

## THE SURVEY OF PALESTINE.

---

LETTERS FROM LIEUT. CLAUDE R. CONDER, R.E.

I.

*10th July, 1872.*

First impressions on arriving in a country so totally unlike any in Europe as is Palestine, must always be more or less interesting.

Two kinds of travellers have given such descriptions, and they are apparently very contradictory. The first kind are enraptured by the scene, and describe in flowing language blue hills, venerable cities, orange groves, and palms. The second, disgusted with everything they meet, talk only of deserted ruins, hovels, parched shapeless hills, dirt, and dust. The truth of the matter is that there is much to be said on both sides of the question. Palestine at present is emphatically a land of promise. The distant scene from a window in Jaffa—long garden, groves, palms, plains covered with vegetation, and distant misty mountains—quite comes up to such expectations as are raised in our infancy by the sketches of Roberts and Bartlett; descending, however, into the details when distance no longer lends enchantment, the promise cannot be said to be well fulfilled. The venerable town proves dusty, noisome, and hot to an insufferable degree, the plains flat and uninteresting, and the hills shapeless and burnt up. The truth is that for distant views Palestine is indeed beautiful, but for stern realities in the foreground it is barren and commonplace to an unusual extent.

Having safely landed through the high waves and the narrow inlet of the dangerous reef at Jaffa, the road lies through the plains to Ramleh by a road once well made but so neglected as to be worn to its very foundation of large stones. The Arab horses, with their rapid walk and easy canter, are now the only means of travelling; the omnibuses and carriages started some few years ago in the days of the American colony at Jaffa being now broken or sold, and the road impracticable.

In the evening we reach Ramleh, which is quite typical of most of the Syrian towns and villages. The first thing which specially strikes the eye in these buildings is their ruinous appearance when seen close. This is due to several causes—first, their colour, which is most peculiar; not white, as in Italy or Alexandria, but simply dust-coloured, as if dust, such as that on an English road, had been scattered over the whole and over every patch of soil in the roads, streets, and country, which is not covered with some sort of vegetation. The second cause is the crumbling and uneven dressing of the limestone of which the

walls are formed. The third, to an English eye, is the want of any relief from difference of colour in the roof or windows, which, with the white flat concrete roofs, is continually characteristic. The last, and perhaps most important cause, is, that as in the ancient times of megalithic structures, so in modern buildings, the inhabitants of Palestine seem to be quite unacquainted with or to have a profound contempt for the right angle; as in the grand Haram enclosure, so in every Syrian house, there is rarely any attempt at squareness. The roofs are at all levels, the walls often not strictly parallel, and little round domes crop up without any attempt at symmetry or proportion. Each house, unlike an Italian or Alexandrine building, has its flat roof surrounded by a parapet wall, which runs along at various levels and always appears to be ruined, in some parts two or three courses wanting. Such, with additions of a few minarets, scattered palms, and cactus straggling in and out of drystone enclosures, is the outside of a city in Palestine. In the distance it presents a compact square mass of building; in the interior, streets paved in parts with small stones and arched over for shade, going up and down by steps, with small shops and covered bazaars.

After leaving Ramleh by starlight, with an occasional view of gleaming eyes from some wild dog or hyena, the mountains are reached just as day begins to dawn. They are certainly disappointing. They are round and shapeless, of stratified limestone with brown bands of burnt herbage visible between; and only when some special effect of light or broad shadow is visible, can they be said to look at all picturesque. In some parts the limestone, usually dark grey, has a purpler tone, and the yellow grass contrasts with it; in others the olives, of a brighter green than those in Europe, with aged boles hollowed and ragged, give a little freshness to the view. When, however, these relieving features are absent, the scene is barren and desolate in the extreme; no human habitation or sign of agriculture is visible, a few partridges and small birds appear now and then, and birds of prey, owls, hawks, kites, and other wild inhabitants of the desert, are seen sailing in amongst the confused succession of round summits separated by deep dry valleys and the road runs up and down as mountain succeeds mountain in wearisome succession; and as you gallop to each eminence in hopes at least to see the distant city of Jerusalem, your view is barred by yet another brown hummock to be traversed with pain and discomfort.

Two coffee-shops are promised us on the way; each is found in a valley by a stagnant muddy well, each equally disappointing, as it consists merely of a semicircle of dry stone wall, some two feet high, with a low roof of boughs supported on a central pole, and half covered with dry brushwood. Here coffee is served by an aged and dirty Arab, and mules and horses crowd, tortured by flies and gnats, round the well.

At length we are told that from the next summit we shall at last see Jerusalem. What, when it proved such an acceptable announcement to us, who had only travelled nine hours, and had fed by the way,

must it have been to the crusaders who, in hunger and thirst, under a burning sun, had struggled through half Europe and all Asia Minor and Syria on foot to reach it? Little can those who most sneer at this "centre of the world" wonder at the tears and cries of the multitude when they at last beheld their goal.

Nothing was more contrary to expectation than the first view; not of a large city walled round, lying spread out below us, but of a few white modern houses, drystone walls, and a large building with several white domes, evidently also quite new; and all this, not in a valley, but on the very top of the last summit ascended. This was modern Jerusalem, the Russian town. We gallop on, and at last on the same long ridge, but sloping down towards a distant valley, we see a long dark grey wall with battlements, and two square towers; minarets and tall cypresses rising behind, and in front of the dark gateway yellow camels in the blazing sun, lying grunting and grumbling in the road. Such is the foreground, but it forms, not as one would be led to expect and believe, the whole scene, but merely the setting of the extreme distance of a long veil of grey mountains—the Moab country. It is not, indeed, till visiting the spot that the traveller appreciates the meaning of the Psalmist's words; for twenty miles he has struggled over mountains, and now he sees on every side to the extreme verge of the horizon still higher hills, and yet finds himself standing on one of these at the gate of Jerusalem.

Captain Burton, in the general remarks prefacing his new work on Syria, speaks with great contempt of the "torpid little town of Jebus;" yet to the traveller fresh to Syria, although well acquainted with the beauties of mountain scenery in Upper Italy, and the rich plains of the South, and not even suffering from "Holy Land on the brain," the first impression is decidedly a striking one.

Let like be compared with like, and not with that which is incommensurate. Compare Jerusalem with Paris or London, compare the Moab chain with Mont Blanc, the result will naturally be unfavourable to scenery which is on a smaller scale; but when, after seeing the shapeless and half-ruined villages near Jaffa, the well-built walls, the fine buildings, the battlements, archways, pillars, palms, and gardens of the capital strike the eye, the effect is certainly superior in beauty to moderate expectations. And again, when the brown hills passed through still meet the eye on the north, the distant range of Moab looks imposing by contrast; and again the truth of the assertion that the charm of Palestine consists in distant scenery is proved.

Another point which in England appeared of great difficulty now disappears entirely as such. It is evident that Palestine is not a land where architecture has ever reached any great amount of excellence in detail, or richness of style. Hence it is that the apparently homely outline of the ancient Temple, as blocked out from the Talmud description, and the plain character of the remains as yet found, are still not inconsistent with the enthusiastic accounts of Josephus.

*Size* was to the Jews, whose ordinary buildings were small and insignificant, the only element of grandeur, and in this, indeed, they excelled. The effect of even such small towers as these at the Jaffa Gate is striking; what then must have been that of the lofty piles of Hippicus, Psephinus, and Mariamne, and the great wall of the Haram, of which now but a third of the height is visible?

Beauty of detail and richness of style we should not naturally expect in Palestine, but grandeur in proportion and square massiveness we should look for and do find.

---

## II.

11th July, 1872.

My second day in Jerusalem was spent in the shop of Mr. Shapira, in Christian Street, sketching the pottery alleged to have been recently discovered from Moab and which he has offered to the Palestine Exploration Fund for examination. These are most interesting to Bible and archæological students, and appear to be, in many instances, unique. They are of two kinds of pottery, one bright red and sharply defined in outline and inscription; the other, apparently older, is of greyer colour and less distinctly moulded.

The sketches I send are the only ones which time enabled me to prepare for this mail, but the number as yet uncommunicated by either Mr. Drake or Dr. Chaplin is very large, and these will be forwarded as soon as possible, my time being principally devoted to such drawing for the next few days.

First in interest to the general public is the "Moab Calf." Here, if genuine, we have a relic which may at once take us back to the Mosaic Dispensation, to that mysterious worship which—perhaps first connected with or in imitation of the Egyptian Apis—seems to have had peculiar attraction for the Jews. Hardly had they left Egypt when under Sinai itself they worshipped the golden calf, and later we find that Jeroboam caused Israel to sin by the erection and worship of calf idols in Bethel and Dan. It is a curious, but perhaps impertinent remark, that twelve oxen supported the brazen sea, and that the bull was one of the four beasts or portions of the Cherubim.

To find therefore in Moab, the country where first Israel, issuing from the desert, was led astray, one calf idol and the fragment of a second, would be most interesting, and the rumour that similar relics, but of gold, have been unfortunately already melted down in Damascus, still further excites the curiosity of the student.

The Moab calf is perfect, all but the feet on the right side. It is 22½ in. long, 9 in. broad, and 8½ in. high, or rather less than the dimensions of a new-born ordinary calf. Its ears are chipped, and it has on its

sides scratches which might be conjectured to be the remains of an inscription, but may only be marks of the moulding tool. The head is well-shaped, and the dewlap well executed; the rest is clumsy and rough in the extreme; the hollow in the back may be either for incense or for the reception of offerings, and is of irregular shape. The colour of the pottery is light, and in parts grey; the nostrils are shallowly moulded, and not perforated as in the second or fragmentary head, which is also better moulded and of thinner pottery. No really marked inscription exists on either.

The remaining sketches carry back our thoughts at once to the eleventh chapter of 1st Kings, where it is told us how Solomon erected on Olivet temples to Chemosh, the abomination of Moab; and for Molech, the abomination of the children of Ammon; and for Ashtoreth, the goddess of the Zidonians.\*

---

### III.

#### ON THE EXPLORATION OF JERUSALEM—THE SECOND WALL.

NABLOUS, 18th July, 1872.

Much as has been done in elucidating the topography of Jerusalem by my predecessors, I feel, after a long talk with Herr Konrad Schick, in charge of the excavations in the Muristan, that there will soon be opportunities for still more decisive discoveries on the subject.

These opportunities should not be lost, and I sincerely hope that, as in next November work will be possible here without affecting the health of the party, the Committee of the Palestine Exploration Society will feel justified in supplying men, materials, and money; whilst I would guarantee that the support and assistance necessary for success are to be readily obtained here.

First in interest to us all, comes the vexed question of the Second Wall, including that of the identity of the traditional site of the Holy Sepulchre, with that new tomb in the garden which was nigh at hand to Calvary.

Calvary, as all agree, was without the then existing city wall, which by Josephus is always spoken of as the second wall. If, then, the wall ran east of the present church, the evidence is permissive, though not positive, but if it ran west, the evidence becomes definitely negative as to the authenticity of the site.

The description Josephus gives (*B. J. v. 4*) is bare enough. The wall

\* These sketches, together with some by Mr. Tyrwhitt Drake, are lying in the office of the Fund. It is not yet by any means certain that the objects are genuine, but it is hoped that further investigations may confirm the good opinion of them formed both by Mr. Drake and Mr. Conder.

started from the gate Gennath, or, as it has been translated, the garden gate, belonging to the first wall; it encompassed the north quarter of the city, and reached to Antonia. We have, however, another indication of its extent in the same passage; for, supposing the distance of every tower on each of the three walls to be the same, and comparing thus the lengths of the walls, we find that the second wall was two-thirds the length of the first, and four-ninths that of the third, and coupling this with the thirty-three furlongs given as the circumference of the city, the length of the second wall is roughly one English mile.

Of local indications we have but one of any value, at the Damascus Gate, where two ancient towers are found. This, then, must surely be a gateway of the wall in question, for it is too far north to belong to the first wall, and, if the circumference of the city be kept in view, too far south to have been in the third.

From this starting-point, then, we might trace the wall to Antonia on one side, and to the Gennath Gate on the other. The first question, as being of less immediate interest, and also more difficult to solve in accordance with all the different points of evidence, I leave at present untouched. One of two courses, it must, as is generally agreed, have taken; and I shall therefore merely remark that the greater the extent on this side, the less is left to be accounted for; and thus the greater the probability of so tracing the wall as to exclude the church of the Holy Sepulchre.

We come, then, at once to the question of the junction of the first and second wall; and here it is important first to determine the line of the first wall itself.

On this, in the same chapter, Josephus is fortunately more definite in his description. The northern course was from the tower Hippius, which, with Phasaelus and Mariamne, was placed on this side. Hippius we also *infer* to have been at the north-west corner of the wall, as from it the course to the west cloister of the temple is described. From this salient point the third wall also started. Phasaelus and Mariamne must then have been east of it; and to them we are told that the King's palace adjoined. The wall hence ran on to the Xystus, the council-house, and the west temple cloister, excluding the lower city which was separated by a valley.

But little difference of opinion exists, therefore, about the course of this wall, which is supposed to lie in the line shown. With regard to its history I have never seen it remarked that it may probably be identical with the wall which Simon and Jonathan, the Asamoneans, first built in the midst of the city, to exclude the market-place from the garrison, which was in the citadel on Acra, which was afterwards levelled (*Ant.* xiii. v. 6).

Of local indications there are very few. On the west, at the Jaffa Gate, stands the citadel of the present town, including the castle of David, a tower the foundations of which are undoubtedly ancient, and agree with the dimensions given by Josephus for Phasaelus. On the east, at

Wilson's arch, it is possible the wall ran close to the vaulted ascent. Between these two points in the same line stands the property of the Society for Converting the Jews; and here, as shown on a larger plan, Captain Warren sought to find, beneath an archway, the Gennath Gate. A second ancient gate exists close by further west, but its date is uncertain, and part of it seems Christian. In the same vicinity an old tower-like cistern exists, and part of an ancient wall below the surface, all pointing to the existence of the wall, probably under the street.

Having thus a tentative east and west line, we require one north and south to fix the position of the Gennath Gate; but it is just here that the difficulty lies. Captain Warren on the east went forty feet deep without finding either the rock or the gate; and Captain Wilson was equally unsuccessful at Kalaat el Jalûd, on the west of the Holy Sepulchre, which Dr. Robinson had taken as a point in his second wall.

The scattered references to the wall in question in Josephus are numerous, but tend, it would seem, rather to trace the wall so as to include the Holy Sepulchre; though the evidence cannot be considered as conclusive.

First we learn (*B. J.* v. 6) that Titus thought to attack at the monument of the High Priest John, as the outer wall was lower, the second wall not joined on, not being completed, and there was an easy passage to the third or inner wall.

A sally from an obscure gate (or postern) at Hippicus was directed against this attack by the Jews, who under Simon fortified the spot near John's monument as far as the gate where the water (probably the aqueduct) came in to the tower Hippicus (*B. J.* v. 7).

Titus, however, took the second wall at the part where the narrow streets led obliquely to it, and prepared to assault the last wall. For this purpose he erected banks at John's monument, and the pool Amygdalon, thirty cubits apart, in the north quarter (a term equivalent, it would seem from another passage, to the lower city). (*B. J.* v. 9, and v. 11.)

The deductions to be made from these passages seem to be as follows:—

1st. The second wall was at its junction, near the tower Hippicus, which is supposed to have been near the Jaffa Gate.

2nd. The postern of the aqueduct at Hippicus may possibly be identified with the Gennath Gate.

3rd. The pool Amygdalon, only mentioned after taking the second wall, must have been within it, close to the monument of John—a conspicuous object, which M. Ganneau boldly identifies with the Holy Sepulchre itself! The pool may, therefore, very well be that of Hezekiah which lies nearly north of the castle of David.

With regard to the opposite view of the subject, I may state that, east of the Holy Sepulchre, there are ruins of what was undoubtedly a tower or building of some sort belonging to the megalithic period, the rock not being here far below the surface; these are, in all probability, *in situ*. Captain Wilson thoroughly explored this.

First it is evident that the aqueduct should be carefully traced in hopes of finding both Hippicus and the Gennath Gate. To this work Herr Schick promises soon to devote himself. Secondly, it is important to descend into the lower part of the castle of David, which has, I understand, never been explored, and for the investigation of which it is hoped the new governor will give facilities. Thirdly, an arch in the moat of the citadel must be opened, and the vaults within searched, and if necessary a short gallery driven towards the south to find, if possible, the first wall.

---

#### IV.

##### THE PROGRESS OF THE SURVEY.

NABLOUS, *18th July, 1872.*

Arriving on the 17th at Nablous, my first attention was directed to the examination of what had been done in the survey during the time that Mr. Drake has been in charge. Having before this date been unconnected with the work, I may of course be looked upon as an impartial critic; and on that ground I wish to report at once my impressions on joining.

Palestine has been described as an easy country to survey, the distances being large from one point of extensive view to another, and the amount of detail small. I wish, therefore, to give a short sketch of the practical difficulties of the work.

Our method is to establish a camp from which to extend the survey within a radius of five to seven miles; when this is finished the camp is removed some ten miles further and the same process repeated.

The size of the triangles is therefore limited, not by the distance that can be seen, but, as each point has to be revisited for the sake of connecting it with new ones afterwards erected, by the distance that can be ridden in the day, leaving the requisite amount of time for the observations to be taken.

When it is considered that in some parts no roads exist, that where they do they are used by the natives principally as receptacles for all the stones in the gardens; that all the surface from Jerusalem to Nablous is either covered with small stones or consists of flat limestone slabs worn quite slippery by sun and the feet of the camels; that no shade can be found on the hill-tops; that water is scarce in most parts; and that delicate instruments have to be mounted on mules which are urged as fast as circumstances permit—it will be seen that to construct an accurate map is not by any means an easy task.

For this task but two men have been employed, under the care of Mr. Drake, without whose experience and constant assistance they would have been unable to accomplish what they have done. They have

worked now unceasingly for six months, and the results are successful and satisfactory beyond what could have possibly been expected: in fact, better work could not be desired.

The extent of the Survey at present plotted is 560 square miles. Part of the most difficult country is already passed, and a considerable portion that is easy will be even more rapidly completed.

As regards the triangulation, the checks have been in all cases satisfactory; and lines of thirty miles in length are calculated throughout, which prevent all possibility of slewing. The direction taken will bring us in the shortest possible time to the second base on the plain of Esdraelon, which will still further check the work.

The observations have also been very satisfactory, and agree well with those taken by Captain Warren. Finally, the detail has been all filled in, and the work will be forwarded as soon as possible to England, and can be published at once. The hill shading is not placed on the plan, and as it rather tends to obscure the detail of roads and villages it would be better to add it later. It will, however, be continued in conjunction with the other work.

Perhaps the most satisfactory feature in the work is, however, yet to be mentioned. The amount done in the last quarter has been half as much again in quantity as that done in the first three months, and that in spite of the increased heat of the weather. It is hoped, also, that as the men get more accustomed to the work, to the hard riding, to the habits, language, and appearance of the country; and, further, when the plains and less difficult country are being surveyed, that still greater progress will be made.

I cannot, however, consider this report as complete without urging most strongly that more men be employed. Captain Stewart, I am aware, spoke on this point at the last general meeting; and I do not hesitate to state that, as at present carried on, it cannot be completed in the time expected. Two more men would more than double the rate at which work can be carried on, and it would be desirable to increase the party still further in order to lighten and accelerate the work. It is at present in a precarious state, for the illness of one of the men must necessarily put a stop to it, and although their health has as yet been very good, the risk is very great to run.

I would, therefore, press the committee earnestly to consider the saving in time and expense which the addition of two or three more men would make. They need not be of the rank of Sergeant Black or Corporal Armstrong; as younger men of the corps would, under the guidance of these excellent and experienced workmen, be quite efficient, and could be easily selected at Chatham. They should be men accustomed to filling in of detail, but need not be able to take observations.

My conclusions are, therefore, that considering the party and the country, the work is far more satisfactory than could have been hoped, and indeed for accuracy and detail leaves nothing to be desired; but I

consider that the addition of three more men at least to be sent out to arrive in October at the latest, is of the greatest possible importance.

---

## V.

## THE COUNTRY ROUND SAMARIA.

NABLOUS, 23rd July.

The Survey has, during the last quarter, been extended through the hill country of Palestine, until at last from our further points on the north we can see stretched in the distance the plain of Esdraelon, on which our second base is to be measured; with Nazareth, Tabor, and Hermon on the north, and the ridge of Carmel and the white sand cliffs of the Mediterranean stretching away on the north-west and west.

Our present camp is, and will probably for a week or more continue to be, at Nablous, the site of Shechem, the patrimony of Abraham, and the resting-place of Joseph; placed between Ebal and Gerizim, on the very watershed of the country, with hill country on every side, and deep wadys or valleys leading to the Jordan valley and the Mediterranean.

The country from Jerusalem and Hebron on the south, to Esdraelon on the north, presents such constantly recurring features, that a description of that in the Samaritan district will give a correct impression of the whole. Indeed, were it not for the distant views reaching beyond Jordan on the one hand, and to the sea on the other, including long ranges, broad plains, and distant blue ridges, the scenery would present a most monotonous and uninteresting recurrence of round-topped barren hills and deep stony valleys. Palestine is, as I have before remarked, the country of all others where distant effects can best be studied and appreciated.

The geological composition of the hills is a dark grey, sometimes almost purple, limestone, hard and compact, stratified in beds of an average thickness of two, three, to seven feet, and as a rule very nearly horizontal. These are referred by the French geologists to the early miocene or late cretaceous period, and called by them nummulitic.

Beneath this bed lies another, similar to that on the east of Jerusalem, a soft chalky soil containing a portion of alumina; in fact, approaching to a marl. The beds are much thicker, ranging from ten to fifteen feet, and in places beds of equal thickness of a flint conglomerate of dark colour are found, inter-stratified. The dip of this formation varies, but apparently the beds are not conformable with the upper limestone. A good view of the out-crop of a still lower bed is obtained at the head of Wady Farah, an important valley running to the Jordan on the east of Nablous. The chalk here is suddenly replaced by a secondary limestone, the beds contorted with a dip which probably in places exceeds 45°, and stratified in thinner beds of dark colour. The strike can be traced for many miles in a southern direction along the plain east of Nablous;

and a deep water-worn ravine on N.E. of the town has left on its west side a strip of the limestone, which fringes the softer and rounder outline of the chalk hill.

This third formation is a dolomitic or crystalline limestone, marked by narrow torrent beds, with natural caverns. The outline is sharper than that of the nummulitic limestone, which appears, however, to be the main feature in the landscape on the south.

The appearance of the country is what would be naturally expected from such formations. Round stony hills, hemmed in and divided by innumerable valleys, mostly narrow and nearly all dry; down these the winter torrents which first formed them flow to the plains, but in summer the water supply is limited to a few streams and to wells. The horizontal beds give a tame outline to the hills, and their only beauty consists in their colour towards evening or in early morning, when reds, bright browns, and yellows, with bluish and purplish shadows in the deep folds of the hills, give, with the distant dim mountains on the east, a striking though barren scene. Where soil exists not consisting of grey shingle from the rock, it is of a rich reddish colour, and it affords, as Captain Burton remarks, a valuable indication in searching for ruins, as the existence of this virgin soil is a distinct negative proof.

Between the ledges at this time of year (a time most unfavourable to the beauty of the scenery, as flowers and green leaves have long ago been parched, and only burnt grass remains) grow every species of thorny shrub, and plants delighting in dry barren sites. One low dark-brown thorny plant makes itself specially conspicuous, covering the hill-sides in moss-like patches on every side, contrasting forcibly with the yellow-burnt grass and the grey stone. Rock roses (*cisti*), lemon-scented thyme, and thistles also abound; and, like the remainder of the shrubs and plants, are dull grey and brown in colour. The summits are generally flat and covered with stones, often quite bare, and rarely possessing any trees. Lower, patches of maize, of cucumbers, and other vegetables, near the villages, and occasionally tobacco fields, give a greener hue to the hill-side, but in the general view these are lost, and the effect is brown, yellow, and grey.

Descending into the valleys the soil is even stonier, but in Wady Farah there is a stream of fresh water, and beside it dark bushes of juniper and clusters of large oleanders in blossom mark its course like a black broad line in the middle of the valley.

Where the chalk appears, the outlines are softer; and broad white patches and bands run over the mountains. The water has here worn down the hills, and plains of alluvial soil, such as that east of Nablous, result from the softer formation.

Near the villages and up the hillsides the olives give an appearance of greater fertility, though in colour they are grey and dry. Many are of great age, and split into several pieces, which flourish independently. The crop, with the small amount of cultivation it obtains, is biennial. The whole of the groves, to sunset or even after, resound with the extra-

ordinary creaking of the cicala, which sounds sometimes like mule bells, at others as if the whole ground was simmering in the heat.

In the midst of this barren and half-cultivated country the immediate neighbourhood of Nablous presents a marked contrast. Numerous springs and streams run from the weather-beaten scarps of Gerizim and the olive slopes of Ebal, towards the sea. The grey town, with its square houses, its underground streets, its solitary palm-tree, occupies the high valley between the two, and creeps up the side of the former. Around are fig gardens, olive groves, and cultivated plots of herbs, all presenting, as seen in the distance, a green and fertile extent of orchard. Good fruits of every kind, melon, prickly pear, plums, and grapes, abound, and a good harvest is now threshed by the primitive method, used, no doubt, in the time of the Patriarchs.

Such then, are the physical features of the country of Samaria. Of its *fauna* and *flora* but little can at this period of the year be learnt. The flowers are burnt and dead, whilst birds and beasts are alike few and uninteresting. Round the wells, the large herds of black long-eared goats are mixed with small sheep, also long-eared, and out of condition owing to the heat. Over the hills long strings of yellow or white camels, each led by a dark man, in his black keffiyeh, riding a diminutive donkey, are constantly met swinging along. Higher up a pair of gazelles may occasionally be seen bounding over the stones, and once we came across a family of wild pigs. Reptiles, however, enjoy the country and the weather, huge grey lizards scamper about with head and tail well lifted from the ground. Small ones, more resembling earthworms in appearance, also abound, and an occasional large-sized snake is to be met with on the hills.

Song birds seem entirely absent, and of the smaller birds only sparrows and a dark-coloured stonechat appear. In the clefts of the rocks little brown owls are perched, and over the deep wadys the Egyptian vulture is seen circling. Black crows, black kites, and other birds of prey are common; a black-headed jay is also often seen in the olive gardens. A flight of bee-eaters came over our camp this evening, and in the morning we saw a little woodpecker on the hills; these, however, are the only species as yet noticed, and as it is near moulting time it is not a favourable period for collection.

The insects alone remain to be noticed, and of these there is a marked absence of coleoptera, only two or three small beetles having been obtained. On the hills, and sometimes lower down, there are many butterflies, the large yellow swallowtail (*P. podalirius*), and both kinds of the small copper, are the most common; but a bright orange one, and another dark blue or black also, are found. Grasshoppers, the mantis, great yellow spiders, and scorpions, three or four inches long, and light-brown coloured, complete the list. It is remarkable that no *green* insects seem to exist here, but all seem suited to the colour of the country. In southern Italy, where vegetation is fresher and greener, lizards, grasshoppers, and beetles are all often bright green in colour.

Such is the summer aspect of Palestine, at least as far as the hill-country is concerned. Dry and parched, it presents, no doubt, at the present day an appearance very different from that which, with the hills covered with shrubs, with copses, and even with trees; the valleys, watered by fresh streams, bordered with grass and with foliage, it offered to the eyes of the Israelites, to whom, fresh from the barren deserts of Sinai and the rocks of Moab, it must have seemed to be indeed, at least by comparison, a land flowing with milk and honey.

---

## VI.

### ROCK INDICATIONS AT JERUSALEM.

CAMP JEBA, 18th August, 1872.

Having recently had occasion to visit Jerusalem for a week, to arrange stores, &c., Mr. Drake and I have occupied our time in explorations of various parts of the city and neighbourhood, and have been rewarded by the discovery of several points of interest, some of which have not, I imagine, been as yet brought before the public.

Our first object was the examination of the Haram, principally with regard to the tracing of rock on the platform itself, and the examination of the chambers on the south and west of the platform. The general result was an impression that much still remains to be done in the sacred precincts, which will throw light on the disputed topography of the interior.

Mr. Schick had just commenced the examination of Captain Warren's Tank No. 24, which lies under a square house used for storing tiles in. Here Captain Warren only remarks that the rock is at a depth of nine feet from the surface, sloping west at an angle of thirty degrees. Descending into it, we found that the rock, though irregular, and rising towards the east, forms the floor of the great part of the chamber. On the north side is a scarp, cut very distinctly, running to the east wall of the chamber, about one foot from the north wall, the interval being filled with dust and the rock foot not visible. (See Sketch 1 from the O. S.) The east wall also consists to a considerable height of a finely worked scarp of rock, which I suppose deceived Captain Warren, who took it for masonry; no joint, however, exists between it and the rough rock at its foot. The chamber is vaulted, with steps at its south side, and above these the same scarp is again visible. How far it extends southward there is no saying, but we have here indications of a corner of some kind, a sudden descent from a level about two or three feet below the platform to one of some ten feet. On the rough rocks there are marks as though of the remains of steps, or of masonry, fitted against the wall. The interest of this discovery is very great, and no doubt it will form a new point in future theories on the temple.

The sketch which I send will show the position with reference to the mosque, which is to the south-east of the spot. The line of scarp continued appears to cut the top of the steps from the gate above Wilson's arch. The north scarp is on the lower level, and finishes the rough rock; its junction with the eastern scarp is hidden by plaster on the wall. The higher, or eastern scarp, has a set back of about six inches, about two feet from the top of the rough rock. The neighbouring deep cistern should be examined, to see if it contains any indication of a continuation of this scarp.

The distance, taking the middle of the Sakhrah as a centre, is nearly equal from the south wall of the platform, and from this scarp on the north. This again may be an indication of the platform not having originally extended so far on the north as it now does.

Entering the mosque itself (an impressive and most interesting interior, with its glorious windows and brilliant mosaics) we walked round and round the sacred rock, and made on the architecture of the mosque many valuable notes, which have, however, no place in this report.

A more minute survey of the Sakhrah than has yet been made is much to be desired, and could it be accomplished a good deal would come of it. The outline only is given in the Ordnance Survey, and the plan and section of M. Du Vogüé are not exhaustive of its details.

On the exterior of the stone I remarked several interesting indications, but what they tend to show is not yet clear. First, the western face, which is the highest, is an artificial scarp, and careful investigation shows that it has a broad step running nearly all the way along, and indications of a second. A gutter, also, or channel, descends the rock at its north-eastern extremity. On the west are indications as of stepping, to receive courses of masonry, intended perhaps to equalise its height, which is much lower on this side, sloping regularly to the floor.

The shaft so adventurously investigated by my predecessor, has now been closed with cement. The cave itself we entered and examined, but not too attentively; the mats on the floor were not removed. There appears to be a difference of sound in the floor on the two sides of the flight of steps by which the cave is entered, as though a hollow passage led beneath; Mr. Drake noticed this, and a similar sound at the northern end of the cave, on a previous visit.

The dome of St. George Mr. Schick has entered, and found nothing of great interest. We visited all the houses but one on the south side of the platform; they run under it a little way, but are not apparently rock-cut. On the west side the houses are built against the platform, and show no indications of rock, but an inner chamber in one, south of the great steps, had a very hard cement, and may possibly be worth examining by breaking through its eastern wall.

The steps, and the garden to the north of them, must also on the earliest opportunity be examined.

The substructures under El Aksa, and at the south-east corner of the Haram, the Golden Gate, and the northern scarp, though interesting to see, gave no new indications, and the only observation made further,

was on the apparent antiquity of the east gate of the platform. The fifth step, some 30 inches from the level of the interior, appears, though it is not a certainty, to be cut in the rock, an important indication of level. Old drafted stones appear in the side piers, the old columns built into the central piers have their bases below the present level, and finally, the line of the gateway seems almost, though it is difficult to judge, to differ from the line of the wall on this side.

Under the Dome of Spirits, at the north-west corner of the platform, Mr. Schick thought the rock was visible, but this I think extremely doubtful.

Next in interest to our Haram notes comes the investigation of the scarp on Zion, which was conducted on three separate occasions. Though already surveyed by Capt. Wilson,\* I have thought it worth while to go over it again, as of the greatest possible interest in the tracing of the old first wall on this side.

Commencing on the west, outside the Bishop's church, we found a rubble wall in hard cement, over which was a thin stratum of fine old shingle and broken pottery, beneath the more modern mound of *débris*; and in front of this the top of a stone, with apparently the remains of a vertical draft, was noticed, and a little farther off another was discovered, the line being a production almost of the present west wall of the city from the Jaffa Gate.

The wall of the Bishop's school stands, as does the whole of the dining-room, on the great buttress next in order. The steps are distinctly visible, and the scarp itself on three sides. We are informed that there is a sudden drop or second scarp. The scarp is continuous from the buttress, but not visible in the parts where it is not shown, but the foot of it is never seen, as it is covered by a pavement. The line of cisterns runs apparently behind the scarp, but they must all be examined thoroughly to see whether they are rock-cut or not, for the steps appear to be so, and it is therefore probable that those near it are entirely or partially so.

The four steps are possibly more modern work, as also the cutting back of the top of the scarp, which here appears, and is of irregular height.

Here again, in a room occupied by a shoemaker, the other scarp or side of this rock-cut rampart was found when the house was built; the northern pier of the room rests on rock at a level of 15ft. below the floor, but the top of the scarp is nearly on the same level with this floor. From these two indications we may conclude that the rock has been artificially lowered on the inside, forming a kind of covered way inside the wall, and that on the outside a precipitous scarp formed the foundation of what was no doubt the city wall on Zion.

Passing the second buttress, which has a step or return on the west side, at a height of about 5ft. we come to the remains of a cistern of some size, and coated with hard cement. Its position is

\* See Ordnance Survey map of Jerusalem, 1870 plan, and "Notes," p. 61.

puzzling if, as would seem most probable, its base was rock-cut, in which case the scarp must run here farther south, forming a step. The rock here projects slightly, and the scarp, which is here from 15ft. to 20ft. in height, runs on, forming the north wall of the English cemetery, and here another flight of thirty rock-cut steps appears.

These steps\* have been already examined by Captain Wilson, who excavated to a total depth from the top of the scarp, of some 35ft., but without striking the rock at the base. The excavation still remains, but is blocked with fallen stone at the end. Just to the east the scarp again projects and is lost under the rubbish outside the east wall of the cemetery. It is, however, to be remarked that here, as on the western side, the compact shingle mixed with pottery underlies the modern *débris*, and probably, as in the former case, overlies the masonry or rock.

Continuing our exploration eastward from the last point, we come on what appears to be a continuation of the scarp, or a sally-port with a rock scarp on either side. The indications here are, however, by no means so clear, as the rubbish has filled up the space between the two scarps, and as some of the details seemed to point to its being merely one of the innumerable rock-cut tombs round the city. On the outer or southern scarp, a broken cistern, another, small but complete. The remains of an oil press, and indications of what may have been steps, are visible. In the northern or inner scarp, which is also the highest, there are indications of a buttress similar to those before described, but a water channel cut in it at first disposed us to imagine this scarp to belong to a tomb. The rock is here traced in a north-east direction, going towards the Mosque of David, and three cave entrances lead to rock-cut irregular caverns, having apparently no connection with each other, and though thoroughly examined, showing no indications of value or interest.

Such is a rough sketch of the rock rampart of Zion, to the importance of which too much attention cannot be given. Its existence at a part of the town where nearly all agree the ancient city wall must have been placed, and the facility of examining it thoroughly, as being placed outside the modern town, in an uncultivated part, render it most desirable that trenches or mines should here be undertaken, to explore it more perfectly and follow up the valuable clue thus obtained.

The first requisite will be a proper survey of the part at present visible, which occupies a total length of some 300 yards, observing the lie of the rock in the cisterns, the distance apart of the buttresses (probably an important point), and the level of the top of the scarp. It will then be necessary, where possible, to find the depth below the present surface to which this huge effort of human labour is carried down; and, finally, the discovery must be followed up on both sides—northwards to the city wall on the west, and eastward or northward, as the case may be, from the eastern extremity of the double scarp.

The method best adapted for following the scarp on the west, is the

\* See Ordnance Survey Notes, p. 61.

driving of a mine from the side of the hill beneath the modern *débris*, at right angles to the presumed direction of the scarp or wall; whilst on the east the rubbish must be cleared out, and if necessary a shaft sunk between the two scarps, in search of indications of an entrance of some kind. Another shaft must subsequently be undertaken still farther east, in search of the continuation of the rock or of the foundations of the wall. The indications of its precise position are not as yet as clear as in the former cases. The thirty steps should be farther followed, and the total number of mines here required would probably be four, to be undertaken in succession, and none of them likely to be of very great extent.

To hazard a theory on the probable meaning of this interesting work is perhaps premature, but it suggests itself most forcibly to the mind that here we see the south-west corner of the first wall of Josephus, and very possibly the remains of one of the gates. Now, at the south-west corner, we are told, was the place called Bethso and the gate of the Essenes; and if, as Dr. Chaplin has suggested, Bethso and Beit-sur are the same, the meaning of the latter word as being the "place of the hard rock" may very well connect "the place called Bethso" with the scarp as now existing. In which case we might possibly discover the gate of the Essenes in the position where indications have been observed of a gate.

Eastward from the Zion scarp our explorations did not bring anything of importance to light. The rock on the brow of the hill appears constantly, so that, except round the Mosque of David, the *débris* cannot be of very great depth in this part, and the chance of finding foundations is therefore considerably reduced. It is, however, most striking to observe the immense labour devoted by the inhabitants at some period when the now uninhabited slopes of Zion were covered with buildings, either suburban or within the wall, to insure a water supply during the dry mouths of the year. Cisterns connected by small pipes or aqueducts, running in a chain one below another, and so arranged that it was not till the one immediately above was full that the second could receive any supply, are found in every direction. Many are now being destroyed by the Arabs in the process of quarrying stone, as it is of course more easily obtained by breaking in the thin surface of rock than by attacking a solid mass. Several large caves, some of unexplored extent, and rough rock-hewn tombs similar to those in the so-called Valley of Hinnom on the opposite slope, are also found, but do not seem to promise any indications, and the question of the exact course of the ancient wall is rendered still more difficult by the present lie of the surface (following no doubt to a certain extent that of the rock beneath), and apparently at variance with most preconceived theories on the subject.

On the opposite tongue of Ophel the same features reappear. Here an aqueduct of larger proportions than those on Zion has been broken up: part still remains intact leading to a cistern, in the roof of which is a shaft. This ought to be explored on the earliest opportunity. It is at a very much higher level than that explored by Captain Warren from the

Pool of the Virgin, and runs along the eastern slope above the Kedron valley. Dr. Chaplin and I also examined several rock-hewn tombs, but here, as on the western hill, no great indications exist.

The village of Siloam and its rock-cut tombs, which owing to the turbulence of the inhabitants is almost unvisited, next attracted our attention, and we ascended by the precipitous and slippery scarp which has been so cleverly identified by M. Ganneau with the stone Zohemoth of Scripture. The name "Zehweileh," and the interpretation, "a slippery place," we found to be undoubtedly in use and understood by the inhabitants, who were carefully questioned, with the same result in every instance.

In the village itself the inhabitants live partly in large caves and quarries, in which also their animals are stabled, a troglodyte propensity which appears very usual throughout Palestine, and is the more curious amongst a people to whom the labour required for excavation of such abodes is unknown, and whose buildings even are of the rudest description. All the houses in Siloam are modern, but the rock-hewn quarries and tombs are no doubt of great antiquity; on many of them, however, there are Christian crosses rudely cut both within and on the exterior; but in no case either here or farther north was there any indication of the *loculus* placed endways in the tomb, supposed to be characteristic of Jewish sepulchres.

Siloam may possibly prove a fertile source of inscriptions. Here M. Ganneau discovered on the rock the one containing the name "Beth Baal," and in the main street a rough stone with the appearance of Phœnician characters. Here also we were shown, built into a wall, one with square Greek characters of rough execution. This Mr. Drake copied, and a sketch is now forwarded. It appears to belong to a mortuary tablet, and is partly defaced. Farther north we again hit upon an inscription of most puzzling character, which merits to be more particularly described.

Immediately north of the village the steep rocky side of the Kedron curves back, and the valley between this point and the tombs of St. James and Absalom is broader, and on the eastern side less precipitous. A glance at the Ordnance Survey map will explain this better than words can do.

Here, then, a flat plateau of rock separating the lower precipice from the upper by some thirty or forty feet, leads to a rock-hewn tomb which stands above it in a kind of buttress, and contains on either side of the entrance a sort of rough window pierced through the rock.

Immediately east of this the rock is scarped back to a still greater distance, and at places on the present level, partly covered with rubbish, it is coated with a hard cement and painted.

On a ledge running approximately north and south, we discovered the pattern of which I send a coloured sketch, and in its immediate vicinity, the inscription, defaced partly by age and partly by the growth of lichen. It consists of small characters in white paint or

enameled, very hard, slightly raised from a ground of grey-blue cement. The characters are placed one beneath another in ten vertical lines, and are unintelligible, and almost impossible to trace. Of the date and character of this building, apparently lying east and west, and partly rock-hewn, it is probably almost impossible to give any idea.

Immediately below the rock plateau is a curious detached rock-cut tomb, consisting of one chamber with a recess in each of its four walls. Its exterior mouldings are almost Egyptian in character, and in front of its door is a small tunnel or rough stone vault lined with hard cement, and now filled with rubbish. The end is not visible, and being so near to the other cement-lined ruin, it would be interesting to clear it out.\*

The number of rock-hewn tombs here situated is large, and their character curious. The cross is found on several, and in none does the Jewish loculus exist. Some have recesses as though for urns or osteophagi, but few are sufficiently large for a body to be placed in them. They are all entered through small square entrances just large enough to crawl through, but afford room to stand up in comfortably. Some marks in the walls seem to indicate that lamps were hung or placed in niches. Two of the larger have stone-cut loculi in their sides, as shown in the sketches, with marks of a groove where the lid was placed.

The latter of these is better cut than most, and has a pointed roof. Some few have an inner chamber, but most have but one. In one of the sarcophagi a place for the head appears—not the ordinary roller for the neck, but a hollow sunk to receive the nape of the neck and the back of the skull.

Sunset put an end to our explorations, which might, however, be renewed with advantage, as the date and history of these tombs is a point apparently difficult to decide. They seem, however, very probably to have been at some time or other inhabited by Christian hermits.

These expeditions round Jerusalem might be continued for a long time, and probably would always bring to light new points which had before escaped notice. The southern part of Siloam, the slopes of Hinnom, and Acedama, together with the extent of ground north of the city, all require minute investigation, and much is still to be recovered in the city itself. Some half-dozen inscriptions are still uncopied, and a most valuable addition to our information will be given soon by Mr. Schick, who is better acquainted than any one else with the depth of the rock at various points throughout the city. Three relics—a head, a bas-relief apparently from a sarcophagus, with Greek characters, and a Roman inscription—are built into the wall of the Prussian consulate, and are, I believe, still unpublished in England. Even above ground, in the heart of the town, there is still much work for a patient explorer to do.

On the north side time did not permit of much reconnoitring, but the indications observed were interesting. The discovery by Captain Warren of a wall running north of the Haram enclosure, and the existence of the

\* A plan and section of this are given in the Ordnance Survey Notes, plate 24, and p. 64.

rock-out trench which may very possibly be anterior to Saladin's fortification of Jerusalem; would seem to point to a solution of the question of the course of the second wall east of the Damascus Gate. Explorations, and if necessary excavations, near this latter would be most interesting, and I fully believe productive of results.

That the gate itself is near an ancient entrance has been already proved, and to the east of it, therefore, if practicable, the wall ought to be sought and found.

There is, in conclusion, but one point of immediate interest to notice, and this is the Kalaat el Jalud, a rough irregular mass of rubble, set in hard mortar or cement, situate in a waste corner close to the modern city wall. Captain Wilson's investigations and trenches failed there to bring to light anything of interest, and the style of masonry has continued a puzzle to the present day. It is evident that dressed stone of some kind originally faced the rubble; and similar work was discovered in a wall near the Jaffa road, outside the present city wall, by Mr. Drake, who ascribes both to the Crusading period.

A window has lately been broken through the wall, and looking through we perceived drafted masonry of moderately large size.\* Descending first into a chamber, some 5ft. or 6ft. below the present level, we explored it, but found it to consist only of a mixture of rubble work, and drafted stones of small size, with a rustic boss; the roof vaulted and cemented, and the entrance a pointed arch. In the second chamber, which has the same vaulted roof, the walls are of similar masonry, but without rubble. The entrance has an older arch, inside which the more modern arch is built. At the opposite end of the chamber is a second arch, dimly visible; it consists of five stones, with a marginal draft, and the boss in the centre dressed. The draft follows the form of the stone, and the keystone is cut out beneath to give a point to the arch. Three or four courses of stone dressed, and with the draft as in the arch, form a wall running approximately north and south; above this is rubble work, as on the outside of the Kalaat.

But the most curious feature of this building consists of the two great piers of drafted stones, with a rustic boss. The length of one of these is some 7ft. 6in., and the sixth course appears to go through the vault of the roof of the chamber, whilst another course is just visible, the greater part being hidden beneath the floor. The appearance of these buttresses or towers is that of the entrance to a gateway; it is doubtful whether they have any connection with the arch, but at any rate they are much older than the rubble work of the Kalaat el Jalud, which has surrounded them.

The more we see of the drafted, or, as it is falsely termed, "bevelled" masonry, the more we become confused, and the greater the difficulty of fixing a date to any specimen. The draft was originally supposed to

\* These chambers were opened by Capt. Wilson in 1865, and a description of them is given at page 73 of Notes to the Ordnance Survey of Jerusalem, with plan and section, plate 27.

be an exclusive mark of Jewish work, but its frequent use by the Romans, its appearance in the wall at Passagardæ, and subsequently its use by the early Christian, and even in several instances by the Saracenic, builders, in Jerusalem and other places, have proved the fallacy of such a theory. Besides the huge smooth-faced Herodian ashlar of the Haram, Captain Warren distinguishes two kinds of masonry, the drafted ashlar with a rustic boss, and the drafted ashlar with a smooth-dressed face. Work similar to the former was used by the Romans, and (in smaller proportions) the smooth-dressed drafted ashlar by Romans, Christians, and Saracens. Thus it is impossible from the draft alone to tell the date of any kind of this masonry.

Far more characteristic of Jewish work is the enormous length of the stones, as compared to their height, which is exactly reversed in Roman work, where the height of the stone is sometimes greater than its length. The latter is the case in the rustic drafted stones of the Kalaat el Jalud, and as the rustic boss was not used by Saracenic architects, it seems most probable that these two buttresses, which seem to stand *in situ*, are Roman work at Jerusalem.

Of what exact date they may be it is more difficult to decide, for the largest of the stones are small compared with the drafted ashlar of the base of the Tower of David, and these again are dwarfed by the Haram walls; and still further it must be remembered that between the Roman work of Herod and that of Justinian, comes the period, so little studied, of the Emperor Hadrian. Surely of the two great market-places, the theatre, the mint, the tricameron, the tetranymphon, the anabathmi or dodecapylon, with which he ornamented the city, some traces must still exist, and must not be confused with the earlier work of the Jerusalem of the Christian era.

It would appear, then, that the Kalaat el Jalud, though dating itself at some period not earlier than the eleventh century,\* contains the remains of a building of Roman work, and possibly of two dates; whether, however, this structure belongs to the *Ælia* of Hadrian, or to some earlier work of Agrippa, or even, though this is scarcely probable, to Herodian date, cannot at present be decided.

Such are the results of a week's reconnaissance in Jerusalem; and, such as they are, they give some encouragement in the pursuit of archæological remnants, which, when compared carefully with former discoveries, may lead to results of some importance in the settlement of the vexed questions of the ancient topography of the city.

---

\* The Kalaat el Jalud is generally supposed to be the Tancred's Tower of the Crusaders, which, according to William of Tyre, was at the north-west angle of the city.