

RAMBLES
AND
RECOLLECTIONS
OF
AN INDIAN OFFICIAL.

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"The proper study of mankind is man."
POPE.

IN TWO VOLUMES.

VOL. I.

LONDON:
J. HATCHARD AND SON, 187, PICCADILLY.
1844.



CHAPTER XIV.

BASALTIC CAPPINGS OF THE SANDSTONE HILLS OF CENTRAL INDIA—SUSPENSION BRIDGE—PROSPECTS OF THE NERBUDDA VALLEY—DEIFICATION OF A MORTAL.

ON the 29th we came on to Puthureea, a considerable little town thirty miles from Saugor, supported almost entirely by a few farmers, small agricultural capitalists, and the establishment of a native collector. On leaving Puthureea, we ascend gradually along the side of the basaltic hills on our left, to the south, for three miles, to a point whence we see before us this plane of flat basaltic cappings extending as far as the eye can reach to the west, south, and north, with frequent breaks, but still preserving one uniform level. On the top of these tables are here and there little conical elevations of laterite or indurated iron clay. The cappings everywhere repose immediately upon the sandstone of the Vindhya range; but they have occasional beds of limestone formed apparently by springs rising

from their sides, and strongly impregnated with carbonic acid gas. For the most part this is mere travertine; but in some places they get good lime from the beds for building.

On the 1st of December we came to the pretty village of Sunodah, near the suspension bridge built over the river Beeose by Colonel Presgrave while he was assay master of the Saugor mint. I was present at laying the foundation-stone of this bridge in December, 1827. Mr. Maddock was the governor-general's representative in these territories, and the work was undertaken more with a view to show what could be done out of their own resources under minds capable of developing them, than to supply any pressing or urgent want. The work was completed in June, 1830; and I have several times seen upon the bridge as many as it could hold of a regiment of infantry while it moved over; and at other times, as many of a corps of cavalry, and often several elephants at once. The bridge is between the point of suspension two hundred feet; and the clear portion of the platform measures one hundred and ninety feet by eleven and a half. The whole cost of the work amounted to about fifty thousand rupees; and under a less able and careful person than Colonel Presgrave would have cost perhaps double the amount. This work has been declared by a very competent judge to be equal to any structure of the same kind in Europe; and is eminently calculated to show what genius

and perseverance can produce out of the resources of a country even in the rudest state of industry and the arts.

The river Nerbudda neither is nor ever can, I fear, be made navigable; and the produce of its valley would require to find its way to distant markets over the Vindhya range of hills to the north, or the Sathpore to the south. If the produce of the soil, mines, and industry of the valley cannot be transported to distant markets, the government cannot possibly find in it any available net surplus revenue in money; for it has no mines of the precious metals, and the precious metals can flow in only in exchange for the produce of the land and the industry of the valley that flows out. If the government wishes to draw a net surplus revenue from the valley or from the districts that border upon it, that is, a revenue beyond its expenditure in support of the local public establishments, it must either draw it in produce, or for what can be got for that produce in distant markets. Hitherto little beyond the rude produce of the soil has been able to find its way into distant markets from the valley of the Nerbudda; yet this valley abounds in iron mines; and its soil, where unexhausted by cropping, is of the richest quality.* It is

* The soil of the valley of the Nerbudda, and that of the Nerbudda and Saugor territories generally, is formed for the most part of the detritus of trap rocks that everywhere covered the sand-stone of the Vindhya and Sathpore ranges which run through these territories. This basaltic detritus forms what is

not then too much to hope, that in time the iron of the mines will be worked into machinery for manufactures; and that multitudes, aided by this machinery, and subsisted on the rude agricultural produce, which now flows out, will invest the value of their labour in manufactured commodities adapted to the demand of foreign markets, and better able from their superior value compared with their bulk, to pay the cost of transport by land. Then, and not till then, can we expect to see these territories pay a considerable net surplus revenue to government, and abound in a middle class of merchants, manufacturers, and agricultural capitalists.

At Sunodah there is a very beautiful little fortress or castle now unoccupied, though still entire. It was built by an officer of the Rajah Chutter Saul, of Bundelcund, about one hundred and twenty years ago. He had a grant on the tenure of military service of twelve villages situated round this place; and a man who could build such a castle to defend the surrounding country from the inroads of freebooters, and to secure himself and his troops from any sudden impulse of the people's resentment, was as likely to acquire an increase of territorial possession in these parts, as he would have been in Europe during the middle ages. The son of this chief, by name Rae Sing, was, soon after the castle had been completed,

called the black *cotton* soil by the English, for what reason I know not.

killed in an attack upon a town near Chitterkote; and having in the estimation of the people *become a god*, he had a temple and a tomb raised to him close to our encampment. I asked the people how he had become a *god*; and was told, that some one who had been long suffering from a quartan ague went to the tomb one night, and promised Rae Sing, whose ashes lay under it, that if he could contrive to cure his ague for him, he would, during the rest of his life, make offerings to his shrine. After that he had never another attack, and was very punctual in his offerings. Others followed his example and with like success, till Rae Sing was recognized among them universally as a *god*, and a temple raised to his name! This is the way that gods were made all over the world at one time, and are still made all over India. Happy had it been for mankind if those only who were supposed to do good had been deified!

On the 2nd we came on to the village of Kojunpore, (leaving the town and cantonments of Saugor to our left,) a distance of some fourteen miles. The road for a great part of the way lies over the bare back of the sandstone strata, the covering of basalt having been washed off. The hills, however, are everywhere, at this distance from the city and cantonments of Saugor, nicely wooded; and being constantly intersected by pretty little valleys, the country we came over was picturesque and beautiful. The soil of all these valleys is rich from the detritus of the basalt that forms or caps the hills; but it is

now in a bad state of cultivation, partly from several successive seasons of great calamity, under which the people have been suffering, and partly from over assessment; and this posture of affairs is continued by that loss of energy, industry, and character, among the farmers and cultivators, which must everywhere result from these two evils. In India, where the people have learnt so well how to govern themselves from the want of settled government, good or bad government really depends almost altogether upon *good or bad settlements of the land revenue*. Where the government demand is imposed with moderation, and enforced with justice, there will the people be generally found happy and contented; and disposed to perform their duties to each other and to the state, except when they have the misfortune to suffer from drought, blight, and other calamities of season.

I have mentioned that the basalt in the Saugor district reposes for the most part immediately upon the sandstone of the Vindhya range: and it must have been deposited on the sand while the latter was yet at the bottom of the ocean, though this range is now, I believe, nowhere less than from fifteen hundred to two thousand feet above the level of the sea. The marks of the ripple of the sea may be observed in some places where the basalt has been recently washed off, beautifully defined, as if formed only yesterday; and there is no other substance to be seen between the two rocks. The texture of

the sandstone at the surface, where it comes in contact with the basalt, has in some places been altered by it; but in others it seems to have been as little changed as the habitations of the people who were suffocated by the ashes of Vesuvius in the city of Pompeii. I am satisfied, from long and careful examination, that the greater part of this basalt, which covers the table land of central and southern India, must have been held for some time in suspension in the ocean or lake into which it was first thrown in the shape of ashes, and then gradually deposited. This alone can account for its frequent appearance of stratification, for the gentle blending of its particles with those of the sand near the surface of the latter; and above all, for those level steps, or tables, lying one above another horizontally in parallel lines on one range, corresponding exactly with the same parallel lines one above another on a range twenty or thirty miles across the valley. Mr. Scrope's theory is, I believe, that these are all mere flowings, or coulées of lava, which, in their liquid state, filled hollows, but afterwards became of a harder texture as they dried and crystallized than the higher rocks around them; the consequence of which is that the latter have been decomposed and washed away, while the basalt has been left to form the highest elevations. My opinion is, that these steps, or stairs, at one time formed the beds of the ocean, or of great lakes; and that the substance of which they are composed was, for the most part, projected into the

water, and there held in suspension till gradually deposited. There are, however, amidst these steps and beneath them, masses of more compact and crystalline basalt, that bear evident signs of having been flows of lava.*

Reasoning from analogy at Jubbulpore, where some of the basaltic cappings of the hills had evidently been thrown out of craters long after this surface had been raised above the waters, and become the habitation both of vegetable and animal life, I made the first discovery of fossil remains in the Nerbudda valley. I went first to a hill within sight of my house in 1828, and searched exactly between the plateau of basalt that covered it, and the stratum immediately below; and there I found several small trees with roots, trunks, and branches, all entire, and beautifully petrified. They had been only recently uncovered by the washing away of a part of the basaltic plateau. I soon after found some fossil bones of animals. Going over to Saugor, in the end of 1830, and reasoning there upon the same analogy, I searched for fossil remains along the line of contact between the basalt and the surface upon which it

* Since writing the above, I have seen Colonel Sykes's notes on the formations of southern India in the *India Review*. The facts there described, seem all to support my conclusion; and his map would answer just as well for central as for southern India; for the banks of the Nerbudda and Chumbul, Sohun and Mahanuddee, as well as for those of the Baum and the Beema. Colonel Sykes does not, I believe, attempt to account for the stratification of the basalt; he merely describes it.

had been deposited; and I found a grove of silicified palm trees within a mile of the cantonments. These palm trees had grown upon a calcareous deposit formed from springs rising out of the basaltic range of hills to the south. The commissariat officer had cut a road through this grove, and all the European officers of a large military station had been every day riding through it without observing the geological treasure; and it was some time before I could convince them, that the stones which they had every day seen were really petrified palm trees. The roots and trunks were beautifully perfect.

CHAPTER XV.

LEGEND OF THE SAUGOR LAKE—PARALYSIS FROM EATING THE GRAIN OF THE LATHYRUS SATIVUS.

THE cantonments of Saugor are about two miles from the city and occupied by three regiments of native infantry, one of local horse, and a company of European artillery. The city occupies two sides of one of the most beautiful lakes in India, formed by a wall which unites two sand-stone hills on the north side. The fort and part of the town stands upon this wall, which, according to tradition, was built by a wealthy merchant of the *Brinjara* caste. After he had finished it, the bed of the lake still remained dry; and he was told, in a dream, or by a priest, that it would continue so till he should consent to sacrifice his own daughter, then a girl, and the young lad to whom she had been affianced, to the tutelary god of the place. He accordingly built a little shrine in the centre of the valley, which was to become the bed of the lake, put the two children in, and built up the doorway. He had no sooner done so than the whole