

# THE ROYAL TOMBS OF THE I<sup>ST</sup> DYNASTY.

## INTRODUCTION.

1. The work described in this volume is but a portion of that carried out during the past winter, 1899-1900. In most places it is essential to finish the work in one season, and therefore to include everything in one volume. But as Abydos is a subject for several years' work, there is no need to delay the issue of the most important results while the lesser but more tedious matters are being prepared. Hence this volume does not profess to be complete, but is only some advance sheets of a longer publication which will be completed next year. Large quantities of the more bulky materials, such as jar sealings and pottery, have been left undrawn, to await issue in future; and the whole of the results of the periods of the XVIIIth Dynasty and onward will appear in a later volume. The present plates are but a portion of the material from the Ist Dynasty, with a brief account of the subjects, but so important a portion that we do not wish to keep it back for a year or two, or even a month. This has led to reversing the order, and issuing it before last year's results from Diospolis Parva, but the relative importance of the two is sufficient reason for this course.

The materials here published were prepared in Egypt during the excavating season, and some two hundred photographs and the draw-

ings for over forty plates were brought home ready to use. My wife drew the tomb plans and all the marks on pottery, and I have to thank Miss Orme for inking the drawings of jar sealings. Thus I have been able to put everything in the printers' hands within eighteen weeks from the beginning of the excavations. I need not refer to our party at Abydos in detail, as, excepting a little occasional help, the work on the royal tombs, and the photographing and drawing, was my own share of the season's work. Mr. MacIver worked on the prehistoric age and a temple of the XIIth Dynasty; Mr. Mace on the cemetery of the XVIIIth to XXVth Dynasty; I worked some cemetery of the prehistoric and of the XXXth Dynasty; and for the Egyptian Research Account Mr. Garstang worked a cemetery of the XIIth and XVIIIth Dynasties. All this material, of much interest historically, will be published after it has been properly worked up. Some of the photographs need apology; my plates were soon exhausted by the great number of objects, a further batch from England did not arrive, and I had to fall back on very unsatisfactory plates, which were the best to be got in Cairo. Messrs. Waterlow's phototypes are better than I could have expected from such negatives.

2. It might have seemed a fruitless and

thankless task to work at Abydos after it had been ransacked by Mariette, and been for the last four years in the hands of the Mission Amélineau. It might seem a superfluous and invidious labour to follow such prolonged work. My only reason was that the extreme importance of results from there led to a wish to ascertain everything possible about the early royal tombs after they were done with by others, and to search for even fragments of the pottery. To work at Abydos had been my aim for years past; but it was only after it was abandoned by the Mission Amélineau that at last, on my fourth application for it, I was permitted to rescue for historical study the results that are here shown.

Nothing is more disheartening than being obliged to gather results out of the fraction left behind by past plunderers. In these royal tombs there had been not only the plundering of the precious metals and the larger valuables

by the wreckers of early ages; there was after that the systematic destruction of monuments by the vile fanaticism of the Copts, which crushed everything beautiful and everything noble that mere greed had spared; and worst of all, for history, came the active search in the last four years for everything that could have a value in the eyes of purchasers, or be sold for profit regardless of its source; a search in which whatever was not removed was deliberately and avowedly destroyed in order to enhance the intended profits of European speculators; a search after which M. Amélineau wrote of this necropolis: "tous les fellahs savent qu'elle est épuisée." The results in this present volume are therefore only the remains which have escaped the lust of gold, the fury of fanaticism, and the greed of speculators, in this ransacked spot. These sixty-eight plates are my justification for a fourth clearance of the royal tombs of Abydos.

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PUBLICATIONS REFERRING TO THE ROYAL TOMBS.

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|-----------------|---|
| J. DE MORGAN.   | <i>Recherches sur les Origines de l'Égypte</i> , ii., 1897. ( <i>Account by G. Jéquier.</i> ) |
| E. AMÉLINEAU.   | <i>Les nouvelles Fouilles d'Abydos. Compte rendu</i> , 1895-6.                                |
| "               | " " " " 1896-7.   |
| "               | " " " " 1897-8.   |
| "               | " " " " <i>in extenso</i> , 1896-7.   |
| "               | <i>Le Tombeau d'Osiris (monographie)</i> , 1899.  |
| G. MASPERO.     | Reviews in <i>Revue Critique</i> (Jan. 4, 1897; Dec. 15, 1897).                               |
| K. SETHE.       | <i>Ältesten geschichtlichen Denkmäler</i> , in <i>Zeitschrift f. A. S.</i> , xxxv. 1.         |
| W. SPIEGELBERG. | <i>Ein neues Denkmal</i> , in <i>Zeitschrift f. A. S.</i> , xxxv. 7.                          |
| A. ERMAN.       | <i>Bemerkung</i> , in <i>Zeitschrift f. A. S.</i> , xxxv. 11.                                 |

## CHAPTER I.

### THE SITE OF THE ROYAL TOMBS.

3. Abydos is by its situation one of the remarkable sites of Egypt. At few places does the cultivation come so near to the edge of the mountain plateau; the great headland of Assiut, the cliffs of Thebes, or the crags of Assuan, rival it, but elsewhere there lie generally several miles of low desert between the green and the mountain. At Abydos the cliffs, about 800 feet high, come forward and form a bay about four miles across, which is nowhere more than a couple of miles deep from the cultivation (see pl. iii.). Along the edge of this bay stand the temples and the cemeteries of Abydos; while back in the circle of the hills lies the great cemetery of the founders of Egyptian history, the kings of the Ist Dynasty.

The site selected for the royal tombs was on a low spur from the hills, slightly raised above the plain, and with a deep drainage ravine on the west of it, so that it never could be flooded. Strictly speaking, the river valley, the hill line, and the tomb orientation, are all diagonal to the compass, the sides of the tombs being N.E., S.E., S.W., and N.W. But for facility of description it is assumed here that the river runs north and south, as it usually does in Egypt, and that the tombs lie correspondingly. That the ancient Egyptians recognized the diagonal direction is seen by the corner of the wood-paving of Mersekha being marked "north." In all these descriptions "north" means more exactly 44° W. of N. magnetic.

From the ruins of the Osiris temple by the cultivation, if we stand on the corner commonly called the *Kom es-Sultan*, we have before us the scene shown in pl. i. 1. The broken fore-

ground stretching back for half a mile is part of the historical cemetery of Abydos. The dark walls on the right are those of the fort of the Old Kingdom age, known as the *Shunet ez-Zebib*. And far in the distance near the mouth of the valley is a low dark rise on the desert, formed by heaps of broken pottery around the royal cemetery. The centre of this photograph is marked on the map, pl. iii., as  $\Phi$  1.

Advancing up to the old fort our next view (pl. i. 2) is taken at the side of the little signal heap seen on the further corner of the fort in view 1; marked  $\Phi$  2 in the plan. From that we still have a stretch of the historic cemetery before us. But the distant royal cemetery is clearer, below the mouth of the valley; and the mounds are seen to be one long uniform mass, with a short ridge nearer and a little to the left. The long mass covers the royal cemetery; and the heap to the left is the rise marked as *Heqreshu* on the plan (pl. iii.). This rise is so called as the *ushabtis* of a noble of the XVIIIth Dynasty, named *Heqreshu*, were found here. This ground was a favourite place for high people of that age to have their *ushabtis* buried in, so as to be near Osiris, and ready to work in his kingdom. No human burials were found; but *ushabtis* of some half dozen persons were found here, and about the same number were found by the Mission Amélineau.

We next, in the view (pl. ii. 3), have gone forward to this hillock of *Heqreshu*, to the point  $\Phi$  3 in the plan. The foreground is strewn with broken pottery, of offerings made there in the XVIIIth Dynasty and onward. The mounds over the royal tombs now separate into the

heaps of Mersekha on the left, the great banks of pottery of the Osiris shrine in the middle, and the heaps over Perabsen on the right.

Lastly, advancing a short way further, we reach the first of the great mounds of pottery offerings (marked  $\Phi$  4 on plan), and stand on it, as in fig. 4, looking on to the side of the great tomb of King Zer, which was later adopted for a cenotaph of Osiris. Such is the approach to this strange site, which, from the vast quantities of pottery here, has been called by the Arabs *Um el-Qa'ab*, "the mother of pots."

The situation is wild and silent; close round it the hills rise high on two sides, a ravine running up into the plateau from the corner where the lines meet. Far away, and below us, stretches the long green valley of the Nile, beyond which for dozens of miles the eastern cliffs recede far into the dim distance.

4. Looking at the group of tombs, as shown on pl. iii. and pl. lix., it is seen that they lie closely together. Each royal tomb is a large square pit, lined with brickwork. Close around it, on its own level, or higher up, are small chambers in rows, in which were buried the domestics of the king. Each reign adopted some variety in the mode of burial, but they all follow the type of the prehistoric burials, more or less developed. The plain square pit, like those in which the predynastic people were buried, is here the essential of the tomb. It is surrounded in the earlier examples of Zer or Zet by small chambers opening from it. By Merneit these chambers were built separately around it. By Den an entrance passage was added, and by Qa the entrance was turned to the north. At this stage we are left within reach of the early passage-mastabas and pyramids. Substituting a stone lining and roof for bricks and wood, and placing the small tombs of domestics further away, we reach the type of the mastaba-pyramid of Seneferu, and so lead on to the pyramid series of the Old Kingdom.

The plan pl. lix. is left intentionally in out-

line as the survey is not completed, and until we have accurate plans of the tombs that I have not yet opened, it is impossible to finish it uniformly. It might be supposed that the plans already published would suffice, and that I might incorporate those. But the uncertainties which surround them are so great that it is impossible to rely on them. M. Jéquier, in the *Recherches sur les Origines de l'Égypte*, ii., on p. 232 has given a plan called the "tombeau du roi Ka," but the form is that of the central chamber of Mersekha, and the scale shows it to be 328 inches long, while that of Qa is 428, and that of Mersekha 523 inches; its proportion of length to breadth is as 1:2.28, that of Qa is 1:1.90, and that of Mersekha 1:1.80; it has no entrance, and both Qa and Mersekha have wide doorways. Thus neither in size, proportion, nor detail can it be followed. Turning to the next plan, on p. 233, called "tombeau du roi Den," the length by the scale is 277 inches, whereas the tomb is really about 652 inches; the other details I cannot check until I clear it. The next plan, "tombeau du roi Dja," or Zet, is apparently intended for it, but the chambers differ from the truth in number, size, and form; the size by the scale is 355 × 429 inches, really 369 × 470 inches: and I have not yet found any trace of the passage around the tomb, which seems to be an entire misconception. The next plan, that of the "tombeau du roi Ti" (p. 242)—or as he should be called, Khasekhemui—is by scale 2068 inches long, by measure of the breadth 2840 long, and is stated in the text to be 83 metres or 3260 inches long: probably the text is corrupt and should read 53. The details of the tomb I cannot verify until it is cleared. Turning now to M. Amélineau's plans ("Nouvelles Fouilles, 1897-8"), the "tombeau d'Osiris," that is of King Zer,<sup>1</sup> is

<sup>1</sup> For this reading *Zer* (the bundle of reeds) I am indebted to Mr. Quibell's study of the sealings from here. M. Amélineau reads this sign, however, as *khent* (the group of vases), and always calls this tomb that of Osiris.

shown (p. 39) with the shortest dimension N. to S., in the text the shortest is E. to W.; the detail I have not yet verified. In the plan of the tomb of Perabsen, north and south are interchanged, and the scale is about 1:170 or 180, instead of 1:200 stated; the contraction to the N. end is unnoticed, but details I have not yet verified. It will thus be seen that there was room for some fresh plans to be made of these tombs.

5. The sequence of the tombs is to be carefully studied. As will be seen on pls. xi. 14, xv. 16, the king whose *ka* name is *Den* is also known as the *suten biti Setui*, a name which Dr. Sethe has correctly suggested to be that misfigured in the table of Abydos as Hesepti, the fifth of the Dynasty. Further, by the sealings shown on pl. xxvi., No. 57, the king with *ka* name Azab is also known as Merpaba, doubtless King Merbap, the sixth of the Dynasty. Further, by the sealing on pl. xxviii., No. 72, the king with the *ka* name Mersekha is the seventh of the Dynasty, figured in the Abydos table much like a statue of Ptah, and called Semempses by Manetho. That this is to be read Sem-en-ptah is very doubtful in view of the original form of the figure, which is best seen on the tablet pl. xvii., No. 26; it seems more likely to be a follower, *shemsu*, or possibly a "priest of Ptah."

Beside the absolute identification of three of the kings with those in the list of Abydos, we can add several proofs of relative order from the inscriptions on vases found appropriated by later kings. In this way a vase of Narmer (pl. iv., No. 2) is found in the tomb of Zet, and another erased in the tomb of Den. A vase of Den-Setui (pl. v., No. 11) is found re-engraved by Azab. Many vases of Azab are found erased and re-used by Mersekha, pl. vi., Nos 9-11.

Therefore we may, from the evidence of the tomb inscriptions alone, restore the order of the kings as:—

Narmer

Zet

—

Den = Setui

Azab = Merpaba

Mersekha = Semempses.


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Hence the order of Manetho is confirmed for the three kings who are identified.

We may now turn to the plan, as we can be certain that the order of building is Den, Azab, Mersekha. It needs little notice to see that Qa naturally follows this group. Of the earlier tombs it seems probable that Merneit is before Den, Zet earlier still, and Zer (or Khent) before all these; the gradual pushing back of the tomb sites being pretty clear. We therefore must look on the most eastern tombs as the earliest, and this is confirmed by private tombs to the east of Zer, which contain a jar sealing and a shell bracelet of King Aha. That Aha must come very early in the Ist Dynasty is already clear; the style of his work is certainly ruder than anything else in the Dynasty, and the form of the hawk on his vases is closely like that of Narmer, who comes before Zet and Den. Thus Aha must, from evidence of style, and position of his objects, come within a reign of Mena; and there is no reason for not accepting the identification of him with Mena; especially now that it is shown to be usual for the king's name to be simply written below the vulture and uraeus group.

Thus we are led to the following order of kings:—

By tombs.	Table of Abydos.	Manetho.
Aha . . . .	Mena . . . .	Menes
Zer . . . .	Teta . . . .	Athothis
Zet . . . .	Atet . . . .	Kenkenes
Merneit . . . .	Ata . . . .	Uenenfes
Den—Setui . . . .	Hesepti . . . .	Usafais
Azab—Merpaba . . . .	Merbap . . . .	Miebis
Mersekha . . . .	... ptah?	Semempses
Qa—Sen . . . .	Qebh . . . .	Bienekhes

and we have left yet unplaced King Narmer, who must be before Zet; King Zeser (pl. iv., No. 3), and King D (pl. xxxii., No. 32); these two last seem connected by the title being only two *neb* signs, without the vulture and uraeus. Zeser is before Den, as the piece was found re-used in Den's tomb. King D I found on a piece of vase in the Cairo Museum, where it had lain unobserved. If Narmer came after Mena there would be a difficulty, as there would be four names between Aha and Den, and only three between Mena and Hesepti; but there is no proof but what Narmer may be before Mena, as Zeser and D may be. The position of a king who seems to be named Ket  (pl. xi., No. 12; pl. xvii., No. 28) is also uncertain; the piece was found by the offering-place of Qa.

Thus though the Dynasty is nearly all restored in order, entirely owing to the work of this year, yet there are several puzzles still remaining for future work to solve. And the relation of the tombs of Perabsen and Kha-sekhemui to the others is quite untouched.

6. We may now notice the appearance and history of the royal cemetery in later times. The tombs as they were left by the kings seem to have been but slightly heaped up. The roofs of the great tombs were about six or eight feet below the surface, an amount of sand which would be easily carried by the massive beams that were used. The lesser tombs had about five feet of sand over them. But there does not seem to have been any piling up of a mound; not only is there no such excess of material remaining, but the condition of the steles, as we shall next describe, shows that the level of the soil remained uniform for a long time, whereas a mound would have been continually degrading and accumulating blown sand.

On the flat, or almost flat, ground of the cemetery the graves were marked by stone steles set upright in the open air. The great stele of Merneit (frontispiece) shows clearly the

level to which it was buried; below that point the stone is quite fresh, above that the exfoliations are due to moisture soaked up from the earth, and the upper part is sand-worn. Other small steles show very plainly the lower part absolutely fresh and unaltered, and the upper part deeply sand-worn; the division between the two being within a quarter of an inch.

Each royal grave seems to have had two great steles. I found two of Merneit, one almost perished; there were two of Qa, one found by the Mission Amélineau, one by myself; and though only one has been found of Zet and Mersekha, yet one such might well be lost, as none have survived of Zer, Den, or Azab. The steles seem to have been placed on the east side of the tombs, and on the ground level. Those of Merneit had fallen into the tomb on the east side, the fragments of steles of Mersekha lay on the east side, the stele of Qa lay on the ground level at the east side, and close by it were many stone bowls, one inscribed for "the priest of the temple of Qa."

Hence we must figure to ourselves two great steles standing up, side by side, on the east of the tomb: and this is exactly in accord with the next period that we know, in which, at Medum, Seneferu had two great steles and an altar between them on the east of his tomb; and Rahotep had two great steles, one on either side of the offering-niche east of his tomb. Probably the pair of obelisks of the tomb of Antef V. at Thebes were a later form of this system. Around the royal tomb stood the little private steles of the domestics (pls. xxxi.—xxxvi.) placed in rows, thus forming an enclosure about the king.

7. The royal cemetery seems to have gradually fallen into decay; the steles were blown over or upset wantonly, and the whole site was neglected and forgotten in the later ages. There are no offering vases there of the pyramid age, nor of the Middle Kingdom. But the revived grandeurs of the XVIIIth Dynasty awakened

some interest in the tracing of the history. Tahutmes III. had a roll of ancestors compiled, which though very erratic, yet showed an interest in the past; and Sety I. succeeded in having a fairly correct list made, in which a few blunders occurred in the early names, as we see by the differences between the inscriptions of the 1st Dynasty and the Table of Abydos, but which seems to have been historically in order. This revived the interest in the cemetery which tradition had known as that of the early kings. Offerings began to be made to the kings at their tombs; but very blindly, as several places which did not contain any royal tomb were heaped up with potsherds, while some of the royal tombs (as Merneit and Azab) had scarcely anything placed on them. In this uncertainty the rise marked "Heqreshu," pl. iii., was evidently supposed to be important, though there was nothing older there than a Vth or VIth Dynasty tomb of an official named Emzaza.

A great impetus to offerings was given by the adoption of one of the royal tombs, that of king Zer, as a cenotaph of Osiris. The granite bier of Osiris placed in it was probably of the XXVIth or a later Dynasty; but in the XVIIIth Dynasty the site had been adopted as the focus of Osiris worship, the earliest of the pottery heaped over it being the blue painted jars which came in under Amenhotep II. or III. The later offerings were mainly of the XXIInd to XXVth Dynasty, during which an enormous pile of broken jars accumulated over the tomb.

In the XXVIth Dynasty a chapel was built here by Haabra, of which part of a door-jamb was found thrown into the tomb of Merneit (pl. xxxviii.); scattered like the fragments of the bier of Osiris, which we found, one by Azab and the other a furlong away on the south. Further building was done here by the Prince Pefzaauneit under Aahmes; but the interest in the site faded under the Persians, and beyond a few stray scraps of Roman pottery and glass there is nothing later found here.

At what time the burning of the woodwork took place is not fixed. It was certainly long after the original burial, as the wooden floors mostly remain quite uncharred, and the walls seldom show any burning toward the bottom. The only tombs with burnt floor are that of Merneit and part of Mersekha. In the tomb of Azab it is clear that the roof had let in sand at the south end until the chamber was nearly full, and only the corners of the upper part were exposed to the burning of the roof. Probably, therefore, the burning was due to accident. The tombs were deserted, the roofs broken in, the chambers almost full of sand. Runaway slaves and vagabonds taking refuge here would light fires and use the wood, and thus by accident the great beams would catch fire and be destroyed. Such seems to have been the source of the burning here; certainly it had nothing to do with the funeral, as scarcely any of the objects of wood, ivory, or stone, show any traces of it.

## CHAPTER II.

## DESCRIPTION OF THE TOMBS.

8. THE TOMB OF ZET, pl. lxi. This tomb consists of a large chamber twenty feet wide and thirty feet long, with smaller chambers around it at its level, the whole bounded by a thick brick wall, which rises seven and a half feet to the roof, and then three and a half feet more to the top of the retaining wall. The exact dimensions of these tombs are all given together in sect. 16. Outside of this on the north is a line of small tombs about five feet deep, and on the south a triple line of tombs of the same depth. And apparently of the same system and same age is the mass of tombs marked as "Cemetery W," which are parallel to the tomb of Zet. Later there appears to have been built the long line of tombs which are marked partly Z, partly W, placed askew in order not to interfere with those which have been mentioned. And then this skew line gave the direction to the next tomb, that of Merneit, and later on that of Azab. Such seems to have been the order of construction; but as the great mounds of rubbish, which I have not yet moved, stand close to the east of Zet and Cemetery W, there may be other features beneath them which will further explain the arrangement.

The private graves around the royal tomb are all built of mud brick, with a coat of mud plaster over it, and the floor is of sand, usually also coated with mud. The steles found in the graves around Zet are shown in pls. xxxiii., xxxiv., and the copies pl. xxxi., Nos. 1-16. The places of such as could be at all identified with the graves, are shown on pl. lxi. by the

name from each being written on the chamber plan. Beside these steles there were often the names inscribed in red paint on the walls; these names are drawn in pl. lxiii., and are written close to the south walls of the plans. These painted names are always on the south wall of the chamber, close to the top of it. A patch of whitewash about eight or ten inches square was roughly brushed on the mud plaster of the wall; on that the hieroglyphs were painted with a broad brush. Some lines are pink, owing to the whitewash working up with the red in the brush. On a few are traces of black also. The form of inscription is much simpler than that of the steles; the *ka akh*, "glorified ka," only once appears, and there are no titles or offices, only the name. The *ka* arms often appear; but whether this refers to the *ka* of Du, A, Si, &c., or is really a compound name, Ka-du, A-kat, Si-ka, is not clear. Probably the latter is true, as the feminine *t* is added to the *ka* in two cases, which points to its being in a name. Many of these names were illegible, only fragments of the plaster remaining. Three I succeeded in removing. The few contents of these graves, left behind accidentally by previous diggers, will be fully catalogued in the next volume; a few jars and beads, and two or three pieces of inscribed stone bowls (each marked with their source in pls. iv., vi.), are all that we found.

9. TOMB OF ZET, INTERIOR, pls. lxi., lxii., lxiii. The first question about these great tombs is how they were covered over. Some have said that such spaces could not be roofed,



## DESCRIPTION OF THE TOMBS.

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and at first sight it would seem almost impossible. But the actual beams found yet remaining in the tombs are as long as the widths of the tombs, and therefore timber of such sizes could be procured. In the tomb of Qa the holes for the beams yet remain in the walls, and even the cast of the end of a beam. And in the tombs of Merneit, Azab, and Mersekha are posts and pilasters to help in supporting a roof. We must therefore see how far such a roof would be practicable. The clear span of the chamber of Zet is 240 inches, or 220 if the beams were carried on a wooden lining, as seems likely. Taking, however, 240 inches length, and a depth and breadth of  $10\frac{1}{2}$  inches like the breadths of the floor beams, such a beam of a conifer, supported at both ends and uniformly loaded, would carry about 51,000 lbs., or 2900 lbs. on each foot of roof area. This is equal to 33 feet depth of dry sand. Hence, even if the great beams were spaced apart with three times their breadth between each, they would carry eight feet depth of sand on them; but as the height of the retaining wall is  $3\frac{1}{2}$  feet, the strain would be only half of the full load. It is therefore quite practicable to roof over these great chambers up to spans of twenty feet. The wood of such lengths was actually used, and if spaced out over only a quarter of the area, the beams would carry their load with full safety. Any boarding, mats, straw, &c., laid over the beams would not increase the load, as they would be lighter than the same bulk of sand. That there was a mass of sand laid over the tomb is strongly shown by the retaining wall (see pl. lxii.) around the top. This wall is roughly built, not intended to be a visible feature. The outside is daubed with mud plaster, and has a considerable slope; the inside is left quite rough, with bricks in and out (see photographs on pl. lxiv., Nos. 1, 2, 3). Such a construction shows that it was backed against loose material inside it. The top of it is finished off with a rough rounding. At the S.W.

corner this retaining wall ceases, and it seems as if this were left thus in order to gain access to the tomb for the funeral. The full thickness of the tomb wall stretches out several feet beyond even the outside of the upper retaining wall.

Turning now to the floor, the section is given in pl. lxii., and the view of it in photographs pl. lxiv., nos. 3, 4. The basis of it is mud plastering, which was whitewashed. On that were laid beams around the sides, and one down the middle: these beams were between 9 and 10·8 inches wide, and 7 to  $7\frac{1}{2}$  inches deep. They were placed before the mud floor was hard, and have sunk about  $\frac{1}{4}$  inch into it. On the beams a ledge was recessed 6·5 to 7·7 wide, and 4·7 to 6·0 deep. On this ledge the edges of the flooring planks rested, 2 to 2·4 thick. Such planks would not bend  $\frac{1}{4}$  inch in the middle by a man standing on them, and therefore made a sound floor. Over the planks was laid a coat of mud plaster ·5 to ·7 inch thick. This construction doubtless shows what was the mode of flooring the palaces and large houses of the early Egyptians, in order to keep off the damp of the ground in the Nile valley. For common houses a basis of pottery jars turned mouth down was used for the same purpose, as I found at Koptos.

The sides of the great central chamber are not clear in arrangement. The brick cross walls which subdivide them into separate cells have no finished faces on their ends. All the wall faces are plastered and whitewashed; but the ends of the cross walls are rough bricks, all irregularly in and out. Moreover, the bricks project forward irregularly over the beam line, as outlined in the plan, pl. lxii. This projection is 4 inches on the north, 4 on the east, and  $2\frac{1}{2}$  on the south; and on the east, one of the overhanging bricks had mud on the end of it, with a cast of upright timber on it. It seems then that there was an upright timber lining to the chamber, against which the cross walls were

built, the walls thus having rough ends projecting over the beams. The footing of this upright plank lining is indicated by a groove left along the western floor beam, 3·7 wide between the ledge on the beam and the side of the flooring planks (see plan pl. lxii.). Thus we reach the view of a wooden chamber, lined with upright planks  $3\frac{1}{2}$  inches thick, which stood 3 to 4 inches out from the wall, or from the backs of the beams. How the side chambers were entered is not shown; whether there was a door to each or no. But as they were intended to be for ever closed, and as the chambers in two corners were shut off by brickwork all round, it seems likely that all the side chambers were equally closed. And thus, after the slain domestics (p. 14) and offerings were deposited in them, and the king in the centre hall, the roof would be permanently placed over the whole.

The height of the chamber is proved by the cast of straw which formed part of the roofing, and which comes at the top of the course of headers on edge which copes the wall all round the chamber. Over this straw there was laid one course of bricks a little recessed, and beyond that is the wide ledge all round before reaching the retaining wall. The height up to the top of this course of headers is 89·6 in N.W. chamber, = 90·6 in main chamber, as the floor is 1 inch higher; 93·2 in second chamber N., = 94·2 in main; 90·0 in third chamber S., = 91·0 in main; and 95·3 on mid W. So it varies from 90·6 to 95·3 over the main mud floor. This implies about 92, less 4 for flooring, less probably 12 for roofing, or clear 76 inches height in the chamber. The retaining wall is 38 inches high inside, and 47 high outside.

Having thus cleared up the central chamber, we should notice those at the sides. The cross walls were built after the main brick outside was finished and plastered. The deep recesses coloured red, on the north side (see pl. lxiii.), were built in the construction; where the top is preserved entire, as in a side chamber on the

north, it is seen that the roofing of the recess was upheld by building in a board about an inch thick. The shallow recesses along the south side were merely made in the plastering, and even in the secondary plastering after the cross walls were built. All of these recesses, except that at the S.W., were coloured pink-red, due to mixing burnt ochre with the white. In the outlines of pl. lxiii. the condition of the walls does not profess to be exactly as at present, but more or less broken down, so as to show the plan and detail more clearly. The purport of these recesses is quite unknown; but they can hardly be separated from the red recesses on the walls of the central halls of houses at Tell el Amarna, of the XVIIIth Dynasty. There was also a red recess, with a scene of worship of the tree goddess painted over it, in a gallery of the Ramesseum. It seemed from that as if these red recesses were false doorways for the worship of domestic spirits. Possibly this may be connected with the red recesses of this tomb. The supposition that these recesses were to hold steles is impossible, in view of the sizes of the steles, and the finishing and colouring of the recesses.

10. THE TOMB OF MERNPT, pls. lxi., lxiv., lxv. This tomb was not at first suspected, as it had no accumulation of pottery over it; and the whole ground had been pitted all over by the Mission Amélineau making "quelques sondages," without revealing the chambers or the plan. As soon, however, as we began to systematically clear the ground the scheme of a large central chamber with eight long chambers for offerings around it, and a line of private tombs enclosing it, stood apparent. The central chamber is very accurately built, with vertical sides parallel to less than an inch. It is about 21 feet wide and 30 feet long, or practically the same as the chamber of Zet (exactly  $250 \times 354$  inches to the brick walls, the plaster varying from  $\frac{1}{4}$  to 1 inch). Around the chamber are walls 48 to 52 inches thick, and beyond