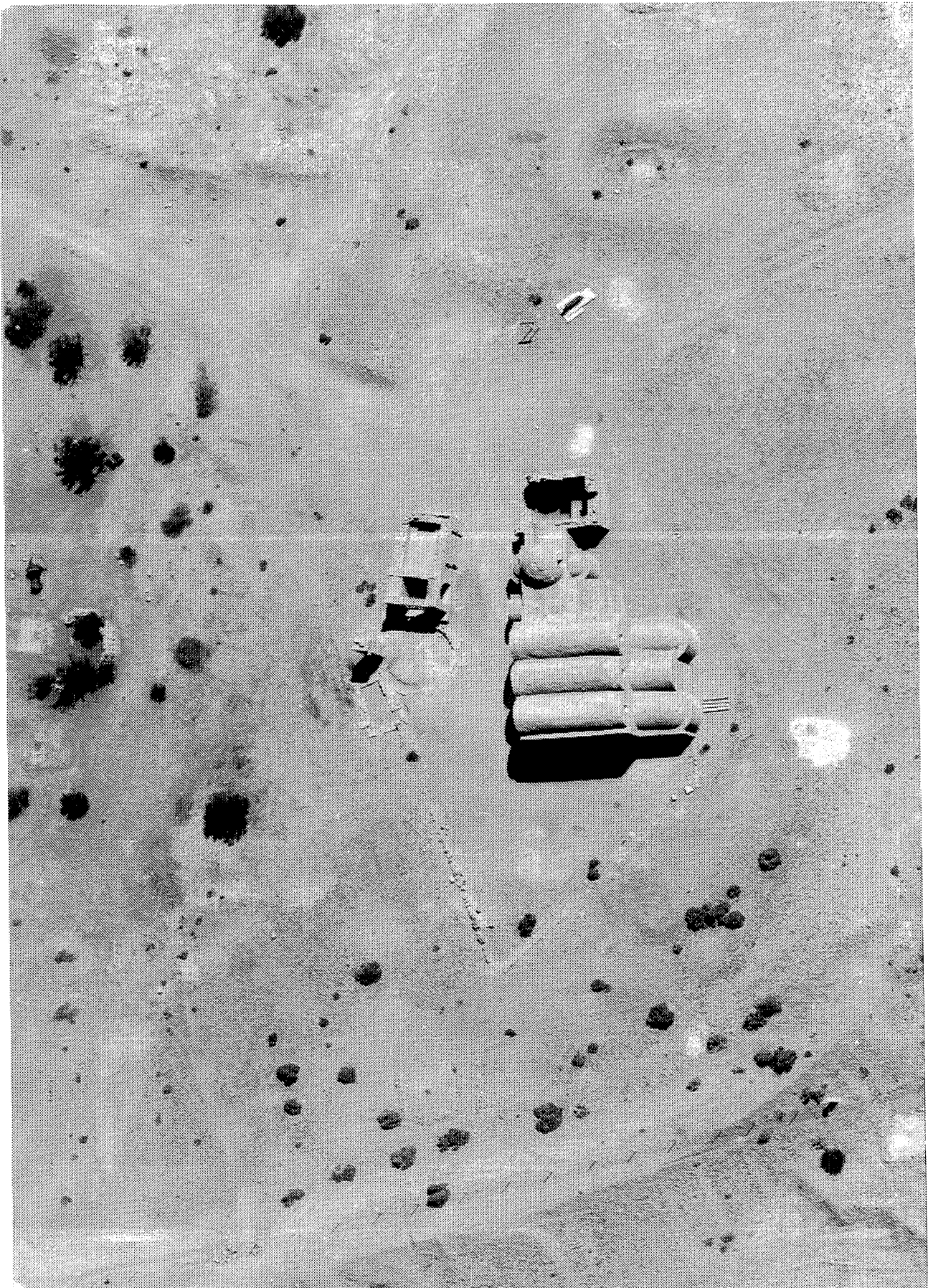
Aerial photograph of Hallabat



1. Aerial photograph of Kerak



2. Aerial photograph of Lajjun



Aerial photograph of Qusayr 'Amra



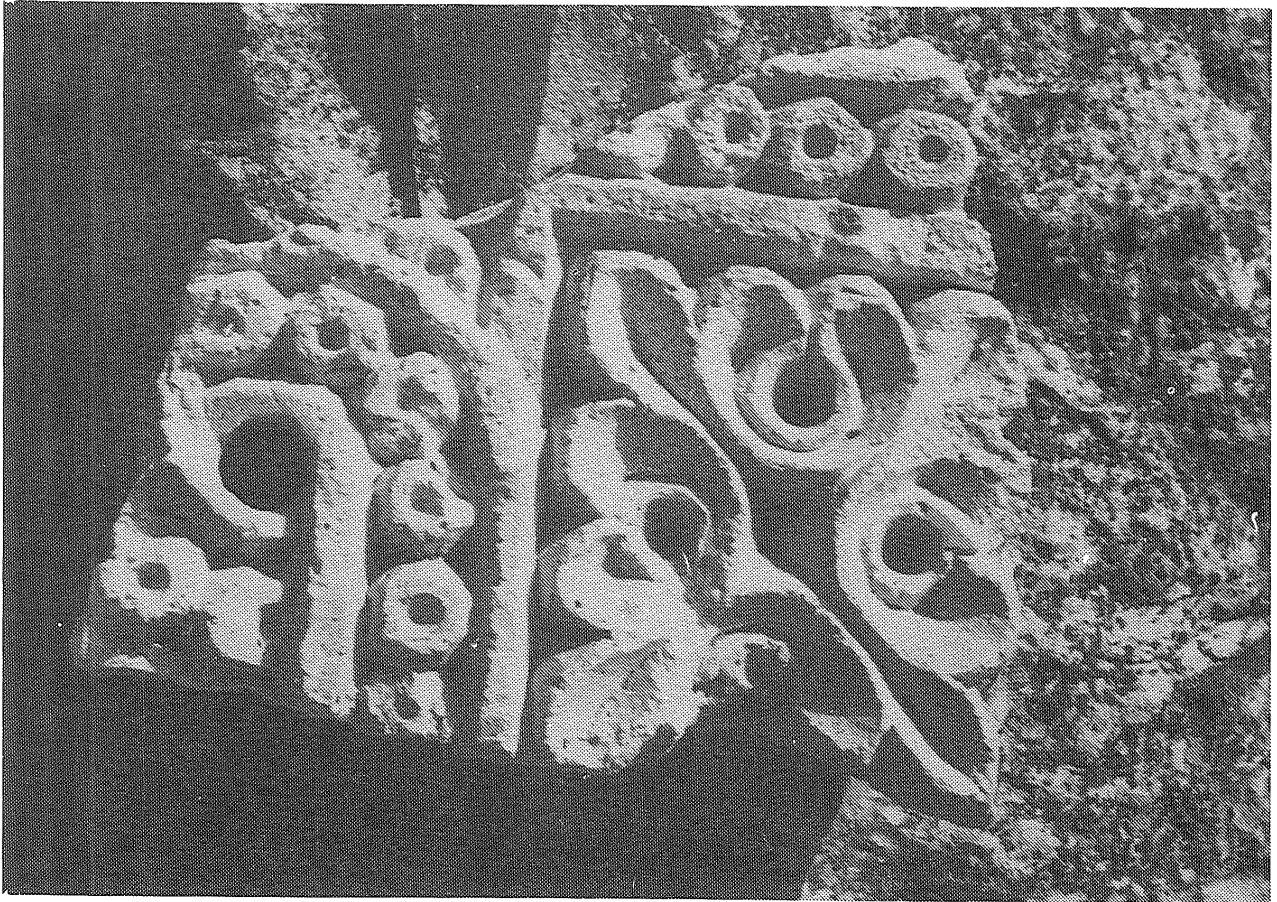
Aerial photograph of 'Aqaba Castle



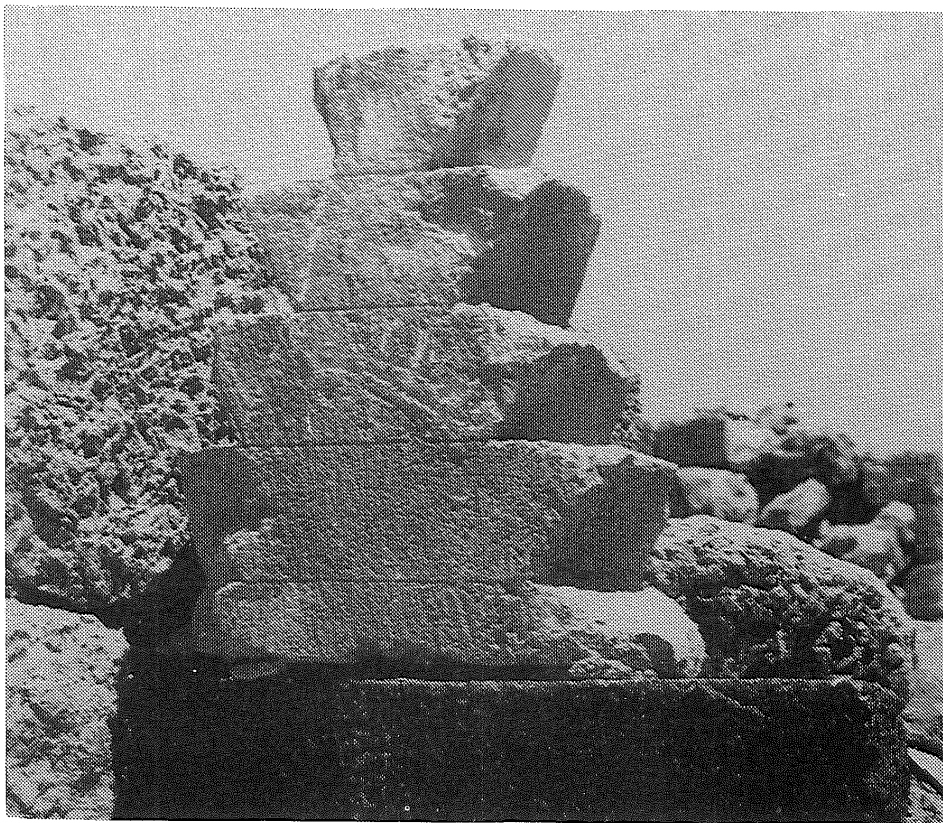
1- Qasr el Hallabât, face est.



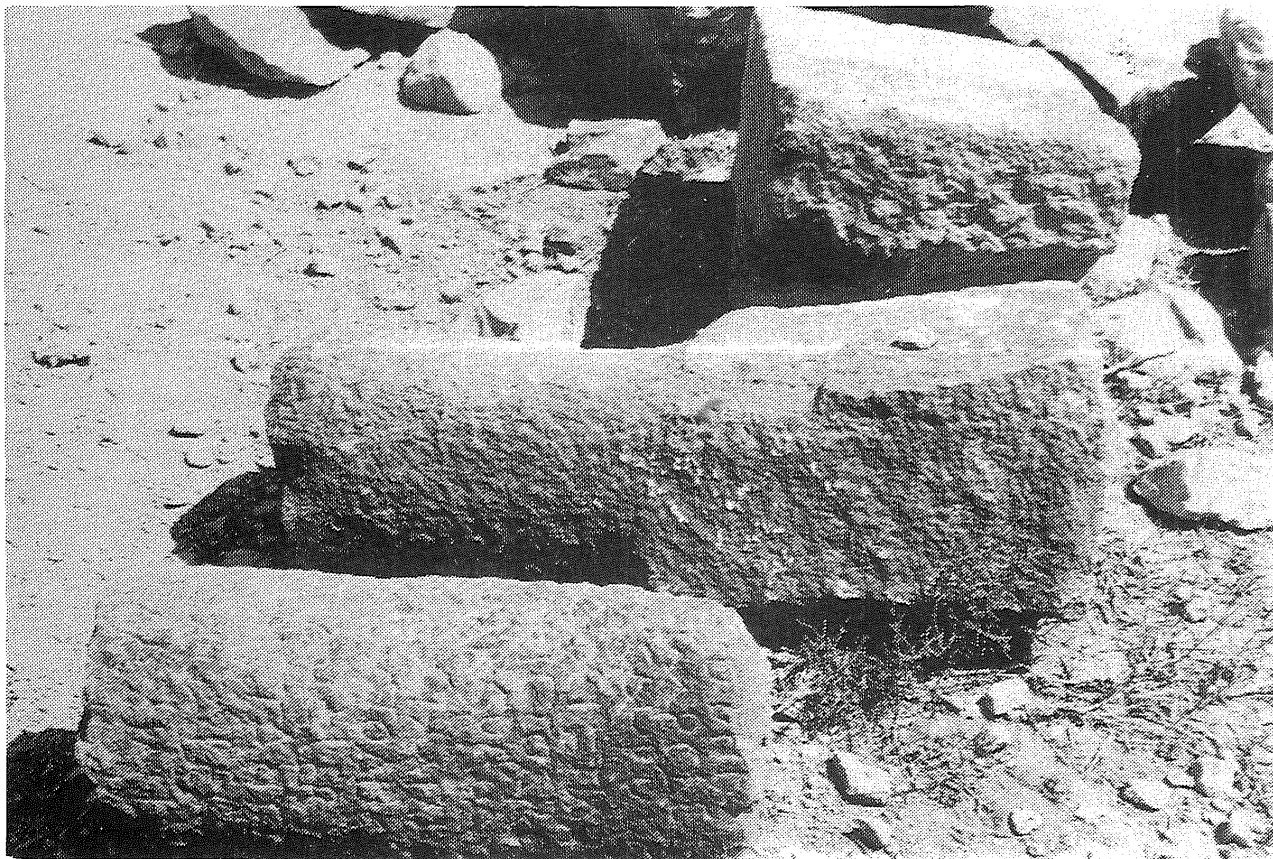
2- Qasr el Hallabat, face nord.



1· Stuc



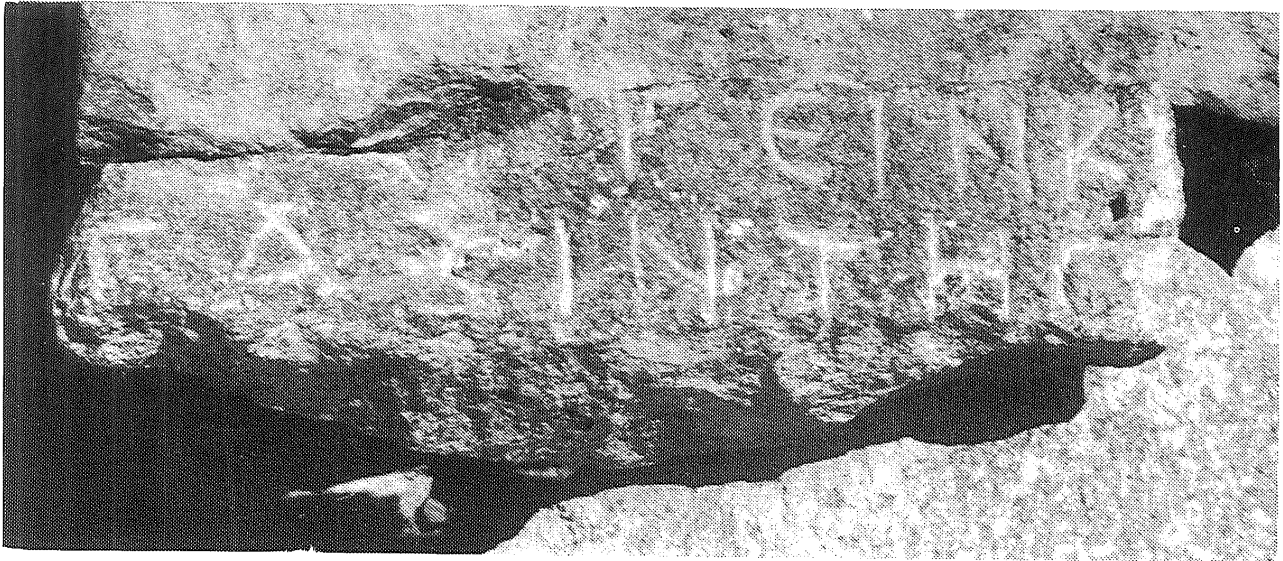
2· Merlon



1. Borne milliaire 79/14 et 15



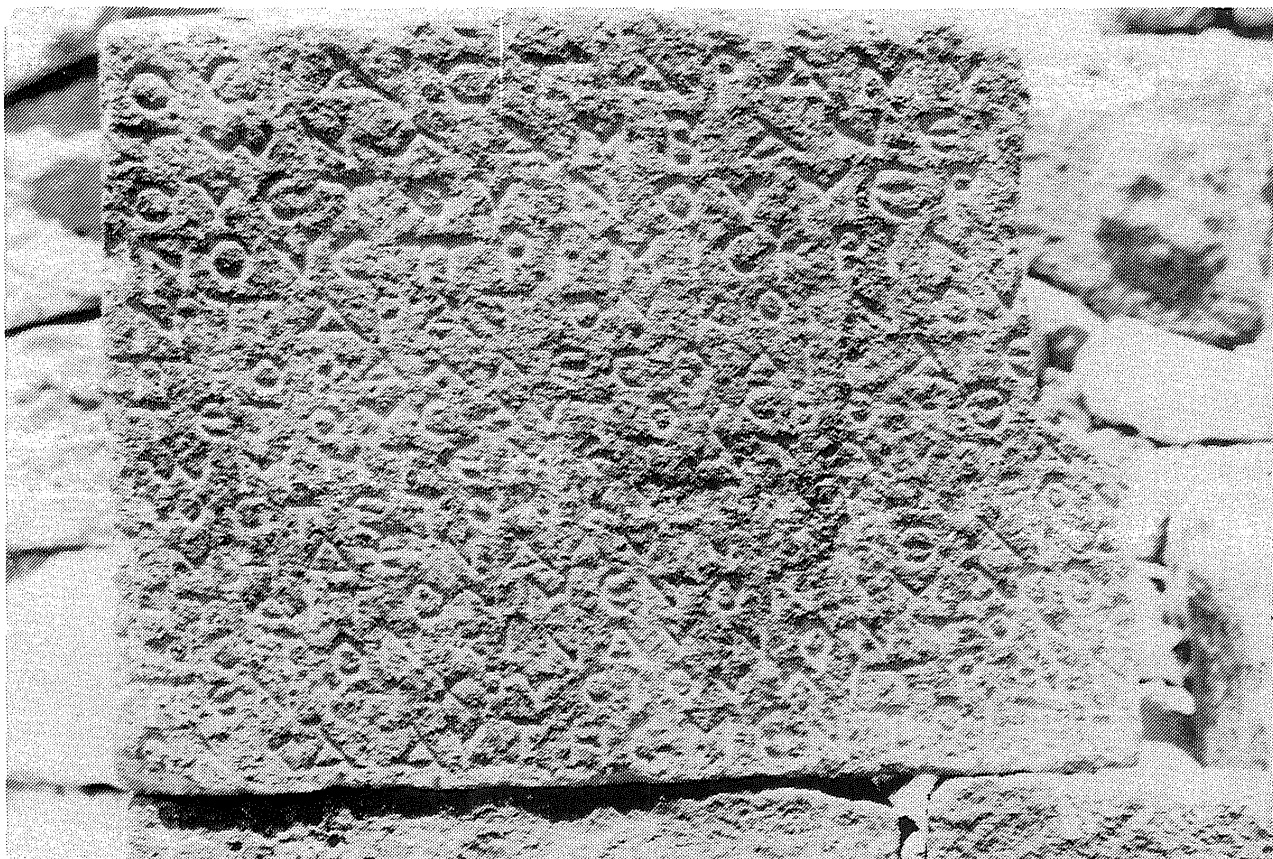
2. Estampage du fragment 79/12



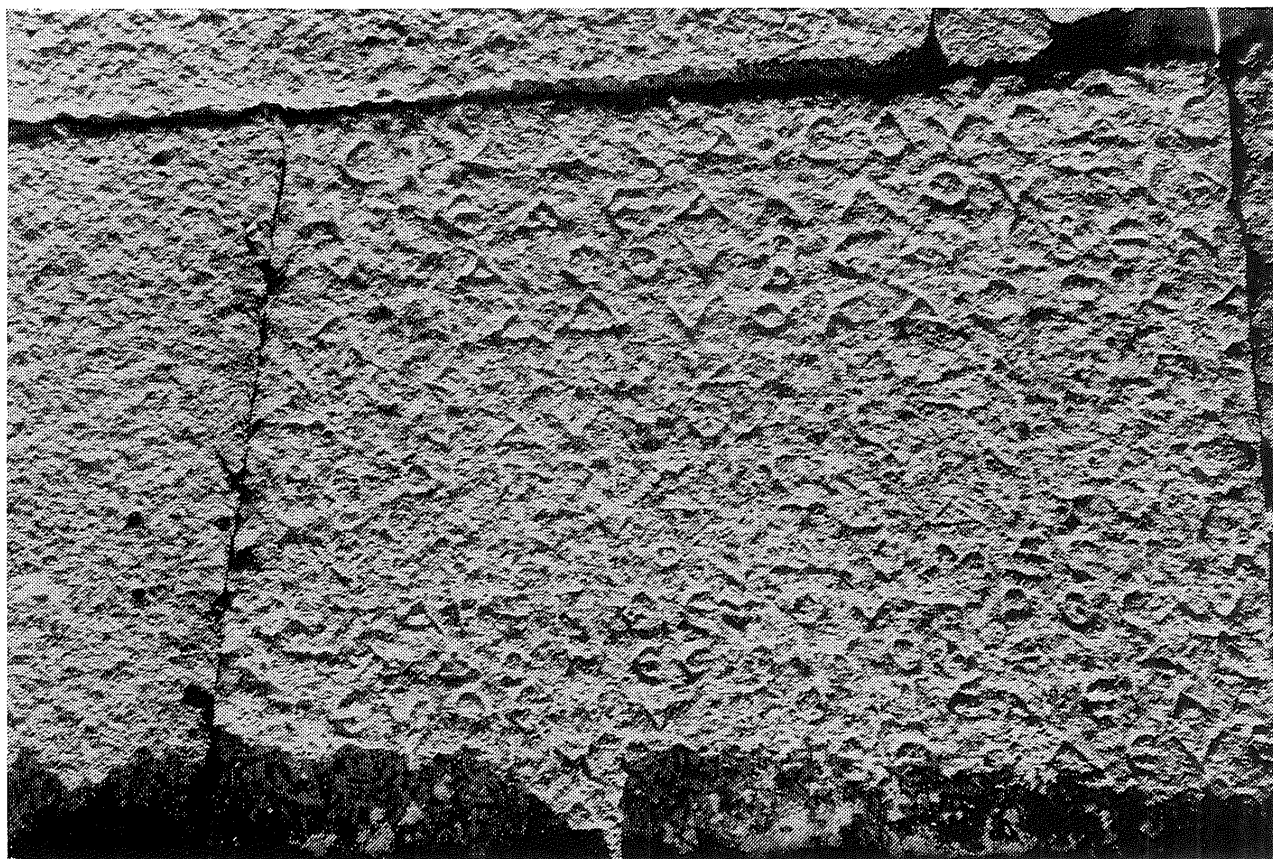
1. Fragment 79/19



2. Le fragment PAES 20/4



1. Le fragment 79/15



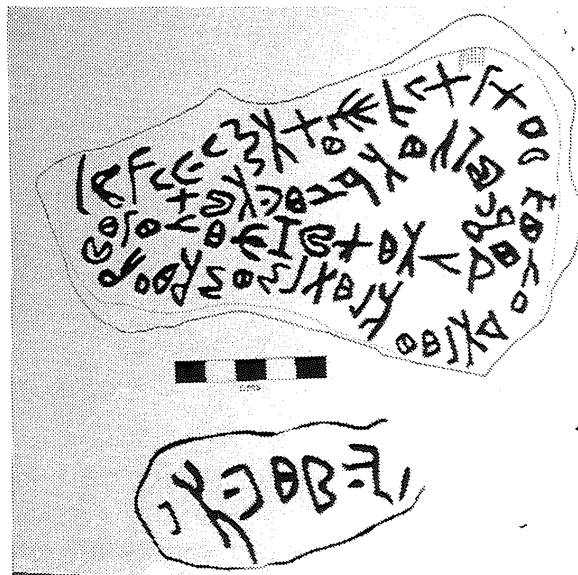
2. Le fragment PAES 20/5



1.



2.



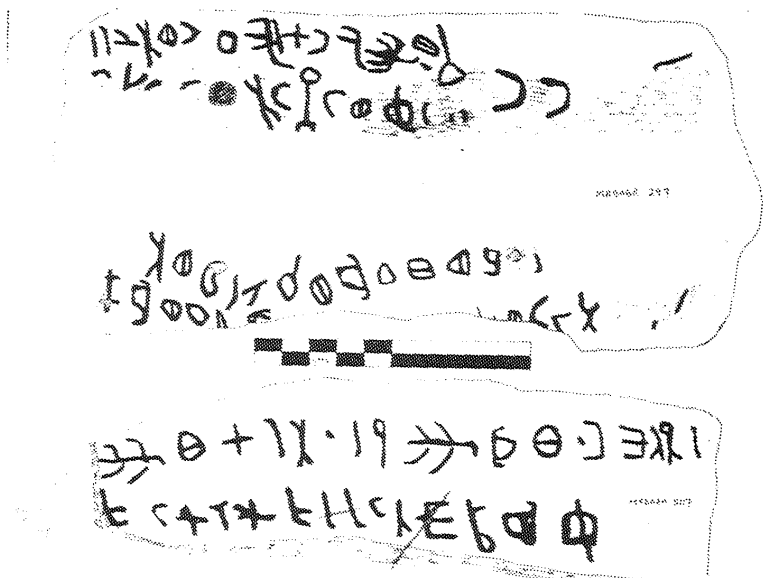
3.



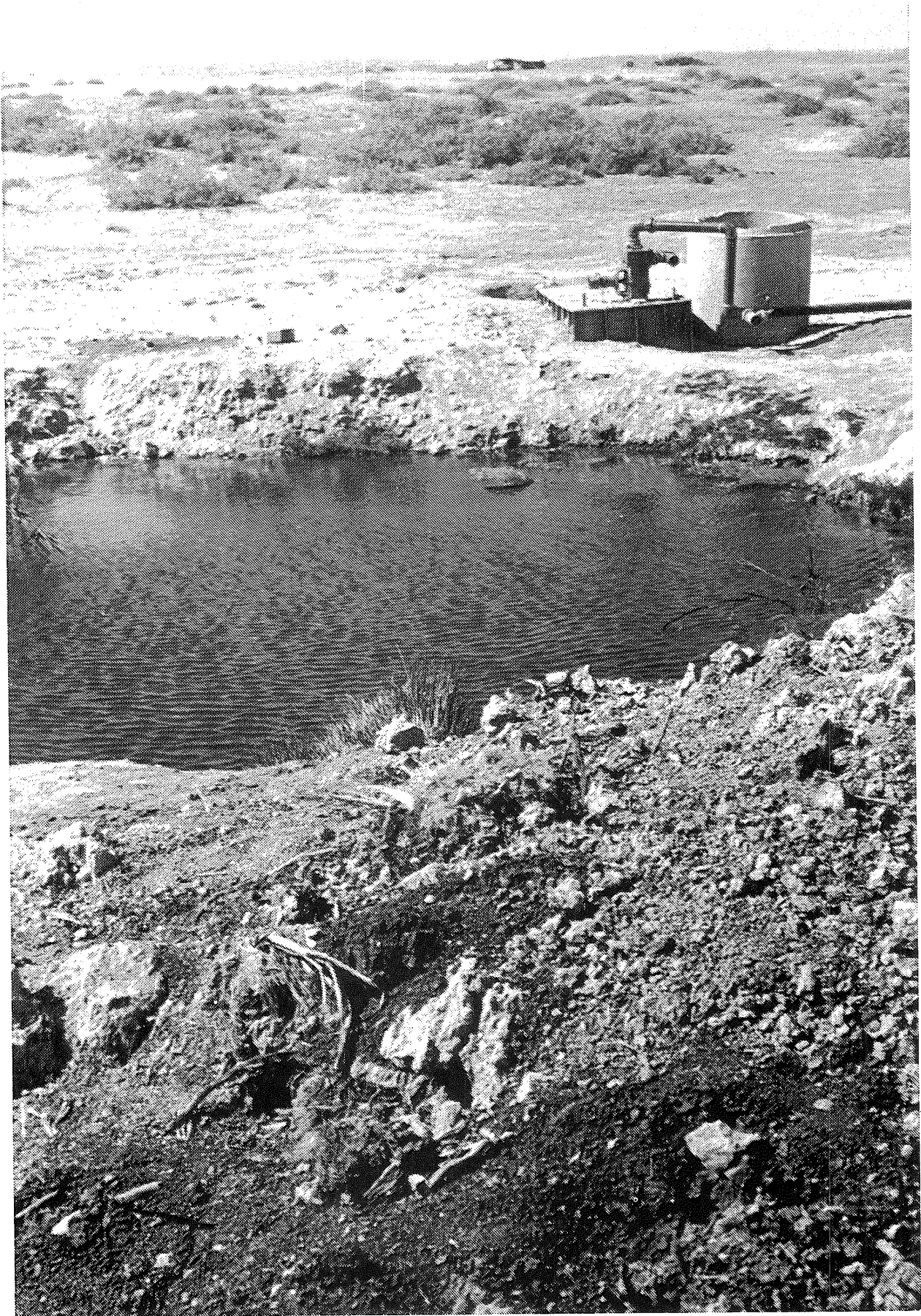
1.



2.



3.



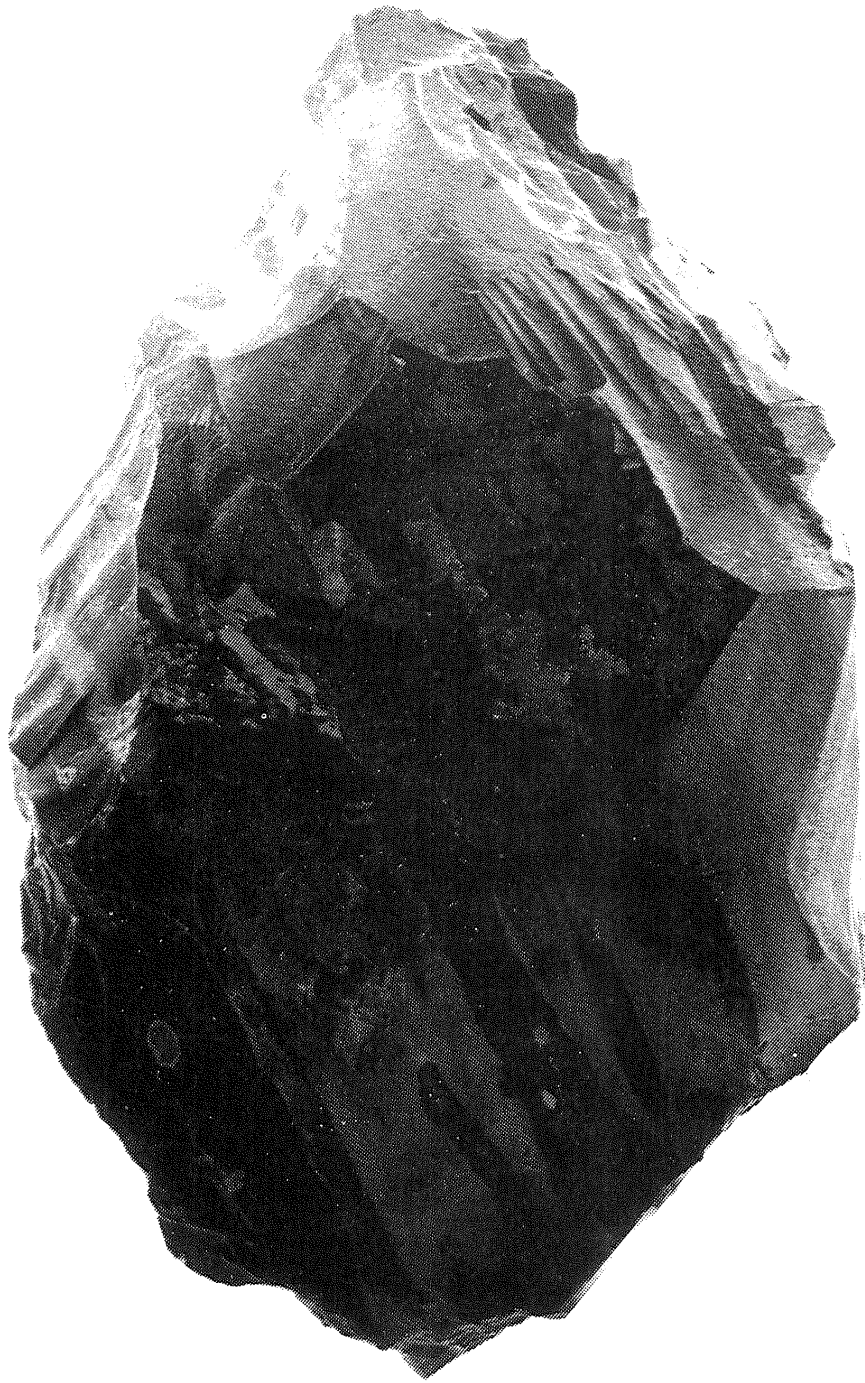
The sump at Ain el-Assad, looking west. One of the backdirt piles from the excavations is crumbling in the foreground.



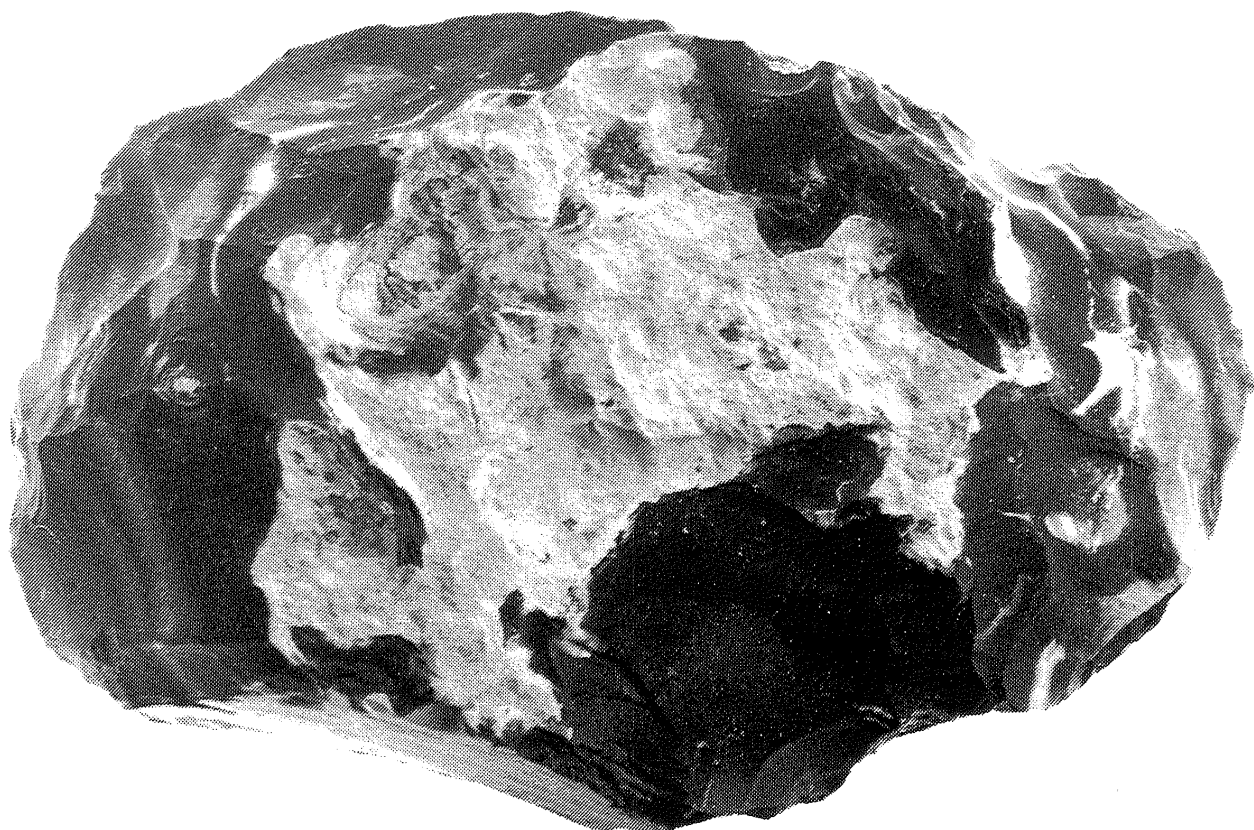
1. Cleaver (above) and amygdaloid handaxe (below), both Black Series.



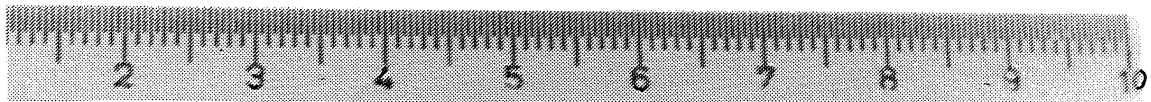
2. Lanceolate handaxe. The tip was snapped and subsequently retouched. (Gray Series)



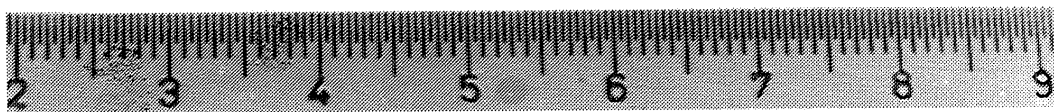
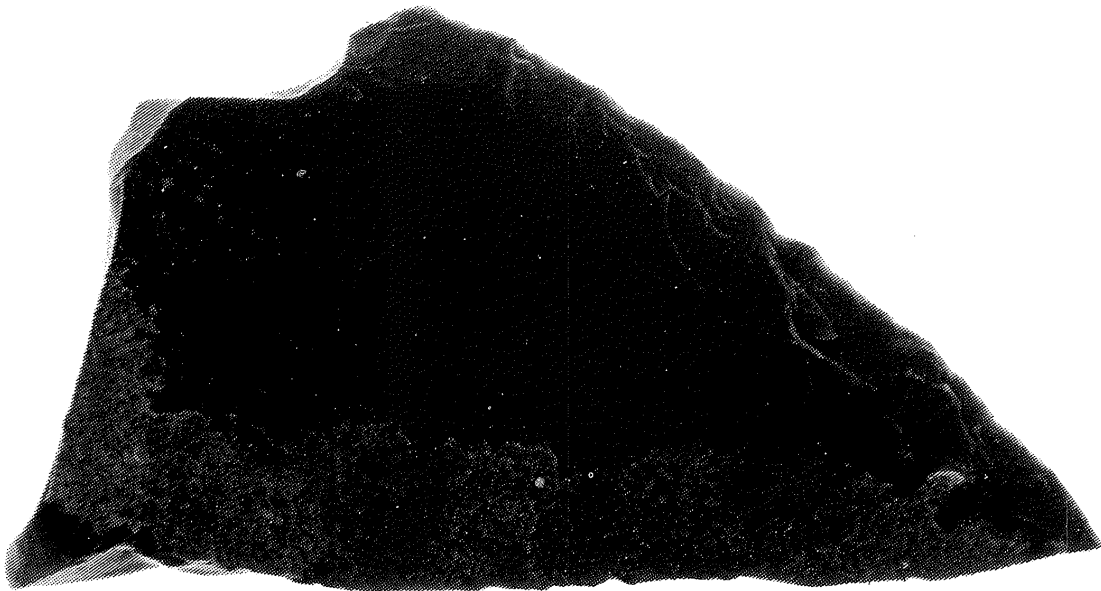
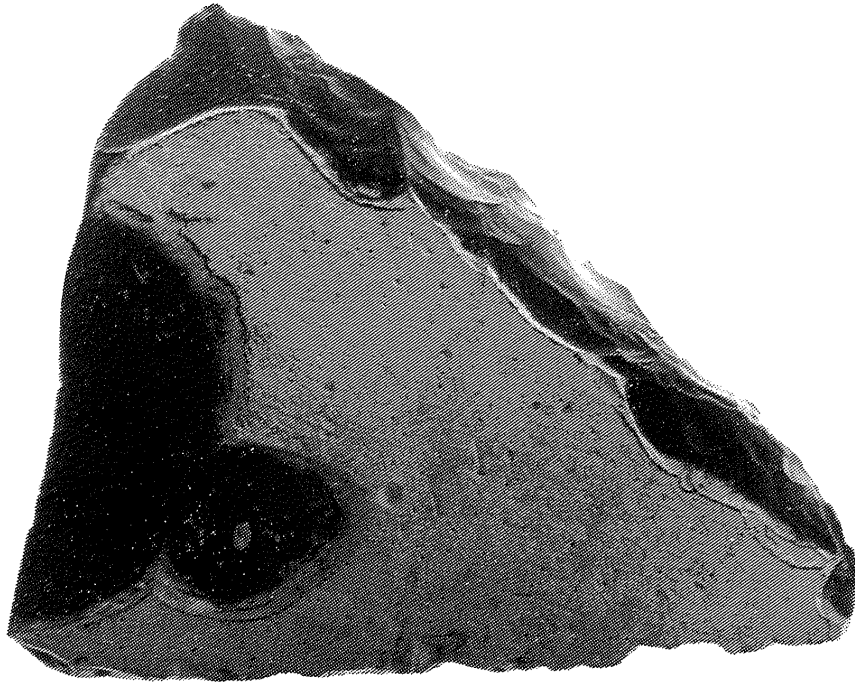
1. Abbevillian handaxe (Grey Series).



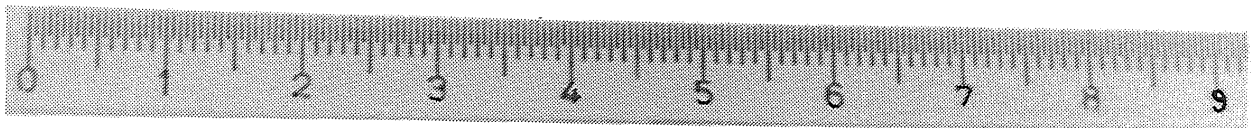
2. Limande handaxe (above) and cleaver (below), both Black series.



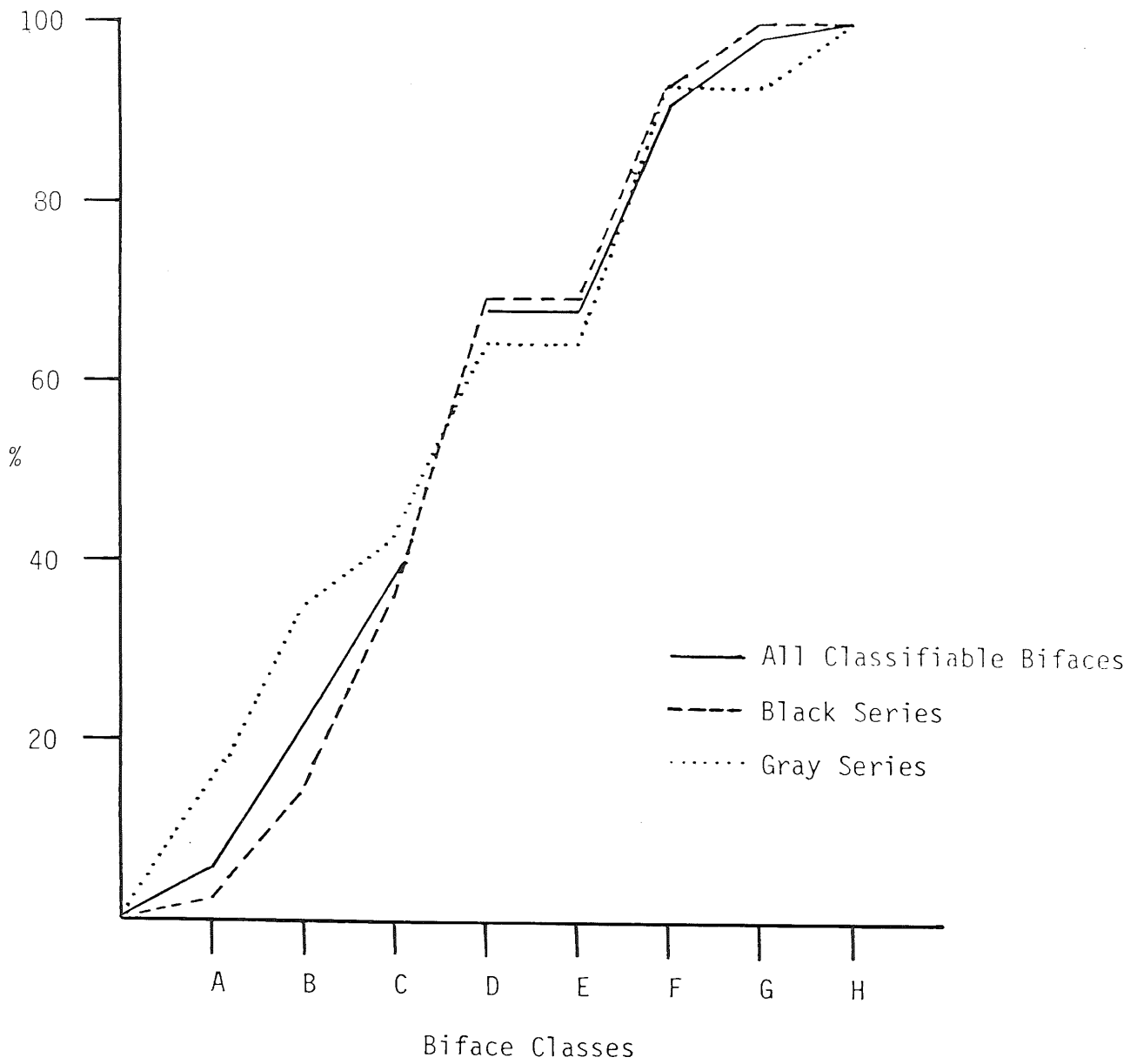
1. Transverse raclor with no color change, but with high stream polish.



2. Two convex racloirs (Black Series).



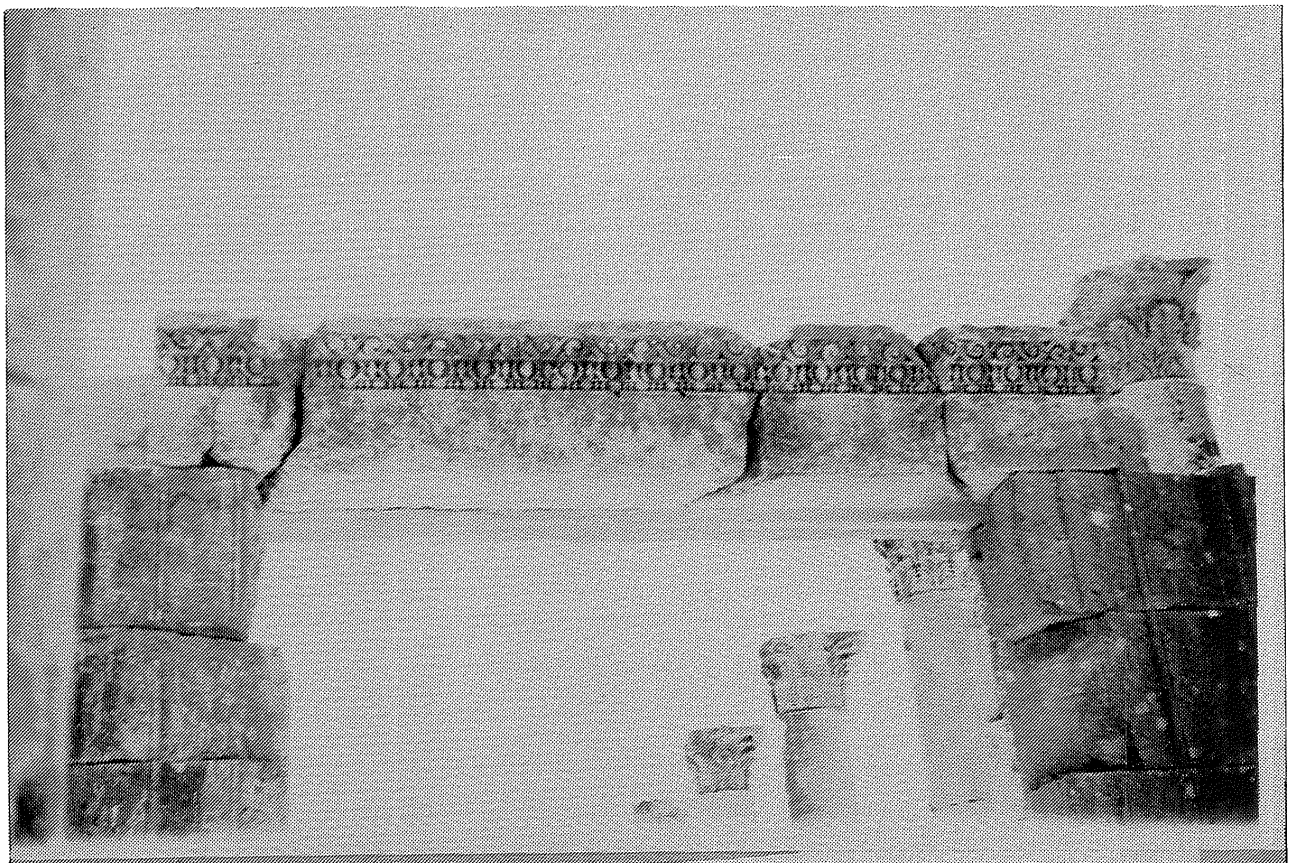
Core of diverse type. Note the burin-like blade facets at upper right.



Cumulative relative frequencies of biface classes of the Black and Grey Series from Ain el-Assad.



1. Upper external face of the architrave of the peristyle reused in St. Theodoro's Church.



2. Upper external face of the architrave of the peristyle reused as lintel of the main entrance of St. Theodoro's Church.



1. North-east corner of the trapezium-shaped square.



2. Fragment of the upper segment of the cornice of the cella wall.



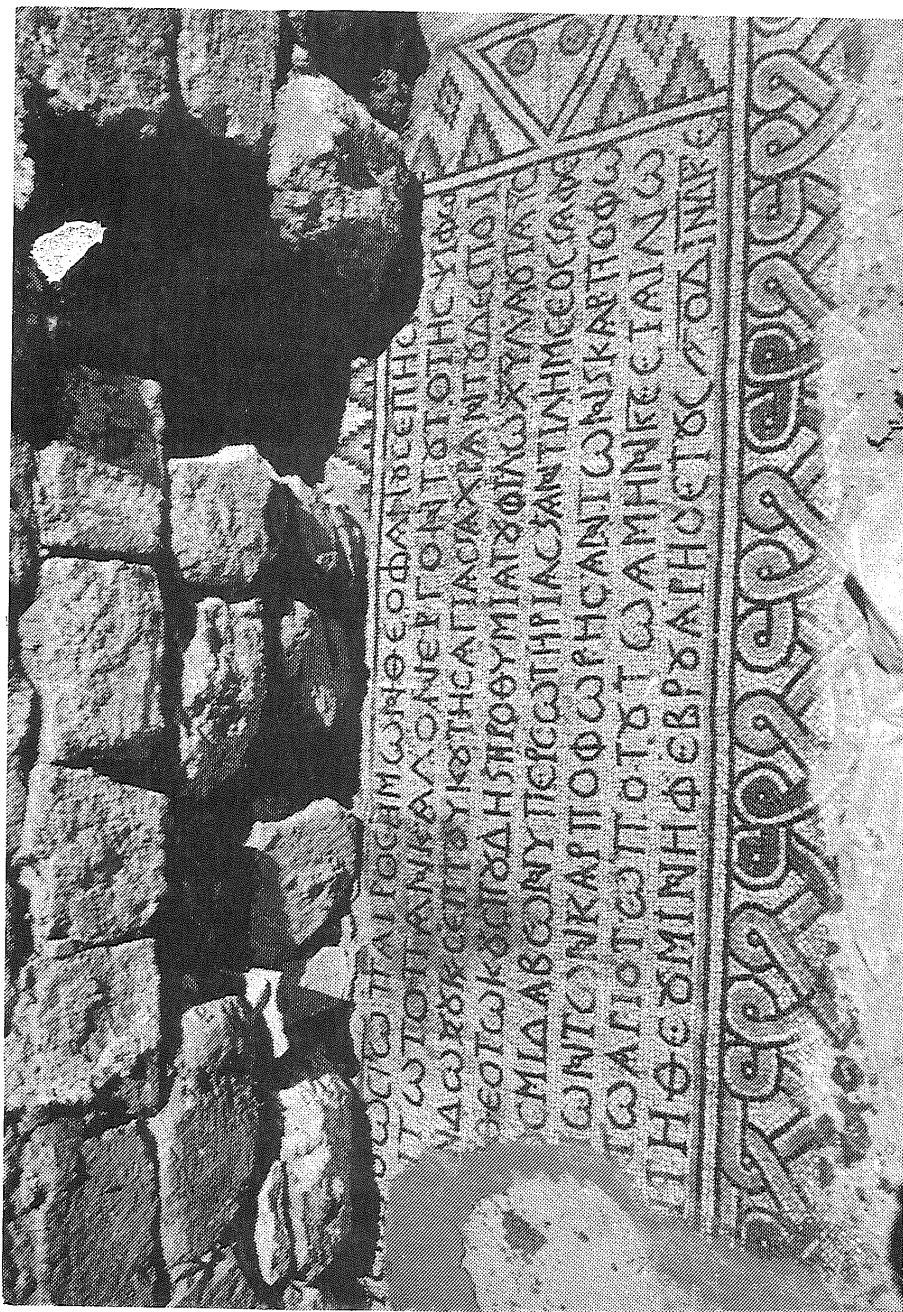
1. Fragment of the lower segment of the cornice of the cella wall.



2. Piece of the upper segment of the cornice of the cella wall.



Madaba, Church of the Virgin Mary. The main mosaic floor with the inscription in the medallion and the dedicatory inscription in the background.



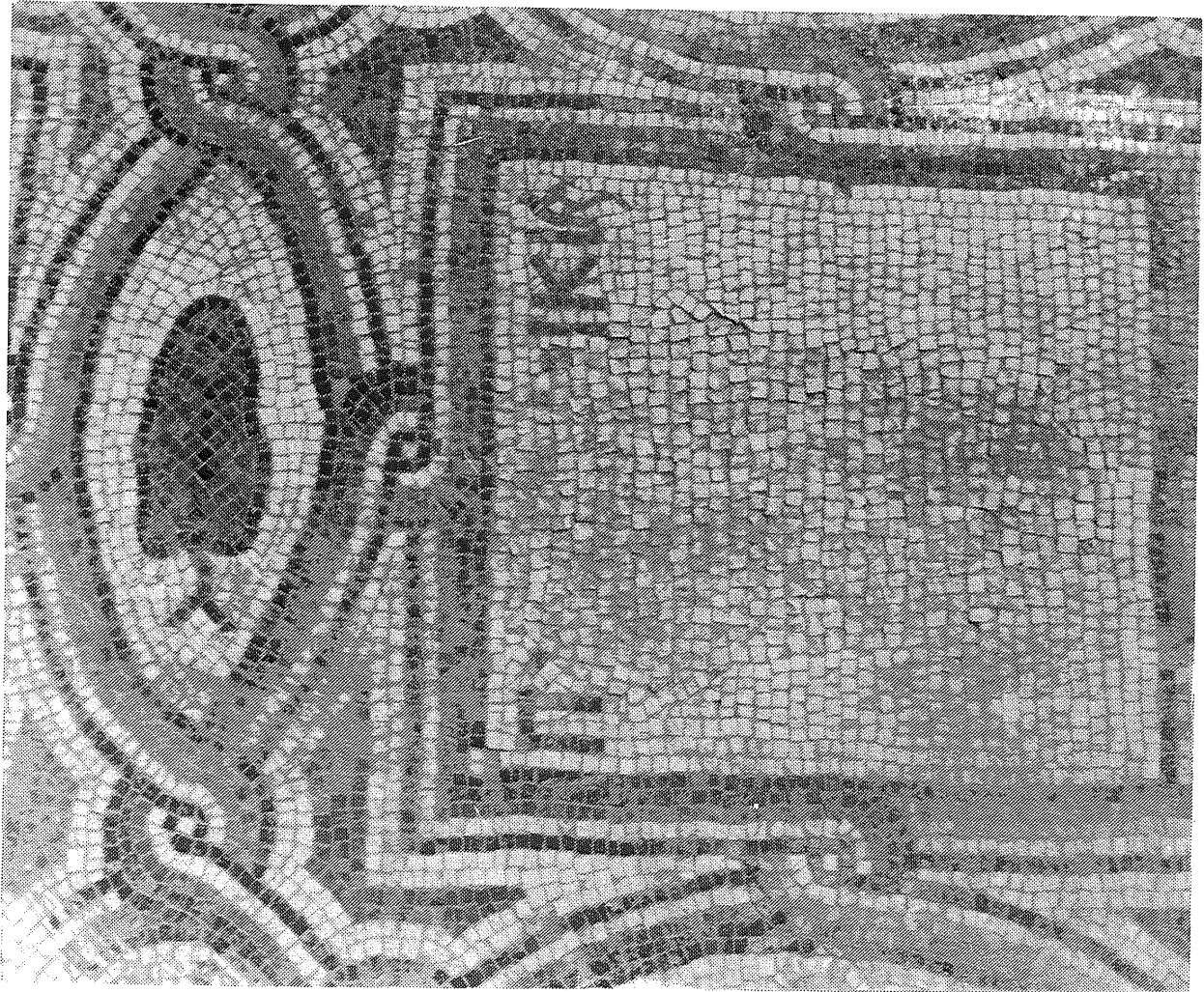
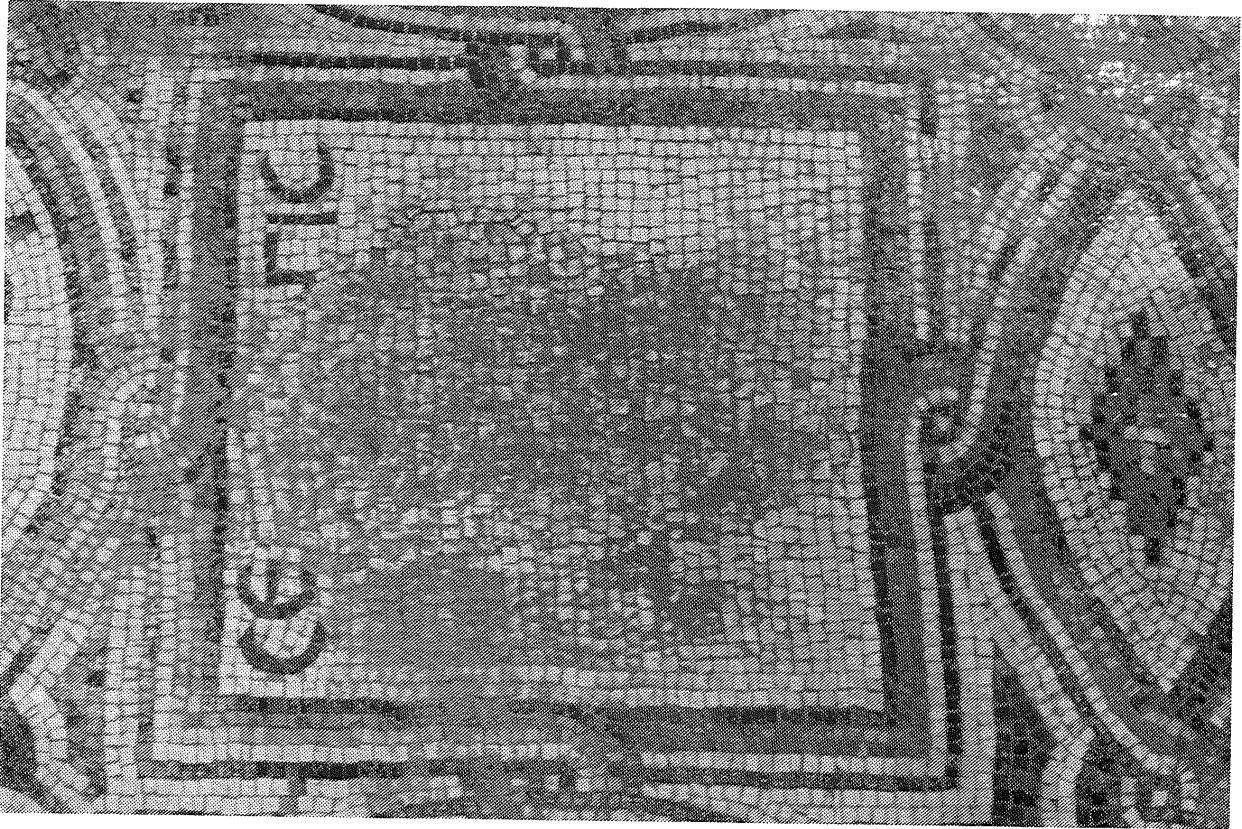
Madaba, Church of the Virgin Mary. The dedicatory inscription.



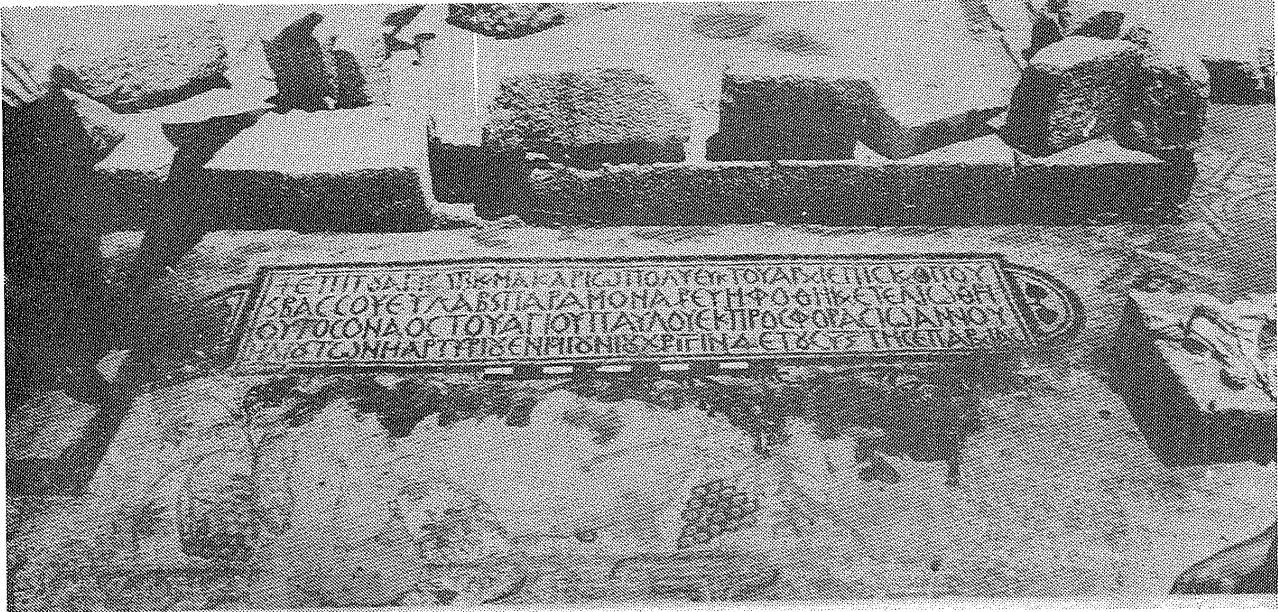
1. The Church of St. Peter:
general view



2. The Church of St. Peter: dedicatory inscription.



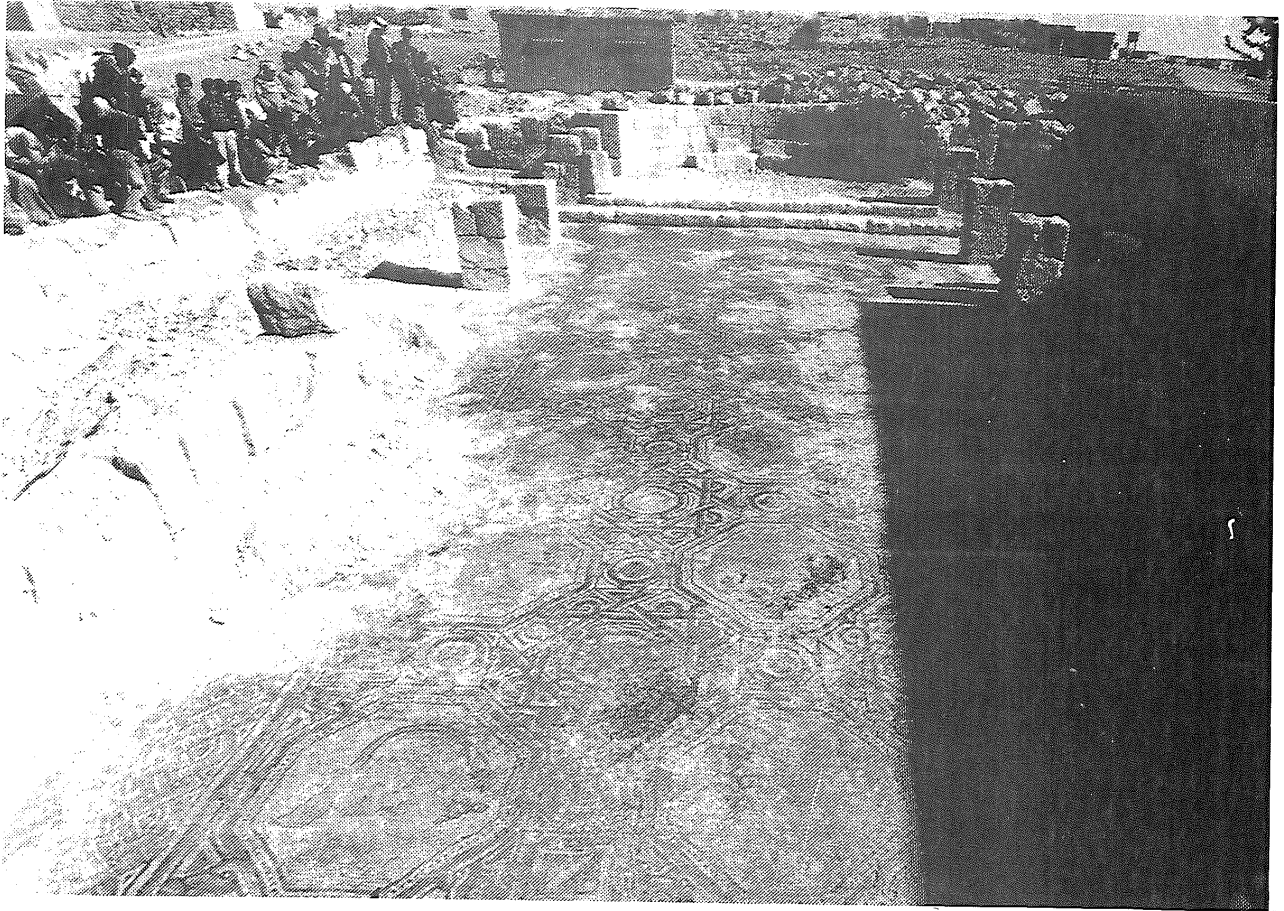
The Church of St. Peter: details from the central mosaic carpet.



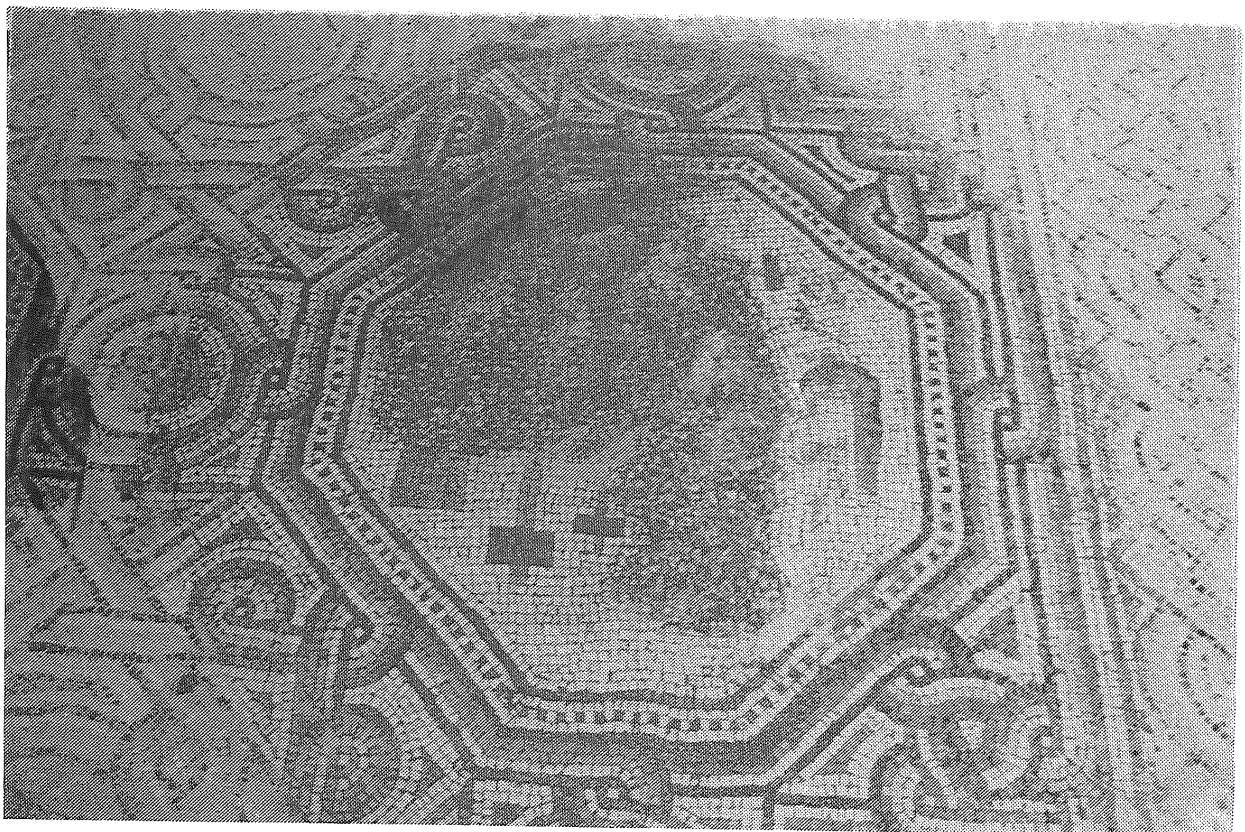
1. The Church of St. Paul: dedicatory inscription.



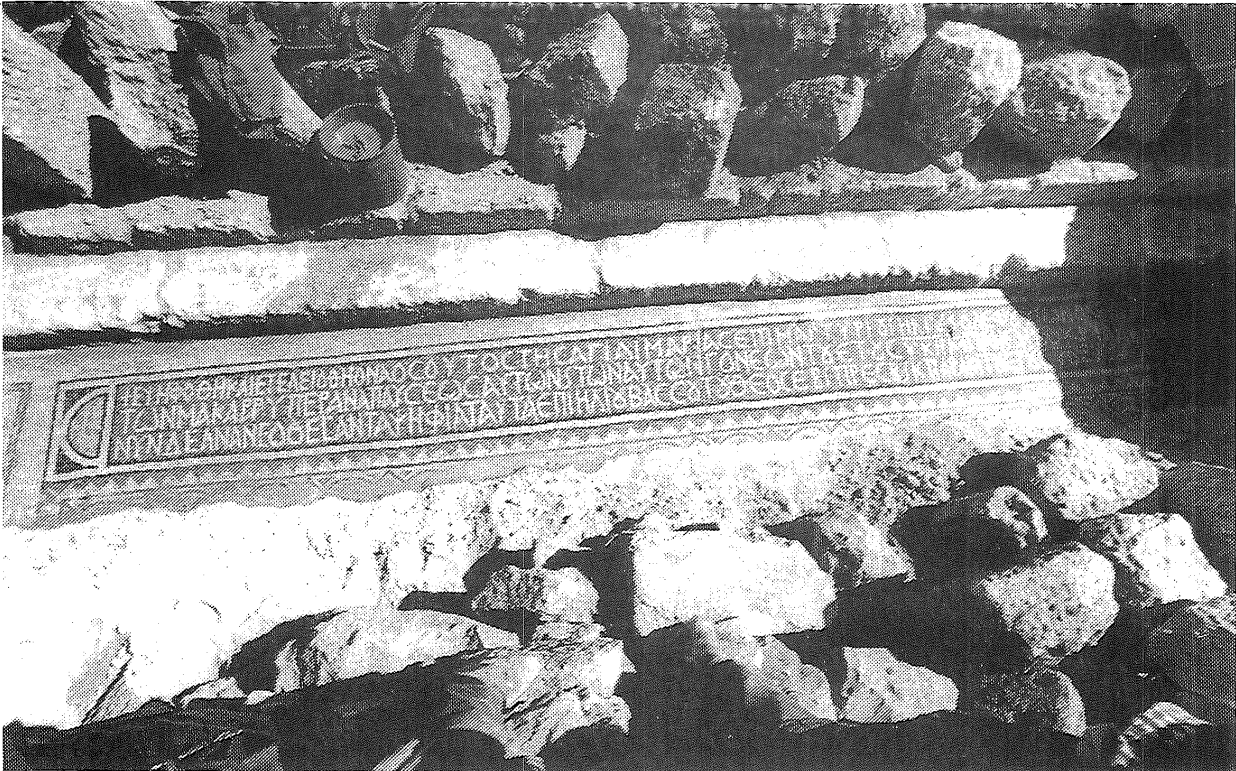
2. The Church of St. Peter: detail from the central mosaic carpet.



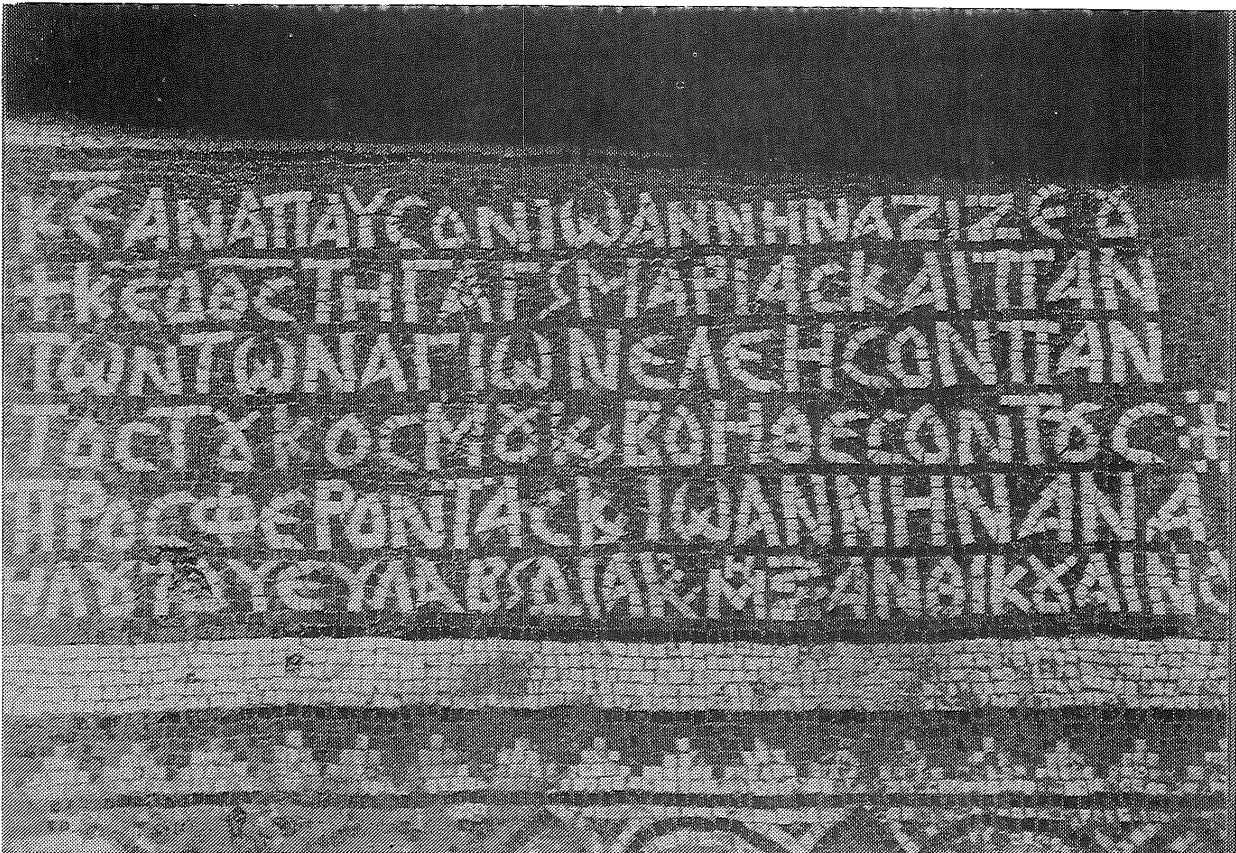
1. The Church of St. Mary: general view.



2. The Church of St. Mary: detail from the central mosaic carpet.



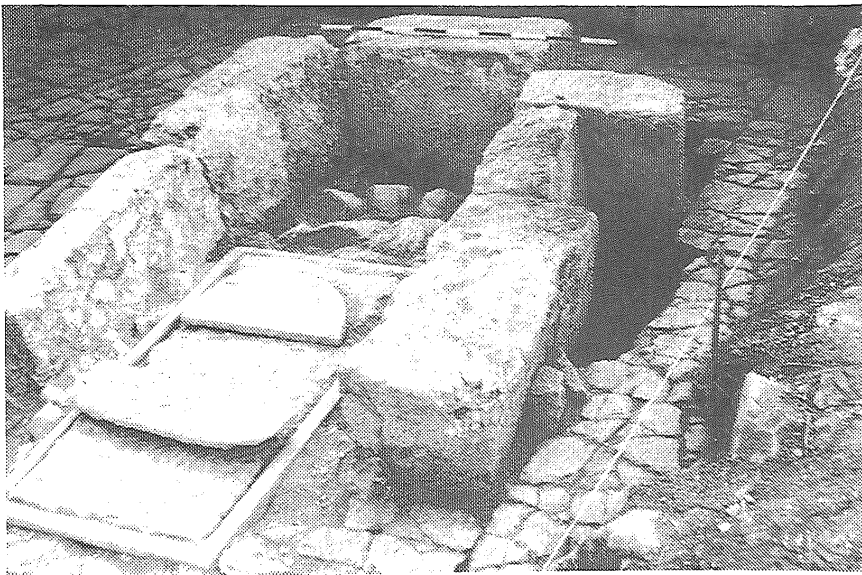
1. The Church of St. Mary: dedicatory inscription.



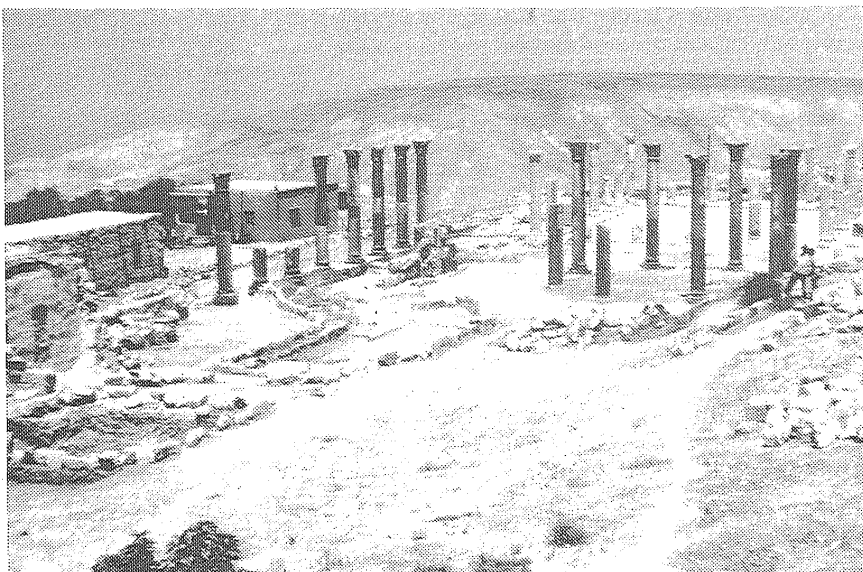
2. The Church of St. Mary: inscription between two pillars.



1. The Basilica: Eastern portion of the Octagon.



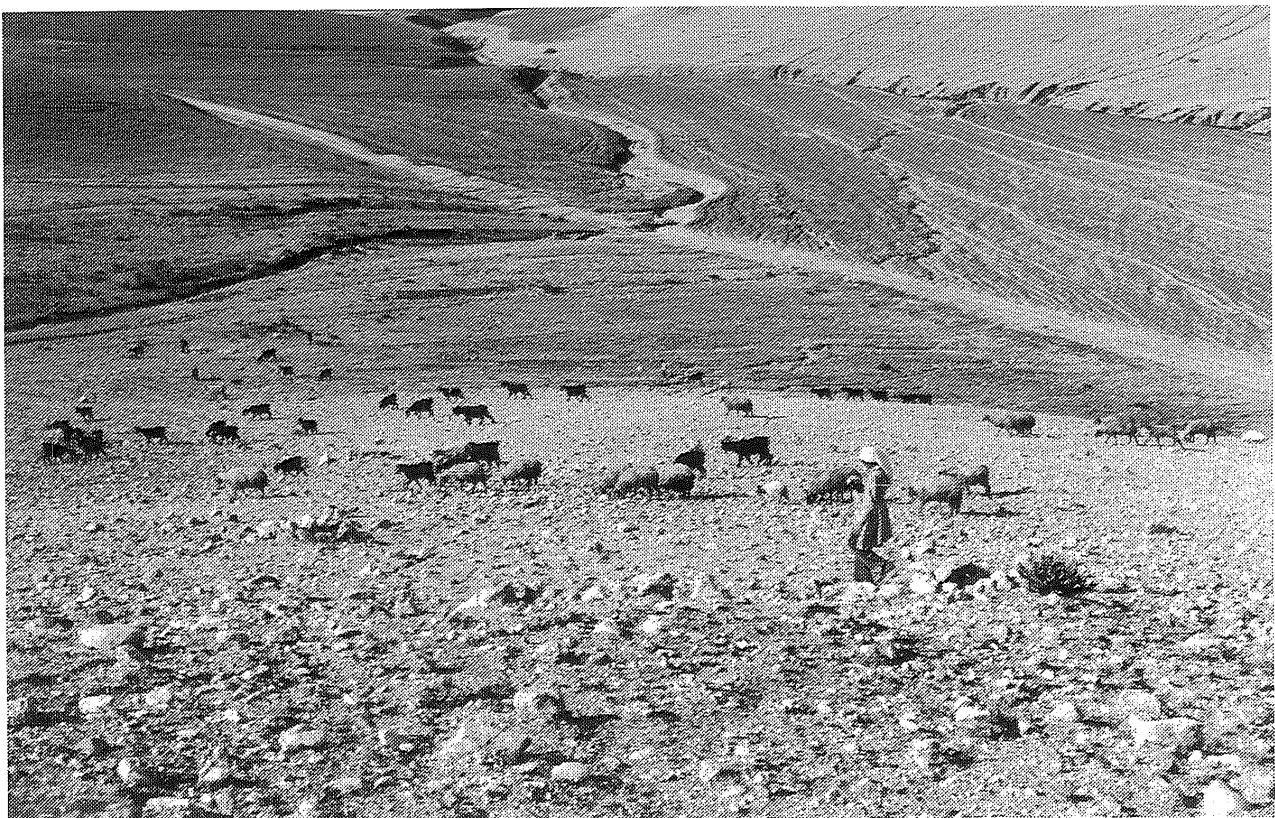
2. Sunken Grave in the Basilica.



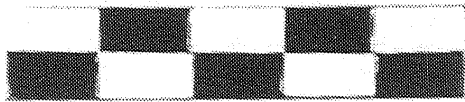
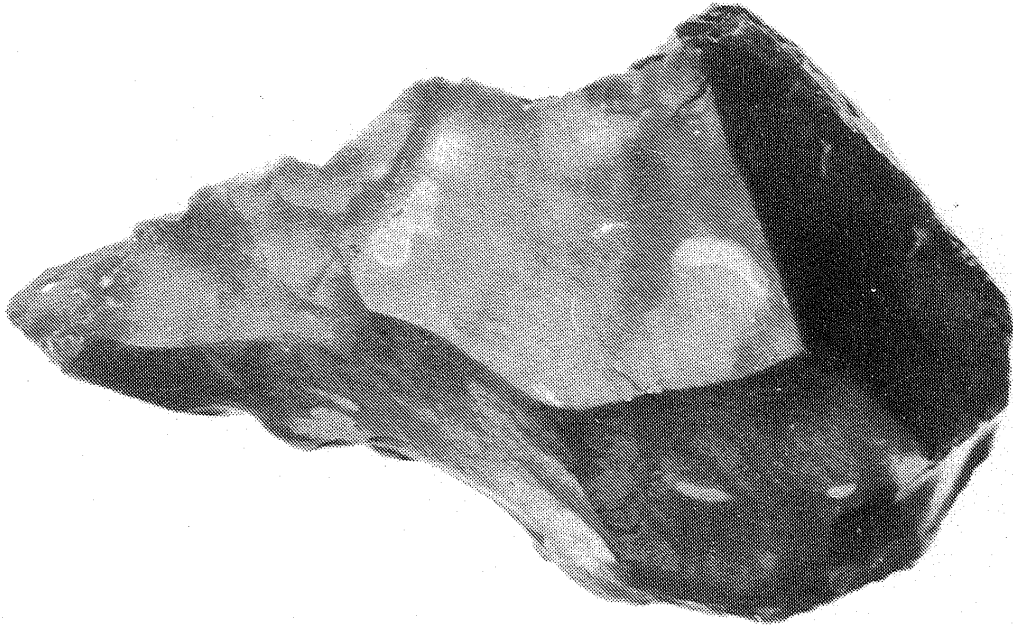
3. The Basilica after partial restoration.



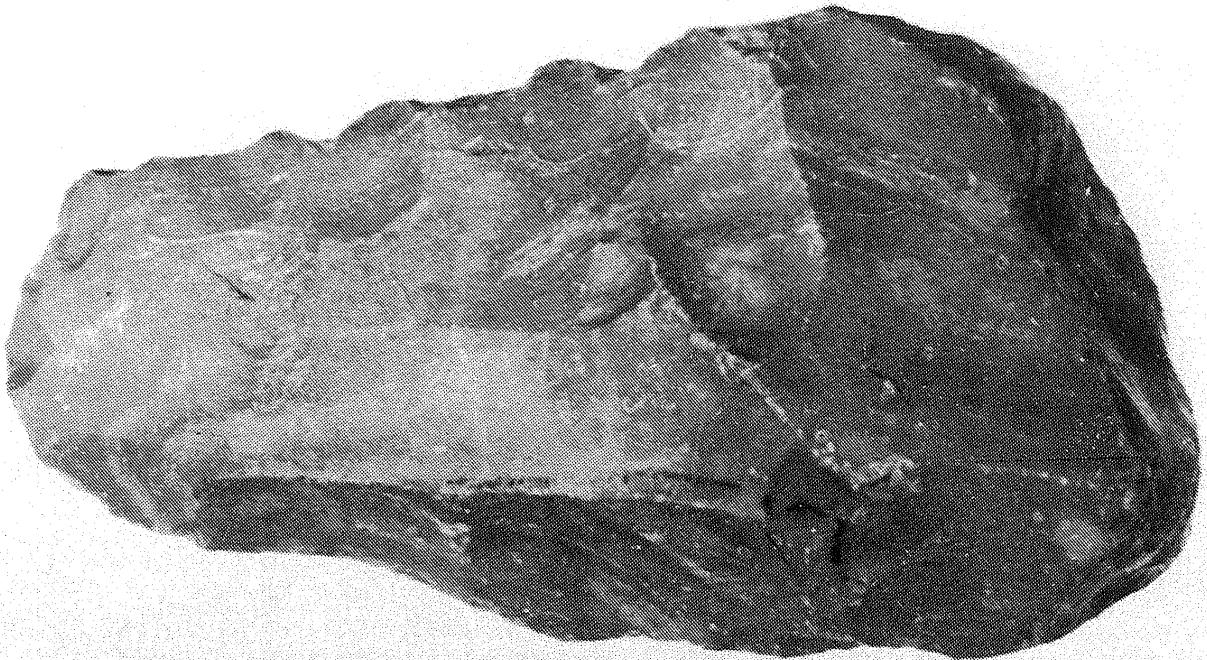
1. View from above the Abu el Khas site showing Ramileh ridge on the right, the Wadi el Khas cutting through the site, and the Tabaqat Fahl plain beyond. The flat topped hill of el Ba'ab is on the extreme right of the mid-ground.



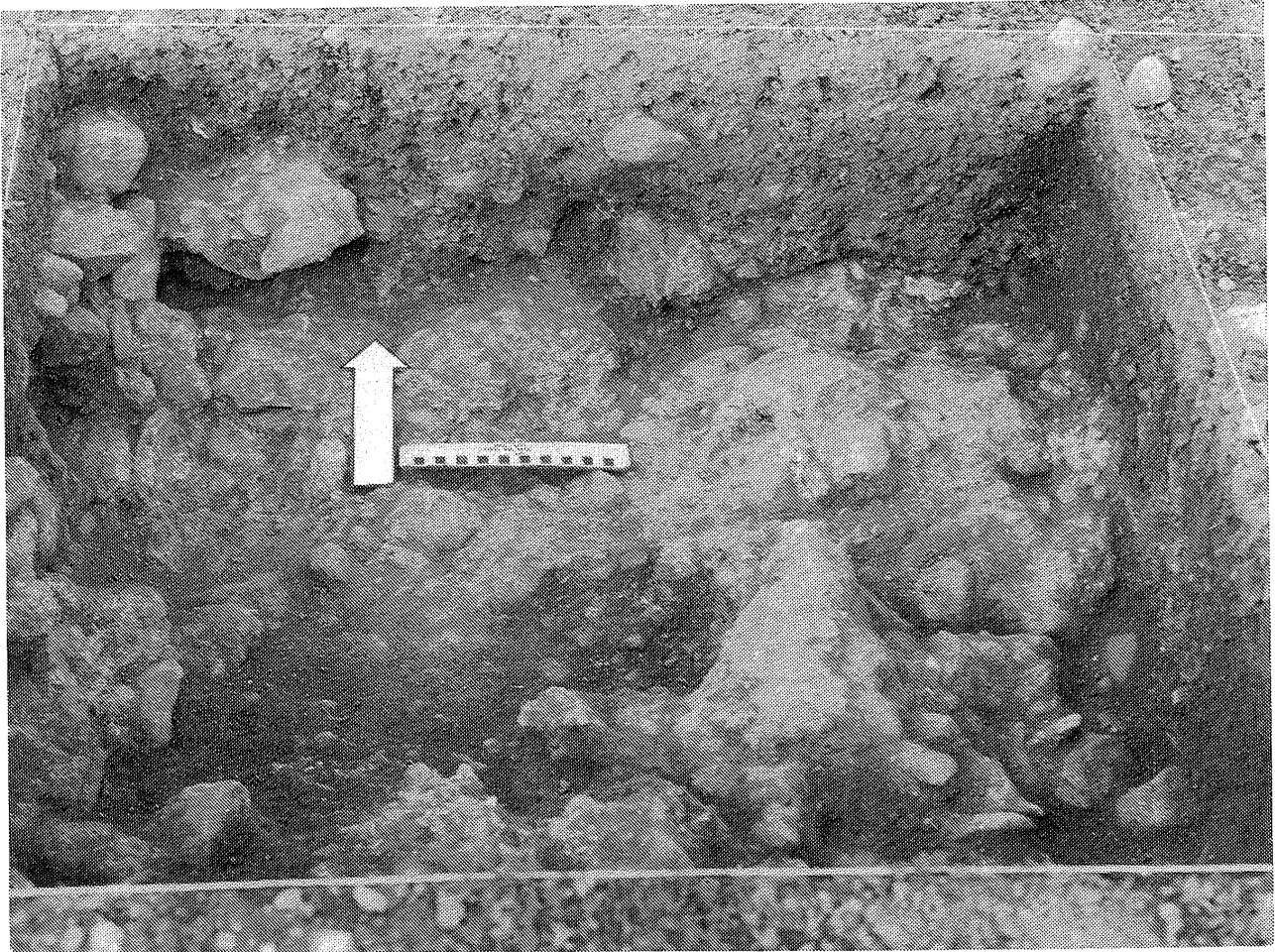
2. View from el Ba'ab west showing Ramileh and small alluvial terrace of Wadi el Khas.



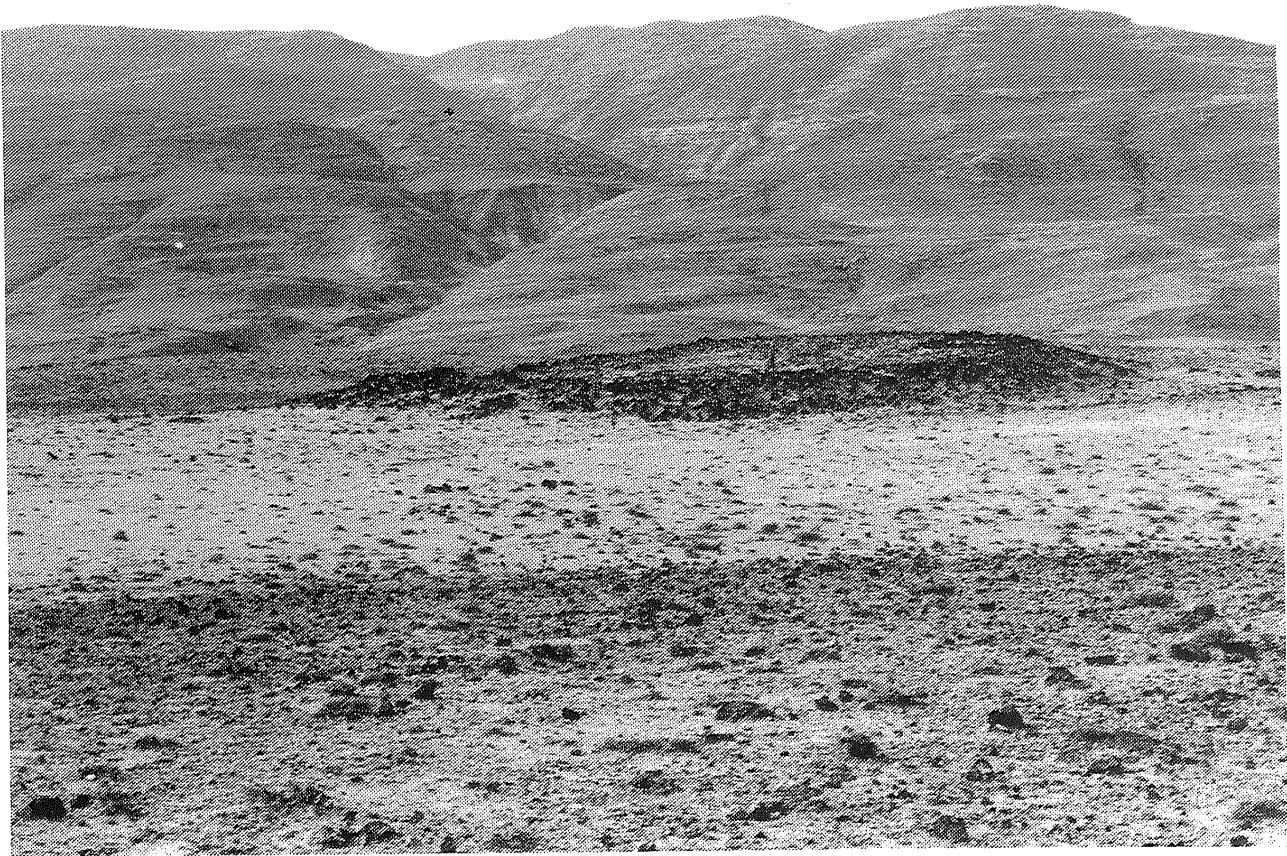
1. Handaxe from Selective Surface Sample (HA4.15)



2. Handaxe from Random Sample (71-1)



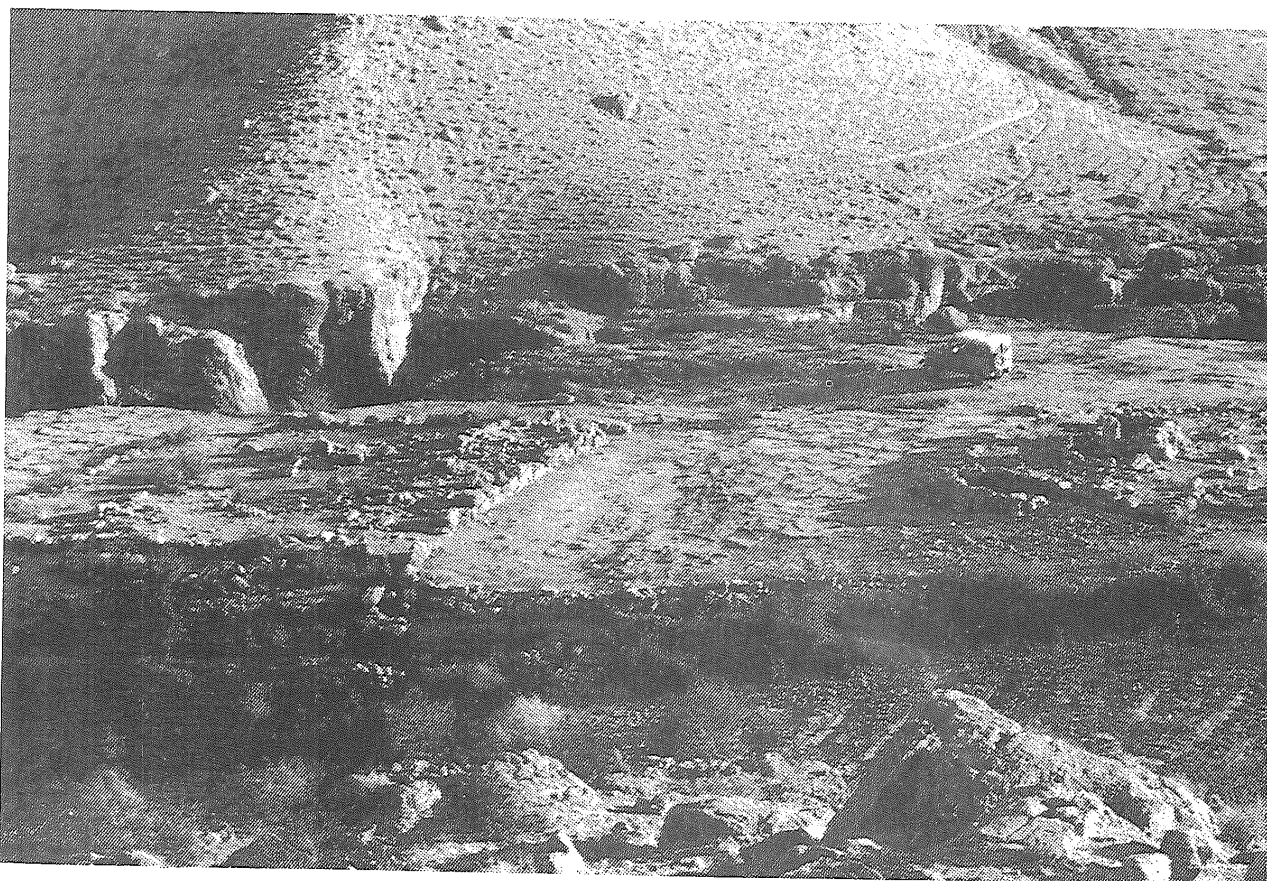
1m. x 1m. Test trench at cessation of excavation.



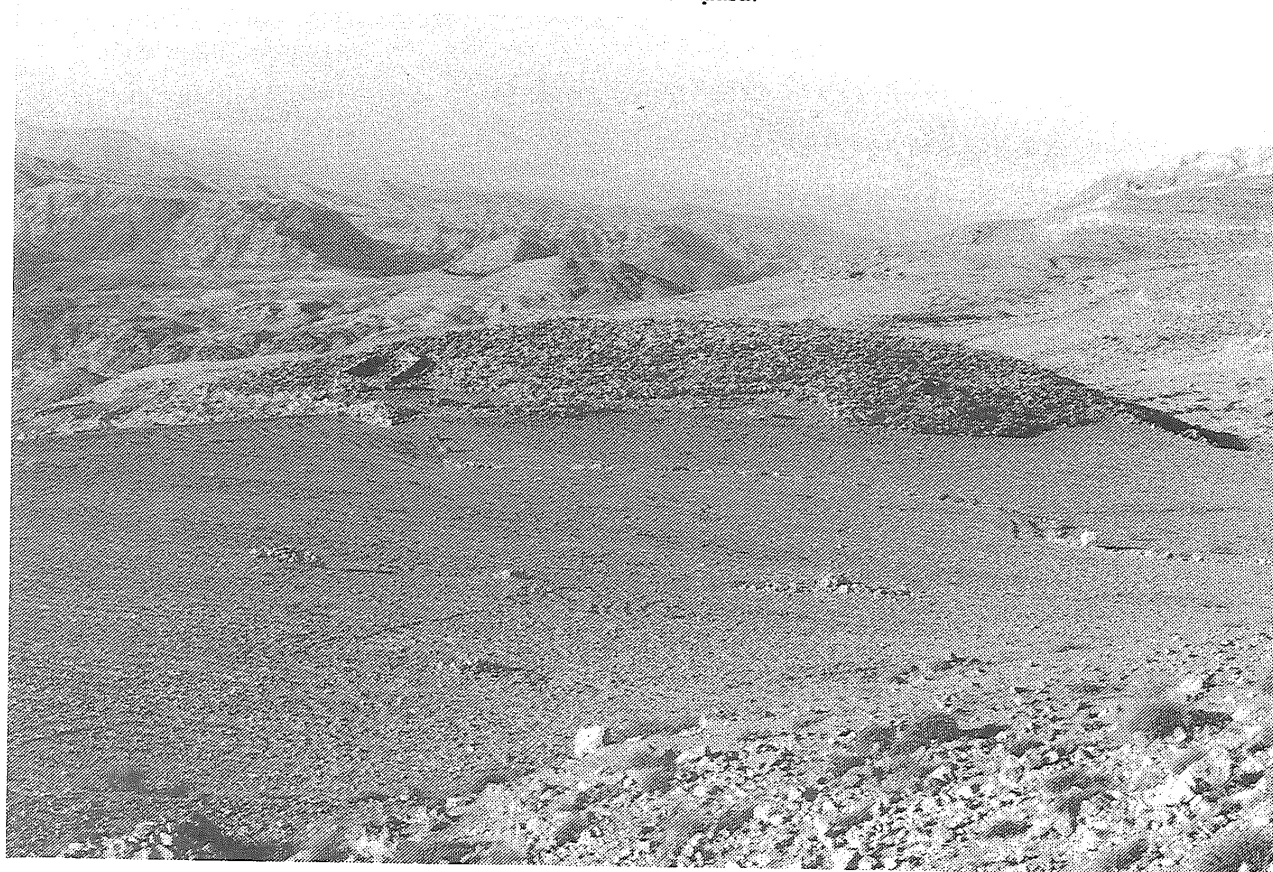
1. Site Number 42, Umm Qreiqarah; Stone Enclosure on Basalt Plateau on the East side of the Wadi eth Thamad; looking Southwest.



2. Northeast Tower/Stone Platform at Site Number 61, Khirbet 'Ain Saubala with the Wadi 'Afrā in the background.



1. Site Number 165, Beider Rādwan; showing two rectangular structures on the South Bank of the Wadi el Ḥasā.



2. Site Number 173, Al-'Addanin; looking West.



1. Site No 145, Khirbet 'Ain el Guzlan, with Jebel et-Tannur in the upper left hand corner.



2. Site Number 16, Khirbet Jummah; looking East.



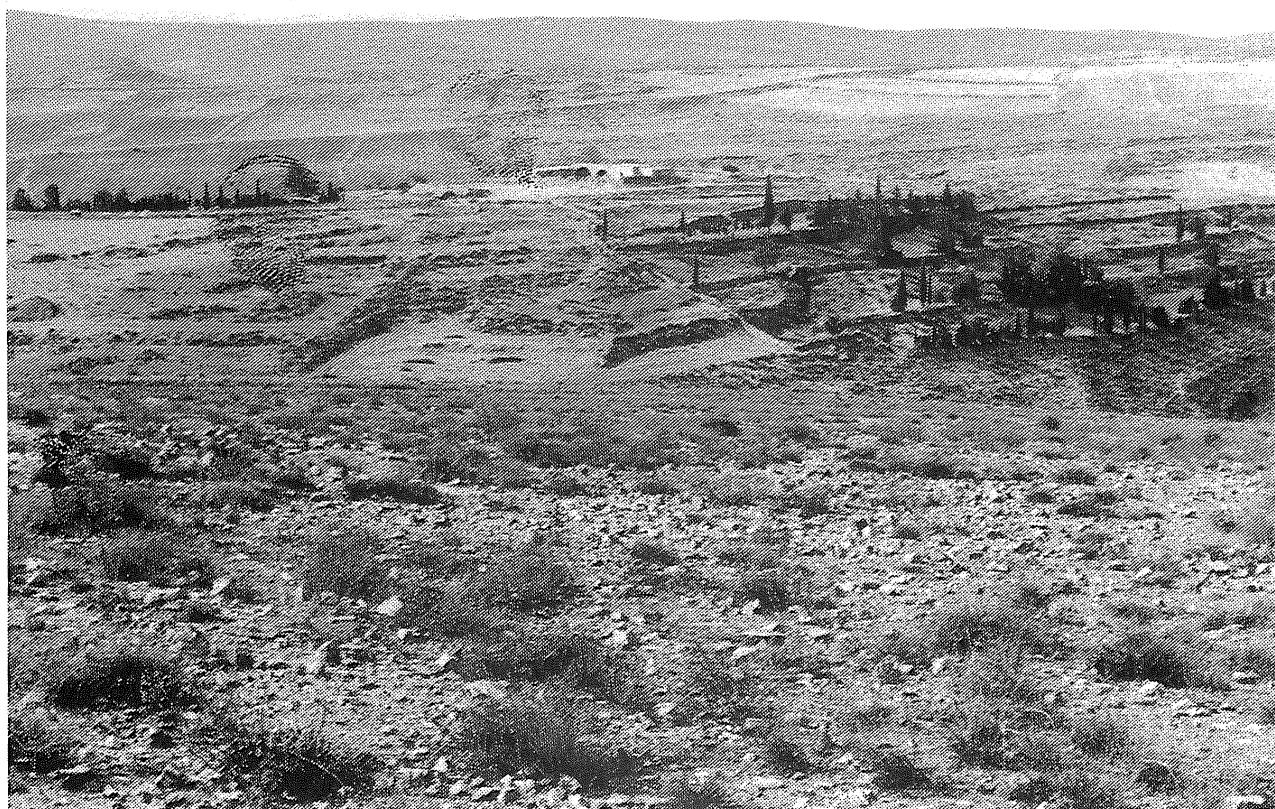
1. Site number 70, Al Habes South; East Slope of Site.



2. Site number 169, Mu'afā, at the Confluence of the Wadi 'Afrā and the Wadi el Ḥasā.



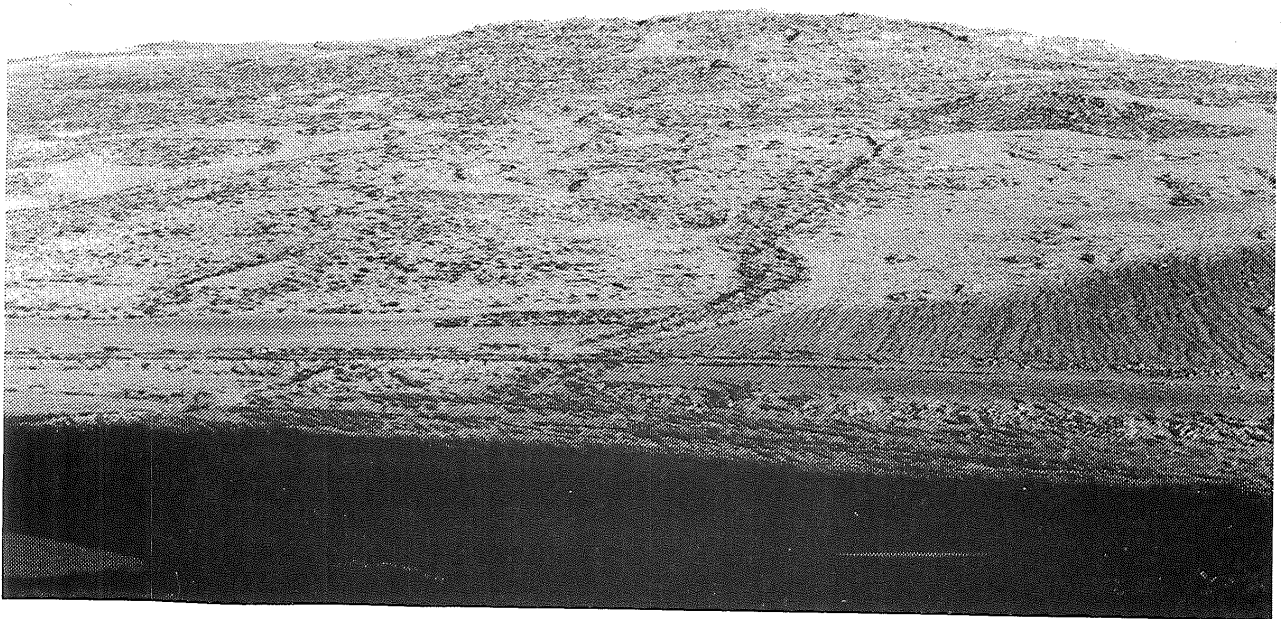
1. Site number 23, Mashmil-El Mushimīn; looking Southeast.



2. Site Number 6, Majādil; looking Southwest.



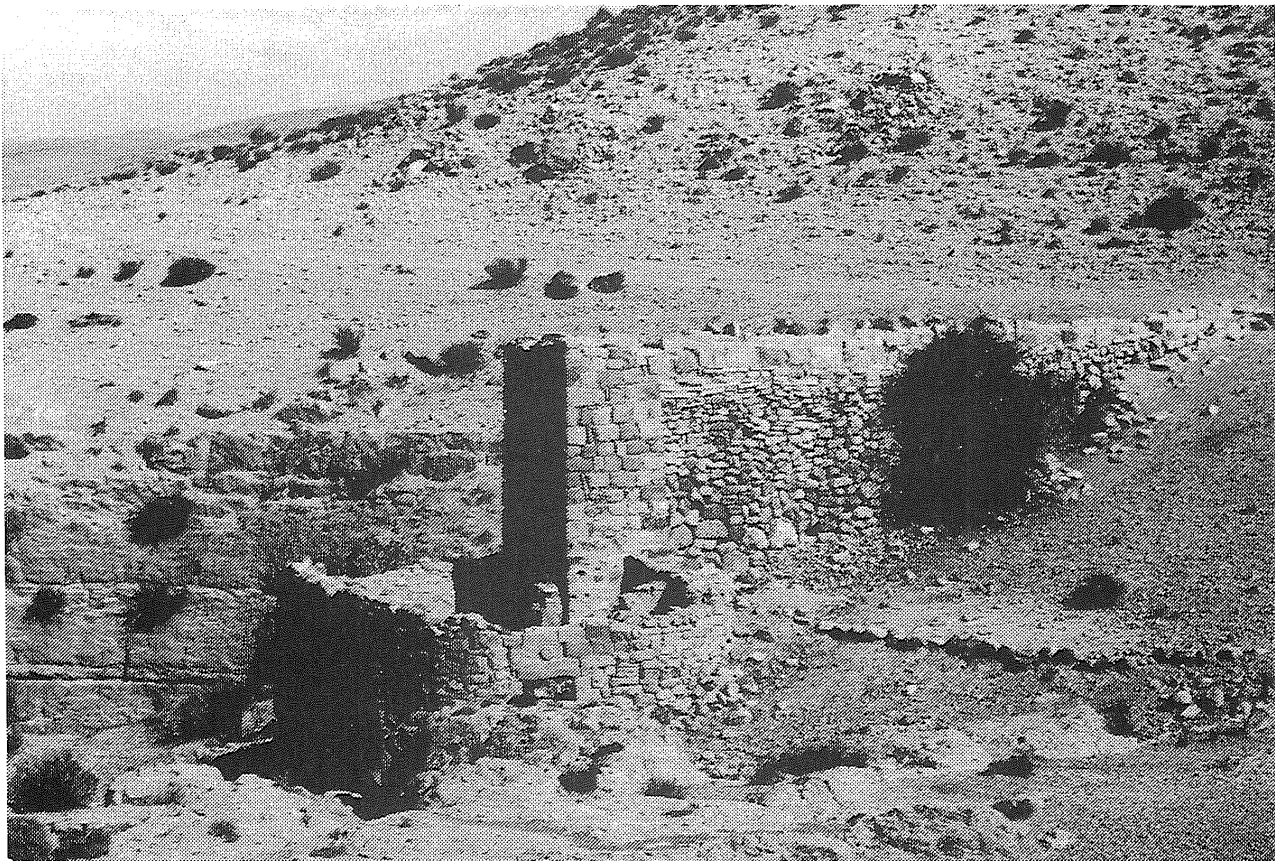
1. Shepherd's Dwelling at Site number 13, Gnan el-Qarn; looking South.



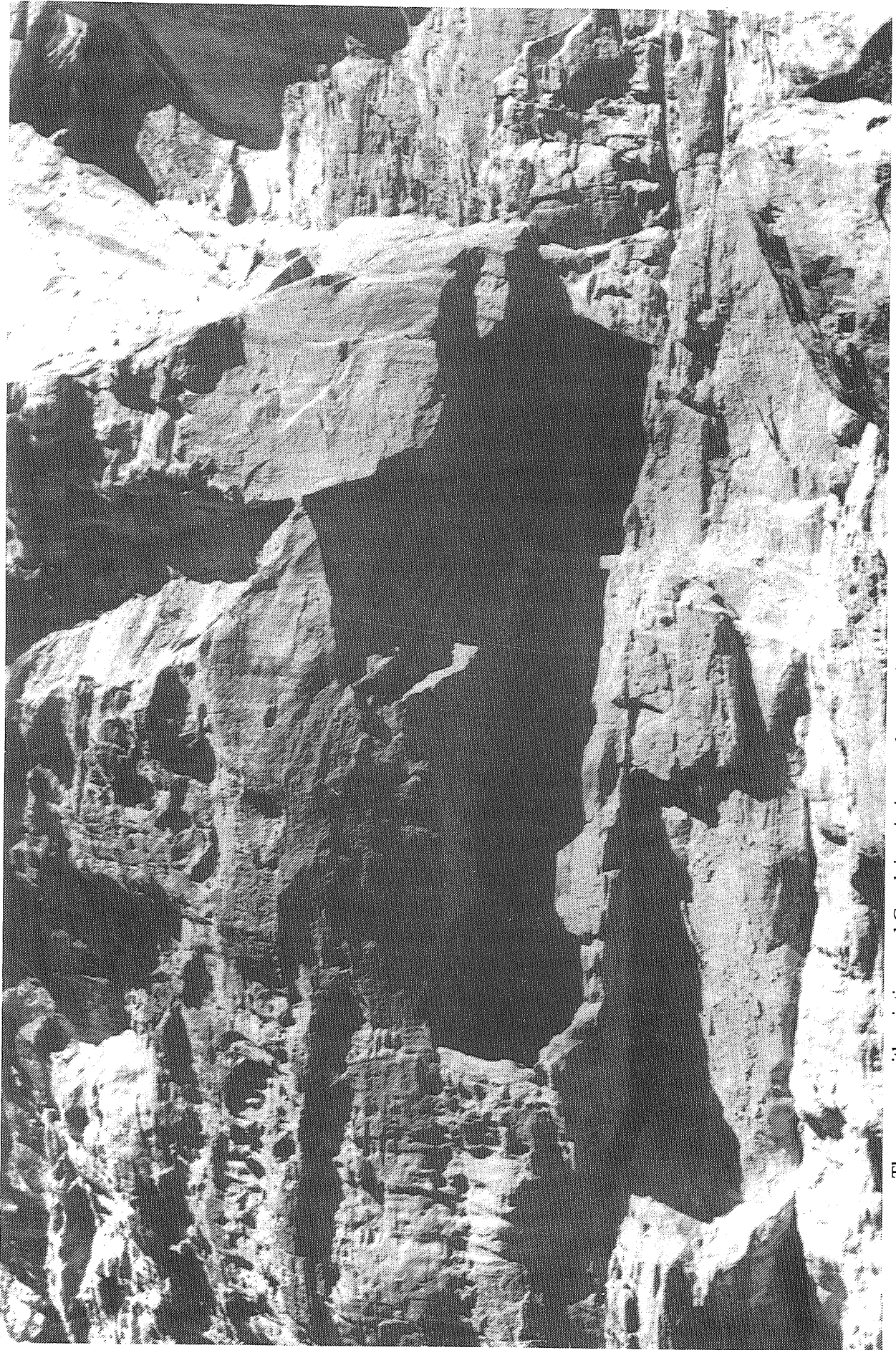
2. South Slope of Site number 20, Naukha.



1. Site number 185, Miḥraq; looking North with the Wadi el Ḥasā in the Background.



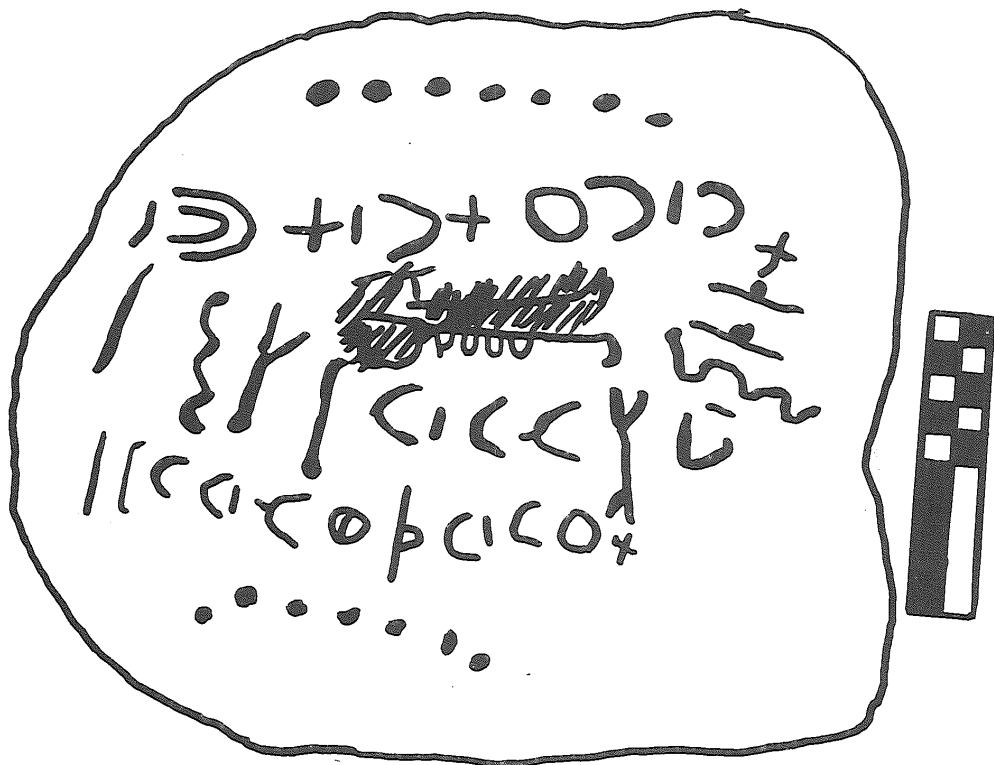
2. Site number 52; Ṭawaḥin al-'Oran, on the East Side of the Wadi 'Afrā.



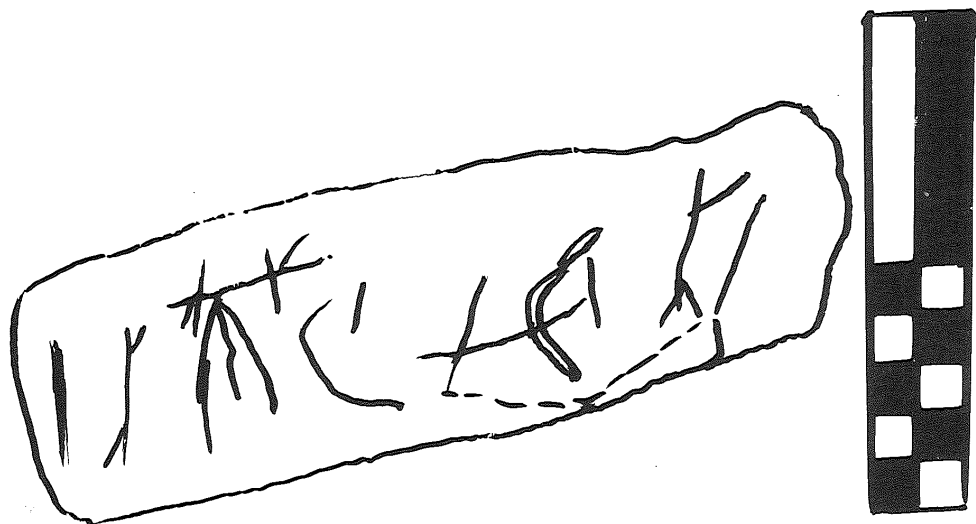
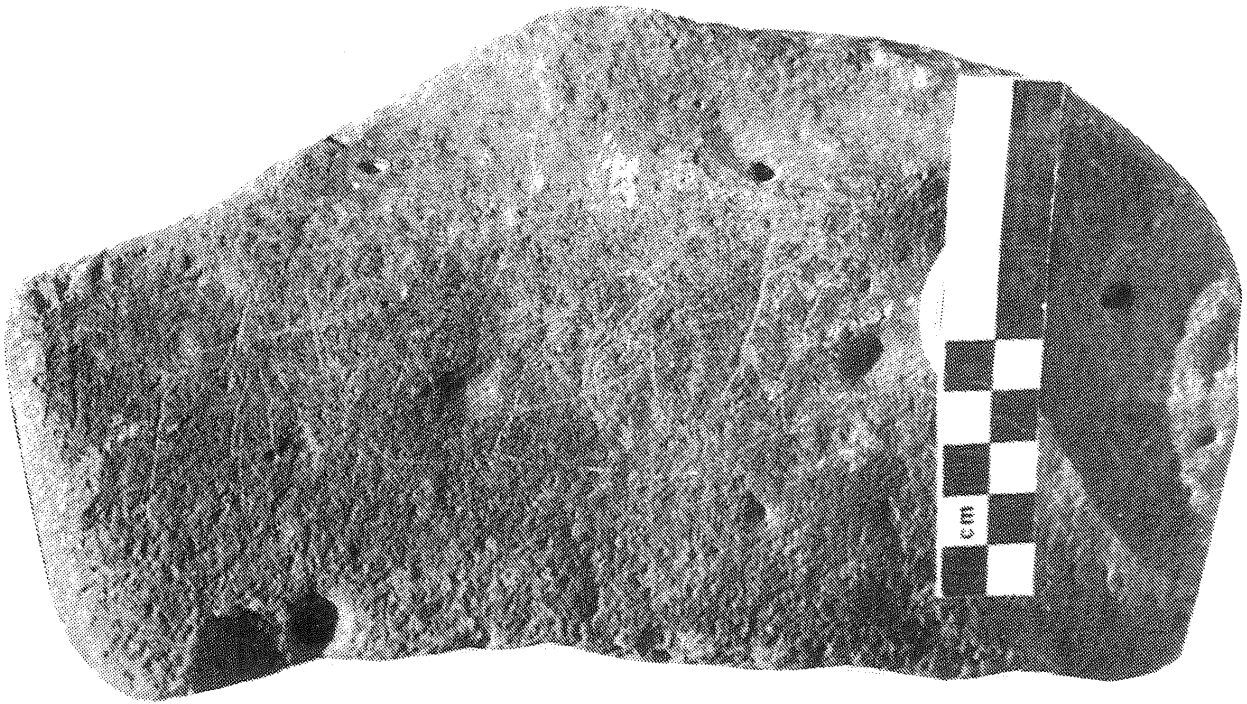
Three caves with paintings and Greek inscription on the east side of the Wadi 'Afra at Site number 107 Hammam 'Afrā.



SIAM No. 36.

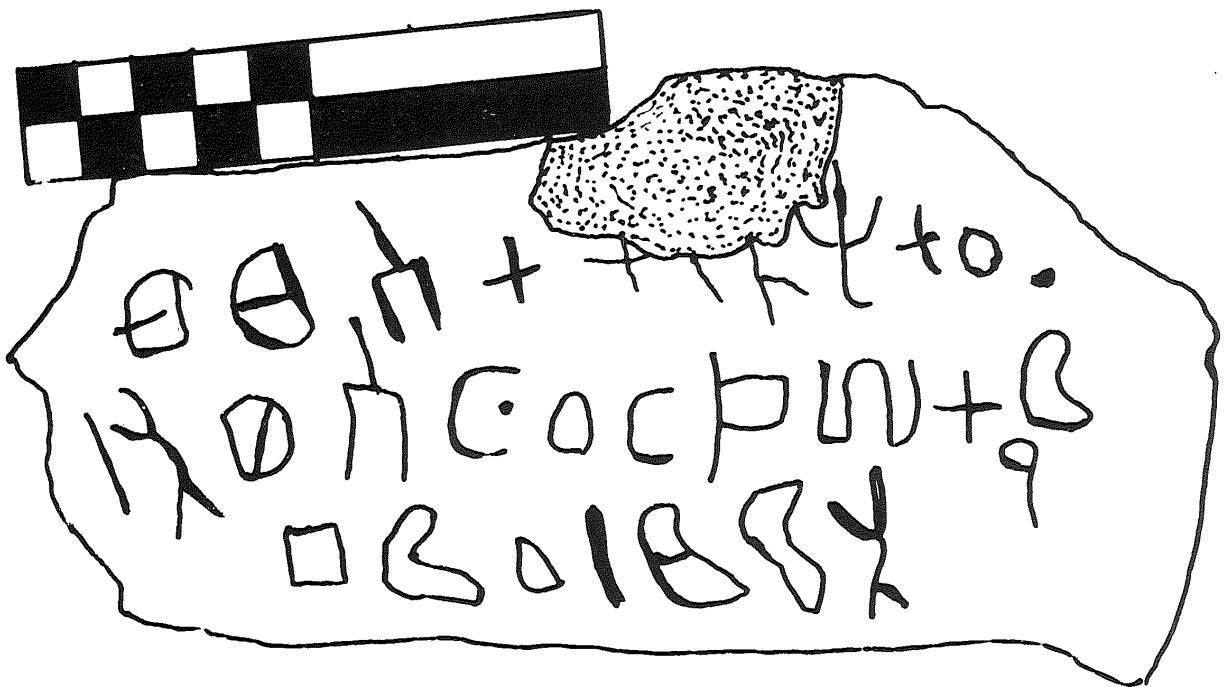


SIAM Nos. 37-38



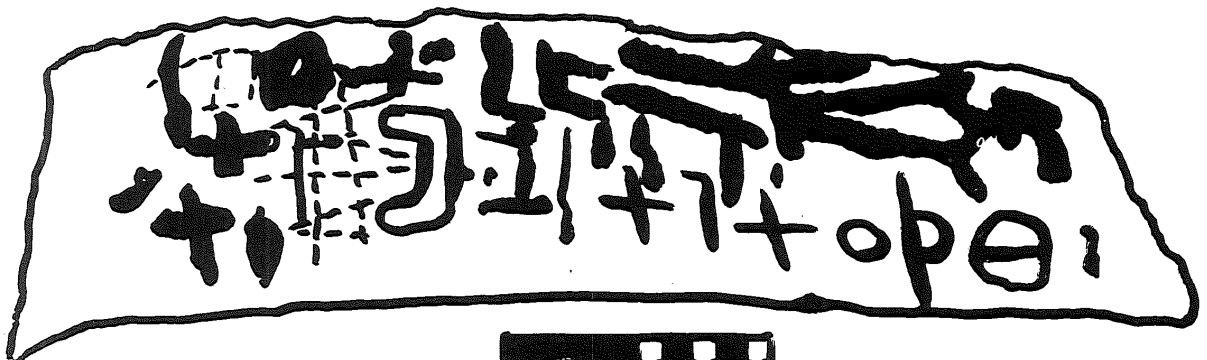
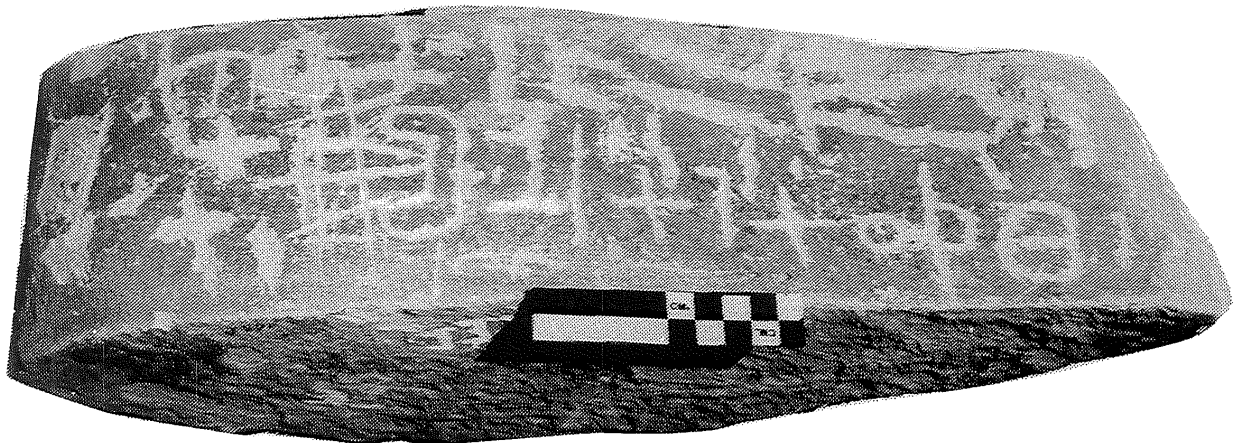
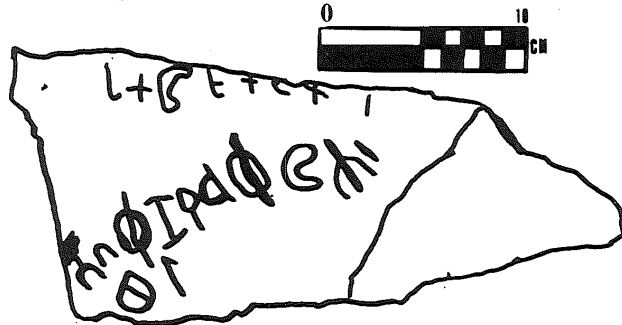
SIAM No. 40





SIAM No. 42

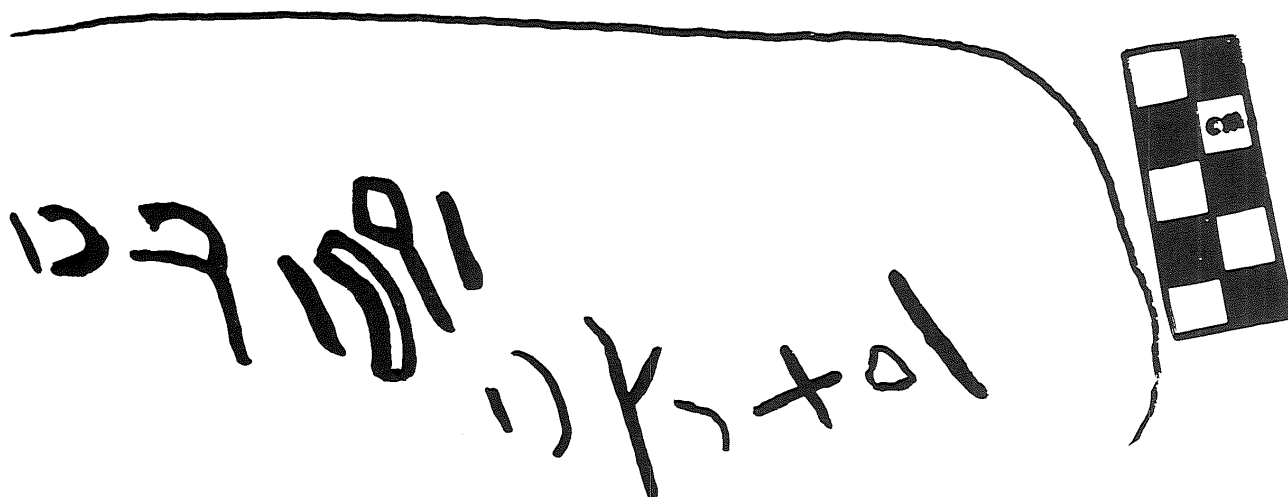
1. SIAM Nos. 43-44



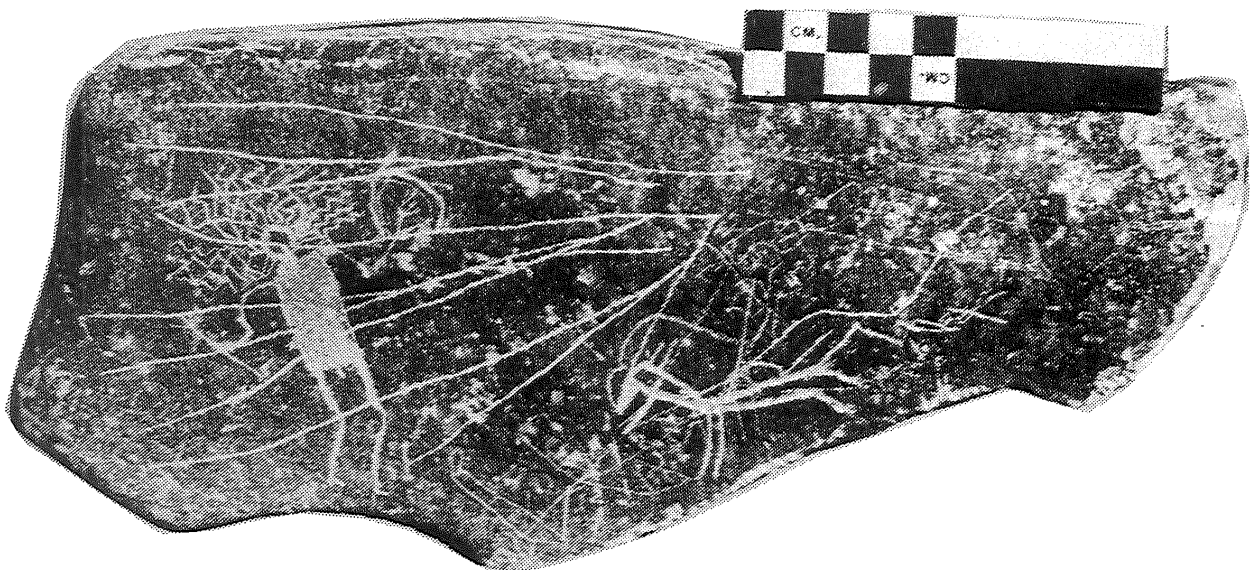
2. SIAM No. 39



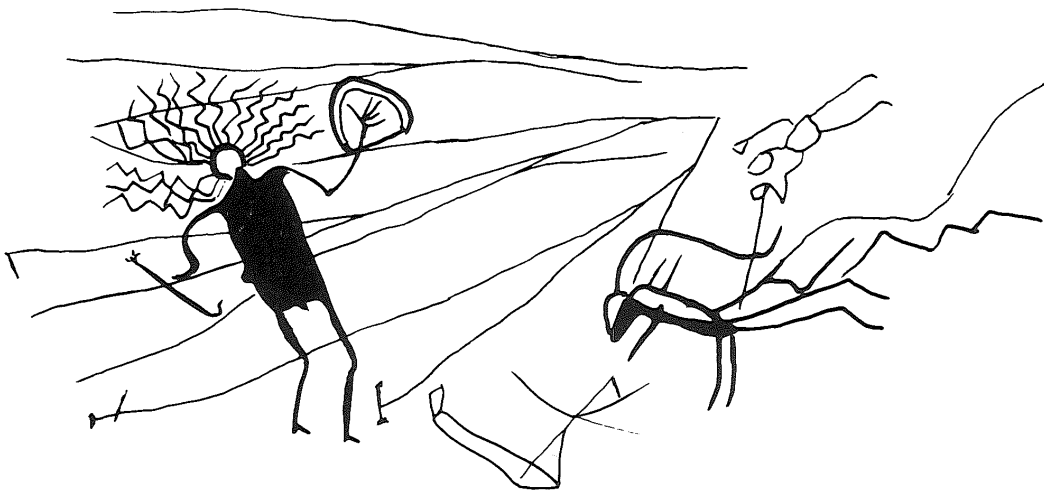
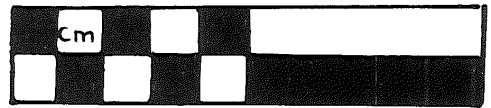
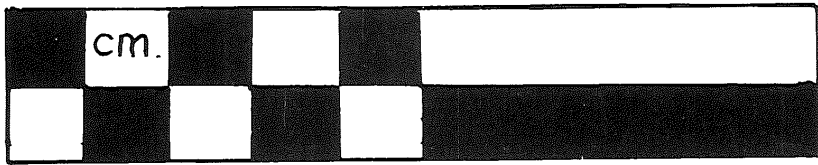
HCH 23 and 114



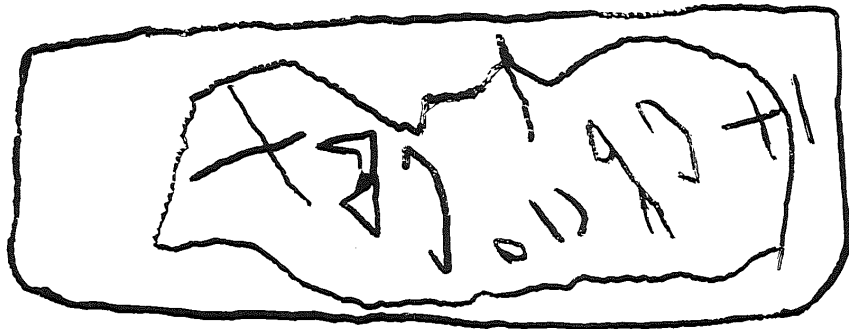
HCH 34 beginning and 34 bis



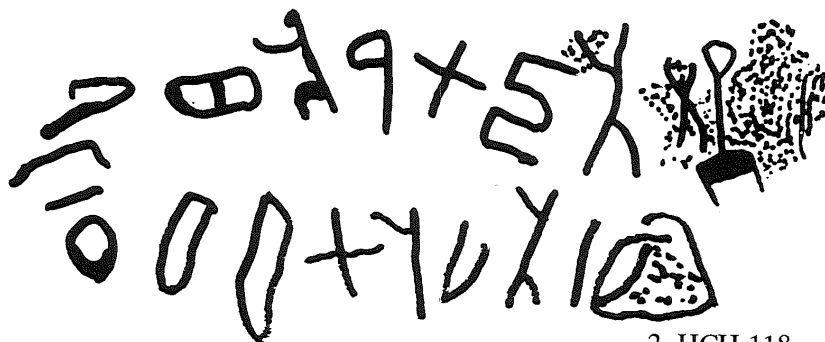
Drawings on the same stone as HCH 85



Drawings on the same stone as HCH 85



1. HCH 108bis



2. HCH 118



158 BIS

158 TER

158

Handwritten transcription of the inscriptions on the fragment, showing a vertical column of characters on the left and several lines of characters on the right.

1. HCH 7, 158, 158bis and 158ter



Handwritten transcription of the inscriptions on the fragment, showing a vertical column of characters on the left and several lines of characters on the right.

2. HCH 31bis



1. SIT 12-14



2. WH 28-29 and 34



1. WH 37bis

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2. WH 178-179



1. WH 182 (Original State)
Photograph courtesy of the Department of Antiquities of Jordan



2. WH 182 (Present State)



1. WH 1273-1275



181621102K1

2. WH 1864



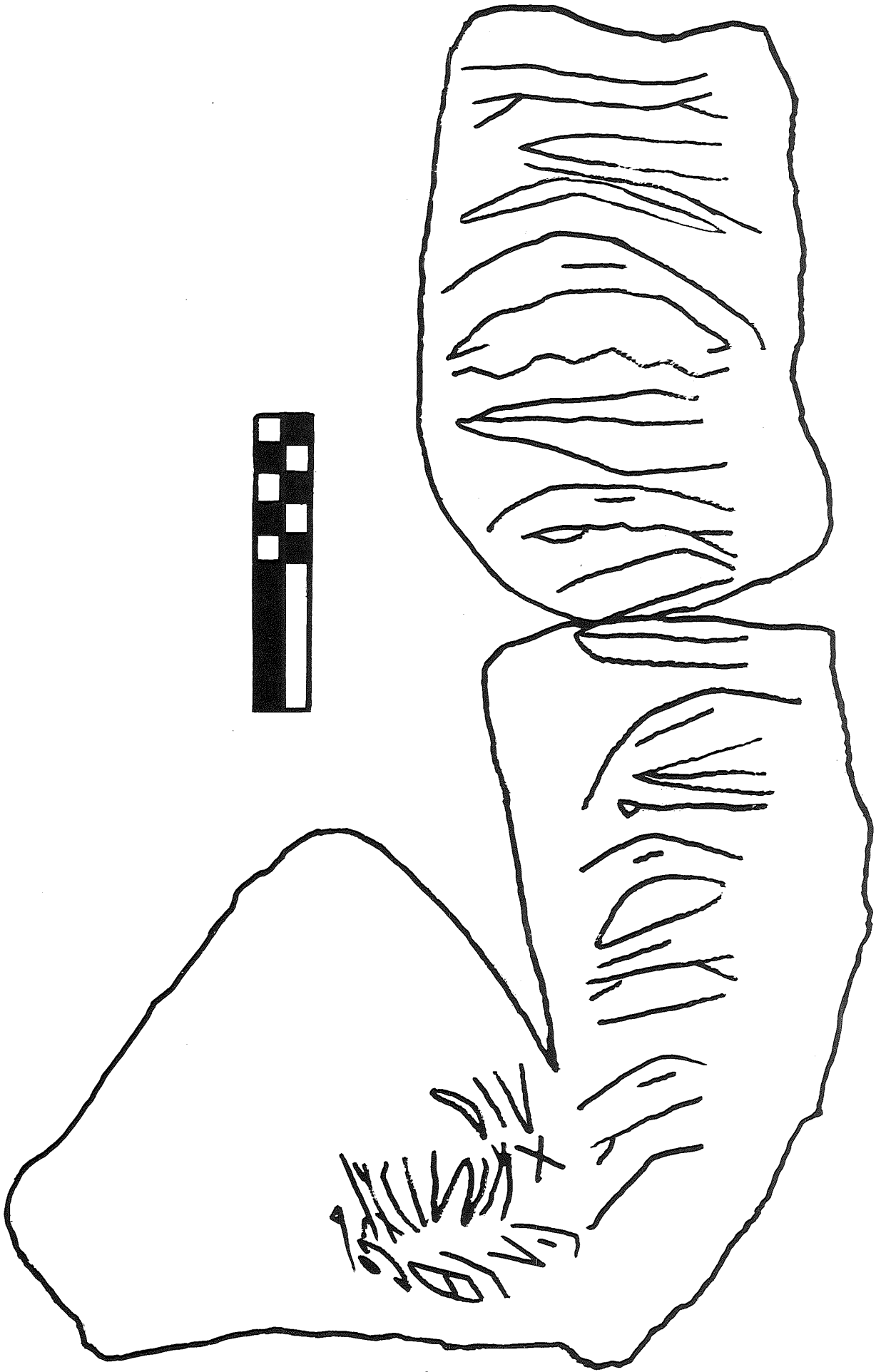
WH 1897



WH 3792 b (detail)



WH 1898 and 1899



WH 1899



WH 3914 (detail)



WH 3914

