

AN EDMITE FORTRESS AND A LATE ISLAMIC VILLAGE NEAR PETRA (JORDAN): KHIRBAT AL-MU'ALLAQ

by

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Introduction

During the Petra surveys 1991-1995 of the Naturhistorische Gesellschaft Nürnberg e.V., directed by M. Lindner, the archaeologically little known region west of the ash-Sharā escarpment between Wādī Mūsā and aṭ-Ṭayyiba was explored (Fig. 1). On a wide ledge or shoulder of the escarpment, where Cenomanian limestone overlies the Cambrian sandstone, the springs of 'Ayn Braq (c. 1300 m), 'Ayn Amoun (c. 1330 m), 'Ayn al-Mu'allaq (c. 1400 m) and 'Ayn aṭ-Ṭayyiba were natural stations along an ancient route. Graf lists it among the major connections of the Roman era. He adds, however, that most of such roads clearly followed the more ancient Nabataean ones (1992: 258-9). After finding Iron II (Edomite) pottery at Khirbat al-Mu'allaq (by Suleiman Farajat, Inspector of Petra) and the discovery by excavation of an Edomite fortress at this place, one may consider a more or less similar significance of the route during the Edomite period of Southern Jordan.

Khirbat al-Mu'allaq: The Site History

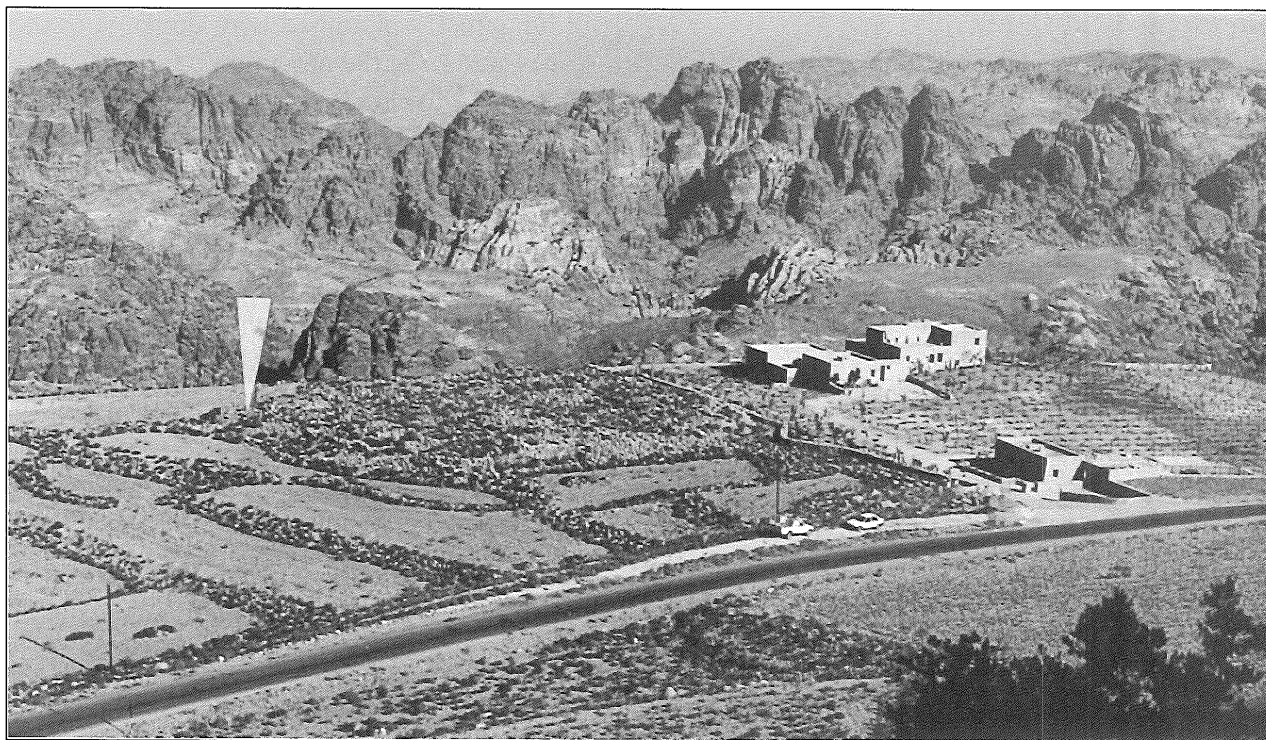
Khirbat al-Mu'allaq is located c. 6 km south of Wādī Mūsā, right by a new asphalt road following the ancient route to aṭ-Ṭayyiba (Fig. 2). It was visited by Musil in 1898 who described "die Quelle a'jun Mu'allaq und ein zerstörtes Dorf". Numerous vineyards and trunks of old olive trees bore witness that once industrious people had lived there. His companion, a "*fallāḥ*", told him that 70 years ago (i.e. possibly around 1830) "Lijatne" had raided their village, felled the olive trees and forced the inhabitants to emigrate to "al-Araba". In Musil's time, the

place was deserted (1907: 3,283). His informant may have referred to raids and battles mentioned by Russell and Simms when, in the 19th century, Mohammed Ali fought the Ottoman army and took control over all of Palestine and Syria until 1841. During a feud between the nomadic 'Alawin, who were allied with the Bdūl, and Abū Rashid who had separated from the 'Alawin, the Egyptian government intervened in an attempt to subdue the Bdūl in 1838/1839 (1991: 26-29; Russell 1993: 24-25).

We do not know whether the "village" of al-Mu'allaq was inhabited by a Bdūl clan or by another tribe, but it may have been destroyed at that time. Even if this destruction was not the first one, the episode and its consequences, supposedly one of many in the 19th century, characterize the astonishing changes not only of habitation but also of environmental conditions through war and destruction as demonstrated by the next recorded visit. In the footsteps of Musil, Glueck explored Khirbat al-Mu'allaq in May 1934. He described the site as an extensive, ruined place with quantities of medieval and modern Arabic pottery. He found 'Ayn al-Mu'allaq rising above the site, irrigating a number of large terraced fields on the hillside. The last vestiges of the splendid "garden village" had disappeared within 36 years (Glueck: 46, 79).

'Ayn al-Mu'allaq

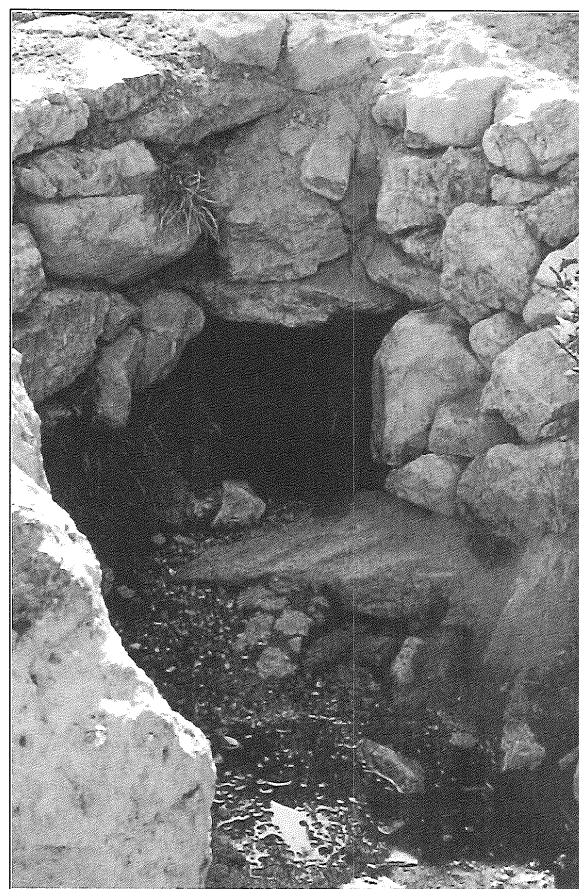
'Ayn al-Mu'allaq is located 115 m above and somewhat more to the south-east of Khirbat al-Mu'allaq. There are still more than 100 m to go until one reaches the plateau (c. 1550 m). The whole escarpment between Khirbat



2. Khirbat al-Mu'allaq with the excavation place (arrow) and the mountains of Petra in background.

and 'Ayn al-Mu'allaq, that seems extremely steep and barren when viewed from the road, is carefully terraced with lines of small and big stones creating strips of cultivable soil. Two Nabataean sherds and one Iron II sherd were collected among a scatter of unidentifiable fragments. Only a thin rivulet came out of the built enclosure of the spring in October 1992. Old grape vines and dead trunks, fig trees, apricot trees, olive trees and a middle-sized *Crataegus aronis* constitute a small oasis. A few field terraces profiting from the spring water are irrigated in winter as well as several terraced fields below the road. No human-made structures beside the spring enclosure and a built fireplace were noted (Fig. 3).

A few Nabataean and other plain sherds including the handle of a big vessel were collected on the surface. No traces of a conduit to Khirbat al-Mu'allaq were visible. Where the water from the spring reaches the road below, a pipe of such a small size was installed under the road bed that obviously even in winter not much water is expected nowadays.



3. Built enclosure of 'Ayn al-Mu'allaq.

The Slopes of al-Qṣeir

West of Khirbat al-Mu‘allaq and the Wādī Mūsā-aṭ-Ṭayyiba road, the slope of the ash-Sharā escarpment becomes gradually more gentle. After a while, the limestone peters out and sandstone crops out, first in gullies and later in very deep gorges. They drain the water of winter rains into rock wadis, leading into the Petra area to the north-west and into the Ṣabrā area to the south-west. The whole region is called al-Qṣeir by the local population. Seen from afar, especially in summer and autumn, al-Qṣeir seems barren. In fact, however, almost the whole slope from the road down to the watershed between Petra and Ṣabrā is terraced with lots of substantial fieldstone walls (Fig. 4). In April 1991, grain was growing on many of the terraces, and in October 1992 these fields were newly ploughed, interestingly, with the help of tractors in the upper and with donkeys in the lower parts. Olive trees had recently been planted in two places. The ownership is not clear. The authors were told their campsite at the slope (1240 m) belonged to a Bdūl family, and



4. Recently used, ancient terraces on the shoulder of Jibāl ash-Sharā with Khirbat al-Mu‘allaq in background.

Bdūl actually ploughed with donkeys in the lower parts. On the other hand, Bdūl officially do not own land, since they declined paying taxes in 1923 (Russell and Simms 1991: 321). Apparently, however, they actually cultivate land and arrange themselves with the people of Wādī Mūsā and/or aṭ-Ṭayyiba.

The terraces on the slopes of al-Qṣeir were already tilled by the Nabataeans. A house ruin of well-cut ashlar of the usual size with Nabataean pottery sticking out of the masonry is located at 1040 m in the middle of terraced fields. A threshing floor and a rock shelter, filled with grain sacks in October 1992, are no recent installations. A second house ruin further north-west is also located among terraces without any trace of an ancient road or pathway. With such houses or hamlets, the al-Qṣeir slope was part of the agricultural resources of Greater Petra. The steep gorges, first in limestone, further down in sandstone, exhibit remnants of walls which at different times had to hold back, slow down and preserve water. Only a thin scatter of Nabataean sherds and a few pieces of quite recent white-blue china fragments were collected on the slope. Al-Qṣeir ends in the south-west at a steep rock wādī which may have allowed the installing of a reservoir in antiquity. Steps on the opposite bank lead down from a hollowed-out hillock. With a basin at its entrance, it is in typical Nabataean style (Fig. 5). Higher up the slope, a large rock shelter with tumbled building stones in front of it belonged once to the same area of agriculture and habitation. Still further up, one can reach the conduit from ‘Ayn al-Buraq and a track to Petra. To the south-east from the al-Qṣeir slope, rainwater is received by Wādī ar-Raqī and further south by upper Wādī Ṣabrā. Both wādī entrances are deeply cut in the surrounding sandstone. The entrance to west ar-Raqī does not seem passable. West Ṣabrā is actually a short-cut from the Wādī Mūsā-aṭ-Ṭayyiba road to Ṣabrā and further on to Abū Khushayba via a substructed pathway, us-



5. Nabataean cave, chamber with basin in front and a staircase down to the steep rock wadi.

able for camels and horses. In its lower half the broadening wadi was once cultivated. Today, only 'ar'ar trees profit from the ancient terraces, belonging already to the ancient hydraulic works of Şabrā.

Khirbat al-Mu'allaq. The Ruin Field

As the reports of Musil and Glueck already demonstrate, by not describing it, the site of Khirbat al-Mu'allaq is, in fact, not easy to assess. The roughly trapezoidal ruin field of c. 60 x 48 m at 1335 m, 75 m distant from the modern Wādī Mūsā-aṭ-Ṭayyiba road, is with its longer axis orientated toward NNW, simplified as north in this report. Dry-stone walls of roughly cut limestones with a few sandstone ashlar all around are mostly doubled and 1.50 m wide with a gap of 0.60 m. There is serious doubt whether all of them are original border walls or just what is left after stones had been transferred to the field terraces, robbed for building purposes in the

neighbourhood or sold away by the owner. As far as could be ascertained, most of the interior walls are also doubled, 0.90 m wide and built at right angles from the present enclosure. Walls not built at a right angle were noted only at the southern side. Walls not doubled are 0.60 m wide.

Circular shafts and rectangular enclosures of c. 2 m in depth and 2.50 - 6.00 m in diameter are randomly distributed in the ground. They are made of carefully selected and positioned ashlar taken from the formerly existing walls. The upper diameter of the shafts is slightly larger than the lower one (Fig. 6). Due to the disturbance of the original ground plan, they must be later modifications. Supposedly, after the destruction of the original structure, people living and occasionally squatting at the site had to protect themselves and their property against wind and cold by constructing make-shift tents or shacks on top of the shafts and enclosures. In



6. Round shaft of recent use by a pastoralist and/or non-sedentary population at Khirbat al-Mu'allaq.

one of the shafts, an oval flat stone with a groove around and two outlets, obviously the lower part of an olive mill, is a reminder of former olive groves in the vicinity.

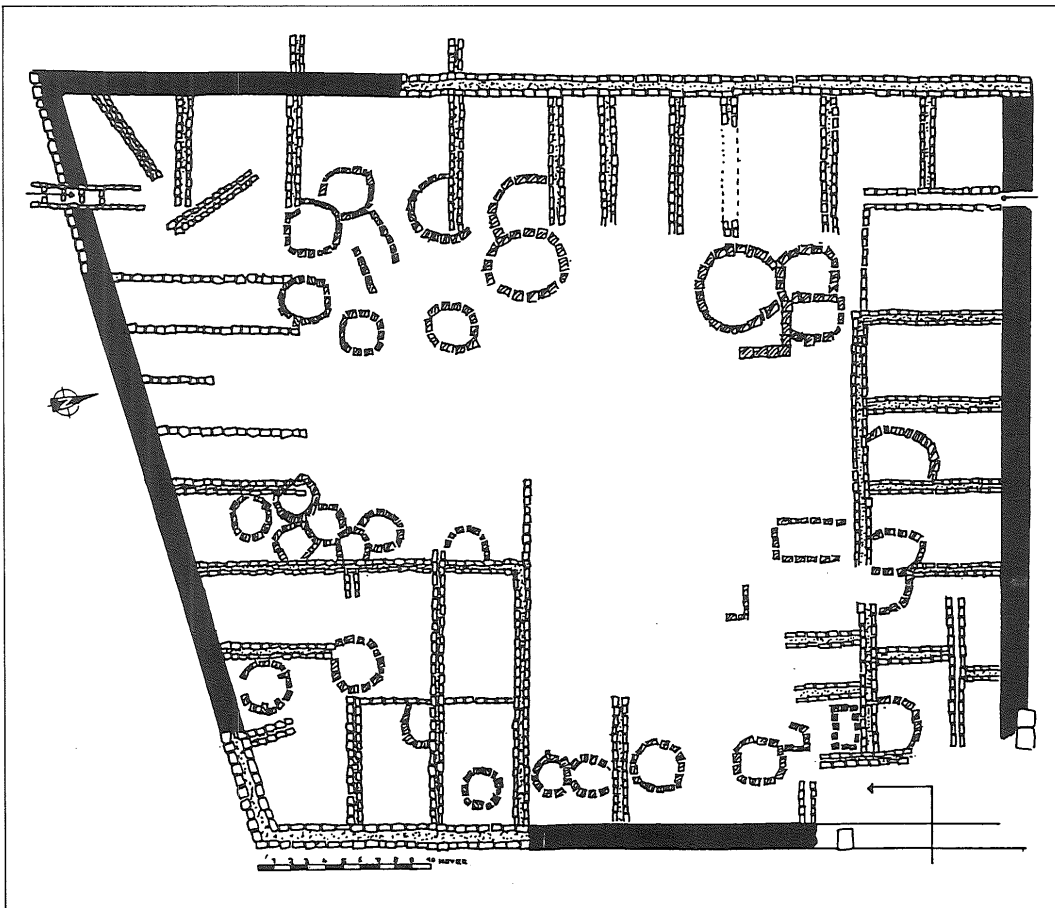
The stone work of Khirbat al-Mu'allaq was certainly not far extended toward the west, where the shoulder of the escarpment ends and the gentler slope of al-Qseir begins. The western periphery looks even more than the eastern one like a bordering wall. To the north, a modern building hides possible former extensions of the site, if there were any at all. The ground slopes to the west and the south, and was also bordered by a wall. Toward the east, agricultural activities have been undertaken at different times. The northern side of Khirbat al-Mu'allaq differs considerably from the other ones. What looks like a roadway, built on both sides with large ashlar of up to 1.00 x 0.50 x 0.40 m, still standing to a height of 1.30 m, leads to a tentatively presumed gate consisting of

ashlars of the same size and quality. The wall between the "roadway" and the ruin field proper is partly doubled. Due to failing substructures and/or to earthquake(s), the original gap is considerably enlarged.

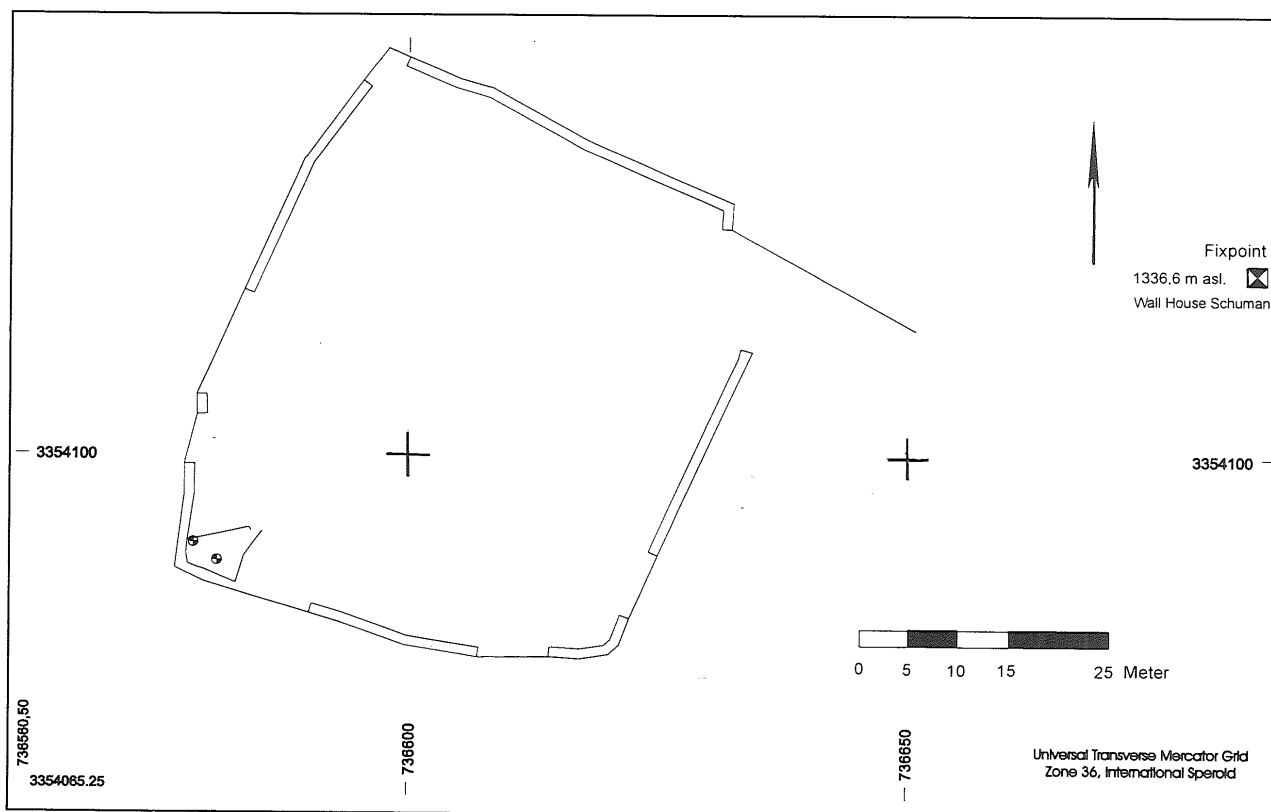
On the whole, the ground of Khirbat al-Mu'allaq with its either regularly laid or loose sharp-edged stones of different sizes makes crossing and surveying the ruin field cumbersome and perilous. Therefore, only a sketch ground plan, established with measuring tape and compass, could be presented till 1994 (Fig. 7). In 1995, however, it was possible to survey the ruin field and the excavation area exactly (Fig. 8).

A Small Scale Excavation at Khirbat al-Mu'allaq

Nobody so far has ventured a date for the origin of the walls of Khirbat al-Mu'allaq, and Glueck's finds of "quantities of medieval and modern Arabic pottery" were not



7. Sketch ground plan produced with measuring tape and compass.



8. Ground plan produced with theodolite and GPS.

exactly verified during the survey. Surface sherding of the site produced mostly fragments of a coarse reddish-brown pottery with a hard grey-black core. The clay is mixed with organic and unorganic material and in many cases blackened by soot and fire. The pottery was tentatively called "Mu'allaq ware". A small portion of the surface pottery was wheel-made coarse and fine Iron II ware, few of them painted. Only some pieces were Nabataean- Roman.

Considering the astonishing finds of Iron II pottery, with the permission and assistance of the Department of Antiquities, first a sounding and then an exploratory excavation were undertaken from 1991 to 1995. The excavation site at 1335 m asl was chosen at the south-west corner of the ruin field near the intersection of two well-recognizable massive double walls. The area was undisturbed by shafts or enclosures as described before, and close by what was considered the western wall of Khirbat al-Mu'allaq. From the excavation site, there is

an unrestricted view to 'Ayn al-Mu'allaq in the south-east and across the Petraean mountains with Jabal Hārūn towering above all of them.

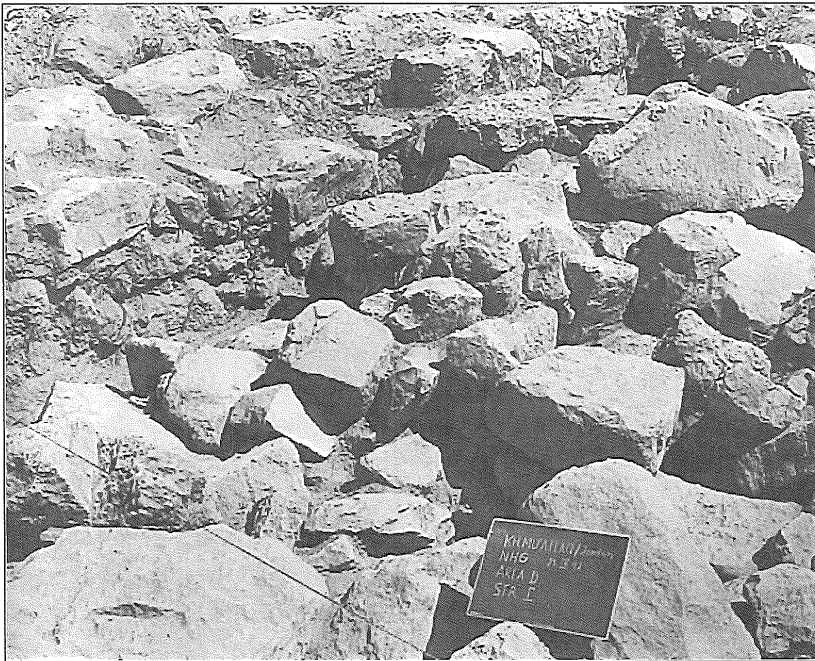
The Surface

The surface of the excavation area was part of and identical with the almost unpenetrable surface of Khirbat al-Mu'allaq, consisting mostly of tumbled, dislodged and displaced limestone boulders and fieldstones with only a few sandstones among them. Surface finds ranged from fragments of pecked querns to sherds of coarse, hand-made reddish-brown pottery with a hard grey-black core; various types of ledge handles, sometimes together with a taenia in the lower part of the vessel; a smaller amount of coarse and fine Iron II (Edomite) pottery sherds, a few of them painted; a handle of an Iron II storage jar with two (unreadable) oval seal impressions; very few Nabataean-Roman sherds; a scatter of fossils from the Cretaceous formation of the plateau.

Stratigraphy and Architecture at Khirbat al-Mu'allaq Site 1

The first sounding was put down in 1991. It was located 5.20 m from a northern double wall (Wall 1), 5.20 m distant from the western boundary wall (Wall 6). The area of 2 x 1 m was gradually enlarged during the following campaigns and finally turned out as a triangle, called Khirbat al-Mu'allaq Site 1. Until October 1994, eight one-metre squares were opened. A grid of 10 x 10 cm was used to localise the finds and to draw the walls.

Stratum I (0 - 0.44 m) (Fig. 9) consisted of tumbled building stones and fieldstones, generally less carefully cut than the wall stones, in an unstratified layer of sand, loam and chalk. There were pottery sherds as on the surface and a few saddle quern and grinding plate fragments. Hardened floors without any paving and without sherds clearly connected with them followed each other in Squares C3, C4 and D4. When during the excavation Squares B4, C4 were cleared of debris material, at Wall 6 a lot of Iron II sherds were found, among them a rectangular fragment (9 x 18 cm) of an Iron II jar with an Edomite letter *Aleph* incised in it. A round millstone in Square E3 marked

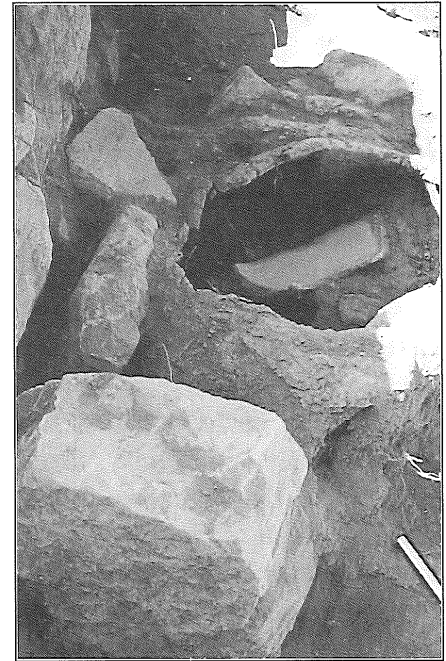


9. Stratum I of excavation with tumbled ashlars.

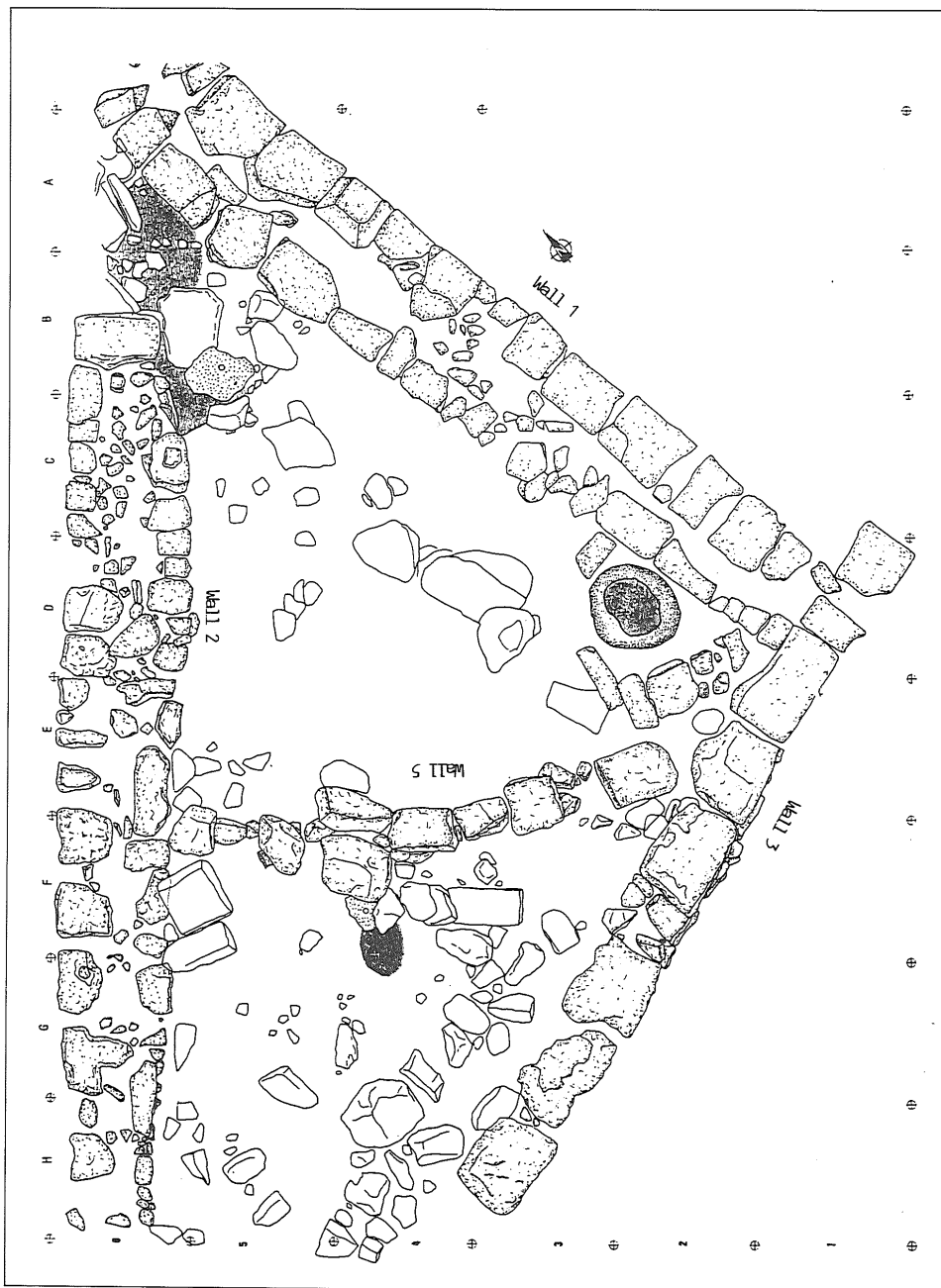
the end of the stratum.

Stratum II (0.45 - 0.78 m) produced only a few obviously tumbled building stones within the same unstratified matrix as before. Walls, formerly noted only as parts of the surface, were now revealed, for example Walls 5 and 6. Wall 1 exhibited its interior side of special structure and quality. A balk between Squares D4 and E4 was left standing. Two fireplaces with blackened hand-made sherds, charcoal and a few animal bones marked cursory occupation on different levels in Squares C3, C4. Another spot with habitation was marked by broken vessels of the hand-made ware, one of them shattered by a tumbled stone between Walls 5 and 2 in Square B4. The rim of an Iron II storage jar in Square E4 was consistent with the overall mixture of numerous hand-made and less Iron II pottery fragments.

Stratum III (0.77 - 1.24 m) exhibited the same soil as before, but was defined by a *ṭābūn* enclosed by well-cut (well-chosen?) ashlars in the corner of Walls 1 and 5. Its body, preserved up to at least 0.60 m high and having a lower diameter of c. 0.65 m, was set in a hard-packed floor on Squares C2/C3 (Figs. 10 and 11). The firehole was



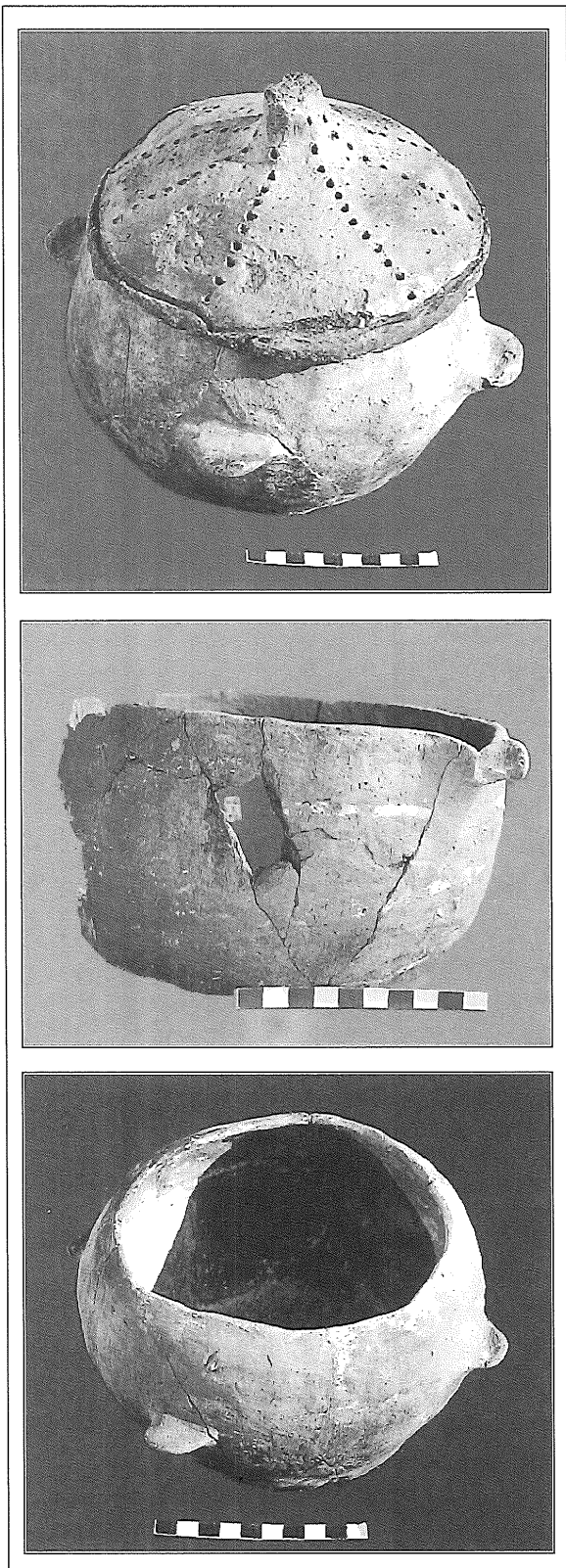
10. *Ṭābūn* of Stratum III.



11. Stratum III with *ṭabūn* and fireplaces.1

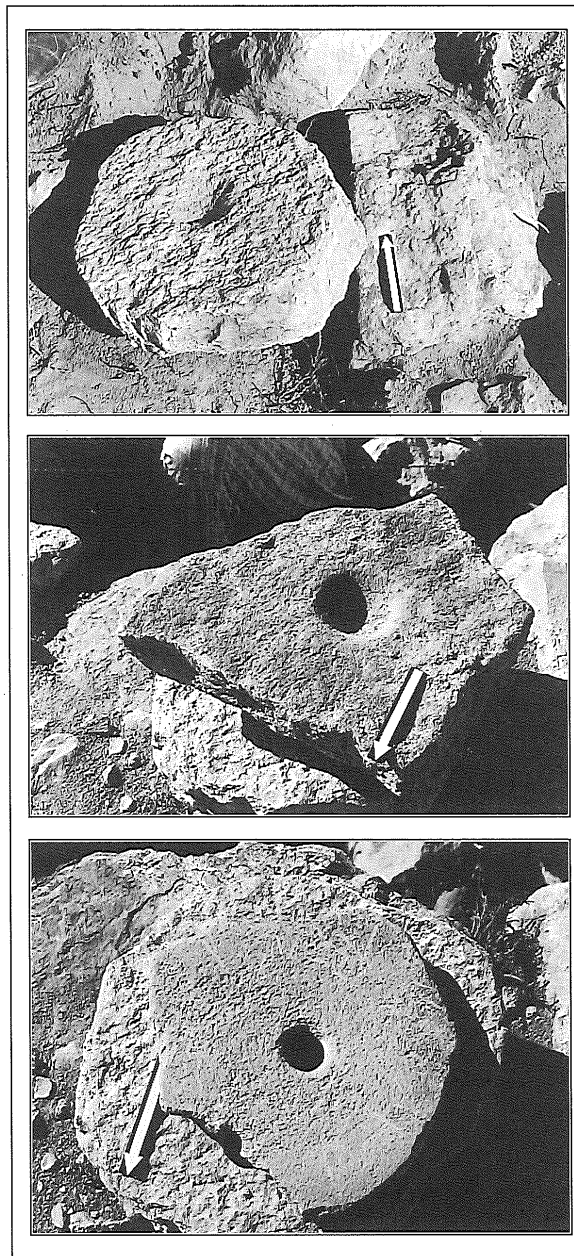
directed towards north. Two hand-made cooking pots, one with a decorated lid, both with finely molded ledge handles, were found complete, yet broken, beside the *ṭabūn*. Other fragments of the same ware were noted inside and outside the *ṭabūn* (Fig. 12:1-3). Astonishingly, one of the protecting ashlar was a voussoir with carefully chipped sides without any parallel in Khirbat al-Mu'allaq so far. Stratum III was further characterized by fireplaces and round millstones in different depths and locations,

for example in Squares B4 and C4, 1 m distant from Wall 1; in Squares D4 and C4, in the latter case together with a round millstone and a hammering stone of flint. One millstone, flattened on one and left rough on the other side, disclosed a second hole near the rim (Fig. 13:1-3). Thick hand-made blackened sherds and animal bones were found accumulated in Square C3. A tiny undistinguished piece of bronze, also from Square C3, was the only metal find during excavation. There was generally a higher



12. Late Islamic pottery from Stratum III.

concentration of hand-made sherds close to Walls 1, 3, 5 than in the center of the area formed by Walls 2, 5 and 6.



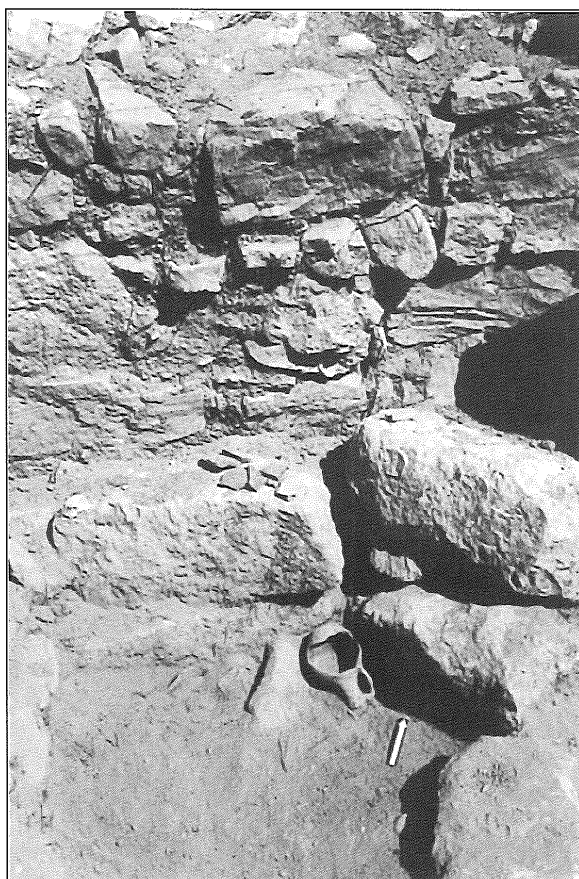
13. Millstones of Strata II and III.

Stratum IV (1.25 - 1.78 m) was marked by the discovery of a wheel-made juglet (H. 17.6; W. 13.6; B. 5.5 cm) with a slightly oblique handle, a sieve with six holes inside the neck and a spout attached at not quite a right angle. The neck is decorated with a schematic floral design and two simple lines. The light-brown vessel had been either relinquished intentionally or deposited at Wall 2 in Square G4 between three ashlar of bigger size and better quality, and had been unbroken before it was inadvertently dam-

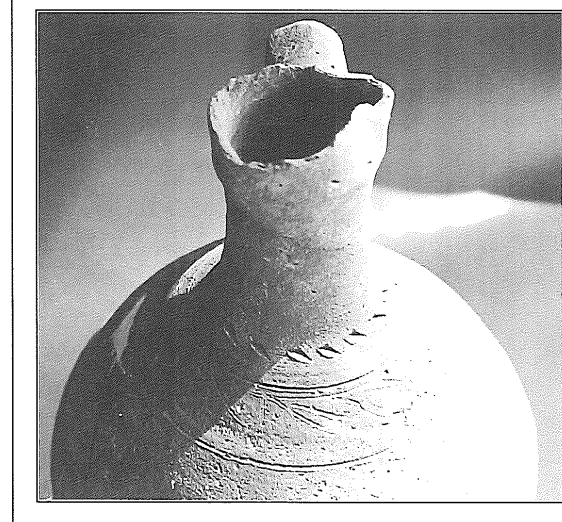
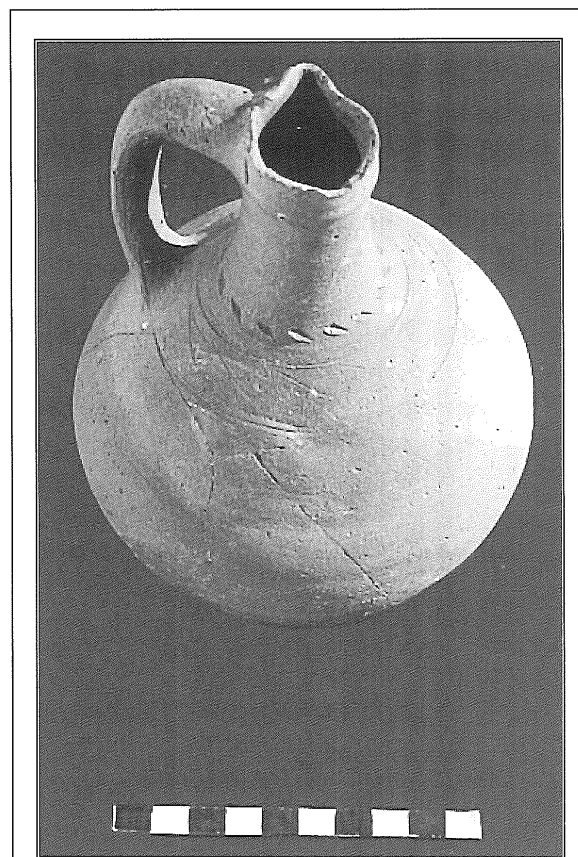
aged during the dig (Figs. 14, 15: 1-2). A sounding of 2 x 1 m directly at Wall 1 (Squares C3, D2) disclosed a layer of very hard soil mixed with loam, chalk and very small stone chips.

At 1.87 m only a small Nabataean-Roman body sherd and a possibly Iron II sherd were found. In the corner of Walls 6 and 2 (Square H4) an Iron II storage jar rim and a fireplace with a quern of 18 cm length, then a cooking place with ashes on hardened ground were noted in the otherwise sterile locus. A spurious paving with slab fragments of natural origin suggested a somewhat longer stay of people at this place as well as directly at Wall 2. An Iron II sherd was built into Wall 5 (Square E3). By a supposed entrance in Square B4 between Walls 1 and 2, a quern of 25 x 25 x 30 cm, made of a very hard limestone with a picked surface, was found in an otherwise empty hard soil.

Stratum V (1.79 - 2.43 m) produced two



14. Juglet found in Stratum IV.



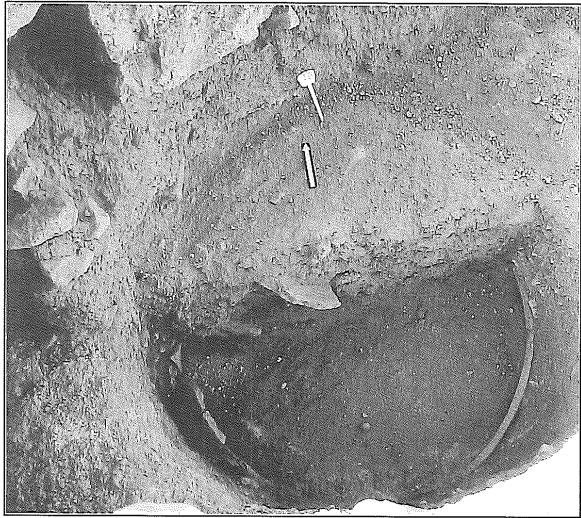
15. Juglet from Stratum IV.

items apt to elucidate part of the site's history. First, at 1.80 m, broken slabs underneath the hard layer of Stratum IV, now again in softer soil (Square H4) with Iron II sherds exclusively, obviously stemmed from an older habitation level without any handmade pottery. Second, a large Iron II storage jar in Square H3 extended through the hard

layer at 1.60 m to 2.43 m. A few fragments of its upper part and a stamped (unreadable) handle belonging to it were found in the loose sandy fill. Stratum V marked the interface between the levelled groundfloor of the previous and the secondary structure (Figs. 16 and 17).

Removal of Walls 3 and 6: End of Excavation

The hard layer, first encountered at Wall



16. Iron II storage jar *in situ*.



17. Storage jar during restoration.

1 and later under Wall 5 constitutes the groundfloor of an Edomite structure (Fig. 18). Beneath Wall 5, 5 hand-made sherds, 2 Iron II body sherds, 1 Nabataean fine ware sherd, a bone and some charcoal were found.

When the corner stone between Walls 3 and 6 was taken out, we discovered more foundation stones. They belonged to the original Edomite Wall 6, but were removed later (robber trench) and set outside their former position (Fig. 19). The robber trench contained 5 Iron II (1 storage jar rim, 1 bottom, 1 platter rim), 17 Iron II body sherds, 1 possibly Nabataean-Roman body sherd and 1 limestone implement (?). The rebuilt angle between Walls 3 and 6 contained 16 Iron II sherds (3 bottom, 1 rim) 2 of otherwise indetermined sherds, one was decorated with red dots on the inside, another one with a double wavy line; 1 Nabataean body sherd, 1 body sherd of very homogeneous light whitish clay with a neat taenia and red slip inside and outside. Finally, in the fill between



18. Iron II groundfloor between walls II and VI.



19. Robber trench and reused Edomite foundation stones for a new outer wall.

Walls 1 and 3, 5 Iron II body sherds were recovered. Without extending the size of the excavation toward the center of Khirbat al-Mu‘allaq, the aim of the excavation was accomplished, that is, to identify the habitation levels indicated by surface and excavation finds.

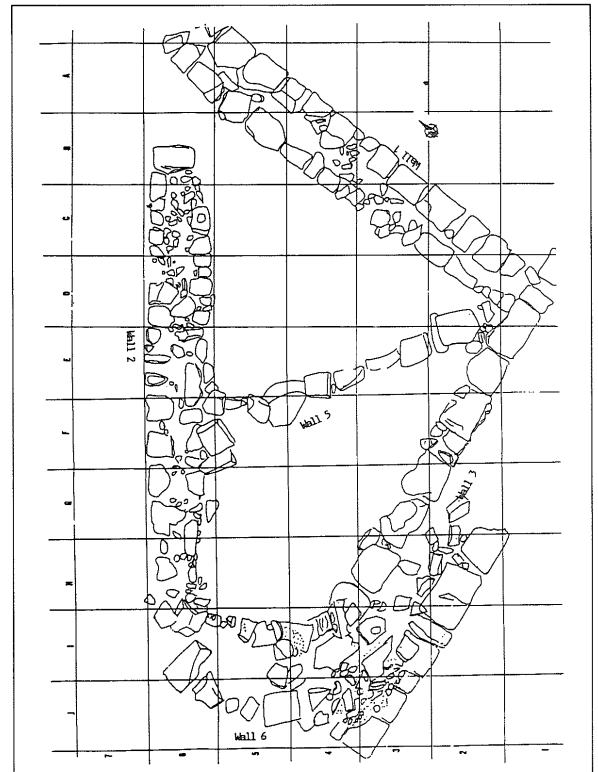
The Walls (Fig. 20)

Khirbat al-Mu‘allaq is bordered by walls, but only Wall 6 can be considered as an original bordering wall.

Wall 1, running from north-east to south-west and joining Wall 3 at an almost right angle, is an excellently built dry-stone double wall of 0.90 m width, excavated to a length of 6 m. It consists of roughly but adequately cut limestone ashlar of an average size of 0.50 x 0.30 m thickness. Wall 1 seems to be a good example of the walls of the later al-Mu‘allaq installation.

Wall 2, running from east to west in an acute angle from Wall 1 cuts a double dry-stone wall of 0.90 m width. Excavated to a length of 6 m like Wall 1, it consists of stone material less regularly cut than Wall 1. The space between the two parts is less clear, the visible exterior is not smoothed.

Wall 3, running from north-east to south-



20. The walls of the excavation area.

west is 0.45 m wide and not doubled. The roughly cut stones are larger than those of the preceding walls and up to 0.60 m long. The exterior is smoothed, the joints are filled with loam. The wall was secondarily attached, at a wide angle, to Wall 6.

Wall 4, was first numbered this way. Later its number was changed to Wall 6.

Wall 5, running from north to south between Wall 2 and Walls 1 and 3 is of less quality, in fact, the poorest of the excavated walls and not doubled. In the corner, with Wall 1, a *tabūn* with associated vessels was found. The wall functioned perhaps rather as windscreen or partition-wall than as roof-support.

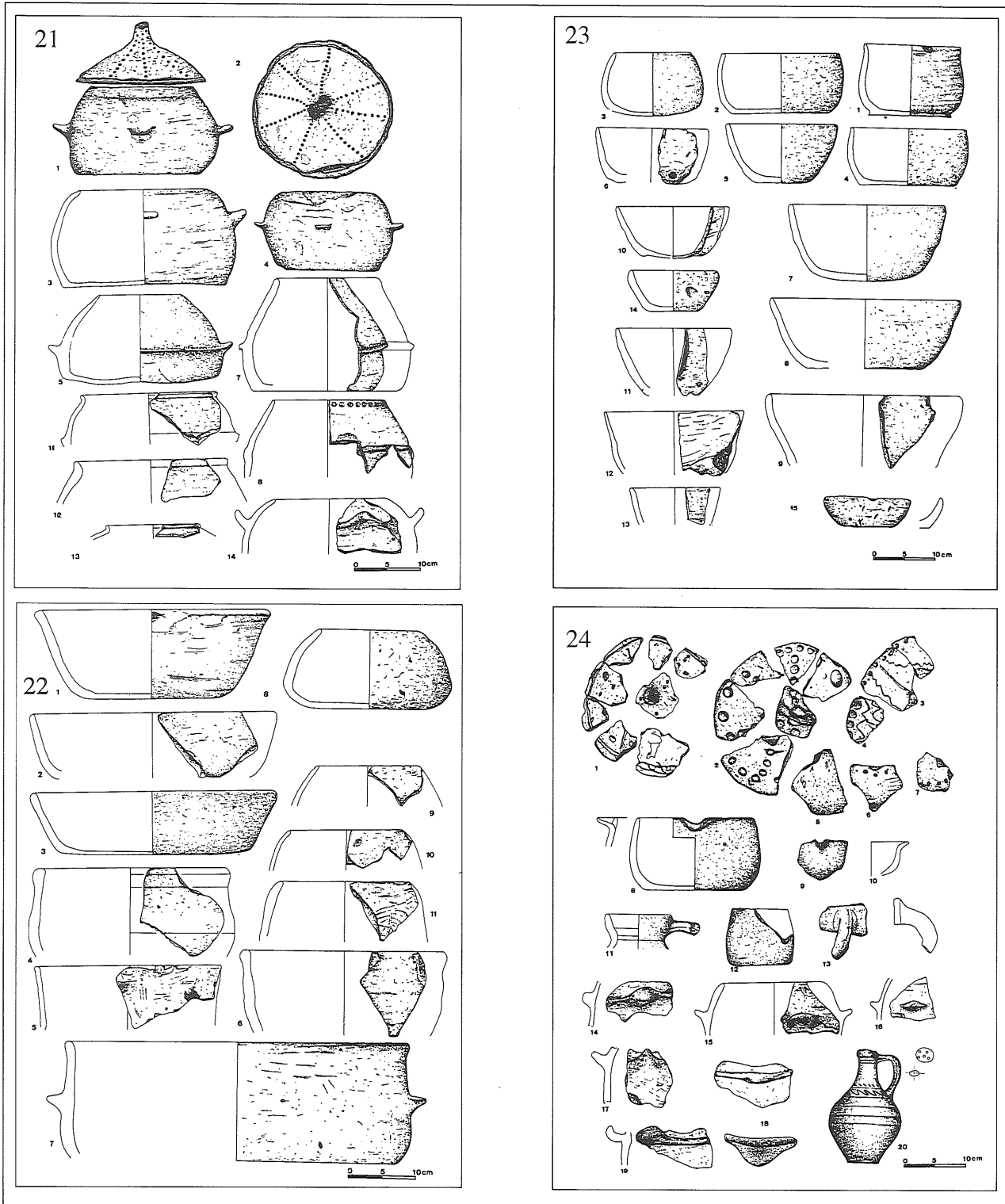
Wall 6, running from north to south is joined by Wall 2 at a right and by Wall 3 at a wide angle. It is 2 m wide and was excavated to a length of 5m. It consists of bigger, roughly cut ashlar and is neither to be compared with the poor quality of Wall 5 nor with the careful laying of Wall 1. It is built for durability, and it is not set upon the hard layer of Stratum IV as the other excavated

walls. It was most probably the bordering Wall of the original Iron II settlement. In 1993/94, Wall 6 was cleared and found to be covered with a lot of debris deposited there during later building activities.

Finds and Studies

The hand-made pottery of Khirbat al-Mu'allaq (Figs. 21-24)

Its ceramic technology appears only poor if compared with the Iron II and Nabataean-



21-24. Late Islamic pottery from Khirbat al-Mu'allaq and probably imported juglet.

Roman ware of the site. The majority of the vessels found so far is made of good clay and demonstrates a simple but effective firing method. There are as many mineral and organic inclusions as seemed to be and were necessary for village household pottery. Its main features are a grey-black core and mostly reddish-brown to light-brown surfaces, effected by intensified heating toward or at the end of firing. Mostly the surfaces were just passed over, some vessels carry a brownish or red slip. Decoration is scarce, but was at least attempted. Several cooking pots are decorated with finger-thumb indentations around the exterior of the rim (Fig. 21: 8). A spouted vessel (Fig. 24: 8-10) without taeniae and ledge handles shows a few white streaks on the exterior. There were only two sherds with a painted red band and one sherd with broad black streaks brushed vertically on the outside. The decorated lids will be mentioned later.

Most distinctive are cooking pots (Fig. 21: 1-13) with the bases wider than the openings and the bases or bottoms as thin and porous as possible. Their thickness varies between 4 and 7 mm, the thickness of the curve or bend from the base to the opening between 12 and 17 mm. Such a shape allows heating food with a minimum of fuel. There is a variety of ledge handles (Fig. 24: 14-19) from small, plain and neat to large, folded and coarse ones. On some of the cooking pots, and only on them, the handles seem to evolve out of a taenia in the lower half of the vessel. The worm-like continuous ledge was attached to the body after the handles had been put into place. The reason behind the method was not to embellish but to strengthen the pots which nevertheless used to break in the ledge handle zone. The handles, of course, served to put the pot on and take it off the fire. Their sizes, therefore, correspond with the size and possible content of the vessel.

A second distinctive group within the al-Mu'allaq pottery are decorated lids (Fig. 24:

1-7). They are round, slightly convex and on the upper side decorated with finger indentations and tool- or fingernail-scratched grooves around and inside the upper surface. In a second group (Fig. 21: 2) the lids are pierced with tool-made holes following a radial pattern between a crooked and obliquely cut-off knob and its periphery. A few holes perforating the lid are rather due to haste than made purposely. Concerning the first group of lids without a knob, it has been suggested that they might have been used as baking platters. The differing diameters of 12 to 26 cm, however, contradict such an interpretation.

Another definite group of vessels are bowls of different form and size (Fig. 23: 1-14). Only one of them sports a base. There were no cups, indicating that small bowls were used for drinking, and only two saucers, possibly having served as crude lamps (Fig. 23: 15).

Several hole-mouth vessels were apparently also used for cooking (Fig. 22: 8-11). A few large vessels with almost straight sides (Fig. 22: 4-7) are reminiscent of modern casseroles. Due to their width and their contents' temperature and weight, they were "handled" with ledge handles. These vessels might have been used for common meals of a family. Of middle-sized jugs or juglets (Fig. 24: 11-13) a few loop handles of brown clay with a self-slip were found. The lower part of a jug with the attachment point of a loop handle is made of a porous whitish clay mixed with sand and chalk. The outside is pock-narbed. The jug may have been used for cooling beverages (Fig. 24: 12).

Other Pottery Assemblages

Very few Nabataean-Roman-Byzantine sherds without decoration were found on the surface and in the lowest strata. A scatter of a red-brown ware in Strata III - IV was thrown on a fast-turning wheel with an excellent clay almost without grits. There are decorative fine lines on the exterior and care-

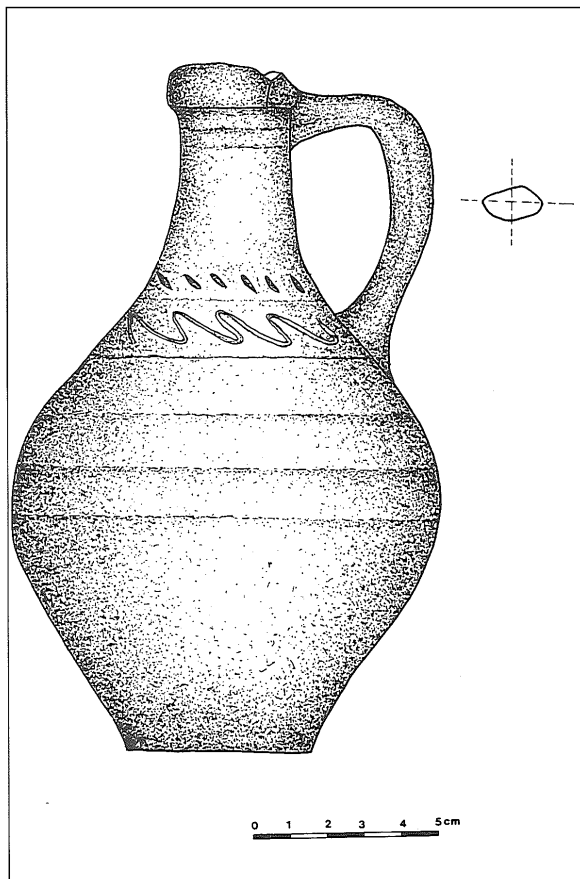
fully produced grooves on the interior of the flower-pot like vessels. The pottery is neither Iron II nor local ware and seems to be related to the juglet found in Stratum IV which has to be considered as imported (Figs. 15 and 25).

Other Finds

Other non-pottery finds comprise several oval (saddle) querns, slabs and fragments thereof, three hammer stones made of quartz, five round millstones, one of them with a second (eccentric) hole, fossils of the local Cretaceous formation, some sea shell fragments, one unidentifiable bronze fragment, one fragment of a coloured glass bracelet, a flint implement (scraper) and a (dubious) limestone implement.

Examination Results

The examination of animal bones from the excavation carried out by Angela von



25. The juglet from Stratum IV.

den Driesch, (Institut für Paläoanatomie, University of Munich, Germany) showed predominantly sheep and goat with a scatter of donkey, camel and *Scarus Harid* in Stratum I, in Strata II - IV also cattle.

Charcoal taken from the *tābūn* in Stratum III was C14 analyzed by the Niedersächsisches Landesamt für Bodenforschung and calibrated to 785 -1015 AD .

Closing the Gap: An Analysis of the Iron Age Pottery from Khirbat al-Mu‘allaq (J.P. Zeitler)

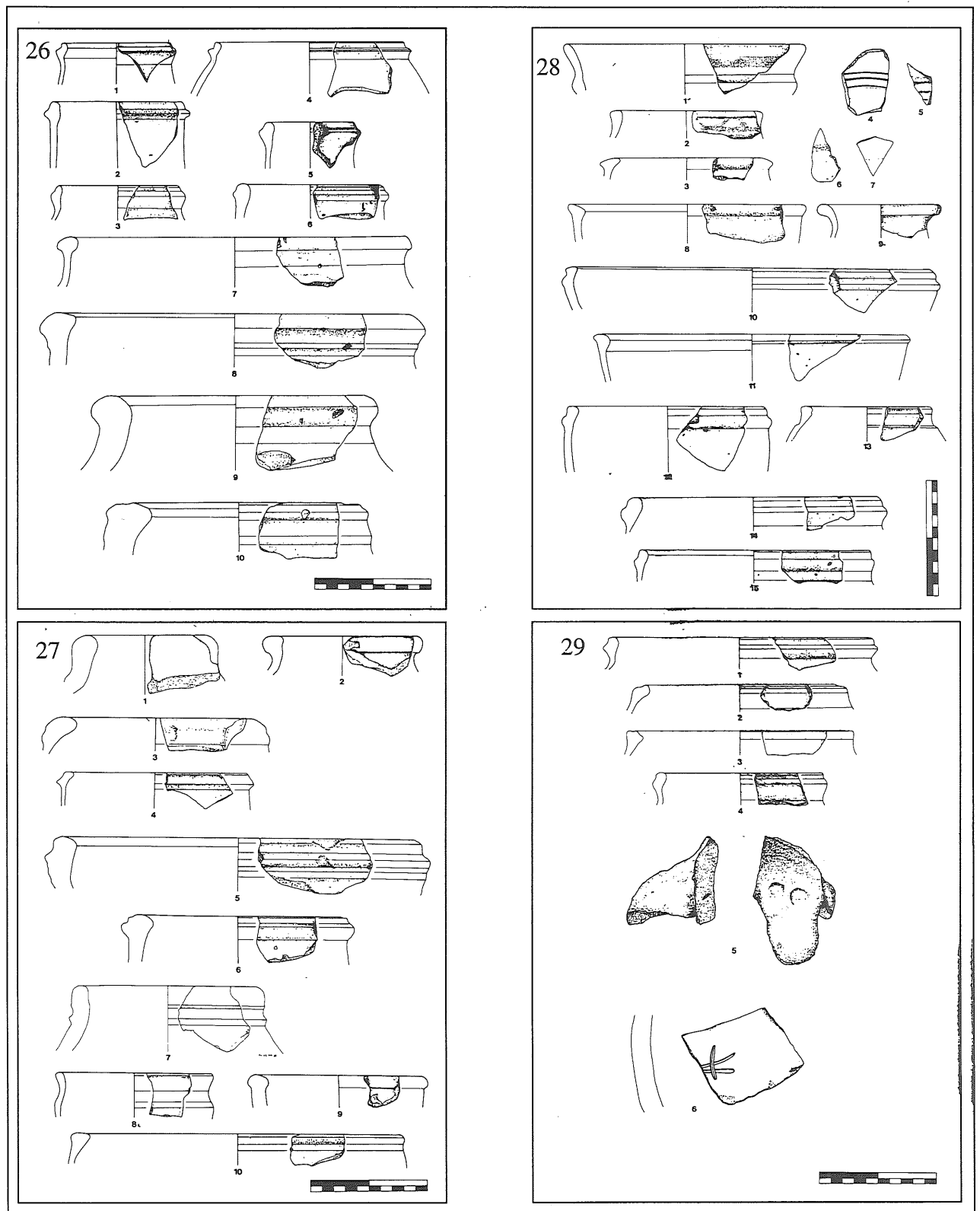
Discussing the “Edomite” pottery from the Petra region, two different pottery assemblages from different site locations were noticed. Locations in a favourable position, with pottery of a large variety both in typology and decoration, contrast with mountain top settlements with a high percentage of coarse pottery and a very low percentage of painted and fine ware (Zeitler 1992). This differentiation was based on the finds from Umm-al Biyāra, Ṭawilān, as-Sadah/Umm al-‘Ala and Ba‘ja III in the Petra region and from Buṣayra and some surface finds from as-Sela in northern Edom. Five sites - not counting the finds from as-Sela - are a rather small basis for grouping settlements in a region as large as ancient Edom. Therefore, new finds from hitherto undetected settlements were in great need to confirm or disprove the hypothesis of a relationship between pottery assemblage and site location in Iron Age Edom.

In 1994, Manfred Lindner and his team of NHG discovered and surveyed a site on top of a steep mountain, Jabal al-Qṣeir. The pottery showed the expected assemblage of coarse ware, while painted pottery was absent (Lindner, Knauf, Zeitler and Hübl, *infra*). This left one question open to be answered: was the strong resemblance of the pottery assemblages of Buṣayra and Ṭawilān coincidental, or would new sites with a similar topography show a similar connection

between site location and pottery. The site of Khirbat al-Mu'allaq, described by M. Lindner in detail above, now fills this la-

cuna.

The Iron II pottery from al-Mu'allaq (Figs. 26-29) fits within the frame of pottery



26-29. Iron II pottery from Khirbat al-Mu'allaq.

groups already defined elsewhere (Zeitler 1992: 167). The finds come from two different sources. Most of them were revealed during a trial excavation alongside an Iron Age wall, reused in Late Islamic periods. The stratigraphic context of the finds is given in the following description. The second group of pottery are surface finds from a general site survey before excavation. They are marked as GSF (General Surface Finds).

Group 1 : Jugs with high necks are represented by five pieces (Fig. 26: 1-3, 5, 6). Their topological variety is somewhat limited. Stratum I produced one piece, Stratum II three pieces and Stratum III one piece.

Group 2 : Only one cooking pot from Stratum III appeared in the excavation area (Fig. 26: 4).

Group 3 : Six sherds belong to large storage jars with short necks and everted rims (Figs. 26: 7-10; 27: 1, 2). Three pieces are from Stratum II, two pieces from Stratum III, while Stratum I contained only one piece.

Group 4 : Group 4 was previously described as large deep bowls. Two pieces of the al-Mu'allaq assemblage represent deep bowls, but with a rather small diameter (Fig. 27: 3,4). They come from Strata II and III.

Groups 5 - 6 : Bowls with flat, thickened rims and jars with collared rims. Both groups are not represented in the al-Mu'allaq finds.

Group 7 : This group, large jars with rilled rims is the most common pottery from the mountain-top sites. In Khirbat al-Mu'allaq, only four pieces belong to this group. One rim sherd from Stratum I (Fig. 27: 5) shows a rather faint profilation of the rim, different from the deep rills known from other sites. Another piece from Stratum I (Fig. 6: 27) is of the same variety, but represents a vessel with a very narrow neck. Another variety, with a high neck and shallow rills in the lower part of the neck, came from Stratum II (Fig. 27: 7). The most spectacular find, pieces of a large vessel with a

seal impression on the handle, came from Stratum V. This pot shows shallow rills on the upper side of the rim, the outside is smooth (Fig. 30).

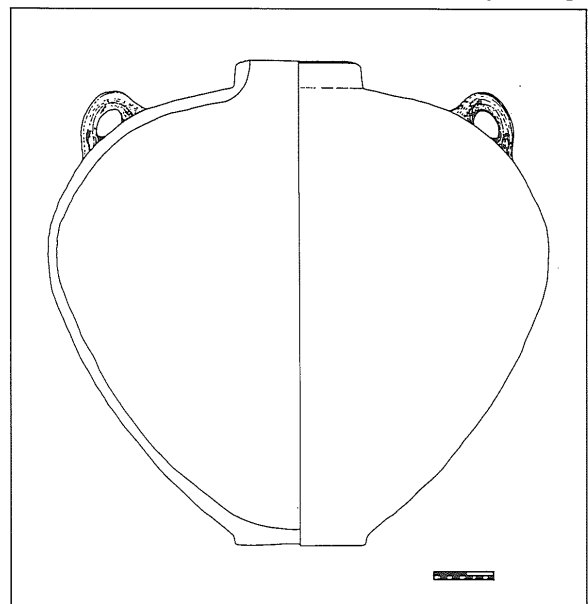
Group 8 : There are no bowls with high, profiled rims in the Khirbat al-Mu'allaq finds.

Group 9 : Bowls with a high, slightly out-turned rim are represented by two pieces from Stratum III and Stratum IV (Figs. 27: 8; 28: 1). Both are of medium fine quality. The piece from Stratum IV shows a band painted in brown slip on orange on the neck.

Group 10 : The pottery from Khirbat al-Mu'allaq shows a large variety of large bowls with profiled rims (Figs. 27: 10; 28: 3, 8, 10, 11). One piece comes from Stratum V, one piece from Stratum III, one from Stratum II and two pieces are from Stratum I. Their rims show different designs, ranging from a rill on the outside (Fig. 28: 10) to T-shaped variants (Fig. 28: 3).

Groups 11 - 16 : These groups are missing in the al-Mu'allaq assemblage.

Group 17 : This new type of pottery, straight bowls with a simple profiled rim, is unknown from the mountain top sites and only represented by a single piece from Stratum II in the al-Mu'allaq assemblage (Fig.



30. Iron II storage jar from Stratum V of Khirbat al-Mu'allaq.

28: 12). The shape is without close parallels in other Edomite settlements. The rim shape with a cordon close to the mouth of the pot and both temper and surface treatment of the piece argue for an Iron II date.

Group 18 : Another new type can be described as small bowls with a short, collared neck. They are present in two examples, one from Stratum II (Fig. 28: 13), the other one is a GSF. The latter shows a decorated outside (Fig. 28: 2).

Group 19 : This variety of cooking pots with a short neck and profiled rim (Figs. 28: 14,15; 29: 1 - 4) is unknown from the mountain top sites, but well known from Ṭawilān (see below). One piece was found in Stratum one, four pieces come from Stratum II.

Stratigraphical Significance

The observed stratigraphy seems to reflect filling and building activity mainly in the Late Islamic phase and is therefore of little value for chronological questions of the Iron Age finds. This is best demonstrated by the large vessel with a seal impression on the handle. The lower parts of the pot were still *in situ* during the excavation, while the upper parts were broken and damaged possibly during clearance work in Late Islamic periods and were found fallen into the pot. This argues for an undisturbed situation only up to Stratum V, being the lowermost sediment on the site. Therefore, the distribution of Iron Age Pottery in the upper Stratum has no chronological meaning, it only represents later, that is Late Islamic movements of the finds in the soil.

Khirbat al- Mu'allaq and other Edomite Pottery

In comparison with the pottery assemblages from Umm al-Biyāra, as-Sadah, Ba'ja III and al-Qseir, the pottery from Khirbat al- Mu'allaq shows differences in the assemblage. Although many groups are well represented both in the mountain top sites and in Khirbat al- Mu'allaq, the typological

range within a given group is usually larger in the Khirbat al- Mu'allaq finds. For example, the group of large vessels with short necks and everted rims (Group 3) show varieties with a small opening and thick walls (Fig. 27: 1) as well as varieties with a large opening and thin walls (Fig. 27: 7). The usual type known from other sites is also present (Fig. 26: 8 - 10). Group 10, usually with a typological clear but monotonous design, is represented by only two pieces of this clear variety (Figs. 27: 10; 28: 3). The other examples (Fig. 28: 8, 10, 11) show great modifications. Group 7, one of the most common pottery types from Edomite sites, lacks the usual three prominent rills on the outside of the rim. Group 19, cooking pots with a short neck, are absent in the mountain-top sites, whereas the standard cooking pot of those sites, Group 2, is only represented in one example from Khirbat al- Mu'allaq (Fig. 26: 4).

Two other types of pottery seem to be typical for the site. Painted pottery is present in a small, but considerable amount. The designs show some variation, ranging from the usual dark-brown on orange band painting (Fig. 28: 1-3, 5, 6) to an angular band within two lines (Fig. 28: 4). The other type is pottery with seal impressions on the handles (Fig. 29: 5, 6). Unfortunately, the seals are unreadable and provide no argument for an absolute date of the finds and the site.

Given the presence of two seal impressions, the find of a sherd with an incised letter is not surprising. The *Aleph* is clearly readable. Unfortunately, the sherd is too small to bear any traces of further letters. The lettering of pots before firing is paralleled in a find from Horvat Quitmit in the Negev (Beit-Arieth 1991: 99). Some examples of incised letters on Edomite pottery come from Buṣayra and Tall al-Khalayfi (Bartlett 1989: 222 - 225).

It was stated previously, that Edomite sites can be grouped together by their topographical situation and their pottery assemblages (Lindner, Knauf, Zeitler and

Hübl, *infra*). The topographical situation of Khirbat al-Mu‘allaq is similar to that of Ṭawilān. Therefore, it is expected that Khirbat al-Mu‘allaq reveals a pottery assemblage similar to Ṭawilān. The major drawback of the Khirbat al-Mu‘allaq finds is the relatively small number of pottery, due to the small size of the excavation area and possible alterations in Late Islamic times. Additionally, as the excavation only examined a small part of the total structure situated near its outside wall, it is to be expected that only a facet of the total functions within the building structure will be represented by the pottery assemblage. As the function of only one area seems to be reflected in the pottery assemblage, any hypothesis stating the function of Khirbat al-Mu‘allaq from the pottery assemblage can in fact only refer to a specific part of the site.

Given this *caveat*, parallels in the pottery of Khirbat al-Mu‘allaq and Ṭawilān are exceptionally evident. This is best to be demonstrated by the presence of Group 19, cooking pots with a short neck. They are abundant in al-Mu‘allaq and present in Ṭawilān (Bienkowski 1995: Fig. 15: 6-8). There are no published (excavated ?) examples from Umm al Biyāra. From Tall al-Khalayfi, one example is known (Pratico 1985: Fig. 14: 3). The type does not occur in the pottery samples from al-Qṣeir, as-Sadah and Ba‘ja III. Another link between Khirbat al-Mu‘allaq and Ṭawilān is the presence of painted pottery. This is not restricted to dark brown parallel bands, as one pot showing an angular band within two lines is present. A similar decoration was found on a bowl from Ṭawilān (Bienkowski 1995:17). Again, the mountain top sites lack this variety of decoration, and only as-Sadeh produced a minimum amount of painted pottery at all (Zeitler 1992: 171).

The Question of Chronology

This leaves still the question of chronology open to debate. Usually, a chronolog-

ical difference would be proposed from the fact, that Edomite sites produce different pottery assemblages. This was in fact suggested by S. Hart, who dated Umm al-Biyāra early and Ṭawilān late within a hypothetical chronological frame (Hart 1989). Khirbat al-Mu‘allaq pottery strengthens Bienkowski’s critical remarks (Bienkowski 1995: 52). Hart stated that elongated bottles from Umm al-Biyāra (Bennett 1966: Figs. 2, 9,14,15: 3, 1) and rounded jugs (Bienkowski 1995: Fig. 18 left) represent early types of Edomite pottery. Therefore, they should not appear in any pottery assemblage similar to Ṭawilān. As some typological affinities between the pottery of Ṭawilān and Khirbat al-Mu‘allaq could be established above, the presence of at least one rim sherd of a bottle from Khirbat al-Mu‘allaq (Fig. 28: 9), similar to the rims of the Umm al-Biyāra bottles argues against Hart’s chronological construction. Due to the high fragmentation of the pottery from Khirbat al-Mu‘allaq, no definitive statement can be given on the presence or absence of this type in Khirbat al-Mu‘allaq.

At present, it seems reasonable to repeat the observed typological differences in Edomite pottery from different sites, but any chronological attempts deduced from these differences would be speculations. As the newly discovered site of Khirbat al-Mu‘allaq fits into the proposed bipartite classification of Edomite settlements and their pottery, that is, sites with a rather coarse pottery on high and steep mountain tops and sites with a larger selection of fine pottery on the slopes of the Edomite plateau. An explanatory model for this grouping is already given elsewhere (Lindner, Knauf, Zeitler and Hübl, *infra*)

Discussion (M. Lindner)

Interestingly, Khirbat al-Mu‘allaq despite its easily attainable location, first at a much used track, then a proper road, was seldom visited. With the exception of Glueck, mod-

ern visitors, as there were, among them Weippert (pers. comm.), refrained from dating the site. There is a simple explanation. Apart from walls and a mass of tumbled and restacked, sharp-cornered limestone ashlar, at first sight Khirbat al-Mu‘allaq does not exhibit any pieces of architecture, indicating temples, tombs or even dwellings. There are no ashlar with the typical diagonal dressing favoured by the Nabataean stone masons and no distinctive amounts of Nabataean sherds on the surface. Shafts and hypogaeum-like secondary alterations of the original ground-plan make any investigation, even simple measuring and sherding an ordeal, and neither short nor prolonged examination of the site is apt to increase appreciation.

On the other hand, there can be no doubt whatsoever about the significance of the site location between the protecting escarpment of ash-Sharā, an important north-south route along springs and the cultivable slopes of al-Qṣeir with ancient terraces. Built of limestone ashlar with mostly dry-masonry walls, running straight from the outer walls toward the centre, the building complex was carefully planned and executed for a certain purpose. This purpose could not be ascertained by the excavation. As far as the Late Islamic upper structure of Khirbat al-Mu‘allaq is concerned one may think of a defensible village, a storehouse, a caravan station or a pilgrims’ “khan”.

The problem of the water supply remains unsolved. Despite a height difference of c. 125 m between the two sites no traces of a conduit from ‘Ayn al-Mu‘allaq were found. Of course, the excavation of 1991-1994 uncovered only a small part of the ruin field, and some structures, for instance cisterns, may remain undetected. There is no doubt about a destruction of the site by earthquake(s), proven by the layer of tumbled building stones measuring more than 0.44 m. They actually sealed everything what was relinquished before. There is only one

problem: How could it happen that despite sealing, at least in the excavation area, ceramic material of all deeper strata was found on the surface and that it was also mixed within the layers under the tumbled stones? To the excavators it seems the original second structure was never used for the purpose it had been built for. Instead semi-nomadic settlers or seasonal squatters lived in the available spaces, sometimes changing walls as needed. Others dwelt on top of the debris and the sand blew in in the meantime. They might have cleaned a space by dumping the remnants of the past in adjoining rectangles. At another time, settlers, while ploughing the land around, might have thrown stones and sherds back into the ruin field. There are no other explanations for the fact that fireplaces were found without a worked or consolidated groundfloor in the middle of an area which can only be called a dump. Only in one place and on one level, that is in Stratum III a *tābūn* with a fireplace and assorted vessels were revealed within an habitation area in the corner between two walls. There were, however, no striking differences in the hand-made pottery between Surface and Stratum IV.

With regard to pottery found at Khirbat al-Mu‘allaq, the coarse hand-made ware, partly equipped with ledge handles and taeniae, has to be identified as Late Islamic household ceramics. By careful drawing of many large fragments and whole or restored vessels, Glueck’s regret (1939: 267) about the “badly neglected Arabic pottery” may be remedied. The Late Islamic ware of Khirbat al-Mu‘allaq seems to be of local origin and significance; some types, however, for example ledge handles with a taenia and lids with incised radial decoration from a crooked cut-off knob to the rim, were noted at other places in Southern Jordan and will be described elsewhere. The wider distribution points to an era of reoccupation of former sites in the Petra region by a Late Islamic half-sedentary population. The juglet

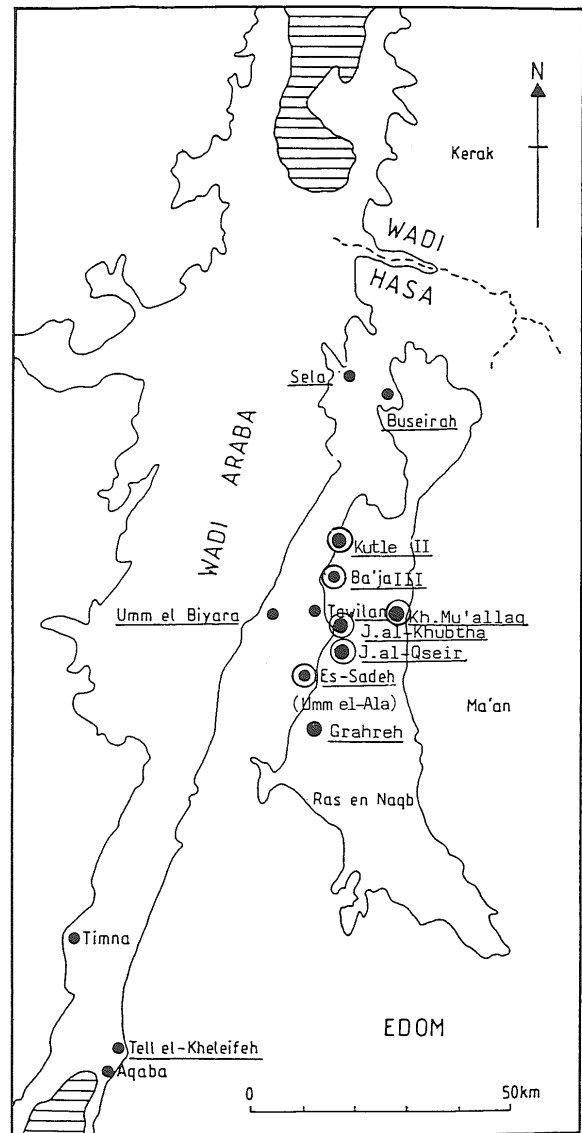
from Stratum IV as well as the undetermined wheel-made pottery from the lower strata, both imports, underline the same increase in prosperity.

With regard to comparisons, there might be a certain resemblance to but no identity with parts of the pottery Brown (1987: 281/6) and Vanini (pers.comm.) excavated at al-Wu'ayra, one of the two crusader forts of Petra. The preliminary dating of their pottery around the Crusade period (1099-1291) and the Early Ayyubid period, that is medieval Arabic time, might be compared with the result of the C14 analysis of charcoal excavated from the *tābūn* in Stratum III at Khirbat al-Mu'allaq, that is calibrated 785-1015 AD. As to the exact date, the lack of geometric painting in the al-Mu'allaq pottery assemblage is significant.

The Iron II (Edomite) pottery from Khirbat al-Mu'allaq follows the pattern of the known settlements at Ṭawilān and Buṣayra and the mountain strongholds of Ba'ja III, Umm al-'Ala (as-Sadah), Jabal al-Qṣeir and Jabal al-Khubtha, all of them identified as Edomite sites by NHG during the last years (Fig. 31). At Khirbat al-Mu'allaq, belonging to the "plateau", however, some fine and painted fragments demonstrate a higher level of urbanisation not to be found "in the rocks" (Lindner and Knauf *et al. infra*). A still more exact analysis is presented by J.P. Zeitler. For him, the Iron II pottery of Khirbat al-Mu'allaq fits into the bipartite classification of Edomite settlements without a chronological difference.

Conclusions (E.A. Knauf)

The survey of the walls in and above the surface of Khirbat al-Mu'allaq recalled the groundplan of a typical Iron II fortress with casemate walls. As the excavations of 1991-94 revealed, at least the upper courses of the partition walls are probably Late Islamic. It can be assumed, however, that these later walls follow in many instances Edomite



31. Iron II (Edomite) sites in Southern Jordan. Sites lately discovered by NHG are encircled (Sketch map).

foundations. Severe earthquake damage could be discerned in the north-east and north-west corners. The outer wall was at least rebuilt on the north and west sides of the ruin field.

The site was occupied during two periods: An Edomite fortress of the Iron IIC period was later reused as a village in the Late Islamic (Ayyubid through Ottoman) period.

Edomite Period

Edomite occupation at the site began prior to the erection of the outer walls, as evi-

denced by a fireplace without stones (bread baking place) and by a stone-lined storage pit in H5. Similar storage pits, antedating the construction of walls, have been observed at Ṭawilān. The storage pit of H5 was cut by a foundation trench of Wall 3. That trench, containing a few Iron II sherds was cut c. 0.50 m into virgin soil (Stratum V). Its south face has been robbed above the foundation. The excavated area forms an open courtyard in the south-west corner of the original fortress (Stratum IV). In B4, the balk under Wall 1 revealed a pit dug for a medium sized storage jar which had been removed. A large storage jar was dug in in H3 and found *in situ*. Otherwise the area was empty, suggesting the Edomite fortress was abandoned in an orderly fashion. Several finds from the surface and from later occupation strata date also from the Edomite period, notably seal impressions on jar handles, a jar inscription and painted pottery.

Late Islamic Period (Ayyubid through Ottoman)

After the Edomite site was abandoned, the area was frequented by transient occupants as evidenced by the traces of two camp fires in Stratum IV and also by a certain number of "al-Mu'allaq ware" sherds antedating the erection of Walls 1-4. Walls 1 and 2 were built immediately on top of Stratum III. They formed the south and north-west wall of two different houses, using the Edomite fortress wall as their back walls. Stones for the construction of these houses were taken from the Edomite ruin and possibly from unlocalized Roman-Byzantine installations. The south façade of the Edomite outer wall was robbed; the robber trench contained a rather high number of Late Islamic and several Nabataean through Byzantine sherds.

The area remained in use as a courtyard, partitioned by Wall 5 and closed by Wall 3, a row of stones following the line of the Edomite wall at a distance of c. 0.50 m. As

indicated by an accumulation of loose soil under Walls 3 and 5 above Stratum III, construction of these courtyard walls occurred somewhat later than the erection of Walls 1 and 3. In E5, a presumably imported juglet was placed into the corner of walls 2 and 5. A fireplace was observed in F4.

The Late Islamic occupation ended in violent destruction, in all probability caused by an earthquake, as evidenced by the fallen stones constituting Stratum I. A considerably large amount of household pottery was found together with a *ṭābūn*. The exact date of the Late Islamic occupation depends on the reliability of a C14 date of charcoal from the *ābūn* and on the dating of the juglet of Stratum IV which is subject to further study.

The surface of the site is characterised by various shelters, constructed by re-arranging the stones from the Edomite and Late Islamic settlements. They indicate the recent use of the site by another transient (pastoralist and/or non-sedentary) population.

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from Wādī Mūsā and Umm Ṣayḥūn worked hard during the four campaigns. Suleiman Farajat, Mohammed Murshed and Dakhilallah Qublan provided excellent advice. Ms Schumann, our next door neighbour, allowed her house keeper to entertain everybody on site with innumerable cups of tea.

Personally I have to thank Prof. E.A. Knauf for bringing the excavation to a satisfying end, and J.P. Zeitler for analysing the Iron II pottery from the excavation.

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