

INTRODUCTION.

1. Tell el Amarna is one of those sites which are of the greatest value for the history of Egyptian civilisation. It had a shorter life than perhaps any other town in the land. From the remaining indications it appears to have only been occupied for a single generation ; and hence everything found there is well dated. The limits are even closer than at Kahun, Gurob, or Defenneh ; and hence I had a particular object in exploring the ruins of the palace and the town.

After some delay I obtained permission from M. Grébaut to work in the town, but not at the tombs. I then fetched five of my old workers from Illahun and reached Tell el Amarna on 17th Nov. 1891. A few days were occupied in building huts and looking over the ground ; and on the 23rd November I began work. In three days I found the painted pavement at the palace, and in a fortnight the government began to build the house to protect it ; which was paid for, however, by the English Society for the preservation of the monuments. The second pavement was next found, and by the end of January 1892 the building was finished. During the remainder of my time I was occupied in cleaning and copying the painting, and fitting in a raised gangway, so that visitors could see it all, without the risk of injuring it by walking over it. At the beginning of January I had the pleasure of being joined by Mr. Howard Carter, who undertook to excavate certain parts of the town on behalf of Lord Amherst of Hackney. In this way I secured a greater amount of research, without entailing more work on myself ; his special field being the great temple, and parts of the town. We finished active excavations on the arrival of Ramadan at the end of March. Work at the pavement house, drawing there, and packing our results occupied two months ; and by the beginning of June

I reached the Ghizeh Museum with 132 cases. The objects brought to England were exhibited in the autumn. The representative collection of all the objects was presented to the Ashmolean Museum at Oxford, and will be exhibited in the new museum there, forming the most complete collection of the work of Akhenaten.

The survey work on the desert was done in five or six vacant days at various times. A triangulation was made in the plain, which included all the main points of the hills around ; and from these fixed points I carried back all the valleys by pacing and compass, counting steps all day, and going from twenty to twenty-six miles on different days. The accuracy that can be reached by pacing and compass was better than I could have expected ; the discrepancy, on a circuit of many miles up and down valleys, being only 1 per cent. of the distance.

2. We settled to live at the village of Haj Qandil, fixing at the north-east of the houses, and building a row of mud-brick huts as we needed them. Such rooms can be built very quickly ; a hut twelve feet by eight taking only a few hours. The bricks can be bought at tenpence a thousand ; the boys make a huge mud pie, a line of bricks is laid on the ground, a line of mud poured over them, another line of bricks is slapped down in the mud so as to drive it up the joints ; and thus a wall of headers, with an occasional course of stretchers to bind it, is soon run up. The roof is made of boards, covered with durra stalks to protect them from the sun ; and the hut is ready for use, with a piece of canvas hung over the doorway. Such a place is far better than a tent to live in ; and on leaving we found that every native was so afraid that we might give away the materials to some one else, that we had offers for all our bricks, boards, and straw, at nearly the new price.

3. Great changes have taken place since my last volume appeared. The regulations then settled for the protection of excavators have all been swept away

in a fresh political bargain. For the present, however, the question is not urgent, as the new and energetic Director M. de Morgan has shewn the greatest goodwill toward scientific work. Some day new and impartial conditions will have to be made about the whole department, in which at present no Englishman can hold any appointment. The personality of the Director may however prevent the need of such changes for a time.

The present excavations have been carried out in association with the same friends as before. Mr. Haworth and Mr. Kennard have joined with me in the cost, and a part of the site was worked by Mr. Carter on behalf of Lord Amherst of Hackney. Mr. Griffith, Professor Sayce, and Mr. Spurrell, have given me great assistance in their own special lines. The delay in issuing this volume is due to some illness, and to much work in connection with the organising of the new library and collections established by the will of my cordial and constant friend Miss Amelia Edwards, at University College, London. Her loss is a great blow to the popularising of Egyptology in this country; but her bequest may, in a different manner, lead to the progress of the subject. An almost complete library, and considerable technical collections of dated objects for study, will, we may hope, induce many to follow the subject who could not do so without such assistance.

CHAPTER I.

THE SITE.

4. The ruins of Tell el Amarna lie on the eastern bank of the Nile, at the border of Middle and Upper Egypt, about a hundred and sixty miles above Cairo. They have been known throughout this century to the explorer, and are now frequented even by the ordinary travellers who come in twos and threes off the select *dahabiyeh*, and in dragoman-led streams from the tourist steamer. The sites of the temples and palace have been often plundered by the passing collector, and everything visible and portable has long since been removed from thence; but no systematic excavation had been attempted, and no record remained to shew from where the various pieces now in museums had been taken. A few years ago a man of the village Et Till attacked the celebrated tombs in the cliffs, and cut away everything that seemed

saleable and easily removed, in the same way that the tombs of Beni Hasan and El Bersheh were wrecked, and much has now irretrievably been lost. The present century has, therefore, done its worst for the place in every way; and all that I could hope to secure would be the most inaccessible remains of what both the ancient Egyptian and the modern Egyptologist had plundered as completely as they could. This is very late in the day to attempt any regular examination or study of such a site; but better late than never, was all that could be said.

The name of Tell el Amarna seems to be a European concoction. The northern village is known as Et Till—perhaps a form of Et Tell, the common name for a heap of ruins. The Beni Amran have given their name to the neighbourhood, and the village of El Amarieh may be also in the question. But no such name as Tell el Amarna is used by the natives, and I only retain it as a convention, used in the same way as we use the names Leghorn or Japan. The name of the founder, commonly known as Khuenaten, is more correctly Akhenaten, which transliteration is here followed.

5. The site of the town is a wide plain on the east bank of the Nile (see Pl. XXXV), hemmed in at each end by cliffs which descend almost into the river. This plain is covered with the sand and *débris* which were deposited by the prehistoric high Nile, and it is one of the most perfect sites that is possible for a great town. There is unlimited space for building, the whole plain being about five miles long and three miles wide; this is four times the area of Cairo, and not more than a tenth of the area was actually occupied. The ground slopes gently down to the river, and the soil is clean yellow sand.

Such was the site selected by Akhenaten for his new city, and no trace has been found of any buildings or occupation of the plain at an earlier date. The ideas of the king will be dealt with in the last chapter; but briefly we may say that, in order to carry out new principles, this king, at about 1400 B.C., left Thebes and settled at this site, and here he produced in a few years an entirely new city, in which his new ideas found free scope. His successors soon abandoned both his principles and his practice; and within a few decades of his death every part of his construction was eradicated or destroyed with the greatest zeal. No trace of any other occupation can be found till fifteen hundred years later, when a Roman camp and town was planted on a different part of the plain. Hence we have to deal with a very brief period, and

everything Egyptian found here belongs to a single generation.

6. The geological features of the plain deserve notice. Around it are four great valleys, which discharged their torrents during the ages of rainfall (see PL. XXXIV). At the north end a widely-ramifying valley, or rather three united valleys, drained the area toward El Bersheh. In the middle of the east side a long valley runs back into the desert, and was selected by Akhenaten for his tomb. South of that a shorter valley discharges between two striking headlands of cliff; and at the south-east corner is a wide structural valley, over two miles across, quite different to the other three, which are mere gorges. This wide valley drains the desert for a long way back, its branches running up north behind the other valleys. The scenery in these gorges is wild and often grand; deep clefts in the plateau wind and twist, continually altering their direction, between vertical faces of rock, two or three hundred feet high. The beds of the torrents are heaped up with fallen masses, and the path leads sometimes up a staircase of rounded blocks.

A remarkable feature is the number of depressions in the limestone strata, which are otherwise quite horizontal. Three such are seen: one at the mouth of the triple north valley, one two miles up Akhenaten's valley, and one at the mouth of a short valley a mile east of Hawata. In each case the strata are level on either side, and suddenly curve down, sometimes with faulting, to a depth of two hundred feet or perhaps more. Such a fall can only be accounted for by the collapse of a vast cavern, worn in the limestone by the subterranean discharge of rainfall to the level of the Nile at a far lower depth than at present; and hence these point to the Nile-bed being really a deeply-faulted gorge, which is now almost filled up by deposits. These depressions must have formed lakes, and have thus determined the drainage lines of their valleys.

The desert plateau, which is about 400 feet above the Nile, is not uniform in character. In some parts it is a smooth plain, only slightly grooved by shallow valleys: elsewhere it is deeply cleft by the drainage gorges, or weathered into a confused mass of broken hills and peaks. These latter usually accompany the deposits of alabaster, and are probably the result of varying hardness and resistance to weathering. The highest points of the peaks are usually masses of crystalline carbonate of lime or Iceland spar; and particularly on the hills of the north valley are spaces

of many yards across, composed entirely of translucent spar glittering from every cleavage, but not clear enough for optical use, at least on the surface.

7. The alabaster quarries were worked from the earliest times. At the south-east, ten miles from the river, is the quarry opened in the IVth dynasty by Khufu. It is an open circular pit with vertical sides, about 200 feet across and 50 feet deep; the bottom is encumbered with heaps of waste on the south part, and around the sides are crystalline faces of alabaster. It is reached by a broad sloping way cut in the rock, on the west side of which, near the pit, are the names of Khufu (PL. XLII). Elsewhere in the pit are names of Pepy I., Mehtiamsaf, and Pepy II.; the latest name is that of an official, Sebekhotep, which shews that the quarry was used until the XIIth dynasty. This quarry was reached by a road which is traceable on the plain of Tell el Amarna, and must have started from a landing-place a little to the south of El Amarieh. It runs to the low hills, which bear a way-mark of a cairn of black stone; this is piled up from the stones which strew the desert, the lumps of hard limestone and the flints being covered with a black-brown coating by exposure. Such cairns are thrown up on many points of the desert to direct the workmen. Passing this way-mark the road is skilfully carried past the top of a valley, and avoids all steep ground until it reaches the main range. This it ascends by the easiest way that there is in all the cliffs, and it then skirts the head of a deep valley, where it is carried by a high causeway that is still sound and firm; this causeway has been widened and repaired in early times, perhaps by the kings of the VIth dynasty. Thence the road avoids all rough ground, and skirts the south edge of a great flat plateau, which does not drain in any direction. Groups of hut circles are found along it at different places; and passing another valley head by a slight causeway (at C), it runs direct to the quarry. As this lies on a slope to the south, the great waste heaps around it are not seen from a distance. This quarry was first visited by Mr. Newberry, guided there by the Arabs last year; and the inscriptions in it prove it to be the celebrated quarry of Hatnub, from whence Una obtained the alabaster altar for the pyramid of Mehtiamsaf. It seems also, by the name of Khufu, to have been the source of the great blocks of alabaster in the granite temple at Gizeh. All the inscriptions have now been copied by Messrs. Blackden and Fraser.

In the XIIth dynasty this quarry seems to have

been deserted in favour of a new alabaster quarry, R, about a mile to the south-west of it. In a narrow side valley there lie two quarries; the western one is partly subterranean, the entrance parts being tunnelled, and the inner part being opened to the sky. There are many tablets of the XIIth dynasty here, but as most of them were only painted they have nearly disappeared. The best is one that records a keeper of the recruits, Petuameny, under Usertesen III. (PL. XLII); others name a private person Teta. Just beyond this quarry the valley has been excavated into a shallow pit, in which there are no inscriptions. These quarries were found by Mr. Fraser, guided there by the Arabs last year.

Other quarries, T, lie in a valley about three-quarters of a mile to the east, but they contain no inscriptions. I found them while surveying this region. The high rock marked on the plan is a striking point from all sides; upon the top are model flights of steps, only a few inches wide, cut by the ancient workmen. There are traces of an ancient road, along the broken line on the plan XXXIV, branching at the valley head from the IVth dynasty road; pieces of alabaster lie scattered along this road, occasional way-mark stones are set up, and a group of huts occurs half-way. The valleys of these quarries slope down to the south, and evidently join into a large valley which drains into the great valley south-east of the plain.

Turning next to the northern quarries, one already noticed by Wilkinson is at the head of two valleys running opposite ways, quarry G. This is an open pit of alabaster, of large width, but not deep. It is approached by a sloping trench from the W., and some niches for tablets occur in the sides, and traces of a tablet now illegible; from the style it looks early, not later than the XIIth dynasty.

In a spur of the hill between the valleys is a limestone quarry, H, facing toward the peak of white rock on the top of the cliffs; it is cut as galleries into the cliff face, and contains the cartouche of Queen Thyi (PL. XLII), in the wide cartouche band which is characteristic of the art of Tell el Amarna. This is of importance, as proving the queen's sole regency after the death of Amenhotep III., and her adoption of the peculiarities of style before Akhenaten. I found this quarry while surveying the region.

Another quarry, L, contains the names of Ramessu II. and Merenptah; this is only inserted approximately, as it was found by Mr. Newberry after I had left. It seems to have been the source of

alabaster for the XIXth dynasty. Strange to say, no one has yet succeeded in finding the alabaster quarry of Akhenaten; great quantities of this stone were used in the palace here, but the source is yet unknown, although I followed up every road that I could find.

8. The ancient roads are of four classes: (1) the patrol roads of the *mazau* or police; (2) the roads to the quarries; (3) the roads to the tombs; (4) the roads to the steles.

The patrol roads run from end to end of the plain, or along the crests of the hills, or into the desert. They are marked out by the pebbles being swept off from ten or twenty feet width of ground, and heaped in a ridge on either side: or in more remote parts they are merely indicated by way-marks on the ridges of the country. In the plain they take advantage of any rise of the ground to run over it and command a view; the foothill in the middle of the plain was a favourite point of inspection, and every road but one runs over it. An isolated round hill at the foot of the southern range was also a look-out station. That these roads were only for patrols is proved by their nature; they run up slopes on the hills which would be impossible for a chariot, while easy ascents could be found near by; in the long desert road the straight line is carried across the tip of a spur with a rise of 20°, instead of turning round it. Such roads then could not be for royal chariot drives, nor for transport of stones, but rather like our coastguard paths to keep the patrols from wandering off the line in the dark. In the plan (PL. XXXV) the connections of the roads are unfortunately not completed, owing to my foot being disabled during the last weeks of my stay at Tell el Amarna; Mr. Carter very kindly completed the survey this year, but his map with all the notes was lost in the post. The roads were really continuous from end to end, but are much broken up and washed away in many parts by the torrents from the valleys. The roads along the crests of the hills are also for patrolling, and not for travelling. The road is very well defined where it passes above the stele U, and runs on without hesitation to the small valley south of the stele. Here it abruptly ends, at a sheer fall of about three hundred feet, and is resumed on the other side in the same line. No man could possibly get across, or even climb down and up, at this point; and, if transit had been required, it would have been quite easy to diverge around the head of this little valley. There is no sign of such a continuation, however, and the roads must have been

used by patrols who only needed each to secure their own beats and to challenge each other across the valley when they approached at the ends of the roads. The long road running into the desert near this point is also a patrol road by its steep gradients for short distances. It is on the whole most skilfully laid out to skirt across the heads of the valleys which run either way, and keep the highest and most even ground. It is well made near the beginning, and gradually deteriorates, until it is only marked by occasional stones; and it does not lead anywhere in particular, but is untraceable beyond a wide valley, which runs south, beyond the limits of this map (PL. XXXIV). The roads to the quarries we have already noticed.

The roads to the tombs are the best known of these roads, and are entered on the map of Lepsius (Denk. I. 63); but they were only there surveyed by their bearings from the tombs, without actually tracing their course on the plain. They were probably used both for the workmen, and for the funeral processions. The northern tombs have roads converging, and leading to a square enclosure. Within this are remains of several mounds, of which an enlarged plan is given in PL. XLII. The northern mound has a brick wall enclosing a square space filled with desert sand, a large part of which I dug out fruitlessly; it was evidently a basis for some object, as four ascents lead up to it, one on each side. The middle mound has one ascent, and two small mounds by it. The southern mound has four ascents, which suddenly break off before touching the mound; it seems to have been cased with stone which has been removed, leaving these gaps on each side. From the figures of great altars with sloping ascents, shewn in the views of the temple court in a tomb here, and the altar with sloping ascent at Der el Bahri, it seems that these are a group of altars, probably intended for offerings on behalf of the occupants of the northern tombs.

9. We now pass to the steles, which are more fully shewn on this map (PL. XXXIV) than in any previous account, though probably there yet remain others to be discovered. They are here lettered with discontinuous letters, so that others may be inserted in the series in future, without upsetting the lettering here adopted. We begin with the western bank.

Stele A.—This bears the king and queen on the north side of the scene at the top, adoring the Aten southward. 8 columns of inscription and 25 lines. On the south of the stele are two pairs of statues of

Akhenaten and Nefertythi holding altars before them with two daughters in relief; but with three daughters—Atenmeryt, Atenmakt, and Ankhsenpaten—incised on the sides of the altars. The stele is carved on a good face of rock, but much of it is weathered away. It is published in Prisse, Mon. Eg. PL. XIV.

Stele B.—This is two miles south of stele A, on the most striking cliff along the western desert, the prominent corner of which towers up vertically, and is known as El Qalah, or “the castle.” It has figures of the king and queen and two daughters repeated on both sides of a central altar and Aten disc, in the top scene. 7 columns of inscription and 27 lines. On each side of the stele are statues of the king and queen holding altars. It has been much disfigured by Arabs in 1885, who have hammered on names, Reshwan and Said, and date (1)303. Portions of the upper inscriptions are published by Lepsius (Denk. III, 91, a–f). M. Daressy (Recueil XV, 61) writes of statues near Dirweh “mais la stèle n’a pas été gravée ou a disparu.” Either there are some monuments besides stele B which escaped my examination, or else he has not visited the place, nor seen stele B.

Stele F.—This is on a low scarp of rock, in the middle of a wide bay of desert. The exposed part is entirely destroyed, but by scraping away sand with my hands I uncovered parts of 10 lines, the last 6 being complete. It does not seem to have been known to any one in modern times. The whole stele contained a scene 41 inches high to the under-edge of the Aten disc, and 14 lines of inscription, 55 inches wide. A road runs from it toward Gildeh, as the town is actually called, though the maps name it Dilgu. South of this I have searched all the cliff faces for fifteen miles, up to Mair, without finding any more steles.

10. Crossing now to the eastern bank, the southernmost stele that I have seen is stele J, and none is to be seen for about two miles south of this. This has a scene of the king, queen, and one daughter, adoring the Aten, on the south side of the altar. 8 columns and 9 lines of inscription remain; but the rock is very bad, and has been largely inlaid with pieces now lost, and the whole of the lower part is gone, leaving a great cavity. The rock is smoothed on the north of the stele, as if to begin the usual statues in recesses.

Stele K is the longest of all. It has a scene of the king and queen and one daughter adoring the Aten, and two other daughters have been added later

beyond the margin. The whole was originally 79 lines long ; but the 40th is the last visible, besides traces of numbers 74–79 at the bottom. This probably is the same which Lepsius gives in *Denk.* III, 110 b., as it seems to be indicated on his map, but misplaced.

Stele **L** is a small tablet almost entirely weathered away, only one or two signs being traceable. It is about twenty yards north of the Shekh's tomb at the corner of the hill.

Stele **M** is about ten yards north of **L**. It has the king and queen and two princesses on the south side of the scene, adoring the Aten. 8 columns and 8 lines of inscription, but the lower part quite weathered away. Spaces on each side appear to have contained statues now destroyed.

Stele **N** has the king, queen, and one daughter on the west side of the scene ; the second daughter has been added later. The inscription has been largely cut on inlaid pieces which are now lost, but it accords with stele **S**. 19 lines are visible, and more is buried in the sand. On each side are flat recesses, which probably contain statues now buried. A road leads from the plain up the hill to this stele. The scene is given by Lepsius, *Denk.* III, 110 a.

Stele **P** is in tolerable condition, and appears to be that published by Prisse, *Mon. Eg.* XII.

Stele **Q** was only discovered by Mr. Newberry in 1893, since I left ; hence the position is approximate.

Stele **R** shews the king, queen, and two daughters. It is much injured, partly by loss of inlaid pieces, and also by scandalous destruction in late years in the attempt to chop out pieces, in the same style in which the tombs are wrecked.

Stele **S** is by far the most complete and beautiful of all. It has figures of the king, queen, and two daughters on each side of an altar, adoring the Aten. It is 5 feet wide and 8 feet 3 inches high. A photograph and copy is published by M. Daressy in *Recueil* XV, 52, but I cannot agree that Prisse professed to publish this in his *Pl.* XIII, which rather seems to me to be stele **P**, not seen by M. Daressy. The list given by this explorer only contains eight, and he has not seen **B** (?), **F**, **J**, **K**, **P**, **Q**, or **V**. A complete squeeze of it was taken by me ; and a plaster cast was exhibited with the antiquities from Tell el Amarna, and is now preserved at University College, London. The condition of the stone is marvellous, no appreciable weathering or loss having taken place on it, although it is fully exposed.

Stele **U** is the largest of all, being 14½ feet wide and about 26 feet high ; it is on the side of a bay of the cliffs with a road leading up to it across the plain. The king, queen and two daughters are on the south side of the scene adoring the Aten. 3 columns and 24 lines of inscription, most of which is perfect. On either side is a recess with statues of the king and queen more than life-size, holding altars ; although battered, the king's head yet remains on his northern statue. The inscription I copied by telescope from the opposite side of the bay. It is published—with many errors—by Prisse in *Mon. Eg.* XII.

Stele **V** is extremely weathered away ; so much so, that though close to the well-known tombs, it had never been noticed until I searched for it in consequence of noticing the road running up the hill to it. There are only about a dozen signs remaining, including a mention of a tablet, the distance between the tablets, and the end of an Aten cartouche. Stone walls have been built in front of it forming several chambers (see *Pl.* XLII) ; but these are probably of later date, when many habitations were formed in these cliffs, especially behind some rock masses between steles **U** and **V**, where the face of the cliff has slipped forward and left a long tunnel behind it. These dwellings appear to be of the late Roman age by the pottery thrown out ; possibly due to refugees from the Roman town in the plain, at the Arab invasion.

It seems almost certain that other steles have existed on the bold cliff north of the plain. But I carefully searched the whole of the face as far as the mouth of the valley beyond the corner, and although the cliff faces are magnificent, both for surface and position, not a trace of a stele can be found. As two plain tomb facades remain there in perfect condition, nothing has disappeared from weathering. We can only say that if steles existed here, they must have adjoined the quarries over the river, and have been destroyed by later quarriers working there. The text of these steles is usually the same, but **K** contains a longer and apparently different account. The subject of the standard text records that a district named Akhutaten, with its villages and inhabitants, was dedicated to the Aten, and gives the length of the district between the terminal steles from north to south, in the sixth year of Akhutaten, who swore never to pass outside of these boundaries. In the eighth year he recorded a visit of inspection to the south-eastern tablet, and confirmed his oath.

CHAPTER II.
THE PALACE.

11. The position of the palace of Akhenaten is evident from the nature of the buildings. There are but three sites possible—the two marked “temples” and that marked “palace” on the plan (PL. XXXV), as there are no other buildings of great extent. The “great temple” site is not suited for the palace, as it only contained one main building, and that situated a long distance from the river. The other “temple” site also only contained one building, not very large, and approached through great pylons. But the site marked “palace,” on the other hand, cannot be a temple, as it will be seen from PL. XXXVI that it has not a single usual feature of the temples. On the contrary, the numerous painted pavements in it, the grouping of several structures of varied form and elaborate finish, the presence of vase fragments with the king’s name, with pieces of Aegean pottery, and the situation opening to the river-bank all along, point to this as being clearly the royal palace. I therefore excavated over nearly all of the site, and have recorded the varying remains which I found on PL. XXXVI.

There are four kinds of remains to be traced—(1) the brick buildings, which are marked in solid black ; (2) the stonework columns and bases in the brick buildings ; (3) the foundations of the stone walls marked as a double line of blocks. In all cases the stones have been removed down to the very lowest, and not a single block was found in place ; but these foundations, being deep, have left a wide trench in the native sand where they were extracted, which is now filled with chips and earth ; and by tracing these trenches, often 6 or 8 feet deep, we could follow the lines of the walls. (4) There are broad cement beds, marked here by diagonal shading. Whether these supported buildings or pavements we cannot be certain.

12. We will begin at the south end of the site. Here we meet the great hall of brick pillars, surrounded by a double wall, which also runs the whole length of the palace next to the high road. Probably this was arched over above, and supported chambers on the walls ; but the sides are still upright for 8 or 9 feet in some parts. The object of this double wall would seem to be as a protection against thieves, as three or four men in such a passage could guard the whole palace from any one attempting to dig through the mud-brick walls. The open spaces at the south

end are not understood. They are about 3 feet lower than the ground level, and therefore seemed at first sight like fish-ponds. But on clearing around the edge nothing was found but clean native sand at the bottom, and it would have been impossible for them to hold water. There is a similar enigma in the town, where I uncovered a pit about 100 feet square and 10 feet deep ; it was lined with a brick wall and surrounded by a brick paving, but the bottom was only clean sand. There is no entrance to the hall here, all three walls being solid across the middle line.

The great hall is 423 ft. 4 ins. wide, and 234 ft. 7 ins. long ; it contained 542 pillars, each 52 inches ($2\frac{1}{2}$ cubits) square, and with spaces of 107 inches (about 5 cubits) between them. The middle passage is 173 inches wide, or about 8 cubits. The pillars are all of mud-brick, but very little remains of them, the site having been all apparently dug for earth ; and we learn more from the other halls to the north, which were undisturbed. In these the pillars are also 52 ins. square, but rather closer together, being from 98 to 104 ins. apart. Each hall contains 40 pillars, making 702 in all the halls. These pillars were white plastered, with a small torus-roll up the corners, and the ceiling was of mud plaster, painted with vine-leaves and bunches of grapes on a yellow ground. The purpose of these great halls seems to have been for a cool shade to wander in during the heats, the great mass of the pillars serving to cool the air, and rendering this almost like a subterranean retreat. In the south-east corner of the south-east small hall, many wine and oil-jars had been cast aside ; they mostly bore dates in the year 2, which appears to be of the reign of Akhenaten’s successor (see Chap. V.) ; hence these halls were then falling out of use and becoming lumber-holes. It was probably at this time that the doorway to the great hall was walled across, as I found it, the gates having been removed and a brick wall run across the pivot blocks. The purpose of thus cutting it off was probably to prevent thieves harbouring in its forest of pillars, when it had become disused. Not a chip of stonework was found in the whole of these halls, except the sill and pivot-blocks of the great doorway.

13. Outside the halls at the north-east is a series of store-rooms, and it was in these that the blue paste fragments of a vase, with the names of king and queen, were found (PL. XIII, 27), along with other fine pieces ; and in the passage in the wall were pieces of Aegean pottery, engraved glass (PL. XIII, 36), &c. This set of store-chambers appears to have been added after

the thick wall was built, leaving only a narrow passage at the corner of that.

Beyond this the stone foundations seem to be without any regularity, and we cannot guess at the design of the building. All we can glean is that a great entrance way ran along the line marked "alabaster pavement," as several massive blocks of alabaster were found in this trench, each with figures of bound captives, like those on the passage way of the painted pavement. Also near this, on the north, were large bases and portions of capitals, and an abundance of the stone hieroglyphs from inlaid inscriptions, shewing this to have been a highly-ornamented part of the palace.

Coming more to the east, remains of two alabaster steles were found, lying on two slightly-raised bases of small blocks and cement. The gap in the cement bed between these, being all clean sand, seems as if it was an entrance, with a stele on each side. But the purpose of the cement bed is yet unexplained. These steles are all of one type, shewn in PL. XII, 2. They are found in all materials. A hard white limestone one in the great temple enclosure is inscribed on both sides (now placed in the pavement house); pieces of red quartzite, black granite, and red granite steles are found in the temple and elsewhere, and alabaster steles in the palace. It seems as if every important place were signalized by a dedicatory stele to the Aten. All the steles are alike in design; the ends are not wrought, but the top has a curved surface between the rectangular edges, with large cartouches on it, and the line of the top is always sloping slightly down to one end. The object of this peculiar form is unknown.

Returning to the south-east, we see a small cement platform which must be for an isolated building. North of it is a small brick building; north of that a mass of brickwork, with a cement bed adjoining it, at the east edge of which, and in the trench of foundations, were found the fragments of the vine columns (PL. VIII). The middle of the length of the palace is marked by a great pylon or gateway, of un-Egyptian form, across the main road; it had two footways, and a wider chariot-way, between them, like a Roman triumphal arch. The side walls run deep back into the structure of the palace, and that of the large house on the other side of the road; and the depth of these suggests that they were needed for arch abutments, and that the ways were arched across.

North of this are varied small buildings. One contains painted pavements in almost every room (marked P on the plan); and in the chambers east of this

some pieces of stone column were found. The reeds of these were not grouped, but were similar all round, and treated angularly (see PL. VII, 1).

14. The only part of the palace which shews a regular plan is the building against the outer wall, on the north east (see PL. XXXVI). Though part of it is wholly washed away by denudation, we can trace a symmetrical design in the remains. From the retired position of this, in the innermost part of the palace enclosure, from the fine ornamentation of the floors covered with painting, from the elaborate stonework, the gorgeous glazed-ware decoration, the number of sleeping cubicles, and the queen's name and titles fully set out on the well-coping, it seems most likely that this was the queen's pavilion, or *harem*.

The entrance seems to have been at the southern end of the pile, as there were no considerable chambers north of the cubicles. Of the first hall, marked "Painted pavement," only the north and east sides remained, and a part of the painted floor along those sides. This led to a wide cross-chamber, 21 feet 4 inches long, and 51 feet 3 inches across, the painted floor of which is almost perfect (PL. II). Thence the door led into the open Court; and the central object in that was the well, covered with a canopy supported on finely-sculptured pillars. This well must have been the main point to the eye, in looking along the axis of the building through the open doorways. Of this Court one base of a column remained, shewing that it had a colonnade around it. The wall at the sides was probably open above to light the side passages, like the dwarf walls and pillars of Thothmes III at Medinet Habu. The passage roofs were supported by a row of stone columns down the middle, the fragments of which lead to the restoration given in PL. VII. The cubicles opening off the passage are remarkable. They are 6 × 8 feet in plan. Within the doorway is a thin wall 13 inches from the doorway, and 8 inches thick. And in the two back corners of the chambers are blocks of brickwork, 21 inches wide and 24 inches deep back. The purpose of these seems to be for supporting a sleeping bench along the back of the chamber, 2 feet wide and 6 feet long; while at the sides ran other benches, 15 inches wide and 5 feet long, on which to sit or to place personal articles. These side benches being supported on dwarf walls, clear of the door wall, left space for a curtain to hang down over the doorway to screen the room. The original height of these benches, the supports of which are mostly ruined, is shewn by the plastering above the

supports, which is 33 inches from the floor. This is the first time that the arrangement of bedrooms has been traced in Egypt. The larger rooms on the south, with one central pillar, and two small rooms opening from them, might be for some chief attendants, as the size—10 × 12 feet—is not enough for a common hall. The queen's private room might be the side hall marked P 1, which was the most highly decorated part, the columns having been covered with glazed-ware modelling of plants. The courtyard was probably closed along the north side by a colonnade which is now destroyed. In the court stood the well we have noticed. This was only shallow, about 15 feet deep, and quite irregular at the bottom. The upper part was lined with stone, and pieces of a stone coping with rounded top lay near it, doubtless from the dwarf wall around it; these bore the full titles and name of the queen (base of PL. X). The fragments of the beautiful pillars found around it will be noticed further on. As this well was only filled during the inundation, water was needed from a greater depth at other times; and a *sakkieh* or water-wheel appears to have existed at the other end of the court. The remains of it are indicated by two deep trenches in the ground, about 2 feet apart, from which the natives have lately abstracted all the stone; the stone walls which were here seem to have been the sides of a pit for the water-wheel and chain of jars, to draw water from a depth.

The fragments of colossi of quartzite and red granite, shew that outside of this *harem* building must have been one of the most decorative parts of the palace. But the wide expanse of open sand, on which no trace of remains now exists, prevents any conclusions about this. It may have been an open court or parade-ground; and upon the cement basis possibly stood the high gallery facing the north, from which Akhenaten is represented throwing down wreaths to the people. Further north are remains of a building with blocks of mortar paving, concrete hearts of walls and sculptured fragments, and outside of that a long deep foundation of a wall, which seems to limit the palace in this direction. As the trenches, (which shew where the natives have dug for stone in the foundation lines), run down into the cultivated ground toward the river, and the river level must have risen here as elsewhere, it seems likely that more of the palace extended westward toward the river; and it is possible that we have only the back of it remaining here, and that the whole of a symmetrical river frontage has been lost under the crops.

Certainly the absence of any scheme in the greater part of the structures is surprising, as the whole was executed at one period. But there seem signs of a change of design, as a very long deep foundation can be traced just west of the *harem*, and running south for 600 feet without any connection with adjacent buildings: and the large isolated brick building in the middle of the area runs across a similar deep foundation. The store-rooms and painted rooms, P, also seem to have been forced into the plan with little regard to the larger works. As however not a single fragment of sculpture earlier than Akhenaten was found anywhere, and not any name later than his on the sculptures—except Horemheb once in the great temple—we must attribute any changes to the rapidly-developing ideas of Akhenaten, rather than to a succession of rulers.

15. We now turn to the architecture.

The only columns that can be restored directly are those of the gallery in front of the cubicles. The various fragments found there indicate the form shewn in PL. VII, 3. For restoring these we have the bases of the columns, pieces of the spring of the stems to the first band, an intermediate band, the large upper band, the ducks, the band above, and the lower part of the capital; the top of the capital I have reduced from a fragment of a great capital of this palace. The only point of doubt is the number of intermediate bands: I have allowed one, (which is left blank here) as being likely from the proportions. According to the columns in the rock-cut tombs the height would be but 3·4 diameters to the base of the capital; this proportion would exclude an intermediate band here, and so reduce this column to 3·5 diameters or 65·7 inches, *i.e.* 77 with the capital. As however this seems unduly low, and rock-cut columns are generally thicker than others in their proportions, I have credited this column with one extra band, thus raising it to 4·1 diameters. The lotus capital columns of Sety I and Ramessu II are 3·7 and 4·5 diameters, so that 4·1 is just the average. The portions of inscription on the bands shew exactly how much has been recovered. The type of the columns is an imitation of 8 bundles of reeds, each bundle shewing 4 reeds on its outer surface, which is thus composed of 8 segments of circles, each broken into 4 smaller segments. This reeded part was coloured a yellow olive. The springing leaves at the base and at the capital are coloured brownish pink. The corresponding parts of the glazed columns of the S.E. painted chamber are apple green, and brown, puce, or yellow. The bands

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are painted yellow, with blue in the incised hieroglyphs: probably these were engraved bands of bronze, on the glazed columns.

This type of column was varied slightly in the small chambers of the block south of the *harem*. Here the reeds were not grouped in bundles, but all uniformly ranged around, and each treated angularly with an edge outside, as in PL. VII, 1.

Both of these types of columns were used in the palace front, as is shewn by the fragments found on the western side. But the size in this part was far larger, some columns being as much as 5 feet diameter; hence their height in proportion would be 20 feet, and the capital 3 feet more, or altogether nearly the size of the columns of the Ramesseum.

16. Some other varieties of type were also used here. The pieces of palm leaf and date capital (PL. VII, 4, 5, 6) shew a design which is not met with again until the Ptolemaic times. But the most striking of all these capitals must have been those inlaid with coloured glazes. These capitals were of the old palm leaf form (PL. VI), which was known in the XIIth dynasty, and was used down to Roman times. Instead, however, of merely indicating the ribs and leaves, they were developed by inserting alternating colours along the leaves, and then the intervening lines of stone were gilded. Thus the capital was a copy of the favourite cloison work of the Egyptian jewellers, in which minute segments of rich stones were set each in a fitting nest of gold, so as to produce a brilliant device, in which every spark of colour was separated from the next by a line of gold. Such, indeed, was the main principle of the use of gold and light colours in Egypt, to serve as a brief break between larger spaces which might otherwise harshly interfere.

Here the jeweller's design was boldly carried into architecture on the largest scale, and high capitals gleamed with gold and gem-like glazes. Not to be wasteful the Egyptians often substituted mere painting for all this gold and inlaying, probably in the parts which were less open to daylight. The actual evidences that we have for this are painted pieces of such capitals with the hollows alternately red and blue, and the ribs and bars all yellow; pieces of capitals of exactly the same form with the hollows filled with coloured glazes let in; and pieces of glaze which still retain the edge of the gilding adhering round their edges, although all gilding has perished from the limestone. This edge of gilding sufficiently shews that the parts otherwise painted yellow were actually

gilded in the more costly inlaid capitals. In the restoration there is no direct evidence for the colour of the bands below the capital; but pieces of columns with wide bands of red and blue were found in the smaller temple, and on this capital the broad gold rib is flanked by blue glaze next to it; hence the restoration that I have adopted.

17. Two other types of columns are quite peculiar to this place. Those of the well in the *harem* court were surrounded by bands of figures of the king, queen, and princesses adoring, and with bands of decoration not found elsewhere. In PL. X the fragments of these are drawn. At the top is a chequer network, the traces of colouring on which shew that the net lines were yellow, and the spaces red and blue chequerways. Next is a regular Egyptian garland of lotus petals threaded together; and below that a scale pattern. These elements apparently occupied this relation, as the fragments shew us; a continuation is carried out in broken line to connect the design. Another design was of spiral pattern; which, though common in colouring, is not known otherwise in Egyptian sculpture. The raised spiral was yellow, and the spaces alternately red and blue. Below it came a garland; and then a zigzag pattern. The position of these bands in relation to the figures is not known. The fragments of figures and cartouches shew delicate work, but nothing fresh in design.

The other peculiar type of column was found in the region marked "vine columns." The form was as strange as the decoration, many of the fragments not belonging to circles, but shewing irregular flattened sections, as if even the cylindrical column had been abandoned, and variety and naturalism sought by copying the curves of tree trunks. The surface decoration (PL. VIII) is unique in Egypt, and can only be paralleled in mediæval art. Winding branches of a climbing vine twist around the column in wild confusion, their leaves turning in all directions and overlapping, with a pointed disregard of any symmetry or pattern. The pieces found have been arranged on the plate so as to give some continuity in the stems, in order that the design may be more easily grasped; but none of them really fit, and some are of limestone, others of soft sandstone.

Much the same decoration is shewn on two pieces of the great stele of the temple (PL. VIII, top). It evidently represented the king, queen, and princesses, life-size, adoring the Aten; and over the top of the stele hung a mass of trailing vine (using the word in