

cave almost entirely ruined. The water now finds its way through this mass of stones by different channels, uniting immediately below the *débris*, and forming at once a strong stream that irrigates the surrounding gardens and makes Banias the most beautiful place in Palestine. By this stream stood the ancient Panium of the Greeks, and here Herod erected a temple in honour of Augustus. There are three votive niches in the face of the rock, one of which is visible in the photograph. They were once much higher above the ground than now. Two of them bear Greek inscriptions, in one of which "Priest of Pan" is mentioned. This was also the site of Cæsarea Philippi of the New Testament, and it has been suggested that this rock was intended in our Lord's words, "Upon this rock I will build My church, and the gates of hell shall not prevail against it" (Matt. xvi. 18).

XX. *Palestine Survey Camp at Banias.*—The magnificent olive trees formed a delightful shade, while the trickling stream of water led through our camp, making everything cool and delightful. Under the roots of these great trees we found remains of tessellated pavement in different coloured marbles, showing that some ancient building once occupied this site. A hundred yards to the east of our camp was the great source of Jordan, clear and sparkling, and delightfully cold.

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## THE LAND OF MIDIAN AND ITS MINES.

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THE return of Captain Burton and his party from the Land of Midian at the beginning of this week is already known by telegraph in England. The object of the expedition was to examine into the mineral wealth of the country, which hitherto has been very little visited by travellers, and is only imperfectly known to geographers. Yet the minerals of Midian were known both in Biblical and classical times. Everybody remembers how Moses, when he fled from the face of Pharaoh, dwelt in the land of Midian and married the priest's daughter; and how, notwithstanding this alliance, the children of Israel, after the Exodus, vexed by the wiles of the Midianites, made war upon them and slew their kings, and burnt their cities and their goodly castles, and spoiled them of "gold, silver, brass, iron, tin, and lead," and "jewels of gold, chains and bracelets, rings, earrings, and tablets;" and now Moses ordered the wrought jewels of gold to be brought into the tabernacle as a memorial. It is equally well known, too, how the Romans long afterwards again worked the mines whence these metals were dug, and many are the traces of their work which Captain Burton has recently found. Yet next to nothing is now known of the country, its wild wastes of

rock, its barren valleys and precipitous mountains, its vast half-worked mines, its ruined cities, and its wandering and savage population. That it lies to the east of the Red Sea, that it belongs, for some mysterious reason, to Egypt, is about all ninety-nine out of every hundred people know about it. Captain Burton's two expeditions will have at least one good result—they will instruct the people. Thanks to his kindness, I am able to give a sketch of his recent doings, and even my summary will prove the land to be at least as interesting as many countries which have long been the happy hunting-field of enterprising travellers of all nationalities.

The expedition left Suez December 10th, 1877, and returned there on April 20, 1878. During four months of hard travelling and voyaging upwards of 2,500 miles, they only lost one soldier, who died of fever. They brought home some 25 tons of geological specimens to illustrate the general geological formation of the land; six cases of Colorado and Negro ore; five cases of ethnological and anthropological collections—such as Midianite coins, inscriptions in Nabathean and Cufic, remains of worked stones, fragments of smelted metals, glass and pottery; upwards of 200 sketches in oil and water colours, photographs of the chief ruins, including catacombs, and of a classical temple, apparently of Greek art, and, finally, maps and plans of the whole country, including 32 ruined cities, some of whose names can be restored by consulting Strabo and Ptolemy, besides sketches of many *ateliers*, where perambulating bands like the gipsies of ancient and modern times seem to have carried on simple mining operations.

Among the specimens are argentiferous and cupriferous ores from Northern Midian, and auriferous rocks from Southern. There are collections from three turquoise mines, the northern, near Aynuneh, already worked; the southern, near Ziba, still scratched by the Arabs; and the central, until now unknown, save to the Bedouins. There are, moreover, three great sulphur beds, the northern and the southern, belonging to the secondary formation (now invaded by the trap granite), and the central, near the port of Mowilah, of pyretic origin. Rock salt accompanies the brimstone, and there are two large natural salt lakes. The whole of the secondary formation supplies fine gypsum, and in parts of it are quarries of alabaster, which served to build the ruins of Maghair, She'ayb, Madiama (of Ptolemy), and el-Haurá (Leuke Kome), the southernmost part of western Nabatheia.

The term Midian, popularly derived from Medan, the Hebrew, is really the Old-Egyptian "Mádi," a word which occurs in many papyri, whose plural is Mádian, or Mádiná. The modern tribes that hold the land confine "Mádyan" to the strip of maritime country between the coast Ghauts and the sea, from the fort of Allabah (lat. 29deg. 30min.) to Mowilah (lat. 27deg. 32min.). Captain Burton calls this country Northern Midian, and he applies the term Southern Midian to the tract of about similar size stretching south from Mowilah to the great Wady Hamz (lat. 25deg. 55min. 15sec.), where Egypt ends, and the Hedjaz, the Holy

Land of the Moslems, the capitals of which are Mecca and Medina, begins. He also divides the country into two mineral districts: the northern, with Makná as its port, has not been much worked; the southern, with Wedj as its harbour, shows extensive traces of ancient scientific labour. But he describes the whole as affording great mining capabilities to modern science. These [conclusions he arrived at by dividing his four months' exploration into three several excursions—northern, central, and southern.

The caravan consisted of eight Europeans, three Egyptian officers of the staff and two of the line, 25 soldiers and 30 miners, 10 mules, and about 100 camels. The northern excursion commenced at Mowilah, the port of arrival in Midian. They revisited the country covered by Captain Burton's expedition last year, the story of which will be told in his forthcoming book, "The Gold Mines of Midian," which I must not anticipate. After reinspection of the ancient workings 'of the precious metals, passing the traditional site of Moses' Well, they marched upon Makná, the port, and spent a week digging into and extracting the veins of silver which thread the quartz, carelessly cupeled specimens yielding 15 to 20 per cent. of silver. The hill is within a few minutes' walk of the coast, and by means of Mr. Haddan's cheap tramways it would be easy to ship the ore in the harbour. Leaving Makná they rounded the windy Gulf of Allabah, and the incorrectness of the British hydrographic chart very nearly shipwrecked the party on the reefs off the island Tiran. They reached Mowilah again on February 3rd.

The second expedition followed and was directed to the inland region east of Mowilah. The object was to determine the longitudinal breadth of the metalliferous country. A double chain of ghauts subtends the coast, and a succession of valleys cut through these heights. Beyond the ghauts a rough and precipitous pass, terrible for loaded camels, leads to the Hisma, a plateau some 4,000 feet high, of new red sandstone, which is in reality the western wall of the Nejd, or great central uplands of the Arabian peninsula, and is remarkable for the beauty of its brick-red precipices and castellations. East of the Hisma lie the dark lines of the Marreh, the basaltic and doubtless volcanic regions whence the miners of old brought the rough mill-stones that served for their first grindings. But here the expedition reckoned without its hosts, the Maázeh, a semi-Egyptian tribe, who received them apparently with friendliness, but all the while were preparing for attack, murder, and plunder. The trap, however, was badly set for an old traveller. Captain Burton guessed the coming danger, and was able to beat a hasty retreat without bloodshed. The expedition, altering its plans, then turned to the south-east. They passed through the lovely Wady Daumah, once teeming with fertility, now laid waste by the Bedouin, "the fathers of the Desert." They discovered the ruins of the city of Sheewak (the Souka of Ptolemy), which, with its outlying suburbs, its aqueducts carefully built with cement, its barrages across the village

heads, its broken catacombs, its furnaces and vast *usines*, covers some four miles. Here and elsewhere the furnaces were carefully searched. The Colorado quartz-ore and the chloritic greenstone, used as flur, showed what ore had been treated; but so painstaking were these old miners, that not the minutest trace of metal was left to tell its own tale. Sheewak was evidently a city of workmen, probably of slave workmen. A few miles to the south lay Shaghab, the ruins of which, far superior in site and construction, suggested the residence of the wealthy mine-owners. Here the expedition turned west. The country was barren, roadless, and very thinly inhabited, but they came upon the ruinous traces of mining operations at every stage. March 5th they arrived at the flourishing little port of Ziba (Zibber on the hydrographic chart), built with the remnants of some older town. Near Ziba was found the southernmost of the turquoise mines. Its natives have learnt the art of promoting the growth of pearls by inserting a grain of sand into each oyster.

The third, or southern excursion, which Captain Burton was enabled to undertake by the dispatch of a second ship and another month's food from Suez, proved by far the most interesting to mineralogist and archæologist alike. Gold mining evidently here takes the place of silver and copper extracting, and the vast traces of the labours of the scientific old miners in shafting and tunneling teach exactly their *modus operandi*. The Marreh, or volcanic district, which they inspected, extends as far as Yembo, and possibly as far as Medina, the Holy City. It is covered with ruins of mining works, and the expedition found gold threading and filming the basalt, which led them to believe this district to be the focus of the mineralogical outcrop. Meanwhile, M. Marie, the mining engineer, proceeded to the southern depôt of sulphur, and discovered a third hill distant only two miles from a navigable bay. He secured specimens of this rock and also of chalcedony, the material of the finely-engraved seals and amulets worked by the natives. He found, and the whole party afterwards visited, an outcrop of quartz, in mounds, hillocks, and gigantic reefs, called "Abel Marwah," and the disused works, of great extent, were surveyed. The caravan, now guided by the Balizy tribe, which claims some of the old mining districts, left the port of Wedj March 23, and visited the ruins of Um el Karayyat ("Mother of Villages"), where the remains of mining operations lie scattered about in all directions. In parts the hill of snowy quartz had been so well burrowed into that it has fallen in. All the shafts and passages were duly explored. The precious metal was extracted from the rose-coloured schist veining the quartz, and specimens of free gold appeared. The next march showed the Um el Kharáb ("Mother of Desolation"), in which an extensive vein had been worked, and pillars of quartz left standing between roof and floor. Travelling through a land once rich and prosperous as mining could make it, now the very picture of dreary desolation, the travellers reached the plain El Beda (Bedais of Ptolemy). Here the hills of red porphyry were covered with religious inscriptions

in the Cufic and modern Arab characters; nothing Nabathean, occurred. On April 8, after traversing another quartz country, the expedition reached their Ultima Thule, the Wady Hamz, the great gap worked by water in the maritime mountain chain which forms the highway for pilgrims returning from Medina, and constitutes the frontier between Egypt and the Hedjaz, which belongs to Turkey. Here a pleasant surprise awaited the party. On the southern brink of this wild watercourse was the site of a beautiful little temple, built of white and variegated alabaster, dug from neighbouring quarries. The foundations alone were left, and a few years ago the place was a tumulus into which the Arabs dug for treasure. The Wady had washed away the northern wall, and the adjacent bed was strewn with fragments of columns, bases, and capitals, all of alabaster, and cut in the simplest and purest style of Greek art. Can this be a vestige of that ill-fated expedition in which Ælius Gallus was foiled by the traitor Nabathæsus?

This closed the expedition. The party returned to Suez, and arrived in Cairo the 21st of April. They received a most courteous welcome from his Highness the Khedive. Specimens of their ores will be sent to Paris and London; the rest will be analysed in Cairo by a local commission, while the curiosities of all kinds will be exhibited first in Cairo and then sent to the Paris Exhibition. So ends the story. After all allowances made for the traveller's love of the scene of his labours, it must be admitted that the Land of Midian is a wonderful place. As one hears of the mines that are spread over the country, with their shafts and their tunnels, their furnaces and their barrages, the towns of workmen, and the cities of mine owners, one begins to understand why "all King Solomon's drinking vessels were of gold, none were of silver, it was nothing accounted of in the days of Solomon." And when one reads of the mines that are yet unworked, with their quartz and their Colorado ore, one feels tempted to ask why the Khedive at Cairo, like Solomon at Jerusalem, should not "make silver and gold as plenteous as stones." But hitherto brilliant prospects for Egypt have turned out very grey-toned realities. So we Egyptians are content once more to possess our souls in patience until the cool and cautious capitalists of Paris and London put their hands into their pockets, pay the Khedive a handsome royalty, and turn the Land of Midian into a limited liability company. One thing is certain. This dead country of Midian, thus suddenly brought back to life, is no fabulous land, where all the world can go and pick up gold and silver. Its development will need capital as well as science, and Egypt must, therefore, be content with a royalty and leave the risk and the work to foreign skill and enterprise.