could find some connection between the venerated magam of the Imam Aly-Joshua and the sacred magam, where Joshua stood while he spoke to the angel; but the Mussulman sanctuary is too far to the west to permit Sartabeh to be seen.

THE SURVEY OF PALESTINE.

LIEUT. CLAUDE R. CONDER'S REPORTS.

XXI.

28th April, 1874.

SINCE last I wrote from W. Far'ah the Survey, though still impeded slightly by wet weather, has been steadily advanced, and we are able by two days' work in subsidiary camps to fill in the whole piece required to complete the Jenin sheet, bringing the total to about 2,800 square miles, and giving the whole of the Jordan valley from the Dead Sea to within a mile or so of the Sea of Galilee. Our intermediate camp between Wady Far'ah and Beisan was placed at W. Maleh, and was by far the most desolate site which we have as yet been forced to select. A few fellahin and Arabs were settled not far off, and supplied us with guides and meat. The water in the neighbourhood is all more or less salt, whence the name given to the principal stream. We were therefore glad to remove to the plentiful springs and open rolling country of the neighbourhood of Beisan.

The following are the chief points of interest which we have noticed during the last fortnight:—

Ye·zeh. Yerzeh is a ruined site of very considerable extent, lying at the foot of the fine isolated hill called Ras Kader. The ruins seem of a late Greco-Jewish type, and the whole of the site is covered with a confused débris of moderately-sized rough-hewn stones, beneath which foundations are visible in parts. One or two stones have a broad flat draft, and seem rather to have been intended for tablets. Towards the north of the town are pillars and a fine lintel, probably remains of a temple. The ornamentation of the lintel with rosettes and the conventional vine is of the ordinary debased classic style. There are a considerable number of rock-cut tombs, internally very rough, and with loculi of both kinds; externally the circular arch above the door is very well cut, and in one case structural. A Greek inscription, illegible all but a few letters, with a rough ornamentation, is to be found on the front of one of these sepulchres. There are one or two moderate cisterns cut in rock. An ancient road leads by the spot at the foot of the hill.
Tyasir, like most of the old sites in this part of the country, is almost undermined with caves and rock-cut tombs. On the south-west of the village there exists, however, a very interesting little monument, of which I have taken very careful measurements.

It seems probably to have been a tomb, and its door is placed towards the east, the interior being square, with four corner piers, which supported a groined roof, as far as can be judged by the shape of the remaining haunch stones. The projection of the piers gives a recess on each side of the chamber, three of which may have been occupied by sarcophagi. A regular stylobate runs round the outside, and on it stand attached pilasters with a projection of only two inches; there are two intermediate and two corner pilasters on each face of the building. The projecting profile of the door is very curious, and resembles that at Nebi Yahyah to a certain extent. We did not succeed in finding any capitals, but fragments of cornice, with classic details and very rich foliated work, were lying near. The size of the stones, some over four feet long, their excellent workmanship, and the beauty of the carved work of the cornice, show that the monument* must have been, when complete, a very fine one, and probably the property of a man of distinction.

The narrow gorge above the warm springs of El Maleh is commanded on the north by a fortress set in an almost impregnable position. With much trouble we reached the top, and executed a plan of the enceinte. It is irregular in shape, fitted like a modern redoubt to its rocky site, and surrounded, as usual in the Crusading buildings, with vaulted chambers. The masonry generally used is neither large nor well cut, but the corner stones of the fortress, both externally and within the principal gate on the north side, are all marked with a rough draft.

Kaukab el Hawa, situated on the cliffs south of the Sea of Galilee, and visible from Beisan, seems to be also a Crusading fortress. Its enceinte wall, of great thickness (eleven feet), is built of blocks of black basalt, which are nearly all drafted. It is a point of considerable interest to determine whether such blocks were cut by the Crusaders themselves, or only used where found in older buildings. It has been argued that the Crusaders would employ lighter material, in order to allow of greater rapidity of construction; but strength seems in their days to have been the most important requisite, and in no fortress which I have as yet seen in Palestine is small masonry used in the outer walls of the place. Kaukab (Belvoir), standing on no Roman route, and with masonry which bears every sign of being intended for its present use, argues strongly in favour of the large drafted masonry having been actually quarried by the Crusaders. The Saracenic buildings, such as the great Khans, are, on the contrary, generally of smaller masonry, and in one instance (Cesarea) a sloping revetment of small stones in very hard cement covers the larger masonry of the Crusading wall.

* It was photographed and planned by Major Wilson, R.E. See Photo. No. 97, old series.
The plan of the fortress of Kaukab is irregular. There appears to have been a central building supported on vaults, and vaulted chambers ran round the town immediately within the wall. The gate on the east was closed by a portcullis, the place for which is still visible. A ditch fifty feet wide surrounds the fortress on three sides, but on the east a steep slope leads directly down to the Jordan valley.

Attention was first drawn to the great interest of these curious mounds, which were first excavated at the same time by Captain Warren, who supposes them to have been fortifications. In a subsequent number of the Quarterly it was pointed out that similar mounds are in process of formation at the present day both in Egypt and in India, being made by the accumulating refuse of sun-dried bricks which are picked on these heaps, those which are spoilt serving as a sort of platform on which others are baked; thus gradually a mound accumulates, and would, when deserted and overgrown, present exactly the appearance of a tell. The tells are found in the Plain of Esdraelon, and in that of Acca, near the Kishon, but more especially in the Jordan valley. I have already given a list of the true tells near Jericho which Captain Warren found to consist of sun-dried bricks. Near Beisan, and in the plain south of it, there are twenty true tells, apparently of the same character with those at Jericho, besides other mounds formed of crumbled ruins to which the name tell is also applied. In confirmation of the latter theory of their formation I would call attention to one or two points. First, they occur invariably in the immediate vicinity of water, generally at a spring or beside a running stream. Second, they are always found in alluvial plains and in places where clay may be expected to exist; thus, for instance, at Beisan they are found in the "clay lands" between Succoth (generally supposed to be S'akât) and Zerthan, which was below Jezreel, where Solomon cast the brass work for the temple service. Third, they are known, at least at Jericho, to consist of sun-dried bricks. It has been remarked that they occur at the mouths of passes which they were supposed to defend, but I may remark that this is hardly a rule, as many are placed in positions which can have no military significance, whilst the wadies at whose mouths they are placed always contain water. Neither can they be held to defend the Jordan fords, for many important fords have no tell near them. Where they do occur along Jordan it is in places where springs or tributary streams flow down to the river. Their great antiquity is shown first by their being mentioned in the Bible at an early period (Geliloth); secondly, by their having been subsequently built upon in a few cases in Roman times. None of the true tells have, however, been identified with Biblical sites, unless, indeed, we except those at ‘Ain el Sultan.

The shape and appearance of the true tells would also point to the same explanation of their origin. They are evidently accumulations. Often two occur close together of different size, or two or more small tells spring on a platform formed by a large one; sometimes a small subsidiary
mound, as though only lately commenced, will be found at the foot of a very large one.

The interest and importance of such remains can hardly be overestimated. They form a key to the understanding of all the more ancient ruins in Palestine. Nothing is more natural and probable than that the Jews who in Egypt, as we know, were employed in the manufacture of bricks, and whose first possessions in the country were in the plains, should have resorted to this material for the rapid construction of towns, necessitated by the total destruction of the Canaanite cities. The method in which this destruction was made, its completeness and rapidity, seem to show that these cities themselves were of no great strength, and it is even possible that the brick-making may be carried back to Canaanite times. Of architecture as a fine art there seems good reason to suppose the Jews were ignorant, nor is there anything in the Bible or in the country to indicate that the towns of the early Biblical period were better built or more important than the present Syrian villages. In the time of Saul we find the people dwelling in caves, and there is much evidence which points to the old inhabitants of Palestine having been much addicted to such a practice. Even at the present day the natural caves and larger tombs are used as dwelling-places and stables.

In modern Damascus we have an instance of a city mainly built of sun-dried brick, and the chopped straw in its clay calls to mind the bondage of the Egyptian brickfields. Wood is used in combination with this hardened mud, and may have been in the early Jewish towns at a time when it was more plentiful than now. At the same time, it must be recognised that stone-quarrying was very extensively undertaken at some period of Jewish history, as is evidenced at the present day in every part of Palestine, though the period it is almost impossible to decide. In the hill country the use of stone must naturally have been greater than that of brick. So now in Palestine the hill villages are of stone, and those in the plains mere collections of mud huts.

The interest of the inquiry is very great in explaining how it occurs that the more ancient ruins of the country are mere mounds in which the presence of stone is scarcely discernible, and the grey colour of the mass alone distinguishes the site. Were brick supposed to have been extensively used, this peculiarity of the ruins of Palestine would be easily accounted for.

The survey of the extensive ruins of Beisan occupied some time, Beisan, and the twelve-inch map of the whole was executed by the corporals, whilst Sergeant Black accompanied me to the short camps at Kawkab and Sulem, where, with an average temperature of about 92 degrees in the shade, we completed the work to the northern line of the Jenin sheet. The principal Roman ruins are the Theatre, Hippodrome, and some large tombs. The tell fortifications are possibly crusading, and a ruined mosque, two fine viaducts, and a good-sized khan, no doubt Saracen. The theatre, situate in the basin which isolates the tell, and through
which two streams flow, joining at the lower bridge, is built of black basalt, and in better preservation than most of the ruins of the country. It is a semicircle and a third, being closed on the north by a massive wall, the foundations alone remaining, including a block of marble six feet nine inches by four feet, which forms the chord to an arc of 120 degrees. Nine vomitories remain more or less perfect. They are double, and out of the western passage of each a narrow gallery leads diagonally to a cage open towards the interior of the theatre. Each cage is a hollow quarter sphere eight feet in diameter, and was no doubt closed by bars in front. There seems to have been twelve rows of benches eighteen inches high, but they are scarcely traceable beneath the rank growth of spring herbs.

The stream from a mill flows close to the theatre, and may have been turned into a basin of some kind for the naval entertainments.

The Hippodrome is almost entirely destroyed, and its plan recovered with difficulty. It appears to have been constructed by two circles seventy-six feet radius, with centres 128 feet apart. Its longest axis is nearly east and west; the entrance probably on the east. Stone seats eighteen inches high surround it on all sides. The base of what was probably one of the goals lies towards the western end of its greatest diameter line.

Capitals, fragments of ornament, and other indications, prove the great extent of the town, which stretched south of the modern village, and both north and south of the main stream of W. Jalud. The tombs, cut in a soft sedimentary river deposit, in cliffs close to the stream, resemble in arrangement those at Sh. Abreik, with this peculiarity, that they contain sarcophagi larger than the loculi placed in a row parallel with the length of the chamber. We planned them carefully, but found no inscriptions. Not far from them, on the north-west, is a fine cistern or birket lined with hard cement, and once roofed over. A row of pillars exists close to it, and a large building seems to have stood on the spot. The extent of the Roman town we were able to make out, fully tracing its walls, nine feet thick, of black basalt, including an area of one-third of a square mile.

There is perhaps no corner of Palestine where the events of Bible history crowd so thick upon one another as in that portion which we have just completed. On the north, the Sea of Galilee, with its sacred memories; on the west, Tabor and the hill Moreh, the Valley of Jesreel, and the chain of Gilboa; on the south, Succoth; and on the east the winding Jordan. But perhaps the history most fully illustrated by our present survey is that of Gideon's victory over Midian, and subsequent pursuit (Judges vii.). The nomadic hordes of the Midianites had, like the modern Beni Suggar and Ghazawiyeh Arabs, come up the broad and fertile Valley of Jesreel, and their encampment lay, as the black Arab tents do now in spring, at the foot of the hill Moreh (Nebi Dahy), opposite to the high limestone knoll on which Jesreel (Zer'ain) stands. As on the first night of our camping at Sulem (Shunem), when
six horsemen and fifteen foot of the Bedouin came down on the village and retreated, after stealing a horse and a cow, followed by the fellahin with shouts and a dropping fire, so in Gideon’s time the settled Jewish inhabitants assembled to drive back the marauders. The well Harod, where occurred the trial which separated 300 men of endurance from the worthless rabble, was no doubt the ‘Ain Jalūd, a fine spring at the foot of Gilboa, issuing blue and clear from a cavern, and forming a pool with rushy banks and a pebbly bottom more than 100 yards in length. The water is sweet, and there is ample space for the gathering of a great number of men. It has, however, like most of the neighbouring springs, a slightly sulphurous taste, and a soft deep mud covers the middle of the basin below the surface.

The graphic description of the midnight attack, when, no doubt concealed by the folds of the rolling ground, the 300 crept down to the Midianite camp “in the valley beneath,” and burst on the sleeping host with a sudden flicker of the concealed lamps, can be most readily realised on the spot. The immediate flight of the nomadic horde is most easily traced on the map. “The host fled to Beth-shittah in Zererath, and to the border of Abel-meholah” (vii. 22), a course directly down the main road to Jordan and to Beisan. Beth-shittah may perhaps be identified with the modern village of Shatta, and Abelmea (as it was called in Jerome’s time) with Wady Maleh. Zererath would appear to be a district name, and is generally connected with the Zerthan and Zeretan of other passages of the Old Testament. It is known to have been “below Jezreel,” and near Beisan. I think, therefore, we can scarce doubt that the name still exists in the Arabic, ‘Ain Zahrah and Tullül Zahrah, three miles west of Beisan. Thus the immediate pursuit drove the enemy some ten or fifteen miles towards the Jordan banks. A systematic advance immediately followed. Messengers went south two days’ journey to Mount Ephraim, and the Jews descended to the lower fords of Jordan at Bethbarah, which has been supposed identical with the Bethabara of the New Testament, and which was in all probability situate at the traditional site—the pilgrims’ bathing-place near Kāsr el Yehūd, east of Jericho. Meantime Gideon, having cleared the Bethshan valley of the Midianites, crossed by the fords near Succoth at its southern extremity (the modern Makhathet Abu Sūs), and continued the pursuit along the east bank of the Jordan. The Midianites were thus entirely cut off. They appear (or at least some part of the host) to have followed the right bank southwards towards Midian, intending, no doubt, to cross near Jericho. But they were here met by the men of Ephraim, and their leaders, Oreb and Zeeb, executed on that side of Jordan, their heads being subsequently carried to Gideon, “on the other side.” This confirms positively the theory which I offered somewhat cautiously in a former report, and makes the identification of the “Raven’s Peak” and the “Wolf’s Den” with the ‘Ash el Ghor‘ab and Tuweil el Dhiab a natural and probable one. The sharp peak overlooking the broad plain north of Jericho would indeed form a natural
Additional interest attaches to the identification of Zereth or Zerthan, for it points to the locality where the Jordan was miraculously blocked during the passage of the Israelites. The Ghor or Lower Jordan valley is not continuous here; in parts the cliffs are closely approached, and a blockage of the river at one of these narrow places would leave its bed dry for a very considerable time, as a lake would gradually form in the wider basins above, and a rise of more than fifty feet, with a width of nearly a mile, could be obtained in place of a river some twenty yards in breadth. Such a blockage might any day be occasioned by one of those shocks of earthquake which from the earliest historical period down to the present day have been constantly felt in the Jordan valley, and which point to the volcanic nature of the agency which has caused this extraordinary depression.

Our work in this part of Palestine, including what we hope will prove the refinding of Gilgal, the settlement of the boundary of Judah, the identification of the rock Oreb, and yet more certainly that of the doubtful Šenon, with the explanation of the flight of Midian and the discovery of Zereth, cannot fail to be considered of the highest interest, and proves how much light the survey of Palestine must throw on the simple, exact, and graphic descriptions which abound in the Bible, and which are only apparently confused or contradictory because we in times so remote have almost lost the key to their explanation.

Having finished the Jenin sheet, and carried up the Jordan to within a mile or two of the Sea of Galilee, we proceeded by easy marches to the Maritime Plain, and arrived at Kefr Saba on the 23rd, the fourth day from Sulem. Here about 120 square miles remain to be put in, which will complete the Jaffa sheet of the map; and to this work, after having settled the triangulation, which is here a matter of no small difficulty, I propose to leave the non-commissioned officers under Mr. Drake's care, starting myself for Jerusalem, in preparation for my home visit. When finished the party will move to Jerusalem, where they will await my return, employed in the execution of the plans.

The question of most interest in this part of the work is that of the site of Antipatris, and it seems to me that a very slight investigation of the ground is sufficient to decide the matter. The town built by Herod bearing this name in honour of his father was on the site of the ancient Kaphar Saba, the name of which still lingers at the village where our camp is now pitched. The points in favour of its identity, further than the preservation of the name, are, however, few. Antipatris was 150 stadia, or about sixteen miles, from Jaffa. Kefr Saba is rather more than fourteen. Again it was, according to the Onomasticon, twenty-six miles from Cæsarea, lying between it and Lydda. Kefr Saba is about twenty-five Roman miles from Cæsarea. On the other hand, it is said by Jerome to have been six miles south of Galgula, but Kefr Saba is about three miles north-west of Jiljulich, which is possibly the
place in question, and nearly due west of Kalkilia, which might perhaps be identified with Galgula.

Antipatris was protected on the south by a ditch and wooden rampart, with towers constructed by Alexander Balas as a defence against the advance of Antiochus from the south. The Roman road from Jerusalem to Caesarea led through Antipatris, which was surrounded by a river and by fertile wooded country, and situate close to a hilly ridge. All these latter requisites are quite inconsistent with the Kefr Saba site. No Roman road leads to it from the hills; no river is found, the water being from a couple of wells; no trees or ruins of a large town exist. The indication of direction is also a very important point (although slighted by Dr. Robinson), as it is far less likely to have become corrupted in copying than the numbers which indicate distances would be. It would seem, therefore, that the name has wandered from some other site in the neighbourhood, and become affixed to this modern village.

It remains, therefore, to find in the vicinity a site which shall fulfil the requisites enumerated and form a natural position for one of those noble towns which sprung up in Palestine during the prosperous times of Herod the Great. Such a site has been already suggested at Ras el ‘Ain, where the ruined shell of the fine old Castle of Mirabel stands above the “wonderfully beautiful” springs of the Aujeh river. The fine Roman road which we have traced step by step from Jerusalem to Jifneh, and thence to Tibneh, descends the steep hills and runs down straight to Ras el ‘Ain. It was by this road, as is now generally allowed, that St. Paul was hurried by night to Antipatris, whence he proceeded to Caesarea. From Ras el ‘Ain another Roman road, marked in one place by a milestone, leads along the foot of the hills to Jiljulieh and Kalkilia, and thence to Kaisarieh. It was by this road, as is now generally allowed, that St. Paul was hurried by night to Antipatris, whence he proceeded to Caesarea. From Ras el ‘Ain another Roman road, marked in one place by a milestone, leads along the foot of the hills to Jiljulieh and Kalkilia, and thence to Kaisarieh. It is the main road from Ramleh through Lydda, and Ras el ‘Ain thus lies exactly between Lydda and Caesarea, which cannot be said of Kefr Saba; still further, it is south of the site of Galgula, being three and a half miles from Jiljulieh and about six from Kalkilia. To Jaffa is eleven miles, to Caesarea thirty Roman miles. These numbers, though less exact than in the former case, are yet approximately correct in comparison with the words of Josephus and Jerome. But what is more important to observe is that Ras el ‘Ain is the natural site for a town in the neighbourhood. The streams which burst out round the mound are the surrounding river of Josephus. The hilly ridge rises just behind. The trees, indeed, are no more, having shared the fate of the great oak forest, the stumps of whose trees cover the sandhills from Mukhālīd to Jaffa, but there can have been no spot so likely to be fertile in the Plain of Sharon as the sources of the Aujeh. It would be interesting to find the ditch which was dug by Alexander Balas, and which was no doubt filled with water from the Aujeh, and intended as a more direct line of defence than that of the winding wady bed. Mr. Drake informs me that a ditch full of water some fifteen feet wide exists near the bridge, but this is some five or six miles from Ras el ‘Ain and directed south-east. The trench reached the
"Sea of Joppa," according to Josephus, and has no doubt been filled in by the light soil of the plain and left no more trace than its wooden wall and towers. At Kefr Saba no signs of a trench are visible, nor is there any supply of water to fill it. Thus balancing the evidence as a whole, we arrive at the pretty safe conclusion that the Antipatris of Herod was, like his Jericho, built at the source of one of the finest springs in the country. A visit to the site, with its mound occupied on the west by the Kala'at, and presenting in other parts an appearance similar to that of the ruins of Roman Caesarea—heaps of broken stone and occasional large blocks overgrown with the yellow composite flowers which invariably mark such spots—serves to strengthen this impression.

The whole district passed through since leaving Jerusalem is geologically of the highest interest. I have already noticed the discovery of old sea levels and the very striking indications as to the date and mode of formation of the Jordan valley, on which I propose to offer the Committee a separate paper when my notes have been completed and digested. The great valley of Far'ah (not to be confounded with Wady Far'ah, near Jerusalem) is no ordinary water-worn depression, but has been formed by some considerable convulsion, no doubt at the same date as the depression of the Ghor, upon which it will throw considerable light. It marks a change in the character of the country. The dip of the beds north of it is much less violent, and an upper plain called El Bukeia forms an intermediate step between the Ghor and the hills of the watershed. Crossing this plateau we arrive again in another district where there is much local disturbance. Trap rocks here first appear on the east, and a very considerable outbreak is found in the upper part of Wady Maleh. The springs in the neighbourhood are more or less salt, as the name signifies. The stream in the valley has a temperature of about 85 degrees, and the so-called Hammam is a spring of 100 degrees Fahrenheit. A red marl similar to the formations of the Nebi Musa basin here appears in the lower hills near the Ghor; it overlies beds of red and white banded marls, and is in most places capped with a sort of conglomerate which seems to be of fresh-water origin, pointing to the probability that the present Plain of Succoth and Beisan was at one time a lake, one in the great chain of lakes which seem most probably to have extended from the Dead Sea to the Hulah.

On arriving at Beisan we again change the scenery and obtain a country purely volcanic. The hills of Gilboa have a general dip upwards towards the north-west, and from beneath them the hard black basalt comes out as noticed first at Zer'ain. The whole breadth of the Wady Jalud has a basis of black basalt which has tilted up the limestones of Nebi Dahy (Little Hermon), and has formed various cones and small craters in its neighbourhood. Kaukab el Hawa seems to have been a centre of eruption, and a shelf on which Beisan stands is due to this disturbance. The basalt here overlies the white marls—a valuable indication of geological date. The hills north of Wady Bireh, bordering the Sea of Galilee, are principally basalt, the limestone where
it does crop out having a dip upwards towards the north-east. It is a remarkable instance of the ignorance of Palestine geology that this great field of basalt, extending over perhaps 200 square miles, is not shown on Lartet’s map, though the smaller outlying fragments of it in some cases are.

MR. TYRWHITT DRAKE’S REPORTS.

CAMP IN WADY EL FAR‘AH, March 21, 1874.

On the 24th ult. we left Jerusalem and descended to 'Ain el Sultan. En route we visited El Marassas and Shunet Marassas, a Christian ruin of considerable extent, containing the ruins of a church, of which two apses and a portion of mosaic pavement in red, yellow, black, and white are still visible. There are also a number of unusually large rock-hewn cisterns with well mouths; on one of these crosses are cut on each of its eight sides. Tradition tells of a gentle recluse, named Kaddis K’raytún (the priest Chariton), who lived in days of yore. Suffering much annoyance from the thievish propensities and knavish tricks of his neighbours, he determined to extirpate them, and accordingly served round a draught of serpent’s venom, which miraculously destroyed them all, notwithstanding its being a blood and not a stomach poison. After this the good monk lived long and happily.

Between Khirbet Dikki and Marassas we observed a ruined dolmen. The two top slabs were of considerable size: below this is a small semicircular platform built against the hillside with unhewn stones, and lower down again is a small natural cave.

On the following day we rode down to the Dead Sea to fix a couple of piles for measuring the rise and fall of the water. These piles were made by Herr Shick at Jerusalem, and are marked every six inches. It is to be hoped that all travellers will note the height at which the water stands on each at the time of their visit. They are placed opposite the Rijm el Bahr, or island at the north end of the sea. We drove in the first at the water’s edge without difficulty, but the second, which had to be driven in water five and a half feet deep, was no such easy job. The joint exertions of Conder and myself, however, enabled us at last to cope with the excessive buoyancy of the water, which forced us to swim, and the strong current setting eastwards, which several times carried us away from our work. The use of a heavy mallet while swimming was a novel experiment and somewhat trying; it would have been impossible anywhere else than in water as buoyant as that of the Dead Sea.

A ride to the Jordan mouth, a detour back westwards to Wady Dabr, where we had a fruitless search after the basaltic greenstone mentioned by Dr. Tristram, and a light meal of eggs and rice in the tent of Shaykh Jemil abu Nusayr, completed our day’s work.