

tifies Pliny's Mesobatene with Máh-sabadán, and, he adds, "the Eulæus which traversed this district above Susiana can only represent the Kerkhah; and yet, in his (Pliny's) further notice of the river, the Kuran will alone answer the description." Pliny further says that the Eulæus surrounds the "Arx Susorum" (Susiorum or Susianorum?), which Major Rawlinson does not consider to raise any objection to his theory of Shusan being on the Shuster river. He says, "when again he (Pliny) states that the Eulæus surrounds the citadel of Susa, I cannot but recognise the Kuran and Susa; for, as I have shown, the Kerkhah flows at the distance of $1\frac{1}{2}$ mile from the great mound of Sus." But as we now know that there is no mound at Susa, the matter is reduced to this:—part of Pliny's description of the Eulæus is applicable to the Kerkhah, and part is applicable to the Kuran. A better proof of the worthlessness of his evidence could not well be urged.

I am not aware that any facts as to the rivers of Susiana have been established since the publication of Major Rawlinson's paper, which can throw any new light on this question. If we are now rightly informed as to the general course and position of the Kerkhah, the Shapur, the Dizful river, and the Kuran, we know all that is material for the question.

VIII.—*The Bolan Pass.*—Extract of a Letter from an Officer of the Bengal Artillery, dated Camp at "Quetra," or, more properly, "Shawl Kot," in Khorasan, 2nd December, 1841.

AFTER crossing the desert from Sukkur, by way of Barshore, we drew near the range of mountains that divide Sinda, Kachu, and Gundova from this pass. They are beautiful and varied in form, but rocky and precipitous, devoid of vegetation, except that in the ravines and water-courses a few stunted bushy trees are to be observed. The Bolan river runs along the base; and in the neighbourhood of this stream cultivation is again to be met with.

This brings me on to Dádar, from which place I took my departure on the 16th November, having with me about 500 camels and eight carts and waggons. The road through this pass leads, with few and rare exceptions, along what is the bed of a mountain-torrent, when filled by the melting of the snows or heavy rains, and is composed of loose shingly gravel, that recedes from under your feet, and is very difficult for draught: camels get on well. It is infested by the Kakurs, who live by robbery; and the hills sometimes close in upon the road, which is filled up by the bed of the stream, running through rocky chasms, up-

wards of a hundred feet high, from the top of which the robbers assail the traveller with stones; and were they as bold as they are cruel and perfidious, they might hold the place against all comers. Many spots were pointed out to me by the guides I had with me, as signalised by acts of violence, several European officers having lost their baggage during our occupation of the country. Should there be rain in the higher parts of the mountains, the stream at times comes down in an almost perpendicular volume, without warning, and sweeping all before it, as a friend of mine experienced, when he saw a party of men, horses, and camels, and all his property, borne down by it; when himself and some few men with him escaped by climbing up the nearly perpendicular side of the hill. About thirty-seven men were washed away upon that occasion. The views in this pass are grand, but there is a want of contrast to the barren rocks.

In the second march through it we had to ford the stream eighteen times; tedious work, as the men must unshoe, and put their shoes on again after crossing. At the halting-place the country opens out into a large valley, about 10 miles long, by 3 or 4 broad, having the Bolan river foaming along the base of the hills on one side. Here is a small village, and near the bank of the river the soil improves; some traces of cultivation are seen, and forage is obtainable for our beasts.

After making a short halt in this valley for a reinforcement, I moved on through an open and stony, barren plain, surrounded with mountains; a low rocky ridge of hills runs across it, leaving a narrow opening of not more than 30 feet wide—(this is a favourite spot for the plunderers)—and reached the third halting-place. In the middle of the night an express reached me from Dádar, requesting me to halt, until a native of authority in the country, and who knew all the haunts of the robbers, should join me: this he did in the afternoon, with about eighty followers of various kinds, to be used as scouts. I took a scramble up a high hill in the neighbourhood of the camp, and discerned a wilderness of mountains, with extensive barren valleys; and, where the stream runs, a little green tract of coarse grass, which the camels feed on.

After our next march we encamped under a perpendicular scoop of a hill, which time and the torrent had worn away, laying bare the strata, in which regular veins of coal, but of a bad quality, are to be found: these strata are not above 6 inches in thickness, and recur at regular intervals of about 6 feet apart. The strata run nearly in this form *////*, the coal appearing in black lines in that manner. I ascended this hill, and some higher ones, to see if the coal cropped out anywhere, or if there were traces of it in the scoops of other ravines, but without success. This halting-place

is called "the Lost Waters;" for the stream comes forth from the shingly bed, and after flowing for about a mile is again lost, leading one to suppose that water might be found by digging in any part of the bed of the stream. The ascent is gradual, about 100 feet in a mile.

The next march brought us to the source of the Bolan river, which issues out at the base of a rocky hill in a strong stream, and apparently at a warm temperature. It is said that sulphur is found in the vicinity of these mountains. I got upon the highest accessible point, and had a magnificent view of the pass downwards, recognising several of the remarkable peaks that we had passed upon the road. The general appearance of the country is that of rocky ranges of hills very abrupt, and regular sloping plains filling up the valleys: these are composed of gravel and boulder-stones of various sizes, and in different strata, sometimes large round stones, in others smaller pebbles; but all have a rounded appearance, and are hardened together into a rocky mass. It has the appearance as if the higher points had withstood a deluge, and the valley been filled up with all its débris. But the plains are cut into perpendicular and deep ravines by the torrents from the hills. There are remains of coarse herbage to be found, and I believe in the spring-time it has a more cheerful look; but everything now is dried up and burned from the great heat.

The next day I did not move off until I could see about me; for after about 3 miles of ascent through the bed of the torrent you enter that part of the pass where the marauders usually take their post. For about 3 miles the road runs between perpendicular cliffs, winding and locking in to each other, making short zigzag turns: the cliffs gradually increase in height from about 100 feet at the commencement to 500 or 600 in the centre. Notwithstanding all expectations, we were not molested anywhere; nor did we see any one, though the places where they haunt are easily to be discerned by the breastworks of rough stone on the heights, to conceal themselves and fire through. We passed the spot where the last attack was made,—the remains of the dead camels and horses and property strewed about, as well as blood—whether human or not, I will not say. The scouts I had with me, under the native I had waited for, had gone through this part in the morning, and reported that all was clear.

About 9 o'clock I found an open space, where the sun shone warm, where I halted the men, and allowed the advance-guard and baggage to pass on—(I had about 700 camels with me)—that I might see everything out of the pass before I left it, and wait the arrival of the carts. Hours passed away, and no tidings of them; so about 1 P.M. I went back to see where they were: I

found that the cattle could not get on; so I collected about 100 men of the infantry, with ropes, to pull the bullocks and all over the stones. In the upper part of the pass the hills become somewhat more rounded, and the road less confined; but it still presents the same wearisome difficulties, and the spurs of the hills lock into each other, and turn after turn, and objects of the same nature, constantly meet you. There is no lack of grandeur in all that is to be met with.

I am not a geologist to tell the nature of the rock; but it is generally in horizontal strata; you sometimes come upon places where it rises in curves, and in every conceivable angle. But the gravel boulders are not met with in the higher part of the pass.

At the top we experienced a great change of temperature: it is 5000 feet* above Dádar.

I reached this place the evening of the 27th November. This elevated valley is well watered by streams from the hills, which surround it in every direction, so that you never see the sun rise nor set: the hills, however, are all rocky and barren: it freezes every night, and in spots inaccessible to the sun it does not melt during the day; nor is the heat of the sun disagreeable at any time. Our fevers are leaving us, and we are all recovering our English complexions.

IX.—*Comparative Geography of Afghanistan.* Extract of a Letter from Major RAWLINSON, dated Kandahar, May 1st, 1841.

REALLY and truly I cannot contrive to steal a single hour from my official duties to devote to my books or even to the arrangement of the multitudinous notes which I collected in Persia.

When relieved from the official drudgery which the presence of an army entails on me at this place, you will again find me a zealous contributor to your Journal, but in the mean time you must be content to receive such occasional scraps of information as I may be able to pick up from time to time, relative to the countries in which my lot is now cast.

I have discovered at a spot in the Ghilziyeh country (S.E. of Kandahar), now named U'án Robát or Shahri-Zohák, the site of the ancient city of *Arachosia*, which dates from the fabulous ages of Semiramis, and the ancient name of which (Cophen), mentioned by Pliny and Stephanus Byzantinus, gave rise to the territorial designation of Kipin, applied by the Chinese to the

* Dr. Griffith's barometrical measurement (Journal of the Asiatic Society of Bengal, new series, No. xxxvii. pp. 54, 55) gives,—Dádar 742·6 feet above the level of the sea; Quetta, 5537.—Ed.