

At Mazráh, a village, end of ascent. The plain of Kázvín visible from the summit of pass. Descent gradual; snow diminishing.

Three miles beyond is a deserted village on right; road leads over low hills; gradual descent for two miles farther, when the road leaves the hills and enters the plain of Kázvín. Pass the hamlet of Aghá Bábá on a small stream flowing from the N.E., and an hour after leave the village of Nizám-ábád half a mile on the right. Six miles farther, by a level road, the latter part through vineyards, we approach a large town surrounded by a wall and ditch, and enter the city of Kázvín. From Kázvín to Tehrán the distance is about ninety miles, in an E.S.E. direction, the high road leading through a long valley better cultivated than is usual in Persia, and bounded to the north by the lofty range of El-búrz.

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III.—*Extracts from Notes, made during the Campaign to Kōstantīnah, in September, 1837.* By Major Sir GRENVILLE T. TEMPLE, Bart., M.R.G.S., and Member of the Scientific Commission attached to the French Army in Africa. Read February 12th, 1838.

*Kōstantīnah, October 20th, 1837.*

September 19th, 1837.—I landed at Bónah: on approaching the town and off a point of land lie two rocks called “the Lion,” from correctly representing, when seen from a particular spot, a lion couchant. Bónah,\* the ancient *Aphrodisium*, is called in Arabic ’Annábah,† “the place of jujubes.” The town was destroyed in 1832, but is now rebuilt; the streets have in several instances been widened and carried in straight lines. Many good houses have been constructed, and good shops, reading-rooms, coffee-houses, restaurants, and even a theatre established. The walls by which it is surrounded were erected in 450 of the Hijrah [A.D. 1058.] The ruins of *Hippona* ‡ are distant a mile, standing on *mamelons* between the waters of the Sebús§ and the Bejímah. The cisterns are very considerable. I made a plan and took drawings of them. I also observed the site of a theatre, which has never been noticed by other travellers. The bridge over the Bejímah is of Roman construction, and lately repaired.

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\* Bónah is an ancient Arab name, Idrísí (Jaubert) 246, &c.—F. S.

† From ’Aneb; Zizyphus jujuba.—F. S.

‡ The ancient Hippo.

§ The MS. of Sir G. Temple contains many names of places in Arabic, but as the words have been strictly rendered in the Roman character according to the standard adopted by the Society, as given in Vol. VII., p. 245, it has not been thought requisite to print them also in Arabic;—the MS. is preserved for reference in the library of the Society.—Ed.

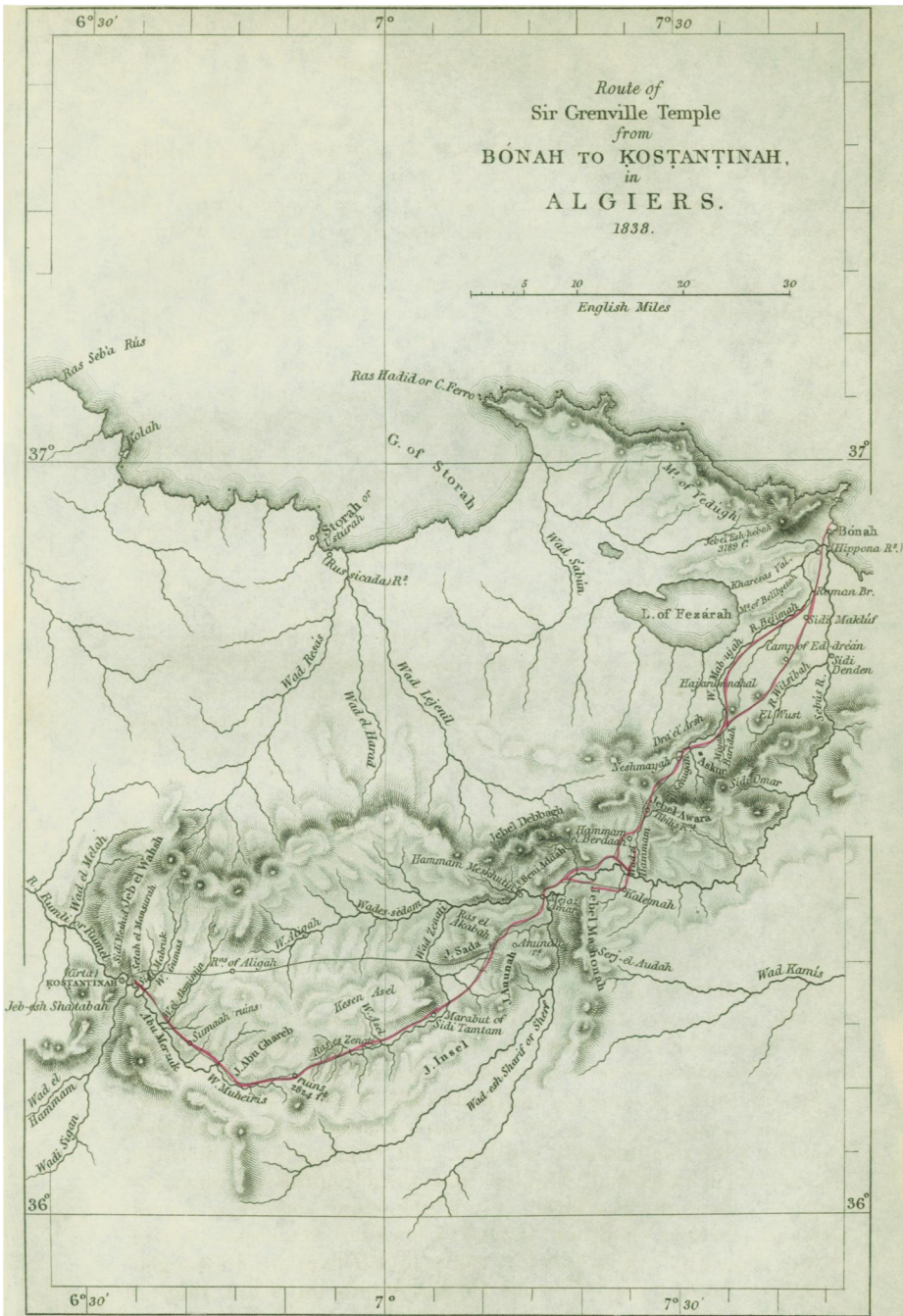
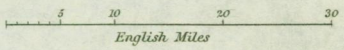
This river is but four feet deep at Hippona, and a much smaller stream than the Sebús. Two streams called Míyáh-báridah, "cold waters," and Wad-edlís, "the river of the rush" (a particular sort so called in the Berber dialect) and both rising about  $36^{\circ} 36' N.$ , unite soon after, and form a stream, which at first bears the name of the Abú Ufrah, then that of Mab'újah, and finally of Bejímah. The Sebús, which during the time of the Romans was navigable, and on whose banks they had established a dock-yard, might still be rendered so for some distance without difficulty, by removing the bar at its mouth, in which are now only from three to four feet water; inside this, however, it deepens to twelve and thirteen. It runs up S. to  $36^{\circ} 30' N.$ , and then turns to the W. I shall hereafter speak more of this river. To the east of Bónah and Hippona extend the level plains of the Bení Werjín and the Merdás, uncultivated save where exist three or four oases. To the W. are the mountains of Yedúgh, among which we distinguish the Jebel Esh-hebah,\* "grey mountain." To the S.W. are the mountains of Belíyetah, "the weathercock," the highest of whose summits is called Abú-fernún. Between these two ranges runs the valley of the Kharesas, extending for ten miles S.W. to the lake of Fezárah. This lake is said to be ten geographical miles in length, by six miles and a half in breadth: it is very shallow, and abounds with flamingos and wild fowl, and its shores with snipe and wild boar. The French have not commenced the colonization of the environs of Bónah.

*September 26th.*—I left Bónah and marched with a division of the French army to join the head-quarters at Mejáz 'Amár. Crossed the Bejímah, leaving Hippona on the right: after passing over a few elevations of ground, we entered the great and level plain through which flows the Sebús; this river was on our left. Three block-houses are established between Bónah and the fortified camp of Ed-dere'án; at the second is a Roman bridge of two arches over the Bejímah, or Mab'újah, for I do not exactly know where the stream changes its name: the road which passes over this bridge is the shorter, but we left it for the longer one of Ed-dere'án more to the southward, in order to obtain supplies, as Neshmáyah, the second camp, was too distant to reach in one day with the infantry, artillery, and baggage. At the third block-house, called Sidí Maklúf, from the adjoining sanctuary, is a well; to the right is a large tree, which being seen from a great distance, forms a good land-mark: it is called Shajeratu-s-selám, "tree of peace." The fortified camp of Ed-dere'án, eleven geographical miles S. by W. from Bónah, stands on a low ridge of

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\* Rising 3189 feet above the sea. Bérard.—Ed.

Route of  
 Sir Grenville Temple  
 from  
 BÓNÀH TO KOSTANTĪNAH,  
 in  
 ALGIERS.  
 1838.



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*J. Arrowsmith*

heights. The country about it is inhabited by the Aulád Abú 'Azíz. The derivation of this name (Ed-dere'án) I could not ascertain correctly; some say, from Edrár, the Berber word for a hill, others, from Dhirá', "the arm," "the cubit measure." My own idea is that it is connected with the name of Adrian, who may here have erected a camp or station, as the French have done at the present period. From the Roman bridge at the second block-house the Romans had two roads, one passing by Ed-dere'án, on its way to the *Aquæ Tibilitanae*, another, which crossed the bridge to *Russicada* (near Stora), passing along the level ground on the south of the Fezárah lake. Our horses were watered in the stream of Witsibah, which flows into the Sebús opposite Sídí Denden.

*September 27th.*—Leaving Ed-dere'-án, we soon after passed on our right an isolated hill studded with fantastically grouped rocks: it is called by the Arabs Hajar-u-n-nahal, "the rock of the bees;" but the French give it the more formidable appellation of *Montagne des Lions*, from the number of those animals they have there met with. On our left and left-front were the hills of El Wust [the middle], and in the latter direction the Marábut of Sídí 'Omar. Six miles from Ed-dere'án we reached the Miyáh Báridah. The Roman road from hence ascends this stream to Askúr the ancient *Ascurus*. We continued our march more to the westward, ascending a steep hill. On our right was the chain of Dra' el 'Arsh,\* and on the left the steep peak of Bír-urta, and behind it, at the distance of one mile and three quarters, is Askúr, which I was prevented visiting, as an escort could not then be given. Two leagues and three quarters from Miyáh Báridah we reached Neshmáyah; but the elm trees, which gave it its name, no longer exist, at least I did not perceive them. The fortified camp of Neshmáyah is smaller than that of Ed-dere'án: it is placed in a basin or hollow surrounded by heights, from which it might comfortably be cannonaded. Close by the camp flow four small streams, the Wádí Sehúghah, the Wádí Kúrs, and two others, whose names I did not learn: these united form the Wad-edlís, which united with the Miyáh Báridah, constitute eventually the Bejímah. The Bení Fúghál occupy the country on the west, and the Bení Káid on the east.

*September 28th.*—Immediately on leaving the camp we commenced ascending on the south, and by the pass called El-mulfah, the range of the Fejúj, which notwithstanding the road made last year by the French, occasioned much delay to the artillery. On the summit of this hill are the ruins of a *vigie* erected by the French. From this point the eye embraces a great extent of

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\* Dhirá'u-l-'arsh i.e. Throne's arm.—F. S.

country, the Kaşbah of Bónah, Ed-dere'án, the sea, the lake of Fe-zárah, Hammám el Berda'ah,\* Kálemah,† the Serj el 'Aúdah, and many mountains, rocky peaks, and winding valleys. The scenery around is fine, bold, and picturesque, but at present, tenantless and treeless. Descending the hill, we find, where we again join the Roman road, the ruins of a small Roman town, perhaps of *Tibilis*, built on a low *mamelon*, and embosomed in olive and other trees. Here we also strike the Wád el hammám, "river of the bath," running south to join the Sebús, and bordered by oleanders. Eight miles from Nesúmáyah we reached the camp called Hammám el Berda'áh, "the bath of the *bát*," which name it derives from the adjoining tepid springs, that part at least of it which relates to baths; respecting the *bát* I could learn nothing. These waters are the *Aquæ Tibilitanæ*, that is, unless we must place the latter at Hammám Meskhútín. At all events, they were known and used by the Romans, for we here see considerable remains of their baths, and some slight ones also of their houses. With the stones of these ruins the present fort has been constructed. The temperature of the water varies in parts of the baths from 29 to 30 centigrade (84° to 86° Fahr.). These baths are now surrounded by a thick and luxuriant grove of vines, olives, figs, and oleanders. The troops fully appreciated the luxury of these waters.

*September 29th.*—We descended the course of the Wád el Hammám for two miles and a half, when it falls into the Sebús, which here flows from west to east. On our right were the lower ranges of the Jebel Debbágh, "hill of the currier;" and on the left those of the Jebel Awara, the latter covered with a thick wood of olive trees. Through the vista of the valley formed by the heights, we beheld to the south the towers and walls of Kálemah.

The Sebús, where we crossed it, was then only two feet deep, but during the rainy season it sweeps furiously along its course in heavy masses. The French army last year lost many men, horses, and carriages in its passage. It is rendered still more dangerous by its bed being filled with large, loose, and rolling blocks of stone. Ascending its right bank, we reached, after one third of a league, the camp of Kálemah. As I before observed, I shall not touch upon the subject of antiquities; suffice it, therefore, to say, that this camp occupies the site and the remains of *Suthul*, which also bore the name of *Calama*, one of the principal and richest towns of Numidia. The ruins of the Numidic city stretch over a great surface; what is surrounded by the still existing stone walls and their thirteen towers, is the space occupied by the much

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\* Packsaddle-bath.—F. S.

† Pronounced Gelmah.

more circumscribed town of the Lower Empire. Kalemah is situated on the northern declivity of a branch of the Jebel Mahónah, one of whose peaks, called Serj-el-'Audah, "the mare's saddle," forms a very striking feature of the landscape. Kalemah is in the territory of the Aulád 'Arid: the country on the left bank of the Sebús, in the direction of Mejáz 'Amár, belongs to the Werz-ed-din. The troops did not pass through Kalemah, but pursued their march from the confluence of the Wád el Hammám with the Sebús, along the left bank of the latter. Kalemah lies nearly south from Hammám el berda'ah, and from it to Mejáz 'Amár, the course is a little S. of W. After riding seven miles from Kalemah, we reached the camp of Mejáz 'Amár, "the occupied passage;" the whole of the valley between which and Kalemah, and through which flows the Sebús, is not only beautiful by comparison with the country we had hitherto traversed, but would also be considered so under all circumstances. This valley is embellished by the rushing waters of the river, by a thick growth of trees and shrubs, and by verdant and elastic turf. It is bordered on the S. by the range of Mahónah, and on the N. by those of Bení 'Addah and Debbágh; the outlines of these hills are bold and picturesque, and their flanks are clothed with trees and shrubs, among which predominate the olive, and several varieties of the lentisk. The camp of Mejáz 'Amár, at which the expeditionary army was assembled previous to its advance upon Kostantinah, is situated at the confluence of the Wád-esh-Shárif and the Wád-es-sědam, "river of the irruption;" these two waters united, bear the name of Sebús. The former is much more muddy and slower in its motion than the latter, and its bulk of water is greater; it comes from the S., the latter from the W. Two wooden bridges have been constructed by the French over the latter, one for the passage of the heaviest artillery, the other solely for infantry. The right bank in some parts rises perpendicular to a considerable height. The entrenched camp occupies both banks of the Sědam. Ahmed Bey, with the *élite* of his forces, bravely and vigorously attacked the part on the right bank, but was repulsed. The beauty of the country, the positions occupied by the combatants, the variety of their costumes, the fineness of the weather, and the animation and spirit of the affair, served to form one of the prettiest pictures it is possible to imagine. Two and a quarter miles to the W., are the famous hot-springs, called Hammám Meskhútín, "the enchanted baths," which I was prevented then visiting, but hope to see on my return, when we shall have more leisure time. Some excavations were made at Mejáz 'Amár, by order of General Damrémont, and the remains of a Roman villa discovered. I cannot, however, say what name this place bore under the Romans.

*October 1st.*—The army commenced its march, taking the road by Rás el 'Aḳabah and the course of the Wád Zenátí, which promised us a greater supply of water than the much shorter way by Alígah. We immediately commenced ascending the pass of Rás el 'Akabah, "the summit of the acclivity," situated between the Jebel 'Anúnah on the left, and the Jebel Sadá on the right. The Roman road to 'Anúnah keeps to the left of the present French one. The country about 'Anúnah is extremely picturesque, possessing a happy combination of mountains, rocks, water, and trees. We bivouacked on Rás-el 'Aḳabah; here rain fell, which continued till late on the following morning. Our horses went to a considerable distance to drink; the artillery found it impossible to reach the summit of the pass this day. The French military road ends at Rás el 'Aḳabah. The distance from Mejáz 'Amár is  $7\frac{1}{2}$  miles.

*October 2nd.*—As soon as the artillery joined us we resumed our route. The country on that side of the mountains where we were now marching presented a totally different aspect from the other: the hills which now bordered our route had not the bold and picturesque forms of the others; not a tree or a shrub was to be seen—not a man or an animal was visible; all was silent, desolate, and dreary. The land had, however, all been under cultivation, which was not the case on the other side, though the ground appeared to be equally fertile. Judging from the stubble, this year's crop was a plentiful one. During the day I observed many remains of Roman posts and stations. We crossed two small streams flowing from left to right; the last is called 'Ainet-toráb, "the spring of earth;" they both join the Zenátí.\* We shortly after crossed this latter river, which here flows a little to the W. of N., and ascending its current, bivouacked round the Marabaṭ of Sídí Tamtám, between the Jebel Insel † on the S. and the Kesen 'Asel, "honey," on the N., distance  $6\frac{1}{2}$  miles from Rás el 'Aḳabah. Although we saw no Arabs during the day, we frequently heard and felt them at night, when they permitted themselves to fire upon us.

*October 3rd.*—Crossed the dry bed of a stream, and afterwards the Wádí 'Asel, with water, which it discharges into the Zenátí on the left. On the bank of the Wádí 'Asel is a small Roman fort of stone. We continued to ascend the course of the Zenátí along its left bank, and towards the end of the march, crossed it three

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\* When at Kostantínah I was told by some Arabs that the Wádí Zenátí does not join or form the Sebús; but that from Sídí Tamtám it flows north and joins the other waters which discharge themselves into the gulf of Stora. Researches respecting rivers in Africa are not easily pursued, from the variety of names which the Arabs give to them in different parts of their course, thereby creating much confusion.

† Inzil. Dismount?—F. S.

times near its source, called Rás-ez-Zenátí. This is the spot about which the waters of seven small streams, Seba' 'Ayún, unite to form it. From the heights\* beyond the head waters of the Zenátí, we beheld thick and lofty columns of smoke rising from the plain. The Arabs on our approach fired their *dowárs* † and their stacks of straw; this conduct they pursued all the way to Kostantinah. Our cavalry threw itself forward to rescue the forage, and in part succeeded, as it also did in discovering some *matamórs* [subterraneous granaries], in which the Arabs conceal their wheat and barley. We bivouacked on the Wád el Bakarrah, "river of the cow." The country about the sources of the Zenátí is very much broken and tormented, forming numerous cones or *mamelons*, and has the appearance of being volcanic.

*October 4th.*—During the night and early in the morning, we experienced considerable cold, the thermometer marking only five centigrades above 0. (41° Fahr.) Soon after leaving the Wád el Bakarrah, we passed on our left the ruins of a Roman *statio*, or small town, and beyond it reached the most southern point attained on our march to Kostantinah, viz., 36° 12' N. We observed many foot-prints of camels; crossed a stream with no running water, but containing some in the holes or deeper parts of its bed. Crossed the Wádí Muheirís (the pounding mortar), and bivouacked on its right bank; this river flows to the westward, and under the name of Abú Merzúk, joins the Rummel, or Rumlí, "the sandy," close to Kostantinah.

*October 5th.*—We continued our course, descending along the right bank of the Muheirís, leaving the Jebel Abú Ghareb on the right, and crossing a stream of the same name which flows into the Abú-merzúk, and then ascended the heights of Súma'ah, ‡ "the tower, or minaret," so called from a Roman mausoleum which crowns its summit, and which is distinguished from a considerable distance, and bears in fact the appearance of a tower. From this point we enjoyed a magnificent view, rendered extremely interesting to us by embracing in its range the battlements of Kostantinah, the absorbing object of our thoughts. We also beheld the Bey's camp on our left front, the Setáh el Mansúrah, "terrace of victory," the red Jebel-esh-shatábah, the perpendicular rocky side of the Jebel Sídí Súleimán, both being portions of the range of Zuwíyah, the Kudyat 'A'tí, § &c. Crossing a small stream, and halting for the night on the banks of another, called Wad el Akmimín, || we were employed for an hour, before making our

\* The plateau which divides the basins of the Zenátí and Muheirís, and separates their head waters, is 2,824 feet above Bónah.—A.

† Dowár, or rather *dwár*, is a colloquial abbreviation of *adwár*, (*pl.* of *daur*,) 'circles,' because the Arab tents are pitched in a circle.—F. S.

‡ Sauma'ah, vulgo *Sma'h*, or *Súm'ah*.—F. S.

§ Coming hill.

|| Distance from Wad el Bakarrah sixteen miles and a quarter.



soup, in a very pretty little affair with the Arab cavalry. Our progress from Rás el 'Aḳabah had been slow, as the engineers were in many places obliged to make a road for the passage of the artillery and waggons.

*October 6th.*—Crossing the Wadī Gumas,\* we had another little affair with the Arabs, and then ascended to the Marábuṭ of Sídí Mabruk,  $4\frac{1}{2}$  miles from Wád el Akmímín on the Setáh, el Maṣúrah, which is a branch of the Jebb-el-Wahsh.† At this Marábuṭ were established the head-quarters of the army: we galloped on to the edge of the terrace, when suddenly burst upon our sight the whole town of Ḳoṣṭantínah lying at our feet, and separated from us by the deep, perpendicular, and rocky ravine through which rush the waters of the Rumlí. As soon as we were seen from the town, its batteries opened upon us, and every window and rock became animated by the fire of musketry. The women at the same time raised their voices in the usual sounds of *lú-lú-lú*, and the men shouted curses against us. All these sounds were loudly and often repeatedly reproduced by the prolonged and many-toned echoes of the ravine. The siege lasted till the 13th; batteries had been established at Maṣúrah, and on the other side of the Rumlí on the Kudyah 'A'tí, “hill of 'A'tí.” The weather during all this period was rainy and cold; there was no shelter, and no fuel to make fires; no forage was to be obtained, so that the horses had only half rations of barley, which we had brought with us; fevers and dysentery raged throughout the camp, to which was subsequently added the cholera; men and horses died rapidly. At last a breach having been made, the town was on the 13th most gallantly carried by assault, and the tri-colour floated from the minaret of the Ḳaṣbah.

Ḳoṣṭantínah or Ḳoṣantínah, قسطنطينيه, stands on a peninsula formed by the Rumlí, “sandy,” or Wád er-rummel; “the river of sand.” The part on which the town is built was at one time certainly connected with the heights of Setáh-el-Maṣúrah, and of Sídí Meshid, and was separated from them, not, as is always stated, by the hands of men, but by an earthquake or some convulsion of nature, though at what period this took place we cannot ascertain, no tradition whatever of such an event existing. Both sides of the ravine are of calcareous rock, covered with a very shallow coat of vegetable earth. We here discovered four strata: the lower one is black, pure schist; the second is calcareous, black, and, on exposure, separates in laminae; the third calcareous, dark-grey, compact, and very hard; the upper one calcareous, warm yellow, or pale orange, spongy, and filled with fossil remains. These strata are nearly horizontal; the black rocks of

\* Kummás, or kammás, diver's or leaper's river?—F. S.

† Wild well.

Kōstantīnah, and the black stones with which its principal edifices were formerly constructed, are not, as commonly stated, either of lava or basalt; the stones used in construction were taken from the third stratum. In more modern times the upper stratum has been used as being much softer and more easily worked. The Rumlí, which at or near the town turns twenty mills, enters from the S. E. the deep fissure or ravine called El Huwah, existing between the heights of Mansurah and the town. The entrance is extremely narrow, the breadth there from side to side not being more than four yards. The rocks rise perpendicularly on each flank, but there exist narrow ledges at different elevations, which enable a pedestrian to follow the whole of its course to El Kāntarah, from which there exists no difficulty in continuing it to the cascade where the waters debouche from the ravine. A part of the works below the cascade are of marble, and thence called Dár-er-rukhám. El Kāntarah, as its name indicates, is a bridge across this ravine, placed at the angle which it here makes; the entrance bearing from it about S. S. E., the cascade W. S. W. From the summit of this bridge to the water of the river the height is 114 yards. The bridge itself, which rests on a natural one called Gorra,\* is fifty-two yards. The open arch of the natural bridge, called Dholmah, "darkness," is of considerable height; but I was unable correctly to ascertain what part of the remaining sixty-two yards it occupied; the extreme length of the bridge on its summit from the Báb el Kāntarah to its commencement on the opposite side, and following its curve, is 113 yards; its breadth eight yards. Higher up the ravine are either the commencement or the remains of two other bridges or aqueducts, also of Roman construction. The modern part of El Kāntarah was built by Mahonese, about forty-five years ago, with, it is said, materials prepared at Mahon! From El Kāntarah to the cascade are four natural bridges; the arch of the one nearest the cascade so perfectly resembles a Gothic arch, that at first it appears to be the work of man. The cascade is divided into three falls, which together may be from forty-five to fifty yards, but I did not measure them. The rock which overhangs it on the town side, or left bank, is in perpendicular height exactly m. 109·3 yards, to which must be added a slope formed by the fall of stones and earth, which measures thirty-three yards more; total above the summit of the cascade 142·5 yards: from the top of this rock, named Keff Shakará, women guilty of adultery are precipitated. Kōstantīnah, before it received its present name from Constantine its restorer, was called by the Romans *Cirta*; but under the Numidic dominion it must certainly have had another name, for *Cirta* corrupted from קרתא *Carta*, the

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\* Korrah, pupil of the eye?—F. S.

Punic for "a city," was only applied to it by the natives, as we employ the word "town" for London—the city—the town *par excellence*. I entertain not the least doubt of the Numidic city having been of far more considerable extent than the town of Constantina, which was what it still is at present. The Numidic city extended not only over Kudyat 'A'ti, but also on the right of the ravine, and at the base of the Setâh el Mansûrah. I will not here bring forward the proofs of my assertions, but for the rest they are numerous and convincing. Kosantînah still retains a great portion of the walls of Constantina, which extended from where the Rumli or Er-Rumel enters the ravine, across the neck of land, and, when it was necessary, along the summit of the rocky precipice which forms the W. and N.W. boundary of the town. From the Kaşbah, which almost overhangs the cascade, we see no traces of it along the edge of the ravine; nature had here rendered them superfluous. The Mohammedans have, however, erected batteries near El Kahtarâh to defend it. Kosantînah\* (I call it by its Arab name to distinguish when speaking of it under the dominion of the Romans.) has four gates—Bâb el Kahtarâh; Bâb el Jabiyah, nearest to the entrance of the Rumli into the ravine; Bâb el Wâd, now closed; and Bâb Jadîd, nearest to the river, after it has made the circuit of the town. All these are of Arab construction, built, however, in great part with materials of Roman edifices; the superb gates, with columns of red marble, mentioned by several travellers, do not now exist; and I may here observe, that the ancient edifices have of late years suffered much, and in many instances have been entirely destroyed, in order to obtain materials for the fortifications of the town: especially this was the case with Ahmed Bey, when preparing to defend himself against the French forces. The town walls on the land side, five feet thick, and in many parts with casemates behind them, are built of Roman wrought stones. Kosantînah measures nearly 2700 yards, or  $1\frac{1}{3}$  mile geographical, in circumference; the accounts which state its population at between 25,000 to 30,000 are probably correct. The period, however, at which I arrived in the town was not a favourable one for ascertaining its correctness, for, with the exception of dead bodies, we scarcely saw more than 200 or 300 of its inhabitants; the rest all fled when they perceived the certainty of our taking their town. Judging from the size and decorations of the houses, and rich furniture and stores we found in them, a considerable portion of the inhabitants appear to have been very wealthy, and to have indulged in much luxury. Neither did I see any indications of extreme poverty in any of the habitations; there appeared to exist a general degree

\* Kosantînah, a corruption of Kostantînah, has long been in use. See Idrîsî, *Africa* (Ed. Hartmann), pp. 123, 203, &c.

of comfort which is seldom found in any large towns, even in Europe. The greater part of the houses are built from two to five feet above the ground, on large square-cut blocks of the dark-grey calcareous stones, the remains of ancient buildings. *Kořtantınah* from a distance has not the gay and white appearance of the towns of the East, or even of other parts of Barbary: this is owing to the peculiarity of the houses, not being covered with white-washed terraces, but with tiled roofs, *à dos d'âne*. During wet weather, *Kořtantınah*, as seen from *Mansúrah*, or any of the other commanding elevations, presents itself, from this circumstance, in a most gloomy and dull aspect. None of the mosques, public buildings, or houses, are remarkable for any beauty or elegance of architectural design. Judging from the size and height of the minarets, or rather towers, (for they resemble not the graceful ones of Turkey,) and not from their fame or sanctity, there are nine principal mosques in the town; but since this, the names of thirteen have been given me, besides several chapels. The Bey's new palace, built about eight years ago, is a large edifice, and in its interior very handsome; white marble courts, galleries, fountains, and columns; bright and gaily painted walls; vivid and glossy *azulejos*, with Arabesque patterns; orange, citron, and pomegranate trees; mirrors, and numerous glass lamps suspended in all directions; with a due mixture of rich carpets, cushions, lion and leopard skins, form on the whole a pleasing *ensemble*.

The inhabitants state that *Kořtantınah* contains 9000 houses and 40,000 persons, but perhaps both these statements exceed the truth; however, from the reasons before given, I can form no decided opinion, and the exact number of houses had not, when I left the town, been correctly ascertained. About 17,000 soldiers might be quartered in the barracks, *fonduks*, palaces, and the large houses of the wealthier inhabitants, without having recourse to billets on all the houses in general.

Before our arrival provisions were very abundant and cheap; wheat, per sack, 8s. 6*d.*; barley, per sack, 4s. 3*d.*; beef, per lb. ½*d.*; mutton, per quarter, 1s.; fowls, each, 5*d.* to 6*d.*

The inhabitants chiefly bake their bread at home; and the few public ovens which existed before those constructed by the French could only bake about 3000 to 3500 rations daily.

The land round the town belongs for the most part to the community in general, and is let out to a few of the principal families; these let it again to the actual cultivators, who receive one-fifth of the produce. The land is fertile and produces generally 30 per cent.

The principal manufactures in the town are those of saddles, bridles, boots, slippers and gaiters. The leather for these objects is dyed of a dingy red colour, with the bark of the del-

bragh. A few coarse blankets are also made. About twenty-five men were employed by the Bey in the manufacture of gunpowder. All the arms are made in the hilly districts of the Bení Abbás. A considerable trade was carried on with the south, from which, in return for corn, saddlery, and objects of European manufactures, the Kostantinians received gold dust, ostrich feathers, slaves, and the finer sort of háiks, both of wool and silk. From 1200 to 1500 mule-loads of corn, &c., were yearly sent to Tunis, from which European goods were brought in return.

The valley to the N.W. and W., through which flows the Rumlí, after it has disengaged itself from the ravine, is of great beauty; the river winds much in its course, and is bordered by a few villas and numerous gardens, rich in every variety of vegetable and fruit trees, with extensive groves of pomegranate, olive, fig, orange, and citron; the view in this direction is bounded in the distance by a bold range of mountains. North, or little westerly of Kostantinah is the hill of Sídí Meshid and the Jebel el Wahsh [the wild mountain], to the east Mansúrah, to the south Kudyat 'A'tí, and to the west of south, Jebel-esh-Shatábah [mountain of heather], the rocky Sídí Suleímán, and the range of Zawáwiyah. In the Jebel Jebbás (plaister) a part of the last-named range, gypsum is found, and the stones are burnt in the ravine Shabt-er-rúsas. The ancient remains in and around Kostantinah, I shall merely enumerate, without entering into descriptions. Where now stands the Kaşbah was the Numidic citadel, some parts of the walls of which are still seen, as well as the remains of a large edifice, with the bases and pedestals of very large columns of the dark-grey stone; these bases measure seven feet square. This must either have been a double temple, or a palace (of Syphax?). It was also the Roman citadel, and called by them, as an inscription informs us, the Capitol; great portions of the Roman walls exist. Here are also large cisterns, divided into twenty-one compartments; and there is also a church, of perhaps the time of Constantine. In the town is a Tetrápylon, or rather was, for one of its gates or arches has been destroyed. Near it, but unconnected, are two other arches. A great part of El Kañtarah is Roman; the bas-relief on it, of a woman and two elephants, was incorrectly copied by Shaw. On the east, or right of the ravine, is a circus, of which the arch, called Kaşr Gulah, (now destroyed,) formed the entrance; near it are two sets of cisterns. At the entrance of the river into the ravine are the remains of a large stone dam extending across its breadth. On the right bank of the Rumlí, and close to its junction with the Abú-Merzúk, is a fine aqueduct; six arches of the lower tier only remain, but over the river it must have had three tiers of arches to have carried the water to the elevation at which, on Kudyat

'A'tí, we afterwards find parts of its channel. A short way higher up the stream, are the vestiges of a Roman bridge, and the traces of the road from Cirta to Carthage. On the different heights which, though incorrectly, are generally by Europeans included in the name of Kudyat 'A'tí, are many remains, cisterns, channels of aqueducts, two paved Roman roads, houses, &c. At the foot of the precipice, on the west of the town, are the tepid Roman baths, now called of Sídí Meímún, the waters mark 31 centr. [102° Fahr.], and abound with tortoises. Lower down are the ruins of a Numidian mausoleum, which, like those of Kubrer-rúniyah [Roman graves] and Medrashem, rose by steps to a point; it is however square, and not round. On the ridge between Báb Jedííl and Kudyat 'A'tí was the theatre, another of which existed not far from the Bardo. Many inscriptions exist in and near Kōsantínah.

Abú 'Obeíd el Bekrí\* states that Kōstantínah is bathed and surrounded by three great and navigable rivers, which rise from the sources called Inghál, or black, and then lose themselves in the deep ravine close to the town. We cannot reconcile this passage with what at present exists, as there are only two rivers, the Rumlí and the Abú Merzúk, for we cannot count the salt stream of Wád el Melah, both from its insignificance and its not entering the ravine; the only manner of explaining the passage is by counting Wád el Hammám and the Wádí Sigan, which uniting a few leagues to the south of Kōstantínah form the Rumlí. But none of these four streams are navigable for even the smallest boats, both from want of water and the rocky and broken nature of the beds. I have before stated that at the entrance of the ravine are the remains of a stone barrier across it; this of course increased the bulk of water above, but was probably constructed more for the sake of irrigation, or defence, than navigation. I may here observe, that if the Rumel did not always flow through the ravine, its former bed was in a valley near that of the Wád el Melah, and that it joined its present bed below the town, at the point where the latter stream now discharges its waters into it: however, these are useless conjectures, for a convulsion which could have formed so great a chasm may well have caused water to spring from a place where it had not before flowed.

My observations on the part of the country I traversed must necessarily, for evident reasons, be extremely few, and those very slight. With regard, for example, to its inhabitants—their manners, customs, and character, I can form no judgment, as I never met them except in the field of arms, or a few in the town, vanquished, submissive, and at one's feet. In dress and

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\* Notices et Extraits des MSS, de la Bibliothèque du Roi, xii, p. 516.

personal appearance I have observed no peculiarities to distinguish them from the people of Algiers or Tunis. From Bónah to Kōstantínah I did not see above six Arabs, besides those fighting against us. Kōstantínah contains many Jews, who appeared to maintain the character which their brethren have gained throughout the world. Many Turks were in the town; and they fought admirably; so also did the Kabáil,\* and the Arabs. Many French persons have accused the latter of not displaying much courage, saying that they never stand to receive a charge, even from an inferior force:—this is generally true—but is solely to be attributed to their peculiar style of warfare, and not to deficiency of courage. They would act unwisely to change this system, for it is good, and well adapted to the country; and so has it, as in former days with their ancestors, proved to their enemies. Independently of the women in the Bey's harem I saw but few, and none of any great beauty.

The country from Bónah to Rás el 'Aḳabah is little cultivated, scarcely at all, but it supports numerous herds and flocks. There are in parts woods of considerable extent, but they are composed chiefly of large shrubs, and with the exception of the olive, very few trees—none adapted for ship-building. From Rás el 'Aḳabah to Kōstantínah nearly the whole country is cultivated, and produces much corn and barley, but not a tree or even a shrub, with the exception of a few asparagus bushes, and oleanders on the banks of the streams. To the west of Kōstantínah fruit trees are reared, among which are found a very few date trees, but their fruit does not ripen; the olives are among the largest, and the finest I have ever seen; the cultivated pomegranates are large and of exquisite flavour: this tree, as well as the fig, grow also in a wild state; the wild lotus, in Ar. Sidrah, † is found in abundance, especially to the north. The melons of Kōstantínah are the most delicious that exist—they are called Merhúm, ‡ and are not found at Bonáh; they are green, with yellow spots; the flesh is of a beautiful green colour, and may all be eaten close to the skin, which in thickness does not exceed that of a dollar.

During our advance, the country was parched and burnt up, but after the heavy and continued rains which had so much annoyed us, it almost instantly clothed itself with brilliant verdure, studded with the purple flowers of numberless iris. The Sebús is by far the largest of the rivers we saw; the Sherf, and the Rumel, are the next; then follow the Abú-merzúk, the Zenátí, and the Bejímah; some of these would, however, in Europe, never

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\* Plural of Kabíleh, a tribe.—F. S.

† Zizyphus Lotus.

‡ 'Blessed.' These melons closely resemble those of Kaṣabah, or Turghúd-lí, 40 m. east of Smyrna, on the road to Ephesus, which are an incomparable fruit.—F. S.

be dignified by the name of rivers, and many others would never be noticed, so very small are they : most of them, in summer, have no flowing water, retaining only in the holes, or deeper parts of their beds, the remains of what had been furnished by the rains. Independently of the domestic animals, I saw but few others, namely, camels, jackals, hares, tortoises, hyænas, and leopards, and only very few of these ; there are, however, many lions and wild boars ; partridges, snipe, and wild-fowl, are found in great numbers, and in still greater numbers did we find vultures and crows ; but the presence of these latter was accounted for by the great number of horses that died during the campaign. Of insects, the most common were scorpions, mosquitos, and a very large and black species of earwig which I had never seen before. The thermometer in my house at Kostantínah ranged from 10 to 15 centigrades (50° to 60° Fahr.), but seldom rose higher than 12 (53·3 Fahr.)

In returning to Bónah, I followed, with trifling exceptions, the same route. From Rás-el-'Aḳabah, I visited the ruins of *Annona* ; from Mejáz 'Amár, I went direct to Hammám Berdá'ah, thus cutting off a great angle ; and from Neshmáyah, I rode along the course of the Mab'újah, to the Roman bridge near the second blockhouse, thus avoiding Ed-dere'án. Our étapes during the return were as follows :—Wádi Muhéiris, Rás-ez-Zenátí, 'Ainet-toráb, Mejáz 'Amar, Neshmáyah, Bónah.

My researches were chiefly directed to the subject of antiquities, and the illustration of ancient history and geography, as well as to the obtaining Arabic MSS. relative to Arab history. I had intended giving the latitudes, longitudes, and elevations of different parts of the Beylik, from the observations made by M. Falbe ; but after due consideration, I do not think I should be justified in doing so, as he may wish to publish them first himself in his own country. On the subject of zoology, I may mention, that while at Kostantínah, Ferhád ben Sa'id, chief of the powerful tribe of Auléd Sa'id, came from the Great Desert with nearly 1000 cavalry, to offer his allegiance to the French, and on this occasion, I observed that their horses were generally much superior to those we had hitherto met.

The numerous ruins of Roman posts and stations that we saw, though in no way whatever remarkable either for their size, architectural design, or preservation, were extremely interesting, as clearly showing the excellent plan adopted by that nation when colonising a conquered country. These posts were of two sorts, those which secured the roads, and others which guarded the estates at some distance from them ; but I have not leisure at present to enter into the details of their colonization system.

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