

Report on present condition of Akhenaten Temple Project 01
'Pennsylvania' magazine
August 2008

Introduction

From 5–17 August, 2008, a preliminary survey was made of the present condition of the approximately 16,000 Akhenaten talatat stored in the Akhenaten Temple Project magazine (ATP 01), on the western side of the Khonsu Temple, also known as the 'Pennsylvania' magazine. The survey was carried out by Jocelyn Gohary and Rawya Ismail, and a digital photographic record was made by Matjaz Kačičnik. This survey and record was essential in order to plan for the next stage of the project, which will involve cleaning, conservation, photography, database recording, and re-storage of the talatat in an area or location yet to be determined.

The talatat, which are of a uniform size, 52 x 22 x 26 cm, are piled in 14 stacks, each approximately 15–16 metres long and about 2.5 metres high (8–9 courses of blocks), arranged on either side of a central aisle. The stacks are 'double-sided', i.e. the talatat are arranged back to back, so that the decorated surfaces are visible on both sides, and each side of the stack has a separate number, e.g. 1 and 2, 3 and 4, etc. (see attached plan).

Between the 14 major stacks there were originally lower stacks, many of them containing talatat decorated on more than one surface. However, most of these appear to have been dismantled at some stage, and their blocks laid alongside the main stacks, possibly in some cases in order to support some of the stacks, which are leaning outwards.

For the purpose of this report, the original ATP stack numbers have been used, as in most cases the label with the stack number is still in place at each end of the stacks, and the ATP plan of the magazine is attached to the back of the door.

The talatat were stacked on low brick mastabas, but the ground level is irregular, and in several places burrowing by foxes, or other animals, has piled up earth against the lowest course of talatat. This factor, as well as ground water and the passage of time, has resulted in damage to the lowest course of blocks in each stack, causing some blocks to crumble on the underside, or even split, or shatter. Rain water has come through gaps in the roof in some places, and left streaks of mud down several courses of talatat in most stacks.

The majority of the stacks are no longer entirely vertical for their whole length, most of them leaning inwards or outwards to a greater or lesser degree, some of them dangerously. Two adjacent stacks, 9/10 and 11/12, have largely collapsed eastwards, (in the direction of the Khonsu Temple), and many of their blocks are scattered on the ground. Presumably some of this type of damage has been caused by earth tremors over the past 30 years, as well as burrowing animals.

A large proportion of the talatat have some kind of thin 'crust' on the surface, particularly those with little paint surviving, but as this is visible on photographs from the 1960s, it is likely to be due to the location at which the talatat were re-used in ancient times, and which was susceptible to ground water damage. In the case of these talatat, they appear to have come principally from the north wing of the Second Pylon, or the foundations of the Hypostyle Hall.

About 75% of the talatat in the magazine retain most of their original paint, but they are all covered with a thick layer of dust, those in the stacks against the wall of the Khonsu Temple even more so, because the gap in the roof is wider at this end.

Condition of magazine

As a new storage area for these talatat has not yet been decided on, there is a strong possibility that they will be returned to the present magazine for the time being. A brief survey was, therefore, made of the condition of the magazine building. This is a brick structure, erected in about 1956, which has small barred windows just under the roof on the north, south and west sides. The east side abuts directly onto the west wall of the Khonsu Temple. The roof consists of sheets of corrugated conglomerate, which is still mostly in place, but there are gaps where the sheets have shifted. The roof sheeting is supported inside the building on wooden rafters resting on narrow brick piers (two bricks thick), with a wooden strut giving extra support here and there. Most of the brick piers seem to be sound, except for the ones beside the collapsed stacks 9/10 and 11/12, which are supported by wooden struts and metal clamps.

Condition of individual stacks

Stack 1

The stack is generally in good condition, with just slight 'bulges' here and there. Almost all of its 9 courses are in place, apart from some missing pieces nearer the aisle end from the 6th~9th courses. (This is where a block was extracted in 2004, for inclusion in the second Akhenaten talatat wall on display in the Luxor Museum. The missing talatat are probably among those on the ground beside the stack). Only one brick of the mastaba is now visible, so the talatat are very close to the ground, and most of those in the lowest course have been affected by damp. Many are crumbling on the underside, while some have actually cracked or shattered. Rain water leaking through the roof joints has also damaged a number of the blocks in the upper courses.

There are some talatat on the ground beneath the stack, maybe from what was Stack 51, which was originally piled up against the outer wall opposite the stack.

Stack 2

This is the reverse side of Stack 1, and is also generally in good condition. There is less obvious ground water damage to the talatat in the lowest course on this side, although some blocks in the upper courses have been affected by rain water leakage through the roof.

Some blocks are lying on the ground against the stack, (but have not fallen, as they look arranged in lines), or are piled in the middle between Stacks 2 and 5. These are presumably from Stack 52/55.

Stack 3

The first part of the stack near the central aisle is in reasonable condition, but most of the last 6~7 metres near the window end are leaning inwards, so any movement of blocks could cause them to fall that way. The ground is level and the brick mastaba visible. Most of the talatat in the lowest course appear to be sound, but some in the upper courses have been damaged by rain water coming through the roof.

A section of Stack 53 was originally on the north side of the magazine under the window opposite the end of Stack 3. These are now perhaps the talatat piled haphazardly against the west wall at this end. The remainder of Stack 53 was originally standing against the west wall, and these are presumably the blocks now piled against the length of Stack 3.

Stack 4

The stack is in poor condition, as it is leaning dangerously outwards (towards Khonsu Temple) for about half way along from the central aisle to the end by the window. The brick mastaba is visible for almost half way from the central aisle, then the ground level rises until at the window end it is almost completely covered. Many of the blocks in the lowest course are affected by damp.

The talatat now piled against the north end of Stack 4, and a further 26 or so blocks on the ground near the central aisle end of the same stack, are presumably the blocks from Stack 54/57.

Stack 5

The condition of the stack is fair, but it is leaning inwards slightly near the central aisle end. The ground level is higher, so almost all of the brick mastaba is covered with earth, causing the lowest course of talatat to be affected by ground water, and some blocks have split.

There are about six or seven gaps in the roof, one of them near the window being 25~30 cms wide. Rain water has come through these gaps, causing damage to the surface of several courses of blocks at these points. There are a number of talatat on the ground at the beginning and end of the stack, and about two-thirds of the way along, 5 or 6 blocks appear to be missing from the 8th and 9th courses.

Stack 6

The stack is leaning outwards dangerously 3~4 metres from the aisle. The brick mastaba is visible, but low, and some of the blocks in the lowest course have been affected by damp. Rain water has also dripped heavily through the roof in places, causing damage to several courses of blocks, and possibly washing away some of the paint, of which few traces remain. Some talatat are missing from the upper courses of the stack, but these may be some of the ones now lying on the ground beside the stack.

Stack 56/59 is no longer in place between Stacks 6 and 9, but the blocks now on the ground alongside these two major stacks are presumably from this stack.

Stack 7

The stack is generally in good condition, although it is leaning outwards slightly (towards the door) about half way along for about 6.5 metres. The brick mastaba is just visible at the beginning of the stack, but the ground rises from about half way along, and at the window end the lowest course is half covered by earth. However, the visible blocks do not appear to show many signs of damp

Talatat piled along the stack, and apparently giving it some support, are presumably those originally in Stack 54/57.

Stack 8

The condition of the stack is generally good, apart from a slight bulge outwards about two-thirds of the way along towards the window. The ground is more or less level, and the brick mastaba is visible. Some blocks are missing from courses 5~9 for about 1.5 metres near the window end. The missing blocks are possibly those lying on the ground. Stack 58/61 is no longer in place, but the blocks from this stack are presumably those now piled on the ground against Stacks 8 and 11.

Stack 9

This stack is in a very bad state, dangerous and unstable, as the middle section has collapsed eastwards (towards Khonsu Temple) in two places, and the rest of the stack is leaning that way. Most of the top courses are missing, and are now presumably amongst the pile of blocks beneath Stack 10. The individual blocks still in place are in reasonably good condition, maybe because the roof is better sealed in this area. At least one brick of the mastaba is visible, but what one can see of the lowest course has been affected by damp.

There are 15~20 blocks next to the wall by the window, which may be from Stack 56/59.

Stack 10

The stack is in extremely poor condition, most of the middle section has collapsed and the rest is leaning eastwards. There are many broken blocks in the collapsed section, but it is impossible to tell whether they were broken when the stack collapsed, or whether they were originally so. Many red bricks were used as fill when the stack was erected, and may have contributed to its instability. Two of the brick pillars opposite the collapse are supported with wooden struts and metal clamps. The brick mastaba is visible here and there, but some blocks in the lowest course have been affected by damp.

It is difficult to tell whether blocks piled on the ground against Stack 10 are from Stack 60/63, from the collapsed section of Stack 10, or a mixture of both, although a pile arranged near the middle between Stacks 10 and 13 does appear to be remains of Stack 60/63.

Stack 11

The stack is very poor condition, the whole stack leaning inwards (towards Khonsu Temple), and blocks from the upper 5~6 courses in the middle section have fallen down between Stacks 12 and 15. This is the continuation of the same stack on the other side of the magazine, Stack 9/10, which is in a similar, if not worse, state.

There are about 20 talatat at the end of the stack near the window, which may be part of Stack 58/61. The blocks on the ground seem generally sound, except for 2 or 3 among those nearer to the window, which are crumbling.

Stack 12

This stack is also in a very dangerous condition, like Stack 11, but the condition is worse this side, as the blocks fell this way when the middle section of the stack collapsed. The rest of the stack is leaning outwards. The brick mastaba is visible, but most of the second half of the stack has collapsed, and some of the blocks lying on the ground are shattered or crumbling.

The pile of collapsed blocks presumably contains talatat from Stack 62/65, as well as from Stacks 11 and 12. Part of what may have been the middle section of Stack 62/65 is still in place near the central aisle, and some talatat near the window probably also belong to this stack.

Stack 13

The stack is in reasonably good condition, but earth is heaped up against it, so that about two-thirds of the lowest course is buried, and the rest is affected by damp. The brick mastaba is not visible at all. Two of the upper courses near the beginning of the stack appear to be missing. There is little rain water damage.

Stack 14

The condition of the stack is fair, with most of the talatat in place, but the stack is leaning in and out in places, and the middle section is unstable. There are many headers and broken pieces of talatat in this part, which may contribute to its instability. The ground level beside the stack is higher, and the mastaba is buried, so the lowest course is damp. Blocks on the ground have also been much affected. At the window end, on the end of the stack, and for the first 2 metres of the stack, the lowest course is completely covered by earth, which is heaped up at this point.

In Stack 64/67 under the window, the lower blocks are also damp. Other blocks originally in Stack 64/67, are presumably those now mostly against Stack 14, and a few opposite, against Stack 17.

Stack 15

The stack is in reasonably good condition, with almost no blocks missing, but is leaning outwards slightly. However, earth is piled up against the lower courses opposite the collapse of Stack 12 as far as the window end, and covers parts of the lowest course of talatat. The brick mastaba is not much visible from the aisle end on.

Stack 16

The condition of the stack is fair, but it is leaning in and out in places from the middle onwards. The mastaba is visible until the last 1.5 metres near the window, where the ground level rises and earth is covering the mastaba. This has caused damage from ground water to blocks in the lowest course, where crumbled blocks are very obvious.

As for the intermediate Stack 66/69, the first section near the central aisle is probably as originally stacked, and the rest is now piled haphazardly against Stack 19. The window section probably consisted of those blocks now collapsed because of animals burrowing.

Stack 17

The stack is in reasonable condition, with most pieces in place, but it is leaning slightly eastwards. The lowest course has been affected by damp, as the ground level is higher, rising further near the window, and only one brick course of the mastaba is visible.

Stack 18

The condition of the stack is generally good, but it is leaning outwards slightly about a third of the way along from the central aisle. The brick mastaba is visible, and talatat in the lowest course seem to be mostly sound until nearer the window, where they are badly affected by ground water for the length of about 4 metres.

There is no sign of Stack 68/71 near the window. The stones in the middle section are in 3 small stacks; there were originally 4, but the last stack near the aisle is missing, although blocks now lying on the ground against Stack 18 may have come from this.

Stack 19

The stack is in reasonable condition, but is leaning inwards slightly from the middle on. Most blocks are in place, but the top 3 courses at the window end have fallen, or been taken off. The brick mastaba is just visible, until the last few metres of the stack near the window, where the ground rises and earth covers about half the lowest course for the length of approximately 2 metres. The lowest course and parts of the mastaba have been affected by damp, especially at the beginning of the stack, and there is some rain water damage in places.

Some of the blocks that belonged to the window section of Stack 66/69 are still in place, and most of the middle section is now piled against Stack 19.

Stack 20

The condition of the stack is reasonable, but the ground level rises from about half way along, covering the mastaba, and the mastaba and lowest course of talatat are badly affected by damp. Several blocks are shattered and many crumbling. There is also some damage to several of the upper courses from rain water coming through the roof nearer to the window end.

Blocks from the intermediate Stack 70/73 are presumably those in the middle between Stacks 20 and 23, and others beside Stack 20.

Stack 21

The stack is in good general condition, and the brick mastaba is mostly visible, except for about 4 metres near the central aisle end, where earth is piled up, and some blocks in the lowest course are affected by damp. Others in the upper courses have been damaged by rain water leaking through the roof joints.

Stack 22

The condition of the stack is reasonable, and the ground more or less level, except for a mound of earth about 3 metres from the window. Most of the blocks in the lowest course seem fair, except for a few, some by the earth mound and towards the window. The roof is apparently better sealed here, as there is little damage to blocks from rain water.

Talatat piled at the window end of the stack are presumably from Stack 22/25.

Stack 23

The stack is in fair condition, leaning very slightly eastwards, with almost all blocks in place. The mastaba is visible all the way along, although the ground level rises slightly towards the window. Signs of damp affect can be seen on blocks in the lowest course from about half way along the stack towards the window.

Talatat piled at the window end of the stack are presumably from Stack 70/73.

Stack 24

The stack is in reasonably good condition, though leaning outwards slightly in parts. Some blocks are missing from the top 6-9 courses at about 4 metres from the window, but are possibly on the ground below the gap. The mastaba is mostly visible, although the ground level rises towards the window, and some blocks in the lowest course have been affected by damp. Rain water leaking through the roof has also damaged quite a large number.

Remaining blocks of what was Stack 74/77 are now piled against Stack 24, and a few against Stack 27 at the window end. Many of those lying directly on the ground have been affected by ground water.

Stack 25

The stack is in good condition, but about 6 or 7 blocks from the top one or two courses near the middle appear to be missing, although they may be on the ground below the stack. The ground is more or less level, but some talatat in the lowest course have been affected by damp. There are also a few blocks of poor quality sandstone.

There are several blocks on the ground beside the stack, and many small fragments, which were presumably originally parts of Stack 72/75.

Stack 26

The condition of the stack is good, although a few blocks are missing from the upper one or two courses about 4 metres from the window. These are possibly the blocks now on the ground below this gap. The ground level is higher on this side of the stack, only one mastaba brick being visible (cf. Stack 27/28). Earth is piled up for about 2 metres approximately a quarter of the way along from the central aisle. Some of the lowest course blocks are shattered, and/or affected by ground water, but the majority seem in reasonable condition. Rain water has also come through the roof in 3 or 4 places.

Stack 27

The stack is generally in good condition, apart from a section near the central aisle, which is leaning inwards slightly. The 4 brick courses of the mastaba are visible for almost the entire length of the stack, although there is a slight rise in the ground level near the

window. The lowest course, therefore, seems sound, except for those blocks in the last 2~3 metres near the window. Damage from rain water coming through the roof is minimal.

About 20 blocks piled near the window end of the stack may be from Stack 74/77.

Stack 28

The general condition of the stack is good, although it is leaning outwards very slightly in parts. The ground level is higher on this side because of earth being heaped up, so the lowest course is somewhat affected by damp. The brick mastaba is just visible, apart from about 4 metres near the central aisle, where earth is piled against the lowest course. There are no loose blocks on the ground beneath the stack.

Conclusion

The present condition of the Akhenaten talatat stored in this magazine is unsuitable for their long term preservation, and accessibility to scholars. Most of the stacks are in an unstable condition, several of them leaning dangerously inwards or outwards, and two of the major stacks (9/10 and 11/12) have largely collapsed. Expert advice should be taken, therefore, before moving any of the blocks. Many of the talatat in the lowest courses are suffering from the affects of ground water, and are crumbling, or breaking up, so these in particular require conservation. Those in the upper courses are in reasonably good condition, but require cleaning, as they are covered with a thick layer of dust. However, a considerable number have been damaged by rain water coming through gaps in the roof.

If the present magazine is to continue to be used for storing the talatat, there are a number of improvements to the building which should be carried out. The brick mastabas on which the talatat are stacked need to be raised and made non-porous, and the floor of the magazine needs to be cleared, as there are heaps of earth made by burrowing animals, such as foxes, between and up against most of the stacks. The brick piers supporting the roof should be checked, and reinforced where necessary, and the roof should be replaced, as gaps between the corrugated sheeting have allowed rain water to run into the magazine, damaging blocks in the upper courses of the stacks.

The talatat should be recorded individually with photographic images, using modern digital technology. This will not only provide a record of the carved relief on the blocks, but also of the paint surviving on the talatat, as well as other information, and can form the basis of an electronic archive, which could be accessible to scholars.

The stacks of cleaned and conserved talatat should be covered with plastic sheeting, or some other form of protective covering, to minimize the accumulation of dust, and prevent further possible damage from rain water coming through the roof.

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