

**A Report on the Field Activities
of the Dakhleh Oasis Project
during the 2003–2004 Field Season**

by
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with
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INTRODUCTION

The 2003–2004 field season of the Dakhleh Oasis Project took place between 10th November, 2003 and 25th March, 2004. A total of 42 expedition members joined the field work at various times during the season. The expedition was based, for the second season, at our new headquarters at ‘Ain el-Gindi, Sheikh Wali. It was our good fortune to have the Governor of the New Valley, General Medhat Abdel-Rahaman, present at the opening ceremony on 22nd January.

Field work included surveying by geoarchaeologists, paleontologists and Egyptologists; excavations at Mut el-Kharab, Ismant el-Kharab, Amheida and el-Qasr. Site conservation work was accomplished at a number of sites – the Mamissi plaster at the Temple of Tutu at Ismant el-Kharab, the Bayt el-Qadi (‘House of the Judge’) at el-Qasr, the Roman sandstone temple at ‘Ain Birbiyeh, and Roman period plaster decoration at Amheida. Special studies of Old Kingdom flint working, archaeobotany, papyrology, and physical anthropology also went forward. Various expedition members have written many of the following reports.

PLEISTOCENE GEOARCHAEOLOGY

M. R. Kleindienst

Fieldwork in 2004, between February 19 and March 01, based on ‘Ain el-Gindi dig house, was in collaboration with R. and B. Churcher. Objectives for this brief season investigate some questions about the Pleistocene palaeolake deposits in the Teneida and were:

1. To investigate some questions about the Pleistocene palaeolake deposits in the Teneida and Kellis Palaeobasins which had arisen while preparing a publication on “The Great Lakes of Dakhleh” (Churcher and Kleindienst n.d.).
2. To investigate more thoroughly the Bow Wave Structure (BWS) and its environs. A Landsat map provided by H. P. Schwarcz indicates a circular feature in gravels (‘virtual’ collapsed crater) north-east of the BWS upthrust sediments discovered many years ago (Mills 2003-a [2001]). The feature is also visible, but less clearly, on air photographs of the area north of Camel Thorn Basin and el-Akoulah Pan.

Churcher and I revisited some areas we had noted previously, and some newly capping topographic highs were bedrock or lacustrine Lake Kellis Formation (LKF); and, if the latter, of what facies. As previously noted in 2002 (Mills 2003-b [2002]), lake deposit remnants from south of Masara west until south of Mut are mainly of the FSS facies, with some interfingering of CSS. This season Churcher found basal LKF capping high knolls in the cultivated lands south of Masara and Sheikh Wali, extending north almost to the modern tarmac road.

We found a small remnant of sandstone beach cobbles in a sandy matrix preserved on top of a high ‘pinnacle’ jebel south of the modern oasis rim at an elevation that could represent a southern margin of Palaeolake Kellis (164.5 m by GPS) (Loc. 417). This approximates the elevation projected by palaeolandscapes reconstruction (Churcher and Kleindienst n.d.).

We also reinvestigated the LKF CSS-capped knolls at Locs. 397 and 398 discovered in 2002, mapping the extent of Dakhleh Glass occurrences, which are found across an area of over 1.5 x 3 km. The glass is darker, more dense, thicker and in larger pieces at Loc. 398N; those found at Locs. 398WW on the west or 398SE on the southern margin are lime-green coloured, highly vesicular, thin, and in small pieces. Some southern fragments that appear to be complete have aerodynamic rounded or teardrop shapes. These observations suggest a northern origin for the glass melt, somewhere in the now deeply eroded and cultivated lands. Earlier, Churcher found a third occurrence of lime-green, vesicular Dakhleh Glass in place within CSS lakebeds, at Loc. 397W.

An anomalous observation is that on two isolated, high, lake deposit-capped jebels south of Sheikh Wali, there are deep excavations into their centres, probably done in pre-Roman times. The backdirt from these excavations is nearly eroded away; and there is no associated

evidence of grave robbing. These require further investigation by the Historic Period archaeologists.

Most of our investigations concerned the Bow Wave Structure (BWS). We revisited puzzling geological anomalies noted in earlier surveys, which now can be tied-in to a probable meteorite impact north of el-Akoulah Pan. Archaeological remains indicate that the event occurred between 100,000 and 200,000 years ago, during the Middle Stone Age occupations of Dakhleh (Kleindienst, Churcher, and Schwarcz n.d.). (Churcher and Kleindienst n.d.). Glass melt (Dakhleh Glass) was ejected for up to 4 km southward from the BWS. The distribution of characteristics in the glass from north to south is similar to that seen at Locs. 397 and 398 (above). Various ‘plops’ of displaced bedrock sediments (Mut Formation, Duwi Formation) were ejected for 1-2 km to the south and south-east. These are out of normal stratigraphic order, resting on eroded Taref Formation sandstone below the north rim of el-Akoulah Pan. Some Duwi brown shale ‘plops’ are blacked and appear to have been altered by heating. The displaced sediment remnants are now only the highly eroded remains of masses that must once have existed. That these rest on sandstone below the highest elevations of Lake Teneida Formation (LTF) lakebeds suggests that the lakebeds may already have been eroding when ejecta were emplaced, although vegetal impressions in the glass suggest a much wetter environment existed at the time of impact than at present.

Disturbed bedrocks around the impact zone can be traced for over 1 km in all directions, and apparent ejecta (reddened or blackened rocks) can be found in the surfaces of reworked Pleistocene gravels to the west and south. Disturbances include shear faults and offsets, with overturning and upthrusting of the Mut and Duwi Formation sediments. The lower green Dakhla Formation shales appear to have capped the bedrock sequence, overlain by P-II gravels and soil, when the impact took place. Redistribution or collapse of the P-II gravels has obscured the ‘virtual crater’, where the topographic indications seen on satellite or air photographs are too subtle to be observed on the ground.

The area to the north of the BWS, where ejecta could also be expected, is eroded well below Pleistocene surface elevations, and is further heavily disturbed by modern gravel collection. We did not, therefore, conduct any detailed walking survey there. In a one-day reconnaissance, we did not locate any ejecta, although observation of the ‘normal’ Mut Formation bedrock geology was instructive. However, the combined evidence of bedrock disturbance, rocks that appear altered, displaced bedrocks and glass melt all indicate that the BWS is a probable meteorite impact site. Evidence for such impacts is rare on earth, and those dating to the past few hundred thousand years and/or hitting unconsolidated sediments are even rarer (Koeberl 1994). Also, the evidence tends to confirm our earlier hypothesis of an oblique impact (Pierazzo and Mclosh 2000).

While investigating the area north of the BWS, we traversed the P-II gravel-covered erosion surface north of the Dharb el-‘Ain Amur camel track, now a gravelled road. We discovered a deep fill in an ancient channel cut into Mut Formation sediments, and overlain by P-II gravels. This was probably an inflow into Palaeolake Teneida. The fill appears to include a long microstratigraphic record of overland flow into the lake.

We also investigated the area along the northern margins of el-Akoulah Pan, where thick LTF gravels in a calcareous matrix mark another inflow into Palaeolake Teneida. Below those gravels, which rest on a sandstone bench several meters above grade, Churcher, J. Walter and I found pieces of wood incorporated in redeposited gravels overlying the red-brown sediments that infill the pan. The wood may be of Holocene age, or may be older. At present, no vegetation grows in the pan, although xeric shrubs and grasses, and new cultivation, are found to the west in Camel Thorn Basin where a modern water table must be higher.

PLEISTOCENE ARCHAEOLOGY

M. R. Kleindienst

Seven new prehistoric archaeological localities were logged in the course of fieldwork in 2004:

In the course of their survey earlier in the season, the Churchers found two new Pleistocene prehistoric localities: Loc. **415**, a Sheikh Mabruk Unit scatter on the eroded top of an FSS-capped jebel south of Sheikh Wali; and Loc. **416**, two Earlier Stone Age isolates on the Si'o'h Ridge, east of and below Gebel Edmonstone (heavily abraded handaxe made on red Duwi Formation limestone, quartzite spheroid).

Some artefacts were found on P-II and P-III gravels in the area of the BWS, which appear to represent a very late, post-Aterian, Middle Stone Age unit (Loc. **418**). These include small worked-out, specialized chert cores, specialized and unspecialized flakes, small ironstone bifaces, and an unusual unifacial ironstone point with an indented base. These scattered artefacts postdate the impact event.

A few isolated Middle Stone Age artefacts were found associated with lake deposits of both Palaeolake Teneida (Loc. **419**), and Palaeolake Kellis (Locs. **417** and **431**).

A sparse scatter of Pleistocene artefacts was noted on the P-II gravels north of the Dharb el-'Ain Amur road, indicating prehistoric use of the area only as a 'transit zone' (Loc. **430**).

In addition, six Middle Stone Age, Teneida unit pieces were added to the Loc. 374 collection, newly exposed on the LTF CSS talus south of the Iron Balls Spring. A few LKF associated artefacts were also collected at Loc. 398 SE.

Summary

Geoarchaeological investigations of the palaeolake deposits extended the area of the LKF, and located a high beach deposit on the southern margin of the palaeolake. Investigations of the BWS area confirm the probability of a meteorite impact event during the Middle Stone Age occupation of Dakhleh. The event must post-date the Teneida unit, found in the LTF, and pre-date the diagnostic Dakhleh Unit (Aterian Complex) tanged pieces which have been found on eroded sandstone surfaces south of el-Akoulah, from which LTF had been removed; the time range is estimated to have been between 100,000 and 200,000 years ago, based upon correlations with archaeological units associated with chronometrically-dated tufas at Kharga Oasis (Smith *et al.* 2004).

THE EXCAVATIONS AT ISMANT EL-KHARAB AND MUT EL-KHARAB

Colin A. Hope

The excavations at Ismant el-Kharab and Mut el-Kharab on behalf of the Dakhleh Oasis Project were directed by the writer and funded through a Monash University (Melbourne, Australia) Faculty of Arts Small Research Grant and by the Egyptology Society of Victoria. In addition, several of the participants funded their own expenses while a travel scholarship was donated by Rosemary Cromby; for all of this support I am most grateful. As usual, the officers of the Dakhleh and Farafra Inspectorate facilitated the work, as did the two inspectors seconded to the excavations.¹ This report commences with a description of the results of the excavations at Ismant el-Kharab, ancient Kellis, followed by that of the work at Mut el-Kharab, ancient Egyptian *Mt*, Greek Mothis. In addition to the excavations, the study of artefacts discovered during previous seasons at Ismant el-Kharab was undertaken, preparatory to the publication of the excavations in the domestic structures of the central part of the site (Area A). The detailed study of imported amphorae discovered at a variety of sites within Dakhleh, principally Ismant el-Kharab, Mut el-Kharab and Amheida, was also undertaken.²

Ismant el-Kharab

The excavations were carried out between January 7 and 27. They were restricted mainly to work within the Northern Tomb Group, a series of predominantly mud-brick mausolea on the north-western edge of the site. Three such tombs were examined, numbered 5 to 7; the location of the tomb group is indicated in the accompanying plan of the western half of the site (Figure 1), and their details in the plan of part of the North Tomb Group (Figure 2). At the northern end of this line of structures the remains of a stone building was noted during the initial survey of the site (Figure 1); this building was also examined. It is uncertain whether it formed part of the sequence of North Tomb Group and so will be termed North Stone Tomb in this report. Finally, another tomb to the south of this group, possibly to be considered part of the group, but which is close to the two elaborate West Tombs, was excavated; it has been numbered West Tomb 3 (Figure 1). Each tomb will be briefly described.³ The purpose of the excavations within the three brick tombs of the North Tomb

¹ These were Sabri Youssef Abdul Rakhman and Ahmed Gum'a Hussein.

² A report on this material will be published in *Cahiers de la céramique Egyptienne* Volume 8.

³ These descriptions are based upon those made at the end of the excavations by the site supervisors Wendy Dolling, Caroline Hubschmann, Paul Kucera and Anna Stevens, whose skill I acknowledge here.

Group was to determine the date of their construction, details of their architecture and the existence of any secondary use. The two largest tombs in the group, 1 and 2, revealed elaborate architectural details and both witnessed reuse: Tomb 1 by Christians in the fourth century and Tomb 2 by pagans probably in the late second or early third centuries. Tomb 2 contained remnants of the original burial equipment; the exterior of Tomb 1 preserved elaborate architectural details. The architecture of the two tombs resembles that of Late Period to Roman Period temples.⁴

North Tomb 5

This structure comprises an entrance portico, Room 4, which leads into a transverse chamber, Room 1, off which open two inner chambers, Rooms 2 and 3. The barrel vaults of Rooms 2–3 are almost entirely preserved; that in Room 1 is semi-intact. The entire west wall of the tomb has collapsed and the portico is only preserved to its lowest courses. All interior walls appear to have been white plastered, as do the exterior walls. The north and south walls of the tomb are ornamented with false doors topped by cavetto cornices, and the corners originally supported torus mouldings; there are raised jambs on either side of the door into the tomb from the portico, and it is likely that these were topped by a cavetto cornice above the door. The main part of the structure measures 6.90 m north/south and 7.20 m east/west; it is preserved to a height of 2.9 m on the south. The portico extends 2.85 m to the east and is 2.57 m wide.

Rooms 1 and 3 were partially filled with deposits of wind-blown sand, mud-brick rubble and organic matter, to a maximum of 1.5 m. Room 4 was buried entirely in wind-blown sand and organic matter. No sealed deposits were encountered. Removal of the fill revealed remains of gypsum-plastered floors throughout. Patches of blackening occur on the walls and floors, attesting one or more episodes of burning.

In Room 1 the remains of three human bodies were recovered: one adult and a child in the fill and clearly disturbed, and another child within a pit cut into the floor. All appear to be intrusive. Artefacts from the tomb include elements of painted wooden funerary furniture, a ceramic lamp and intact ceramic vessels. An intact wooden mummy board was found beneath wall collapse due west of the tomb. The artefacts probably all date to the second century CE.

North Tomb 6

This tomb post-dates tombs 5 and 7 and was built within the intervening space of 5.20m. It comprises three chambers: an entrance portico (not shown on the plan illustrated here), Room 3, and two inner rooms, 1 and 2, numbered from west to east. The tomb was filled

⁴ These tombs are discussed in C. A. Hope, *The Excavations at Ismant el-Kharab from 2000 to 2002*, in G. E. Bowen and C. A. Hope, eds, *The Oasis Papers III*, Oxbow Books, Oxford, 2004, 252–82, and the Christian burial practices in G. E. Bowen, *Some Observations on Christian Burial practices at Kellis*, *loc.cit.*, 167–82, and *Early Christian Burial Practices at Kellis, Dakhleh Oasis, Egypt*, *The Artefact* 26, 77–88.

with deposits of wind-blown sand, mud-brick collapse and organic material to a maximum depth of 2 m. Episodes of burning were encountered; no sealed deposits were preserved. Only the lower courses of the roof vaulting are preserved and the west wall has collapsed; the maximum extant height of the wall dividing Rooms 1 and 2 is 1.45 m.

Removal of the fill revealed the remains of mud-plastered floors in Rooms 1 and 2, and possible patches of a gypsum-coated floor in Room 3. The walls of Rooms 1 and 2 are mud-plastered, while Room 3 has gypsum-plastered walls. Large quantities of human remains were recovered. In Room 1, disarticulated remains, including a significant number of skulls, were found in a deposit of sand above the floor. In Room 2 human remains were found in two separate horizons. The upper one generally contained disarticulated, sometimes burnt, human remains within sand and collapsed mud brick. Below this were generally intact bodies, often with well-preserved tissue, regularly within pits cut into the floor. At least 13 individual interments were identified within Room 2. None can be identified with confidence as the original burials within the tomb. Artefacts include intact and semi-intact ceramic vessels, elements of painted wooden furniture, a metal hair pin and a probable metal seal. The ceramics can be dated to the third century.

North Tomb 7

This is a five-roomed structure comprising an entrance portico, Room 5, on the east that provides access to a transverse chamber, Room 1, off which open three inner chambers, Rooms 2–4 numbered from south to north. It is mud-plastered throughout and shows signs of burning. Its entire west wall has collapsed. The structure as a whole has been reused in recent times as a stable for the guards' donkeys and all original deposits have disappeared. Numerous cuts into the floors were filled with stable deposits.

An intrusive burial of an infant was discovered in Room 1, associated with a niche cut into the east wall. No significant finds were made. The structure comprises a block measuring 9.00 m north/south and 8.90 m east/west; the portico projects 3.25 m to the east and is 3.50 m wide. There is a maximum preserved height of 3.20 m in the centre of the tomb.

North Tomb 16

Following the disappointing, though not unexpected, results of the clearance of Tomb 7 another tomb of similar size was selected for excavation. Tomb 16 lies a distance to the north of Tombs 5–7 (Figure 2). Like Tomb 7 it comprises a transverse chamber, 1, off which three inner chambers open, 2–4 numbered from north to south; it lacks an entrance portico. The inner rooms preserve their vaulted roofs. At some stage Room 1 was sub-divided by a wall extending from the inner face of the south jamb of the centrally-located door into the tomb to the wall south of the door into Room 3, and another entrance into the southern part of original Room 1 was cut through the southern end of its outer wall. The small area so created at the southern end of Room 1 is termed Room 5. The tomb is mud-plastered throughout and has mud-plastered floors. All floors had been disturbed by intrusive cuts,

presumably made by robbers looking for sub-floor interments; there were large pits cut into the western ends of Rooms 2 and 3. This tomb also has been used for the stabling of donkeys as the fill below wind-blown sand showed. It measures 9.00 m north/south and 8.70 m east/west; internal height is a maximum of 1.81 m.

A total of six human bodies were excavated in the northern part of Room 1. All appear to be secondary having either been laid upon the partially-disturbed floor or, in the case of numbers 5 and 6, within a shallow grave cut into the floor against the east wall. In Room 5 four cuts into the floor resemble shallow graves; they are oriented east/west across the room, unlike the bodies in the northern part that were mostly aligned with the walls. In addition, a quantity of disturbed, disarticulated human remains was found, and a considerable amount of linen wrappings in Room 2. Ceramics from the tomb can be assigned to the late second to third centuries; a painted cartonnage foot-stall was found just below vault level on sand fill in Room 2.

North Stone Tomb

This structure lies slightly apart from the line of brick mausolea termed the North Tomb Group (Figure 1), and may be one of several such tombs in this part of the site to judge from surface scatters of sandstone. Surface clearance of rubble and sand revealed a single chamber made from regularly-cut sandstone blocks at the centre of a mud-brick complex. The number of rooms in the complex and its arrangement were not ascertained, but there is a rectangular mud-brick entrance chamber with barrel-vault on the east of the stone room, and another brick chamber on its north. The floor of the main chamber is also of stone; this was revealed only in the south-west corner of the room. The room had a stone vault, traces of which are preserved on the south wall; all walls appear to have been coated with a thin layer of gypsum plaster. The north and west walls preserve faint traces of original painted decoration; on the west parts of a figure making offering to Osiris (?) and the deceased could just be determined.

The tomb was filled completely with wind-blown sand. In the north-west corner several wall and roof blocks were found. Nothing of the original interments or burial equipment was found. The internal dimensions of the room are: 4.0 m east/west by 2.0 m north/south; the north and south walls are each 0.42 m wide while the west wall is 0.55–0.60 m wide. The maximum extant height of the room is 2.3 m at the west wall.

West Tomb 3

As mentioned above, this tomb lies to the south of the main group of mausolea in the North Tomb Group, close to the two elaborate West Tombs situated within one of the enclosures associated with the Main Temple of Tutu (Figure 1). It is now apparent that the area between the concentration of tombs in the north and West Tomb 3 is not vacant, and several single- or multiple-chambered tombs have been discovered in the area. Thus the entire north-western edge of the site housed a cemetery of mud-brick tombs; how far they extend

towards the rock-cut tombs in the hills to the north-west of the settlement (the so-called Kellis 1 cemetery) could not be determined.

West Tomb 3, which lies due west of the expedition's workrooms, preserves a single subterranean chamber cut into the clay terrace upon which the site is built, that is gypsum-plastered and accessed by a shaft in its south-eastern corner. A pier against the east wall aids in the support of a single upper chamber. This is of a similar size to the subterranean chamber, built of mud-bricks and gypsum-plastered. The tomb was devoid of human remains and the fragmentary artefacts that were recovered are likely to be intrusive. Strangely, there was a considerable number of pig bones within the tomb chamber. The dimensions of the upper chamber of the tomb are 2.90 m east/west and 3.10 m north/south with walls between 0.55 and 0.60 m wide, and of the lower 2.80 m north/south by 2.20 m east/west.



Figure 1 Plan of Ismant el-Kharab showing main excavation areas (original drawing by J. E. Knudstad supplemented by J. Dobrowolski and B. Rowney). Scale 1:5000.

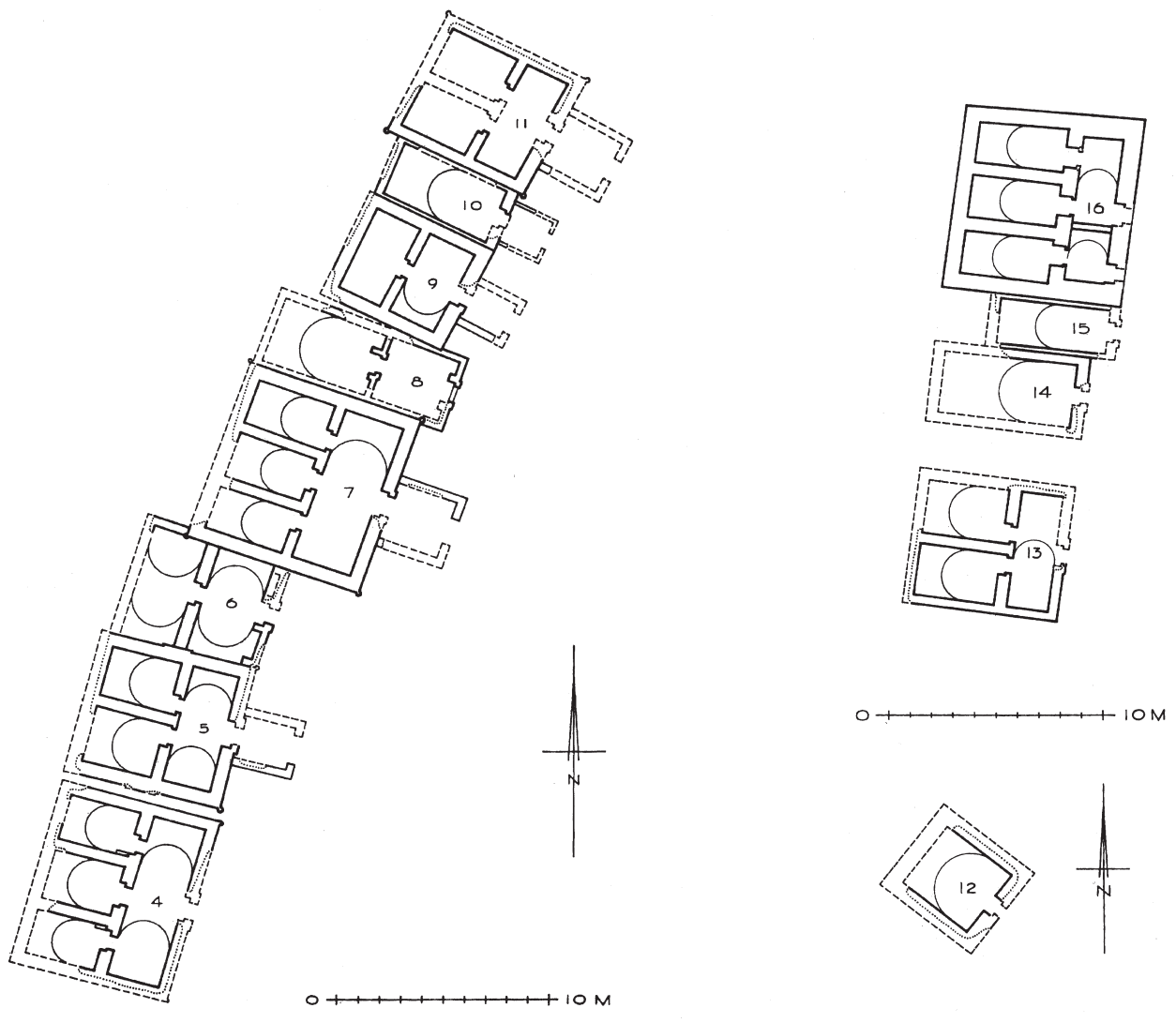


Figure 2 Plans of North Tomb Group (Tombs 4 to 11 and 12 to 16), Ismant el-Kharab.

EXCAVATIONS AT MUT EL-KHARAB

Colin A. Hope

A short excavation period of only seven days from 28th January until 7th February was conducted, but, as usual, the results were significant. Four trenches were opened: three, numbered 12, 13 and 15, within the vicinity of early work within the Temple of Seth, and one, numbered 14, against the temenos walls in the north-west corner of the enclosure.⁵ See Figure 3 for the location of these excavation units.

Trench 12

This is located due north of Trench 7 and measures 5 m east/west and 3 m north/south (Figure 4). As in previous trenches excavated within the temple area, extensive deposits of crushed sandstone mixed with sand and mud bricks (context 9) were encountered above the remains of a sandstone pavement. This survived in the south-west corner (context 13) and across most of the eastern half of the trench (contexts 15 and 19). The remaining blocks sit atop a mud-brick foundation that is 1–2 courses thick (context 15). Amongst the rubble a few fragments of wall relief were found.

As a large stone feature was identified within the north-west corner of Trench 7, it was decided to connect the two trenches to locate the northern face of this feature. The connecting cut revealed that this feature comprised one layer of sandstone blocks (Trench 7 context 26) on top of a layer of mud bricks laid on their edges, and the feature terminated immediately north of the original edge of Trench 7. It appears to represent a pavement that is on a higher level than that in Trench 12, possibly with a step up from the latter. This would then imply that Trench 12 is part of a room further away from the original sanctuary of the temple than that within Trench 7.

As in Trench 7, the material below the brick foundation for the paving stones is fine-grained sand with ash that contains ceramics of Old Kingdom date. They are shale-tempered and within the tradition of the indigenous terminal Sheikh Muftah Unit.⁶ Ceramics from the destruction layers was mixed in date: Old Kingdom to Islamic (Mamluk).

⁵ For detailed reports on the previous work at the site see C. A. Hope, Egypt and Libya: Excavations at Mut el-Kharab in Egypt's Dakhleh Oasis, *The Artefact* 24, 29–45, and The 2001–2 Excavations at Mut el-Kharab in the Dakhleh Oasis, Egypt, *The Artefact* 26, 51–76.

⁶ For an overview see C. A. Hope, Early and mid-Holocene ceramics from the Dakhleh Oasis: Traditions and Influences, in R. Friedman, ed., *Egypt and Nubia: Gifts of the Desert*, British Museum Press, London, 2002, 39–61.

Trench 15

Located between Trenches 7 and 8, this trench measured 7 m east/west by 4 m north/south (Figure 5), and aimed to relate the stratigraphic sequences revealed in the two previously-excavated trenches.

Below deposits of sand, collapsed mud brick and crushed sandstone, three narrow, north-south mud-brick walls were revealed: one (context 13) represents the western face only of a wall, one at the western end of Trench 15 is only one brick width (context 2), and the third to the east of the centre of this trench is two bricks in width (context 16). The western wall is the best preserved with four extant courses. The eastern and central walls are built over a wider mud-brick wall at their southern ends (context 12), 1.175 m in width, while for a width of 1.55 m to the west of the central wall there is an area of mud brick (context 29). This brick area and the southern brick wall stop 2.00 m east of the western wall. Beneath a deposit of crushed sandstone (context 21), this area revealed the remains of a north-south sandstone wall (context 27), 1.575 m wide and which runs for the full width of the trench, which extended below the western brick wall (context 2).

The stone wall represents the lowest part of a wall that has been largely robbed out, but parts of three courses were revealed, each with ashlar blocks, and comprising larger blocks flanking narrow central blocks. The extant height of the wall is uncertain. To reveal the full width of this wall the baulk separating Trenches 7 and 15 was removed. This extension showed that a compact earth deposit had originally abutted the western face of the wall. It is evident that the three narrow, north-south brick walls represent a building phase that post-dates the destruction of the stone wall, which is clearly a part of the temple structure. Unfortunately, deposits associated with the brick walls were all disturbed and contain ceramics that range in date from the Late Period to Islamic Period (Mamluk). These deposits also yielded ostraka inscribed in cursive hieroglyphic, hieratic, demotic and Greek. The area between the central and eastern brick walls was excavated below the bases of these walls; this revealed deposits of mud-brick and stone rubble with ash lenses (contexts 34 and 36) above compacted yellow clay (context 38). The latter resembles material found in Trench 8 to the east, which abutted a dump of Dynasty XXV pottery.⁷

Trench 13

To the immediate north of the depression in which the remains of the stone temple are located there are two, roughly square mud-brick structures that appear to flank the approach to the temple (Figure 3). To determine the date and nature of these structures a trench was excavated in the south-eastern corner of the western building. Surface clearance revealed doors through the southern and western walls; the eastern wall is 1.48 m wide and the southern wall is 1.20 m wide. The two walls are bonded; the western wall stands 2.75 m in

⁷ See Hope, *The 2001–2 Excavations at Mut el-Kharab*, 59; for other contemporary ceramics found beneath a structure of Psamtek I at the site see C. A. Hope, *A Note on some ceramics from Mut, Dakhleh Oasis*, *Cahiers de la céramique Égyptienne* 7, 99–121.

height and the southern one 0.80 m. Both walls are built upon compact sand that contains ceramics of the Terminal Sheikh Muftah Unit, lithic debitage, charcoal and bones. The eastern wall is set 0.75 m lower than the southern wall and its lowest four courses contain mud bricks that are considerably larger than those employed within the temple area. They are 0.5 m long and 0.09–0.10 m thick and laid as stretchers; the upper bricks in this wall are the standard 0.32 x 0.16 x 0.09 m in size. Deposits abutting the eastern wall but below the southern wall contained ceramics of the Late Period to the Old Kingdom, some lithic debitage, bone, ostrich egg-shell and beads. Associated with the lowest courses of the southern wall are two water-hardened surfaces with ceramics of the terminal Sheikh Muftah Unit, the New Kingdom and the Late Period. In deposits abutting higher courses of this wall there was again ceramics of a wide date range: Old Kingdom, New Kingdom, Late Roman and Islamic, although Late Period material dominated; sherds of Mediterranean amphorae were found. Evidently the brick structure is a Late Period feature set upon Old Kingdom deposits, that has been disturbed subsequent to the Roman Period. Some decorated fragments from the temple were found in the upper deposits filling the area. The trench yielded sherds from a blue-painted, necked jar of Ramesside date.

Trench 14

This is located in the north-west corner of the temple temenos, the northern wall of which appears to be in the region of 8.00 m wide. Below surface sand the remains of mud-brick structures were found extending from both temenos walls in the direction of a mud-brick building sited close to the northern wall but about 10.00 m from the western wall (Figure 3). Those walls abutting the corner of the temenos were cleared to reveal a narrow rectangular room 2.76 m east/west and 1.00–1.26 m north/south, with brick walls on the east and south, and a door through the eastern end of the southern wall (Figure 6). It was filled with collapsed mud-brick rubble and sand.

Within the collapse were substantial quantities of intact and broken ceramic vessels, all of which can be dated to Dynasty XXVII (Figures 7–9). Amongst these were two examples of Bes-vases (Figures 7c and 8f) and two imported Gaza amphorae (Figures 7d and 8l); excluded from the forms illustrated here are examples of typical Dakhleh water kegs datable to this dynasty.⁸ Two small, painted sandstone female figurines were found. The assemblage appears to be domestic in nature. No identifiable floors were found, and it can be assumed that they were of compacted earth rather than mud plaster. Below the ceramic deposits and the bases of the walls of the room there was more brick rubble in sand. The temenos walls were revealed to a depth of 2.00 m below the surface of the site before excavation was terminated; the northern temenos wall as exposed stands some 3.65 m in height.

The significance of the discoveries in this area lies in the fact that the temenos walls may be ascribed to a period before Dynasty XXVII, confirming conclusions drawn from

⁸ Tall-necked kegs with barrel-shaped bodies: see C. A. Hope *et al.*, Kegs and Flasks from the Dakhleh Oasis, *Cahiers de la céramique Égyptienne* 6, 189–234.

excavation within the south-eastern corner of the temenos.⁹ In light of the evidence for substantial construction at the site in Dynasty XXVI, specifically the reign of Psamtek I, then it is possible that the temenos was erected during his reign.

⁹ See Hope, *The 2001–2 Excavations at Mut el-Kharab*, 63–67.

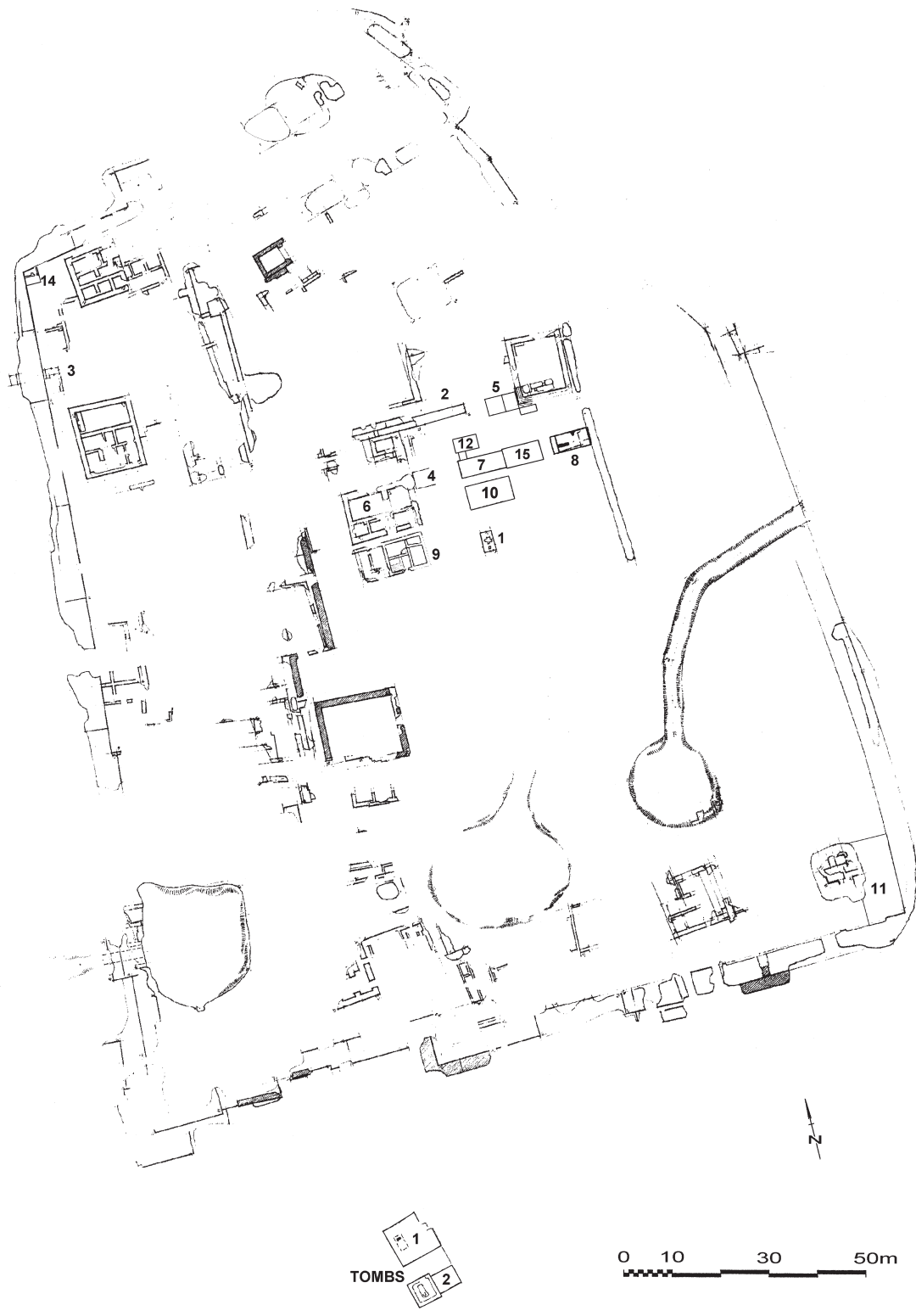


Figure 3 Plan of Mut el-Kharab showing the location of the excavated trenches.

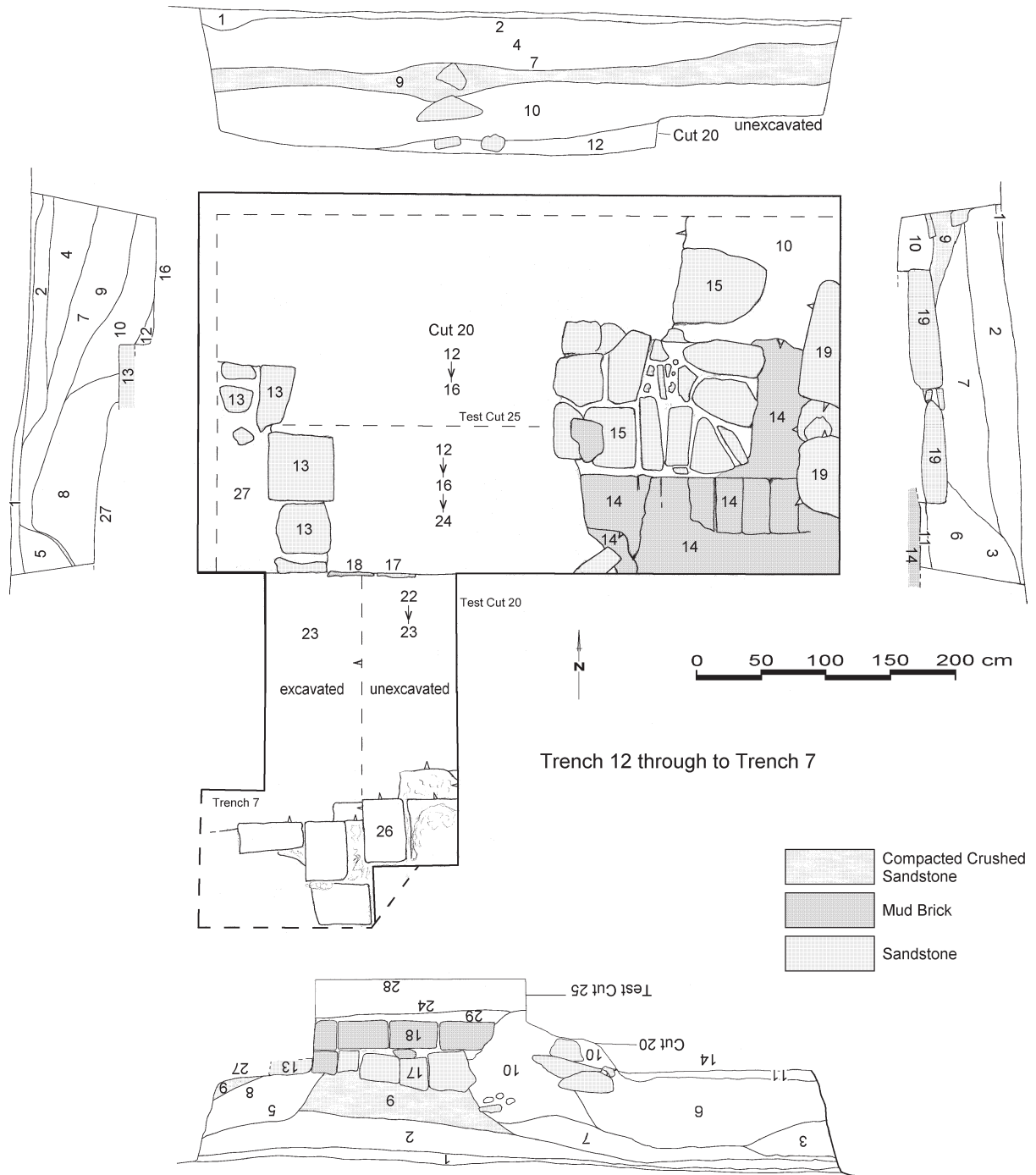


Figure 4 Plan and sections of Trench 12, Mut el-Kharab.

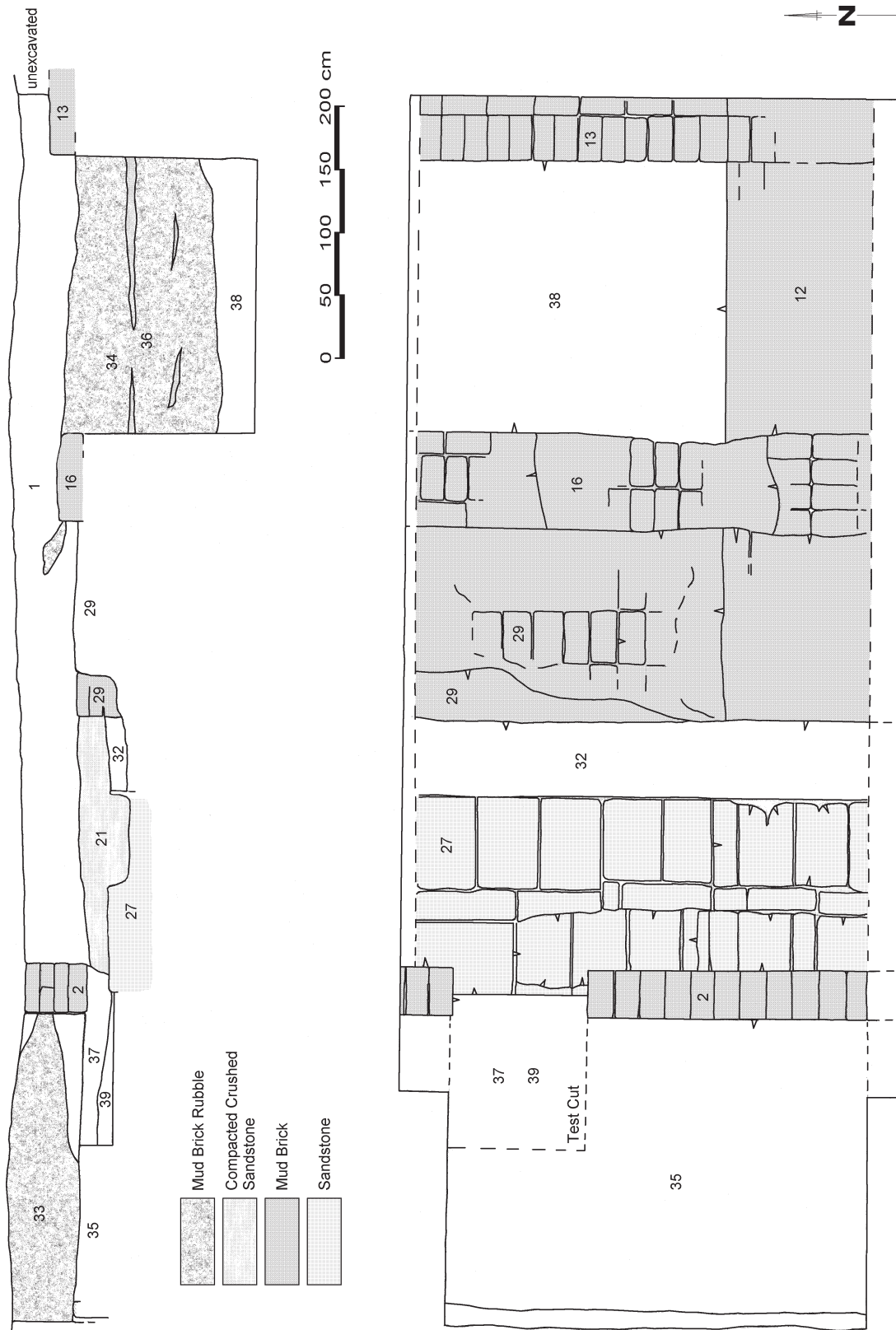


Figure 5 Mut el-Kharab, Trench 15: north section and plan upon completion of excavation.

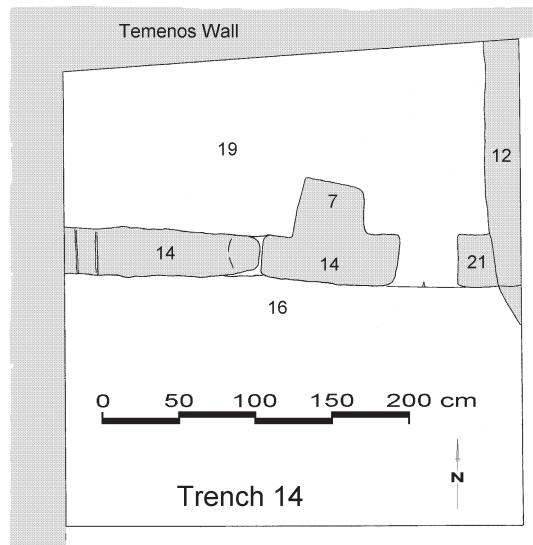


Figure 6 Mut el-Kharab, Plan of Trench 14.

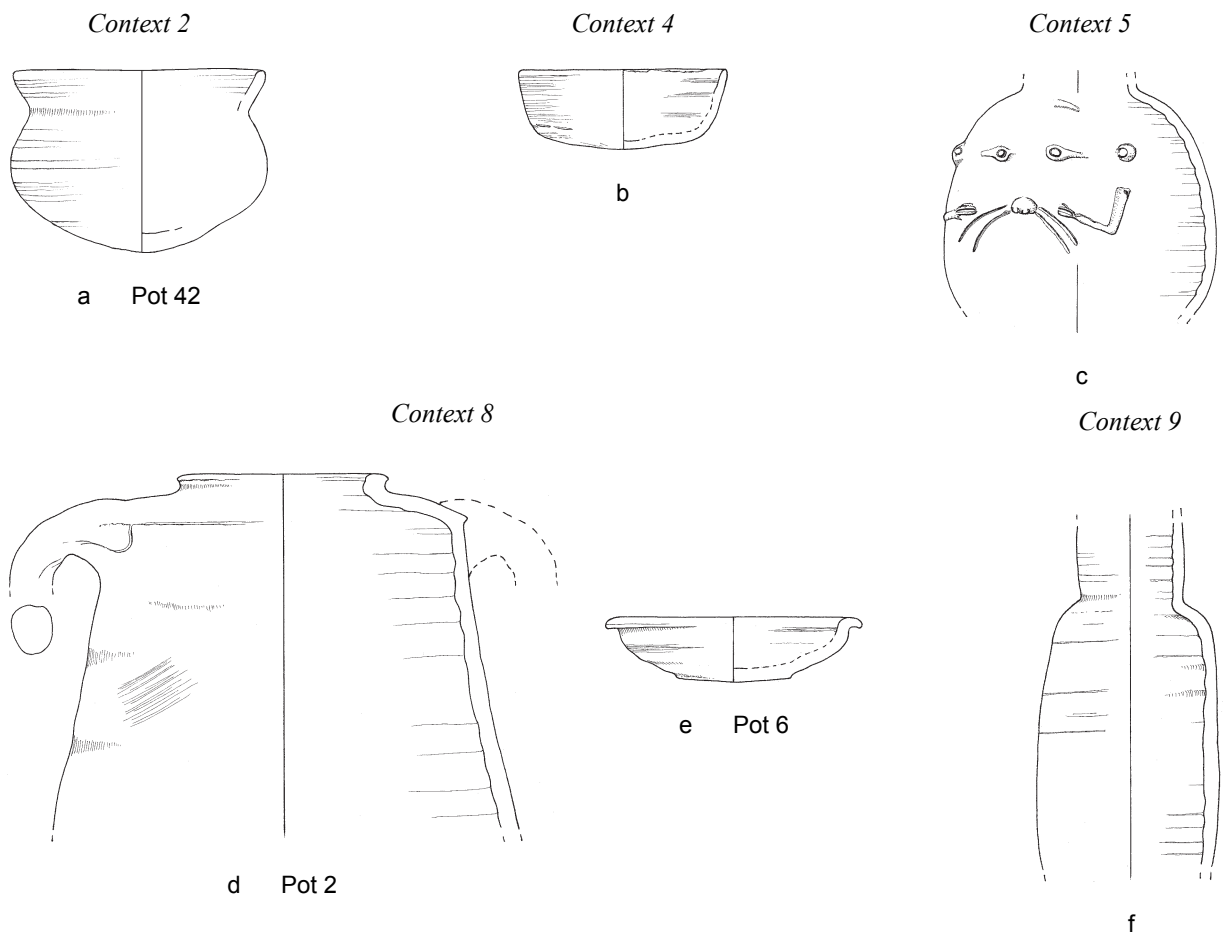


Figure 7 Mut el-Kharab, Trench 14: pottery from Contexts 2, 4, 5, 8 and 9. Scale 1:4.

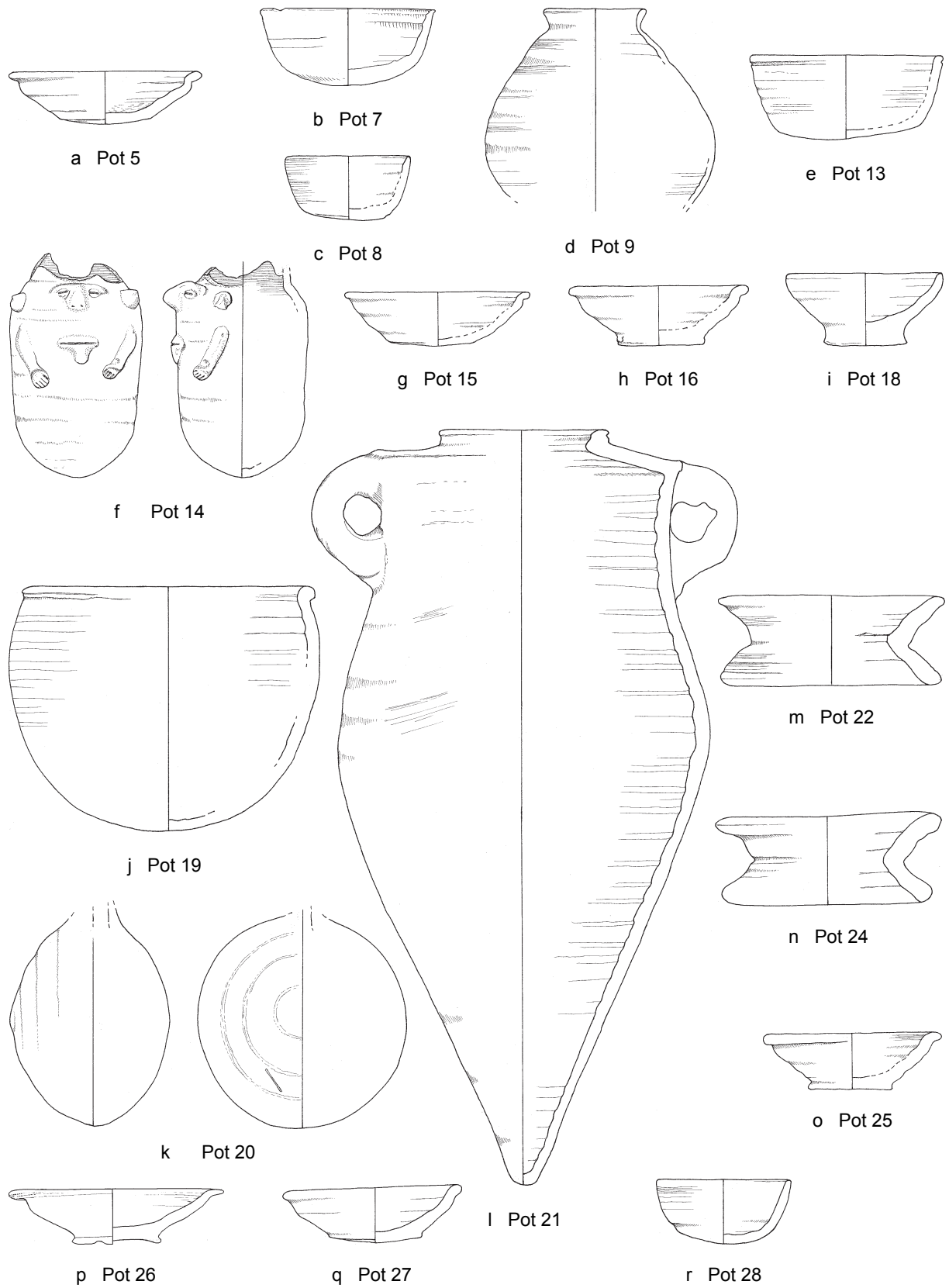
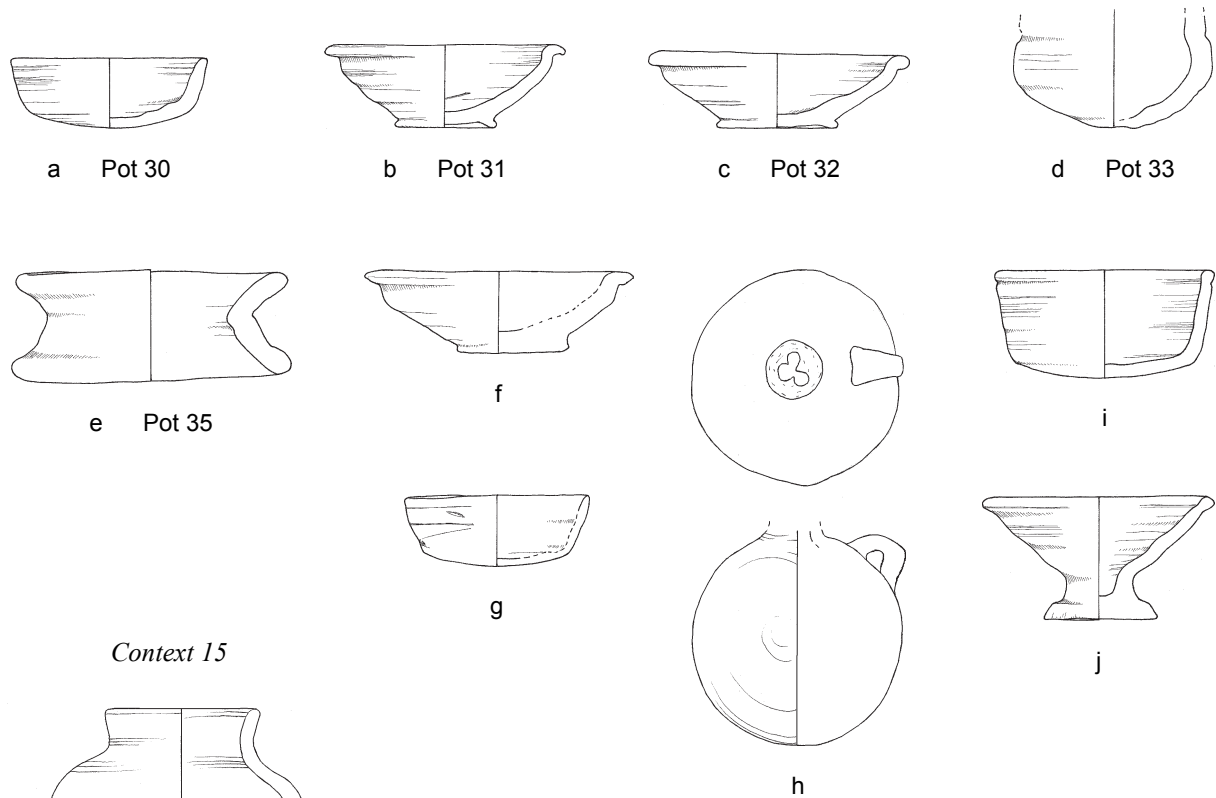
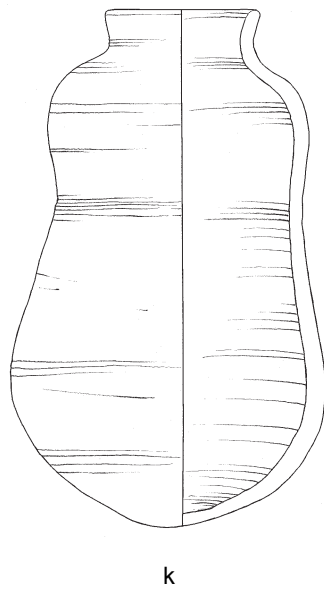


Figure 8 Mut el-Kharab, Trench 14: pottery from Context 11 in 8. Scale 1:4.

Context 11 in 8 (continued)



Context 15



Context 15 on 16

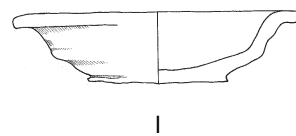


Figure 9 Mut el-Kharab, Trench 14: pottery from Contexts 11 in 8 (continued), 15 and 15 on 16. Scale 1:4.

EXCAVATIONS AT AMHEIDA, 2004¹⁰

Roger S. Bagnall

The site of Amheida (Dakhleh Oasis Project site no. 33/390-L9-1) lies a few kilometres south of the renowned Islamic mud-brick village of Qasr, in the north-west part of the Dakhleh Oasis. Amheida was the most important town of north-west Dakhleh in antiquity. Once the excavations by the Dakhleh Oasis Project and Monash University at Ismant el-Kharab, directed by Colin Hope, proved through abundant papyrological discoveries that Ismant el-Kharab was the ancient village of Kellis, it was quickly realized that the ancient city of Trimithis, known from a few documentary sources, must have been located at Amheida, the only remaining site of sufficient significance. The Kellis papyri also showed that Trimithis had become a city by the fourth century. In 368/9, as we know from a Leipzig papyrus, Trimithis (with its district) was responsible for a tax liability about three-quarters that of Mothis or Hibis and was treated on the same level as these cities.

The DOP took a preliminary look at Amheida already in 1979, clearing the upper part of two walls of a single room of a house and finding paintings with Greek mythological figures. These were given a popular description by A. J. Mills in the Royal Ontario Museum's membership magazine *Rotunda* and a much more detailed publication by Lisa Montagno Leahy in the *Journal of the Society for the Study of Egyptian Antiquities* (Toronto). They were reburied at the time, however. Also investigated in those early days of the DOP were several pottery kilns in a workshop area along a major east-west street in the northern part of the site. These kilns formed important sources for knowledge of the pottery industry in the oasis in the Roman period.

Columbia University, as part of the DOP, conducted preliminary survey work at Amheida in 2001 and 2002. (Reports on this work can be found at http://www.learn.columbia.edu/amheida/html/2002_field_reports/field_reports_2002.html). This year excavations were begun with a small team, which will be expanded in 2005. Amheida is a large site, and it is generally in an excellent state of preservation. The one significant threat to the integrity of the site is groundwater and rising damp from the expansion of nearby agriculture. In some places standing walls rise above the surface to a height in excess of 3 metres and a depth of deposit around the buried remains of the latest period exceeding 2½ metres. The cover of broken pottery throughout the site is unusually dense. This pottery comes not only from sherds used in mud bricks and as wedges between

¹⁰ The staff consisted of Roger Bagnall, director; Olaf Kaper, associate director; Eugene Ball, field director; Mirjam Bruineberg, archaeologist; A. J. D. Isendoorn, ceramicist; Johannes Walter, archaeobotanist; Constance Silver, conservator; Giovanni Ruffini, papyrologist; Delphine Renaut, art historian; and Abeer Helmi, conservator.

mud bricks in vaults and from pottery kept on the roofs of houses, but also from jars embedded whole in walls, sometimes upside down. These have no doubt broken as walls have been eroded, producing large sherds. Beneath all this pottery is often a fairly barren layer of wind-blown sand.

For the first season of excavation, work concentrated on the house of which the painted room was a part. We also carried out some clearance of surface debris from two areas where we plan to work next year. These activities are described in more detail below.

Methodology

Because the extent of the deposit at Amheida remains to be established, an excavation method was chosen with which it would be possible to excavate both a stratified site with tell deposits and a site with visible structures covered in windblown sand. The time depth, as represented by the testing of the site in former campaigns and by surface finds, showed that we might well, at least in some parts, be dealing with a stratified site, with occupation from the Old Kingdom up to the Late Roman Period.

A site with thick deposits can be excavated in squares with sections in between. On the other hand, the most recent occupation levels at Amheida, consisting of Late Roman standing mud-brick buildings filled with windblown sands and with deposits of windblown sands in between the buildings, are much more difficult to excavate in squares, as sections do not remain standing.

The excavation method used in the 2004 campaign was based on the system as used in several research projects in the Near East and has been modified to fit local conditions. The basis is the locus-lot system, which makes a stratigraphical reconstruction possible. Excavating in pre-numbered squares and pre-defined areas/sub-areas together with the locus-lot method makes it possible to tie finds and features to exact locations on the site, both horizontally and vertically.

It is here that we would like to thank Prof. Dr. P. Akkermans and M. Bruning from the Dutch National Museum of Antiquities and Dr. M. Verhoeven from the University museum of the University of Tokyo for their help in selecting the excavation method.

The Grid

On arrival at the site a new grid system, utilizing a chessboard pattern, was partly laid out. This was done with a Leica Total Station, using existing points with 3D-coordinates which had been defined during previous survey campaigns. The new grid is orientated exactly North-South–East-West with numbers increasing towards the South, and letters mounting towards the West. The point of departure for the largely fictitious grid is situated just to the North-East of the boundary of the site. The whole site is thus incorporated in the grid and can be meticulously mapped further in campaigns to come.

Only on those parts where work was actually going to be conducted in 2004 was the grid physically placed. This was done by hammering in wooden stakes set out every ten meters, creating 10 x 10 metre squares over the areas to be excavated or cleared. In areas 1,

2 and 4 small grids, varying from 70 x 60 m to 60 x 50 m, were laid out. The squares in it not only serve as excavation units; their corner points are also used as measuring points for drawing and documenting architecture, finds and samples.

In area 1, surface clearing work was conducted in squares K34-L34, K35 to M35, K36 to M36, K37 to M37. In area 2, an excavation was carried out in the squares AC56–AC57. The surface was also cleared in AP49 and AR51 in area 4.

Figure 1 shows the general layout of the site.

The Excavation

During the 2004 campaign archaeological fieldwork was conducted in three areas, in the squares mentioned above. In areas 1 and 4, several centimetres of the wind-blown surface sand were cleared off to reveal the structures underneath. In area 2, part of a large building, part of which had been studied previously by the DOP, was excavated. The results of the work in the three areas are presented briefly in the following pages.

Area 1

This area, located in the northern part of the site, has been defined in previous campaigns. From 2000 onwards surface clearing has been conducted here. The area holds a major street with a series of domestic and industrial installations. Most prominent in the area is a series of Late Roman pottery kilns already examined by Hope in 1980.

The 2004 clearing focused on what appeared to be a large room or a courtyard and also a part of the adjoining street on the east side of area 1. This part was chosen for its potential for study of the stratigraphy of this part of the site in the future. The large room and the fairly wide street were thought to be good locations to dig trenches into possible pre-Late Roman habitation layers (Figure 2).

The architecture within the boundaries of the examined squares was found to be more complex than formerly mapped, as several more mud-brick walls were discovered. The room or courtyard originally thought to be approx. 17.5 x 14.75 m is now shown to be divided by badly decayed walls running NNW–SSE.

Excavations in this area will commence only in future seasons, but so far, the clearing of the area has yielded a large amount of pottery and a small amount of other objects, amongst which are two ostraca and part of a hollow terracotta figurine of a saddled donkey or horse.

Area 2

In area 2, sub area 2.1 part of a mud-brick Late Roman urban villa was excavated (Figures 3, 4). In the 2004 season five rooms were excavated, together called sub-area 2.1. These chambers were all excavated to floor level and testing was done beneath several of the floors. Rooms 1, 2, 4 and 5 certainly belonged to the same building. For Room 3 this has not yet been proven. The rooms will be discussed separately here:

Room 1

Room 1 of the house in area 2 is of roughly rectangular size, c. 4.7 m EW x 5.3 NS. It is entered from the north, through an axial doorway measuring 1.3 m in width. (Figure 5, view from Room 1 to north). Two small rooms open off this room through its western wall. The maximum preserved height of the walls is 2.95 m in the southern wall; the minimal preserved height of the walls is 90 cm in the southern wall.

The room originally had a domed roof, supported in the corners by four pendentives, the triangular segments that formed the transition between the circular plan of the dome and the rectangular plan of its supporting walls. The pendentives were set into the corners of the room at a height of c.1.50 m. The dome was constructed of mud bricks of both regular and special size. The special bricks were double the size of the regular bricks (31 x 26 x 7 cm). The curvature of the dome had been achieved by the insertion of chinking sherds between the bricks in the exterior surface. The dome had collapsed into the room and had mostly separated into individual bricks. A few larger sections of the dome survived intact: F4 24 x 36 cm in the NW corner; F11 1.30 x .30m in SW corner. F36 is 3.20 x .30 m in SE corner. The NE corner had already been removed during the testing of the site by the DOP in 1981.

There were several cupboards (niches) inserted into the walls of this room: in the eastern half of the north wall, at 1.17 above the floor, measuring c. 42 x 42 cm; in the southern wall, at 1.30 m above the floor, measuring c. 48 cm in width and at least 60 cm in height; in the northern half of the eastern wall, at 1.20 above floor level, measuring 40 cm wide and nearly 60 cm in height. The entire south eastern corner of the room has collapsed, so that the former presence of niches cannot be ascertained. However, there is reason to believe that the collapse of this section of the room was in part caused by the presence of a larger niche in the eastern half of the southern wall.

The excavations commenced in the north-eastern corner of the room, where testing in 1981 had exposed a part of the painted plaster decoration. The remainder of the room consisted of a layer of sand on top of disarticulated mud-brick collapse. Painted plaster was found attached to individual mud bricks and as detached fragments. All fragments of painted plaster were kept together with a record of their find spot. In future it is hoped that parts of the lost decoration of the room may be reconstructed with the help of these fragments.

The entire interior surface of the walls, the pendentives and the dome had been covered with a whitewash, which had largely been painted. A preliminary description of the subject matter of the paintings still extant on the walls is given below.

The fragments collected during the excavations revealed that the dome had received only a partial decoration. The pendentives had been painted with figures of nude winged female figures with outstretched arms. These figures resemble the supports of heaven depicted in the neighbouring tomb of Petosiris at el-Muzawwaqa (Dakhleh). In this case, however, the figures were depicted holding a floral wreath in their hands, which stretched from one figure to the next. The lower part of the dome, above the floral wreath, was left unpainted. The central part of the dome survives only in small fragments, which appear to show a geometric design with many small segments in a large number of different colours.

In the collapse of the room, several objects were found. A total of eight Greek ostraca, one coin, an unbaked clay figurine and a bronze ring were all contained in the collapse. The ceramic finds included mostly sherds used in chinking, but also two small intact bowls. The excavations did not penetrate into the floor itself; only the rubble collapse was cleared in this season. From the top layer of the earthen floor, samples were taken for botanical analysis.

Room 2

This room, situated in square AC56, is more or less rectangular and measures approx. 5 m EW and 3.7 m NS. This room has no roof, nor does it show any evidence that a roof was ever present. Room 2 is therefore interpreted as an open courtyard. This courtyard can be entered from all directions through a total of six doors. Two doors on the north side provide entrance to Rooms 4 and 5; two doors in the west lead to two so-far unexcavated rooms; a door in the south provides entrance to Room 1; and a door on the east side enters into another until now unexcavated room. (Figure 6, view from Room 4 to Room 2.)

The maximum preserved height of the walls is 2.6 m above the last floor level on the east side of the room. The walls are well preserved. Only those on the northern side are damaged at the top, owing to the removal of the wooden lintels from above the doors leading into Rooms 4 and 5. This has caused the upper part of the walls to collapse, resulting in a fan of debris on the floor. This removal of the lintels is certain to have taken place in antiquity. Although several other lintels in the room have also been taken out, this has not resulted in severe damage.

Both on the west side and on the south side of the room niches are present. The one in the west wall, set 80 cm above floor level, is approx. 120 cm high, 80 cm wide and 45 cm deep. It shows traces of lintels and two shelves.

The niche in the south wall, on the west side of the door to Room 1, is set 110 cm above floor level and measures approx. 70 x 70 cm x 50 cm. This one also shows traces of lintels and of a shelf. A small pot is mortared into the western corner of this niche. The sandy contents of the vessel were sampled for botanical analysis.

The walls in room 2 had been dressed with mud plaster at least twice. The first layer shows traces of red pigment. This suggests that the walls were once, at least partly, painted. The second coating is a coarser, organically tempered mud plaster.

In the south-western corner of the room a small trench measuring 1.8 x 1.8 m was dug into the floor to examine if different floor levels were present and if other, older habitation levels were present at this location. The trench shows a sequence of floor levels belonging to the same building, but no earlier structures. The top level, as well as several of the earlier levels, is made of compacted loamy material. Directly beneath it are the remains of a broken and ill-preserved 0.5 to 1 cm thick gypsum floor.

Notable is a large, probably round pit, dug apparently just off the centre of the courtyard. It cuts through several levels of the compacted loamy material interpreted as floor levels belonging to Room 2 and the underlying undisturbed sands, and it is also covered by several floors, amongst others the gypsum one. The pit has only been partly excavated. It reduces somewhat towards the top in width and it is 1.65 m deep in the excavated part. The

pit was filled with pottery fragments, some with traces of red and yellow pigments once stored in the vessels, some painted plaster fragments, pieces of mud brick and a small amount of bone. The pit fill consists of refuse material, and its original function is not yet clear.

Above and in the floor levels of Room 2 several objects were found. Ten ostraca were more or less clustered in the south western corner of the courtyard and 3 were found in front of the entrance to room 1. These 13 ostraca were all situated on top of the latest floor level. The somewhat older floor levels excavated in the 1.8 x 1.8 m trench in the south-west corner of the room yielded several more. One ostrakon was situated in the sandy fill of the small pot set in the niche in the southern wall mentioned above, another in the sand which filled the room.

The deposits in the courtyard, Room 2, consist virtually only of windblown sands. There is a lack of refuse material on the floor, only consisting of mud-brick debris from the collapse caused by the removal of the lintels, as well as some mud bricks from the top of the walls and some mud-plaster fragments, which seems to indicate that the sand accumulation took place rather soon after the abandonment of the building.

Room 3

Room 3 is situated in square AC 57. This originally vaulted room is roughly rectangular and measures approximately 3.4 m EW x 3 m NS. These measurements have not been taken at ground level, as only part of the room has been fully excavated. The maximum preserved height of the wall is 3.2 m above floor level on the east side. The north wall, which is also the south wall of Room 1, is very poorly preserved. The walls show multiple coats of mud plaster. Several parts of the wall show traces of whitewash.

Parts of the vaulted roof are still in place. Most of this vault and the materials on it have collapsed and were found embedded in windblown sand. The mud bricks used in the vault measure approx. 33 x 20 x 7 cm, and show a distinctive pattern of two concentric impressed open circles. This pattern was made to increase the strength of the connection between the bricks. The insertion of chinking sherds further strengthened the vault.

The room shows traces of three doors, two of which, one in the eastern and one in the southern wall, have been filled in with mud bricks, the bottom of the latter also with baked bricks. One door in the southern wall is still open, with its lintel still in place, albeit badly decayed. There is no evidence of a door leading through the north wall into Room 1, and it is, therefore, uncertain if room 3 belongs to the same building.

A small niche with a rounded top is set in the western wall, which has not been fully excavated. Only the eastern half of the room has been excavated to floor level. Part of this floor has been examined to reveal undisturbed sands underneath. It is clear that there is a sequence of temporary floor levels here, most of them made up of compacted loamy materials. This sequence is set on top of a layer of rubble, within which large fragments of painted thick lime plaster have been found. The floor levels have been extensively sampled for botanical analysis.

On top of, and in the excavated half of the floor in this room, objects of various kinds were found. Apart from eleven small coins, there were five ostraca and a series of items of jewellery. A large copper alloy ornament in the shape of a leaf is the most notable of these. It measures 8.6 cm across and may have served as a clasp of some sort (Figure 7). Other items include a bronze pin, some beads, a bit of gold wire and a ring made of bone. In the layers of debris from the collapsed vault of the room, there are again more items within the same category. Here, another five coins and four ostraca were found, and fragments of three different bracelets made of glass and bone (Figure 8). Two bronze rings (Figure 9) and one ring of bone were also in this collapse, as well as a bone eye pencil (Figure 10) and an iron knife. The large amount of jewellery found here combines with the contents of one of the ostraca to suggest a female presence in this part of the house.

Room 4

Room 4 is situated in square A56. This room, entered from the south through a door in the northern wall of the courtyard, measures approximately 3.4m EW x 3.1m NS. The room had a vaulted roof. The southern wall still has a section of the vault *in situ*; the remainder was found collapsed onto a layer of windblown sand and subsequently covered by such a deposit.

All the walls were plastered with mud and were partly whitewashed.

The western wall has two niches, the southern one approximately 1.3 m above the latest floor level, the northern one at 1.4 m. Both are small and probably secondary additions to the wall. They were probably used as lamp niches. The southern wall has a low but deep niche, with a rounded top, at 1.1 m above the last floor level. It is 40 cm wide, 15 cm and 40 cm deep. The southern wall also shows two holes, approx. 10 cm wide and set 30 cm apart, 50 cm above the last floor surface. The holes were deliberately made in antiquity and were obviously made for attaching something to the wall.

The east wall also shows traces of a small niche. The wall is, however, badly preserved. During the clearance of the outer face of the east wall of Room 4 an intact pot was found inserted into the wall as building material.

A small hearth was found, made of four large mud bricks set upon the last floor level and abutting the west wall of Room 4. The inside is sooted, and much ash was found around it. The wall behind the feature also shows a strong soot accumulation fanning outwards towards the top. Both the hearth and its surroundings have been sampled for botanical analysis.

Another remarkable feature is an east-west oriented low mud-brick wall (F37) running parallel to the north wall of Room 4 at a distance of 40 cm. This feature, which is only two mud bricks high, creates a storage space and subdivides the room in two. The low wall is set at a lower level under the latest floor surface, and it therefore belongs to an earlier phase of use of the room than the hearth just mentioned (Figure 11).

Room 4 has been excavated to the latest floor surface in the entire room, and in the western half also the deeper levels were examined. The room shows a sequence of often broken floor or surface levels consisting of layers of compacted loamy sand and large amounts of ashes. Mixed in with this are numerous fragments of ceramics and also some

pebbles and cobbles. The quality of the floors in this quarter is seemingly poor. Underneath the floor levels there is a thick deposit of clean sand, which measures at least several meters in thickness.

The number of objects collected from Room 4 is impressive. The material directly associated with the collapsed vault, including building materials and debris from the roof, contained 17 jar stoppers made of plaster. The floor levels in this room contained another 14 of the same. This stands in stark contrast to the other rooms, where no jar stoppers were discovered. The room also produced a significant amount of coins. Fifty-seven coins were found in and directly on top of the floor layers and another nine were found among the roof debris, and one inside the northern niche in the west wall. Sixty-four ostraca were found in the room, most of them (48) from the floor levels, and a smaller amount (11) from within the roof debris and associated material.

The room also yielded three complete vessels. One was built into the eastern wall, mentioned above, and two others were found in the long narrow space between the north wall of the room and the low wall running parallel to it. A pottery oil lamp was also found inside this storage space.

Room 5

Room 5 is a chamber with staircase connecting Room 2, the courtyard, with the roof or possibly another storey. The steps of the staircase are partly made of baked brick. The room has not been fully excavated yet.

As has several times been indicated, we do not yet know how large this house was. Its walls are all visible above the surface, and these have been mapped two years ago already. But their excellent state of preservation is in this respect a disadvantage, because they stand to a level above the doorways, the openings of which are mostly not visible at ground level. Only the vaults and domes are gone, and even parts of those are preserved, although often in precarious condition. The result is that we cannot tell without excavation where the doorways were located and thus how the large urban blocks that we find were subdivided into houses. The five rooms partly or wholly cleared so far may have been no more than third of the total area of the house, and it will take us at least one season and perhaps more before a complete picture of the house emerges.

Coins

As has been noted above, Room 4 yielded numerous coins, all of bronze, with many fewer occurring in other rooms. The total of coins from the season is more than 90. Almost all had suffered badly from corrosion, some to the point of exploding the coins in the middle. Of those coins from the floor of this room that have been able to be cleaned sufficiently to be identified, all seem to belong to a relatively narrow window from 337 to 355, or the reign of Constantius II. As nothing in the handwriting of the ostraca or the character of the pottery found suggests a date any later than this, we may tentatively suggest that the house went out of use around the middle or end of the 350s. Trimithis was still an active centre of a

prosperous region in the late 360s, as the evidence cited earlier indicates, and the end-date of its occupation is not yet known. Some of the pottery found on the surface of the site appears to be later than the mid-fourth century. This house may therefore not be entirely characteristic of the site as a whole.

The Paintings

The undoubted centre of attention in this house so far is the painted room (Room 1), with some scenes still in place on the wall, others preserved in fragments of collapsed wall from the upper registers. These are still in the course of being reassembled, like a giant jigsaw puzzle, by O. Kaper. An entire room is filled with trays containing fragments of plaster and their mud-brick backing. Among the scenes present on these walls, now or originally, are Ares and Aphrodite taken in adultery, with a whole squadron of gods and a figure representing City, Greek Polis, looking on (Figure 12); the washing of the feet of Odysseus by Eurykleia when she recognizes him upon his return to Ithaca; Perseus and Andromeda; Orpheus charming the animals; and a satyr pursuing a not-too-reluctant maenad. There are several scenes not identified with Greek inscriptions (as Ares, Aphrodite, and their audience are) and not yet recognized by their iconography.

Below the figural scenes run non-figural designs, originally intended to suggest stonework. The original standard of artistic quality in the painting was high. The same cannot be said of the technical quality of the plastering and paints, which used thin layers of wash and soon began to deteriorate. As a result, there were at least two phases of touching up or repainting, in which the room was ‘restored’ to a more pristine condition. This work has affected different areas to different degrees, with the lower and most easily touched areas the most completely redone. In some places there are three layers. Fortunately, the losses to the figural scenes, which are at face level or higher, were less than to the faux-marbre decor of the lower panels. Still, the cumulative effect of the low quality of work has left us with serious conservation challenges.

Written Documents

Reference was made above to one of the ostraca found in Room 3. Caution is in order until the higher deposits have been fully studied and the rest of the floor level is reached – not to mention exploration of the levels below the top floor – but the impression already referred to, that the room was used by the woman or women of the house, is given some confirmation by the ostrakon mentioned, which was apparently a kind of greeting card or tag sent with an object. At the top it reads *to himation*, “the dress,” and after a blank the writer has added the stereotyped greeting found at the end of letters, “I pray for your health, my lady”. The rest of the handful of ostraca from this room are not so domestic. They are business-related; one of them is a short account, and another a small chit, concerned with wells, *hydreumata*, particularly with what appear to be rents from users of the wells and expenses incurred in maintaining them. Chits of this sort are found in every room of the house excavated so far, most of them from Room 4, the kitchen. It seems likely that these

chits formed part of the short-term record-keeping, coming in to the house from all of its properties and no doubt being converted into entries on wooden tablets and eventually onto papyrus. The tiny ostraca used to transmit the data about the transactions (often only 2 or 3 centimetres on a side) contained just enough information for the record-keeper to know the essentials that had to be noted in the master record. The full understanding of this unique body of material is going to require considerable study. There is one order for delivery sent by a woman named Demetria, and it is possible that this was the lady of the house at some point in its history and that she took an active role in the estate management.

Obviously the house was a substantial one, and the impression of a portfolio of wells suggests considerable wealth, as they were the key to prosperity in the oasis in any period. One ostrakon from the debris below a niche in the courtyard (Room 2) gives us a deeper insight. It is a letter from Serenos to Philippos, whom he addresses as “brother” – meaning “colleague,” probably, as it usually does in administrative and business correspondence. Serenos says, “Send me the decree which I wrote concerning the liturgy” (Figure 13). The word which I render with “decree,” *psephisma*, is the normal technical term for a civic decree in a Greek city, and in a fourth-century Egyptian city it can only refer to an action of the city council. It follows that Serenos and Philippos must have been *bouleutai*, members of that city council. There is another ostrakon containing another letter from Serenos to Philippos (on a much less important matter), but there are also other letters from Serenos on ostraca addressed to other people, suggesting that the letters might have come back to the sender with the object sought, and that Serenos was thus the householder. But the name is of little importance compared to the social standing. This is, as far as we know, the first house actually identified as that of a city councillor of Roman Egypt. There is another curious piece of evidence that points in the same direction, a little memorandum in which a name is given with the title *têrêtês xenôn*, “warden of foreigners” – foreigners meaning people whose registered residence was somewhere other than the district of which Trimithis was the capital. It is hard to imagine anyone but a councillor being concerned with such a superintendency, an office nowhere else attested. It would presumably have been the city council that appointed this official, the very existence of whom may suggest an active government.

Despite the lack of papyrus documents from the rooms excavated this year, then, the 105 ostraca provide a considerable amount of information to help with the interpretation of the house and its other finds, as well as to contribute to larger questions concerning the status of the Dakhleh Oasis in the fourth century.

Area 4

Area 4 is the highest point of the site, which lies geographically also at its centre. Since the surface here was covered with a remarkably dense scatter of stone fragments, it was chosen for a more detailed examination. During the 2004 season, the site grid was extended to this point and two squares of 10 x 10 m were selected for a controlled surface clearing. The

upper layer of surface material was removed and sieved, in order to gain a first impression of the nature of its original occupation (Figure 14).

The large amounts of stone fragments on the surface of the squares consisted of both sandstone and limestone, in a division of 3:1. Beside these, many lumps of gypsum cement were found, probably originating from the core of some original stone walls. Only a few intact stone blocks were found within the squares, and almost nothing remains in situ at surface level. In the south-western square the remains of a mud-brick wall were found, measuring between 60 and 90 cm in width and c. 3 m in length, but no conclusions can be drawn from these at present. The finds also consisted of flint tools, possibly of Old Kingdom date, which may have been reused in later mud bricks on the site.

The most notable find consisted of a series of bronze statuettes found during the surface clearance of the south-western square (AR51). Nine bronze statuettes of the god Osiris were found here (Figure 15). Five of these were of identical size (3.8 cm high) and there are fragments of two slightly larger figures of the god, of an estimated 4.8 cm, as well as a triple figure of Osiris of 5.7 cm in height. Of the largest figure, only the head of Osiris survives, which measures 6 cm in height. The smaller figures each show a suspension loop in the neck of the god, which would allow them to be used as amulets. The crown of the god is often surmounted by a large solar disk, and also in other respects the iconography of the god conforms to the standard with sceptres held in both hands and a long pleated beard. This collection of bronzes points unmistakably to the presence of a pharaonic temple at this location, as they are comparable to the hundreds of votive bronzes found, e.g., in the Late Period temple of 'Ain el-Manawir in the Kharga Oasis.

The presence of temple remains is also indicated by a few fragments of stones that bear relief decoration. One stone fragment has the remains of a hieroglyphic inscription from the Graeco-Roman period, which certainly originates from a temple wall.

These preliminary conclusions will be tested during the coming seasons when area 4 will be further explored in excavations.

Stratigraphy

In Rooms 2, 3 and 5 of area 2 (sub area 2.1) small trenches were dug through the levels belonging to the building, into deeper levels. The main goal was to observe if there were older occupation layers present under the Late Roman building. In all rooms clean compacted / concreted loamy sands were discovered underneath. The small trench in room 4 was excavated to approximately 3 m beneath the top floor level. Under the floors there is a seemingly natural deposit of approximately 0.5 m of reddish brown–brown loamy sand/loam and a thick layer beneath that of finely laminated, strongly concreted loamy sand. This yellowish brown-yellow sand is most probably an eolean deposit. No signs of habitation or use in the form of archaeological indicators were found in it. Therefore, we conclude that there are no occupation layers pre-dating the Late Roman period at this part of the site. In areas 1 and 4 no excavation was yet undertaken, and no conclusions can be drawn about the stratigraphy in these areas.

Conservation

Because the paintings in Room 1 of the house were already known to exist, provision was made for a plaster and paintings conservator to be present from the beginning of the excavation. Problems of conservation with these paintings in large part result from the component materials and technique of execution. The nature of the architectural support and the ambient conditions of the architectural space further impact the condition of murals.

At Amheida, available materials were used. The reception hall was constructed from mud brick. The shrine that was found during excavation is made from stucco. The murals are executed from a mud plaster and whitewash ground upon which the murals were executed in a tempera paint. These are all Neolithic techniques of construction and wall decoration, but used for a man of substance of the late Roman world.

These materials of construction and mural painting have impacted the condition and prospects for conservation. The mud-brick wall is extremely hard. On average, the mud plaster is only about 0.5 cm thick, very soft and not well adhered to the wall. The white ground is more like a whitewash than a true preparatory layer. The paint is a very thin tempera. All of these components of the mural are soft, friable, and easily degraded by impact and abrasion and are highly sensitive to water. As will be discussed further, the very hard consistency of the mud brick and the very soft and friable nature of the murals complicate the prospects for conservation treatment.

One of the most difficult problems in fine arts conservation is the treatment of matte paints, such as those found in the reception hall. Briefly summarized, matte paint is a difficult problem because it inevitably becomes weak and friable as it ages, but generally responds poorly to all categories of consolidants. Aqueous consolidants can damage the materials, cause staining, and leave tide marks. Resinous consolidants almost always change the refractive index of the murals, causing them to appear dark. Thus, the first task of the 2004 conservation treatments was to test possible consolidants.

Not surprisingly, all water-based materials provoked the above-described negative side effects and could not be used. On the other hand, acrylic resin consolidants proved to be very effective and did not cause any of the negative side effects that are usually encountered, such as darkening. At present, it is not clear why the murals of the reception hall proved so resistant to changes in optical qualities following consolidation.

During the excavation of the reception hall, three major problems of conservation were encountered:

1. Conservation of Murals in situ. This aspect of the conservation treatment was supervised by Constance Silver. As the sand was removed from the room, the murals were revealed on the wall. However, the condition of the murals was so poor that in many areas only the pressure of the sand fill in the room against the walls kept the murals from flaking off. In these areas, the sand was removed inch by inch, in coordination with the consolidation of the murals, using a 10 percent solution of Acryloid B72, which was applied by brush, drop by drop from an eye dropper, and by spraying. In some areas, sections of the mural were so weak that they had to be hinged in place with facings composed of crepe line (silk) or wet-strength tissue, using a 20 percent solution of Acryloid B67 as the adhesive.

The rationale is that Acryloid B67 can be dissolved in weak solvents, so the removal of the facings should not affect the consolidated plaster because Acryloid B72 requires stronger solvents to be dissolved.

2. Collection of Fragments. Because the domed ceiling of the reception hall and sections of the walls had collapsed following abandonment in antiquity, there were extensive fragments of murals in the sandy fill. Wood trays were made so the fragments could be laid directly on a flat surface as found. At each section of the room, and at each level, an individual tray was used for the collection of fragments. At the conclusion of the excavation, more than 50 trays of fragments had been collected. This aspect of the work was supervised by Olaf Kaper.

3. Collection of Masonry Blocks with Attached Murals. Blocks of masonry of various sizes, to which sections of mural paintings were attached, were collected by their location in the room. A very important panel was found, showing Orpheus playing for the animals. This aspect of the work was supervised by Olaf Kaper.

4. Analysis of Ambient Conditions. Analysis of ambient conditions entailed recording the water content of the murals as they were exposed during excavation using a Protometer, and removal of samples of the murals and salts for laboratory analysis. Signs of water and salt damage were observed on the lower registers of the murals. It is indeed interesting to note that quite high water readings were recorded, and salts clearly are evident. At present, the source of the moisture content and salts are not clear. This aspect of the work is supervised by Constance Silver. The samples have been sent to Prof. Richard Wolbers, University of Delaware and the Winterthur Museum, for analysis.

Following excavation, the murals exist in three states. Most of the murals have been stabilized in place on the standing walls of the excavated room, which was “backfilled” with a double course of mud bricks and sand infill between the bricks and the murals. However, highly important fragments are preserved on blocks of masonry that were retrieved during the excavation. Additionally, there are over 50 trays of fragments. Some of the fragments are significant images, but most appear to be from the painted *trompe l’oeil*. It is unlikely that the fragments can be reconstituted, with the exception of those that have clear figurative and formal compositions. The fragments are extremely thin and fragile, often retaining only a thin stratum of the mud plaster. In some instances, the mud plaster has been lost. Continuing conservation research will be carried out by Constance Silver and Prof. Wolbers. It will address several issues:

1. The Final Disposition of the Murals. This is the most important issue that must be addressed: are the murals to remain on site or be detached and exhibited in a museum? Many determining factors will be brought to bear on this defining question: conservation ethics; the realities of securing and presenting the site the reception hall at the site; the technical challenges of detachment; the exigencies of museum display in the Dakhleh Oasis; and the financial ramifications of both system of conservation.

2. Methods of Detachment and Museum Installation. Detachment presents extreme challenges. The detachment of murals generally is effected by cutting between the wall surface and the plaster. Normally, plaster is composed in two sections, a ‘brown coat’ and a finish coat to create a thickness of at least 1 inch. However, in the case of the reception

room, the ‘mud plaster’ is generally very fragile. Thus, the common detachment method will not be applicable.

Consequently, other systems of detachment will be explored and tested. Regardless of the final disposition of the murals, substantial detachment will be required in any case because the fragments of murals will have to be removed from the blocks.

3. Methods of Remounting Fragments. Research will be undertaken to develop techniques to secure and remount important fragments of murals and reintegrate them onto the mural paintings.

4. Investigation into the Ambient Conditions of the Reception Hall. Various samples will be analyzed at the Winterthur Museum. The objective is to explain the water and salt-induced damage that is evident on the mural paintings. These data may help to determine whether the murals can be left in situ or should be detached in order to separate them potentially destructive ambient conditions.

Archaeobotanical Remains

In this season’s work 88 soil samples have been collected and studied from area 2.1 (squares AC45–AC57; one additional sample containing hardened soil was taken from an unbroken jar found on the surface eastwards of area 2.1). This sum includes 10 “hand picked” samples with solitarily collected seeds, 3 samples of contents of soil in pots, and furthermore 4 mud bricks were flotated (water flotation) which all come from wall collapse in Room 1.

The soil samples were taken mainly from floor levels, only a few from sandfill above floor level. Fifty-one soil samples contain mostly sand and red clay coming from floor, without ashy concentrations, and 20 samples were taken from ash layers.

The soil samples include an average volume of 4.97 litres with a maximum of 10.2 and a minimum of 0.1 litres (the exceptions were the contents of jars).

The soil samples were sieved with a set of sieves, 4 mm, 2 mm, 1 mm, and 0.5 mm mesh. In ashy samples another method was applied, namely the electrostatic extraction.

Results:

The few sandfill samples do not contain plant macro remains at all. But also those from the floor level show usually only a (very) low amount of organic remains. In 18 samples no plant remains at all (excluding recent botanical and non botanical remains) could be detected. The samples taken from ash rich layers contain more plant remains but present mostly only as charcoal.

The general situation, beside the extensive absence of organic material, is characterized by exclusively charred material. However, only a few plant species are apparent, comprising frequently uncharred seeds and fruits (always in bad condition: grapes, olive). Furthermore, in a few samples only small and very badly preserved fragments of date pits were detected, and as a result of long term effects of humidity existing in these soils (see below) those rare uncharred fragments had already disappeared or they often disintegrate when touched.

The most frequent plant macro remains are pits of olive and seeds of date, of wine grape, and cereals. The two first species occur in nearly all samples containing any other plant remains. But in most of the samples only scattered seeds and fragments of them have been found, and there was never any concentration of cereals or other useful plants, except a low increase of date and/or olive pits. No increased amount of the generally rare weeds could be found, either.

To give a first summary, the cereals comprise grains of bread/hard (durum) wheat, possibly emmer, rachis fragments of bread wheat, hard wheat, and rarely also emmer. Beside wheats, barley is also represented frequently (grains and rachis fragments). So far, the grains of the cereals seems to be more common than the rachis fragments.

Pistachio (*Pistacia vera*) and safflower (*Carthamus tinctorius*), Egyptian plum (*Cordia myxa*), persea (*Mimusops schimperi*) have been detected rarely or in very few samples, whereas the small seeds of fig (*Ficus cf. carica*) are relatively common, found usually in the smallest 0.5 mm mesh.

The natural vegetation is represented by small twigs of tamarisks (*Tamarix* sp.) and mericarps of *Acacia nilotica* and fragments of seeds but also leaflets of *Acacia* sp. Rarely, scattered seeds of the succulent *Suaeda aegyptiaca* and/or *monoica* occur also in samples. All of them probably reflect the use of fuel.

All of the latter species, except *Acacia* sp. but together with an additional species (*Sarcocornia* sp.), which so far has not been recorded for the Roman site Kellis, indicate a salt-rich vegetation. Whereas *Tamarix* sp. show a very wide ecological range, *Suaeda* sp. and especially *Sarcocornia* sp. need brackish water.

Seeds of weeds are not frequent. Most of them belong to *Fabaceae* including once fruits of medick (*Medicago* sp.) and also seeds of this genus, as well as seeds of *Brassicaceae* and asfodill (*Asphodelus tenuifolia*).

The amount of macro remains in the mud bricks is relatively low but richer than those in many soil samples and even of some ashy soil samples. However, the highest frequency of plant remains occurs in some ashy samples. Despite the very fine structure of the relatively poor organic material (straw) in the mud bricks the variation of species is surprisingly high. Compared with the mud bricks of the Roman settlement at Kellis, their organic, dominantly straw texture is coarser and richer and even contains big diaspores such as date and olive pits, along with big rachis fragments.

No activities by termites have been noticed in the analyzed mud bricks and hardly any plant impressions of organic textures could be found, either, even though termite activities can be found very frequently at this site.

In the soil samples salt concentrations frequently exist, dominated by gypsum-rich tiny globules. The lack of nearly any organic and uncharred material at this site is eye-catching (cf. above on conservation), at least compared to the enormously organic-rich site of Kellis. In spite of the lack of wells or swamps and irrigation close to the site, there must have been at least a relatively low humidity but for a long time and high enough to decay gradually organic material. No uncharred wood or bark is preserved except some very small pieces; these are also very soft.

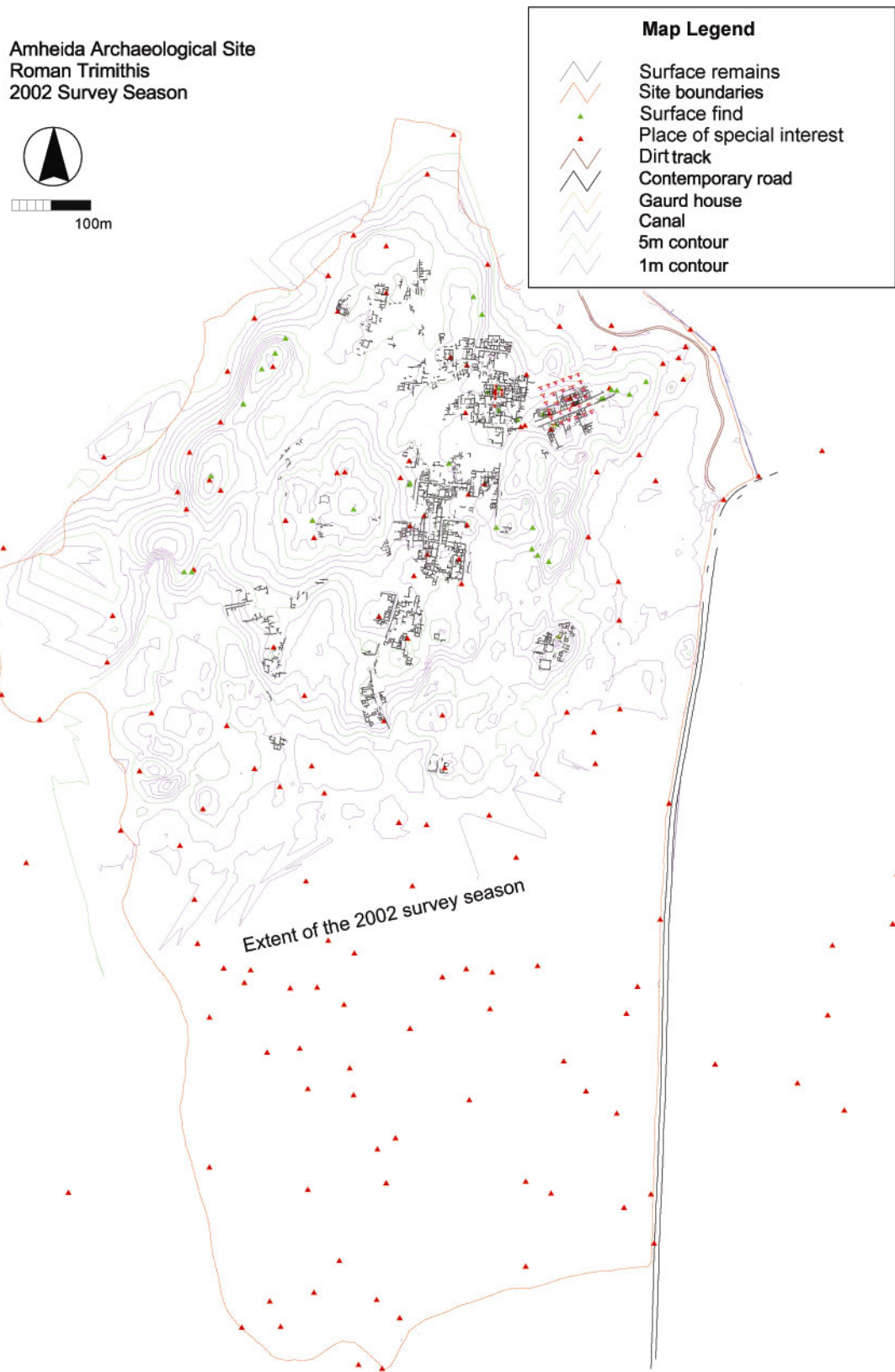




Figure 2 Amheida.



Figure 3 Amheida.



Figure 4 Amheida 2004.



Figure 5 Amheida 2004.



Figure 6 Amheida 2004.



Figure 7 Amheida 2004.



Figure 8 Amheida 2004.



Figure 9 Amheida 2004.

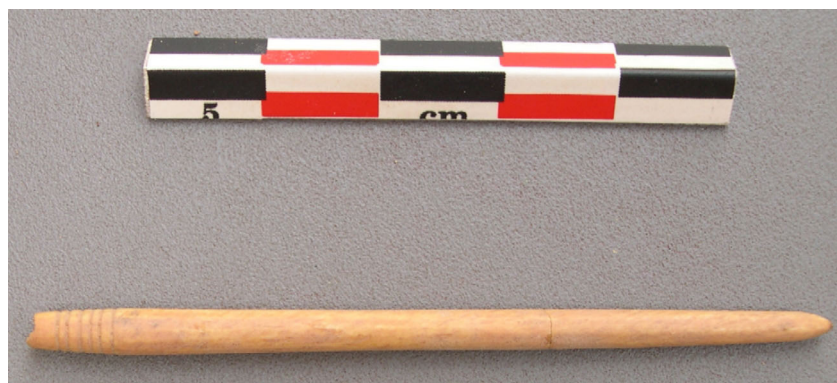


Figure 10 Amheida 2004.



Figure 11 Amheida 2004.



Figure 12 Amheida 2004.

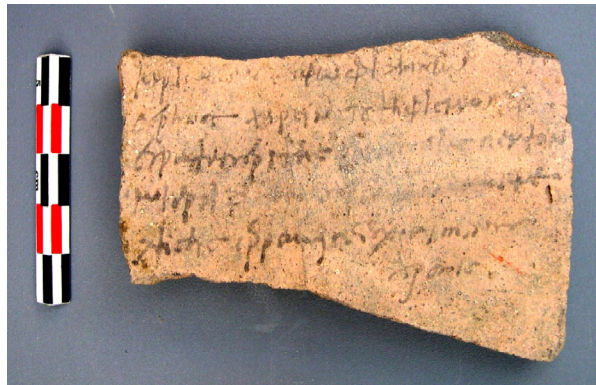


Figure 13 Amheida 2004.



Figure 14 Amheida 2004.



Figure 15 Amheida 2004.

THE TEMPLE OF AMUN-NAKHT AT ‘AIN BIRBIYEH

A. J. Mills and A. Zielinski

The excavation and conservation project at the Roman period sandstone temple began in 1983 with an assessment by Adam Zielinski of the structure's condition (Zielinski, 1989). Samples of the matrix and the monument's fabric were examined and assessed. The site itself was also carefully examined and a structural analysis resulted. It was decided to excavate in the Gateway as a test and this work began in 1986 and subsequently in more western areas of the monument. This work was interrupted in 1991 due to a lack of funding support and it has not been until this 2003–2004 season, when the Royal Netherlands Embassy in Cairo generously donated sufficient funds for us to proceed with the program on the site.

This season we began on 21 February 2004, and continued for five weeks. The object was to excavate down into the Sanctuary to reveal the uppermost register of carved decoration completely, approximately 2 metres of wall exposed.. This is down to the bottom of the door lintel of the doorway into the Pronaos. As the result of ground movements under the foundations, there are areas where crushing has occurred and the fabric is quite unstable. There are large voids, for example in the north-west corner. These have to be filled and consolidated before work can proceed lower down. At all times, the safety of the personnel and the integrity of the structure were of paramount importance. The work proceeded slowly because of the care necessary.

It was necessary to underpin the lintel and other stonework above that in the doorway between the Sanctuary and the Pronaos so that work at lower levels in the room could be undertaken. As many tons of sandstone were to be supported, special steel beams were ordered from Cairo. A delay in the delivery of this steelwork meant that work had to be discontinued at the level of the bottom of the lintel. The season was closed with the installation of a temporary roof of wooden beams, palm ribs and a coating of mud as a sealant. This will keep out wind, sand and people until next season when it will be easy to remove again.

The conservator, Adam Zielinski, has reported as follows:

1. Work at the site of the temple of Amun-nakht included conservation of the exposed parts of the structure and the gradual back-filling of parts already investigated.
2. The temple building suffers from serious structural problems that originate in the unstable foundations. In many locations the original stone fabric of the structure has been damaged by an excess of sub-surface moisture.

3. The objective of the present season were to continue work within the Sanctuary chamber area, and to begin the process of re-burying areas where investigation has been completed.

4. The Sanctuary chamber is located at the west end of the building. It is accessed from the Pronaos (antechamber) by a single door opening in its east wall. The chamber was equipped with two pairs of light openings, located on the north and south walls at ceiling level. The chamber was roofed with several stone slabs, each some 60 cm thick.

5. The damages observed include the loss of all the roof; distortions, dislocations and the partial loss of stone masonry in all the walls of the Sanctuary and structural damages to the massive lintel assembly above the door opening. Generally, serious structural distress to all masonry has resulted in secondary losses of the original wall finishes.

6. The work plan for the sanctuary area included removal of accumulated sand, recovery of fallen stone masonry and repairs to masonry. Temporary protective and safety measures were to include steel-wood support for the failed lintel assembly and lightweight roofing over the sanctuary.

7. The work completed, as of the end of March 2004, includes:

- The removal of sand deposits to the depth of around 150 cm below the original ceiling level
- The recovery of fallen stone masonry
- The cleaning and repair of masonry joints
- The installation of masonry supports in the walls
- The installation of parts of the lintel support
- The installation of a lightweight roofing over the Sanctuary area
- The consolidation of deteriorated stone material.

8. The materials used for masonry repairs include:

- Sandstone and lime mortar for masonry supports
- Lime mortar for repairs of masonry joints
- Local hardwood (boards and logs) for temporary lintel support
- Wooden beams, palm fronds and clay ballast for lightweight temporary roofing
- Silicate infusions for the consolidation of deteriorated stone

The back-filling continued in north and south side corridors, and parts of front porch. A number of decorated fragments were reburied. The site was closed on March 22, 2004.

REPORT ON RESTORATION AND RESEARCH ACTIVITIES OF THE QASR DAKHLEH PROJECT DURING THE 2004 SEASON

F. Leemhuis

The third season of the Qasr Dakhleh Project (QPD) was even more successful than the previous one. Administrative matters with the Supreme Council of Antiquities (SCA) were fast and efficiently finalised and work could already start on January 15th, more than two weeks earlier than last year.

This season the activities again consisted of two distinct, but not completely separate parts. The research activities, which included excavation, were mainly funded by the University of Groningen, and for the restoration and reconstruction activities an important contribution was received from the Netherlands Embassy in Cairo. Also from the contributions from Vodafone Egypt to the Dakhleh Oasis Project (DOP) part of the costs of the QDP were paid. All these contributions are very gratefully acknowledged. Report on restoration and research activities of the Qasr Dakhleh Project during the 2004 season

Research

The research consisted of two more or less complementary parts: the study of the history of the two houses chosen for restoration and reconstruction and the study of earlier habitation.

Further clearing of the Bayt al-Qurashi and connected finds

The research on the history of habitation was mainly concentrated on Bayt al-Qurashi, the collapsed building that had been built onto the southern wall of Bayt al-Qadi. The clearing of this house had already begun during last season and had to be continued in order to make its reconstruction possible. For the restoration of Bayt al-Qadi last year it had been necessary to clear the adjacent parts of Bayt al-Qurashi, because the unstable rubble was not secure enough as a base for the placing of scaffolding for the restoration of the southern wall. An important result of this clearing was that a great number of objects and documents were found in the rubble.

During the 2003 seasons the rooms BQur 1, BQur 2, BQur 3, BQur 4, BQad 7 and BQad 8 (Figure 1) were entirely or partially cleared. During this season, the clearing of Bayt al-Qurashi was almost completed (Figures 2–5). Only the rooms BQur 8b and BQur 10a and b are not yet completely cleared. The clearing took more time than had been planned. The rooms BQur 7, BQur 8 and BQur 9 had an original floor level that was about seventy centimetres lower than the other rooms. This produced nearly 70 m³ more rubble. During further clearing it also appeared that, otherwise than could be expected from the survey of last season, the rooms BQur 8a & b, BQur 9 and BQur 10 a & b were, at least at the time of

the collapse of the house, part of the whole complex of Bayt al-Qurashi. This will also be taken into account in the further reconstruction plans. However, it was especially the constant finding of many more objects, and notably many more documents than could be expected on the basis of last year's experience that slowed down the process of clearing out the rubble from Bayt al-Qurashi.

These finds are extremely important for the research, because of their great number and their variation and quality. Together with the finds of last season they provide more insight into the traditional manner of living in the pre-modern past of al-Qasr, i.e. during the time when there were no fast connections from and to the Dakhleh Oasis.

Before the collapse of Bayt al-Qurashi, a number of larger pieces, like furniture were apparently removed on time, but almost all the other objects have clearly been left behind in the collapsing house and thus ended up under the rubble. On the basis of the fact that dated fragments of documents are not younger than 1930, we presume that Bayt al-Qurashi has collapsed around that year. The more than five hundred objects are mostly household objects like clothing (Figure 6) and fragments of clothing, footwear (Figure 7), wooden utensils (Figure 8), basketry (Figure 9) porcelain and pottery (Figure 10). Interesting are the objects of foreign origin, like shards of a French porcelain plate (Figure 11) and a leather purse (Figure 12). A relatively large part of the finds originated from the room BQur 7. It is probable that one of the storeys of this room was used as a storage room. Notably in BQur 7 objects like earthenware bowls (Figure 13) were found which were clearly new when the house collapsed. A bundle of unfinished plaits and material for the making of basketry (Figure 14) has also been found. The further description and study of these objects as well as those found last season will take place in coming seasons.

An interesting find which was also found in room BQur 7 was a *khatim*, a signet (Figure 15) engraved with a woman's name: Halima 'Uthman. Doubt about the accuracy of the reading of this name, because of the fact that women were not supposed to have a *khatim*, was erased because shortly after the find of the *khatim* a pile of eight folded letters was found close by. Three of these letters are addressed to "our mother Halima 'Uthman" (Figure 16) and in four others she is named. The dates of these letters vary from 1304 AH/1887 AD till 1324 AH/1906 AD. Furthermore a tax assessment for Halima 'Uthman Mohammed Salih al-Qurashi from 1907 was found. One of the letters (reg. nr. D 04 157b) provides a nice proof for the fact that in the traditional dialect of al-Qasr already at the beginning of the twentieth century an /n/ was pronounced instead of the //, like at present. In it, the name of Halima is twice spelled as Hanima and the Islamic month of *Shawwal* has the spelling *Shawwan*.

Apart from these letters more letters and fragments of letters have been found, but letters form only a relatively small part of the total number of documents that in this season emerged from the rubble. In total 349 written or printed documents or fragments of documents have been registered. About one fifth consists of rather late fragments from newspapers, schoolbooks and industrial wrappings. These were registered and stored away without further conservation. The rest was rehydrated and put between glass plates by Vreni Obrecht. Thus conserved these documents are now accessible for further research. By far, most of the documents are handwritten. But even among the printed fragments of texts there

are remarkable specimens, like the title page from the Istanbul edition from 1287 AH/1870 AD of one of the latest works of the famous medieval Islamic theologian Al-Ghazali, *Ijām al-‘awamm ‘an ‘ilm al-kalam* (Figure 18), fragments of clearly early editions of other religious texts and of an early edition of the *Thousand and One Nights*, probably the Bulaq edition of 1863 or 1888. Among the manuscripts a few fragments were found of probably the same Coranic manuscript of which some fragments were found last season, but also a few fragments of other books, like the manual for the writing of *hijabs* “amulets”. But the majority of the documents are legal and magical texts as well as letters.

An extremely interesting group are the thirty-four folded documents that were found in room BQur 8b (Figure 19). These documents are all clearly written by experienced writers and have a high quality. They contain judgements of the *Shari‘a* court of al-Qasr and are mostly dated. Most of these documents are approximately 15 cm wide and 40 to 50 cm long and, except a few, written on one side only. A few are considerably bigger and the biggest piece of which the beginning is missing, measures 20 cm by 66 cm and contains more than a hundred lines of text. The oldest one of these dated legal texts (Figures 20 and 21) is from 1032 AH/1622 AD and the most recent are from the beginning of the 13th century AH/19th century AD. Apart from this group of judgements that were found together, also a number of similar legal texts or fragments thereof were found scattered through the house. The amount and the extensiveness of these texts make us presume, that in the coming years the study of them will bring a wealth of information about legal practice in al-Qasr during that period.

A group of magical texts has also been found, mainly *hijabs*, or protective amulets. Sometimes some of these protection texts have a length of more than a meter and a half. They are mostly rolled up in small leather cases and were worn on the body. Many of these amulets were found ready for use in room BQur 7 (Figures 22 and 23). Together with the other magical and religious texts and of course also the personal. The fact that these legal documents had been preserved for some centuries, most probably in a kind of an archive, and the presence of secular and spiritual books indicates a tradition of a certain erudition which would be compatible with the existence of a *madrasa*.

Building History

The preliminary result of the research of both houses is that both houses were fitted in between an existing row of houses. The date when this happened is clear from the dates on the lintels. Bayt al-Qadi was built in 1702 and although the lintel of Bayt al-Qurashi has now disappeared, there are photographs of it and the text is registered. Bayt al-Qurashi was built in 1773. In both the houses the second floor has been added at a later period. In the case of Bayt al-Qurashi this was coupled with clear changes on the first floor. An original door in the façade of Bayt al-Qurashi has been walled up at a later time. Probably this went together with changes in the layout of the house (Figure 24), but in any case, combined with the addition of the second floor and the changes on the first floor, the façade clearly acquired a more monumental character with an obvious focus on the eye-catching main entrance of Bayt al-Qurashi (Figure 25) which accesses the high and cool entrance hall (Figure 26).

These changes have most probably been made at the end of the eighteenth or the beginning of the nineteenth century. Possibly the enlargement of the house with the rooms BQur 8, 9 and 10, which originally didn't belong to it, took place at the same time. The reconstruction of this situation (Figure 27) is the aim of the restoration and reconstruction of Bayt al-Qurashi.

The research of the larger context of both houses in Harat al-Shihabiyya, the quarter (Figure 28) in which they stand, has been continued by Wolf Schijns with the careful mapping of the whole quarter. In so doing, the attention is turned on making an inventory of the present situation as well as the building history.

Excavation

The small-scale investigation into previous habitation levels that was begun last season was continued in this year with the excavation of a new trial trench in the street in front of both houses under the supervision of Jakob Obrecht. A north-south trench of 3.4 m long and 1.4 m wide was marked out directly against the façade walls from the door of Bayt al-Qadi to the door of Bayt al-Qurashi. The very hard layers made it necessary that nearly everything had to be hacked out with adzes. As soon as the hard and compact material was loosened up, however, it changed into dust. Thus it was decided to excavate in layers of about equal thickness. The trench was excavated in six layers of about 30 cm each, till a depth of about 1.9 m below street level. At least three, but probably four floor levels were found. The lowest level corresponds with the lowest level of the sounding of last season and may thus be designated as late-Fatimid (Figures 29–31). The pottery finds appear to confirm this. The importance of the trench consists in the fact that it provides a stratigraphy from late-Fatimid till the building of Bayt al-Qurashi in 1773. At least seventeen layers can be distinguished. The interpretation of these is not nearly finished (see the appendix for a provisional description and interpretation of the stratigraphy), but it is already clear that this stratigraphy will enable us to draw up a pottery sequence for al-Qasr in the period concerned. Therefore, the meticulous peeling off of the layers that now have been established will have a high priority in the next season. For safety's sake at the end of the excavation a temporary support wall of mud brick was built from the bottom of the trench to the street surface and the rest of the trench was backfilled with clean yellow sand.

More detailed conclusions with respect to the chronology of the pottery finds must wait till a pottery sequence for the Islamic period at al-Qasr can be established. A preliminary analysis of the pottery finds was executed by Anetta Piber-Lyzwa. It established that among the fragments of glazed tableware (bowl shapes) that were found the following types are represented: Fatimid Fustat Sgraffiato (FFS) (Figure 32), Mamluk sgraffiato (Figure 33), Mamluk Underglazed Slip Painted (Figure 34), Mamluk Blue, Black on White (BBW) (Figure 35) and monochrome pottery (Fatimid till late-Mamluk). Most of the glazed pottery is apparently imported from the Nile valley, but also local imitation from the Mamluk period occurs.

In contrast with the glazed pottery, plain pottery was mostly locally made from local materials. The finds include fragments (mostly body shards) of domestic, common wares as

for example: pots for carrying water or other liquids (*qulla*, *ballas*), jars and also cooking pots. Provisionally, the plain pottery may, on the basis of the archaeological evidence and based on parallels with glazed wares from different sites, be dated to the late Fatimid till the Mamluk period (from the end of the 11th through the 15th century).

In the following seasons the pottery will be studied in more detail, especially in connection with a layer-by-layer excavation of the now established strata.

Restoration and Reconstruction

Some weeks before the season proper began, production of mud bricks on a relatively large scale (Figure 36) was started in order to make the restoration and reconstruction proceed as smoothly and efficiently as possible. During the season itself the restoration of Bayt al-Qadi was for the most part completed and the reconstruction of Bayt al-Qurashi was begun, largely simultaneously with the further clearing out.

Bayt al-Qadi

The summer bedrooms on the third floor of Bayt al-Qadi were completed (Figure 37). Next, in the whole house doors were fitted in the doorways (Figure 38). There appeared to be no need yet to make new doors according to the traditional patterns, because a sufficient number of old doors in good condition could be bought up. Most of these are of acacia and come from demolished houses. Interestingly, most of these doors did fit, or nearly fit the existing doorways in Bayt al-Qadi, so that not much adaptation was necessary. Apparently, also in the past at least a degree of standardisation existed.

The re-plastering of the interior of Bayt al-Qadi presented some unforeseen problems. After intensive discussion it was decided that the very defective and loose layers of plaster here and there had to be removed. Especially because the up to more than five different layers made it impossible to even partially establish, let alone restore a possible original plastering. The idea was to have new plastering put in place according to the old traditional method. Traditionally this work is executed by women. However, we did not succeed in recruiting women to plaster the interior. We were assured that the women of al-Qasr did not do it (anymore?), but that the women of Balat (70 km east of al-Qasr) still did. For the time being, transport problems made us give up the idea to recruit women from Balat and some of the male workers were charged with it, because they said that they also did master the technique. However, they apparently did not. In the end, some other workmen were found who did master the technique of mud plastering (Figure 39). Thus, at least a beginning was made with the re-plastering. The large hall on the second floor was completed (Figure 40) together with another room and the stairwell on the same floor. During the next season the same crew will be able to complete the re-plastering of the interior of the whole house. The rooms BQd 7 and 8 shall have to be completed in connection with the completion of Bait al-Qurashi.

Bayt al-Qurashi

As mentioned above, the further clearing of Bayt al-Qurashi took more time than was planned. Nevertheless, in the parts adjacent to Bayt al-Qadi that had been cleared last year the reconstruction was started as soon as possible. Very soon two problems arose. First the façade, which is itself still standing and in good condition, had to be shored up because of the building activities (Figure 41). This was especially necessary because the remains of the old floor beams had to be hacked out before the new ones could be put in this façade wall on the first and second floor. The second problem was that many of the standing walls were after all so dilapidated that they had to be pulled down and rebuilt (Figures 42 and 43). In the course of this it was most fascinating to see that the former situation could be copied almost automatically, largely because of the more or less obvious proportions, which in the building of the walls are generated by the dimensions of the mud bricks. The new mud bricks which are used are not only recycled from the old mud, but, of course, are also produced with the same dimensions as in the eighteenth century. When finally the work could get on, a large part of the reconstruction of Bayt al-Qurashi could be finished.

During the reconstruction, constant consultations took place with the three master craftsmen. On their advice, in some circumstances the historical situation was not exactly reproduced. Particularly for the connection between Bayt al-Qurashi and Bayt al-Qadi a sunken connection was made on their advice, although originally this had clearly not been the case. Their reasoning was simply that it was safer and that it could be done relatively easily at that moment. Moreover, nobody would see it after completion.

On the ground floor of Bayt al-Qurashi the rooms BQur 1, BQur 2a, BQur 5, BQur 7 and the floors of the first floor were finished (Figures 44–46). The stairs to the first floor, including the wooden ventilation grids (Figure 47), were also finished to a large extent. The rooms BQur 2b and BQur 6 are almost finished, but the floors on the first floor are not yet ready, because they have to be done together with the floors of the floors next door. For the time being, the reconstruction of Bayt al-Qurashi was ended this season with the completion of the room BQur 1 on the first floor, including the floor of the second floor and the stairs to the second floor (Figures 48–50). Thus an important part of the house has been finished after all. The façade has been reconnected to the house by the connection walls and especially by the floor beams of the first and second floor to the house. The danger of collapse of this façade wall, which for seventy years had been largely freestanding, has gone. Therefore the shores could be removed at the end of the season.

It is to be expected that work can be resumed quickly next season. As appears from what is mentioned above about the further clearing and the construction history, the reconstruction plan will have to be adjusted according to the actual findings. In other words, the total volume of the future reconstructed Bayt al-Qurashi will be larger than had been thought previously. Nevertheless, the most important fundamental structural problems have been solved. The masters share this opinion.

In the 2004 season which lasted from 10 January till 22 March the QDP-team consisted of Annette Lyzwa-Piber MA (21 January – 15 March), Ir. Wolfgang Schijns (19 February – 5 March), J. Jakob Obrecht, dipl. Ing (5–18 February), Verena Leemhuis-Obrecht

(20 February – 16 March) and prof. dr. Frederik Leemhuis (10 January – 22 March). The activities of the QDP-team with respect to restoration, reconstruction and excavation were executed in close collaboration with a variable group of workmen from al-Qasr and surroundings. Most of those have worked with the project for the second or the third season and clearly have gained experience and skills that proved very useful. The restoration and reconstruction work was executed under supervision of and in cooperation with three master craftsmen Mr. Ahmad Salih Mohammed, Mr. Subhi ‘Abdallah Sanusi and Mr. ‘Abd-al-Ghaffar Mohammed who also worked with the project during last season. The experience and expertise of these three masters has proved to be invaluable. Their cooperation also ensures that their expertise now is passed on again. This is especially true for the complex matter of the construction of high-rise buildings with mud brick. This transfer of traditional expertise, which is an important part of the QDP, proceeds in a reasonably structured way, because the team of workmen with whom they cooperated was largely the same as last year. The very skilful and experienced Mr. Rizk Abdalhay Ahmad, chief restorer for Islamic Antiquities of the SCA in Dakhla again was charged with the day to day management and coordination of the restoration. The supervision on behalf of the SCA was entrusted to the supervising inspector Mr. Adli Abdallah Zawam. The support of Mr. Magdi Mohammed Abdallah, and Mr. Hamdi ‘Uthman must also be mentioned. The active interest and support of the chief inspector Islamic and Coptic Antiquities of the SCA in Dakhleh, Mr. Ahmad Salim is gratefully acknowledged.

With even greater satisfaction than last year we can look back on a very successful season in al-Qasr. We owe much gratitude to the various people mentioned in this report. Their dedication, especially that of the local workmen, has made also this phase of the restoration and reconstruction of mud-brick houses in al-Qasr, which must eventually lead to the reconstruction of this unique historical little town, a success.

Groningen, 22 June 2004
 Fred Leemhuis,
 Field Director QDP

Appendix

Al-Qasr excavations 2004

Provisional description and interpretation of stratigraphy

Sections AC, AA', BB' & CC' as drawn on Figure 51.

(1) Recent street surface (dust, dung, some palm leaves and straw etc.) in this place app. 25 cm already cleared away earlier. (2) Building trench for exterior wall. (3) of Bayt al-Qadi (street dust, straw, stones!). [finding uncertain] (M1) Foundations of Bayt al-Qadi (?). (4) Thick horizontally layered stratum, probably deposited over a longer period consisting of dust, straw, palm leaves, mud-brick remains. (5) Layer of hard mud (Building level of Bayt al-Qadi?) sticks tightly to 3. (6) Walking level? Few organic remains, contains ashes (light grey). (7) Like 4. (8) Well preserved log of palm wood with clear traces of axe

or adze at visible end. (9) Building rubble, broken mud bricks and fibres. (10) Rubble ? Large angular stone, dust, sand and many fibres. Conspicuous layer. Fibres at the at the lower end of the layer. Could have been deposited together with 9. (11) Hard-pressed, layered dust and sand, which covers wall *M4*. Wall (*M4*) Mud brick wall, partially hacked through during excavation of the trench. (11a) mud floor. (12) Hard pressed mud, possibly even hacked at mud-brick wall or mud-brick floor.

Wall (*M2*), foundation of Bayt al-Qurashi, mud-brick wall in the lower part directly laid in the foundation trench. Mud brick dimensions (app. 25 x 14 x 5) different from visible standing walls (20 x 10 x 6). *M2* appears to lie on *M1*, possibly, however, only working joint and not building joint. (*M3*) Dish-shaped bulge from *M2*. At least on the right hand side not directly joined with *M2*, where it is separated from *M2* by a app. 2–3 cm thick layer of dust and sand. Possibly remains of an older building phase! (13) Like 7. (14) Spar (palm) with clear traces of wear and tear, appears to have been used secondarily. (15) Mud-brick pieces, like (16), used for wedging *I4*. (*M5*) Cut stone-block of at least 110 x 25 x 15, extended on the left hand side with a flat stone of the same material (?). Most probably former threshold comparable to the one of Bayt al-Qadi. Lies on a foundation (17) of mud bricks.

(18) Recent street surface like *I*, probably formed after completion of the houses (contains only a little organic material). In this place app. 10 cm. already cleared away earlier. (19) Building trench Bayt al-Qurashi cuts through *21*, *22* and *23*. Contains building rubble, stones and mud-brick pieces. (20) ‘Culture layer’ Straw, palm leaves, sand, dust, ashes and many date pips. (21) Hard-pressed floor, probably mud floor. Is cut off to the left of *20*. *20* could have been cleared away superficially. (22) Like *10* and *18*, but with more straw or palm fibres, contains also many date pips (old street level?) like *4*. (23) Mud floor, contains much chaff and many date pips. At the downside remainders of ash layer. (24) Like *22*. (25) Rubble (?), Mud-brick pieces and more mud-brick pieces and straw than in *24* or *22*, some date pips. (26) Mud floor, on the right-hand side clearly a (cut) mud brick. Could, in the hatched area, even be the lowest course of a wall. (27) Fine, hard dust layer comparable to *21*, but with more ashes, because discoloured slightly greyish. (28) Building rubble, many mud-brick fragments, very many long palm fibres, palm nerves and straw. relatively loose material. (29) Fine material with relatively high proportion of vegetable fibres. Like *24*, but somewhat more brownish, contains in contrast to *24* hardly any ashes. (30) Building rubble, contains in *CC'* less fibres than in *BB'*. Has, however, below *I4*, *I5* and *I6* a high proportion of fibres. (31) Like *29*, but with significantly higher proportion of vegetable fibres. (*M6*) Cut off mud brick on the level of *M5* possibly remains of a wall in the extension of *M4?* + *M5* + *I7*. (32) Building rubble like *30* at the top or the downside of *31* with high proportion of ashes. (33) Thin mud floor (34) Fine, grey sand and dust like *22*. (35) Like *31*. (36) Mud floor. (37) Like *11*. (38) Mud floor, lies clearly lower than *11*.

Basic Remarks:

The colours of the individual layers have deliberately not been described in detail. They do not show much difference. Only discolouration by a higher proportion of ashes and/

or vegetable fibres result in different colours. Moreover, everything is covered by a grey haze of street or building dust. The use of a vacuum cleaner should be considered. Also, the present writer does not yet have sufficient experience in the description of such dry material.

It is very important to realize that the very hard and compact material of the layers as in a flash changes to dust when loosened up with an adze. This makes observation during excavation extremely problematic.

Jakob Obrecht

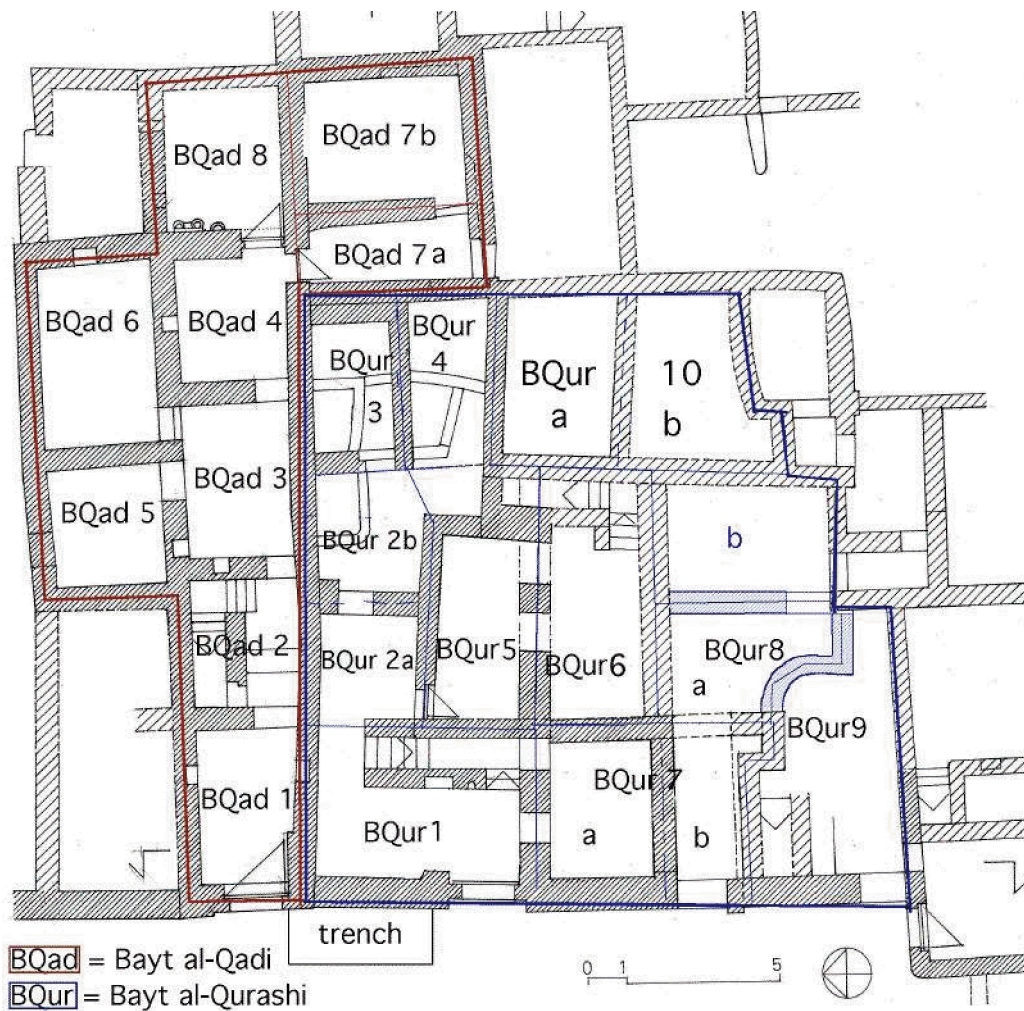


Figure 1 Plan and room numbering of the first floor of Bayt al-Qadi and Bayt al-Qurashi.



Figure 2 BQur 5 and 6 before clearance.



Figure 3 BQur 5 and 6 after clearance.



Figure 4 BQur 8 before clearance.



Figure 5 BQur 8 after clearance.



Figure 6 Woman's gallabiyya.



Figure 7 Shoe.



Figure 8 Spoon and comb.



Figure 9 Basket for victuals.



Figure 10 Cooking pot.



Figure 11 Sherds of a French porcelain plate.



Figure 12 Leather purse.



Figure 13 Earthenware bowl.



Figure 14 Plaits and material for the making of basketry.



Figure 15 Khatim of Halima 'Uthman and impress.

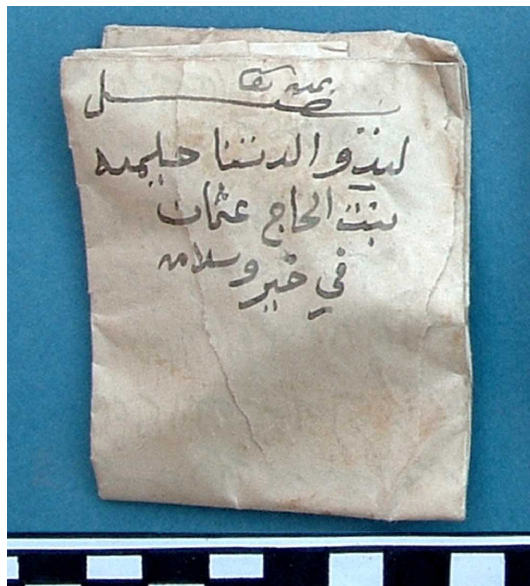


Figure 16 Letter to "our mother Halima bint al-hajj 'Uthman".

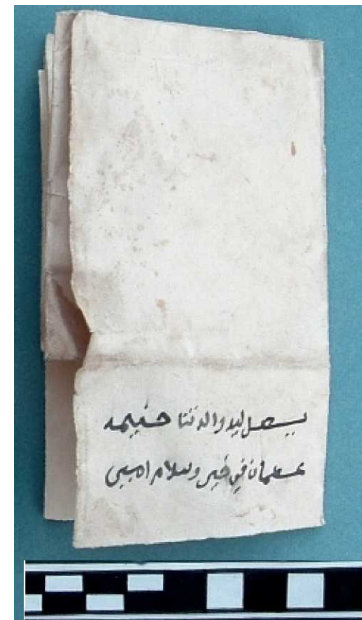


Figure 17 Letter to "our mother Hanima 'Uthman"

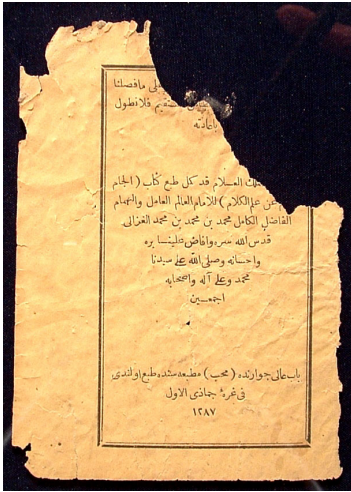


Figure 18 Title page of Al-Ghazali's, *Iljam al-'awamm 'an 'ilm al-kalam*, Istanbul 1287.

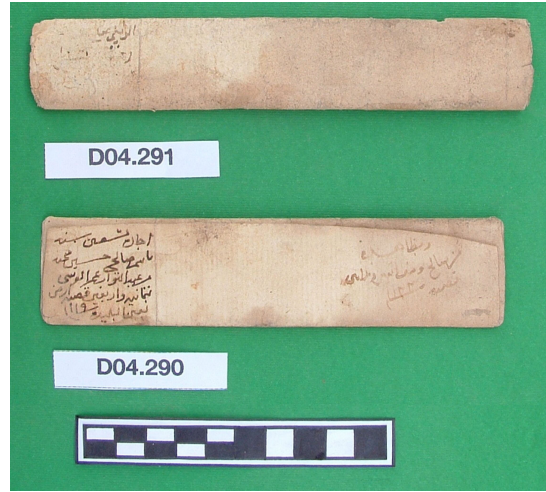


Figure 19 Folded judgements of the shari'a court of al-Qasr.

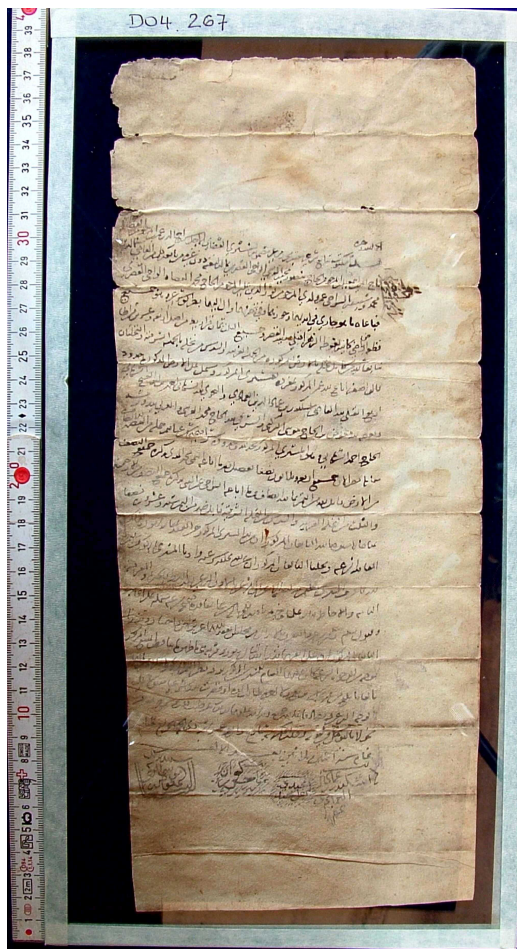


Figure 20 Judgement of the shari'a court of al-Qasr from 1032/1622.

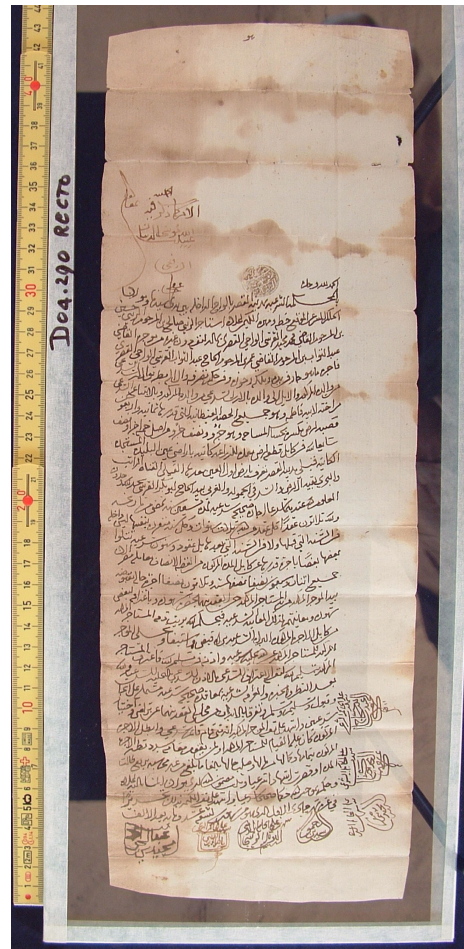


Figure 21 Judgement of the shari'a court of al-Qasr from 1112/1768.



Figure 22 Hijab cases.

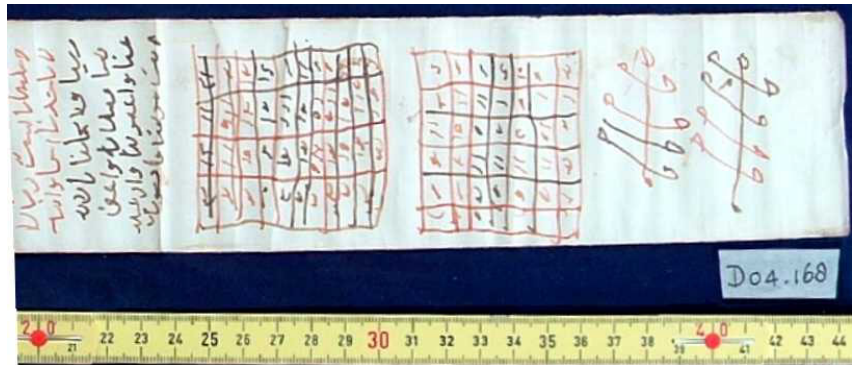
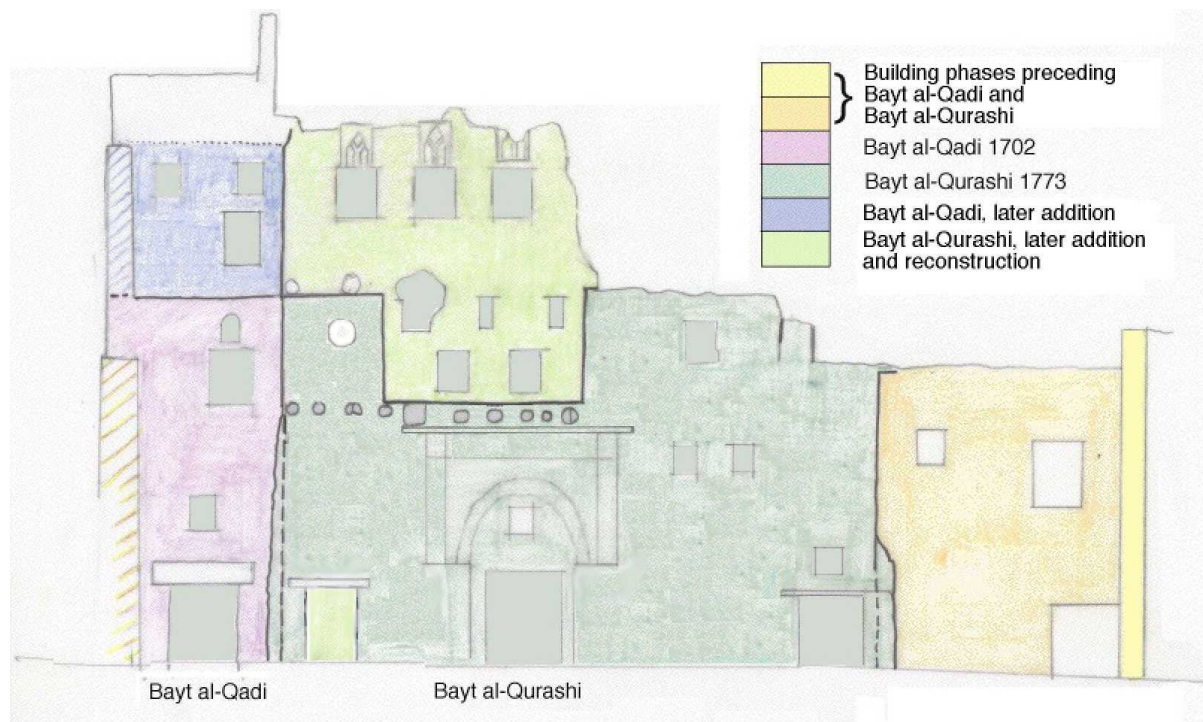


Figure 23 Part of a hijab text.



Drawing Jakob Obrecht, 2004
on the basis of survey and
drawing of Wolf Schijns, 2003

Figure 24 Building phases of Bayt al-Qadi and Bayt al-Qurashi.

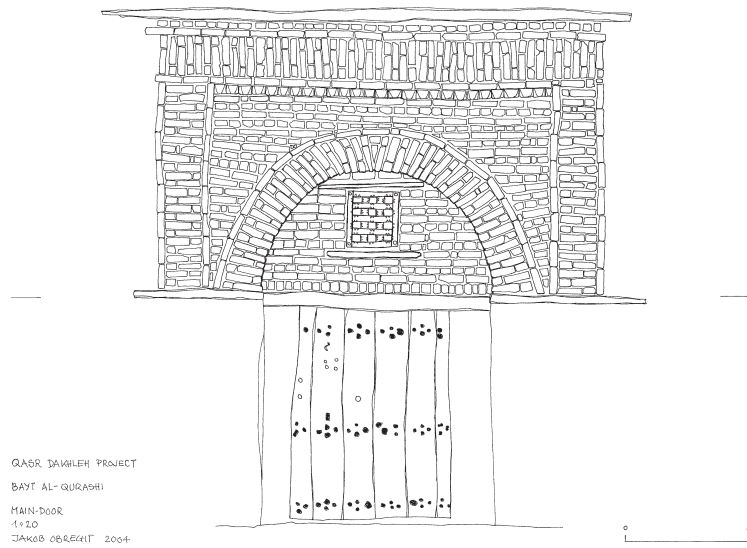


Figure 25 Drawing of the main entrance of Bayt al-Qurashi.

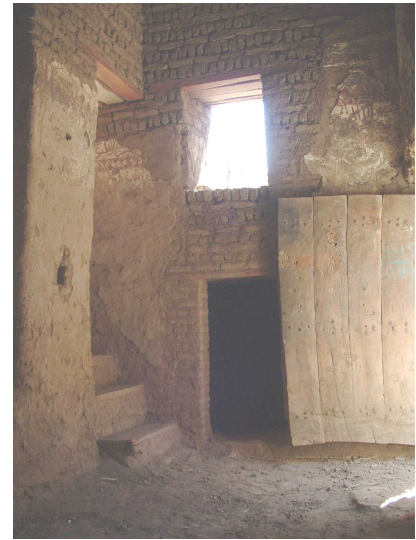


Figure 26 Entrance hall of Bayt al-Qurashi.

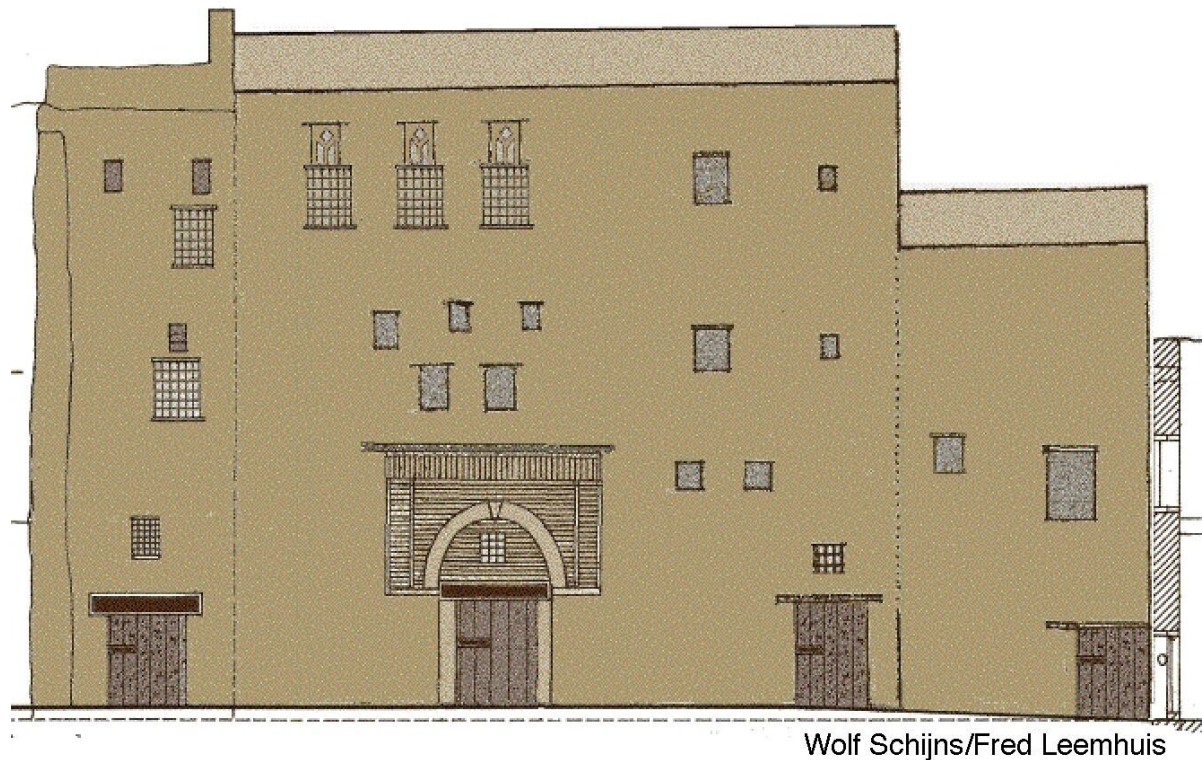


Figure 27 Reconstruction of the façades of Bayt al-Qadi and Bayt al-Qurashi.



Figure 28 Plan of the Harat al-Shihabiyya.



Figure 29 Stratigraphy on the southern side.



Figure 30 View of the trench in the street.



Figure 31 Stratigraphy on the northern side.



Figure 32 Fatimid sgraffiato (FFS).



Figure 33 Mamluk sgraffiato.



Figure 34 Mamluk underglazed slip painted.

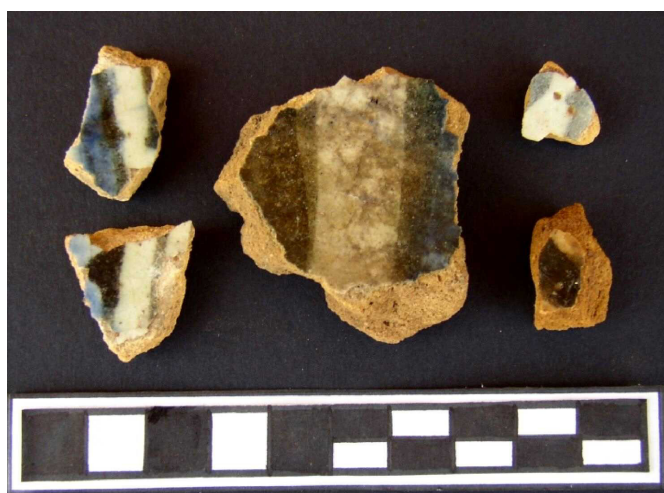


Figure 35 Mamluk blue, black on white (BBW).



Figure 36 Mud brick production.



Figure 37 Completion of the summer bedrooms of Bayt al-Qadi.

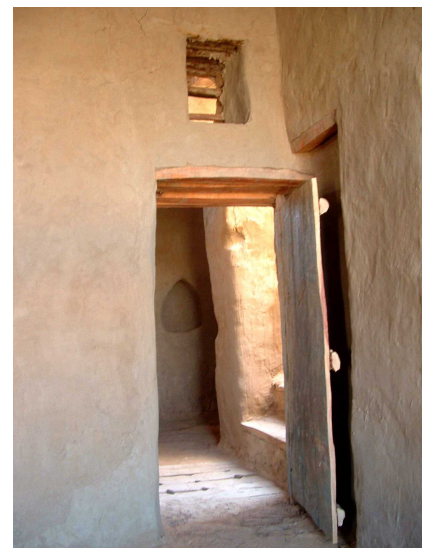


Figure 38 New door.

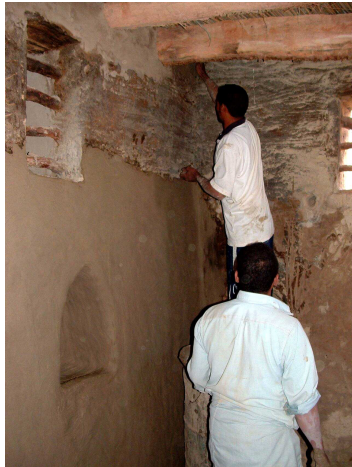


Figure 39 Plastering.



Figure 40 Newly plastered hall on the second floor of Bayt al-Qadi.



Figure 41 Shoring up of the façade of Bayt al-Qurashi.



Figure 42 Dilapidated wall between BQur 2 and 5.



Figure 43 Rebuilt wall between BQur 2 and 5.



Figure 44 Putting floor beams for the first floor of BQur 1.



Figure 45 Laying the palm nerves for the first floor of BQur 1.



Figure 46 Laying the mud layer for the first floor of BQur 5.



Figure 47 Construction of wooden ventilation grid on the first floor above the entrance to the stairs.



Figure 48 Reconstructing the walls on the first floor of BQur 1.



Figure 49 Putting floor beams for the second floor of BQur 1.



Figure 50 Putting on the top layer of the second floor of BQur 1.

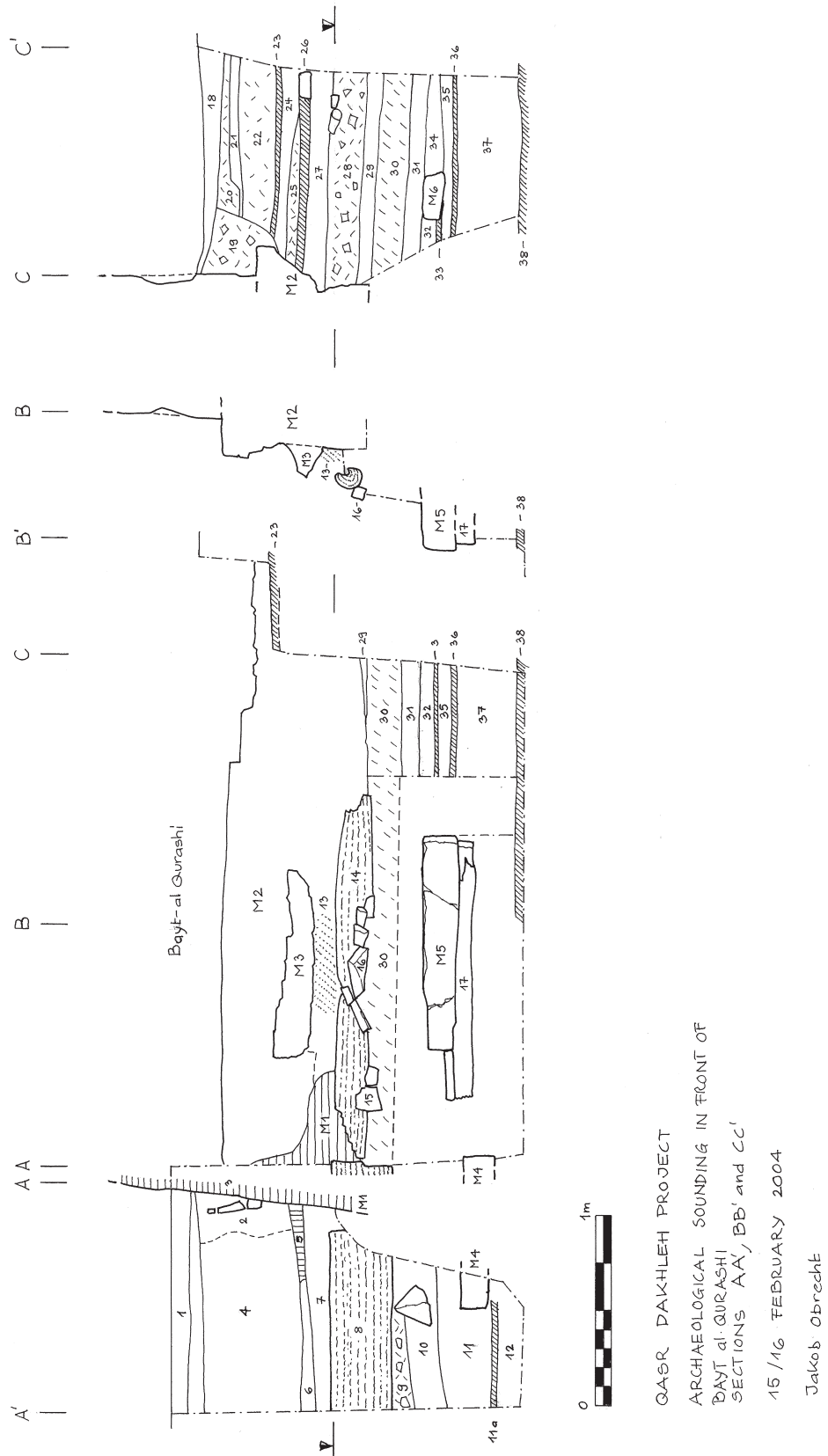


Figure 51 Stratigraphy of the trench in front of Bayt al-Qadi and Bayt al-Qurashi.

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