
Notes on a Sketch Map of Two Routes in the Eastern Desert of Egypt

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Notes on a Sketch Map of two Routes in the Eastern Desert of Egypt.

By ERNEST A. FLOYER, F.L.S.

Map, p. 730.

THERE is in the region under description much that differs widely from the Egypt of the ordinary traveller. It is a district of lofty mountains, of valleys wrapped in snow, of keen morning mists, of waterfalls springing from ambushes of tall reeds, of crystal pools mirroring the stately heads of ibex, and of grottoes hid in maidenhair fern. These things seem strange in the land of dull mud flats, the featureless and woodless land, where an evil-smelling temple is substituted for a hill, and the "forests" of dates supply food to a kind-hearted but eminently prosaic population.

The roughly oblong stretch of country of which the top corners are Cairo and Suez, and which stretches down between the Nile and the Red Sea to Assuan and Berenice, which are the bottom corners, presents the same general characteristic throughout. It is a mountainous desert, 150 miles broad, rising slowly from the Nile over sandy wastes and secondary hills for about a hundred miles, where the elevation is 2000 feet. Down the centre runs a main range or backbone of granite and primary rocks. From this the desert slopes more steeply and more evenly to the sea, over shingly plains and sometimes low secondary and tertiary ranges to the coral of the sea-coast. The eastern side of the watershed is, as might be guessed, more often blessed with rain than the western. On the seaward side during the winter months heavy clouds hang round the summits, until with thunder and violent winds they pour in torrents down the barren mountain clefts, and fill the granite dells and basins with an ample supply for the scanty flocks during the summer. The western side remains for the most part a hot, dry, scorched-up, sunny waste. Always the same. One wishes for no twilight after a long day's ride from the Nile banks to the foot of the mountains, but is content with the almost sudden darkness after sunset, which is one of the great points of difference between an English and

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an Egyptian day. The rain-clouds which burst on the lofty granite summits are not, however, entirely restricted to the seaward side. The Nile side has its picturesque ravines, its tree-sprinkled nullahs, its waterfalls and granite basins. But the seaward side is steeper and stonier, and the gullies show a deeper erosion, and a wilder commotion among the water-worn boulders, than the sand-choked wadies which wind their ribbon of stunted mimosas down to the Nile.

Wilkinson has described many of its antiquities, while its modern aspect has been treated by Herr Klunzinger, and my friend Professor Schweinfurth has laid out the country in wadies or torrent-beds, one of which he explores whenever he can spare time from his other multifarious pursuits. This system of marching up the various wadies is the only system by which the country can be practically explored. So fantastically rugged and chaotic are the mountains of the main range that you can only follow where water shows you the way. And the traveller will not long forget that water leaps down a precipice which gives him considerable trouble to climb up.

The Bedawin inhabitants are to the north the Ma'āza tribe, who live in goat's-hair tents, and despise the comparatively civilised Ababdi who live south of a line drawn east from Kenneh, and who occasionally build themselves huts of mats.

The prominent features of a Bedawi are courage, endurance, and avarice. Avarice is the quality most deeply engrained, but it is not a reproach to them. It is simply self-preservation. I should say that the Ma'āza have a harder struggle for existence than the Ababdi, and cling to their view of a money transaction with proportionately greater tenacity. The former speak a singularly pure Arabic, and their articulation is beautiful. Some of the Arabic plurals of tribal names are curious. An Abādi is one of the Ababdi tribe; a Hendua is one of the Hadendowa tribe. The Ababdi are perhaps the pleasanter tribe to deal with, but all Bedawin are tough parties in a money transaction. The relations between the tribes and the Government are for the most part tranquil. The local governor of a Nile town requires a Bedawi sheikh to live in his town. This man is nominally responsible for the behaviour of his tribe, while in return all camel contracts are made through him. Define this position as a hostage, agent, political resident—gild the pill how you will—no self-respecting Bedawi will live in a town or associate with its governor. The man sent by the tribe is generally some old man, in whose character there is a flaw.

If one reflects on the conditions of Bedawi existence, it is obvious that the highest conceivable standard of honesty is a first and absolute essential.

A Bedawi is not generally supposed to have much property, but he is distinctly a property-owning creature. His gun and his camel-saddle he keeps with him; but in nine cases out of ten his wife would take care

that he did not have a very expensive gun, until she had got at least a cooking-pot and a flat metal baking-platter.

A Bedawi leaves his women, children, and property for months at a time; when his camels are grazing he takes off their saddles and puts them under a bush; he deposits a bag of beans by the way, for his camel to eat on the return journey. If these things were impossible, he could not carry on his struggle for existence. A thief is only possible where there are locks and bars. There are always weaker vessels who in an unguarded moment "find" a camel rein, and such people gravitate towards the river bank. This class supplies the resident agents, and it may be readily imagined that so long as the governor could draw money to suppress Bedawin raids, so long were the dreadful Bedawin spoken of with bated breath, and their numbers and fierceness ludicrously exaggerated.

Public security is not, however, dependent on the Bedawin since Baker Pasha and his police took up their duties in Upper Egypt.

The young men of both the Ma'āza and Ababdi wear their hair in the fuzzy fashion rendered familiar during the Suakin campaign, but it is always under some special circumstances, and usually a white scanty turban is worn by young and old.

It seems probable that the Eastern desert was the scene of the establishment of the first monasteries in the world. Those of St. Anthony and St. Paul are still visited by travellers. They are about 9 miles apart, and about 17 from the coast in latitude 29°, while in the two routes which I shall more particularly describe are found the remains of others, which, so far as I have been able to investigate, date from the fourth or fifth century of the Christian era.

The part of the country, however, which has the most ancient record is the old trade route between Kosseir, on the Red Sea, and Koptos (modern Kufi), on the Nile.

This road, which two thousand years ago carried almost the whole traffic between the East and West (between Rome and India), has very great natural advantages. Sooner than sail the long voyage up to Suez, Sir David Baird marched across it in July 1801, and only lost 3 men out of, so far as I can read, 5000, of which 700 were English. He dug two wells, but his expedition nearly failed through the rottenness of his waterskins, than which there is no more futile vehicle for water.

Later on, in 1839, the Peninsular and Oriental Steam Navigation Company carried their passengers and mails across from Kenneh to Kosseir. In a diary of an ancestor in India, I find him in 1826 praising the rapidity with which letters had arrived by this new route. The company rebuilt some of the wells, and over the entrance to the Sayala well is a well-cut inscription as follows:—"M. R. BRIGGS. W. I. HANCOCK. THO. WOOD. May 25, 1839." I think these are evidently the names of masons employed. The route from Kosseir to Kenneh, 111 miles long,

divides into two roads, called respectively the Russafa and the Sikka road (Baird's road); but from all I can learn, a description of the Russafa road will serve for both.

It was in February 1886 that, on my return from Suakin, I landed at Kosseir. The population of 2500 were much astonished at the near approach of a large English steamer, a sight which had not been seen since 1864, when an enterprising cable company laid short lengths of cable down the Red Sea, and built a temporary station at Kosseir. Numerous flags were hoisted, and almost the whole population came to the shore to meet me. I installed myself in the large Government house, where the governor was most hospitable, though he was such a small, aged, and inconsequential little man that he really appeared to have been accidentally discovered by my servants while dusting out a room for me to sleep in. From the appearance of the house, I never for a moment supposed it was inhabited, and ordered my people to sweep it out for me, under the impression that it had not been occupied for a hundred years or so. But we were neither of us greatly disconcerted, and after coffee we explored his town together.

Although the water-supply is brought from a distance of ten hours, we found a busy little town, and new houses were in course of construction from the coarse soft coral which forms the coast, while the huge empty granaries were memorials of the time when the Egyptian tribute was paid in grain to the Turkish soldiers in Arabia, and was shipped hence in native boats to Jeddah and Yambo, on the opposite coast. The fort was built by Belliard and Donzeld, and in 1800 played havoc with a detachment of marines from H.M.S. *Fox*, who appear to have landed in ignorance of its existence, and were cut to pieces. It contains a curious relic of the French occupation in a mortar dated "Messidor de l'an 3 de la République Française."

I think the repaired well, with its homely and rather cockney inscription, is characteristic of the plain and practical impress England leaves upon a country. If we were to leave Egypt to-morrow we should leave the *corvée* abolished, a measure which makes no show, but which is of as unmixed a benefit in its results as even the abolition of slavery, the great object which the Khedive of Egypt is slowly but surely attaining.

Kosseir is situated on the northern bank of the broad water-course, or Khor Ambagi. During rain this brings down a heavy flood of sweet water, which, however, all runs into the sea. And on this point Klunzinger has a theory, which I mention that it may receive fuller investigation. He thinks that the ancient ports on the Red Sea were all opposite mouths of similar water-courses, and that the harbours were formed by the sweet water killing the coral, and thus forming a break in the reef, which otherwise ran in a continuous line along the coast.

A mile to the south-west, in the main bed of the river, is a small garden with twelve date-trees in it, but beyond this there is no vegeta-

tion but sea-weed, and how the 200 goats which exist are maintained is a puzzle.

One day sufficed to exhaust the sights of Kosseir, though Klunzinger spent eight happy years among the fishes, sea-weeds, the rocks, and sparse flora of the neighbourhood. Six picked camels were waiting for me, and the next morning I started off, full of the pleasurable excitement of a new route.

We started up the Khor Ambagi, and soon entered into the mountains. This is an excessively barren part of the world, and in seventy miles I only saw two species of plants, neither of which were camel fodder, and all of which were burnt to tinder; for it was four years, the natives said, since any rain had fallen. But the most striking feature is the goodness of the road through the mountains. The idea is constantly suggested that it is artificial, though a closer examination dispels this; and Strabo and other ancient writers mention the road as an ordinary desert track. I can convey the best idea of it by describing something else.

A horseman travelling in middle Egypt in the hot weather, finds the narrow donkey-paths winding between the fields very irksome to his horse. The surface of the fields themselves is baked into deep crevasses, making them dangerous to ride over, so that short cuts cannot be made. The banks which control the inundation wind about so much as to sometimes nearly double the distance from point to point. He is glad therefore when he finds a canal which has just been cleaned out and which runs in the direction he is travelling. He descends into the bed and finds himself in a perfectly level road, perhaps 100 feet wide, the edges accurately cut, while on either side is a miniature mountain-range formed by the banks of the canal, and the loose earth which has recently been dug from the bed.

Petrify this dry canal into granite, substitute a gradual incline for a dead level, make it wind slightly instead of running straight, and you have an exact reproduction on a small scale of the seventy-mile mountainous portion of the Russafa route. One is tempted to describe it as smooth and well kept. The western forty miles stretches over a fairly hard shingly plain, diversified with low undulating ridges; and with the exception of two rather steep defiles, each of 200 yards, an omnibus—indeed many omnibuses abreast—might trot the whole distance from the Nile to the Red Sea.

There is little to be seen that is not properly transferred to the itinerary. Down in a trough you rarely see far to the right or left. A glimpse now and then shows you nothing but hills, from which, if you try to select one as a landmark, you will be hidden by the next turn in the valley.

One can keep up an even four miles an hour over the smooth road, and the compass and road-book are always busy. In the evening, as

dusk approaches, rocks assume fantastic shapes, and shadows seem to move. Then from the storehouse of your mind, you may people the valley with the varied crowds, which, thousands of times, have filled its rocky windings. It may be an endless chain of silent-footed camels, each carrying his two goat's-hair sacks of wheat straddled upright across his back. These plod past with a resistless and monotonous swing, and you wonder how the ten or twelve wiry little men can possibly look after the five or six hundred camels. But a caravan of wheat requires but little attention. When they halt, the camel kneels, the toggles which fasten the bales are unslipped, and the camel walks away. To load up, the camel is made to kneel between the sacks; one is raised slightly by two men, the toggle is slipped in, and the camel rises with his load, and wanders off after those who have already started. It is with European miscellaneous baggage and over an uneven road which causes the packages to shift, that camel-loading is a tedious operation.

What did a caravan along the Russafa route two thousand years ago look like? The sun, the rocks, the regular valley road are the same. The men are the same. There is no doubt, I think, that the Ababdi, with whom we are riding, are the Blemmyes of Strabo's history. The caravan would be going the other way, the bales being of valuable silks and perfumes would be smaller than the wheat sacks. They would be like the bales which are to-day sent from the silk-loom of Yezd to the sea-coast, long square-sectioned bales, thickly wrapped in many folds of goat's-hair cloth. And instead of six men there would be six hundred, with javelins instead of matchlocks, for each of the bales is worth 40*l*. Sharpe, in his history, says the Egyptians in the time of Hadrian, A.D. 120, sent coarse linen, glass bottles, brazen vessels, brass for money, iron for weapons; while they received ivory, steel, Indian ink, silk, slaves, tortoiseshell, myrrh, and other scents.

At every five or six miles along the valley is the remains of a khan or caravansera. They are much in ruins, but I should think that each would accommodate a hundred camels with their loads and attendants. Thus the road would accommodate a *cafila* of 2000 camels, a stately procession resembling that which leaves Yezd once a year for Bunder Abbass.

Perched on the summits of the hills round each khan are little watch-towers, from which the watchmen announced the approach of a *cafila*, and perhaps, but rarely I should think, a raid by robbers. The surrounding chaos of hills could never have supported a band numerous enough to attack a well-guarded caravan.

In the month of February you face a cool invigorating breeze; you can speak of a bright sun without associations of blistered face and hands; every turn in the valley may disclose something interesting; your camels swing along without urging, and at every mile you rise

into a purer and brisker atmosphere. At forty-one miles you reach the narrow steep defile of Abu Fanána, where the aneroid shows 1900 feet, and whence you slowly descend. You will probably camp for the night at Sid, a fine gorge choked with huge blocks of black and white granite containing a little picturesque nook of sweet water.

From Sid you start down a broad coach-road, and soon enter a fine gorge, called the Mesāgh El Bagar. Here are traces of the Greeks and the Romans, who, there seems little doubt, 2000 years ago worked the quarries which had been abandoned by the Egyptians 3000 years previously. It requires an effort to appreciate the antiquity of things Egyptian. Here the irrepressible tourist has been carving his name and disfiguring the ancient quarries. But the tourists' names are Cambyeses, Darius, and Xerxes, and they carved their names 2400 years ago. At Oxford you may see crumbling old carvings which are 150 years old. A sample of the breccia, or pudding-stone, from Hammamat, has been prepared for me by the kindness of my friend, Mr. Brindley, the modern builder of temples.

On leaving Hammamat the road emerges from the mountains, and follows a broad shallow wadi over undulating shingly plains for 28 miles, when you leave it on the left, and halt at a village called El Gaita. This valley is the Wadi Zeidun, which reaches the river near Koptos, and may very likely be the canal to the Nile, on which Strabo says Koptos was situated.

These Ababdi Bedawin are so civilised, that here they have a village of forty brick huts, a few patches of corn and date palms, many brackish wells, and some good ones. El Gaita is a more important place than it seems. It is, in its way, what Burton described Suez as, a jumping-off place from civilisation. It is a good twenty miles away from the edge of the Rif, the general name of the cultivated Nile valley, and has an ample supply of good water. It served as a starting-point for the Kosseir route, and also for the ancient route to Berenice. This last was one of the six great military roads in Egypt, and was well provided with khans and water.

The violent north winds which prevail in the Red Sea made the navigation so difficult and slow for the poor ships of the ancients, that 2200 years ago, Ptolemy Philadelphus established the port of Berenice. This is 200 miles south of the ancient ports at or near Kosseir, and consequently saved that distance and its attendant delays and dangers to the mariners from Southern Arabia and India. I suppose the best camels and the worst ships would choose Berenice, while the best ships and the worst camels would carry the Kosseir traffic. For it is interesting to note that Philadelphus, at the same time that he built Berenice, also rebuilt the old Kosseir port, and Myos Hormos, a third port, still higher up the coast, was still kept in repair. In modern days, luxurious steamers, steaming 300 miles a day, compete with Pullman

cars, which go 700 miles a day. In former days it is probable that many a sea-sick traveller, buffeted by contrary winds, joyfully landed at Berenice, and took the twelve days' camel journey sooner than continue in his cramped ship, just as now they disembark at Brindisi instead of Venice.

But there is little of interest left in the Berenice road now, and Captain Colson, who journeyed there in 1878, found little to record but the ruined halting-places and choked wells.

From El Gaita the traveller will probably find the road uninteresting, and he will speed off to the "rif." But, if possible, he should arrange to arrive at the Nile in the evening, and thus enjoy one of the richest visions that ever steeped his senses in delight.

Some people exult in the desert, are inspired by its air, moved to emotion by its rugged mountain solitudes, and stimulated even by the vigour of its absolute sterility. Such men draw pleasure from all things alike—from the bracing tonic of the desert, and from the soft indolence of the Nile valley's wealth of verdure. Others will think of Socrates, as he rubbed his leg, and say, "What is pleasure but release from pain?" And it is true, that though the Englishman is the only man who travels unmoved alike in the hottest and the coldest parts of his planet, still there are many Englishmen whose functions are most perfectly fulfilled in their own island, and who wish neither barren desert nor fertile valley.

Volumes have been written in praise of the Nile valley by those who have reached it in luxurious vessels, which have borne them swiftly from their sylvan homes in the loveliest country in the world. What must be the feelings of him who has spent a month or two on the Red Sea, and then reaches it across the Russafa road?

As you approach from the east you see long cliffs which back the river, and a line of haze marking its course. Still the sandy shingle you are riding over might be at Kosseir for any signs it shows of neighbourhood to the bountiful Nile. At last you rise over the last low ridge—one more step, and you are in a sea of clover of the richest green. What a pleasant homely prospect lies before you! The sun is setting in a crimson haze over a rich plain dotted with houses and with villages; men, women, and children troop along the narrow paths, laughing and talking, driving their cows and sheep before them. A soft, warm moisture steals over your sunburnt cheek, you draw in one deep draught, and the vigorous condition to which the desert air and the swift ride have braced you, all melts away in that first breath, and you are undone. But it is a delicious undoing. The scent of clover, the cheerful talk, the broad good-natured faces, and last, but not least, the friendly groaning of a hundred waterwheels, dotted all over the plain—everything murmurs, "Lay you down and sleep; why this hard riding; why this pestilential energy?" Yonder, made glorious by the setting sun, lies hundred-gated

Thebes, and here we will stop. The prophet, when he looked down upon the beautiful gardens of Damascus, turned him about and departed. What he said was that he could only go to one Paradise, and he preferred to wait for the other. What we feel is, that the Luxor Hotel, even when kept by Mr. Cook, does not require description here.

We have gone south-west to see the sunset over the rich broad plain of Thebes. We wished to strike the Nile valley at right angles, and thus plunge headlong into it, instead of approaching it obliquely and making the disenchantment gradual. But our way from El Gaita lies north-west. Seventeen miles brings us to Bir Ambar, a village on the edge of the "rif" and the desert. Thence ten miles along the edge of the fields bring us to the large and once important town of Kenneh.

From Kenneh we have yet before us the most interesting route, and we enter upon ground which was briefly described by Mr., later on Sir Gardner, Wilkinson in 1830. North-east from here, or, to be more exact, from Koft, now a village near here, runs another trade route, by which the merchandise landed at Myos Hormos arrived in Egypt. By this route Ælius Gallus, the Roman general, returned from his unsuccessful expedition to Arabia 1900 years ago, after Syllaus, King Obadas' crafty minister, had led him a wild-goose chase over the most inhospitable deserts of Arabia. The valley behind Kenneh drains the western slopes of a hundred miles of mountains; and as a curious instance of the power of even infrequent water persevering through long cycles, large pebbles of primary rock may be picked up in its bed which have travelled not less than 50 miles. Along this road came the groaning carts conveying the rich red porphyry from the quarries of what is now Jebel Dukhan, the mountain of smoke. I do not feel sure that the granite was ever brought in large quantities from the granite quarries of Jebel Fatireh; but it was along this road that the unhappy convicts struggled to their dreary labours, or perhaps bounded joyously along after having completed their labours; for in those days it seems that men were condemned to excavate so many feet of granite as now they are condemned to pick so many pounds of oakum.

Starting from Kenneh in a northerly direction, you notice that for a mile the debouchement of the Wadi Kenneh, along which the route lies, bears a rich crop of corn, and several wells of good water are found near the Coptic burying-ground at the head of the cultivated land. Here is the ruin of a house built by Mr. Libby some twenty years ago, when he supervised the supply of provisions to the Marquis de Bassano while the latter was excavating sulphur from Jimseh, on the Red Sea. The woodwork was all torn down and burnt during the great "year of hunger," 1878, when Mr. Baird, of Uri, went up the Nile to distribute the Khedive's bounty to his suffering but patient people.

Thence you follow the wadi up a broad shingly plain skirting the eastern flank of some low secondary hills, and at 12 miles you find that

the water-course sweeps round a low bluff of pudding-stone, where very little water is found 12 feet below the surface. As you approach this Bir Arras, or Arras well, you see quivering and shifting under the burning sun what appears to be some Bedawi goat's-hair tents. They are, however, no tents, but a curious example of how soil is made. For some miles, a number of tamarisks, encouraged by the water held up beneath the soil by the bluff before mentioned, have for many years pushed a struggling existence. The spiniform leaves of successive autumns have fallen round each bush, and bound the sand together. Between the mounds thus formed, the water has washed away the sand, leaving them as rocks on a sandy beach. At a distance they look so exactly like a Bedawi encampment, that one reflects whether, like the sandgrouse, bustard, and many other animals, the Bedawi has not sometimes owed his safety to the difficulty in distinguishing his camp from a clump of tamarisk.

The wadi winds, but you ride straight on to Kasr el Jin, the "fort of the evil spirit," which is perched on a spur of the hill 27 miles north of Kenneh. This is the first Roman station; but there is little left but remains of massive walls and deep stuccoed wells. The walls of all these stations are built for the first four or five feet of large stones, without mortar, and the upper walls of hard mud.

The intending traveller will be saved much trouble by the map published with this paper. Before starting on this journey in May, 1886, I made the most careful inquiries I could, but could get no information that would stand cross-examination. The watering-places were many; but it was four years since the last rain fell, and no one knew whether or not they were dry. All that appeared certain was that there was no water for a hundred miles, while the wind in May was very hot, and always in our faces. My caravan started by itself with many water-tanks, and I was independent with my usual five or six picked fast camels. In the summer the sun's declination north is about equal to the latitude, and there is no atom of shade.

But the difficulties were greatly exaggerated; for, as will be seen, there is at all times an ample water supply within 70 miles of Kenneh. And a Kenneh camel will carry his load 70 miles in even the hottest winds, while a riding-camel can do fair work for five days without water.

With my light cavalry, I visited all the water-holes I could hear of, making a specially long and futile detour to the Bir Nejilah, ten miles to the west of Kasr el Jin, but which I found dry like all the others.

At 36 miles from Kenneh is the second Roman station, called Saghi or Naka'al Teir. It is probable that there was a station between Koft and Kasr el Jin; but I did not see it, and only count those I saw. Naka'al Teir, which is the name of the district, was a large caravansera, much like the Persian caravansera of to-day. A large

quadrangular enclosure, stables, and living rooms all round, and a well or cistern in the centre. From the width of the cistern it would seem that the Romans had to dig very deep before they found water, but all is now choked with sand.

The plain for ten miles north of Naka'al Teir is an absolutely flat expanse of dry, hard mud. And on a hot afternoon it is a very long ten miles, for already at Naka'al Teir the rider sees the hills quivering before him, but at ten miles' distance they look as far or as near as they do at one mile.

From the east comes a wadi which joins the Kenneh Wadi, and is said to come from Fatireh and the quarries of Mons Claudianus; but this required further examination, for two Roman stations in the Medisa valley seem to indicate that as the route taken.

At last, at 46 miles, the rider enters the low granite hills at the Bal el Mukhanij. The hills have a calcined or decayed appearance, like all the low hills which cluster round the main range and lofty peaks of comparatively live granite, which appear to have been recently thrust up through them. The vegetation increases at once, and the now confined bed of the wadi bears the fragrant artemisia, taverniera, and many other shrubs, in addition to the stunted mimosa and zilla thistles which have hitherto marked its course. The interest of the ride is at once increased a hundredfold; the eye is relieved from the monotonous waste, and fixed on the peaks of Om Sidr and Jebel Dukhan, now looking cool in the blue distance.

I may mention here a hint about carrying water in the desert, which has twice proved of value. The traveller should pay great attention to an ample provision of water-skins, insist on the addition of one or two to any number the Bedawin propose to carry, and display great anxiety about their lasting out. But he should secretly carry his own supply in strong bottles wrapped in his blankets in his servants' saddlebags. I always carry four commissariat rum-bottles. Bedawin are absolute children about economising their water, and their water-skin is about the least efficient thing that could be devised for carrying water in. People say it keeps the water cool. But you do not want cool water in the desert—you want water and not an empty skin. I never drink on the march, except when I halt and make hot tea. On this occasion, on the fourth day, the Bedawin had drunk all the water; they did not know when they would find any more, and were ill-tempered, and wanted to ride back and meet the caravan. I gave them a drink, and was amused to hear one, evidently ignorant of my temperance habits, remark to a servant, "We knew he had bottles, but thought they were brandy." The real danger of thirst is not to the man, but to his camel, for if the camel droops, the man in walking soon gets an intolerable thirst; though even under these circumstances a man can go on much longer than would be expected.

Winding along the avenue of hills, at 52 miles, they open out a little, and you arrive at the Deir Atrush, the Convent of the Deaf Man. The well here was 38 feet measured down to the sand, which at that depth choked it. For the sake of argument I said this was not a convent, but merely a station like Naka'al Teir; but the Bedawin seemed to have no idea of confounding the one with the other, though I could see no difference.

Jebel Dukhan seemed quite near now, and a tall peak to the north-east in the Kittar mass was pointed out as that from which the valley Um Yessar, or Mother of the Meringa tree, took its rocky course. A man went forward overnight, and returned in the morning with a skin of water from here. I afterwards, while surveying, visited this place, and found it a grand gloomy gorge, choked with huge boulders, and carrying a torrent of rugged blocks far out into the plain to join the Kenneh Wadi. The water was in the little nook under a mass as large as a cottage, and a man could just squeeze himself under and reach the water with outstretched arm.

Riding on over the hard and gradually rising path at 66 miles, we descended into the broad Kittar valley, which crossed our path at right angles. It was studded thickly with big mimosa-trees, some 20 and 30 feet high, but all hacked and chopped about. It seemed piteous, and I was inclined to be angry at the destruction of the few green trees I had found in my mountains. The Bedawin occupation, and the only occupation I know them to engage in, is making charcoal. They chop half through the finest branches, and bending them down, leave them a month or so to wither. Then they come, collect the boughs, bury them, burn them, and carry the charcoal off to the Rif.

An important question was now to be solved. The camels were very thirsty, and the question was, "Is there water in the Kittar?"

We turned to the right and rode up the valley, which was picturesque and well-wooded as desert valleys go. We rode four miles, and then the valley forked, and we went up the westernmost arm, which every moment became steeper and more choked with rocks, caught against which were piles and swathes of dead brushwood, evidence of former floods.

Soon we dismounted, and led the stumbling camels over the rocks, and at last I overtook two men seated on the ground. It was evident from their faces that their troubles were over; but I could see no well. I asked, with assumed indifference, "Is there water?" and they answered "yes"; but no water could I see. The torrent-bed became sandy, and there were two or three holes scraped by hand, but all were dry. The last man of the party had the wooden bowl, and the moment it arrived, the man set to work scraping out the gravel at the base of a large upright boulder. In a very few moments they reached the much-wanted water, and the next ten minutes were occupied in struggling

with the camels who became dangerously hasty, and threatened every moment to trample on us, or break their legs by scrambling over the smooth rocks. They were watered in their turn from a copper basin of which I knew the measure, and in forty-five minutes each of the camels had drunk more than eighteen gallons. After this they began to drink steadily, and less like hydropults than when they began.

With a comfortable sense of repletion, we marched down to the fork, and sent a man to the crossing to warn the caravan of our whereabouts. This man, I remember, came back next morning, reporting that the caravan had passed, and was indignantly sent on their tracks. Thus by sleeping at his post, he gave the laden beasts 44 miles of unnecessary route.

Early next morning I strolled up the second arm of the ravine. The air was cool, scented with artemisia and the fragrant yessar, and each moment the scenery grew wilder and grander. The torrent cut a tortuous channel down the valley, and the bed was sometimes ten and fifteen feet below the surface. The northern flank was generally a precipitous cliff, while down the southern slope tumbled cascades of boulders, and all around tall rugged peaks stood out in bold relief against the clear blue sky. The numerous green mimosas, the yessar, and other shrubs, which were dotted thickly along the valley, were most grateful to the eye. The yessar, or *Moringa aptera* (as distinct from the *Moringa pterygosperma*), is a tree well known in the West Indies, which has a cluster of white flowers like a laburnum, and a fragrant scent. I hope I have succeeded in introducing it both into Cairo and England; for Mr. Bull of Chelsea showed me two young plants grown from seed I sent him, and several are doing well in my garden in Cairo. Mr. Thiselton Dyer writes from Kew, that it was probably the seed of this tree which produced the oil of Ben, in great use by watchmakers before the introduction of fine mineral oils. Ibex were evidently plentiful, and indeed on waking I had found three peering at me from the opposite cliff. The ibex is a grand animal, and as he always selects his home in the wildest and most inaccessible mountains he can find, ibex-shooting is a sport fit for a king.

I was immensely surprised to find here a pair of donkeys, with a young one, running in a semi-wild condition. They belonged to some Bedawin whom we met later on, about 20 miles to the north, and leapt from rock to rock with the agility of goats. They were obviously quite unattended, and had been here a long while; so it was evident that there was another watering-place ahead of us, for they could not drink from the covered well which had refreshed us. But I little anticipated the discovery we were to make as we climbed over the rocks which now obstructed the gradually narrowing ravine. Rounding a shoulder of the cliff, this is what we saw: The ravine was at an end. Over the cliff, which was about 70 feet high, fell a feathery cascade of softest greenest maidenhair

fern. Over the green moss, and through the clustering sprays, trickled innumerable little streams of water into two crystal pools below, which reflected on their pure surface the branches of a Syrian fig-tree. Above were tall rustling reeds and feathery rushes, and between the pools was a soft strip of green turf. Fresh from nature's hand, our pool was unpoluted by camels, who could not climb there, and only ibex shared our treasure with us; for the donkeys drank at a pool some way off, caused by the overflow.

Here was a delightful end to our hot sunny ride. The friendly cliff hung lovingly over the pools, so that the sun never came there, and with great content I stretched myself on the turf. Books, meat, and tea were always with me, and I spent two such delightful days in that grotto of the nymphs, that I was almost sorry when it was announced that the caravan had got up the valley as far as the camels could climb, and I returned to civilisation.

Here I fixed my camp for a month in the most picturesque spot I had seen since I left Baluchistan. There was a grand sweep southward for my transit telescope, and everything was soon made ready for the wire which should connect me with Colonel Ardagh in the observatory at Cairo. The sun was hot, but the air was pure and not oppressive until just as I was starting on an expedition to the quarries of Mons Claudianus, when ten days of phenomenal heat fell upon us, and for some time the thermometer never went below 114° , and was often 118° throughout the night. Many cattle died at Kenneh during these ten days, and our soldiers at Assuan suffered very much. This wave of heat was felt very severely in India. While it lasted, from the 6th to the 16th of June, it seemed only possible to explain it by some fiery meteor having passed close to the earth. And it is easy to understand how the world will come to an end; for had it been a little hotter, all the animals and human beings on the exposed side of the globe must have perished. It increased for four days, and some of my people ran off to the sea-coast; but after a week it gradually got a little cooler. It was discouraging preparation for our expedition to Mons Claudianus, which was an unknown distance; but still it was fortunate that we had arrived at the Kittar waterfall before it commenced.

The tents were pitched on a beach between the side of the valley and the torrent-bed. A flat granite rock, on which we used to dine, and which is inscribed with the year, marks the spot for which the longitude is calculated. The silence in the hot noonday was most impressive; the rocks seemed to sing in the noonday heat, though this was perhaps a singing in my ears; and in the evening ibex picked their way down the cliff to the water, and regarded us no more than if we had been petrified. Silence and sleep all around almost suggested that the world was not yet created. It might have been an enchanted valley, the nymphs proper to the maidenhair pool being asleep in one of the weird caverns

which abounded in the mountain side. But in the night all the jinns and efreetes of Arab story were around us. Every cliff and crag gave forth ghostly and mysterious noises, which I never could explain. Of one noise, however, which astonished me very much, I did discover the cause. From the apparently unbroken face of a cliff, not a hundred yards from the camp, would arise suddenly the most vigorous quacking, as of hundreds of ducks. This, after much wondering and watching, I discovered to be a colony of hyraxes who lived in a crevice which could not be seen from below. It is no wonder that the Bedawin people the darkness with jinns and ghosts. I should surely have believed in them myself, had I stayed much longer in the Kittar valley.

A description of the Kittar torrent will serve for many similar torrents which rive the mountains, and deposit in their caverns and crevasses the store of water which makes this country habitable. No Bedawi will speak of them until their discovery is inevitable, and Major Rundle, in his daring reconnaissance to Abu Hammad during the Soudan expedition, found large natural reservoirs of delicious water which have remained unknown to hundreds of travellers across the Korosko-Abu Hammad desert, though they have all filled their skins from a brackish supply in the immediate neighbourhood.

Climbing up round the side of the waterfall, you arrive on a broad, smooth, sloping plateau, riven in several directions by giant fissures, of which the Kittar valley is one. Near the top of the waterfall is a building, roofless, but otherwise in good repair, which Wilkinson describes as a church, having copied from it an inscription in Greek, which, though mutilated, translates as follows:—"Flavius Julius, the renowned governor of the Thebaid, built this Catholic church in the time of ———, Bishop of Maximianopolis." Close by is a lovely pool of clear water, full of tall rushes and long grass, a young date-tree, and two or three Syrian figs. It may have been a chapel for a summer retreat for the monks of Deirel Atrush, 20 miles away.

Across the top of the waterfall is a curious natural bridge, formed by a slab of granite, and then for a few hundred yards the floor of the broad ravine is polished smooth during years of attrition by the gravel carried by the torrents. Further up are more clumps of long grass, and water reappears. Further again the polished granite is worn into deep rounded pits full of water, and these form the sources of the waterfall. This water escapes through the cracks, and when I visited the waterfall in December, I was surprised to find that, though there had been no rain, the pool at the base had increased and spread many yards beyond its hot-weather limits, which, I think, is accounted for by the fact that the rocks swell in the heat, and narrow the fissures through which the water passes. The great stone reservoirs thus emit their treasure sparingly in the summer and more bountifully in the winter.

The ravine stretches up to the mountain slope, and the neck, or

divide, from which it takes its descent, is a long three hours' climb up. From this ridge, which is 4560 feet above the sea, can be seen a wide view of the surrounding country. Away to the south-west is a broad expanse of desert with patches of low, black foot-hills, which I described at Bab el Mekānij, and which, from the summit, looked like pine forests. In the distance are the Medamūd hills, on the west bank of the Nile, while to the north-east are the mountains behind Tor on the east coast of the Red Sea. From the divide the surrounding peaks seem to be from 500 to 1000 feet higher. Down the further side runs the Medisa ravine. All these hills are rather steep, and difficult climbing, and there are many places where the foot slipping or overbalancing after a spring might produce very serious consequences. The water makes some fine leaps, and has polished itself some grand basins in the granite, much of which is red on this side. The lips of the basins are encrusted with carbonate of lime, and the Medisa water does not make good tea or coffee.

It is a stiff climb down of four hours from the ridge to the Medisa glen, where is always a plentiful supply of water, both in a natural reservoir with steep sides and full of green watercresses, and from holes scraped in the gravelly bed above. Camels are brought up to the Medisa water, and I think that it is the hardest piece of climbing they ever do. Nor do all make the journey safely. One was standing at the foot with a broken leg, waiting quietly to be eaten by jackals and vultures.

From the Medisa an hour's easy climbing takes you clear of the hills into the pretty Medisa park, where are massive remains of a Roman station, and where I pitched my camp in the winter of 1886.

If, however, you follow the windings of the Medisa ravine, you will pass other large basins, one especially large one overgrown with calamus, or Arab pen-reed, which had only dried up in the summer of 1886.

From the well in the North fork, where we watered on our first arrival, is a steep climb of three hours to the divide, which is 3910 feet, and thence another three hours brings you to the beautiful Kohila watering-place. A dark and gloomy fissure leads into the heart of the mountain, and contains a ribbon of deep water about 6 feet wide. Below the mouth is a red granite basin, and in order to water camels, which can approach from the ravine, the men pour the water down the slope—in fact, put the waterfall into action.

From the Kohila water it is a climb of three hours down the ravine to the "Three Yessar" fork, a clump of three exceptionally fine moringa-trees, which forms a useful landmark on the road from Medisa to Fatira, and five hours hence is the Medisa Park, at the debouchement of the ravine of that name. Eight miles round the flank of the mountain, and across the torrents of boulders which pour down from its side, bring

you to the valley, and thence it is six miles to the camp by the waterfall.

The three watering-places described in the Kittar mountains—also a large well to be described later on—can all withstand many years of drought, and, so far as I can learn, never dry up. At Kittar, the only place where the original source could be examined, former water-marks showed a gradual sinking of the supply, but at Kohila and Medisa no such marks are visible, and I think that they are refilled as they waste from hidden reservoirs.

In the neighbourhood of these water-holes are many rude shelters, constructed by the younger Bedawin, and from which they fire at the ibex coming to water. Besides these are sometimes found small stone huts of the shape of bee-hives, about 4 feet high, and with a small door. I cannot explain what these were for, unless the Bedawin kept young goats in them at night, which those with me thought unlikely.

Where what we may call the high road crosses the Kittar valley is a small Roman station. Starting from here, the valley ascends still for miles up to a bold cliff, which I have called the 70 Bluff. It was visible for many hours before I reached it, and always bore 70° on the prismatic compass. Here is the water-parting 1800 feet above the sea. Following the broad, almost straight, valley on the right, are the live granite peaks of Kittar and Munfia', while immediately on the left are the low foot-hills, and behind them Jebel Dukhan. At six miles is a piece of the ancient Roman road, swept of shingle, and defined on either side by heaps of stones. At eight miles you turn to the north into the foot-hills, and at nine miles you reach the Badia' well. This is a large hole scraped in the valley bed, and supplies the water taken from it so rapidly that a hundred camels can be watered at it. I could not hear that it ever ran dry. Here is a large station and several smaller ones, and a steep path leads over the hill to the valley, where the main Roman town and quarries of porphyry are situated. The ancient porphyry workings have recently been examined by Mr. Brindley, who has obtained a concession for working them from His Highness' government.

From Badia' well the road soon clears the foot-hills, and strikes north over a vast sloping plain covered with coarse shingle. Here for the first time is found the *Salvadora Persica*, a shrub which in Persia indicates water underground. It spreads its twisted branches over the surface of the ground until it has accumulated a heap of sand, when it shoots upwards, and its hard bright-green leaves form a fairly nourishing camel fodder. In Persia it is called *tooj*, or quince, of which fruit the bark has a strong scent. Muslims make toothbrushes of sticks of this shrub, which was so employed by the Prophet.

On the right a few stunted mimosas show the winding track of a wadi which has eaten a path through two ranges of hills to the sea.

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3 B

At 24 miles from Badia' the path passes through a low limestone ridge full of flint nodules, and impregnated with petroleum. A little farther is a parallel range of primary rocks, and between these ranges, and in the track of the wadi, is one of the most interesting places on the route. It bears now only the generic Arab term "mellaha," or salt-place; and Lepsius, who passed here in 1842, suggests that it may be the Fons Tadnos of Pliny. Here has been once a large flourishing date-grove, probably much cultivation, and a large population; but all is now a scene of miserable desolation. It would appear that the torrent of fresh water, of which traces are seen along the route, was once held up by the granite range through which it now winds down a deep and picturesque ravine. The water probably many hundred years ago cut down to a stratum of rock-salt, and has since then poisoned all the vegetation, and covered all the neighbourhood with a greasy mud and salt efflorescence. Some years ago I described a spot of desolation arising from similar causes in the Lashari desert of Baluchistan, and called Marri, or bitterness. But at Marri the desolation was complete and hopeless. At Mellaha hope revived every spring, and was crushed again every autumn. Each date-tree pushed a few struggling fronds, only to droop as soon as grown under the combined poison of salt-water and burning sun. This had been going on for perhaps 400 years, and each living trunk was surrounded by five or six, and even eight or ten prostrate predecessors, who had given up the struggle and lay untrimmed, each with sixty years of fronds round it, reduced to fibre by the action of the salt, which, while it dissolved the softer, preserved the tougher parts.

Some green tamarisk bushes struggle about among the date-trees, and there are masses of rushes and tall feathery reeds. On the north side is what I call, under correction, the remains of a short canal now full of salt-water and overgrown with tall reeds. I could find no vestiges of habitations, but the efflorescence covered everything, even a stick thrown down for 24 hours rendered any discovery impossible except by excavation. It was by accident that I found that there was a ravine through the hills, for the ordinary road lies through a pass three miles to the northward. One evening, while waiting for dinner, I went for a stroll to the foot of the granite range. Singing loudly as I went, I suddenly became aware of five ibex earnestly regarding me from a low spur, snorting and butting in my direction. The moment I stopped singing they retired, but came forward when I began again.

Quitting the rôle of Orpheus, I was on the ground next morning with my rifle at about an hour before daylight, and in the hunt I traced the ravine which is about two miles long, and a hundred yards broad. It is, for the most part, steep on the south and sloping on the north side. Some few date-trees have been washed down from Mellaha, and a considerable stream of salt-water ripples along, sometimes above

ground and sometimes making a marsh over the whole valley, which is then full of tamarisk and green rushes.

Riding down the slope towards the bay of Jimseh, you cross at right angles an old Roman road leading to Abu Sha'r, which is on or near the site of the ancient port of Myos Hormos. The road is distinctly marked by being cleared of stones which are piled in regular heaps at the side.

The route now skirts the bay of Jimseh, the peninsula of which is of coral and limestone formation, and which is interesting as having yielded some small quantities of sulphur and petroleum, of which latter the Government hope to procure a larger supply.

Herr Oscar Schneider has published a long account of the sulphur workings, and I think shows that the concession was obtained from the Egyptian government as a ground on which to establish litigation and claims for compensation, for the sulphur was produced at a cost three times greater than the sulphur from Sicily, and a claim for 21 million francs was made.

Returning across the neck of the Jimseh peninsula, and striking north along the sea-shore or over undulating and broken shingly ground, 25 miles takes us to Jebel Zeit, the oil mountain, where is the wooden town of the petroleum miners. A paragraph in the *Times* early in August stated that at a depth of 1200 feet very favourable indications had been reached, but the great central reservoir from which the entire neighbourhood had been saturated had not yet been reached.

In order to describe the route down the axis of the mountain range, I will return straight to Medisa, and thence take a fresh departure.

Leaving Medisa Park, the route curves round the huge bluff, and enters the hills up a picturesque valley, flanked on either side by such regular buttressed walls of cliff as to suggest passing up the aisle of some great cathedral. The valley is green with shrubs, and here and there smoked and blackened patches of rock suggest that the giants have been roasting a half-dozen camels for supper, though the charred appearance is explained by the manufacture of charcoal.

At the Three Yessar Trees the valley forks, the left hand leading to the Kohila water. On the right are the purple Abu-Hassan mountains, and rounding the north-eastern angle of these, we ride up the broad Ruashid or Rushaidi valley in which some twenty camels are grazing under the charge of some well-armed Bedawin, who are recognised with triumph by those with me as Ababdi, though far north of their established boundary. I travelled this route both in June and in January. The former journey I will not describe, for though I made a rough survey of the route, and took the necessary observations for altitude and latitude, still it was mere labour from the excessive heat which I have before mentioned.

On the 6th of January, as we left the Three Yessars, a name

suggestive of wayside establishments at home, thunder was growling in the mountains and echoing a thousand roars from cliff to cliff. Rain fell, and soon we were riding in a heavy shower which settled into a steady downpour. The effect on the camel saddles was unpleasant, for they were sewn together with leather thongs which quickly stretched, while the shaggy, purple-dyed sheepskins on which we sat gave up the colour most freely. The thermometer fell to 50° Fahr., and we enjoyed more or less a regular English wet afternoon. The camp had been started off to find its way to Luxor, so towards evening we crept under a huge boulder at the foot of the cliff. I lay awake reading until late, as I was waiting for a Bedawi, who was bringing me a bag of gold from Cairo. Suddenly came a splashing rush of water from overhead, and almost in a moment the falls of Lodore were upon us. Within a foot of where we lay was quickly a leaping frothy torrent, and the *sauve qui peut* was amusing; for most of us had undressed to dry our wet clothes, and in the scanty lamplight the water seemed everywhere, and men bounced in all directions, and fell over each other and everything in laughing surprise.

The suddenness with which water comes down is explained as follows, as I once saw:—The water on four broad mountain slopes converged. One ran freely, but three carried so much ibex dung, dead shrubs, and twigs, that they dammed themselves. One held up a considerable head of water, and in bursting, loosened the second, and quickly the third, when they all poured tumultuously down together.

We were wet that night, but in the morning a fresh surprise awaited us. When we woke we were covered with snow. The valley was a network of running streams, but the bushes were covered with white. The great Jebel Shaib took upon himself the appearance of the Matterhorn, and an old grey-beard, a long time comrade, hastened up swelling with pride and chattering with cold to explain to the ignorant Englishman what had happened to his beloved mountains. "You see," he said, "those soft white clouds; when it became cold, those clouds came so low down that they were caught upon the mountains and upon the trees; I have seen Jebel Shaib white before."

In the morning we went through a pass at the head of the valley, and skirted the northern and uppermost edge of a broad sandy plateau. To the left, past Jebel Shaib, leads the road to the *nojeb*, or precipice. It was by this road that the harassed and weary Herr Lepsius escaped on to the plains in 1842, after he and his caravan had wandered aimlessly on the mountains for two days.

Precipice is, however, too large a word to describe the defile on the north flank of Shaib, by which descent is made to the plain of Munfia'. I should have ridden down it in June had I not wished to note the behaviour of a new aneroid barometer I had received, and I may mention here that the aneroid, an excellent one by Elliott, did not move at all

during the whole descent of 800 feet, but that during the three hours' ride over the shrubby plain to the well under the Munfia' hills, it recovered its position, and accurately marked the difference in altitude.

The Munfia' valley is a good pasturage for the Ma'āza, who in June had a fine flock of sheep there, and dug a large well and planted some twenty date-palms. Hassan, the sheikh of that settlement, complained bitterly that the jealous men of the Rif would not sell them young date-palms, and he had been obliged to obtain his from the small-producing trees of Kufra. Donkeys, of which he had a few, required water daily, sheep and goats every second day, and camels every third day.

To return to the route after skirting the plain, we enter the Fatira valley and ride down it. About three miles to the east lies the mountain of Um Anab, or mother of grapes. Here is a curious water supply. The path to it leads over the east side of the Wadi Fatira into a deep ravine. From this you climb up a long steep valley, almost shut in at the top by rocks. Here on the ridge are two round holes which in June, and so far as I could learn always, were brimful of sweet water. I arrived there at noon, when many thousands of sand-grouse were circling round, impatient to drink, and quite fearless from thirst. Unlike pigeons, sand-grouse cannot drink on the wing, and this watering-place, where they can walk up to the brink, serves the grouse for many miles, who cannot drink from water enclosed by cliffs.

At twenty-one miles the valley turns to the west, and we strike up a steep and narrow path over the hills to the west, see some stone pillars lying about, and at last halt near the ancient square fort, in which lived the quarrymen who excavated the granite from Mons Claudianus.

Here were very extensive quarries of grey or blue and white granite. A low mound of granite about 8 or 10 acres in extent and 100 feet high has been cut and removed in huge blocks. One pillar which lay ready for removal, but cracked, weighed 256 tons. Perhaps in two or three winters it could have been rolled down the Wadi Fatira and embarked at Kenneh, but I think that, having convict labour at his disposal, the master mason sometimes launched out in a specially large pillar, leaving it to the purchaser to carry away if he could. The method of excavation was the same as was used at Assuan and elsewhere in Egypt, wedges were driven in at close intervals along the desired line of fracture; inclined planes led from the hill to the valley, and along either side stand the pillars or towers of large stones which were used as purchases for covering the blocks. At one place was a stage from which blocks were loaded on carts. The town, which was contained in four high walls, is completely in ruins, but the plastered walls of baths and tanks remain. Close by were the remains of a temple built, as would appear from the remains of an inscription, by the Epaphrōditos, who commenced the construction of the temple at Mons Porphyrites.

A ruined wall, evidently an aqueduct, from two to four feet high,

according to the inequalities of the ground, runs about half a mile down the valley and round a hill, behind which is a deep brick-built well, a ruined enclosure, and a tall tower which I suppose to have been used for raising the water. Close by is a building which may have been part of the Roman establishment, but which I incline to think was a monastery built after the quarries were abandoned, but while the water supply held good.

Um Digāl, or the mother of pillars, was the appropriate name given by the Bedawin to these quarries which show work that might have occupied for two or three hundred years the number of people which could live in the fort. Leaving Um Digāl we crossed a wadi running west into the Wadi Fatira, and struggling up its southern bank we climbed over into the head of the long Abu Dök ravine, which runs south-west towards Kenneh. Two miles from the head of the ravine a tributary enters from the north. Near the junction are some deep holes which would retain water for perhaps two or three years. Here were ruined buildings, and one approached by a broad flight of steps seemed to be a temple.

It was in the grey dawn of January 7th that we climbed up the rugged south bank of Abu Dök, rode through a few broken hills, and emerged on a broad level plain 2400 feet above the sea. The air was raw and cold, the camels' breath floated steamy in the frosty air. Due north Jebel Shaib with his snow mantle stood stern and silent. In the east a cheerless sun struggled with heavy clouds, which reddened slowly, as if willing to preserve as long as possible the unaccustomed appearance. Silent and wrapped-up closely we moved noiselessly out on the plain, and here was a pretty sight. Picking their way down a neighbouring ravine to our left came a little herd of ibex; a little brook ran across their path, and while they dallied with the water they suddenly became aware of us, all of them turning their handsome heads at exactly the same moment. They showed no fear, but great curiosity. Far away to the south lay range behind range, and a tall mass called the Missika Hill was the mark we aimed for. Across the broad plain we passed through more low hills, and dropped into the Wadi Abu Shīa'—"the father of wormwood," the strong-scented bushes of which filled the valley. Abu Shīa' is, like Abu Dök and Fatira, a large artery running south-west, and we followed it down to its junction with a third, which carried away the water from the Missika group of hills. Crossing the triangle of low hills, we entered the narrow winding portal of Missika. The east cliff is dovetailed into the west, and the walls on either side are almost sheer perpendicular. Hence the road ascends slightly for four miles to the divide at 1960 feet above the sea. Two miles south of the divide the road turns sharp round the Jiddāma bluffs, and in order to find the water we follow the valley which collects the drainage from north, east, and south.

Jiddāma is both interesting and weirdly picturesque. The gorge or throat of the mountains is of blood-red stone, cavernous and gloomy. Nor is Bedawin legend wanting to add romance to the interest excited by the rugged scenery.

The throat is narrow and winding, and descends by a steep granite step, up which an active camel might be forced, but which is impassable for any loaded camel. Here water is always found, and the Bedawin have been at great trouble to scrape holes in the sandy bed and build them round with rude but efficient masonry. But the chief interest arises from the fact that here is the boundary, not arrived at until after many bloody encounters between the Ababdi and the Ma'āza.

From Jiddāma the road runs south-east to the south side of the Eridia hills, and at 5 miles from the water is the divide, 2130 feet, and the road is choked by low hills. At 15 miles you strike into the Atalla hills, and find by a dry watering-place an *ushera* or *Calotropis gigantea*, the Persian *dirakht abrishum* or silk-tree, the Hindustani *mudar*, and the Baluchi *zahren karrag* or bitter flower. This tree is rarely seen away from sandy deserts, and seemed a strange visitor in the rugged valley where it stood. Hence is a straight run down the broad smooth Wadi Atolla. At 22 miles from Jiddāma the Wadi Esshay joins from the north-east, and three miles further we cross the Russafa road between Kenneh and Kosseir. Down the Mesāgh-el-Bagar we rode to Hammāmāt, now upon familiar ground. Next morning we sped away to the west; hardly halted at El Gaita, but pressed on; saw the glorious sunset in the evergreen Nile valley; and dined in the evening with the tourists at the Luxor Hotel.

GEOGRAPHICAL NOTES.

Rev. G. Grenfell.—In a recent letter, Mr. Grenfell informs us that he hopes to be in England again early next year and give the Society his promised paper on his Congo explorations. His departure from England in August last was very sudden; he says, “the news of Comber’s death had not been received more than four hours when I commenced to pack up in readiness for the voyage.” His map of a portion of the river, including the Kwango, will accompany the paper. His colleague, Mr. Bentley, had just returned from an interesting land journey to the south-east of Stanley Pool.

Oxford University Extension Lectures for 1887-8.—We learn from Oxford that Geography is to form one of the chief subjects in the courses of instruction given under the extension scheme during the season, October 1887 to April 1888, now commencing. Eleven courses, comprising eighty-eight lectures on this subject, have been arranged, with Mr. H. J. Mackinder as lecturer. It is expected that the courses will be attended

From Mr. Floyer's Original Drawing.

Route in Red.



