



satisfied myself by hitting it with the empty brass cartridge-case before I allowed the men to come down. The carcase was soon hoisted on to one of the elephants, and started off for camp, being taken *en route*, by special request, for the examination of the ladies of the Zemindar, who were temporarily occupying a neighbouring village. The tiger proved to be a moderately-sized one, only nine feet long. After it was measured, the elephants were introduced to it. Three of them were particularly anxious to kick it, and were accordingly gratified to an extent consistent with the preservation of the skin from damage. But the fourth, "Anarkalli," simply trumpeted, and would not approach the carcase. The next day, Christmas day, I had a series of beats in a tract of country to the east, where a tiger was reported to have been seen on the previous day. However, nothing larger than a hyæna was seen, which I just caught a distant view of, as it scampered up the steep face of a boss of granite. On the day following I had another series of beats; the only animal seen by me was a young male sambar, which I shot. One of the beaters declared that he had seen a tiger, which broke back, but the truth of his statement was doubted. All this time *garrahs* had been tied up, but there had been no kill, though the tigress was still about, the natives saying that they had heard her calling for the male which had been shot.

Some Kabuli merchants bound for Jaipur with elephants—including one only a few weeks old—a most amusing baby—passed through Bolangir to-day. The next march was to Athgaon, where I found the grove of trees where my camp was to be, occupied by a crowded *hât* or market. However, it was an early one, and by the time the elephants arrived business was nearly concluded. I was rather surprised to observe the women present at this *hât* come up in parties to make their salaams. It shewed clearly enough that they were not Urias, who if they cannot run away adopt the graceful custom of turning their backs on a sahib should they meet one on the road. They all I believe, in fact, belonged to the tribe called Binjwal. In the evening the Zemindar paid me a visit; he seemed to be half idiotic, but his



brother or cousin appeared to be a sensible lad enough. A neighbouring ridge of hills was said to harbour a large colony of bears, so a beat was arranged for the following afternoon. Towards the end of the first beat I caught sight of a leopard and got a shot at it as it ran past a gap in some rocks, behind which it was sneaking off. After I had fired it hurried on as if nothing had happened. However, I thought I heard a fall followed by some growling. Presently I just for a moment saw another larger leopard, the male, almost under the feet of the beaters. I did not fire then as I thought he must come down my way. Unfortunately there was a break in the line where he disappeared. I called to the men to beat down in that direction, which they did after some delay, but in the meantime the brute had managed to slip off unseen by any one. Getting down from my tree, I soon found some blood which led up to the body of the first, which proved to be a leopardess quite dead. The Express bullet had gone quite through her, making a considerable wound on the off side. The distance she had travelled, and the pace she had gone at, spoke volumes for the vitality of these large cats. In the second beat nothing was turned out. I then heard for the first time that the great place for the bears was at the extreme east of the range which we had been beating, but as it was then near sunset we were compelled to return to camp.

The following day I marched to Diagaon, another small zemindari, where I put up in the school-house, which had been swept and garnished with a carpet for the purpose of my reception; but was unprovided with means for closing either doors or windows.

*December 30th.—Diagaon.*—Early this morning, before sunrise, I went off in the hope of intercepting some wild buffaloes, before they left the crops upon which they were in the habit of feeding every night. We got on the tracks of one small herd, and while following them up we heard another lot crashing through the jungle, but failed to get sight of either. At one place there were some splashes of blood on the bushes, which the shikaris attributed to one of the buffaloes having gored another with his



horns. The next march was to Sointila, and I traversed a considerable area of country, also examining a portion of the section of the Tel river, where I found an outlying patch of sedimentary rocks belonging to the Talchir series.

On the 1st of January I marched from Sointila to Daramguruh. During the day I heard of the occurrence of buffalo in several places. They appear to be especially abundant in the neighbourhood of a hill three miles south of Sointila. On arrival at Daramguruh the head man or *gaontia* made his appearance. He wore the garb and marks of a Fakir, and enjoys a far and wide reputation as a thaumaturgist. Saidon had picked up, and no doubt believed, various stories about him. Among other things he told me that he was reputed to be invulnerable to wounds by arrow or bullet. Whereupon I asked whether he would stand up as a cock-shot for my rifle. To this Saidon made some reply which I did not quite catch, but he evidently regarded my question as little short of blasphemy. I had a long talk with the old man, who speaks a dialect of Hindustani, which was very agreeable to my ears after the horrible jargon of half-Uria, which had for some time back been my means of communication with the people. In the evening I examined a deposit of graphite close to the village. The rock is a foliated schist, and the graphite is not very pure. It did not appear to exist in any great abundance, but the outcrop was much concealed. I scarcely think it probable that graphite, however abundant, could, in a spot so remote and difficult of access, ever possess any economic importance.

From Daramguruh I marched eight miles to Lapir. Though a short march, the elephants were much delayed by over-hanging jungle. Sal timber is very scarce, but Sali and Asun or Saj (*Boswellia thurifera* and *Terminalia tomentosa*) are abundant. The road constantly crossed the winding bed of the Burabailat river. In one place I saw an encampment of people engaged in the collection of what they called *bockli*, which I understood to be the root of some tree which is employed in dyeing Tusser silk. I failed to get specimens of the leaves of the tree, and was therefore unable to identify it.



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Lapir being a small village, supplies were brought in from about a dozen neighbouring hamlets. The *gaontias* came in a body to make their salaam. They most positively and distinctly declined to receive any payment for their contributions, saying it would be a disgrace to them to take money from the Sirkar. Poor men, to judge from the scantiness of their raiment, they were not in affluent circumstances.

The next two marches were to Duabota and Mondol. Mondol I had been led to expect was one of the best places for tigers in the country. Circumstantial accounts of a family of four tigers which were said to be almost daily carrying away cattle, became modified by successive steps of a descending scale as I approached the place, and on arrival I found, quite close to where my camp was pitched, that a cow had indeed been killed, but by a leopard. The people of the village proved to be Brahmins; they seemed to know nothing about the existence of any tigers in their neighbourhood. To my surprise, however, a number of them turned out as beaters, when I announced my intention of devoting the afternoon and evening to a beat for the leopard in a neighbouring tract of jungle. Towards the end of the beat a doe sambar passed me. Just as she was disappearing from my sight she looked so sleek and fat, and so eminently fitted for the pot, that I could not resist the temptation of a snap shot which knocked her over. My good intention of giving a feed to all was frustrated in this wise. Firstly the sambar was killed by the bullet, so could not yield lawful food to the Mahomedans. Secondly, after she was skinned, and a portion of meat cut off for my use and that of the Brahmin *gaontia* of the village, the Ghasia grasscutters and the sweeper proceeded to help themselves; and, having touched the carcase, caused the Hindus to raise a shout that the meat was contaminated, whereupon all of that persuasion likewise refused to make use of it. The result was that the Gond beaters and musicians had a larger share of the remains than would otherwise have fallen to them.

The next march was to Gumani, fourteen miles. I had



a long and wearisome wait for the elephants till 4 p.m. On the following day I visited another graphite locality at Domaipali, about seven miles off. On having an excavation made into the bed, I was rather surprised to see several peculiar globular-looking, thin-skinned toads, thrown out from a depth of about three feet beneath the surface. It was marvellous to see such helpless-looking animals in such a position. They doubtless managed to burrow down while there was still water on the surface, but the hard, gritty nature of the soil could never have been, one would think, very favourable to such operations.

On my return to camp I heard that three of the elephants, Mowlah, Anarkalli, and Peari, had most improperly been allowed to graze, unwatched, on some bamboos close to heavy jungle and had disappeared. No one could tell what direction they had taken. I immediately despatched men to search on all sides, but without success, till about sunset, when news came from a small hamlet that they had been seen. Soon afterwards they were found by the mahouts, who brought them back to camp, and then received a reprimand from me for their neglect. As if this had not been enough the remaining elephant, Bhari, broke her chains during the night and made off, and was not captured until mid-day, when it was too late to march. This straying of the elephants in heavy jungle, although generally quickly followed by recapture, always caused me a good deal of anxiety. I knew that if not captured the same day, each day would increase the difficulty by a rapidly augmenting ratio, owing to the larger radius of country that would have to be searched, and the greater wildness and intractability of the elephants as they had further opportunities of enjoying freedom from all restraint. The old female, Bhari, was incorrigible; she would frequently spend the greater part of the night trying to break her chain. At one time she was so bad that it became necessary to tie her up in such a way that she was prevented from lying down. According to the mahout, when loose she showed an extraordinary degree of cunning, and would hide herself behind a tree or bush, and remain quite still when she saw him



coming to look for her. I have heard, however, of a still more cunning elephant, which is reported to have been seen, in open country, lying down behind the embankment of a tank, in order to baffle its pursuers. While on the subject of elephants, I may mention that the mahout above alluded to told me that elephants generally lie down to sleep three times in the night, each separate nap being about an hour's duration. The intervals are chiefly devoted to eating. I fancy that individuals differ much in this respect, and that there is no general rule. However tired, an elephant never lies down to sleep during daylight.

The next march was to Nandupalla, at the foot of a fine flat-topped range of hills which separates the Patna district from Bodosamar, and is known as the Gundamurdan range. The following morning I ascended the plateau by a steep and rough path over the vertical edges of a considerable variety of garnetiferous gneiss rocks, capped at the top by about 100 feet of laterite, which forms, at an elevation of about 3,000 feet above the sea, a level plateau very similar to that of the Main Pât in Sirguja. My intention had been to descend the opposite side of the range, in order to visit a locality called Nursinghnath, which is of wide repute throughout the country as a place of pilgrimage. I found, however, that it would scarcely be possible to accomplish the two ascents and two descents in a day; so, instead of attempting it, I followed my guides to what they considered to be the great sights of the plateau. The first place to be examined was a huge cave in the scarped face of the laterite, known to the Urias as *Bhim-er-munda*, or the Cave of Shiv. The dimensions are about thirty feet high, by fifty feet long, by forty feet wide. Owing to a portion of the roof having fallen in, a sort of natural sky-light illumines the interior. The subdued light caused by the masses of vegetation and fallen blocks near the entrance, gives to the cave a weird aspect, which no doubt evokes the awe of the pilgrims. In the valley below this is the head source of the waters which make the falls at Nursinghnath. The locality is called *Sitama*. One of the branches of the stream rises in a spring which makes its appearance among the roots of a lofty mango-tree, which is



accordingly an object of special veneration. On the top of the plateau, under the loose fragments of laterite, I found numerous scorpions, and my followers were somewhat surprised to see me picking them up. But soon entering into the spirit of the thing, they improvised tweezers with twigs, and came running to me with wriggling scorpions in great abundance.

On returning to the foot of the hill I visited a temple at a spot called Harishankar. Here there is a fine cascade over the vertical edges of the gneiss. There was nothing remarkable about this temple, save that it was built of sandstone, which must have come from a considerable distance. The amount of water falling from various parts of this range is very considerable, and testifies to the storing powers of the laterite. On parts of the slope, where the water trickled down, there were gardens of orange and plantains, belonging to the Pujaris or priests of the temples.

The next march was southwards to the village of Koripani, six miles. I had hoped to have been able to cross from this westwards, but found that the road was quite impracticable for laden beasts. So on the following day I was compelled to march still further south in order to round the end of the range, and encamped at Potrapali. At Koripani the people called themselves Bhumias, those of a good many of the previous villages I had stopped at having been Binjwals, whose ethnic affinities I did not succeed in ascertaining. At Potrapali, during the night and following morning, there was a heavy downpour of rain, which prevented me from marching on the following day. From this date, 13th of January, commenced a season of broken, rainy weather, which, with short intervals, continued up to the end of the first week in May. Such a season has been quite unparalleled in my experience; but, great as was the inconvenience of constant drenchings of the camp, it was more than compensated by the frequency of cloudy days, which rendered an amount of work possible in March and April which could never have been even attempted in ordinary years.

The next march was to Sindkela, six miles. I took a wide



sweep round, but did not meet with anything of particular interest. In the evening I went out again to examine the country to the west, a curious, wild tract, the low cultivable portions of which were covered with grass which was, in some places, six feet long and upwards. Game appeared to be very abundant. I saw several barking-deer (*Cervulus aureus*), and nearly trod upon some large animal in the long grass, which made off, however, without my seeing what it was. Peacocks were very abundant, and, with the aid of my dogs, I bagged a couple. Poor Topsyie had almost recovered from the effects of the leopard bites, and was very keen after everything that moved. She came back, after a private pursuit of one of the barking-deer, with her lip cut and bleeding, as though the animal had given her a kick in the mouth with one of its hoofs. Here, for the first time, I came across painted partridges (*Francolinus pictus*), whose peculiar calls resounded from every patch of grass towards sunset. In this area they replace the nearly-allied black partridge (*F. vulgaris*), which is the species found in Chutia Nagpur.

On the following day I started on a long journey of twelve miles to Nursinghnath, returning to Sindkela the same afternoon. The temple is situated on the south bank of the stream, the source of which, near the top of the plateau, has been already described. Above the temple there are a series of cascades, with hollowed basins at their bases, each of which bears a separate name, as *Sidd-Kün*, &c. Ascending by a series of steps, which are roughly hewn in the face of the rock, we reach the pool known as the *panch panda*, from the figures of the five *pandas* which, together with that of the elephant god *Ganesh*, are sculptured on the rock on one side, while on the other are figures of the triple god *Brama* and of *Narain*, with attendant satellites. The principal figures, which are of more than life-size, are vigorously wrought in the hard granite rock. Nursingh is said to be an image resembling a cat which was found by a Khond, and the shrine was erected in its honour by a Raja of the Gung-bansi dynasty. Here, no doubt, we have a traditional record of the absorption of an aboriginal deity into the Hindu Pantheon. The guardian



priest I found to be a Benares man, who had, some eight years previously, been in the employment of Moheshri Pershad, of Lukanpur, in Sirguja. At first he made what looked like a hostile demonstration, on my expressing a wish to see the temple; but afterwards we became very good friends, and he sent in a boy to light up the image, while I remained outside. Over one of the pools, and under a cascade, there is a bamboo staging, upon which the pilgrims are expected to sit and take cold *douches*—very cold, they are reported to be.

During the night a tiger, with attendant jackal, serenaded my camp. I walked round with my rifle, but could not see either of the animals. The sound of a tiger roaring at night had become so familiar a sound, that my men—even those sleeping in the open under trees—did not take any precautions for their protection, nor show the slightest sign of fear. Afterwards it began to rain, and continued to do so, with short intermission, for nearly forty-eight hours. As it cleared up on the second day, I made an afternoon march of eight miles to Sambasinghi, in Karial, and dismissed the chuprasies, constables, and shikaris, who had accompanied my camp through Patna. I was here met by a Darogah and Tehsildar of the Karial Raja; and their very civil reception augured well for my comfort while in this native state. The next day I made a short march to Tarnot, a village situated below the north-east corner of an extensive plateau, which, from its configuration as represented on the map, and as seen from the distant glimpses I had of it, would, I felt confident, prove to be of considerable interest geologically. The event fully justified this confidence. Two months spent in rapidly traversing wide areas in which, with unimportant exceptions, metamorphic rocks had alone been met with, made me hail with delight a new formation, regarding the limits and character of which nothing was known. But it is necessary, perhaps, for one to be a geologist in order to fully realize how such a discovery can afford pleasure.

Soon after my arrival at Tarnot, I set out to examine a scarped face of rock, which from below looked so easy to scramble up



that I was tempted to ascend it. Having, with assistance, accomplished the first fifteen feet or so, which was a nearly perpendicular face of rock, I found that the further ascent was a much more formidable affair than I had expected, but as I could not get down again, I resolved to attempt to reach the crest of the hill, some 150 feet above. How I managed it I hardly know. In one place my whole weight was supported from a small fig-tree growing in the crevices, and while drawing myself up by means of it, my right arm was strained, and had it not been for a hollowed space below the crest, into which I crept and remained until somewhat rested, I believe I should have fallen through sheer exhaustion. The natives accompanying me were of course better able to make their way over the steep face than I was, but the mental and physical strain seemed to have told upon them also in no small degree. Arrived at the crest we found the slope on the other side covered with fallen blocks and jungle, and offering no serious obstacles to the descent.

The next day, leaving my tent and camp behind me, I took a small sleeping-tent and such articles as were necessary for a three days' absence to Maragura, a village rather difficult of access, from being surrounded on all sides by hills, but conveniently situated as regards the plateau, which I proposed to ascend and examine. The locality of Maragura is, I believe, otherwise called Manickgurrh. I found here a fine tank with the remains of an old temple. The present village is a miserable collection of huts, but some of the men were fine sturdy fellows, though of what race I find I have omitted to record. Having pitched my tent on a suitable spot on the embankment of the tank, I shot a couple of teal, and then proceeded to retrieve them, and at the same time refresh myself with a bath. As the birds had fallen among weeds, where the water was out of my depth, I had an opportunity of realising how unpleasant must be the position of those who sometimes are sent in to fetch out birds. Not that I was in any real danger, but the feeling caused by the long stems twining about one is not agreeable, more particularly when, as in



the present case, some of those stems happen to be covered with thorns.

In the afternoon I went out to examine the bed of the Jonk or Jong river where it debouches from the hills. It contains an enormous accumulation of quartzite boulders under and through which the water makes its way. But occasionally there are deep pools containing water of an opaline sea-green colour, which is a common appearance in the water flowing from this plateau. It has also been noticed as characterising the water which flows over rocks of similar age, which are found far away to the south in the Madras Presidency. At one point on the banks there was pointed out to me a huge iron spear, about six feet long, with a spirally ornamented shaft  $2\frac{1}{2}$  to 3 inches in diameter. It must have taken a giant to wield it. Although stuck up in the ground, quite unprotected, it shews no sign of rust. It is called *Bhim-er-lat*, or the mace of Shiv, and is an object of adoration, and is noteworthy simply as a piece of native metal-work.

On the following morning I started to explore the plateau. The path at first led up the valley of the Jonk for about a mile, after which we commenced the ascent over the edges of horizontal beds of quartzite belonging to the Vindhyan series. A walk of about four or five miles brought us to an ancient fort called Jumlagor, which is situated at the head of a picturesque waterfall about three hundred feet high. The view from this point, including deep-cut gorges with the scarped and terraced edges of the plateau rising one above the other and crowned here and there by isolated peaks, made up a scene of great beauty, and one shewing very characteristically the manner in which the rocks of this formation are usually affected by sub-aerial denudation. A second waterfall higher up I was unable to visit owing to the badness of the weather, a heavy thunderstorm appearing to be imminent. The old fort must have been a formidable affair in its day, and was probably used as a place of retreat when there were disturbances in the plains below. The walls were built of stone, but bricks had also been employed in its construction.



With the exception of the walls, which enclose perhaps about half an acre, I saw no traces of any buildings. Both here and on the ascent we startled several sambar from their lairs. The plateau must be full of them, judging from the numbers I heard belling in the evening. Near the head of the fall too, I saw very fresh tracks of a tiger, which must have been roaming about there shortly before our arrival. From the people, and even from the Raja afterwards, I could learn nothing definite about these remains; in fact I found it difficult to get reliable information in these native states, in reference to simple enquiries about the present state of the country.

The next day I returned to my camp at Tarnot by a circuitous route, which brought me over some very rough ground on the outer slopes of the plateau. In many places I found remains of old fortifications now enveloped in heavy jungle. On arrival at camp I was greeted with the unpleasant intelligence that during my absence a mad dog had made his appearance and had sprung at Peari, my favourite among the elephants, and bitten her on the trunk. The attack was so sudden that she had been caught quite unprepared and unable to defend herself. Saidon took a gun and wounded the dog, which was afterwards killed with sticks by the chuprasies. For several days the possibility of Peari going mad caused me some anxiety; however, although marked by the bite she suffered no ill effects. About this time the male elephant, Mowlah, becoming *must*, began to give trouble, and to shew a particular dislike for the mate mahout, whom he several times knocked over.

The following day I devoted to the examination of the country to the west of Tarnot, intending to march on the day after, but was prevented from doing so by rain. The storm of rain was preceded by a rushing mighty wind which awoke me about midnight. On going outside the tent to see that all was right, I beheld, as I thought, a raging fire coming swiftly in the direction of the tent. My first impulse was to shout out for all hands, the effort rousing me from the half-asleep condition I was in, and enabling me to realize the true state of things. The strong gusts over the logs of



the camp fire were driving flames and sparks in the direction of the tent, and there was just a possibility of danger, though the man on guard did not appear to think so.

The next march was to Balukona, eight miles distant. I had a rather severe day's work along the eastern flank of the plateau, and got thoroughly drenched by the dew on the long grass which I had to travel through in the early morning. Here I came across some spur-fowl and shot one. It proved to be the painted species *Galloperdix lunulatus*, Valenc. The red spur-fowl (*G. spadiceus*, Gmel.) I had previously shot near Cuttack and in Patna (Sambalpur). After another day spent in continuation of the examination of the line of junction between the metamorphic rocks and the Vindhyan quartzites of the plateau, I reached Torba, where I found an accession to those already in attendance on my camp on the part of the Karial Raja. They were headed by one Abdul Rahim, a Lucknow man, who was the chief inspector of the Raja's police. Having a good deal of power, he proved a useful adjunct to my camp, but used to annoy me at times by his plausible untruthfulness. Afterwards I found that he bore a very bad character, and I have no doubt his good conduct while he remained with me was in a great measure due to his desire to obtain from me a certificate which might be of service to him at some future time. He brought word from the Raja that while I remained in his territory no payment was to be taken for anything supplied to my camp. The Tehsildar of Tarnot had previously said that he could not *receive* payment for anything without the Raja's order, but I had insisted on his accepting it, as the custom was not a good one for my servants, and would be sure to involve some hardship on the people, though the Raja's officers protested that due deductions would be made them from their rental for whatever was supplied.

In the evening a feeling of weariness which I had experienced for the past few days became intensified, and I felt other symptoms of approaching fever, the cause of which I had little hesitation in attributing to the drenchings from dew off the long grass with which each morning, for some days past, I had com-



menced my day's work. The next day I marched six miles to the village of Rain, passing during the morning through a village called Manickgurh, where I had been falsely led to believe there were some ruins. Maragura must, I believe, be the Manickgurh about which I had heard. On arrival at Rain the fever fully declared itself, and I had to succumb to it and go to bed.

The following day I pushed on four miles to Kumuna, and, as soon as my tent was ready, tumbled into bed, where I remained, my head occupied with various strange fantasies, till late in the evening. In the evening the Inspector redeemed a portion of a promise which he had made, that, on arrival at Kumuna, I should find some hundreds of live birds ready in cages for my reception. I found that he had instructed a party of itinerant bird-catchers, called Pardis, to await my arrival. Thenceforth while I remained in Karial these people accompanied my camp; of men, women, and children there were about a dozen, all told; their mat tents they used to convey from place to place on their trained bullocks. During the time they remained with me their captures consisted of peacock, painted partridge, painted sand-grouse, and four species of quail.\* The methods practised by these people are as follows:—For peacock, sarus cranes, and bustard, they have a long series of nooses, each provided with a wooden peg, and all connected by a long string. The tension necessary to keep the nooses open is afforded by a slender slip of antelope horn (very much resembling whalebone) which forms the core of the loop. Provided with several sets of these nooses, a trained bullock, and a shield-like cloth screen dyed buff and pierced with eye-holes, the bird-catcher sets out for the jungle, and, on seeing a flock of pea-fowl circles round them under cover of the screen and the bullock, which he guides by a nose-string. The birds feed on undisturbed, and the man rapidly pegs out his long strings of

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\* *Perdica Cambayensis*, *Microperdix Blewitti*, Hume; *Turnix taigoor*, Sykes; *Coturnix Coromandelica*, Gmel.



nooses, and, when all are properly disposed, moves round to the opposite side of the birds, and then shows himself, when they, of course, run off, and one or more getting their feet in the nooses, fall forwards and flap on the ground, but are immediately captured by the man, who knows that if the birds are permitted to release the strain, the elasticity of the nooses is such that they would open and admit of the bird's escape. Birds of the size of partridges, and all smaller, are caught in long conical bag nets, which are kept open by hoops, and are provided with a pair of folding-doors. The bullocks are also used in conjunction with them, to walk through the grass and drive the birds towards the net, which has previously been fixed in the proper position. Very cruel practices are in vogue with these people with reference to the captured birds, by which means they are kept alive until a purchaser is found. The peacocks have a feather passed through the eyelids, by which means they are effectually blinded, while the smaller birds have both wings and legs broken. I, of course, endeavoured to put a stop to this system, but, from long custom, the men, were always trying to revert to it, and were specially disgusted when two or three birds, from not having been thus disabled, managed to effect their escape.

The early part of the second day at Kumuna I devoted to attempting to cure the fever, as there was a chance of its hanging about me for an indefinite period. In the evening I rode out to examine some hills to the east, and on the following morning, feeling much better, but unfit for hard work, I had a series of beats for a tiger, which was known to inhabit a tract of jungle not far off. In the first piece of jungle driven nothing came in my way, though the cover looked likely enough. But from want of experience, and owing to the absence of a shikari of authority, I saw that the beaters were not good for much. In the first drive a pig was shot by one of the Raja's police. The second drive was across a heavily-grassed plain, with a few scattered trees—most unpromising looking ground, I thought. Nevertheless, a tiger was seen by one of the people to escape towards the river at our backs. Having satisfied myself that the



tiger had crossed the bed of the river, I took up a position on the opposite bank, telling the beaters to keep well together in the bordering strip. After a time I heard a shot, and was given to understand by a man who was in a tree, which commanded a view of the river, that the tiger had crossed back to its old ground. This, however, was not the case, as when I least expected it, the beast rushed past me with a roar, but quite hidden from me by grass and jungle. Another drive failed to find him, and I returned to camp in a very weak and feverish condition, and much disgusted with the whole business.

The next marches were to Korlapitta and Dedora, in all thirteen miles. At Dedora the deep-cut gorge of the Under river proved to afford, as I expected it would, a most instructive section of the plateau-forming rocks. This was the last day of January, and my latest news of the civilized world was of the 29th December. During the month my camp had marched 130 miles, and I personally had traversed about 450—most of it on foot, as I could seldom use my horses.

The next day, feeling much stronger, I started very early in order to penetrate the gorge of the Under river, as far as possible. I had not gone very far before I came upon fresh tracks of a very large solitary buffalo. However, I had no time to devote to an attempt at following him to his mid-day lair, which might have been a long distance up a cross valley, and quite out of the direction my work lay in. Proceeding along the bed of the valley I came upon two colonies of a wild race of people called Kumars by their neighbours. They were regular Troglodytes in their habits, dwelling in caves,\* and existing chiefly on roots and fish. It is singular to observe how little the people of these wild races do to protect themselves from the inclemency of the weather. In one of these caves the sole protection from the air

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\* At Solon, in the Himalayas, below Simla, there is a colony of people also living in caves, who, I was told, call themselves Kunjwas, a name which is applied to the Khonds of Kalahundi.



was a lean-to of loosely placed branches. The people seemed to be very timid, hiding themselves on our approach. I did not, therefore, like to attempt an examination of their dwellings. After some calling on our part one man was induced to make his appearance. He was a most wretched-looking leprous object, having lost several fingers and toes. He could give no very definite explanation as to his means of subsistence. All he could say was that he lived "by picking up odds and ends, here and there." However, he seemed to be able to afford himself the solace of tobacco. A few cocks and hens at one of the caves, and a goat at the other, were the only domestic animals which I saw.

On return to camp I heard that the *gaontia* of a neighbouring village, Nakpara, had come in to report that a small herd of buffalo was causing damage to his crops, and that he could lead me to the spot where they were likely to be. It was too late and I was too tired to start then on such an expedition; but I told him I would go over to his village early the next morning. I asked him to set watches upon the movements of the buffalo. Rain in the early morning prevented my starting so early as I had intended; but when it had cleared off I took one of the elephants, Anarkalli, as she might, I thought, prove useful in the long grass. When near Nakpara I met the *gaontia* and some of his men. He said that the herd had not visited the crops that morning. But we found their tracks, and, thanks to the recent rain, were able to follow them into the jungle without any difficulty. After a short time a man was put into a tree, and he immediately reported that he saw five buffaloes (a bull, two cows, and two calves) feeding a short distance off and coming towards us. The *gaontia* proposed then that I should get up into a tree, while he and his people would drive them down towards me. To this, however, I would not consent, preferring to stalk up to them as being the safest way of securing a shot. I soon got in sight of them, and, at a distance of about thirty-five or forty yards, fired a couple of shots with the .450 Express into the bull. One ball struck behind the shoulder, a little far back, and the other took effect, but where exactly I



could not see. Off the whole herd went, and I followed the broad track through the long grass, which was spattered here and there with blood. Several times I got close to them, but each time they started off again without my seeing them, owing to the grass, which was upwards of seven feet long. At length I found that the wounded bull had separated from the two cows with their calves; and, as it seemed impossible to get sight of the animals, I mounted the elephant and followed the bull's track, and after a time sighted him at a long distance. While taking a long running shot at him, one of the cows with a calf crossed in front of the elephant at pretty close quarters. I fired at her, and saw that she was badly hit, and rather unfortunately I determined to follow her up in order to give the bull time to lie down. After getting several other shots at her she lay down, and the men who had followed the elephant swarmed up trees all round her. Having fired or dropped all my Express cartridges, I fell back on my old muzzle-loading 12-bore rifle, and then advanced; whereupon the calf ran out, being soon followed by the cow, in full charge at the elephant. Anarkalli, not liking the aspect of things, trumpeted and turned tail, and put on a pace which fairly astonished me. All this time I had no little difficulty in keeping myself and four guns, &c., on the pad. However, as the buffalo came on I fired the heavy rifle at her with one hand while I held on with the other. The bullet hit her on the horn just as she was making a vigorous butt at Anarkalli's stern quarters. She then returned to her lair, and quite disappeared from sight by lying down. With some difficulty the mahout got the elephant back again; but, as she was very nervous, I got off the pad into the branches of a tree. Presently the cow stood up, and I then gave her a shot behind the ear which immediately dropped her dead. In all she had received seven bullets, one of the Express balls having, strange to say, broken one of her hind legs high up near its insertion with the pelvis. In spite of this she had run a long distance and made the gallant charge I have described. I was rejoiced, but at the same time somewhat surprised, to find that the elephant had not a scratch, though the buffalo's horns seemed



once or twice to have touched. My ammunition being exhausted, I returned to camp, telling the villagers to track up the wounded bull. But they apparently feared to do so; for, though I promised a large reward, they never brought in the head. In the evening I went again to the gorge of the Under river, and found there the tracks of the second cow with those of her calf. She had evidently during the day made off along the bed of the river to the fastnesses where I had previously seen the tracks of the solitary buffalo. Could I have spared the time I should like to have made search for the latter, but the next day I was obliged to push onwards eight miles to Makarbal.

About this time I was rejoiced to receive a bundle of newspapers, forwarded to me by a kind friend from Raipur. To avoid their going astray I had been compelled to have all my own letters and papers forwarded to Jaipur to await my arrival in that part of the country.

From Makarbal I marched seven miles to Banskela, but, owing to rain, was not able to make a start till noon. A stiff climb of about 1,000 feet brought me to the top of the outer bounding ridge of the plateau area, descending from which into the internal valley beyond, I encountered another very complicated section; and on one of the lines of fracture found a hot spring; but, as the water rises in the centre of a large artificial basin, I was unable to ascertain the original temperature. A thermometer, thrust down to where the bubbles were rising, registered  $84^{\circ}$ , or about that of the air at the time. A lateritic conglomerate and a calcareous tufa occur close by, and the line of fracture is marked by a vein of hæmatite, which is continuous for several miles. A Brahmin from Benares is established by the Raja of Karial as custodian of the spring. He presented me with a basket of the produce of his garden, which, being watered by the spring, was in a luxuriant condition. A lofty mango which grows on the edge of the basin is almost wholly enveloped by a flourishing banyan, the roots of which are bathed by the warm water. According to the Brahmin, this banyan yields seven crops of fruit in the year, thus affording another instance of the local influence of hot springs on



vegetation, to which subject I have alluded on page 561. At night, it was said, the water felt quite hot, and that the spring became intermittently energetic, at times rising like a fountain above the general level.

The next marches were to Dindubosa and Nilji. The Udet river, which debouches from the hills at Boidelpur, affords a section of the very complicated relations existing between the Vindhyan quartzites of the plateau and the metamorphic rocks which form the basal formation throughout.

Surrounding Nilji, on the north bank of the Udet river, there is an area of about ten square miles in which teak trees occur. I could not detect anything in the soil or the rocks from which it is derived to which I could attribute this peculiar insulated occurrence of teak. In the jungle surrounding there are no teak trees whatever, but in the southern parts of Patna, about thirty miles off to the north-east, teak is known to occur, and is thence carried to Raipur in some quantity. In Nowagurh on the west, towards the sources of the Udet, I met with a few scattered trees of teak growing in the midst of general jungle. For the most part, the trees in this Nilji forest are gnarled and rather wretched-looking specimens—apparently they suffer from heart-rot. To-day (7th February) a warm breeze from the west seemed to point to the early advent of the hot weather, and the mango trees being thus early in full blossom, and the mhowa just coming into flower, seemed to give further evidence of the same.

On arrival at Nilji I was told that four tigers lived in some neighbouring rocky hills, and accordingly had a buffalo tied up. When tying it up I heard what the people said was a tiger grunting in the neighbouring jungle; but I was not quite so satisfied as to the nature of the animal. Neither on that nor the following night was the buffalo touched, and in several beats of the small hills nothing larger than barking-deer, hares, monkeys, and pea-fowl was seen.

While at Nilji a poor lad in the last stage of tetanus was brought into my camp for treatment. According to the story of his accident, he had been out herding cattle, and was knocked down



by them and had his head laid open as they stampeded away from a tiger which had suddenly rushed in amongst them. The next march (seven miles) was to Gondabahali, a few miles from the foot of the Chaoria Hill, a massive block which rises to a height of upwards of 3,000 feet. Bad weather detained me here for three days; on the fourth I marched eight miles to Korntori, and the day following five miles further to Karial, the chief town of the District, and the residence of the Raja. In the afternoon I had a visit from the Raja, who, accompanied by his son, came up to my camp at the head of a procession formed of his servants and retainers. Both father and son were mounted on elephants, and wore very gorgeous golden and jewelled crowns. The Raja's method of descending from the box-like howdah in which he rode was rather amusing than dignified, as he seated himself straddle-wise on the shoulders of a stalwart retainer, who walked with him towards the tent, and then stooping, gently deposited his royal burthen on his feet. He appeared to be an amiable old gentleman, with a peculiarly comical expression of countenance. His whole appearance was suggestive of the monarchs of burlesque. As I expected to leave on the morrow, I accompanied him to his house to pay a return visit. Notwithstanding the amount of state which he was able to keep up out of doors, I found his house, as is so often the case, in a very tumble-down and dirty condition. He spoke to me of the wretched poverty of his ryots, a *good* village yielding only, he said, seven rupees a year, and his whole income not exceeding 6,000 to 7,000. I do not suppose this included his receipts in kind, but these I fancy enable him to feed his establishment, and, perhaps, leave a margin for sale. The whole area of the chieftainship probably exceeds 1,500 square miles. It is said to have been given as a dowry by the Patna chief to a daughter who married one of the ancestors of the present Raja. By caste the Raja is a Chauhan; he speaks Hindustani with difficulty, Uria being the language of his household. The entertainment at his house consisted of dancing and singing by a party of itinerant Raj-Gonds from Sambalpur. This caste seems to furnish the only



female dancers in Sambalpur. Their performances are not much encouraged by the true Urias, whose taste in these matters I have already alluded to.

From Karial I marched to Tukla, passing through an area crowded with magnificent bosses and tors, the smooth surfaces of many of these suggested the appearance of an ironclad—stern up.

From Tukla I paid a visit to a place, ten miles distant, called Ranipur-Jural, which is famous for its temples. I had not travelled very far before I felt so weak that I knew I was in for another turn of fever. However, I pushed on, passing through an open grassy plain with a few hills dotted about here and there. The site chosen for the temples which have given this place its celebrity is somewhat peculiar. Two bare, depressed granitic bosses have at least fifty small Sivoid temples (with the usual Orissa form of cogged capitals), perched about them in groups, over an area of about half a square mile. With one exception these temples are built of the local stone, a highly felspathic, garnetiferous, granitic gneiss. The exception is a brick temple of not unartistic design, which must have looked well when the stucco was in place. Near Ranipur there is a pillar and post sort of structure in a ruined condition, and, on the highest point of the most southern boss, there is a circular enclosure with upwards of sixty figures of four-armed females arranged in stalls all round. The heads are all different, and represent, I presume, various *avatars* of Kali. Besides human heads, those of an elephant, cow, deer, &c., are seen. Some of the figures are much damaged, and have fallen down from their stalls. What the age of these remains may be there is nothing to shew, but they may, perhaps, be several centuries old—they all, undoubtedly, belong to the Hindu period. Considering that the temples have been built without mortar, and merely rest on the smooth surface of the rock, it is marvellous how well they are preserved. I did not observe any signs of guardian priests being about the place.

The next march (five miles) was to Koirbari. As an example of the difficulty of getting at the truth about any matter in these



parts, I may mention that I was told there were forty houses in the village—on arrival I found two! Supplies were, however, brought in from the neighbourhood. From this place I dismissed the crowd of Karial people who had been accompanying my camp, and I also paid and left behind me the party of Pardis, or bird-catchers.

Owing to the great length of this chapter I have divided it into two sections, and the account of the remainder of this journey will be found in Section 2.



## CHAPTER XIII.

## SECTION 2.

KALAHUNDI, JAIPUR IN VIZAGAPATAM, BUSTAR, NOWAGURH, RAIPUR, NAGPUR.

1876-77.

ENTER KALAHUNDI—OBSTRUCTIVE POLICEMAN—FEVER—BEAT FOR TIGER—INTERNATIONAL DISPUTE AMONG THE BEATERS—CHAORIA HILL—JUNAGURH—NACH GIRLS—EASTERN GHÂTS—THUNDERSTORM—A HANDSOME OFFER—RAMPUR—BIRDS—BLACK CATTLE—ELEPHANT BECOMES OBSTREPEROUS—KHONDS' "TOTEM"—MOULPATNA—CEREMONIAL VISIT—BAPLAIMALI PLATEAU—RAJA'S SECOND VISIT—THE PARAMOUNT AUTHORITY—FOREST ON THE ASCENT TO THE JAIPUR PLATEAU—BIRDS—POST AT LENGTH RECEIVED—ENTER JAIPUR—DUAL ADMINISTRATION—NEW RACES OF PEOPLE—NAORUNGPUR—PERSIAN HOSPITALITY CONTRASTED WITH INDIAN—BORIGUMA—VISIT JAIPUR—THE RAJA—HISTORY OF JAIPUR—STRANGE SOURCES OF REVENUE—MERIAH SACRIFICES—RAJA THE ROBBER CHIEF—THE GOVERNMENT ON JAIPUR AFFAIRS—CRIMINAL ADMINISTRATION ASSUMED—UNHEALTHINESS OF JAIPUR—REVENUE OF JAIPUR—CHANGE IN PROGRAMME—DISPUTES IN CAMP—KOTEPAD—ELEPHANT MERCHANT—THE SIAM ELEPHANT AT LARGE—EFFORTS TO CAPTURE HIM—MARCH TO BUSTAR—VISITED BY RAJA—BUSTAR ETIQUETTE—STANDING ARMY—WILD ELEPHANT—MAN KILLED BY SIAM ELEPHANT—RACES IN BUSTAR—BUSTAR v. JAIPUR—GREAT AMOUNT OF SICKNESS—WAR-DANCE—MAD DOG—DECOY FOR PEAFOWL—MID-DAY MARCHING—SHOOT A BUFFALO—THE SWAMP-DEER—BRINJARAS—LEAVE MADRAS AND ENTER CENTRAL PROVINCES—GIANT CLIMBING PLANTS—FREQUENT STORMS—ENTER NOWAGURH—SHOOT A FLYING-SQUIRREL—FIND A DEAD TREE-SHREW—PAINTED PARTRIDGE—CAUSES WHICH MAKE LIFE A MISERY IN THE HOT WEATHER—MAN-EATING TIGERS—THE DOW—THE PEOPLE OF CHATISGURH—RAJIM BUILT OF STONE—RAIPUR—SEE WHITE FACES AGAIN—TREASURY—SALE OF OPIUM—EFFECT OF ABNORMAL RAIN ON GUINEA-FOWL—SET OUT FOR NAGPUR—CHICHOLA—SHOOT TWO BEARS AND A HYENA—LEAD AND COPPER LODE—TRANSPORT OF GRAIN—BIRDS—TROTting-BULLOCKS—VALUE OF MONEY NOT UNDERSTOOD—BANDARA—NAGPUR—WARORA COAL-MINES—RETURN TO CALCUTTA.

On leaving Karial the next march was to Manjer in Kalahundi, eleven miles distant. On arrival I found that, owing to the obstructive interference of a Brahmin police Darogah, my messenger, whom



I had sent on two days before, had been unable to get the *Gaontia* or head man of the village to make the usual preparations. The Darogah's position, like that taken by many of his rascally *confrères* under similar circumstances in British territory, was that he had received "no orders on the subject," and could not act without them. As, although the sun was very hot, I was shivering from ague, I was not in a mood for much parley, and so, in a very few and brief sentences, the purport of which he could not possibly misunderstand, I told him that I would make matters extremely unpleasant for him if he did not personally aid in giving assistance. This had the desired effect, and the *Gaontia*, who proved to be not a bad sort of fellow, soon produced what was required, and, somewhat to my astonishment after what had happened, prayed me not to pay for anything. Owing to the badness of the road, the elephants were not up till late. No sooner was my tent pitched than I had to go to bed and spend the afternoon in accomplishing the successive stages of the fever. In the evening, in response to a message I had sent on some days before, several servants of the Kalahundi Raja arrived and placed themselves under my orders while I remained in the district. The Raja himself was away at Delhi at the assemblage. The *Gaontia* then told me that on the previous night a cow had been killed by a tiger at the foot of a small rocky hill within a rifle-shot of my tent, and that if I liked he would undertake on the following day to shew me the animal, with whose habits he professed himself to be thoroughly acquainted. As I was very weak, and many of the servants, besides the native doctor, were down with fever, I thought it well to make a halt, and next morning beaters were collected; but, as men were scarce in the neighbourhood, I ordered the Karial Jemidar and constables, who had followed me in order to get certificates, to cross the border into their own district, and bring over a detachment of their own men. The beat took place, but nothing came in my way. Perhaps it was well that a tiger did not come, as I was perched on a rock easy of access, and my nerves, owing to weakness caused by the fever, were in by no means as steady a condition as was desirable under the



circumstances. Presently I heard a row amongst the beaters, and the names of different animals were shouted out. On getting to the spot I found that a young leopard had been killed with arrows, and was the subject of a serious dispute between the Kalahundi men headed by the *Gaontia* and their neighbours of Karial headed by the Jemidar. The result of my enquiry into the matter was that I found that a Kalahundi man shot first, and that his arrow had simply passed right through the loose skin of the back without doing any serious injury, and that the Karial man then killed with a well-planted arrow. According to the rules of sport the Kalahundi man, who first drew blood, was entitled to the animal; but, as I wished to make things pleasant all round, I rewarded both men equally. This was the first indication I had observed of a bad feeling existing between the people of these adjoining states. I soon found that it was much stronger than could be due to mere clannish feeling. The Karial Jemidar and constables were refused food on the day of our arrival by the *Gaontia*, and had to be fed by my men, while Abdul Rahim, the inspector who had accompanied my camp in Karial, was, I was told, an outlaw from Kalahundi. The bluff Chaoria Hill, already mentioned, was a disputed property between the two Rajas. The ascent of this hill I was quite unable to attempt, as a steep scramble of upwards of 2,000 feet required more vigour than the fever had left in me. The next marches were to Daspur and Junagurh, nine and eight miles respectively. The name Junagurh means the old fort, and the place was formerly the residence of the Kalahundi Rajas, but was deserted some years ago. The permanent residence is twenty miles distant, though Junagurh is occasionally visited. In the evening some nach girls, with their attendant musicians, danced before my tent. The girls were most ugly and debased-looking specimens of humanity, though they evidently thought a good deal of their tawdry finery. I merely mention them on account of the peculiarity of the instruments used to accompany their excruciatingly inharmonious singing. These consisted of hollow cylinders covered with skin at one end. From the centre of the skin proceeded a string, which was held in the



left hand and strained tight, the cylinder being kept under the arm, and with the fingers of his right hand the operator twanged out the hideous discord on the string. Having listened for ten minutes I dismissed the party with a reward about equal to the price of an opera stall, and I heard them murmuring as they went off, their discontent being due not so much to the amount of the reward as that I had not listened through the whole of their very ill-prepared *repertoire*.

From Junagurh I marched seven miles to Rajpur. Close by was the commencement of a series of ranges of hills, which run from north to south and spread eastwards to Ganjam, forming a portion of what are called the Eastern Ghâts. While out in the afternoon I was caught in a thunderstorm of unusual violence, which I found, on return to camp, had very nearly carried away my tent. Had it not been for some conveniently-situated trees, to which my Jemidar tied the principal ropes, this would have happened, as under the soaking rain the pegs had all drawn. What I had seen of the rocks was so curious and unexpected, that I did not want the additional argument of wet tents to make me determine upon a halt on the following day.

The next morning was devoted to an examination of the hills, which proved to be made up of an ancient group of volcanic rocks, whose characters had been completely modified by the general metamorphism of the rocks with which they were associated.

From Rajpur I marched eleven miles to Kalompur. I there received a visit from the brother of the Rampur Raja, a chieftain subordinate to Kalahundi. He was much pleased and astonished with my Express rifles and other weapons—so pleased, in fact, that he subsequently sent a message to say that he would like to receive one as a present. My servants, however, acting on my behalf, declined this handsome offer, and assured him that they were of enormous value.

On the following day I ascended the hills towards Rampur, a stiff climb of about 1,500 feet, bringing me to the elevation of the higher valleys. The road was very steep in places and



covered with tumbled blocks of stone throughout. A fine forest abounding in large sal trees occurs on the outer face, but there is no teak. I heard the notes of many species of birds not commonly met with below. The shama (*Cercotrichas macrouras*, Gmel.) seemed to be particularly abundant, as I heard its sweet thrush-like notes resounding from the valleys. Owing to the thickness of the foliage I scarcely saw any birds, but I shot one, the black-crested yellow bulbul (*Rubigula flaviventris*), which is a rare species in this part of the country. I heard jungle-fowl for the first time since I had left the vicinity of the Mahanadi. On the plateau portion of the hills I noticed that the cattle exhibited a percentage of melanism very much higher than is to be found in the plains. Melanism is common, I believe, in all hilly countries, but I am not aware that the cause of it has ever been properly explained.

The next morning I marched eleven miles from Kalompur to Kundaimunda. While the male elephant, Mowlah, was being strapped up for his load, he suddenly attacked the mahout's assistant and, with a swing of his trunk, flung him rolling over the ground. The poor man who had already a leg damaged by a wound received previously, looked a most pitiful object as he squatted crying on the ground. A number of Khond coolies accompanied the camp to show the road and carry odd parcels. Not one of them, however, could be induced to carry a basket which contained the skin of the young leopard mentioned on a previous page. This, so far as I could make out, was because the animal was the *totem*, or sacred beast of the tribe. Again I felt symptoms of fever and I was forced to come to the conclusion that a single day's severe work in this country was sufficient to bring on an attack.

On the following day I marched to Moulpatna, leaving everything which I was not likely to require behind at Kundaimunda, together with half the men and elephants. The ascent of the ghât proved a much more serious affair than I had anticipated. However, the elephants managed, being very lightly laden, to accomplish it, though there were one or two spots which very



nearly stopped them. I found that Moulpatna was about 1,300 feet above the last camp. It is situated in the valley of the Indravati river, which rises some miles further to the north. The village seemed to be a very small one, but the portion of it occupied by the zemindar, who is called, by courtesy, Raja, was hidden from view by clumps of growing bamboos, which are employed as a means of fortification in these wild parts. I was somewhat astonished to find a tent in very fair condition pitched for my accommodation, and still more so when the Raja, accompanied by his brother, came to pay a formal visit in the evening, as I had supposed that being subordinate to Kalahundi he was not likely to be a person of much consideration. The first intimation of the extent of the *cortège* about to approach was given by the arrival of half a dozen chairs for those of the Raja's suite and family who were to accompany him, and were by their position entitled to the dignity of a seat. The procession soon made its appearance with torches and music in the van, followed by a magnificent tusker elephant, surrounded by spearmen to keep him in order; then came the Raja and his brother, mounted on a pair of handsome piebald ponies and surrounded and followed by standard and umbrella-bearers, matchlock-men, &c., &c. A salute was fired on his majesty reaching my tent. Both he and his brother were gorgeously attired with handsome gold and jewelled crowns, kincob dresses, and patent leather boots, and carried light English-made canes in their hands. The whole display was very complete and excited the approval of my servants. I certainly did not expect to see such a sight in a country chiefly inhabited by poverty-stricken Khonds (locally called Kunjwas), Suris, and Domes. The young men were at first rather timid, but as they gained confidence shewed themselves remarkably intelligent, and seemed to be specially interested in some astronomical topics which I explained to them. I found that they were aware of the fact that an eclipse of the moon was to take place that night.

On the following day I paid a visit to the Baplaimali plateau, which was about seven miles off. Having crossed the Indravati



river, which owing to the rainfall of the previous week was very full, I passed through a series of north to south valleys and intervening ridges with Khond villages scattered about here and there. The ascent to the plateau was not very steep though the elevation attained is 3,587 feet above the sea. The surface is nearly devoid of vegetation, being of laterite, which forms a cap about 300 feet in thickness. From the view obtainable from the summit it is plain that this plateau is only one out of many having similar characters, which rise to elevations varying from 3,000 to 4,000 feet above the sea, and it can scarcely be doubted that the caps of laterite formed at one time a continuous bed. If such was the case, an enormous period must have elapsed while denudation has operated to produce the isolation of the plateaus.

In the evening the Raja again came over, but on this occasion he and his brother had laid aside their magnificence to a great extent. Our conversation was in continuation of that of the previous evening, and related principally to the stars. Some disturbance was caused during the day by the Kalahundi people wanting to exert their paramount authority in reference to supplies, while those of Moulpatna \* jealous of such interference endeavoured to shew their independence. The dispute arrived at a climax when the Kalahundi man accused one of the Moulpatna men with deliberate attempt to poison my servants by supplying adulterated ghi, and threatened to make a prisoner of him and carry him off to Kalahundi. My servants were, however, very well entertained, and I believe some of them received presents of cloth and rupees, but that I did not hear of till some days later, or I should have endeavoured to prevent it.

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\* Moulpatna, together with several other neighbouring estates, was given, in the year 1712, by the Jaipur Raja to the Zemindar of Thumal, whose daughter the Raja at the same time espoused; a quit rent of 300 rupees was paid for these estates up to the year 1862, at which time the independency of Kuripur, one of the estates above mentioned, was declared by the Governor-General.



On the following day I descended the same pass that I had come up by, meeting *en route* streams of people heavily laden, and toiling up the steep ascent to take part in a weekly market which was held on that day. A crowd of Khonds, some of them very wild-looking fellows accompanied me to Dansuli, where I found the men I had left below awaiting my arrival. I heard that during my absence the elephant "Mowlah" had broken loose, but had fortunately come back to camp of his own accord, after people had been searching for him in every direction.

From Dansuli I had intended to march up to Tetulkuti on the Jaipur plateau; but, finding the road very bad up to the foot of the ghât, I was compelled to remain at a small village called Pundi. A remarkably fine forest here clothes the slopes of the plateau, and I obtained or saw several rare birds, including trogons (*Harpactes fasciatus*), and black mainas (*Eulabes intermedia*).

In the evening I was rejoiced at receiving by the hands of a messenger, whom I had sent on some days before, my letters, &c., which had been accumulating at the Jaipur post-office for about two months. Not to speak of letters, books, &c., about seventy newspapers had to be gone through before I could venture to consider myself *au courant* with the course of events. To arrange them in order, and read the telegrams, beginning with the most recent, was the first thing to be done. The news was not of so startling a character as I had expected. It chiefly referred to the hanging fire of the Turkish conference.

Dismissing the Kalahundi men as I was about to enter Jaipur, I next day ascended the plateau by a not very difficult ghât at Tetulkuti. Here I found to my disgust that all the preliminary business about getting assistance from the local authorities had again to be gone through. In the present instance, too, I found a peculiar dual administration to exist of which I had previously no notice. The whole system of carrying on affairs in Jaipur is, as I shall presently shew, of an unusual character, and it is to be hoped, for the sake of the general body of ratepayers, that it is unique. The magisterial powers in the district are wholly in



the hands of the Madras Government, represented by their agent at Vizagapatam, and his assistants, Tehsildars, and police, who are stationed throughout the country. These officials, however, have nothing to do with revenue matters, which are completely in the hands of the Raja. This being the case the government officials are not in a position to aid in reference to supplies. As, until some properly organised arrangements were made, I knew from the character of the country I should have endless trouble, I was compelled to push on towards Jaipur in order to get into proximity with the authorities. At Tetulkuti, where I remained for two days, the foreign character of the people as compared with those whom I had left behind became tolerably apparent. Both in dress and language the Telegu element was to a great extent apparent, though the latter was, I believe, nominally Uria.

The next march was (twelve miles) to Naorungpur, the residence of a Zemindar, the present one being a widow who is generally spoken of as the Rani of Naorungpur. Much of the country passed through is alluvial, a large portion of it being under cultivation. The jungle patches include some fine sal trees scattered here and there. The villages are large and clean. The people appear to be in good circumstances, and robust, but most of the women seen about were most hideously ugly. Dirty yellow, as in Orissa, is the ordinary colour of their *saris*, which are worn somewhat differently here. Although now the 5th of March, the weather was by no means unpleasantly hot.

Some distance from Naorungpur I was met by the head man of the Rani's establishment who conducted me to the camping-place, where a tent, in anticipation of the arrival of my own, was erected for my convenience, and *dallis* of fruits, &c., in great abundance were sent to me by her majesty, who enjoys the reputation of being an old lady of considerable intelligence and acumen with reference to the management of her estate. Save upon one occasion in Sirguja where the Raja had a sort of guest-house, Moulpatna and Naorungpur are the only places where shelter has been provided for me by native chiefs. In Persia we read that it



is possible to travel hundreds of miles and to be daily accommodated in a good house—the owners temporarily vacating. In India, on the other hand, off the regular line where government rest-houses are established, and, perhaps, in the capital towns of Rajputana chiefs, a traveller, unprovided with tents, can only obtain shelter in dirty cow-houses; but even that class of lodging would often be denied to him by the stricter class of Hindus.

The next day I marched southwards to Boriguma, twelve miles. Here I found a *cutch* bungalow, and the first indications of a made road which I had seen for months. But as I had arranged to stop here until some proper arrangements for the supply of my camp could be made with the Raja, it was rather perplexing to learn that the people of the neighbouring villages professed themselves to be able to furnish only one day's supplies, and there was no market or bazaar to which I could send for what was necessary. I despatched a messenger to the Raja with a letter requesting immediate assistance, and determined to have at least one day of rest in order to write letters, read my news, and give the men some chance of shaking off their fevers. Shortly after arrival I heard that there had been a kill near the village; on examination I could find no footprints near the carcase to indicate whether it had been a tiger or a leopard which had done the deed, and the people could not say. According to the rule believed in by some sportsmen that a tiger commences to eat the hind quarters, while a leopard begins with the fore, it ought to have been a tiger; but this I did not think probable, from the place, and from the fact that no tiger was known to live in the neighbourhood. As it was already raining, and there was no moon, I did not think it worth while sitting up at night, as I had been always unsuccessful at that kind of sport.

My intention of spending a quiet day writing letters and reading up the news to date was frustrated by the receipt on the following morning of a letter from Captain Blaxland, the Assistant-Agent in charge of Jaipur, inviting me to meet him at Jaipur where he expected to be for the day. Accordingly I set out at 10 o'clock to ride the fourteen miles which intervened, and found



him on arrival, together with the Superintendent of Police, occupying a bungalow near the town. It was a great pleasure to me to meet them after having spent over ten weeks alone. In the evening the Raja paid a demi-official visit. He proved to belong to the heavy unintellectual type of chieftains who are completely in the hands of their creatures. So much was this the case that the Government was compelled to press upon him the appointment of a well-educated Dewan who, though not, I believe, liked either by him or the people, was enabled to keep matters straight and from lapsing into confusion.

The Raja rode on a pony which was an innovation on his usual custom of travelling in a palki, or, as it is more commonly called in Madras, a palanquin, and was accompanied by a small cavalcade, and a crier with a deep and sonorous voice who proclaimed the monarch's might and titles aloud as he approached. He had been with the greatest difficulty induced by the Government to attend the Delhi assemblage, in charge of the Assistant-Agent, and had made the grand tour of India from Madras to Delhi, and home by Calcutta and Jugernath. At Madras he had been introduced to the Prince of Wales who was much struck with a party of his paiks or swordsmen, who performed a war dance, and were photographed for his Royal Highness. From the Raja I obtained a copy of this photograph, and of some others representing himself and followers, which I regret being unable to reproduce here, as they illustrate some strange ethnological types.

Here it will perhaps be most opportune to leave the course of the narrative in order to give some account of the past history of Jaipur. According to the family legend, the Raja of Jaipur\* is descended from a line of kings of Jambudesa. The eighty-eighth prince of this line, Vinayak Deo, was adopted by the old Sila Vansa Raja of the country, who gave him his daughter in

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\* The following facts are chiefly derived from the account published in the "Vizagapatam District Manual," by D. F. Carmichael, Esq., M.C.S.



marriage, and resigned in his favour. A more probable story is that the first of the line was an official at the court of the Gujpatis, at Cuttack, in Orissa. In the commencement of the fourteenth century the Gujpatis conquered the country southwards from Orissa, as far as the deltas of the Krishna and Godavari rivers, and in A.D. 1568, their kingdom was overthrown by the forces of the Mahomedan Governor-General of Bengal. It is supposed that in the interval which elapsed, the above-mentioned official, Vinayak Deo, a Rajput of the Lunar line, was established as the Jaipur chief by the Gujpatis, and that in order to strengthen his authority over the wild races of the highlands he took the last princess of the Sila Vansa rulers as his second wife. Be this the true origin of the family or not, it is known that in the year 1652 it was found by the Mahomedan general not only in possession of the present Jaipur Zemindari, but also of all the hill Zemindaris at the base of the ghâts. The tribute payable to the General was fixed at 24,000 rupees.

About this time the Vizianagram Raj was established, and grew so rapidly that in 1773-74, Sitaram Raj, brother and Dewan of the Vizianagram chief, aided by two battalions of Company's troops of sepoys drove out the Raja, who took refuge in Bustar; but finding the country to be unmanageable, he afterwards reinstated him, fixing the revenue to be paid to Vizianagram at 40,000 rupees. This state of things continued till 1794, when in reward for his not joining in disturbances which took place on the death of the Vizianagram chief, Lord Hobart granted a *Sannad* to Ramchandra Deo, the then Raja of Jaipur, for the possession of his estate to himself and heirs in perpetuity, on payment of an annual tribute of 25,000 rupees. This sum was further reduced to 16,000 at the permanent settlement of 1803, in consideration of remission of certain taxes which had been a source of revenue to the Raja; but the maintenance of which was considered to be objectionable by the Government. Traders of all kinds had been heavily mulcted—the transit dues for salt and other commodities being particularly heavy. The Raja used moreover to “sell licenses permitting the holders to



assume the sacred thread common to the upper classes, to use the sectarial marks smeared by Hindus on their foreheads, to wear bracelets of the precious metals, and even to use an umbrella, provided always that it is of calico; for to do them justice it must be said that there is no charge where the article is of palmyra leaf only."

Meriah sacrifices, there is no doubt, used to be practised, and in all probability were a source of income. The boys and girls who were purchased by the wealthier classes, and reared up for this purpose, were called Toras and Torees respectively. There is "reason to believe that the present Raja, when he installed himself at his father's decease in 1861, sacrificed a young girl of thirteen years of age at the shrine of the goddess, Durga, at the town of Jaipur."\* Thus we see evidence that a custom similar to those for which the kingdom of Dahomey has become so notorious, existed in India in a part of the country nominally under British supervision only a few years ago. The Raja was, moreover, it is believed, practically the patron of the robbers and thieves of his territory, and either directly or indirectly through his officials became the recipient of a share of the stolen property.

In one large taluk female infanticide was also a source of income. When parents wished to destroy a child they had to procure a license from an official (the Ameen) in charge of the taluk. This official, on the other hand, had to pay the Raja for permission to collect these fees. Moreover, "when any person wished to marry the widow of one of the Gour, Sundi, Dome, or Buttra castes, he had to pay a fee to the Raja, as these women were called the widowed daughters of the Raja."

From the time of the permanent settlement in 1803 up to 1848, beyond receiving the tribute of 16,000 rupees, the officers of Government took little interest in the affairs of Jaipur. On one occasion when the Raja was slack in his payments, it was even

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\* Report by Mr. Carmichael, "Manual," p. 105.



thought by the Madras Government to be too wild and difficult a country to enter with an armed force, and it was proposed "to transfer the Zemindari to the Nagpur State, but the offer was declined."

In the year 1848, rebellion and anarchy within the state assumed such proportions that it became necessary for the Agent, Mr. Smollett, to visit the district. The leaders of the party in opposition to the Raja were his eldest son, the present Raja, and his mother; they were supported by most of the influential men of the country. Mr. Smollett only visited the purgunas below the ghâts. His first report was followed by others, in which he strongly urged, as the only means of producing order and quiet, the location of a police force in the country. To this "the Honourable Court of Directors objected, that 'we never had exercised police control in the Zemindari; that it was cursed with a pestilential climate; and that it would be sufficient, if without meddling in the internal dissensions of such a tract, we repelled all incursions into the low country.'"

Mr. Smollett strongly protested against this evasion of what he considered to be the duty of the Government.

In 1855, Jaipur affairs were again under discussion, owing to the discovery of the prevalence of both suttî and meriah sacrifices. Regarding the former, the Raja "having been questioned on the subject, admitted the frequency of the rite within his territories, but pleaded ignorance of any knowledge either of the unlawfulness of the act, or of the order of Government prohibiting it." After further enquiries the Madras Government, in 1855, authorised the Agent to assume "the control, both police and revenue, of the tracts above the ghâts, the taluks below being managed by the agency direct." But it was not to be, for Lord Dalhousie at once objected on the ground that "to do so, may involve the British Government in a protracted jungle and hill war, such as that of Gumsur." Mr. Smollett pointed out that the analogy to Gumsur did not hold, as in that case the Raja was deposed, while in the present instance the Raja's authority was to be established. He further held that the Zemindar was



not responsible under the original *Sannad* for the suppression of crime, while the Government was.

In August, 1860, the old Raja, Sri Vikrama Deo, died, and was succeeded by his son, Sri Ramchandra Deo, the present Raja. It being found that the new Government was no more competent than the late one, it was at last settled to assume the direct administration of the country, and in January, 1863, two officers, Lieutenant Smith as Assistant-Agent, and Captain Galbraith as Assistant-Superintendent of Police, arrived in Jaipur. After noticing the jealous hostility which was, for a time, shewn to these officers by the advisers of the Raja, the Agent reviews the results of the first year's working of the new system in the following words:—"Truth to say we are working out in Jaipur an experiment which has never been tried before. Eighty years of independent native misrule have been succeeded at once, without compromise and without any exhibition of military or semi-military force, by an administration which aims at the same completeness as prevails in our oldest provinces. Not a shadow of their ancient authority remains to the Raja of Jaipur and his chiefs. \* \* \* That we have met in Jaipur with no open menace, and with no higher degree of passive resistance than was reasonably to be expected, is first due to the fact that we commenced our reforms by restoring to the Raja the five taluks of Gunapur, of which we assumed the management during the Jaipur disturbances of 1855-6. This at once assured him and his followers that our object was not annexation. It is due secondly, perhaps, to the success of last year's tour, in the course of which every chieftain of note was visited, and a knowledge of the nature and difficulties of the country acquired; but it is due, lastly and principally, to the fortitude and temper with which the Junior-Assistant (Lieutenant Smith), and the Assistant-Superintendent of Police (Captain Galbraith), have met all the difficulties of a new and isolated position, in the midst of much sickness, discomfort, and privation."

Had I possession of the facts, I have no doubt that a long roll of suffering and even of death, might be recorded from among



the histories of the succession of Executive and Survey officers who have resided since that time in this unhealthy tract. A solitary grave near Jaipur records on a granite tablet sent by his friends from England, that one young officer died thus at his post. The late Captain Basevi's narration of his preliminary survey of Jaipur, gives a thrilling account of the sufferings of himself and party. In one instance he describes arriving at an Assistant's camp and finding every one of the party prostrated by fever, and not having even sufficient strength left to pitch their tents.

It will be observed that Mr. Smollett's suggestion to place the revenues of the country also under the management of the Government officers was not adopted; and to this day, except in the form of tendering advice, the officers cannot interfere in these matters. If purely native management possessed a tithe of the qualities which are so freely ascribed to it by a certain class of writers, the condition of this state ought certainly to exhibit some evidence of them. It is difficult to say what the revenue of the country would be under British management, but I can scarcely believe that £20,000 nett would not be exceeded in the first year's collection, and as communications became opened up, and the ryots began to flourish under a lenient treatment, this sum would tend to increase steadily. But what do we find to be the case? On the one hand the Raja is robbed, and at times nearly insolvent, and unable to pay up to date the miserable 16,000 rupees, which is but a fraction of the expenditure disbursed by the Government on account of the magistracy. On the other hand, the population generally is in a very impoverished and wretched condition, and along the frontiers there are many people who are constantly moving from Jaipur into the neighbouring states to avoid payment of revenue, it being the custom to allow people to squat and cultivate for two years without payment; and so they oscillate backwards and forwards, yielding permanent allegiance to no one. At the same time, to be consistent with what I have elsewhere stated, I must admit that the advantages to the ryots in some tracts under direct British rule



are by no means so manifest as might be imagined from the advance in general prosperity which follows from British administration, the effect of which is often to create a class of well-to-do farmers and merchants, rather than to elevate the lower strata of the population above their hand-to-mouth existence.

*March 8th.—Jaipur to Boriguma.*—I was unable to go into Koraput, the station where Captain Blaxland had his headquarters, as I had left my camp where there seemed to be a deficiency of supplies, and my men might have got into trouble had they been left alone. Accordingly I returned to Boriguma, where, after giving full consideration to the subject, I determined to modify my original programme, and instead of working down to the coast at Vizagapatam, to march back northwards after visiting Bustar, to Raipur and Nagpur in the Central Provinces. It took the whole of this afternoon and that of the day which followed to bring myself up to the level of current events by a careful perusal of the already-mentioned seventy newspapers.

*March 10th.—Boriguma to Sasahandi.*—To-day occurred the most serious, though it was not the first, of the long foreseen troubles due to the presence of women in camp. One Mrs. Mahout came to complain that she had been turned away by her husband (Khoda Bux) in consequence of another of the women having said bad things of her in connection with Saidon, the jemidar. I accordingly called up the husband, and told him that he must take back his wife, as he appeared not to believe the accusations, and certainly shewed no enmity towards the alleged co-respondent. He said his own honour was affected by the imputation, and that his honour was dearer to him than life, and very much dearer to him than the woman. He continued to make remarks of this character, and to refuse to act upon my order, until I was at length compelled to chastise him. Now mark the sequel: next day, when on the line of route, and when the senior mahout, who was the husband of the mischief-maker, and who had charge of the troublesome elephant, was fully occupied, Khoda Bux, determined to be revenged, gave the old gossip a tremendous thrashing, and in the evening Kurim came



to complain. Here was a pretty dispute for settlement. I could not but feel that already I had been the cause of a new phase of it by my interference. The only thing to be done was to assume, if I did not feel it, an excess of anger with all parties, and to *defer* judgment and the infliction of penalties—thus keeping the rod in suspense. Immediate punishment would certainly have been followed by further complications, and, as is commonly the case, in order to get one another into evil repute, the men would have taken good care that I should somehow be put to inconvenience.

*March 11th.—Sasahandi to Kotepad.*—Kotepad is a place of some importance in consequence of its being a border town between the territories of Jaipur and Bustar, and the scene of many contests in former years. I found the people civil, and the sub-magistrate, as representing the British Executive, and a functionary called a Nigoman, or revenue collector, on the part of the Raja, waited upon me, and the latter sent an extensive dalli of fruit, &c. The neighbourhood of Kotepad, owing to the lateritic character of the soil in the uplands is very sparsely covered with jungle. In the hollows there is a fair amount of rice cultivation.

On the following day I explored a wide area to the south of Kotepad, and in the evening, after my return, was visited by a young Kabuli merchant, who cried as he besought my aid. He told me that he and another Kabuli had with them an elephant which both the mahout and assistant had deserted during the last three or four days; that there was great difficulty in getting water for it, as the people of Kotepad would run away after taking prepayment for bringing it, and that it was wholly impossible to get any branches for it. He added that they were strangers in a strange land, and could not understand a word of the language of the country, which was Uria. His uncle, to whose party he belonged, had, he believed, gone on to Bustar by a southern route from Jaipur, and what he wanted from me was the loan of one of the mahouts' assistants to take on the elephant with my camp to Bustar. He represented it as being a poor-spirited creature which would go along with him if he only knew the words of

command. I recommended him to send word to his uncle at Bustar, and get aid from him. To this he replied that there was a difficulty about getting any trustworthy person to send, and that the elephant would suffer great hardships from the delay. He then besought me so earnestly and persistently for aid, that, in spite of my knowing the risk attached to meddling with strange elephants, I so far yielded that I called up my mahouts and asked them what they thought of the matter. I found that they had already seen the elephant, and had even mounted him as he stood chained up. In reply to my question as to whether they could venture to bring him on, they said that if he would kneel when told to do so, they would have no hesitation in taking charge of him on the road. During the day he had not done so, but had permitted them to mount him as I have said. Not having seen the elephant save from a long distance, I had no means of forming an opinion as to the nature of the animal except from such information as I received from the Kabuli and my own men. I settled then that the best mahout (Khoda Bux) of one of my elephants, and the best mate (Domun) of another, should visit the Kabuli's elephant early the next morning, and that if they felt satisfied that there was no danger they should bring it on to the next camp.

*March 13th.—Kotepad to Pirinji.*—Shortly after the arrival of my four elephants with the camp, the merchant's elephant was brought in triumphantly by Khoda Bux. I then saw that it was, if not quite the tallest, certainly the largest, elephant I had ever seen. It had an enormous head and rather sloping quarters, and was of a somewhat reddish hue. Altogether its appearance was very different from any Indian elephant I had ever seen; and I was then told that it had been marched up all the way from Bangkok in Siam. That it was a remarkable elephant may be judged from the fact that the price asked for it was 8,000 rupees, or more than four times the price ordinarily asked for a good elephant in India. It seemed to be tolerably amenable to orders, and knelt down when told to do so. It was then taken off and tied up in a grove near the village. I heard nothing further about



it till the afternoon, when news was brought that it had been taken down to water by the mahout, who, over-confident of his powers, had allowed the Kabuli to remove the chain-couplings from its feet. On reaching the water the elephant immersed itself at once, and the mahout, according to his own account, narrowly escaped a blow from its trunk-as he swam to the shore. Having refreshed itself, the elephant walked on shore, and would not then permit anyone to approach it. Application was accordingly made to me to permit the three female elephants to be made use of to decoy it back to the grove. Shortly afterwards, when I went out to the scene of operations, I found that, aided by the females, the mahouts often got it close to the tree, but that when there it was most careful to prevent all attempts to tie it up, and it soon began to charge at everyone who went near it, including myself. At last as night fell nothing had been accomplished, and we were compelled to permit it to walk off in the direction of some heavy jungles to the southward, or whither else it listed; but the young Kabuli declared that it would not go far, as it had been reared in confinement in Siam, and would be afraid to go into the jungle.

*March 14th.—Pirinji.*—As it had been my intention to march for Bustar to-day, the tent was taken down at an early hour; but before starting I sent to enquire for the elephant, if it were still in the neighbourhood. Before the messenger returned the Kabuli servant of the boy merchant came in and gave us to understand, in his very limited Hindustani, that the elephant was then near a village about two miles off, and that during the night it had visited a grove where some of the Raja of Jaipur's elephants were tethered, which were thereupon loosed by the mahouts, who feared their being gored to death where they stood. Hearing all this I thought it incumbent on me not to desert the lad, but to do what I could to get the brute tied up. Accordingly I started with the three female elephants, and on the way picked up two belonging to the Raja, together with some of the men who were then on an elephant-catching expedition, and were supposed to understand the work. On arrival at the village of Amgaon we found the elephant with a circle of men round him in a grove of

trees close by, which included a magnificent banyan. After the mahouts and Foudjar had, as they said, satisfied themselves as to the *rung* (*lit.* colour) of the animal, they loosed two of the kunkis or females, who, after a little preliminary timidity, fraternised with the big male. For about two hours or more I watched the attempts made to capture him by slipping a noose over one of his hind feet. He was, however, far too cunning to be so disposed of, and invariably picked up the rope with his trunk and broke it to pieces, while now and then he would charge viciously and put everybody to flight. In the meantime news of the old Kabuli, the uncle of the lad and the proprietor of the elephant, being at a village two miles off reached me, and I had sent for him. On his arrival the first thing he did, and before I could interfere, was to give the lad a severe cuffing. As he seemed to be pretty confident of his ability to tie up the elephant, and as the beast appeared to know him and took rice from his hands, I, being by that time in high fever, retired from the scene and returned to camp, where I had to remain in bed for the rest of the day. Before leaving I had advised the old Kabuli to offer a liberal reward to the Raja's men, in order to induce them to aid him in tying up the animal at once, as, if it remained much longer at large there was no telling what injury it might not do.

*March 15th.—Pirinji to Jugdalpur or Bustar.*—At a village about half way from Bustar I was informed that it was the Raja's wish that my female elephants should take a round to avoid the town, as they had there a wild elephant, which had been decoyed in from the jungle by the Raja's kunkis, but which had not yet been tied up. I was met outside the town by a deputation, and was conducted through the fort to a grove in which my camp was to be pitched. Owing to the round which the elephants had to take, I had a long wait before they arrived. The Raja then sent to say he would pay me a visit in the evening; but a heavy storm coming on, it had to be postponed. A very urgent request was then communicated to me that I should prolong my visit up to the 19th; but I replied it was impossible for me to do so, as I had arranged to be at Kotepad on that date. Later on I was told by



my servants that the Raja had, in a swaggering way, declared that it was not the "custom" in Bustar for visitors to leave without his permission, and that, as I had come to suit my own convenience, I should go when it suited him—even if I remained for ten days.

*March 16th.—Jugdulpur or Bustar.*—After a feverish night, which was rendered otherwise uncomfortable by heavy rain, I started early in order to examine the river beds in the country to the west for sections of the rocks, all being concealed by laterite and alluvium near Jugdulpur itself. In the afternoon the Dewan, a fine-looking old man, with some other officials, came to announce to me that the Raja might shortly be expected to arrive, and again to express a wish that I would prolong my visit. While waiting in my tent, which was filled with chairs, all other articles of furniture having been removed, I had a long conversation with the Dewan on various matters. Among other subjects he spoke of a strange race of people of whom he had heard, and from what he said about them I had no difficulty in recognising the Andamanese, as being the race referred to. In all probability the stories he had heard had been told by some returned convict. I was able to shew him some pictures of the Andamanese which aroused his interest not a little. Some time after the Raja's procession made its appearance. It included horses, elephants, the regular army of about forty men, clad in old second-hand red coats, with the facings of a dozen regiments, and dirty white country cloth trowsers, and armed with brown-Besses and bayonets; mace-bearers, &c., and a numerous and miscellaneous crowd of irregulars. The Dewan then asked me to go out fifty paces from the tent to meet the Raja; but my jemidar, mindful of my dignity, whispered to me not to go more than four! However, I went to the spot where the Raja descended from his elephant, which was thirty or forty paces off, and conducted him to the tent. He proved to be a fine-looking old man, with a rather brusque manner, and a habit of not addressing any one directly. I did not observe until after I had shaken hands with him, that he was a leper, and the discovery made me feel rather un-

comfortable during the remainder of the audience. As he was departing I made some remark about his army, when he immediately ordered the sergeant to put them through some evolutions. English words of command were used, and a very awkward squad indeed the forty men proved to be, and their knowledge of drill to be vague in the extreme.

On the following day I paid a return visit at the Palace, the Durbar being held in a tumble-down old shed, which was in close proximity to the Raja's stables. On this occasion the Raja alluded to an old-standing dispute about boundaries between himself and Jaipur, and mumbled out something about my declining to go on a shooting expedition with him on the 18th. After this audience, which bored me horribly, I was taken off to see the wild elephant, to which I have already alluded. He was standing close to three kunkis, which were picqueted close to the houses on the margin of the town. He seemed to be much attached to a little baby elephant, which trotted about from one to another. Although he would take sugar-cane from the mahout's hands, and would go to and fro to water with the kunkis, he had not then been chained up, though from various contrivances of poles, &c., which stood about, I concluded efforts had been made to slip on a noose. This elephant was at the time also a subject of dispute between the Rajas of Bustar and Jaipur; and the adjudication of the respective claims were then under consideration of the Madras and Central Provinces Governments. The whole history of the matter, so far as I could gather from very conflicting, and to some extent wholly contradictory statements was, that there had been for many years four elephants at large in the Bustar jungles; but whether they were the survivors of an original herd, or had escaped from captivity during the mutiny, as the Jaipur people maintained, opinions were much divided. At first Bustar gave permission to Jaipur to aid in the capture, and each Raja obtained one elephant, a third elephant died naturally, and the fourth was the one which had just been decoyed into Bustar, and which the Jaipur Raja's men had been waiting for at the



place on the frontier where I met them, as before related, when I was attempting the capture of the Siam elephant. The Jaipur Raja was striving to get the Government to interfere, and in support of the claim that the elephant had originally belonged to his family, produced a roll in which the animal's "marks" were duly recorded. Altogether it was a very pretty quarrel, and the source of much bitterness between the adjoining States, which were from other reasons not on too good terms with one another. Whether the matter has been yet decided by the paramount authority or not, I cannot say.

News came up to-day that one of the Jaipur Raja's mahouts had been killed by the Siam elephant. It was said that he had been riding on an elephant past the place where the animal was still at large, and that on its giving chase he had thought it best to slip off from his seat and leave the two elephants together. While doing so he fell, and in a minute the animal was up and trampled him to death, and then tore him to pieces. But this was not the only death connected with this unfortunate business, for the Kabuli lad died of fever, brought on by the exposure and wear and tear to which he had been subjected. It will be best perhaps to state here the subsequent history of this elephant. A week afterwards I recommended the old Kabuli to ask the Raja of Jaipur's assistance. Accordingly he rode off to Jaipur, and, in an audience, the Raja said "I will give you 5,000 rupees for it, and you need not trouble yourself further about it, as my men can capture it." The Kabuli told me that he had accepted this offer, and went next morning to claim its fulfilment; but in the meantime the Raja's advisers had urged him not to waste money by giving the Kabuli anything, as the elephant being at large in his own jungles he could have it caught at his leisure. Subsequently I gave the Kabuli a letter to the Assistant-Agent, who prevailed upon the Raja to capture the animal, and long afterwards I was told that the Raja bought it, adding it to his already numerous stud of about forty. A further detail which I obtained about the matter was that the mahout who had deserted the elephant was still hanging about in the neighbourhood,



enjoying the confusion caused by his misconduct. His leaving was said to have been in consequence of the Kabuli lad having struck him. Before going it was reported that he had administered some medicine which had made the animal go wild. Had my pity for the poor young Kabuli not caused me to act in opposition to my better judgment, I should not have had this tragical story to relate; and the moral of it all for you, my reader is, beware how you take charge of strange elephants, even though they be represented to you as being poor-spirited creatures.

*March 18th.—Jugdalpur to Tarapur.*—The principal inhabitants of Bustar, I found, belonged to races which were previously unknown to me, and since I had not time to make personal enquiries as to their peculiarities, I shall not pause here to quote other authorities regarding them. According to the Dewan, the following are the names of the principal of these races; they are said to possess distinct languages: Bhatra, Muria (= Gond), Purji, Gudwa (or Gudaba), Jhoria, and Mariah or Meriah.

This brief trip into Bustar had enabled me to get a general idea of the geological formation of a wide tract, but in the time available it was, of course, impossible to go into any minute details.

In the afternoon the Raja's Munshi came to Tarapur with a bundle of papers having reference to the long-standing disputes between Jaipur and Bustar. From these I learnt that the matter had been finally disposed of by the Governor-General, in 1862, by establishing the *statu quo*, without much reference to the past history; but, though I copied an abstract of the whole into my diary, I can scarcely suppose that it is likely to be of sufficient interest for reproduction here. But the impression was very strong on my mind that the decision dealt very hardly with the Bustar Raja, who had a large slice of territory taken from him, receiving, in lieu of the homage and tribute, a sum of 3,000 rupees annually from Jaipur. I could not give them any hope that this decision was ever likely to be reversed.

On the following day I marched back to Kotepad, in Jaipur,



where I remained for four days. The unhealthiness of this country may be gathered from the fact that, not to mention other servants, my six chuprasies and the jemidar, and seven men out of the eight in charge of the four elephants, *all* had fever at the same time. It need hardly be said that, under such depressing circumstances, and in places so remote from any real aid, it requires all one's resolution to enable the work of exploration to be carried on with success. I had one consolation here, however, namely, that there was postal communication, of a sort, between Kotepad and the outer world.

*March 23rd.—Kotepad to Korenga.*—The next two marches were northwards, twelve miles each, to Korenga and Dubgaon. At Korenga, while I was dressing in my tent in the evening, a mad dog ran through the camp and made a rush at my dog, Topsy, but was driven off by the men. I immediately gave chase, and followed it through the village, where, catching sight of it, I shot it. According to the villagers it had been going about in a rabid state for several days, but none of them had attempted to kill it. This was the second case of a mad dog coming into my camp on this journey. Although not a hot year, I heard of numerous cases of rabies subsequently. Generally they are of rare occurrence in India. At Dubgaon I remained for three days, making some long trips in the neighbourhood, to explore various hills and river sections. There are in this part of Jaipur long strips of *sāl* forest, which are intercepted by grassy glades called *beras*.

While I was here the Superintendent of Police arrived, and one evening shewed me a native method of shooting pea-fowl, which he had adopted. On a brick-red cloth screen the figure of a peacock was painted in the rudest possible style of native art, and the sportsman had the screen carried before him by a cooly to the vicinity of the pea-fowl, when he fired at them through a loop-hole. On the first occasion I saw this used as I was watching from a distance, one peacock, which at first ran up to the edge of the jungle, suddenly turned and ran towards the screen as though to give battle to the intruder, when it was knocked over



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by a shot, though it was not bagged. The next two marches took me twenty miles further northwards to Jergaon, from whence I dismissed some Jaipur officials who had been with my camp to provide supplies, but who had not been particularly useful in that respect, the local Nigomans doing most of the work. I also sent away from here two Ganjam constables who had been sent to act as a guard, &c., in case I entered that district or Vizagapatam as was at one time probable. Having handsome uniforms, they had been useful "properties" to display in addition to my own men in my interviews with the various Rajas. Rain and attacks of fever interfered again much with my work, but I managed in the intervals of both to cover a good deal of ground, my method being to start early in the morning, sling a hammock and have some food cooked at the most distant point reached, remain there till the afternoon when the heat had somewhat moderated, and then return to camp.

*April 1st.—Jergaon to Omerkote.*—To-day I marched twelve miles, starting at mid-day to Omerkote, where I joined the camp of Captain Blaxland. In ordinary years to set out on a march at mid-day on the 1st of April would be little short of madness, but in this abnormal season of frequent storms and showers it was often necessary to march whenever one could without reference to the time of day. Near the road I saw two antelopes or black buck, and I afterwards heard that a small isolated herd of them lived in the neighbourhood.

*April 2nd.—Omerkote.*—Hearing that wild buffalo were in the neighbourhood I went to the spot, and after a long stalk got within 150 yards of a small herd of five or six cows, one of which I shot with a single bullet from the 12-bore rifle; the Express, as before, not serving to stop any of the others at which I fired as they retreated. The sport of the thing was very small indeed, and I resolved then that in future I would not shoot any more cow buffaloes out of a herd.

*April 3rd.—Omerkote.*—To-day I examined the Poragur range of hills to the south of Omerkote. It proved to be formed of hornblendic gneiss rocks with a cap of laterite, forming a narrow



plateau. There were some tracks of gaur on the top, such lofty plateaus being a favourite haunt of these animals. On the ascent I saw a male specimen of the trogon (*Harpactes fasciatus*). It fluttered past me like a ball of flame into a bamboo jungle, and although I jumped off my horse and gave chase I failed to see it again. I had, as recorded, met with the dull-plumaged females of this species in the country further north, but this was the first male I had seen alive, and it would have given me as much pleasure to have added the specimen to my collection as it would to have shot a gaur, and very much more pleasure than I derived from shooting the above-mentioned buffalo.

*April 4th.—Omerkote to Bera.*—To-day I parted from my friends, but, owing to the wet, was again unable to make an early start. The country passed through was very wild, and tracks of animals were abundant, but I only saw one rib-faced or barking-deer (*Cervulus aureus*). Just after sunset an animal set up a hideous cry close to my tent. I supposed that it was a hyæna, but the people declared that it was a hind barasingha, or swamp-deer (*Rucervus duvaucellii*). Bera is the deserted site of a village. I met here a large encampment of Brinjaras, with from five hundred to six hundred pack-cattle on their way back from the coast with salt for Raipur and Nagpur. Along this route I met also many similar troops both coming and going, those coming carrying grain from Chatisgurh. These Brinjaras had with them a fine breed of large dogs, whose deep baying at night contrasted with the fretful and currish howls and barks of the ordinary Indian pariahs of the villages. It was interesting to observe the orderly way in which the Brinjaras stacked the bullocks' pads and loads, which formed, with the aid of canvas, a substantial shelter from the rain. After grazing, the cattle, many of which were very fine animals, were picqueted in lines along the sides of squares surrounding the encampments. In some cases the women and children travelled with the party, and the former might be seen immediately on arrival at a camp to set about their culinary operations while the men attended to the cattle.



*April 5th.—Bera to Raigurh.*—To-day I continued my journey ten miles northwards. I found Raigurh to be a more civilized place than I had been led to expect. As it was in a central position, I remained there for three days to examine the neighbourhood. The jungle looked very green and bright, and owing to the rain nothing had been burnt, which was both bad for geological work and for shooting. Besides barking-deer and nilgai I saw one hog-deer, which, in consequence of its horns being in velvet had come to the margin of the jungle to feed. It is probably a rare animal in these parts, as from enquiry I had failed to hear of it, and among a large number of horns in the possession of the Nigoman of Omerkote, there was not one of this species. I have no certain knowledge of its occurrence in Chutia Nagpur.

*April 8th.—Hathgaon to Risgaon.*—To-day I entered the Central Provinces leaving the Madras Presidency behind. I dismissed the Omerkote and Jaipur men who had been accompanying my camp. I found that a very loose system of payment in regard to supplies had been going on under my nose. In some places the Nigomans had received payment, in others they had said they were forbidden by the Raja's orders to receive anything. I found, however, that my bills for the keep of elephants, horses, and table expenses, were maintained as usual, and I had good reason for believing that Saidon, my jemidar, whom I had previously almost implicitly trusted, had been making a large purse for himself by inducing the Nigomans to make some charge so that he might keep his account running. The provisions having in many cases been brought from long distances to the uninhabited spots where I encamped, it was impossible to take any steps by which the actual suppliers should be refunded, and in these native states it would seem that it is the "custom of the country" that they should not be so refunded.

*April 9th.—Risgaon to Sobha.*—Leaving the camp to follow the direct route, which was only six miles, I struck eastwards for about ten miles, crossing some very broken country covered with long grass, which was drenched with dew. The forest which I



traversed included a few fine teak trees, but sal was also present, both growing indiscriminately on the crystalline rocks. Other trees, such as *Sterculia urens*, *Boswellia thurifera*, and *Cochlospermum gossypium*, with other species less familiar to me, made up a very mixed jungle. I had recently been reading Darwin's work on "Climbing Plants," and I noted that all the specimens of the giant creepers (*Bauhinia vahlii* and *Butea superba*) twisted round the trees, some of which were nearly a foot in diameter, from left to right. I subsequently found, however, that this rule is not invariable, and only a few days later, indeed, I met with a curious case in which two thick cables of *Butea*, which apparently started from a common stock, immediately twisted round a large tree in opposite directions, and so continued their spiral courses upwards.

At 10 o'clock I slung my hammock under a bush on the banks of a stream, at a place called Amur; had my breakfast, and set myself to sleep through the heat of the day; but at 12 o'clock, a thunder-storm being imminent, I had to beat a retreat to a miserable Gond hamlet where I sheltered from a downpour. On the rain ceasing I started for camp, but was caught in a return shower, and had a most disagreeable tramp of nominally six miles through jungle, beds of rivers, and long grass. Within the forty-eight hours which preceded 12 o'clock on the following day, there were six distinct thunder-storms with copious rainfall. It will have been observed that in my previous journeys I had never experienced such bad weather as that which characterised this very abnormal season. I was almost inclined to believe that the rainy season had actually commenced, and as I had still about 350 miles of marching before me the prospect was not very pleasant. At the same time the clouds afforded a welcome shelter from the sun which would have been, and indeed was on clear days, very severe.

*April 11th.—Sobha to Borgaon.*—Borgaon is in the native state of Nowagurh, and I expected to be met on arrival, if not by the Raja, at least by some responsible person deputed by him. But there was no one present, and it seemed probable that I

should have again to go through all the trouble I had experienced at first in each of the other states which I had traversed. On this, about the usual date, as I have alluded to in previous pages, I saw the first specimen, a fine male, of the paradise fly-catcher (*Tehitrea paradisii*), and on the following day I saw a number of the same birds, and also some specimens of the yellow-breasted ground-thrush.

While the camp was being pitched there was a loud crash heard in the jungle close by, the cause of which was the falling of a tree into which one of the *mates* had climbed in order to cut branches for his elephant. The tree proved to be a banyan, which was nearly thirty feet high and about two feet in diameter at the base; but it merely consisted of a shell enveloping the decayed remains of the trunk of some other tree, and was held in the loose and damp soil by soft roots, which had given way. The man, though much shaken, and at first I thought internally injured, sustained no permanent ill effects from his tumble.

*April 14th.—Chuia to Doarpur.*—At this place I found the Raja of Nowagurh residing in a temporary dwelling, which he had come to in consequence of sickness at his capital. In the evening he paid me a visit, and proved to be a snuffy-looking little old man, with dyed hair and very dirty clothes. He did not appear to be equal to much conversation; but his nephew, who bore the title of the *Dow*, proved to be very capable in that respect. On the previous day they had written me a letter, in which they gave one reason for not having met me on the frontier, and they now gave another, which was obviously equally untrue. As it was a serious matter to have found myself left to such slender resources of supply as the poverty-stricken Gond hamlets could afford, and as I had in consequence had to modify my route, avoiding a wild tract which I had wished to examine, I had already forwarded a complaint to the Deputy-Commissioner of Raipur, who subsequently called upon the Raja for an explanation; but in the meantime the Dow accompanied my camp to the frontier of Nowagurh, and, as he proved attentive, and I had no further trouble, I was able to intercede for them and prevent their



being visited with the official displeasure which they had incurred by their first neglect to act upon orders they had received regarding me months before. During the audience I made enquiries about a family of man-eating tigers that I had been hearing of for some time, and offered to do my best to exterminate them if the Raja would render the essential assistance; but he received my offer somewhat apathetically, and even began to deny the truth of the stories about the depredations. Subsequently I visited the locality, as I shall presently relate. During the evening, at dusk, when sitting outside my tent, I saw a large squirrel climbing to the topmost branch of a tree close by. Calling for my gun, it was just put into my hands in time to arrest the course in mid-flight of the animal, which proved to be a flying-squirrel (*Pteromys oral*, Tickell), and which was soaring from its lofty perch towards some bushes. This is the only occasion upon which I have seen this animal; being nocturnal or crepuscular, it is doubtless seldom observed, and the Raja's people said they had never seen a *bird* like it before.

The next marches to Milkna, Datbai, and Mahuabatta were comparatively short ones, as there was a good deal of close and interesting geological work to be done along the boundary of two formations occurring in the vicinity.

*April 18th.—Mahuabatta.*—To-day I picked up a dead specimen of the tree-shrew (*Tupaia Elliotti*). It was quite fresh, and had doubtless been killed during the night. There were some punctures in its body, as though it had been caught in the talons of a bird, possibly an owl.

Painted partridge were very abundant here, and were to be heard calling from every other tuft of grass both in the morning and evening. The difficulty of flushing them is unparalleled in my experience of every other bird. One rose off a clear piece of ground, where the grass was burnt, after I had twice hunted for it with the aid of my two small dogs.

Among the many causes of annoyance which combine to make life a misery in camp in the hot weather, the cries of certain birds are not the least. One of these, that of the hawk-cuckoo



(*Hierococcyx varius*), caused me to use much bad language. By day and night it would reiterate its chromatic scale of seven or eight notes, with a monotony that was to me, when feverishly striving to snatch some much-wanted sleep, simply maddening. The koel, which is another species of cuckoo, the hoopoe, the coppersmith barbet, crows, and a few other species, are also sources of irritation. And, if you add to these human voices raised in dispute, tom-toms, the lowing of calves, and a variety of other sounds, you obtain a total number of performers in the hideous concert which renders rest impossible to anyone whose nerves may have been unstrung by fever and the all-pervading heat.

*April 21st.—Paragaon.*—I came to this place for the express purpose of trying to interview a family of tigers, whose depredations had closed one main line of road, and had caused several small villages to be deserted, after the inhabitants had been more than decimated. The Dow had collected beaters, and this morning we beat a hill to the south-west of Paragaon. I felt confident that there was something in it, as the crows in the trees were very noisy; but nothing save a hare and some pea-fowl were seen by me. Some of the beaters said they saw a bear. In the second beat, which was through a likely strip of jungle, nothing was seen either; but the beaters picked up near a shaded pool the skin of a freshly-killed spotted deer. Everything save the head, feet, and skin had been eaten. The tiger must have somehow managed to sneak off unobserved, though I had placed a pair of elephants on the flanks of the line of trees occupied by matchlock men. The third beat included a small hill, and I was placed by the shikaris on the right of the line, on the flank of the hill. It was supposed that the animals would not follow down the hill to its extremity, but would break off in my direction. Owing to rocks and undergrowth, I could not command a view of the terminal slope of the hill. My own idea was to take up a position on the hill itself; but the shikaris dissuaded me from doing so. As events turned out, some animal passed down the slope and grunted in an indistinguishable way as it came near me; but it was hidden



from my view. One of the mahouts saw some animal pass through long grass, and a man far out in the plain declared that he saw a tiger bounding from rock to rock. In the evening some of the beaters said that they had seen the tiger, but had not told me, as they were overcome with thirst, and wanted to get to water. The day was certainly terribly hot, as the clouds had all been dispersed. This result was a great disappointment to me, as I had felt pretty confident of success, and several human skulls and bones which we found near the hill bore testimony to the fact that one or more of the tigers were man-eaters; so that their destruction was much to be desired. I arranged for another series of beats on the following day in another tract recommended by the shikaris. On rising in the morning I felt very far from well, the previous day's exposure having brought back my fever. However, as men were collected, I could not draw back. In the beats which we had nothing was seen, and I returned to camp completely done. Taking into consideration the density of the undergrowth in the jungle, which had not been burnt, as it would have been in ordinary years, the great heat, the badness of the beating, and my own state of health, I felt it advisable to order a march forward for the morrow; but this I did with great reluctance, as I had really hoped to have been the means of ridding the country-side of the tigers which in one direction were stopping all traffic and cultivation, and also prevented the people visiting the jungle for firewood. As, a day or two later, the clouds again collected, I could not but feel that, had I waited, I might perhaps have had better success, since there was no doubt that the badness of the beating was in a great measure due to the exceptional heat of the two days.

*April 25th.—Bourka to Panduka.*—From Bourka, as I was entering Raipur proper, I dismissed the Dow, and as he had been civil I made him a present of a powder-horn and some other trifles, but refused to give him a certificate, as I could not overlook the neglect on my first entering Nowagurh. He left me looking very sad, and my servants told me that he wept bitterly for an hour afterwards.



Some three miles before reaching Panduka I left the hills and rocks behind me, and came into an alluvium and laterite-covered open tract, with good villages and fine groves dotted about. The people of Chatisgurh, as the whole area is called, were very different from those whom I had left behind. This was more notably the case with the women, who were to be seen going about in an open way, such as I had not seen elsewhere during my tour. They made some pretence of covering their faces on seeing a stranger, but at the same time took care to exhibit their features. Their costume, otherwise ample, is so devised as to leave bare their legs from the knee downwards, a dress, or want of it, which would be regarded with horror by the women of Bengal or Orissa. Their figures were plump and well-favoured. If report speaks truly they are very independent, and their lords are not their masters except when it suits them to be obedient.

*April 26th.—Panduka to Rajim.*—Up to Rajim I saw no rocks uncovered, and was therefore surprised on arrival there to find a good-sized town, many of the houses being built of stone. Such a sight I had not seen in the whole course of my journey; since in Cuttack the houses are built of brick, and everywhere else that I had been at, plain mud, or, in some few cases, sun-dried bricks were the only materials which I had seen in use. I was told that the stones had been taken from the ruins of a city which flourished 1100 years ago; but I understood from the Malguzar, or land revenue collector, who came out to meet me on the road, that the stone occurs at no great depth below the surface. It is a material admirably suited for building purposes, as it is a grey flaggy limestone, which can be readily chipped into blocks.

Two marches, aggregating twenty-five miles, over dry laterite plains, where there was no jungle, and where the principal fuel in use was dried pats of cow-dung, brought me at length to Raipur, where I was soon made comfortable in the house of the Deputy-Commissioner, and shortly afterwards joined a lawn-tennis party, where in five minutes I saw five times as many white faces as I had seen in the more than five months which



had elapsed since the 21st of November, when I left Cuttack. Indeed, since that time I had met but four Englishmen, namely, the Superintendent of Police of the Gurjat States of Orissa, the Assistant-Commissioner of Sambalpur, with whom I had travelled for a few days, and the Assistant-Agent, and the Superintendent of Police of Jaipur,—the meeting of even these, save the second, being a mere chance. I might indeed not have happened to cross the paths of any of them, so little frequented by British officials are the regions through which I had marched upwards of 800 miles.

*April 29th.—Raipur.*—I was much charmed with the cleanliness of the town of Raipur. The Deputy-Commissioner, to whom this state of things was, I believe, altogether due, took me into what ought to have been, according to all analogy with other towns, oriental or otherwise, back slums redolent with filth; but they proved to be very clean lanes, with neat stone drains, and with nothing offensive about them of any kind. Several buildings of a useful or ornamental character were in process of construction, and as they were being built of stone, they bid fair to last for many a year, and perpetuate the memory of their founder. Public gardens and parks had been laid out with great taste, and were well planted with ornamental shrubs and beautiful flowers. Altogether I was much charmed with Raipur, and retain a very pleasant recollection of it. Among the public institutions which I visited was the Government Treasury, and what I have to say regarding it I mention as it was novel to me. Very possibly, however, similar practices may be in vogue at other treasuries throughout the land for anything I know to the contrary.

It so happened that in the Raipur treasury there was at that time a vast amount of silver, I forget how many laks of rupees. It was all done up in bags of net-work so that the silver could be seen, the object of which was that the native clerks, or sub-treasurers, should not have an opportunity of substituting copper for silver coins, as they have been known to do when closed cloth bags were employed. A serious defalcation by a native treasurer here some short time before



had caused the Deputy-Commissioner to be mulcted in a large amount; not that criminal breach of trust by natives in the position of treasurers is a rare occurrence calling for special notice. Hardly a week passes that a case is not recorded from somewhere throughout the length and breadth of India. This fact has been specially brought to my notice since my return home, when I have been in the receipt of a weekly newspaper from India.

Everybody knows that the Government of India reserves to itself the monopoly of the sale of opium, and derives from it a considerable revenue; but I was not before aware that a chamber in the Court House was ever allotted for its retail to large customers—yet such I found to be the case at Raipur. I was told that the feudatory chiefs obtain it at a somewhat lower figure than that at which it is sold to British subjects.

A curious fact which I heard at Raipur in connection with the abnormal rainfall of this year, was that the guinea-fowls, of which large numbers were kept by some of the residents, had already commenced laying, though in ordinary years the first eggs are laid at the beginning of July, after which each bird lays daily for an average of one hundred days, after which there is a cessation for the remainder of the year. This fact, though it may appear to be a trivial one, is of interest, as showing how a modification of seasons or climate may produce a change in habits. That it does not always do so is exemplified by the case of an Australian goose (*Cereopsis*), which lays in the summer of the Antipodes, but which when brought to England lays at the same time of year—that is to say in our winter. But geese are strange animals, and are less susceptible to change than are most others whose life histories are equally well known.

After several more days of rest from the wearying iteration of daily marching, it became necessary for me to arrange for the further journey of 176 miles to Nagpur, where I could take the train for Calcutta. Two courses were open to me; one was to make use of a *tonga*, a car drawn by trotting-bullocks, relays of which are by a most admirable arrangement obtainable every



six miles, and by means of which the distance can be accomplished in about three or four days with ease and comfort. The alternative, marching by stages, which would occupy about a fortnight, would involve much discomfort but would give me more leisure to examine the rocks near the road, which, for the most part, had never been seen by eyes geological, and about which it was desirable to obtain as much information as was possible. Since, moreover, I should gain no time by pushing on to Nagpur ahead of my people and goods, where I should have to await their arrival, I elected the latter. At Raipur I engaged carts to carry the loads of two of the elephants which I sent eastwards to Sambalpur, where they were to remain for the rainy season till again wanted for the field. I also lightened very considerably the loads of the elephants which accompanied me to Nagpur both for their sake and on account of the men, as the daily loading and unloading was thereby much simplified. The marches were from ten to twenty miles long, and I endeavoured to arrange that the long and short ones should alternate, but in this respect I had to conform to the distances which separated the very excellent bungalows with which the road was provided. Owing to the great heat it was necessary that the men and elephants should march at night; but as it would have defeated my object—that of seeing the rocks—to have done so, and I should have lost a night's rest, I used, where the march was a double one, to stop during the middle of the day at an intermediate bungalow, thus employing the morning and evening hours only for the journey and examination of the geology. I left Raipur on the 4th of May, and four marches brought me to Chichola, sixty-five miles distant, where I met an Engineer of the Public Works Department who was engaged in the construction of the road. He confirmed a report which I had previously heard as to the granitic hills of this neighbourhood being inhabited by bears. Several of the nearer hills had been beaten a short time previously, but there was one a few miles further off which had been left undisturbed for some years, and we agreed to try what a beat would produce. The prepara-



tions were on a moderate scale, scarcely more than fifty men having been assembled. The man who placed us said that the first passage from the hill which we saw would not be taken by the animals; but it looked so likely a place that I left the elephant Mowlah facing it, and instructed the mahout and a chuprasi, who were seated on the pad, in the event of any animal coming that way to simply clap their hands. I took up a position in a small tree a little further on, and a very uncomfortable and insecure position it was, as both my feet had to rest cramping one another in the fork of a tree about three feet from the ground; how I was to fire and hold on at the same time without any support for my back I did not know; but the event proved I was able to do so somehow. The Engineer climbed another tree fifty yards beyond me, and the beaters commenced their work. They had not reached the crest of the hill ere I heard the chuprasi clapping, and in another moment a bear broke, and I allowed it to come within a few feet of me before I fired a shot from the Express which would have killed it, but I gave it a second shot to terminate its agony. I had hardly reloaded when I again heard the clapping, and a hyæna rushed past me giving me a difficult shot from my constrained position; him also I laid low with a shot, when, for a third time, I heard the clapping, and another bear appeared and received exactly the same treatment as the first, so that I had the carcasses of two bears and a hyæna lying at the foot of my tree. Some shots on the hill gave notice that something was going on there too, and we soon heard that one of the Engineer's men had shot another bear. Such a long time was expended in getting it out of the cleft in the rocks into which it had fallen, and in bringing it down the hill that we had no time for another beat; but we had every reason to be satisfied with the bag, save that my friend had not had a chance of a shot himself. It raised the number of large animals which I had shot during the trip to nine, viz.: one tiger, one leopard, one hyæna, two bears, two buffaloes, and two sambar, all of which, except the buffaloes, had been killed by single shots from the .450



Express rifle, so that I had good reason to be satisfied with the weapon.

*May 9th.—Chichola to Baghnadi.*—About two and a half miles beyond Chichola I examined, while marching to the next halting-place, a lode containing galena and copper-ores; the outcrop of the lode had been much cut into by men employed in preparing road metal, one of whom told me that all the visible fragments of ore had been removed. Certainly, save some stains of copper carbonates, I could detect no trace; but the locality had previously been visited, and had been reported on by one of my colleagues. As being one of the few *bonâ fide* lodes of these ores which are known to exist in India it is of some interest—its economic value is, however, quite unknown, and will remain so probably for some time. Otherwise, too, the locality is of interest as being, I believe, the only one where fluor spar is known to exist in India; it is strange that a mineral, which is so common in Europe, should be so rare in India.

*May 10th.—Baghnadi to Dungargaon.*—The hundreds of carts which were on the road laden with grain for Nagpur, and the number of empties returning for another load before the regular rains should set in, bore a testimony to the extraordinary development in the export trade from this country which had just been accomplished. It is but a few years since the people in parts of Chatisgurh were unable to pay their land revenue in consequence of the *abundance* of their harvests—grain was so cheap that it was impossible to carry enough of it to realise the amount of silver required. This state of things is never likely to occur again, and the corn of the Central Provinces has now found a place in the English markets which was vacated for it in the Russo-Turkish war. A proposed line of railway into the centre of Chatisgurh from Nagpur will serve very materially to develop this trade, and should the line be continued to Calcutta the port at that city will, no doubt, obtain a share of the trade which must otherwise be confined to Bombay.



To-day, for the first time during my journey, I heard grey partridges calling. The bird, to the best of my belief, does not occur in any of the Districts or States which I had traversed. I also heard painted partridges, the common and plaintive cuckoos, and the yellow-breasted ground-thrush.

In Chatisgurh I first learnt what trotting-bullocks can accomplish, and was truly astonished at the activity of some very heavy-looking animals—a good pair can, I was told, trot their six miles an hour with ease. One sort of conveyance in use, which would make the inhabitants of Bengal stare, consists simply of a stout pole which connects the axle-tree with the bullock's yoke; on this the driver and one or more passengers sit straddle-wise with their legs dangling down. A more rudimentary wheeled equipage it is difficult to conceive of, yet some of them are made of choice wood, are highly ornamented, and are drawn by sleek and well-fed cattle. For officials travelling in their districts the tongas have many points to commend them. They will carry yourself, your luggage, and a servant, and in the villages near the main roads a pair of trotting-bullocks can be hired to draw you from stage to stage. In Bengal such a convenient method of travelling is unknown, and, indeed, the cattle are, perhaps, hardly suited for such a purpose; but in the Madras Presidency the use of bullocks in this way is practised to a large extent.

*May 12th.—Sakoli to Lukni.*—I found the people here singularly ignorant of the values of the ordinary Indian coinage—thus a punkab-puller, who was given two two-anna pieces, asked for a third as he said his pay was three annas. I was told that the men employed on the road always change their wages, which are paid in silver and copper, into cowries, in which form they prefer to accumulate their savings. It is by means of these exchanges that many Mahratta money-lenders commence their operations, and they rapidly increase their wealth by various nefarious practices. A man once in their clutches rarely escapes. They become thoroughly well versed in the sections of the law which affect their profession, and they evade the statute of



limitations by getting new bonds from their victims, whom they often compel to take broken-down buffaloes or cattle at fabulous prices, which are entered in the accounts as value received.

On the following day I reached Bandara, a well-kept town, I believe, but I did not visit it, preferring to avail myself of the rest afforded in a very excellent Dāk bungalow, and keep quiet for the day. Bandara is the chief town of a district which bears the same name. Three more marches brought me, on the 16th of May, to Nagpur, the goal of my long journey of about 1,000 miles. Having sent off my men by train to their homes, I remained for a few days at Nagpur where the heat was excessive by day, and it was necessary to sleep in the open *sub jove* by night. On the 21st I started for the Warora coal-mines which I had never previously had an opportunity of visiting. As they are the principal mines at present worked in the Central Provinces, I was particularly anxious to see them, and the methods of working in practice, in order that I might contrast them with the old-established customs in Bengal. I shall not, however, pause here to describe these mines, upon which a vast amount has been expended by the Government, to whom they at present belong.

Leaving Warora, a three days' journey by train brought me to Calcutta, which I reached on the morning of the 26th. The heat in the saloon carriage sometimes rose to 110° Fah.; but as I had it to myself for about 1,200 miles, I did not experience so much discomfort as I might have done had it been crowded with passengers. It proved, indeed, to be a very agreeable change from the sort of travelling I had just experienced. It was a humiliating fact to contemplate that in three days I travelled a greater distance by this means than I had been able to accomplish in six and a-half months' constant marching.

As I have in the course of the preceeding pages alluded to the chief points of economic or general interest connected with the



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geology of the area traversed, I do not give any *resumé* of the geology here, the more particularly as an account and map of the tract have already been published, in which the results of my explorations are described.\*

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\* "Records Geological Survey of India." Vol. x., p. 167.



## CHAPTER XIV.

## LOHARDUGGA AND PALAMOW.

1877-78.

INSTRUCTIONS FOR SEASON—DEVELOPMENT OF THE PALAMOW COAL-FIELDS—COAL-MINES AT KURHURBALI—PARISNATH—COPPER, LEAD, AND ZINC LODE—TEA PLANTATION—CELTS—HAZARIBAGH—KOL MENHIRS—MAN-EATING TIGERS—GALENA AND ANTIMONY—I AM CRIPPLED BY AN ACCIDENT—BALUMATH—DISCOVER LIMESTONE—VALLEY OF THE AURUNGA—PALAMOW LIQUOR-SHOPS—PROFESSIONAL VISIT BY A NATIVE SURGEON—THE RAJA OF VETNAGHERI—JUGGULDUGGA HILLS—GENERAL ACCOUNT OF THE URAONS—STARLINGS—DEFICIENT CROPS AND SCARCITY OF FOOD—HOT SPRING—HOAR-FROST—LATIAHAR—THEFT IN CAMP—THE POLICE—BINDI—DESTITUTION—FOREST CONSERVANCY—PALAMOW FORT—DALTON-GUNJ—CASTE AND THE PETTY NATIVE OFFICIALS—DALTONGUNJ COAL-FIELD—BEAT FOR TIGER—FOUR-HORNED ANTELOPES—KOEL RIVER—GIANT SILK-COTTON TREE—NATIVE IRON-TRADE—RATS—A TIGER'S DWELLING—MAN INJURED BY A TIGER—NIGHT ALARM OF THIEVES—FARIAH KITES—ANOTHER MAN INJURED BY A TIGER—ORNITHOLOGICAL COLLECTION—HUTAR COAL-FIELD—SUPPLIES—MEET THREE LEOPARDS—NILGAI—SUPAHI RIVER—A COOL RETREAT—GAZELLES—BIJKA HILL—STILBITE—SIT UP FOR A BEAR—INDIAN BEARS—THE GUL-GUL PÂT—THE KOREWAHS—WANT OF CARRIAGE IN PALAMOW—THE TATAPANI COAL-FIELD—HOT SPRINGS—PITCHED BATTLE BETWEEN ANTS—WHITE ANTS—RESUMÉ ON THE COAL-FIELDS—THE AURUNGA FIELD—THE HUTAR FIELD—IRON-ORES OF PALAMOW—AGURIAHS, OR NATIVE IRON-WORKERS—NETURHAT PLATEAU—TEA PLANTATIONS—LABOUR OF CHRISTIAN CONVERTS—DAMAGE TO MHOWA CROP—IRON ORE—CONCLUSION OF JUNGLE LIFE—CONCLUDING REMARKS.

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It had long been known that a tract occupied by coal-measure rocks existed in a part of the district of Lohardugga, within the limits of the purgunas of Toree and Palamow. My instructions for the season were to explore and map these rocks, and ascertain the amount of coal they contained. To the extent and value of the iron deposits of various ages throughout the district my particular attention was also to be directed, since the establishment of iron-works, as well as the opening out of new coal-mines, formed



portions of a scheme in connection with the Sone canals which was under the consideration of the Government. Before any decision as to outlay could be arrived at, reliable information regarding the mineral resources was required; and it was my duty to supply this want, as far as possible, within the limits of a single season.

*November 7th.*—Early this morning I reached the station of Giridi by train from Calcutta. This station is the terminus of a branch line from the East Indian Railway, and is in proximity to the mines of the Kurhurbali coal-field, the development of which has been unprecedented in India. The principal mines belong to the Railway Company, and are worked with considerable skill and judgment, and the weekly out-turn steadily increases, all the steam-coal being used by the railway. Other mines in this area belong to the Bengal and Equitable Coal Companies. This was my first visit to this coal-field. It was the only one of any size and importance throughout the Bengal province which I had not previously examined. Though of small size, the area being only eleven square miles, there are many points both of geological and economic interest about it; but these I shall not here pause to describe.

*November 9th.*—*Giridi to Kutwara.*—Two marches from Giridi to Kutwara and Hurladi brought me so close into the vicinity of Parisnath again that I was once more, for the fourth time, tempted to ascend it, the more particularly as a tea-garden had been opened out on its northern slope, which I was anxious to see. I also thought that the walk to the foot of the hills and thence up by a road about six miles long, with a descent of equal length to Nimia Ghât on the Trunk-road, where I sent a horse to await my coming, would afford an opportunity of getting myself into training after the relaxing effects of the Calcutta climate.

Not far from Hurladi, in Palgunj, there is a mineral lode in which copper, lead, and zinc ores all occur. Unfortunately I did not know the exact position when passing, or I should have tarried to examine it. Some of the specimens of ore which I have seen from it are the most promising I have yet met with



from any part of Bengal; and I would not be surprised if this deposit, when opened up, should prove to be of considerable value.

Passing through Madhubun, in which there are several large serais or rest-houses for Jain pilgrims to Parisnath, I commenced the ascent, which first traverses an outer ridge and then dips into a sort of sheltered valley, bounded on the south by the slopes of the main mass of the hill. In this valley the forest has been cleared and the already-mentioned tea-plantation laid out. The plants were, I believe, only about a year old, and as, when passing through, I had not the advantage of the guidance of the manager, who was not at home, I was unable to learn much of their condition and history. But it appeared to me that there was an abundant and rich soil; and the gentle slopes augured well for its preservation from being washed away by rain. A curious fact in connection with the clearance of forest for this garden was the discovery of two remarkably fine polished celts, one of which is precisely similar to a common form met with in Europe. Both of them are figured in Appendix B, plate II., figs. 9 and 10. The latter part of the climb up, where there were no trees and where I was exposed to the full force of the morning sun, was rather severe; but after a rest I reached the bungalow at the summit, where I found a caretaker in charge. Having breakfasted and visited several of the small votive temples close by, I set out on the descent, which, owing to jungle and long grass having asserted possession of the now-unused road, was not accomplished without some difficulty. At Nimia Ghât I found my horse awaiting me, and from thence cantered along the Grand Trunk road, which had a very deserted appearance as compared with what it had when I first saw it fourteen years previously, as described in the first chapter.

From Dumri, where I remained for the night, I made four marches to Hazaribagh. At the last halting-place, before reaching the station, I met the Commissioner of the Division, who had only been appointed a short time previously, and who was about to make a tour into the native states of Sirguja and Jushpur, &c. A few months later he died from fever contracted on this journey.



I remained in Hazaribagh for four days, making some final arrangements, and on the 20th marched westwards to Sultana and thence to Silla. Near the latter place there are some very ancient-looking Kol memorial stones or menhirs, which were ranged in broken lines bearing nearly due north and south. The stones were all of the gneiss rock, which occurs in the neighbourhood. I met with the tracks of a fine tiger in the bed of the Mohani, almost in the same spot as I had seen some previously in 1870, when examining the Chopé coal-field. Apparently the locality, though within seven miles of the station, was a regular haunt for tigers. For some months previously a family of man-eating tigers had been causing great loss of life in the country to the south of Hazaribagh. They had evaded all attempts which had been made to shoot them. On one occasion a colossal expedition, in which some British soldiers were employed, was sent out against them, and a wide tract of country was surrounded and beaten, but without success. As an example of their cunning and daring, it was said that an officer, when travelling by palki through their beat at night, employed a double set of torch-bearers, and had also with him some extra men to keep up a tattoo on drums, yet at one spot a tiger rushed out and carried off the last man of the party. On my return to Hazaribagh I saw one of these tigers, which had been captured in a pit-fall; it was subsequently sent to the Calcutta Zoological gardens. I think another of the family, too, was afterwards captured in the same way; the credit of ridding the country of these scourges, which had so completely foiled the sportsmen, being due to a native gentleman.

My next march was to Lepu, from whence I paid a visit to a place called Hisatu, where galena and antimony were said to have been found formerly. The grubbing at the outcrop had completely removed all trace of the ore, so it was difficult for me to form an opinion as to the nature of the deposit; and I had neither time nor suitable means for opening up the surface.

*November 27th.—Goonia to Balumath.*—To-day an accident happened, which seriously affected my comfort for the rest of the season, and, writing now eighteen months after the event, I am



not quite sure that I am free from its consequences. About four miles from Balumath I was met by the Sub-Inspector of Police, who had come out to escort me into the town. As I was riding along I heard a loud shouting and noise behind me, and, looking back, saw that my second horse, a rather spirited animal, had broken away from the sayce, and was in hot pursuit of the Inspector's pony, the Inspector having been dislodged from the saddle. As the natives were giving the animals a wide berth I dismounted, and was just about to capture the runaway, having my hand actually laid upon him, when my right foot turned under me, and I was flung backwards, and found myself dead lame. With some difficulty I got back to my horse, and rode after the fighting pair, and at last managed to capture them, after they had charged through and scattered a drove of pack bullocks, whose loads were sent flying in all directions. As there was a bungalow at Balumath I occupied it, though it was in a tumble-down condition, and remained there for five days, trying to cure the most severely sprained ankle I have ever had.

*December 2nd.—Balumath to Balunuggur.*—Becoming tired of the inactivity, I started to-day to commence operations on the coal-field, intending to spare my foot as much as possible; but, as usual, I soon found that much riding was impracticable, that rocky beds of rivers had to be examined and hills ascended, and as I could not bring myself to leave the scene of action and march away to either of the district stations, I hobbled along for more than two months, often suffering much anguish, but having the satisfaction of accomplishing my work; and so, at the end of the season, having a full tale to show before taking leave of India on furlough.

On the road to Balunuggur I made a discovery of great importance in connection with the proposition to establish iron-works; this was a vast and inexhaustible deposit of nearly pure crystalline limestone, admirably suited for a flux in the smelting of the ores of iron which I subsequently found. To reach Balunuggur from Balumath one descends into the valley of the Aurunga, by a ghât or pass nearly 300 feet high. The panorama



of the country in which my future work lay, as seen from the top of this pass, was a very beautiful one. Particularly striking were the effects produced by the patches of many-tinted cultivation scattered about through the more uniformly-coloured jungle, which surrounds two ranges of sandstone hills, occupying the centre of the valley. There were scarcely any bare spots to be seen, and though the previous rainfall had been lamentably insufficient for some of the crops, but little evidence of the drought was apparent in the verdure and brightness of the vegetation at this season.

At Balunuggur, I made my first acquaintance in Palamow with what is called the *bati* system, by which the Abkari, or revenue on the sale of intoxicating spirits is worked by the Government. The whole area is divided up into circles, in each of which there is a *bati*, or shop, where the spirit from the mhowa flower is distilled and retailed; and the permission to hold these *batis* is sold to the highest bidders, the value varying with the position and the drinking capabilities of the neighbouring population. How the Abkari system works in other districts of Bengal I am not sufficiently acquainted with the subject to say, but I nowhere else have experienced such an amount of annoyance and discomfort as I did from these liquor-shops of Palamow. Generally speaking, near the large villages, they were situated close to the groves where I encamped, and, as they attracted all the bad characters of the neighbourhood, were scenes of squabbling and disorder, which were often prolonged late into the night. Though among my servants there were only a few who ever drank, there was one who from time to time used to get mad from drink, and place the whole camp in an uproar. All my efforts to obtain a substitute for this man, who occupied the position of sweeper, were unavailing; and I had to put up with his misconduct, which he continued to the very end of the trip, in spite of the infliction of the severest punishment I have ever given to a servant.

*December 6th.—Balunuggur to Murup.*—The work of examination of the coal-measures, upon which I was now fairly



launched, proved very intricate, and necessitated my moving from camp to camp at a very much slower rate than was usual with me, and my days being spent in measuring river sections of the rocks, few incidents occurred suitable for reproduction here.

*December 16th.—Masiatu.*—My foot had become so bad again that I had to rest it for a couple of days here, and the Brahmin Zemindar of the place, hearing of my accident, proposed that his surgeon-in-ordinary, a Rajput, should make a professional visit. To this I agreed, and the man came into the tent for the purpose, a circle of admirers having assembled outside to see his treatment. His method amused me not a little, and his evident anxiety to appear quite equal to the occasion, in the sight of his patron, was intensely ludicrous. His first operation was to compress the prominent arteries and veins on my foot, and to make some learned remarks about them. He then minutely felt the extensor tendons of my toes, and proceeded to endeavour to make the said toes crack at the joints, using the end of his cloth to give him a good grip. This soon became exquisite torture, as my toes had not been accustomed to such manipulation, and I had to cry for mercy. At length he commenced the examination of the ankle, but to his method of doing so I was also compelled to object, as it threatened to more than neutralize the benefit I had derived from my two days' rest, for he gave my foot such sudden bends and jerks that I could stand his mode of treatment no longer. In the evening he came again, and was greatly gratified when I told him that the foot was less painful. He then applied some opium liniment, which had been prepared by my doctor; but he did not rub it into the ankle, as it might be expected that he would have done, but into the *sole* of the foot; before doing so he snuffed up the savour of the lotion with many indications of approval. As a fee for his consummate charlatanism I gave him a rupee, in spite of the protest of the Brahmin, who did not wish that he should be rewarded.

Though not in any way connected with the narrative, I cannot refrain from quoting here an extract from a newspaper, which I copied into my diary at this time. It is evident that the writer