

THE
PALESTINE EXPLORATION FUND.

—
PATRON.

HER MAJESTY THE QUEEN.

OFFICE-9, PALL MALL EAST, S.W., LONDON.

Reports on Progress of Works at Jerusalem and elsewhere in the Holy Land, by Lieutenant Warren, R.E.

XXXV.

JERUSALEM, December 28th, 1868.

Birket Israil.—On 12th November I related to you that in sinking a shaft in this pool we had come upon filthy water, and had been obliged to discontinue the work on account of the foul smell arising. After a few days had elapsed I had this water baled out, and found that the fresh water which streamed in again on all sides was comparatively clean and pure. By feeling with a jumper, the water was found to stand at a height of 3ft. 6in. above the bottom of the pool, and as the *débris* we had to go through was a mass of loose stones, through which the water flowed freely, it was a matter of some difficulty to get a look at the bottom, because it was not possible to get the water out fast enough to enable us to fix in frames one by one; after some trouble, the space between the last shaft frame and the bottom of the pool (about four feet) was cleared out, so far as the stones are concerned, and then a small coffer dam was let down; it consisted of four shaft frames screwed together and rested on the bottom of the pool; clay had been got up for the purpose and was puddled in behind the frames on all sides; the water was then baled out and the bottom of the pool was exposed.

It has a hard smooth surface, evidently for the bottom of a reservoir; on breaking through, we found first a thickness of plaster, 2½in., very hard and compact, composed of cement and broken pottery; then a kind of concrete, consisting of alternate layers of small stones and mortar, to a depth of 1ft. 4¼in. The plaster and concrete was exceedingly hard, so much so that only small pieces could be broken off with the jumper; we were obliged therefore to have recourse to blasting, and as the water trickled slowly into the jumper holes, the charges were put in glass bottles and rendered water-tight.

We soon had a hole, about 2ft. square, made through the concrete, and there was exposed a surface of hard stone (mezzeh), either the rock or a large paving-stone, apparently the former; a jumper hole 10in. deep was driven into this stone, but it would have been very difficult to have gone deeper without disturbing a greater surface than our dam covered. I had the shaft partially filled in and drove a gallery from it at a depth of 9ft. to the south wall of the pool. There we found the plaster and lining stones precisely similar to those which are seen above and which are fully described by Salzmann.

Specimens of the plaster and concrete from the bottom of the pool are now ready to be sent home.

The shaft sunk was 20ft. from the south side of the pool, and 158ft. from the eastern end; the top of the shaft was 60ft. below the Haram Area level. At the northern end, the depth of shaft to the bottom of the pool was 24ft. 6in., so that the bottom of the pool is at a level of 2,325ft. above the Mediterranean. As a result of the examination, we find that the bottom of the pool, at least in one point, is (or rather was) in perfect preservation, that the pool is upwards of 80ft. deep, and that there is in it an accumulation of stones, refuse, and sewage averaging a depth of 35ft. Should the city be again rendered wholesome and inhabitable in summer by the enforcement of proper sanitary regulations, it would be necessary to remove the rubbish from this pool, and then the Birket Israil, at the expense of rendering the sides sound, might again serve as a reservoir for water.

The results of the examination with regard to settling the question of the position of the rock about the pool are not satisfactory; at the bottom it appears to be rock; but at the side, where the gallery was driven, it appears that the rock is wanting, otherwise it would not have been necessary to build up the side with large stones.

If the side of the pool to the south is not cut out of the rock, then we have the Haram Area at this point elevated to a height of 100ft.: and the question arises whether this 100ft. is *débris* (and most interesting *débris* it would be), or whether it is composed of substructions similar to those at the south-east angle, and in continuation of those we have lately found at the north end of the Mosque Platform.

Again, on the east side of this pool, we have the Bab Sitti Mariam, generally called St. Stephen's Gate; are we to suppose this gate elevated 100ft. above the bottom of the wall, or does the rock break down suddenly from the gate towards the south, so as to form a deep gorge in which the pool is built? in this latter case, how far does the ravine extend from the S.W.? does it come down from the Damascus Gate and pass south of the Serai, and so join the valley from the north at the site of the pool? These are points to which considerable interest must be attached.

I find that the rock, to the north of the Birket Israil, crops up at the side of the Church of St. Anne, at a level of 2,410ft., and that at the gate leading to this church from the Via Dolorosa, no rock was found at 36ft. from the surface (2,405ft.)

There is a question also with regard to the two arched passages leading from the west of the Birket Israil; the crowns of these arches are on a level with the top of the pool, and it seems hardly probable that the piers will extend to the

bottom of the pool without a second series of arches midway; if, on the other hand, the passages do not reach to the bottom of the pool, it would be interesting to know whether they are built up on *débris* or on rock: a shaft is now being sunk under one of the arches, but the owner of the ground is a little diffident about our working there, and may place obstacles in the way.

On January 1st, 1869, the garden, north-west of Birket Israil, on the other side of the road, was examined; and an entrance to a cistern found at 61ft. north of the Via Dolorosa, and 33ft. west of the road leading north from Bab Hytta (see Ordnance Survey Plan, 1858, the contour line 2,419 passes through the garden). The height of this entrance is 2,421ft., for about the first 20ft. down there is a shaft 2ft. wide; below this it opens out to west to about 8ft., and at 36ft. is the rock, forming in part the roof of a small chamber or cistern: this chamber is cut in the rock, and is filled up within six feet of the top with mud: close to the shaft already described, is a parallel shaft, giving the impression that water was obtained from this chamber by means of a *n'aura* (water wheel).

It remains to be seen in what manner sufficient water could have been got into this chamber to cause a water wheel to be necessary for lifting it; if practicable, a shaft will be sunk through the mud at the bottom of this chamber.*

January 1st, 1869.

Rock-cut Passage at 'Ain el Luz'h.—The passage was followed up until 170ft. from Bir Eyub, where another staircase was found, the steps of which are in very good preservation: the passage was then continued to north, for upwards of 100ft., until 12th December, 1868, when a heavy downpour of rain stopped the work, Bir Eyub overflowed, and the rock-cut passage was filled up with a stream of water, which found vent by the two lower staircases.

The rain fall in December of 1868, was much greater than usual; up to 15th of the month, 8.703 inches had fallen, and it is interesting to find that the overflowing of Bir Eyub is due, not so much to a steady long continuous rain, as to a sudden heavy fall.

It is now nearly certain that the rock-cut passage does not communicate with Bir Eyub, as we are only 70ft. to south of it, and at least 70ft. to west.

January 2nd, 1869.

Arak el-Emir.—I have got over from Arak el-Emir (Palace of Hyrcanus) the capital of a pilaster shown in de Saulcy's "Voyage en Terre Sainte," vol. 1, page 229: it weighs about 3 cwt., but as the back is all rough it might easily be reduced to 1 cwt. Will you let me know whether the Palestine Exploration Fund wish to have it for the new museum?

Khureitun.—Last Tuesday I accompanied Dr. Petermann and party to the Cave Khureitun, west of the Frank Mountain, the traditional Cave of Adullam.

We went in search of the passage described by Dr. Tobler, in which he found some sarcophagi and Phœnician inscriptions. Sergeant Birtles and six

* See subsequent letter, February 1, 1869, with Plan No. 36.

fellâhs were also of the party, to excavate and examine the bottoms of the large caves.

We arrived at the cave at 10 A.M.; the Ta'amireh at first objected to our digging, but were soon quieted.

We went through to the last cave spoken of in Murray's Handbook, whence Tobler's description of the passage begins. On our way we found a passage to the left, half filled with the refuse of bats. After crawling for about two hundred feet on our elbows and knees we came to a shaft leading upwards, about 15ft. high, climbing up this we found ourselves in a passage, about 6ft. high, leading north and south: to the north we went perhaps 200ft., when the passage ends in a cave, from which, after passing a small hole, are many other passages leading in all directions. To the south we went about 100ft. and found some broken stones which had been hewn. Over a little passage to the east we saw a Jerusalem Cross smoked on the wall. Finding the time was passing quickly we returned and followed into the last cave spoken of by Murray. Here in the north-west corner is a small opening, and over it written "No outlet here," and it was in this, as far as we could understand the description, that Tobler had found an outlet. Crawling up this passage we found to be most difficult, and only to be passed in one place by lying on the side and wriggling through. After this there is a small passage for about 30ft., and then it opens into a passage running north and south, which proved to be the passage we had been in before when we had found the Jerusalem Cross. It will be thus easy at some future period to go up the first passage we explored, and thus miss the very difficult pass from the last cave; but to explore the cavern properly (if it be worth the trouble) people should encamp near the cave for a day or two. Although we got in such a little way we were at work over five hours in the caves.

There are four large caves; in the fourth and last no excavation was made.

In the third the rock was found at 2ft. 6in. No pottery.

In the second, after working through a loose brown loam abounding in pottery, a stalagmite floor 3in. thick was reached, at 4ft. 6in.; below it for 18in. was a white dust and then hard rock (melekeh). No bones.

In the first cave the stalagmite floor was reached at a depth of 7ft., the white dust between it and the rock having a depth of 15in., the 7ft. of loam was full of broken pottery. No bones.

January 2nd, 1869.

South-east Angle, Haram Area.—The heights of courses 2, 3, and 4 were given in last letter as 4ft. 6in., 4ft., and 3ft. 9in. respectively; they should have been 4ft. 3½in., 4ft. 2½in., and 3ft. 7½in.

I have carefully tested the angle of the base course and find it to be 92° 35', while that at the surface I make 92° 5'. Captain Wilson in his notes gives the general direction of the walls 92° 50'; the eastern wall is somewhat irregular, the first 120ft. only being in a perfectly straight line (excluding the offsets), after which there are several slight bulges; it is, however, very probable that the courses below the present surface are in a straight line for the first 260ft. to the north, as in that distance the inaccuracies do not amount to

more than a foot; at this point there is a small postern on about the same level as the single gate on south side; from this postern the wall takes a slight turn to the north-east, so that in 650ft. it is about 8ft. to east of a line in production of the first 260ft. of the east wall (see Ordnance Survey Plan 318).

On 2nd December I stated that at about 895ft. from the south-east angle, along the east wall, there is a break; I took this dimension from plan, but I find on measurement that it is 909ft.—only 14ft. less than the length of the south wall.

The rock at the S.E. angle into which the base course is let is very soft. At 3ft. to the east of the angle a hole was found scooped out of the rock, 1ft. across and 1ft. deep; on clearing the earth out of it, a little earthenware jar was found, standing upright, as though it had been purposely placed there.

A gallery was driven to the east from the angle for about 8ft., when the rock was found to slope away at an angle of about one in nine; this gallery was then tamped up, and a search was made around the corner stone for any means of getting under it, at ft. north of the angle close to the wall, the rock was found to be cut away in the form of a semi-circle or horseshoe, 2ft. wide and about 2ft. 8in. deep; dark mould was found in it; on clearing it out it was found that the base course rests upon very hard rock (mezzeh), the soft rock extending only to a depth of from 2 to 3ft.: the base course is 3ft. 8in. in height.

Upon the soft rock there rests an accumulation of from 8ft. to 10ft. of a clay mould, abounding in pot-sherds; this mould does not lie close up against the Haram wall, but is at top about 12in. from it, and gradually closes in to it; between it and the wall is a wedge of stone chippings; it is quite evident that when the wall was built, this 10ft. of mould and pottery was in existence, and that it was cut through, and the soft rock also, for the purpose of laying the stones on a solid foundation, and it is probable that the horseshoe hole cut in the rock (above mentioned) was for the purpose of allowing the tackle to work when lowering the corner stone into its bed. The pottery found in the clay is broken up into fragments, and no shapes can be recognised; a long rusty iron nail was however found. As this is the weather side of the Haram Area, and as there is such a deep valley below, the *débris* about here is less damp than in the Tyropœon Valley, and there is a much better chance of any articles being preserved in it. One would expect amidst all the chipping to find some broken tools, or something of that sort; and it is most remarkable that nothing ever turns up of importance.

The layer of clay mould slopes to east at an angle of about one in four, the layers of stone chippings, &c., above, at an angle of one in three. I find that the point where the layers slope down towards the wall is merely local, and that the general slope is towards the east. A gallery has been driven along the second course to north; the first stone is very roughly dressed, and is 10ft. 6in. long; the second stone is 4ft. 9in. in length; it is well dressed and has the usual style of bevel; at about the centre is a deeply engraved mark, like the Greek H, only that the horizontal line is about one-third of the way up the upright lines, it is cut in above 1in.; on the south lower corner is another engraving (see Plan No. 29); about the stone are many flourishes with red paint, but whether they are monograms or merely "fantasia," it is difficult

to say, and in black paint there is a mark (Plan No. 29); the stone, shortly after it was uncovered, began to exude moisture, and it would not be prudent to take a squeeze of the two engraved marks until the paint is dry, as it easily rubs off.

We are also driving a gallery along the wall to the north at a higher level, baring courses 4 and 5. Two more characters in red paint have been uncovered; the first (see Plan No. 29), and the second simply a round O.

It is curious that the third stone in the fifth course is very roughly dressed within the bevel. It does not appear that these rough stones form any pattern on the wall, and one is almost led to suppose that the builders were unable to find suitable dressed stones for breaking joint, and had to take those that were unfinished.

There is a most beautifully dressed stone in third course, but, as it is between the two galleries, it would be dangerous to examine it just now.

On examining the chippings at the base of the wall, I find they are in many cases rounded and unlike what would result from stone dressing, having more the appearance of the backing used in the walls at the present day in Palestine. Close up against the wall is a small quantity of chips, but nothing to prove that the stones were dressed after they were laid; and the fact of the horizontal bevels in adjoining stones being altogether unlike is of itself sufficient to lead one to suppose that the stones were finished at the quarries.

The third stone to north on second course was uncovered last night, and on it are found, in red paint, the marks (as in Plan No. 29). This stone has no bevel at top, but a bevel of 13in. at bottom. The marks have been very hastily sketched.

January 2nd, 1869.

Neba.—Robinson, in his list of places in el-Belka, south of es-Salt, gives "Neba (Nebo?)."

M. de Saulcy appears to have been the first to discover the site of Neba, on 13th April, 1863 (see "Voyage en Terre Sainte," p. 239). When passing over the Belka, between Hesban and Ma'ain, he was pointed out "Djebel-Neba" to his right, and the following day (14th April) he passed "Ayoun-Mousa, Sources de Moise," at its foot.

It appears from the plan, published in 1865, that the Duc de Luynes camped at "Ain Musa" on 13th and 20th April, 1864, and that he ascended Neba, which he calls "Djebel Musa."

On 30th April, 1864, only ten days after the visit of the Duc de Luynes, these springs were visited by the Rev. H. B. Tristram, F.R.S., who refers to them in his speech, 11th May, 1867, at Cambridge. Mr. Tristram also ascended Neba, and gives a graphic description of the view from it in "The Land of Israel."

The discovery, then, appears to have been made independently by at least two of these three gentlemen, and, to a certain extent, the results differ in detail.

M. de Saulcy places the springs to the south of Neba; but, as he only saw

Neba, and came to the springs after making a long detour round by Ma'ain, he may easily be in error in the location of the two with reference to each other.

The Duc de Luyne places the "spring" (he calls it 'Ain) to the north of Djebel Musa (Neba); and Mr. Tristram does not mention the two with reference to each other.

I found (22nd July, 1867) the Ayoun Musa situated in a ravine to the north-west of Neba. South of the springs, and west of Jebel Neba, I found extensive ruins of the same name; they consist of a confused heap of stones, 300 yards from east to west, and 100 from north to south, lying on a spur of Jebel Neba. There are scattered about the remains of several columns and cornices; also the remains of a temple, 70ft. in length, and some vaults beneath. We descended into these vaults. They are divided by piers 2ft. 3in. thick; arches 16ft. span, and 6ft. rise; the arches are 1 foot thick, and are paved over with flagging 18in. square. This paved place is west of, and in some connection with, the temple. We also found the appearance of a city wall. The stones about were very much worn.

In the vaults we found the remains of four women and those of some children who had apparently been murdered and thrust down these places.

Jebel Neba is a hill (see photographs 301, 302) on the edge of the swelling ground round the west end of the Belka. It can be seen from the wadies Hesban and Keferein, and from near Tell Keferein it appears as a lumpy hill above the high lands; it is 400 feet above the ruins of Neba, and about one mile and a half distant; it is about 2,670 feet above the sea level (Mediterranean), and is therefore close on a level with the Mount of Olives.

To the north of Neba there is no hill of equal height, overlooking all the plain of the Jordan, until we come to Jebel Husha, though to the north-east the ground rises 200 ft. above Neba.

From Jebel Husha to Jebel Atarus there is not a point which commands the high lands on the west of the Jordan.

In the wady, forming the northern boundary of the Jebel and ruins of Neba, are the springs of Moses. They gush out of the limestone rock, and are numerous; the highest and lowest differ about 100ft. in elevation; the lowest being about 1,100ft. below Jebel Neba. The wady is a ravine broken up by precipices (see photograph No. 301), the water from the springs running down in a succession of cascades of about 20ft. to 30ft. in height. Several of the springs issue from small caves, where the water lies in basins 3ft. to 4ft. deep.

This wady can be seen from Neby Musa, on the west side of the Jordan; and as points from which you can see a distant holy place are venerated among the Mahomedans, I have to suggest the question whether this Neby may not have originally obtained its sanctity from the people having been able from that spot to see up the ravine of the Springs of Moses.

In many places on the east of the Jordan we found piles of stones marking spots from which Neby Musa could be seen.

If there happened to be one spot on the eastern bank from which Neby Musa could be seen, and if it were difficult for any number of years for the Bedouins to cross the Jordan, is it not probable that in course of time this spot would be looked upon as the true Neby?

On this principle, in default of a better argument, may we not suppose that originally Neby Musa was the spot from which the Ayün Musa could be seen, and that, when in process of time it became difficult and *inconvenient* to cross the Jordan, the Mahomedans were content to accept the shadow for the reality?

XXXVI.

JERUSALEM, *January 12th*, 1869.

Robinson's Arch.—In my last account of the excavation at Robinson's Arch, I told you that we had followed the rock-cut passage to the south, and had found a circular rock-cut cistern, and from thence an arched passage leading to east towards the lower part of the Tyropæon Valley. We have since found that the first 30ft. of our gallery was driven along the bottom of an aqueduct 13ft. 6in., and about 3 to 4ft. wide, arched over at top. As our galleries are at most only 4ft. 6in. in the clear, we did not find this out until lately, and now we have been able to knock down the silt from the top to the bottom of the aqueduct, and have been able to recover all our gallery frames, having an arched roof over our heads. Just where we happened to get through into the aqueduct, two large stones have fallen and smashed in the arch, of which there is no appearance for some feet north and south. These two large stones are over 4ft. cube, and appear to be voussoirs of an arch which spanned the gallery previous to the building of the arch, the fallen voussoirs of which are to be seen resting on the pavement 20ft. higher up.

Waiting to hear from you with regard to this aqueduct to the south, I have opened it to the north, and for 50ft. it runs in a straight line 10° more westerly than the west Haram Wall. We have just found that this part of the aqueduct is also arched over (3ft. 6in. wide), and part of the way the arch is most peculiar, it has the appearance of having been pressed in on the western side; but, on examination, I am inclined to suppose it was built as it now remains. It has five stones, and is in the form of a skew-pointed arch, the chord to east being about 22in. with two stones, and west 33in. with three stones; it has a very comical appearance. Beyond this part of the aqueduct, we find another circular rock-cut cistern, about 14ft. 6in. in diameter, and beyond it a rock-cut passage for 10ft., where it branches off right and left: to the right it opens into another rock-cut circular cistern, which is *half cut through* by the west Haram Wall (see Plan No. 28); and on the left it bends again to north, and is connected with a long straight-arched passage, about 3ft. to 3ft. 6in. wide, arched over, and running about 120ft.; that is to say, about opposite to the Bab al Magharibe (Barclay's Gateway).

We cannot clear it out without great trouble, and I wish to hear from you on the subject. It is choked up with silt on the northern end.

The fact of one circular cistern being cut through by the Haram west Wall, and

also a passage south of the bridge being cut in the same way, leads one to the conclusion that this aqueduct existed before the west wall was built. It is quite evident that this aqueduct was for running water, partially for the supply of houses or gardens in the Tyropœon Valley, as every few feet we met with shafts for lowering buckets, quite similar to those found in the older portion of the aqueduct leading from Solomon's Pools (described 2nd September, 1867). The presumption is, that when the Haram Wall west was built, the part of the aqueduct lying west of the wall was left intact, but that when the wall cut through it, straight lines of arched passage were built to connect the older portions.

To the west of the circular cistern to north of Robinson's Arch, some curious rectangular chambers have been opened; they are cut in the rock (about 16ft. by 6ft.) and are arched over (semicircular), in one is a flight of steps leading apparently nowhere. In one of these chambers we found the base of a column which had fallen in through a hole in the roof, a sketch of this column has been forwarded, we have also found several curious rock-cut passages about 2ft. square, the object of which is not apparent.

Presumptive Evidence.—1. The winding rock-cut aqueduct was constructed.

2. The west Haram Wall was afterwards built, and part of the aqueduct falling on the inside of the wall, the outside portions were connected with arched masonry passages, and the rock-cut parts were at the same time arched over. At the same time a bridge was built connecting the Haram Area with the western side of the valley.

3. The arch of the bridge fell (two voussoirs still remain), smashing-in part of the arch of the aqueduct.

4. *Débris* began to fill up the valley, a pavement was constructed upon it, which still remains, about 20ft. above the top of the aqueduct; in order to obtain water readily shafts were constructed at intervals from the pavement down to the aqueduct.

5. The arch fell and now rests upon the pavement.

6. *Débris* began to fill up the valley over the fallen arch, the pier of which standing out was removed all except the three lower courses.

7. Houses were built on a level 20ft. above the pavement.

8. These houses fell into ruin and the *débris* accumulated to its present level, viz., 45ft. above the pavement.

Pool of Siloam.—On the road leading from Burj al Kibryt to Pool of Siloam, about 400ft. from the latter, water was observed, during the heavy rains, to disappear rapidly through a hole in the ground; an excavation was commenced 15th December last, at 9ft. 6in.; a pavement of stone flagging was found and a small water duct 3in. square. This duct was followed to south-west for about 26ft., when it was found to run into a rock-cut tank, 12ft. square and 15ft. deep; roof of rock.

The gallery passed through the remains of an oven composed of large fire bricks.

A piece of fine white marble belonging to the capital of a Corinthian column was found in the shaft.

Birket Israil.—The floor of the northern arch is found to be 36ft. 5in. below the crown, that is to say, 48ft. above the bottom of the pool; the work is still in progress.

Extra Tower and Wall of Ophel.—This tower (previously described) was found to rest upon rock, which is so scarped as to overhang 18in. at top (see Plan No. 30). There is a perpendicular scarp of 14½ft., and then a small gutter for water; below this the rock is cut away so as to form a water channel, 10ft. high, and about 18in. wide, open at the top. This channel was found to be too narrow to follow up. The rock scarp was traced to N.N.E. for about 25ft. when the rock was found to be wanting, a rough wall taking its place.

With regard to the extra wall beyond the tower, it is found to be at present 66ft. in height and 80ft. in length; at its southern end it turns to west towards the Ophel Wall, and becomes so much decayed that further excavations about it were considered undesirable; it is partially plastered on the outside, and so likewise are the large bevelled stones of the extra tower.

The Ophel Wall has been traced for 700ft. S.S.W. of the first tower, it then ends abruptly; it is in a straight line, but the line is broken by the projections of the second and third towers. About 200ft. south of the point where the wall ends, and in the same straight line, some massive walls have been uncovered; they have been built over subsequently, and it would be very difficult to determine their original objects: at this point there is a rocky knoll, and the earth is only about 12ft. in depth. Looking at the remains from a professional point of view, I am inclined to think that what we call the Ophel Wall, was here terminated by a tower, placed on the rocky knoll, and that from thence the wall ran up towards the Dung Gate. (Plan 30.)

We have found, however, no trace of the wall within 200ft. of the rocky knoll, but it is exceedingly unlikely that the wall would terminate in a hollow with rising ground a few feet in front of it; as the earth about here only covers the rock to a depth of from 12 to 15ft., it is possible that the wanting portion of the wall may have been taken up and sold for building stone by the fellahin, who at the present day frequently go down to that depth in search of cut stone. Cut stone in Jerusalem is much in demand, and on the grounds of the fellahin, all traces of walls at or near the surface are fast disappearing; the rock-cut steps and caves which existed along the slopes of Ophel are also fast becoming obliterated, the farmers find that these are the places where they have least trouble in blasting and quarrying the rock, and within the last few years many old features on the southern side of the old city have vanished; thus year by year the old Jerusalem will become more difficult to be understood.

It appears likely that the Ophel Wall was built in two or more steps, with a road at the bottom of each wall, as we find that in the first wall the stone is roughly dressed to a certain height above the rock, and that to this height there is an outer wall of cut stone about 20ft. to the front of it.

XXXVII.

February 1st, 1869.

Curious gateway and chamber, 50ft. below the top of the great causeway of Tarik Bab es Silsile.—Uniting the upper part of the city to the Haram Area at Wilson's Arch, is a great causeway which we have lately discovered to be a succession of vaults upon vaults; and I have now to relate a further curious circumstance relating to this matter. The causeway at its eastern extremity (Wilson's Arch) is elevated about 80ft. above the bottom of the rock on which the west side of the Haram Wall is built, and is about 26ft. above the present level of the ground at the same point, that is to say, the level of the Haram Area is 2,420, the present surface of ground (Jews' Wailing Place) 2,394, and the surface of the rock 2,340ft. above the Mediterranean.

On 2nd September, I told you that we had been unsuccessful in our endeavours to explore the secret passage under the great causeway further than 250ft. west of Bab es Silsile, or Wilson's Arch, and that we found it to run immediately under the street of the same name (Bab es Silsile), which is formed from the upper part of the causeway. At 220ft. from the Haram Wall the passage is terminated abruptly by a comparatively modern wall, and an opening to the south leads into an ancient vault, and further on into a place used as a donkey stable. On examining farther west we found the passage as far as 250ft. from the Haram Wall; it is here used as a cistern, and is under the house of Joseph Effendi. The Tarik Bab es Silsile, or upper part of the causeway, is up to this point from the gate of the same name nearly on a level, that is to say, it is about 2,422ft., and the level of the secret passage is, at the springing of its arch, nearly on a level also, about 2,410ft., the crown of the arch being about 8 to 9ft. below the level of the street above it: it is exceedingly difficult to level through a succession of vaults underground, with the earth nearly up to the crowns of the arches, and I cannot be certain of these levels to a foot either way. The continuation of the secret passage beyond the tanks has not yet been found, but in examining the place a curious chamber and gateway has been found at a lower level. (See Plan No. 31.)

The portion of the secret passage (shown A on section) used as a tank opens from a vaulted chamber (H) on the southern side of the causeway, and a little to the east of the production of the street El Wad: it is shown on the plan of this causeway sent home 2nd September. (Plan No. 17.) In this chamber (H) Joseph Effendi told me he had found the mouth of a cistern some years ago which had been covered up with refuse from the house; the present floor of the chamber (H) is on a level with the springing of the secret passage A. It took some time to find the mouth of the cistern in question, as it is over six feet below the present bottom of the chamber; and when found it was a question whether it could be descended. It consists of a shaft, for 25ft. below the bottom of the chamber, so narrow that we could not use our legs for getting up the ladder; and it was found at last that the only way it could be managed was to be hauled up by the rope about a foot at a time, and then the strain on the rope from the friction of the body against the sides was very great. Having arranged for our ascent, we descended, and found the shaft

to open through the crown of an arch into a chamber (B) running east and west, and about 4ft. to the south of the secret passage above. The crown of the arch of this chamber is 13ft. 6in. below the bottom of the cistern A (in which there was water) and 40ft. below the level of the street above. This chamber is 14ft. 6in. in length, 8ft. broad at the western and 10ft. 6in. at the eastern end. It is plastered. Its roof is peculiar, it is a straight-sided pointed arch, the rise at the widest part is only 2ft. At the western end of the chamber a hole was made in the masonry, but after going 4ft., damp earth was met with and no signs of the continuation of the chamber. We had to be very careful, as in case of our breaking through to water there would have been a difficulty in getting up the working party through the shaft in safety. The *débris* was next cleared away, and a hole made in the wall, when it was found to be a doorway, closed up, which leads into chamber C.

This chamber is very peculiar; it has apparently been used as a vestibule or guard-room to a postern at its eastern end. It runs east and west, is 18ft. long, and like the first chamber B, it is wider at its eastern extremity, being 12ft. to west and 13ft. 9in. to east. There is no plaster about this chamber. The arch is nearly semicircular and the courses are 19 in number, of nearly equal dimensions. At the eastern end there is a semicircular arch of 5ft. span, resting on a lintel 12ft. long and 2ft. high; this lintel forms the top of a doorway whose height was not ascertained. This doorway, 5ft. wide, leads to a passage only 2ft. 6in. wide, and covered over with blocks of stone laid horizontally. At 10ft. to east there is the appearance of some building having given way and fallen into the passage, and I considered it prudent not to meddle with it.

It will be seen on inspection of the plan and elevations of this chamber that the gateway at the eastern end is of a description only likely to be used as the entrance to a passage, and it will also be noted that the gateway to west is peculiar.

In the chamber C a volute of an Ionic capital was found, a sketch of which has already been forwarded.

It is not very clear whether this chamber C was constructed at the same time as the causeway or previously, but in either case it would appear to have been a means of getting from the upper city out into the Tyropæon Valley.

It will be interesting to ascertain where and on what level the present main drain crosses the causeway on its way down to the Dung Gate. I have not been able to get any authentic information on the subject.

The Gate Gennath (so called).—H.R.H. the Archduke, Duke of Modena, through the Austrian Consul, Count Caboga, expressed a wish that we should re-examine the Gate Gennath (so-called), and he gave a donation in furtherance of that object.

On Thursday week a shaft was sunk down alongside the northern end of the gateway, and the arch, which is very much battered and weather-worn, where exposed, was found to be in very fair condition, immediately below the service of the road, and to spring from an impost or capital 2ft. 1in. in height; below this the doorpost is composed of three stones giving together a height of 7ft.

4in. (See Plan No. 32.) The lower stone of the doorpost rests on a stone forming a sill, which projects into the roadway and under the arch about 12in. No pavement has been found.

The arch of the gate is composed of 11 stones, 2ft. 3in. long, and also 2ft. 3in. wide at the extrados. The keystone is 2ft. 6in. in length, the extra three inches appearing to project beyond the archivolt (as shown in elevation); but of this I cannot be quite certain, as a settlement in the arch might have produced this effect. The arch is semicircular, the span being 10ft. 8in. The springing of the arch is flush with the doorpost, the abacus and mouldings projecting 3in. The impost is in good preservation; a sketch of it is enclosed.

The height of gateway from sill to top of impost is 9ft. 5in.; and adding to it the rise of the arch, we have a total height from sill to crown of 14ft. 9in. (See Plan No. 32.)

On getting down to the sill of the gateway a gallery was driven to south, when it was found that there was a second doorpost of more modern construction within the first. On getting under the centre of the arch some earth fell in, and, on its being cleared away, it was found that we were under a pointed arch. On examination I found that the gate Geunath (so called) is cased inside with doorposts and a pointed arch of comparatively modern construction, as shown on plan. This inner doorway is recessed four inches; a simple moulding (astragal) runs down the jamb, projecting four inches, so as to be flush with the front of the outer gateway. I cannot see if the moulding runs round the arch, as there is some masonry in the way. This inner pointed arch forms part of the roof of a dyer's shop; and I understand that it was under the arch inside that the first excavation two years ago was made. Except at the point where our shaft is sunk, there is masonry encasing the old gateway, and one might dig about it for a long time without getting upon the old gateway as we have had the luck to do.

The sill of the gateway (Gennath) is about on a level with the Sûk, at Biyar, and also of the floors of the two towers to west of the gate, described in Lewin's "Siege of Jerusalem by Titus," page 216.

This is not the only instance where I have found old work smothered in on all sides by more modern masonry; and it has sometimes occurred to me that the pointed arches at the Mahkama conceal more ancient arches above—certainly in two places this can be observed.

From the battered condition of the exposed portion of the gate Gennath, it is evident that a vast number of years must have elapsed since the two gateways were closed up; and as the inner gate was probably built to be used when the outer gate became decayed or distasteful in its architecture, we may safely assume that the gateway is of ancient construction, especially as its style is Roman.

South of Haram Area.—(See Plan No. 33.)—Two shafts were sunk in search of any traces of a wall running south from the west side of the triple gate. The upper shaft, No. 34, was commenced 132ft. south of the triple gate, and to the west of a cistern; rock was found at 22ft., and a drain at same level was broken into, in which were found a great number of glass bottles and earthenware lamps, which

are supposed to date from about the third century of our era. A gallery was then driven along the surface of the rock for 25ft. to the west, but no wall was found. Objections were made to our continuation of the work to the west under the adjoining property.

To the east of No. 34 shaft is a cistern in which there is a large cross (of St. John) moulded on the plaster, and also some hieroglyphs, a sketch of which was forwarded home in the spring. The cross is placed in a little alcove in the cistern, so that it would only be seen by persons looking for such marks. This cistern would appear, then, to have been plastered in the times of the Crusaders or of the early Christians; if of the time of the Crusaders, the cross would probably be that of the Templars who were quartered just above. It may perhaps be attributed to the early Christians, as we find the drain with the Early Christian pottery so near to it.

The second shaft, No. 42, was sunk at a distance of 260ft. from the triple gate, and in the production of a line perpendicular to the eastern jamb of the centre arch. Rock was found at ft.; a gallery was then driven to the west, and at 10ft. a drain was broken through, the same as was met with in shaft No. 34; also a branch drain coming from north-west; this was followed up until at 30ft. from the shaft a massive stone wall was met with, running apparently in the direction of the eastern jamb of centre arch triple gate; the wall was then followed 31ft. to south, where it becomes lost, and 35ft. to north, where it is succeeded by a wall of rubble masonry, and there lies on it (not *in situ*) a small well-cut bevelled stone about 2ft. by 3ft. 6in. The wall was then followed 10ft. farther to north, but apparently it still continues of rubble masonry; just at the point where is the bevelled stone the mouth of a shaft was found leading down to a rock-cut cavern, which will be described.

The wall is not yet examined thoroughly; one stone appears to be 15ft. long and 3ft. high (without a bevel); but there is a good deal of cement on the stones and the joints may be concealed; the wall appears to consist of one course of larger stones resting on a wall of rubble, and the impression it gave me at first was that it might be the wall of a ramp leading from the Wall of Ophel up to the triple gate; I shall perhaps be able to judge better in a few days.

At point marked on trace No. 40 a shaft was sunk for the purpose of examining the rock under the hollowed piece of ground south of the double gate; rock was found at 27ft. 6in., and to the east some rock-cut cisterns and a passage with steps leading down into them. A gallery was then driven to north, and another cistern about 17ft. square met with; the gallery was continued along the rock for 60ft. in search of steps leading up to Double Gate, but without result; the rock was found to have a scarp or steep down to east along the line of the gallery; I have since found the rock cropping up to the present surface about 100ft. higher up the hill, so that there is no chance of steps from the Double Gate having extended so far down.

Is there any chance of the theatre of Hadrian having been located near this spot? It is the only place that I have observed near the walls of Jerusalem where the ground takes the form of a theatre.

At No. 38 a shaft was sunk and rock found at 12ft., but we just happened upon a place where it is scarped down towards the west for 12ft. to 14ft.; this scarp was traced for about 15ft. to north-west and south-east.

I have elsewhere suggested that the Ophel Wall may have terminated on a rocky knoll about 200ft. south of the point to which we have traced it, and that then it may have taken a turn up towards the south-west angle of Haram Area; it would in such a case run very close to this scarp at 38 (see contour Plan); which might have been cut to give additional height to the wall; the plan gives the contours as obtained from the several points of rock we have at present met with.

At shaft No. 31 rock was found at 33ft. and a drain cut in the rock, in which some lamps were lying. (For direction of drain see Plan .) The rock is stepped out in a puzzling manner, and to west the jambs of a gateway were found; width from post to post 12ft.

At the point where is the rocky knoll we have found cisterns and strong walls, but they are built over with more modern masonry, and the whole is so blended together that I can make nothing of it; the more modern building has a floor paved with tesserae.

At each shaft sunk south of the Haram Area, we have found the remains of buildings, drains, scarped and cut rock, and we may draw the inference that this portion was once covered with houses; we have, however, found no architectural remains *in situ*, and nothing that would repay the expense of keeping the ground open. As the work is generally 20ft. to 40ft. below the surface, it can only be got at by driving galleries at such depths, and as in this country the wooden frames quickly decay, it becomes a matter of necessity to tamp up the galleries soon after we have opened them. I am now tamping up all the galleries south of the Haram Area except two, where the Wall of Ophel can be seen by any travellers who come here during the ensuing spring months.

Cavern south of the Haram Area.—The cavern previously mentioned as having been met with in gallery from shaft No. 42, is cut out of the rock. The roof is flat; it consists of two chambers: the northern appears to have been about 12ft square, but a portion is taken up to east by a masonry wall; on the sides of the rock are small holes punched as though for some instrument to rest. (See Plan No. 34.)

The southern chamber is irregular in shape, and a portion of it is divided off by stone columns cut from the rock. Mangers or shallow vats exist round the chamber; in some cases the rock is cut in under, as in Plan No. 34, and in other cases the troughs are cut out of steps projecting from the face of the rock. They are from 18in. to 20in. wide, and where unbroken are 6in. deep; in one I found a plug hole, which shows that the vat was intended for the reception of some liquid. In the roof, on the walls, and at intervals under the troughs are eyes cut in the stone through which a 1½in. rope may be drawn. These eyes are formed by cutting two groves in the rock about 2in. apart, and then connecting them by a small hole, half-inch in diameter, about 1in. below the rock surface.

As we find the cave at present, it has the appearance of having been last used as a stable, and the floor is about 2ft. below the level of the mangers, but it cannot originally have been cut for such a purpose, as we find that the

true floor of the cavern is 11ft. below the troughs; so that it is apparent that the original object was not connected with housing and feeding cattle.

On entering a dyer's shop in Jerusalem you will find vats ranged round the room, and staples let into the wall from which lines are stretched for hanging up the cloth to dry. The difference is that at the present day the vats are circular, and those of the cavern are long and narrow. I have to suggest that this cavern may have been a fuller's shop, where clothes were cleaned or made white. Tradition relates that St. James was cast over the outer wall of the Temple enclosure, and that "a fuller took the club with which he pressed the clothes, and brought it down on the head of the just one."

The eyes made in the walls are similar to those cut in the piers of the substructions at south-east angle of Haram, which are sometimes called Solomon's stables, described in Captain Wilson's notes.

At the south-eastern side of the cavern there is a masonry wall, perhaps to support the rock roof which here appears to have cracked. Attempts were made to go through this wall, but it was not considered safe to continue the work.

About half the earth in this cavern has been turned over and a considerable amount of pottery has been found, but all in fragments. Also the lower part of a copper candlestick, which was found in two pieces that had originally been soldered together. The upper part has been turned in a lathe, the lower part has been probably pressed on a block. A sketch of this will be sent.

The rock above this cave is $4\frac{1}{2}$ ft. thick, and in the earth above is a drain containing glass and pottery, supposed to be early Christian; it must then have been some time back when this cave was used as a stable, and further back still when it was used for its original purpose.

In the roof is a peculiar cutting, as though for a piece of metal; and I cannot at present ascertain whether such a hole is made in oil-pressing rooms, &c.; but I have observed a similar cutting in the lintel of a doorway in Hârat ad Dâwâyeḥ, and perhaps some person may be able to explain it; but the dyers, fellahin, and others about Jerusalem, say that they do not know its object.

Substructure in the Haram Area, near Bab Hytta (Plan No. 35).—At the northern end of the Haram Area east of Bab Hytta are two tank mouths, 16 and 17, which were not examined by Captain Wilson. They are closed by heavy stones. To the west of these is a private garden which projects out into, and forms part of, the Haram Area; in this garden are two other tank mouths. I examined one of these some months ago, but was unable to get down the other on account of the small size of the opening. On Monday last I went again to this garden to have another try at these cisterns, and first examined that to the west, which is simply a tank about 8ft. by 15ft., with a semicircular arch over it and no appearance of rock about it. I then went to the other, situate at the south-east angle of the little garden, which at this point is elevated about 10ft. above the Haram Area at mouth of 17 (the mouth 17 appears to be at an elevation of 2,413ft.) On sounding I found it 42ft. down to the water. I tried to descend, but to no purpose until I had nearly stripped

to the skin, and even then in my contortions I managed to slip the rope over one arm. The narrow passage was only for 3ft., and 10ft. from the surface I came on the floor of a little chamber about 6ft. square, apparently on a level with the Haram Area. The shaft down to the cistern continues through the floor of this chamber, and is a moderate-sized opening. On getting down to the water I found it only three feet deep, and concluding from the size of the cistern that help would be required in measuring, I signalled for Sergeant Birtle to come down.

On lighting up the magnesium wire and looking about me, I was astonished, my first impression being that I had got into a church similar to that of the cathedral (formerly a mosque) at Cordova. I could see arch upon arch to north and east, apparently rows of them.

After floundering about some little distance, however, I could see that there was a limit to these substructures at no great distance to north and east. In the meantime Sergt. Birtles was making great efforts above with very little result; do what he would he could not get past the narrow opening to the cistern, and at last had to give up the trial and go and get leave from the owner to pull down the upper mouth of the shaft, and then he very soon appeared at the bottom, his shoulders considerably injured in his exertions. In the meantime the excitement of our "find" had begun to wear off, and the water felt cold. I was just giving the sergeant some sage advice as to how he should direct his steps to the best advantage, when I stumbled over a large stone and fell into the water flat on my face. As just at present the weather is frosty, and the rain is generally accompanied by sleet or hail, a bath in one's clothes is anything but pleasant. I found the stones on which I stumbled to be about six in number: they average about 7ft. in length, and 3ft. in depth and width; I could see no inscriptions on them; they appear to have fallen in by accident.

The substructure, now used as a tank, is 63ft. from north to south, and 57ft. from east to west, thus being nearly square; its northern wall is 23ft. 6in. from the south side of the Birket Israil. It consists of nine rectangular bays, formed by four piers, cruciform on plan, equidistant from each other and from the walls, from which spring arches. The arches between the piers, and between the two northern piers and walls, are stilted or pointed; those from the two southern piers to the walls appear to be flying buttresses, unless the remainder of these arches are concealed behind the east, west, and south walls of the substructure. The dimensions of arches and piers all vary somewhat (see Plan No. 35), which may arise from the thick coat of plaster which exists up to the tops of these arches, that is, to about 14ft. above the floor of the tank; these arches support nothing, they merely strengthen the piers and resist any lateral thrust against the side walls.

The whole of the substructure is covered in by vaults intersecting in groins over the bays. Surface-ribs (of cut stone) are thrown over from the piers to the sides, the remainder of the arches being composed of rag-work; the vaults are pointed. The springing of the vault surface-ribs is 14ft. above the floor of the substructure, and the cement does not reach higher than that point. The vaults from springing to crown are also about 14ft. in height, giving a total of 28ft. from floor to crown.

In the south wall is a staircase leading up to the surface of Haram, which I

understand has been open within the memory of man. Near the bottom of the steps is a shaft leading up to entrance No. 17, and in the centre bay is an opening leading up to entrance 16. There is no appearance of an open continuation of these vaults in any direction. There is an opening on the northern side about 2ft. in height, and 1ft. wide, on a level with the top of the cement, which lets in light; and on examining the pool Birket Israil, I find a grating in the south wall (2ft. square) exactly opposite the opening in the substructure, and which undoubtedly communicates with it, but whether directly through the thickness of the wall, or whether through another chamber in the wall, has yet to be determined; through this opening any superfluous water in the substructure would flow into the Birket Israil.

The impression that I had got into a church still remains on my mind, I do not exactly know why; the vaults are so unlike any known tanks in Jerusalem, and so very different from the substructions at the south-east angle Haram Area. I cannot believe that such a structure as this was built merely for a tank, and if it was simply to support the present surface of the Haram, then there is probably more of it to be found to south and east.

We were altogether three hours in the water measuring, and I took everything I could get at, and have put the most important measurements on the 10ft. to an inch plan.

The vaults look small when compared to the Birket Israil in section, but then the Birket is really an enormous reservoir, nearly 100ft. deep.

The large stones I found huddled together at the bottom in the water, are, I think, evidence of the roof having once fallen in and been replaced.

Birket Israil (Plan No. 36).—Under the northern vault, 9ft. from the entrance, a shaft has been sunk, and at a depth of 14ft. 6in. a floor of concrete has been found, which at this point is 36ft. 6in. below the crown of the arch, and 43ft. 6in. above the bottom of the pool.

The floor has a slope towards the entrance where there are four stone steps 16in. broad and 7in. in height; the bottom step is nearly flush with the west wall of the pool, and from this step to crown of the arch is 49ft.; beyond this there is a landing 8ft. broad, and then a drop of 4ft. Attempts were made to get through the concrete at this point, but the instruments could make no impression on it; the gallery was then driven down along the face of the concrete to east, which is found to consist of irregular steps (see Plan No.). The concrete was followed down until at a point 22ft. above the bottom of the pool, the rubbish was found to be in too loose a state to work through, and the gallery has been discontinued; it is probable that in any case we could not have continued more than a foot or two deeper on account of the water in the pool.

What we learn from this work is, that the northern end of the pool, unlike the other sides, is built up of steps of concrete, similar to those found at the pools of Solomon; and the natural inference to be drawn is that there is no rock on any side above the bottom of the pool except to the north. We are now trying to drive through the concrete again in search of rock, but it is so hard that we make very little impression, and I don't wish to blast just at this point.

I send a trace (Plan No. 36), showing the nearest known points of rock to the Birket Israil.

We have been excavating in the cistern in garden N.W. of the Birket, where I thought there had been a N'aura, but we can find no signs of any aqueduct by which water could have been brought in; the cistern is 20ft. deep.

At the point where the Bab el Aten enters upon the Tarik Bab Sitti Maryam, close to the traditional tower of Antonia, I have opened another cistern, and found rock as shown on trace; running north and south on the rock is an aqueduct which apparently filled the cistern in passing, and may have been used for the supply of the Haram Area or of the Birket Israil; it is blocked up after a few feet at each end, and the owner of the property would not have it opened.

Each step we take about the north-eastern end of the Haram Area tends to point out that there is a great depth from the surface to the rock.

XXXVIII.

February 11, 1869.

The Triple Gate and Tunnels on South Side of Haram Enclosure.—In my letter of 4th December, 1868, I said, "originally the so-called Triple Gate was a double tunnel, proof of which will be found on examination of the 250 Ordnance Survey Plan." I have since seen that the eastern of the three tunnels extends further to the north than is shown in the Ordnance Survey Plan by at least two bays. It is, however, very much choked up by rubbish, and it may extend still further north as a third tunnel, or it may be continued further east in another set of vaults (see Plans 37, 38).

The vaults at the south-east angle are now very difficult of access. Some years ago a door opened into them from the "mosque of the cradle of our Lord Jesus," but subsequently it has been plastered up, and the entrance was from the surface over the remains of a fallen arch. Last year this arch was built up, in consequence of some report of deserters having secreted themselves in the vaults while the troops were at prayers in the Sacred Area.

At present there are only two means of entry, the one through a loop-hole (9in. wide and 19in. high) on the staircase leading to the "mosque of the cradle of our Lord Jesus," by a drop of 40ft., past an overhanging mass of crumbling masonry; an entry which, having once passed in safety, I am not anxious to try again. The other entry is by getting down tank X., and then up again through an old aqueduct into the vaults.

A few days ago, finding that I still required some measurements for the completion of an elevation of the western wall of the vaults, I went in through tank X. You enter from the surface of the Haram Area. There is first a shaft about 16in. square, and about 31ft. to top of the tank (rock), then a drop of 24ft. to bottom of tank, and 18ft. up again to the aqueduct leading to the vaults. The small ladder we could get down was only 12ft. long, and another, which we eventually got to lash on, was of slender proportions, having been made to assist young pigeons in getting up to their cote; the two together did not reach up to the hole, and we had considerable difficulty in getting up.

In tank No. X., in the roof of rock, is a space of 4ft. covered by a flat white stone, and Sergeant Birtles observed some carving upon it. It can only be seen in a certain light, but I have made an approximate sketch of its appearance. It must be nearly 30ft. below the surface of the Haram Area, and is probably very ancient, as it would appear to have been put over the cistern before the *débris* accumulated (see Plan No. 37).

The plans forwarded herewith consist of a plan of the Triple Gate, with elevations of interior and exterior, an elevation of west wall of vaults, and detail plans of the little that can be seen of three engaged columns. It will be seen on examination of the exterior arches of the Triple Gate and the arches of the west wall of tunnels, that they are of very similar construction.

The arches of the Triple Gate on inside are elliptical, and the jambs are formed of rather smaller stones than those on the outside. I can find no trace of any "colossal monoliths" about the gateway.

Forming part of the jambs of the western arch are two portions of engaged columns (see Captain Wilson's notes, p. 38) shown on plan. In the western wall there is a portion of an engaged column formed of two stones placed side by side, which, together with two other stones on either side, have every appearance of being *in situ*. This course appears to be about 4ft. 4in. in height.

The roadway up from the Triple Gate throughout its length is within a foot or two of the rock, and in three places the rock is cut down, and forms part of the western wall. I have examined the supposed lintel of a gateway in the western wall; it is part of the solid rock, and the narrow vacant space beneath appears to be a natural crevice.

Pottery.—Sketches of the most remarkable specimens are being got ready and will be sent as they get out of hand; as soon as the sketches are made the pottery will be packed up to await instructions, whether they are to be sent home or not.*

It is desirable that instructions should be sent as to the style of pottery most worth keeping: at present all specimens are kept, whether Arabic, Christian, or otherwise.

At the rock-cut passage at Ain al Luz'h no pottery was found (except fragments) until the seventh staircase was opened, when three lamps were brought out from different depths: they are of different construction; the first is similar to those found near the rock at Ophel, and which have been pronounced to be lamps of the third or fourth centuries; the second is not like any I have seen elsewhere, and the third is similar to one found in the older *débris*, which existed when the Haram Wall at south-east angle was built.

We observe that the whole of the ground of Ophel between the South Haram Wall and the Pool of Siloam has been built over, and lamps of a particular type (two of which have Greek inscriptions) are found there, and in no case has any known Arabic pottery been found. On the other hand, at the Birket Israil the pottery is totally different: it is in many cases highly glazed, and has patterns on it, and when it is unglazed it has bands of red or brown and other marks, very similar in appearance to the specimens of pottery found at Athens

* Some of these sketches are now mounted and can be seen at the office of the Society. The Pottery has all been brought home by Mr. MacGregor, and can be seen also at the office.

and Melos, and yet among this we have found two pieces of glazed jars with raised Arabic or Cufic inscriptions, the one being the usual invocation of Allah. It is curious that the only other instance in which we have found anything similar to the Grecian pottery was at the Muristan, where the rubbish accumulated is comparatively modern.

It is possible that if the jars were properly cleaned, characters might be found scratched upon them, as some of them evidently were used for religious or superstitious purposes. For example, the jar found placed in the hole in rock at the south-east angle of Haram Area.

I have carefully avoided cleaning any of the pottery for fear of damaging it.

Two stone weights (?) have been found; one at Ophel, weighing 2301·8 grains troy, the other at the south end of the bridge, at Robinson's Arch, above the pavement, and weighing 2885·5 grains troy; this gives a ratio of 4·5 within eleven grains; and if we divide by these numbers we get 575·4 and 577 grains troy as the unit of weight. The weight found at Ophel has a geometric figure on it, a sketch of which has been sent home.

Birket Israil.—The concrete floor under the northern Souterrain has been broken through, with great difficulty, and rock has been found at about 4ft. depth; that is, about 40ft. below the crown of the arch. The work is still in progress.

I believe this will be considered an important addition to our knowledge of the topography of Jerusalem.

First. It shows that the Birket Israil never extended further to the west than its present limit, at its present depth.

Secondly. It is apparent that the engineer would not have gone to the trouble of scarping down the rock on the other sides of the pool, and have left it in its natural state to the west; and this leads us to the fair inference that the pool has only rock on its western side.

Thirdly. We may draw the inference that no other enormous pools exist similar to and to the west of Birket Israil; that any ditches or pools to the west of it will be found to be cut out of the rock, and of comparatively small size, similar to that found near the Sisters of Sion Convent; and that if ever the Birket Israil was of larger extent than it is at present, it would only have been by a portion of the pool running north towards the west end of the Church of St. Anne, or south into the Haram Area.

Golden Gate.—Gallery has been commenced, and progress is slow—soil very loose and treacherous.

East of Olivet.—Two curious pot-like holes in the marly rock have been opened, and a good deal of pottery has been found, sketches of which will be forwarded.

Gate Gemath (so called).—A shaft is being sunk under the gateway.

WORKS IN PROGRESS.

February 2nd, 1860.

Shaft near Golden Gate.—Sinking through loose soil and rubbish; depth about 15ft.

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Robinson's Arch.—The southern course of the arch has not yet been recognised among the *débris*, and the party are now clearing out a passage to the north.

Shafts and Galleries at Ophel.—Two parties are engaged tamping up.

Gennath Gate (so called).—Sinking shaft in front of sill of gateway; depth, 6ft.

Birket Israil.—Searching for rock.

South-east angle Haram Area.—Examining wall. Another H has been found cut on a stone, but it has not yet been examined.