

EXCAVATIONS AT TALL DAYR 'ALLĀ; SEASONS 1987 AND 1994

by

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Introduction

Yarmouk University and Leiden University continued their excavation programme at Dayr 'Allā in 1987 and 1994 after the season of 1984. Both campaigns were in close cooperation with the Department of Antiquities of Jordan.

No full report about the 1987 season has been published, but much of the results has been included in the general publication about the Dayr Allā project *Picking up the threads...; a continuous review of excavations at Deir 'Alla*, edited by the authors (1989). This book is connected with the exhibition about the project held in the National Museum of Antiquities in Leiden in 1989 that was opened by HRH Princess Sarvath on behalf of HRH Crown Prince Hassan bin Talal, in the presence of HRH Prince Claus of the Netherlands, August 24. Since 1990 parts of the exhibition are being used in the small museum room of the Dayr 'Allā Station for Archaeological Studies, accompanied by the same booklet.

At the opening ceremony in Leiden, Princess Sarvath presented Professor Henk J. Franken with the Jordanian Independence Medal as conferred on him by His Majesty King Hussein in recognition of his services and pioneering work in the archaeology of Jordan.

At the same time an international conference was held in Leiden dealing with the different aspects of the Balaam Text (Plaster Text) from phase IX, resulting in a publication: *The Balaam Text from Deir Alla re-evaluated*, edited by Hoftijzer and Van der Kooij.

The interruption after the 1987 excavations took seven years and was longer than

originally intended. It has its background in a number of reasons, including finances and time to study the data collected till then.

Aims and Purposes

The main aim of the Joint Expedition at Dayr 'Allā since 1978 has been described in previous preliminary reports in *ADAJ* 22, 23, 27 and 30), as well as in *Picking up the threads...* It may be summarized here.

The general aim is a diachronical settlement study of the Middle Bronze, Late Bronze and Iron Age site, including the ecological and regional aspects. The position of this site in a steppe region in between Mediterranean zones, as well as in a region where different political influences have had their impact, makes this study of more than local importance. The results can also be used for the turbulent history of the neighbouring regions both west and east of the Jordan Valley during these periods.

Within the framework of this aim the first stress lies on the diachronic study of the settlement character, architecture and use of space. For that purpose the stratigraphy of the site, in the sense of recording and analyzing the detailed results of the stratification processes of accumulation and modification, is taken as a basic condition for the study of the material remains discovered and for the cultural and historical reconstructions based on them. This attitude determines the techniques of excavation and recording.

It should be added here, that the geo-archaeological character of the site and the adapted digging strategy, as well as the exceptional variety of discovered data, make the excavations also a good place for train-

ing purposes.

Based on the aims mentioned above the actual (field) programme of the project also includes regional and ethno-archaeological studies.

Specific Aims of the 1987 and 1994 Seasons

The first stage of work based on this new aim includes the excavation and study of the Iron Age II and III phases, preliminarily indicated as phases II-X. The second stage concerns the Early Iron Age and the Late Bronze Age phases. The 1987 season was meant to get close to finishing the excavations of the first stage and the 1994 season to finish the first stage and start the second one.

The 1987 Excavations. (January 18 - March 26)

The aims were all related to the Iron Age II phases on the top of the tall and meant a continuation of the 1984 season. Some of the planned work was not finished, partly because of lack of personnel, due to the decreased financial contributions from the Jordanian parties in the Joint Expedition.

- Complete excavation of the remains of phase IX in the squares opened so far in Area B and Area D (the test trench of 1978) and a limited excavation of earlier phases in Area B to understand the relationship of phase IX with preceding habitation phases. Actually the work in the test trench of Area D was left for a later season but the other work was accomplished with important results.
- Extension of the excavated area in Area B to the north and the west down to phase IX. The purpose was to get a better connection with the area excavated in 1967 (see Vilders 1992) and to obtain more information about the complicated architectural plan and use of space (as well as the general cultural picture) of phase IX and more information (including ecological data) about the strongly disturbed

phases II to VIII. Actually the excavation in three squares to the west was almost finished and that in six squares to the north reached the levels of phase VI (with important results) and at places also those of phase IX.

The 1994 Excavations (March 20 - May 5)

The two main goals were the completion of the excavations of the Iron II phases in the previously started squares on the top of the tall, and the start of the excavations of Early Iron and Late Bronze Age strata in two areas. Connected with this was the aim to take care of locations endangered by erosion. Eroding forces made it necessary also to fix again the major surveying points of the tall. On this occasion the army trenches on the tall, made during the Gulf-war in 1991, were also mapped by the surveyor. Apart from the tall itself some work had to be done in the fields around.

- On the top of the tall work was done in the extension squares of 1987 (Area B) and in the four squares of the test trench of 1978 going south (Area D). Both areas provided much information about the phases VI, VII and IX, but the excavation of phase IX is not yet finished.
- In order to expand the knowledge about the Early Iron Age phases (problems concerning phase B of the so called metal ovens or furnaces was included) a few squares were opened (partly) on the northern slope (Area B). This meant an extension of the old step trench excavations to the east, especially at spots where erosion was continuing to cause very much harm to the old sections.
- A major excavation area was started, for the first time, on the western part of the southern slope (six squares) and foot (two squares), Area C. The thick layer of burnt debris and the type of pottery sherds visible on the slope's surface indicated remains of the Late Bronze Age as known from the northern slope excavations.

Again continuing erosion indicated the specific location to start the excavations. The important results make it necessary to continue the work in this area.

- Reports of the discovery of human bones and pottery during digging on the land of the Agricultural Research Station at Dayr 'Allā, a few 100 m to the south and south-west of the tall, made it necessary to make some test trenches there. So far no cemetery connected with the Bronze and Iron Age settlements of Dayr 'Allā has been discovered.

THE EXCAVATIONS

This preliminary report will deal with the three major areas (Fig.1) excavated during the two seasons, namely the top of the tall (Iron Age II remains: 1987 and 1994), the

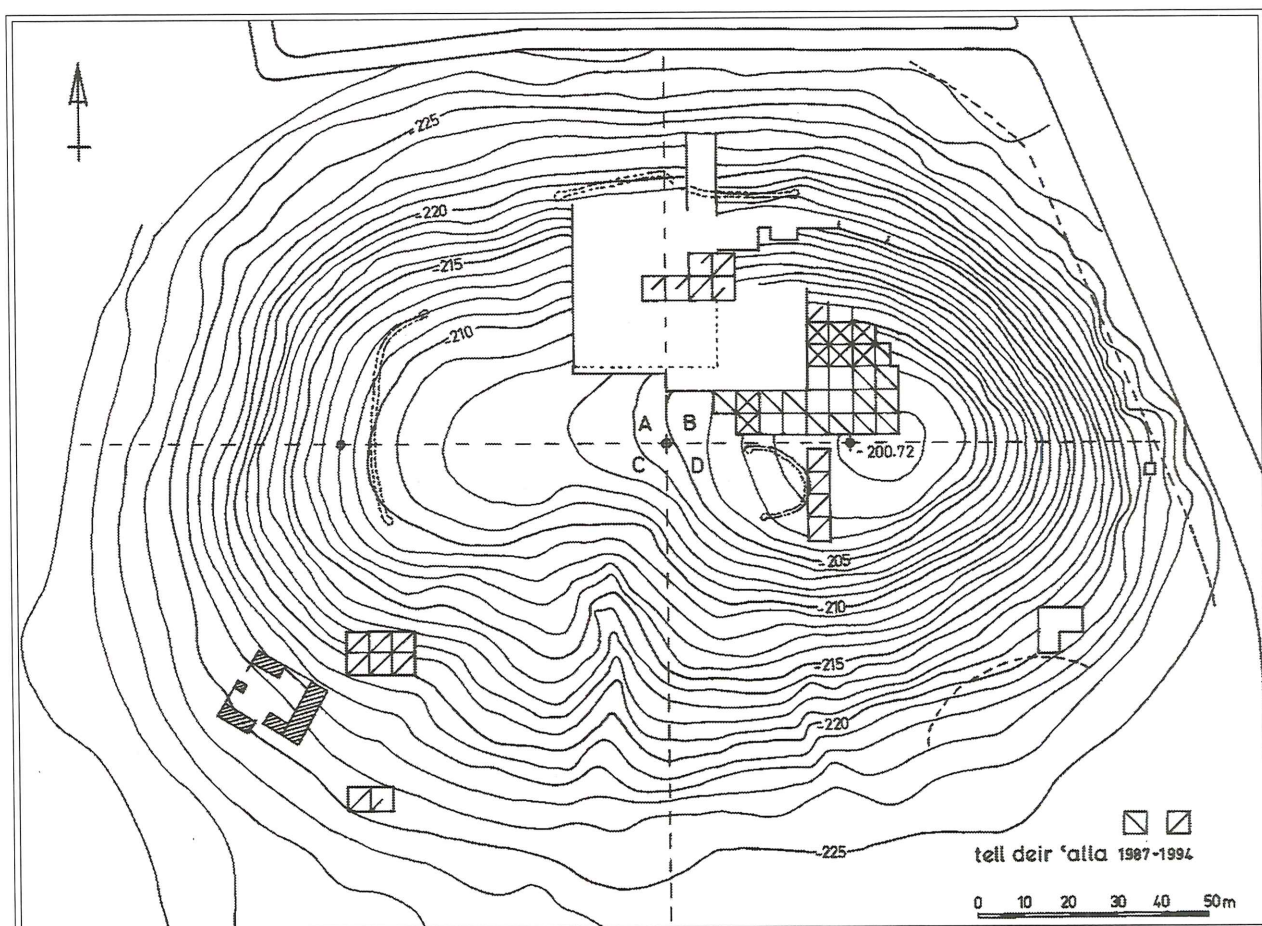
N-slope (Iron Age I remains: 1994) and the NW slope and foot (Late Bronze Age remains: 1994). Results of some digging in the fields south-west and south-west of the tall will be reported too.

IRON AGE II AND III PHASES AND PHASE I (1987 AND 1994)

The excavation of the Iron Age II and III phases on the top of the tall occurred in the N-part of the top (Area B: main area - 1987 and 1994) and in the S-part (Area D: test trench - 1994). In the main area (B) the results concern the phases IV-XI; in the test trench (D) the phases VI-IX only.

Phase I

This phase concerns the Mamluk and probably Early Ottoman grave yard on the



1. Site plan showing the squares excavated in 1987 and 1994, as well as the army trenches made in 1991.

tell. Remains were found in the newly opened squares of the west and north extensions of the 30 x 15m area excavated up to 1987. The graves were all oriented east-west. Most of them were simple oblong holes in the ground, but some (B/B3.15 and 17) had small square mudbricks (25x25x7cm) as a cover, placed as a saddle-roof over the body. The unusually great depth of a few of the graves indicates a rather late use of the grave yard, but there is no clear chronological indication.

Phases V and IV

Phase V is mainly known from the excavations in 1978 and 1979 in the top squares B/A-C5-10. The structural remains include a few buildings with characteristic square mudbricks, and courtyards with several small pits, often used for apparent fodder. The phase has to be attributed to the Persian period, based on a number of artifacts.

In 1987 remains of phase V were found in the northern extension, in squares B/D7-10, just below the tall surface, and eroded away from the slope further north in these squares (Fig. 2). Coherent remains of some walls, placed on a reed layer, connect with

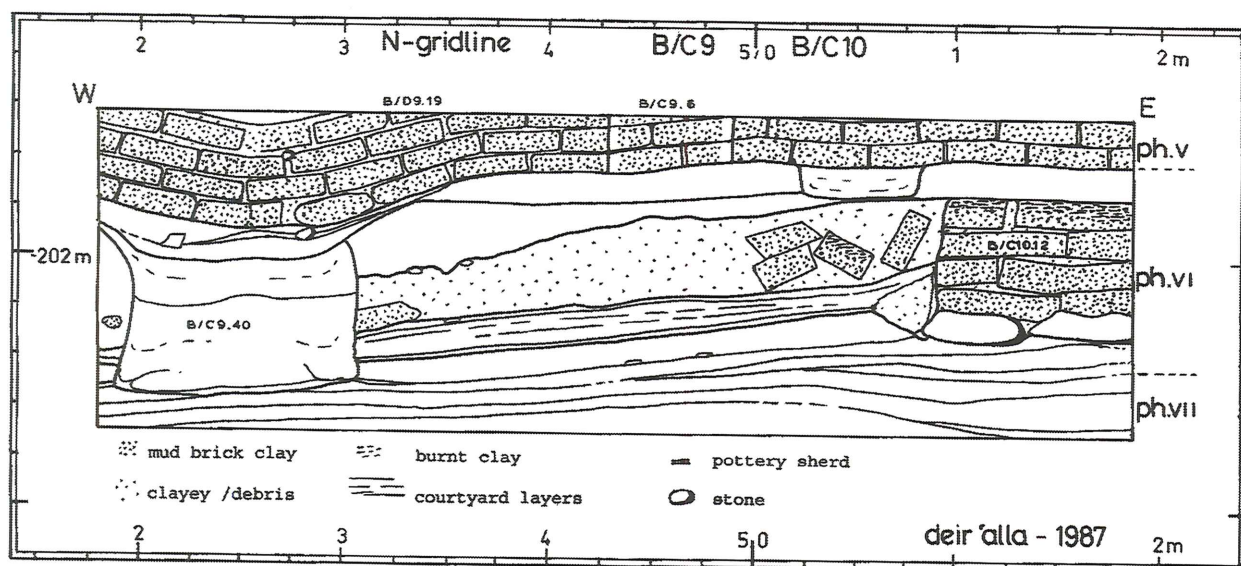
those excavated in 1978 and clearly show the way the mudbricks – square (37x37 cm) and half sizes – were laid. A *tannur* (deposit no. B/D10.20) inside one of the rooms was put in a depression in the floor (see Steen 1991) and contained a juglet.

The disintegration of the buildings and the continuing accumulation of courtyard layers, resulting in the thick deposits of phase IV are known from previous seasons and also represented in these squares.

The two excavation seasons gave some additional information about “phase V/VI” (following phase VI). Especially interesting is the discovery of two large pits (square B/B3 in 1987 and square D/A7 partly excavated in 1994), in addition to those already found in 1994. Both again have outward sloping sides clad with standing mudbricks, but without stones. Pit D/A7.50 (lining bricks D/A7.63) did not show a rounded but a rather oblong almost rectangular shape. The use of these pits is not yet clear.

Phase VI

Phase VI is mainly known through the excavations of 1978 and 1979 on the top of the tall (Area B and the trench in area D). In 1987 (with some additions in 1994) the



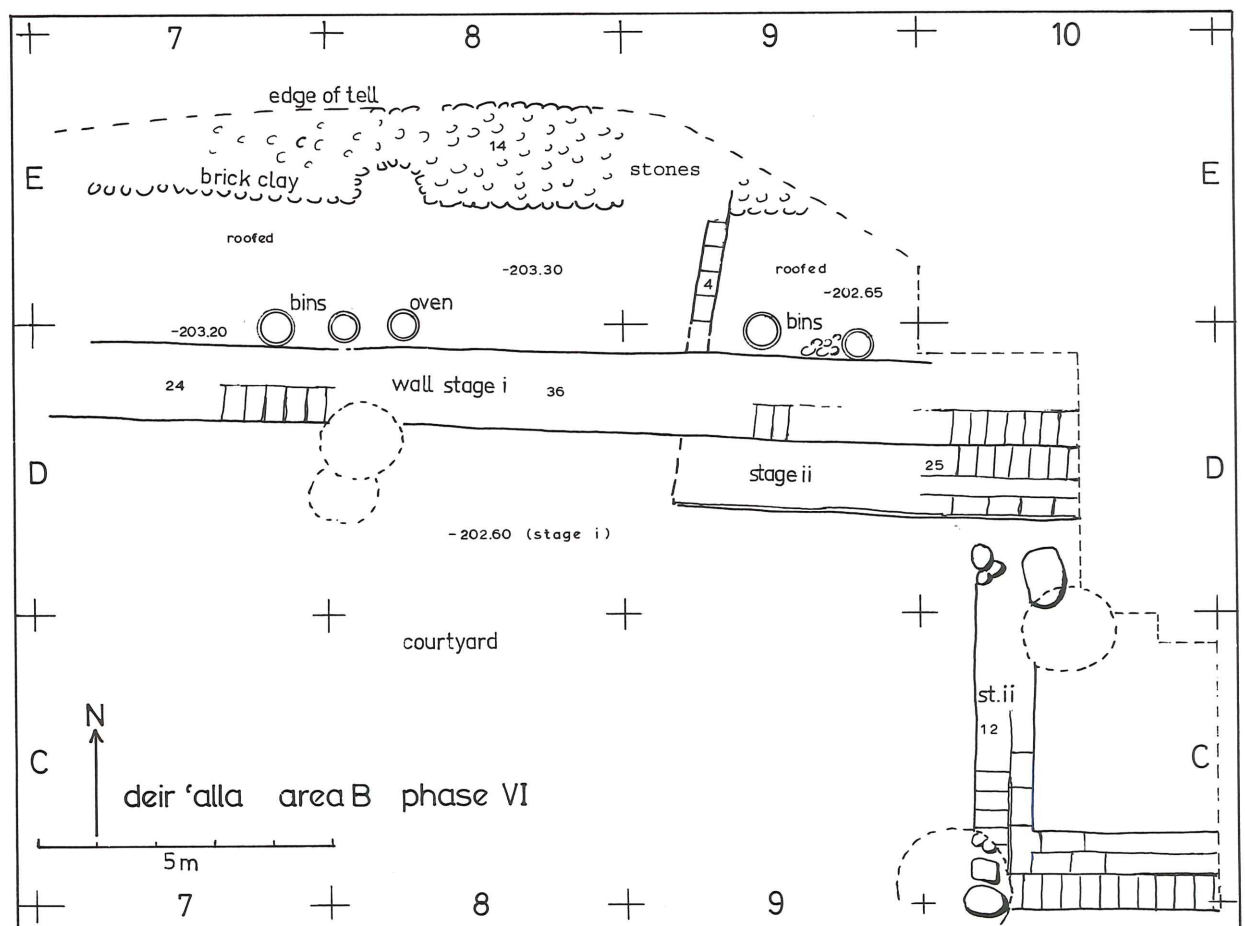
2. Part of N-section (on grid-line) of squares B/C9 and 10. A pull-off of this section, made in 1987, is exhibited in the Museum of Jordanian Heritage at Yarmouk University.

northern squares yielded basic information for the understanding of phase VI. The new data not only provided the criteria to distinguish the different subphases, but possibly also gave a framework for the general understanding of the remains of the settlement. Other data came from the western additions to the excavation area.

First subphase (stage i)

The most important feature is a solid east-west mudbrick wall, 1.3 m wide, based on reed layers only (Fig. 3). Almost 18m of this wall have been unearthed in 1987, but it had appeared also in the 1967 dig further west. The mudbricks (60x30x13 cm) were made of the greenish coloured parts of the banded clay (Lisan bed, locally available). Five to seven courses had been preserved,

with alternating positioning of the bricks (fully studied in 1994: two headers or 1 header and two stretchers in different positions). North of this wall and parallel to it runs another wall, of which only the stone foundation (one course, like a pavement, but 1.8 m wide), reed remains and some mudbrick remains on top have been preserved from erosion. The space in between the two walls is 2.5 m wide and the remains of use were rather well-preserved because of some burning and roof collapse. This long space was divided by a narrow wall, creating two rooms. Both of them had many household features well-preserved, including four (two in each room) standing cylindrical clay silos (diameter 60 cm) and one oven. Erosion has removed evidence about the surface further north, but probably the slope of the then



3. Simplified plan of the first two building stages of the N-part of Iron Age phase VI.

existing tall started at a close distance.

South of the wall complex was a wide courtyard, of accumulations of plant-rich material. At a distance of 9 m to the south of the wall some building complexes were found (1978 and 1979), often with thick walls of the same brick types (type of clay and the size), but these structures were generally badly preserved because of erosion and pit-digging later on. In 1987 some more remains were studied in square B/B10, including a cylindrical bin and two ovens (one with a lid), placed in shallow work pits, as well as remains of stored wheat and barley, originally put in two separate sacks.

Roofs and parts of walls collapsed, accompanied by fire, at the end of the first subphase. Indications of an earthquake were not found. Also the soil of the courtyard, rich in plant matter, was blackened by this fire, with white ash in its lower part.

Second subphase (stage ii)

This subphase has the following characteristics: The long east-west wall (the southernmost of the two parallel walls) continued to be in use, but had been restored for that purpose. The eastern part received a complete new wall attached to the south side of the old one, almost doubling the original width. Attached to its southern face a room was built, with the walls made of the same mudbrick type and based on reed at the inside half and a row of stones at the outside one. This room has been partly excavated in 1978 and 1984 and was apparently used as a barn for fodder, that took fire at the end of this second subphase. Also some of the buildings further south had been rebuilt, and destroyed again at the end of this subphase.

The remains of the settlement of phase VI have been only partly excavated (between one third and one half of it), but much had been eroded. It seems that the northern east-west wall indicates the limits of the settlement in this direction, but we do not know anything about a continuation of

this limiting wall around the top of the tall and around the settlement. The type of courtyard accumulation and the fodder storage probably indicate the importance of animal herding; the bone samples are in the process of being analyzed.

The western extension of the excavated area (squares B/A4 and B/B3+4) revealed also some remains of phase VI in 1987. An interesting area was a group of seven bread ovens in square B/B4 (1987). They were not contemporaneously in use: only one (maximum two) existed at a time. One of them (B/B4.59) had a flat stone fixed vertically in the centre, able to support a pot in the mouth of the oven.

Radio carbon analyses and artifacts date the subphases of phase VI to the end of the eighth through the seventh century BC.

From the last subphase several objects have to be mentioned, including a bronze fibula with iron pin from B/D9.5.

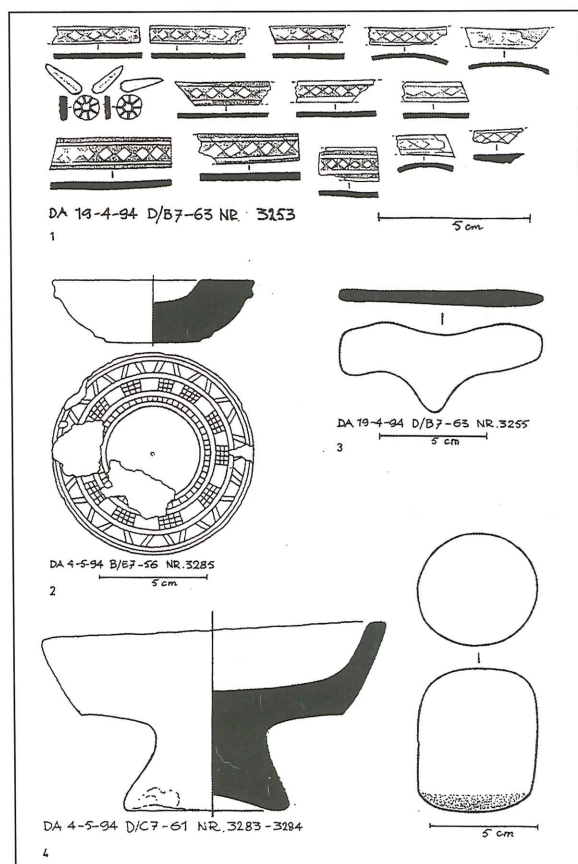
Phase VII

One of the surprises of the 1994 season was the quality and quantity of data retrieved from phase VII. Some scattered remains of it (wall fragments, courtyard layers and pits) became known in 1984, including a fallen wall with many of the bricks still in original binding, but in a vertical position—identified as such in 1987. In the same year, remains were found in the western extension too (B/B4-3). However, the architectural remains were concentrated in square B/A6 and surroundings. In 1994 other concentrations of remains were found in squares D/A+B7, squares B/D+E9, and square B/F7.

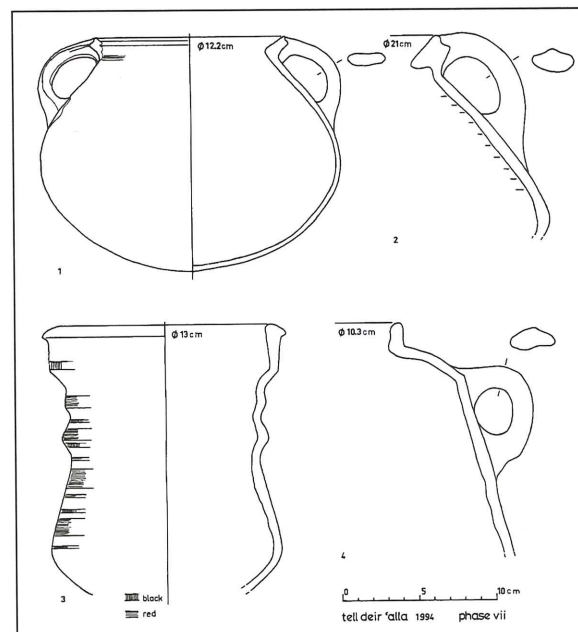
The remains show a sudden collapse of buildings, with fire at places, all caused by an earthquake as probably shown by the crack and shift down in D/B7. After a process of erosion and levelling, the debris was preserved only up to a height of 10-20cm, often leaving just the lower parts of pots sitting on the floor. One of the walls (in square

D/A7) had fallen down in the same way as mentioned before, with many of the bricks still bound together, but now in a vertical position.

The lay-out of the rooms is not clear (several of the walls are expected outside the squares) but the floors in square D/B7 (the "museum") and B/E9 (the "kitchen") were covered with all kinds of artifacts. They include (Fig. 4) bone-inlay, a stone object (3255) of uncertain use, an extraordinary dagger, a sheqel weight (3302), a cosmetic bowl of sandstone (3285), a potter's wheel as well as pottery (Fig. 5; thrown and well-fired) that represents types known from Neo-Assyrian palaces, apart from local types. These data show a rather strong change of cultural character after the phases IX and VIII. Possibly the seal no. 2307 (Fig. 6, inscribed *lmlkwm*) came from phase VII.



4. Some Iron Age phase VII objects: bone inlay (1), a sandstone (!) cosmetic bowl (2), odd stone object (3) and mortar and pestle (4) (Drawings: Hugo de Reede).



5. Some Iron Age phase VII pottery: two cooking pots (1 and 2), a beaker (3) and a jar (4).



6. Two seals: left: with *lmlkwm* (Photo: Youssef Zu'bi).

Phase IX

The 1987 season (partly continued in 1994) was aimed at extending the knowledge of the plan and use of space of this phase. The relationship with the remains excavated in 1967 had to be made clear further to the north and west and in general the excavated area of the phase had to be enlarged so as to get a better picture of the character of the settlement, also in relation to the Baalam inscription and its role in a room in square B/C6. Furthermore some details of the sub-phasing of IX had to be studied, as well as its relation to the preceding phases, especially in the eastern squares.

These aims meant in terms of digging:

1. The excavation of parts of the squares opened earlier but not yet finished down to the beginning of IX (see plan Fig. 1 in the previous preliminary report in *ADAJ* 30:132), especially in the B/C7-10 squares and square B/A6. This work was finished in 1987.
2. Excavation to study the remains in the eastern squares (B/BA+B9+10) for their relationship with phase IX or a preceding phase. The same applies to remains in the western squares, especially B/A+B5+6. This work was done in 1987.
3. An extension of the excavated area to the north, following phase IX up to the edge of the tell. By the end of the 1987 season, the thick phase VI wall and the soil below it were not yet removed. The work continued in 1994, but was not yet finished.
4. An extension to the west: squares B/A+B4+3, alongside the area excavated in 1967. This work was finished in 1994.

The following results of these excavations concerning phase IX have to be mentioned in this report. See also the information presented in *Picking up the threads...*, especially pp.82-89 and 94-103; see also the authors (1991). See also the discussion in Wenning and Zenger 1991.

1. Phase IX has a complicated building history, but it is not yet clear whether originally the set of adjoining rooms was planned and built as a whole. Several of the walls followed walls of a preceding phase. During the use of the complex of rooms at many places rebuilding, for example after roof collapse, and change of use of a room took place. After the destruction by earthquake and fire some levelling of the ruins took place, especially before, or for, phases VII and VI: the remains of phase IX were completely removed by these later human activities and by erosion in the eastern squares. Consequently the walls and rooms found in these squares B/A-C10 (see *ADAJ* 30:

- esp. 132, 136) belonged to a phase preceding phase IX (see below).
2. The extension to the north till now revealed remains of phase IX in squares B/D-F7-9.
3. The extension to the west revealed remains of phase IX in all three squares (B/A4 and B/B4+3, mainly in 1987: Fig. 7, with additions in 1994) that match with the architectural remains of "phase M" excavated in 1967 (see Vilders 1992). However, later pit digging had removed the remains at the western end.
4. Some of the remains and objects have to be mentioned here. Cultivated plant remains show a large variety of crops. Apart from wheat and barley, flax had been very important, as well as a number of legumes. Also sesame was attested and several culinary herbs, some of them very rare, like black cummin, garden cress and basil (for details see Neef 1989). Weaving was represented by several groups of loomweights and tiny remains of cloth, with the threads made of hemp fibres (see Vogelsang-Eastwood, 1989). The pottery includes a number of "Phoenician" red slipped and burnished types, especially jugs with a double loop handle, trefoil-mouthed (Fig. 7; see also the authors 1991: 25) and an askos. Remarkable objects found in 1994 included



7. Phase IX; B/C7.50 with pottery: including Phoenician jug with herbs; platter (originally with barley gruel); to the right: crushed jar with stored wheat (Photo: Hubert de Haas).

a storage jar filled with plant-rich lime, apparently to be used for plaster work, as well as a bulla, going originally around a papyrus scroll.

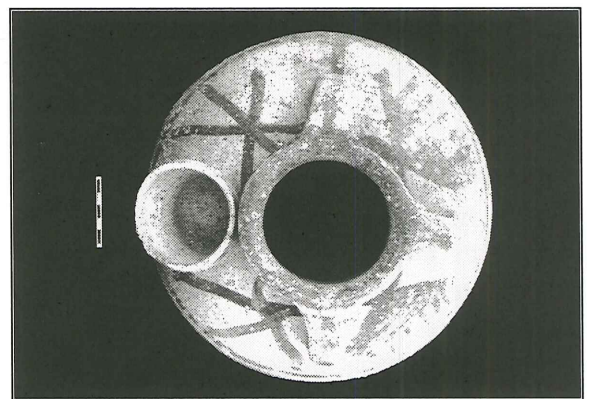
Phases X and XI

The phases preceding phase IX were partly excavated in the eastern squares (squares B/A9+10 and B/B+C10) and further west (square B/B5+6; in 1987). It is not certain whether these two separated excavation areas revealed the remains of the same phase, phase X, or whether two phases are involved. The remains in the eastern squares had been partly excavated already in 1984, but several data were added in 1987 (squares B/A-B9-10).

The remains in the two squares further west were mainly a storage room and a rubbish tip. The storage room was filled with 14 jars, including 12 storage jars that were closed with a lump of clay (Figs. 8 and 9 for the decorated shoulder of the small jar). The rims of the jars include type 1, varieties j and l (mainly from phases H-L; cf. Franken 1969: 161f). All of the jars were still in their original position, though mostly vertically cracked and broken by the pressure from above. They had contained a liquid, leaving crusty tide-marks of dehydration, but one of them (not cracked and still closed) also contained the calcified remains of thousands of ants and some centipedes and wood lice (cf.



8. Phase X: some of the storage jars from B/B5.143, with sealed mouth (no. 3203); small jar 3147 to the left (Photo: Hubert de Haas).



9. Phase X: shoulder decoration of small jar (no. 3147) (Photo Hubert de Haas).

Clason 1989).

The rubbish tip consisted of layers of refuse material, including vegetable remains, mudbrick and oven pieces, large pottery sherds, many animal bones (for example *rom* bovines, goats, including a skull) and surprisingly the lumped parts of the skeletons of two small children, pressed flat in between the layers. These remains were partly in articulation (including the one skull) and partly not. The age of the children concerned was about 2 and 5 years (see Perizonius 1989).

IRON AGE I PHASES (1994)

The excavation of Iron Age I phases (the phases are indicated A-L from bottom upward; see Franken 1969) was started at the eastern edge of the step trench of the 1960s for four reasons:

- A settlement study demands a greater exposure of these phases than the small surface of 200-250 m² studied so far. Parts of the extension should connect with the area known in order to create an area of study large enough to understand the use of space of at least one part of the settlement.
- An eastern extension is chosen because the study of the Late Bronze Age settlement is helped a lot by extending the excavation of the temple (see Franken 1992: 23-27). In fact the excavations of 1967 were started on the north-eastern top of the tall in

order to make this extension possible. Also the knowledge of the Early Iron Age phases would benefit from this eastern extension, for example phase B with the large “furnaces” in this area, and phase K with the edge of a mudbrick “tower” (see Franken 1969: 57, wall K13).

- The steep eastern edge of the old step-trench has been damaged by erosion in such a way, that large parts have been removed already. Gullies had been cutting loose bigger parts that are now in danger of collapse. Organized removal by excavation should save at least the stratigraphic information as soon as possible.
- Eveline van der Steen is in a process of studying phase B in order to understand the use of the large “furnaces”. The 1994 season was an opportunity to search for new relevant data.

For these reasons the squares B/G2+H3 at the edge were chosen (see Fig. 1) with an extension inside the old trench (B/G+H2 equalling square D100 of the 1960s except for the 0.5 m E-baulk) and another extension inside the old trench in squares B+A/G1 (equalling square E400; for the grid system adopted in the new excavation program see ADAJ 22). The excavations were supervised by E. van der Steen, assisted by Jennifer Peersmann (especially square B/H3) and Xander Veldhuijzen (especially square A/G1).

The results of the excavations can be summarized thus:

- The western part of the seemingly circular “tower” has been cleaned from a protective dump in squares B/FG2 and newly excavated somewhat further to the north-east (sq.B/G3), where its mudbricks were laid upon a foundation of a single layer of boulders. For further study the excavations have to start higher up, which has to be done next season.
- The strongly eroded corner area between the old squares D500 and M200, namely square B/H3 (south of sq. M200), was excavated, showing remains of the wall sys-

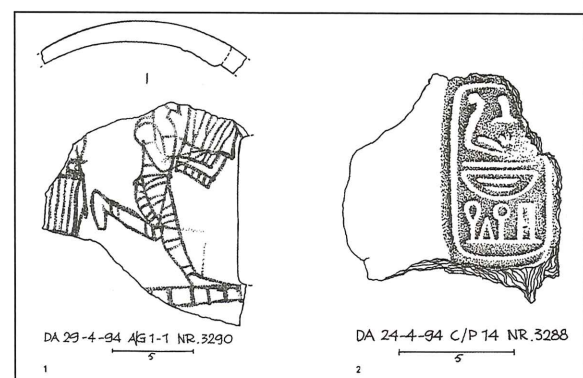
tems of the Early Iron Age phases B until E. Details of plans are not added now but will be as soon as further digging has been finished in this area.

- The context of the “furnaces” of phase B, especially courtyard accumulations, was excavated on a small scale to the south-east of them in sq. B/G2 (N-part). The courtyard layers were found accumulated with a lot of vegetable material, some ashes and lime. Also a fragment of a crucible (with some pieces of a copper alloy in it) was found there, indicating bronze casting. However, the size of the “furnaces” does not fit this use; in any case no evidence of smelting activities has appeared (cf. Negbi 1991).
- Somewhat further to the east (sq. A/G1) excavations also touched some of the phase B courtyard layers, but mainly went through the phase A accumulations and reached the burnt layers of the Late Bronze Age debris.

Two sherds of fenestrated stands were found in these early layers, both decorated with painted figures (see Fig. 10:1, for one of them).

LATE BRONZE AGE PHASES (1994)

The south-west quadrant of the site, Area C, had not been touched by excavations before. Two reasons made it necessary to open



10. 1. Painted sherd with lyre player (Early Iron Age); 2. Egyptian seal impression on jar stopper (end of Late Bronze Age) (Drawings: Hugo de Reede).

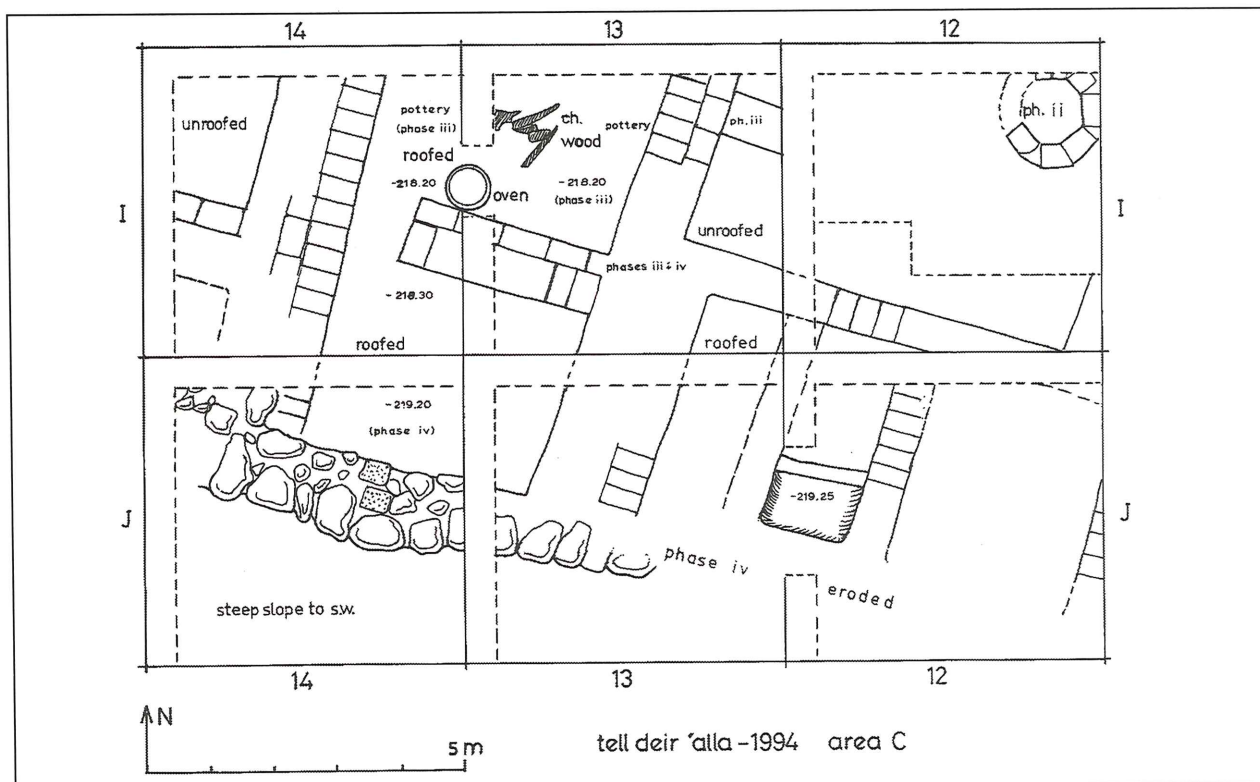
squares now, one programmatic and one circumstantial, namely damage by erosion. The programmatic reason was that the new programme (started 1976, 1978) of the Dayr 'Allā project has the purpose of diachronic settlement research. The collection of data from the later Iron Age phases at the top of the site is almost finished (see above) and the new stage of this programme includes the Late Bronze Age settlement, known from the N-slope excavations (mainly 1964; see Franken 1992). Apart from the necessity to extend these northern excavations of the Late Bronze phases (see above) another digging area is indispensable as a sample of these settlements. The partly gentle southern slope would provide a good location because of two reasons. Firstly the thick layers of burnt debris visible along this slope were possibly connected chronologically with the thick layers of burnt debris of the northern slope and identified as the destruction of the major final Late Bronze phase (Phase E; see Franken 1992). Secondly at the bottom of

this burnt layer, erosion had exposed remains of walls and was demolishing them, making it urgent to have them excavated. On the lower part of the slope six squares, totalling 10x15 m were opened, C/I+J12-14.

A second group of squares was opened 30 m further south at the foot of the mound, bordering the village road in an area cut by a bulldozed drainage trench to lead run off water from the tall towards the western gardens. The very gentle slope at this location suggested extra mural ruins and the section caused by the trench made in 1982 indicated heavily burnt wall structures, even suggesting a kiln. The section was heavily damaged during the years of exposure, making a "rescue dig" necessary for this promising area. Two squares (10 x 5 m), cut by the trench, were opened, but only partly excavated: C/P13 +14.

1. C/I+J 12-14 (Fig. 11)

Excavations were supervised by Nezar Turshan (area supervisor and square C/



11. Late Bronze Age excavation at lower SW slope; simplified plan of mainly phases IV and III.

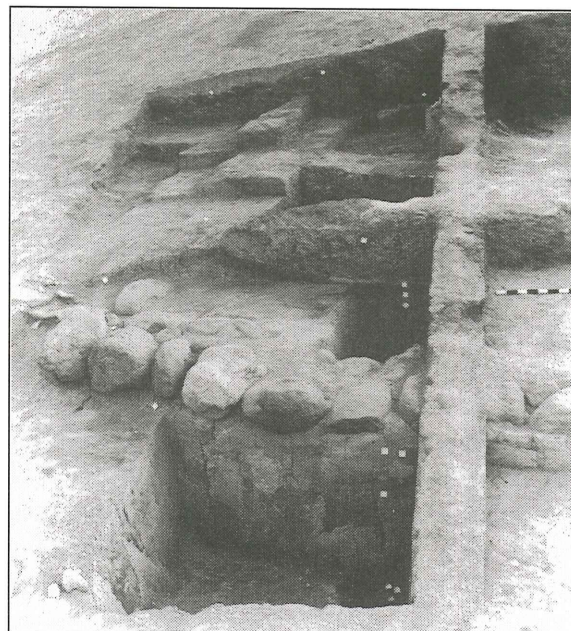
I+J13) and the students Deyar Haddad (C/I+J14; see Fig. 12) and Ibrahim Abdullah (C/I+J12). Most plan drawings were made by Ali Omari and most final section drawings by Gerrit van der Kooij (mainly in July 1994).

Stratigraphy and Use of Space

The following phases were distinguished, indicated by a preliminary independent phasing system as phases I-V (oldest). Phase I is represented by some pits only, probably to be connected with the Iron Age.

Phase V

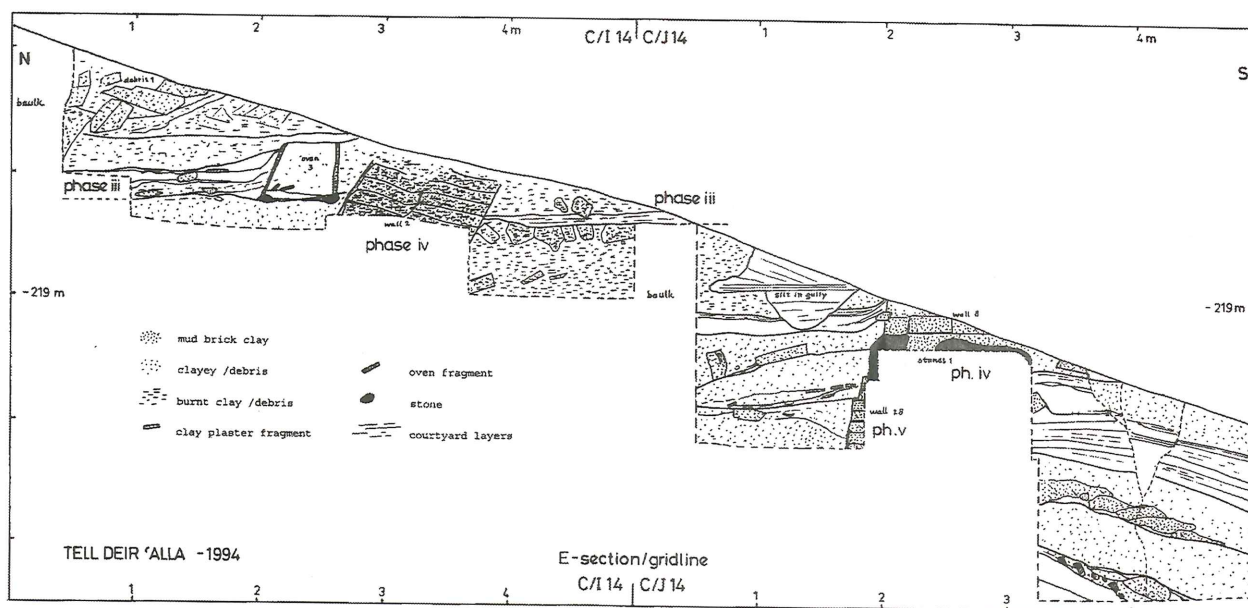
The oldest Late Bronze phase in squares C/J13+14 is represented by a curving E-W wall (following the contour of the tall) 1.5 m thick and preserved quite high, but the base of the wall has not yet been found. It was built from very solid mudbricks, using the local Lisān clay, with reed or wood in between the courses (Fig. 13, section C/I-J 14 East). No information is available from the area north of this wall, but the deposits south of it were sloping up to the wall, probably indicating the edge of the inhabited area of the site. The sloping layers were excavated till a depth of 2 m. The lowest part



12. Squares C/I+J14 at SW lower slope with Late Bronze Age remains (Photo: Youssef Zu'bi).

of them had a steeper slope and included dumped material and layers of tumbled mudbricks. The higher, more gently sloping layers showed a kind of ashy and clayey "courtyard" accumulation.

The suggestion of a city wall is not supported by its size. On the other hand it is quite possible that the building concerned was placed at the edge of the inhabited site.



13. Eastern section of squares C/I+J14.

Phase IV

This phase is fully excavated in the same two squares, represented by a stone foundation of one course and c. 1.3 m wide and with mudbricks on top (remains of two to three courses only are preserved). This wall was placed on top of parts of the previously mentioned mudbrick wall with a thin courtyard accumulation in between. A basin made of lime plaster was included.

Phase III

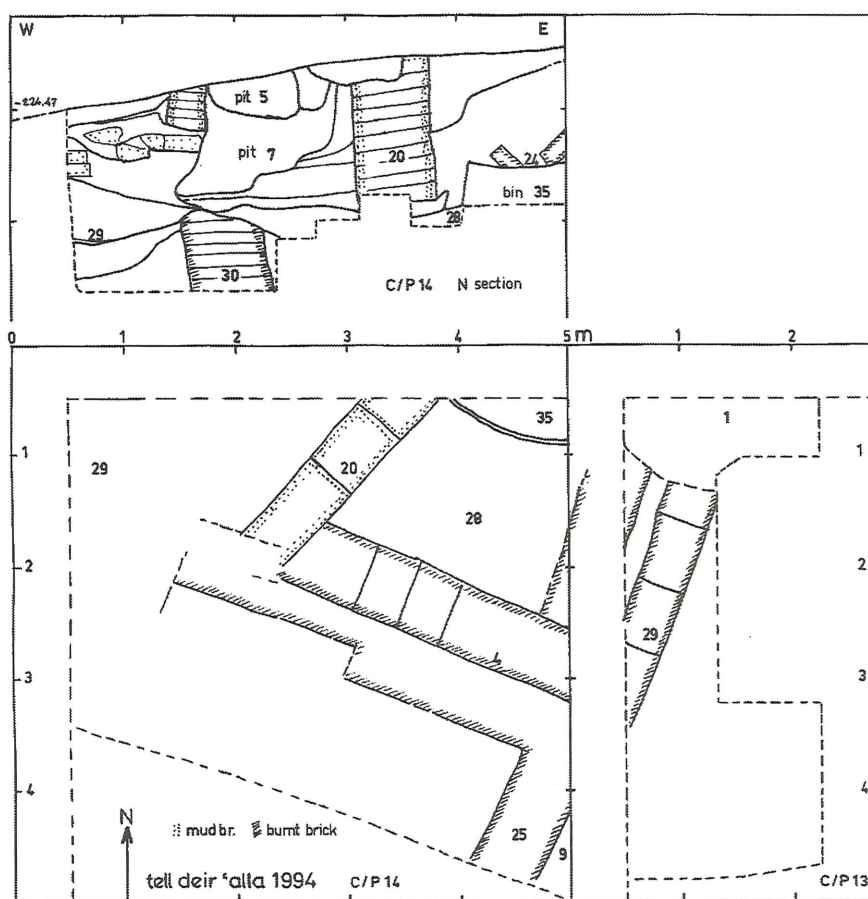
After some (local?) destruction, indicated by a fall of roof and mudbricks, the stone-founded wall of phase IV was reused in a building complex represented in all six squares excavated. It consisted of some heavy north-south walls and bound cross walls for the construction of which only mudbricks were used (see Fig. 11). A phasing in the construction and use can be recognized with debris layers and some walls

as an addition to the previous plan. The final destruction occurred by fire.

A Late Bronze Age date is indicated by the pottery apart from the type of destruction. The pottery found in deposits from phase V cannot be connected with the Middle Bronze Age, as known from the pottery from the south-east foot (excavated in 1978), as was shown by a study of the two pottery groups by Nabil Qadi. The pottery repertoire of phase III is the same as that from Late Bronze phase E from the excavations of the northern slope, except for the type of collared-rim jar. The collared-rim jar found on the northern slope comes from Iron Age phase A (Franken 1969: Fig.47:1) but has a different type of rim.

2. C/P13+14 (Fig. 14)

These two squares at the south-west foot were chosen because a small ditch and "dike" had been made in 1982 to divert run-



14. Squares C/P13+14: plan of last phases of Late Bronze Age remains and northern section.

off water from the village. The northern section of the cut had shown heavily burnt mudbrick structures, even suggesting a kiln. Continuous erosion made it urgent to check and investigate these remains, that were also interesting because of their apparent extra mural location. The remains could not yet be attributed to a specific period.

Excavation took place in less than one and a half square, but at places down to a depth of 2 m. The stratigraphic situation is complicated and partly still obscure. Three ancient phases are preliminarily distinguished. The upper one is represented by a number of pits of different sizes (one 2 m wide and at least 1.4 m deep; others small and shallow), but not yet dated; pit no.5 contained the skeleton of a donkey. The earliest phase is represented by a complex of burnt mudbrick walls and burnt debris. The middle phase is in fact a reuse of this complex represented by rebuilding and by new walls, as well as by debris. At places it is difficult to distinguish between debris and original wall – a situation caused partly by crack and shift modifications. The surface connected with the second (middle) phase is partly found, but that of the earliest phase represented has not yet been reached.

The orientation of the walls is the same as that of the Late Bronze Age walls further north. The mudbrick and roof debris is mostly thoroughly burnt and coloured red-brown. The debris on top of floor C/P14.29 (in the north-west corner of the square) is granular and dusty and burnt light green to cream. The mudbricks of all the walls have been heated evenly to a brown and red-brown colour except the grey ones of wall C/P14.20 (of the second phase), but using mortar made of ground-fired bricks. Since these unfired bricks intertwine with the fired bricks of wall C/P14.4 it has to be concluded that the builder of the second phase reused the accidentally fired bricks and walls in this way.

Use of the rooms of the earliest phase is

not yet certain, since the floors were not reached. However, substantial, but probably amorphous pieces of a heavily corroded copper alloy in the debris (C/P14.28) together with fragments of crucibles for metal are indications of metal working activities nearby. The same kind of objects indicate the same activities in the second phase on the floor (C/P14.29) in the north-west corner. Pottery jars (including parts of a collared-rim jar) were used in this second phase in the room further to the east (in debris 24).

Debris, including roof fragments, in the southern border area of the two squares (C/P14.9 = C/P13.6) is probably a final deposit of the first phase, with wall 25 out of use. Its architectural origin is not yet well understood, but it included a number of tool remains and other interesting objects: a spindle, sickle flints, a basalt pestle, a small haematite stone “weight”, a large Egyptian seal impression on a piece of burned clay – probably part of a large jar stopper – and a clay tablet (no. 3291; Fig. 15 shows it *in situ*). The seal impression (no. 3288; see Fig. 10) has not yet been identified. The clay tablet has the same unknown script as those found in 1964 at the northern slope, close to the Late Bronze phase E temple. The data collected so far in these two squares indicate the existence of buildings outside the main Late Bronze settlement. This space clearly had to do with metal work, storage and possibly with trade.



15. Late Bronze Age clay tablet (no. 3291; 9x4x2 cm) *in situ* (C/P13.6).

The variety of data found in these two groups of squares on the south-west slope make it necessary to try and better understand that location and excavate the area around them and in between. It is also necessary to excavate further down inside the squares opened already and to reach bedrock to understand the development of the settlement at this part of the site.

Erosive forces close to the west-north-west foot of the site revealed mudbrick constructions that resemble the Middle Bronze - early Late Bronze type, indicating the extension of the settlement of that period. Furthermore the bulldozed cuttings at the east foot of the tall shows the minimal extension of the settlement of that period in that direction. This means that the earlier phases of the Late Bronze Age settlement occupied a surface of about 120 x 180 m.

OTHER FIELDWORK (1994)

Search for a Cemetery

The search for a cemetery to be connected with the population of the site of Dayr 'Allā had been done by Diana Kirkbride in 1960 and 1961, without result. In 1994 three test pits (2x2x1 m) were made under the supervision of Nezar Turshan on the land of the Agricultural Research Station to the south of the tall. Workers digging there for a shelter some years earlier had reported the discovery of human bones and some pottery. The test pits were almost on an east-west line at a distance of c.150 m from the south foot of the tall. No deposits or structures to be connected with human action were found, except for the central pit. This revealed a small Mamluk (?) grave with a young child's skeleton and a fragmented glass bracelet originally fixed above the elbow.

Trenches in the Fields West and South-West of the Tall

In November of 1993 two stretches of

trenches, dug to place pipes for irrigation, were studied by Gerrit van der Kooij for archaeological remains. Children of the al-Jamrah family had reported sherds among the soil coming from these trenches. The trenches had a width of 0.7 m and a depth of about 1.7 m. One trench was going north-south close to the western foot of the tall (passing at a distance of 120-150m from the coordinate through the central dividing point of the tall, see Fig. 1), and connecting with the other one going from the south-west corner of DASAS to west-south-west (direction of tall, al-Khisas). The sections of the sides were studied and 13m of the south section of the east-west trench was sketched on scale. Both trenches were cutting through the irregular upper part of al-Lisān layers of "banded clay" at places, with different types of grey/black soil layers on top of them. Among these layers several washed lines of gravel with some pottery sherds were found and an occasional fragment of a stone wall foundation (in the north-south trench only). All the sherds found probably have to be connected with the Byzantine and the Ayyubid-Mamluk period. No Late Bronze Age or Iron Age sherds washed down from the tall or resulting from a supposed use of the fields around the settlement were found.

A regional survey was carried out by Eveline van der Steen, helped by Mohammed Balawneh in order to add data to the information gained already from previously made site surveys in the vicinity of Dayr 'Allā. This work is part of the regional aspect of the Dayr 'Allā project and dealt especially with the transition period of the end of the Late Bronze Age and the beginning of the Iron Age. E. van der Steen is studying especially this period (Steen 1995).

ACKNOWLEDGEMENTS

The Joint Expedition of 1987

The work was made possible by the full support of Dr Adnan Hadidi, then Director-

General of the Department of Antiquities, Prof. Mohammad Hamdan, then President of Yarmouk University and Prof. Herman Geertman, head of the Department of Archaeology of Leiden University. We very much appreciate their cooperative attitude. We also appreciate the interest shown by HM Queen Noor who visited the site on March 31. Among the other visitors special mention should be made of Prof. Henk Franken and his wife, Mrs Cees Franken; they were checking data to finish the publication of the excavations of the Late Bronze Age at Dayr 'Allā. The finances and equipment for the expedition came from the three institutions involved.

The team consisted of Jordanian and Dutch members, connected with Yarmouk University (YU), Department of Antiquities (DAJ) and Leiden University (RUL). Directors were Moawiyah Ibrahim (then YU) and Gerrit van der Kooij (RUL). Other team members were:

Two representatives from DAJ, Emsaytif Suleiman (supervision B/B4+3) and Saad Hadidi (assistant supervision B/B9+10).

From YU Saleh Sari (supervision with assistance of Mohammad Darwish in squares B/D+E9), Nabil Qadi (supervision B/A8, B/C9 and B/A4), Mohammad al-Jamrah (keeper of the Dayr 'Allā Station and supervision squares B/A9+10, B/B9+10, B/C+D10) and Ali Omari for surveying and several plan drawings.

From RUL Louise Dumas (house keeping and registration), Hubert de Haas (photography), Hugo de Reede (object drawing), Margarete Steiner (supervision of B/D+E7), Margaretha Folmer (supervision B/D8), Monique Vilders (supervision B/B5+6), and the students Eveline van der Steen (supervision B/E8) and Kees Stavleu (supervision B/E7). The archaeobotanist Reinder Neef was from the University of Groningen.

Some other guests should be mentioned. Mrs Noor Mulder worked in square B/A6 during one week and five girls and two boys

from the International Baccalaureate School near Şuwayliḥ joined the team during some weeks in connection with the Crown Prince Award.

Very important for the work on the tall were the experienced foremen Ali Abdulrasul Hajaj and Sadik Abdullah Khalef (both from ar-Ruṣayfah) as well as those from Dayr 'Allā and vicinity: Amin Kanan, Gemil Kanan, Mahmud Shobash and Ahmed el-Hawamdeh. All the other foreman and workers, and those taking care of sherd washing and the camp are gratefully mentioned here. A special reference should be given to the chief cook Abu Ramadan.

The Joined Expedition of 1994

This fieldwork was made possible by the full support of the following persons: Dr Safwan Tall, then Director-General of the Department of Antiquities, Prof. Marwan Kamal, President of Yarmouk University, Prof. Youssef Bakkar (then Dean of Research) and Prof. Zeidan Kafafi (then Director of the Institute of Archaeology and Anthropology) of Yarmouk University, as well as Prof. Herman Geertman, head of the Department of Archaeology of Leiden University.

The directors of the expedition were Moawiyah Ibrahim and Gerrit van der Kooij. The Department of Antiquities was represented by Mohammad Balawneh (assistant supervisor B/D+E9).

Other members of the team were: Louise Dumas (RUL, house keeping and registration), Ali Omari (YU, surveying, including his check of the old grid points and fixing new ones), Hugo de Reede (RUL, object drawing), Youssef Zu'bi (then YU, photography).

In the field were the area supervisors Nazar Turshan (especially squares D/D7, C/I+J13 and the test pits south of the tall) and Eveline van der Steen (squares on the N-slope; she also conducted a small scale, site oriented, regional survey to add data con-

cerning the transitional period Late Bronze Age - Iron Age). Square supervisors were: from YU Mohammed al-Jamrah (B/D+E9), Mohammed Dayri (D/A7), Mohammad Jeradad (D/B7) and the students Deyar Haddad (D/C7 and C/I+J14), Nabil Ali (B/A4) and Ibrahim Abdullah (D/D7 and C/I+J12). Khaled Daghlās supervised during two weeks.

From RUL: Debora Zuidwijk (square B/D7+8), Kien van Rijn (C/P14), Manon van Diemen (B/B4, D/C7) and the students Jennifer Peersmann (B/H3), Anna Labadie (C/P13), Dick Grapendaal (B/E+F7), Lucas Petit (B/D+E8) and Xander Veldhuijzen (A/G1). Four of the Dutch members stayed only one month. Other Dutch members were the archaeozoologist Lambertus van Es (University of Groningen; he also collected a lot of recent bone material for a comparative collection) and the anthropology student Natasja van de Lint (University of Amsterdam); she was doing an ethnoarchaeological study of use of space in Debab Dayr 'Allā; we thank Mr and Mrs Amin Kanan for their hospitality in this respect.

We are grateful to the chief cook Abu Ramadan for his vital contribution and to the YU drivers Hikmet Alawneh and Abu Ahmed for their logistic help.

We like to mention here also the elementary contribution by the experienced foremen of the dig, namely Sadik Abdullah Khalef (from ar-Ruṣayfah) and several others from Dayr 'Allā and vicinity Amin Kanan, Gemil Kanan, Mahmud Shobash, Ahmed el-Hawamdeh, Mahsin Mustafa, Haithem Salameh and others. We also thank the workers, sherd washers and those that took care of camp accommodation.

We appreciate very much the interest of the guests that visited our camp and the site, including Dr Anneke Clason, head of the Department of Archaeozoology of the University of Groningen. Another guest was Mr Fuad Haurani, who took a number of micro-morphological samples for a better under-

standing of several of the archaeological sediments.

IN MEMORIAM

It is very important for us to ask for the reader's attention for the loss of three people that have served the archaeological project of Dayr 'Allā during many years in no small way and with great devotion.

Ali Abdulrasul Hajaj

Abu Said was known as one of the "Jericho men". He was born in Jericho and was hired as a worker by the late Dame Kathleen Kenyon for her excavations of Tall as-Sultān in the 1950s. He was trained by the late Dame Kenyon as a foreman in stratigraphical digging and distinguished himself as an expert in section making. Henk Franken worked with Ali in the Jericho excavations and together they formed a strong unit for stratigraphical digging. When Franken started his excavations of Tall Dayr 'Allā in 1960 he took Ali with him (see Franken 1991). His job there during the five seasons up to and including 1967 was not only the expertise in digging and section making, but also teaching the craft to others and organising and motivating the workers for the job. He had a strong contribution to stratigraphic analysis and had an excellent eye also for objects and materials of interest to the archaeologist. He could not read but one of his most important contributions to archaeology was the discovery of writing in ink on the first appearing pieces of lime plaster, that turned out to be part of the Balaam Text. The war of 1967 and the subsequent occupation of the West Bank brought Abu Said with the other three Jericho men to 'Ammān to be permanently available through the Department of Antiquities for expertise digging. Ali worked on many sites, including Bayḍa and Saḥāb. However, gradually his sight became less. Hospital treatment could not prevent his be-

coming almost blind. He very much needed his strong personality and open mind to retain his dignity. He became employed at the Department of Antiquities in the pottery mending laboratory, but also continued to work in the field with all the Dayr 'Allā excavations up to and including 1987. He had trained the sensitivity of his ears and fingers to remain an expert in digging and making sections and in teaching others. Ali Abdulrasul became fatally ill in July 1988 and died a few weeks later.

Cynthia Ann Franken-Battershill

Ann was born in 1930. She travelled a lot with her parents and stayed abroad for some time, but she graduated in archaeology at the University of Durham (UK). She took the opportunity to join Dame Kathleen Kenyon at her excavations of Tall as-Sultān in the 1950s. She worked there as a supervisor during several seasons and she took part in the discovery of several of the Neolithic human skulls. It was during this work that she met Henk Franken from Holland who also joined the Jericho excavations. This meant a milestone on the road of her life and they married. It was during this time that her suffering from rheumatism made itself manifest and more and more difficult for her to move; soon she was condemned to continuous use of a wheelchair. Nevertheless, Ann was a very active member of the Dayr 'Allā excavations from 1960 up to and including 1967. She joined Henk Franken not research, but also in management and writing. With her strong will she was able to continue her archaeological fieldwork, of course limited to camp work, but dealing with general ideas and management, and more specifically registration and conservation. Her personality made her of great social importance both in camp and for the villagers, because she cared for those she met. Gradually her personal life became more and more independent and separated from archaeological work. The use of the wheel-

chair did not prevent her to do a lot of gardening and study international law, making use of her rich experience with Jordanian and Palestinian people. Her contribution to archaeology became of a different nature. Her English translations of Dutch manuscripts include many concerning Dayr 'Allā and they are read all over the world, the last one being *Picking up the threads...* Her understanding and compassion made her a friend of many. She became fatally ill in the spring of 1992 and died on June 3.

Muhammad Hussein Saleh Al-Jamrah

Muhammad al-Jamrah was born at ad-Dawāymeh, a village west of Hebron, in 1936, but fled with his parents in 1948. As a refugee he stayed some years first at Ḥalḥūl and later at Jericho, where he went to school, but stayed for work in 'Ammān during summer. After his exams in 1962 he lived permanently in 'Ammān at al-Wiḥdāt camp and started his work at the Department of Antiquities. At first he was a telephone operator, but Dr Awni Dajani sent him as a representative to his first dig: with Dr Henk Franken at Tall Dayr 'Allā in 1964. Subsequently he became a clerk at the Department, was transferred to Jarash and married in 1965. His four months stay in 1966 in Athens at the Department of Antiquities there was very important, not only for his education in restoration and tourist development, but also for his knowledge and understanding of the "Western World". After another season at Dayr 'Allā in 1967, he came back to 'Ammān and followed courses (often during holidays) at the Arabic University of Beirut and got his BA, majoring in history, in 1971.

In the 1970s a major job was the collection of items for the Folklore Museum with Ms Hadiyeh Abadhah. He was proud of this and enjoyed this work very much. He continued to have a keen eye for the importance of ethnographic objects. He also worked at Departments in other Arabic countries, such

as Bahrain in 1978. Meanwhile he was representative at a number of excavations, such as those off Ṭabaqat Faḥl, Tulūl ad-Dahab, Bāb adh-Dhrā' and again at Dayr 'Allā from 1976 to 1979.

His connection with Dayr 'Allā became very strong in 1982 when the Dayr 'Allā Station was built. He became the keeper of the Station and took his family with him to the village, still employed by the Department at first, but by Yarmouk University since 1985. He not only served the Dayr 'Allā excavations of 1982, 1984, 1987 and 1994, but also other expeditions that used the Station, such as those at Abū Ḥāmid, Tall as-Sa'idiyya and Tall Abū Ṣarbūṭ, as well as individuals and groups staying at the place for research and other visits. He looked after with visitors of the site and small museum, worked with Dayr 'Allā pottery and he was advancing in ethnographic

and ethnohistoric data collection - being concerned about the heritage and the future.

However, his life was not without problems and worry. His diabetes was one of them and caused him some difficulties. A new problem appeared in the beginning of 1994, a malfunctioning of his heart. Medicine and caution did not prevent the heart attack that caused his death on September 12, 1994.

His companionship and his honest advice and judgement are a constant and dear memory.

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