Vazeeri Rupi, the silver country of the Vazeers, in Kulu

John Calvert

Kell., Bros Lith.

GOING TO THE WEDDING—A LIKENESS.

KULU
AND
THE SILVER COUNTRY
of the
VAZEERS.

FARMHOUSE. KULU VALLEY.

London E. & F. N. Spon, 48. Charing Cross.

VAZEERI RUPI,

THE SILVER COUNTRY OF THE VAZEERS,

IN

KULU:

ITS BEAUTIES, ANTIQUITIES, AND SILVER MINES.

INCLUDING

A TRIP OVER THE LOWER HIMALAYAH RANGE AND GLACIERS.

With numerous Illustrations.

By J. CALVERT, F.G.S., Mem. Inst. C.E.,

AUTHOR OF 'NOTES ON THE MINERAL WEALTH OF INDIA.'

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PREFACE.

THE outline of the present work originally appeared in 'The Englishman,' a weekly journal published in Calcutta, without the illustrations, and would have probably seen no further light than the *fire*, but for the flattering expressions of the Indian Press and the solicitations from persons of distinction for copies of the illustrations which accompanied the manuscript copy lent them. I am informed it was the perusal of this that induced Lord Mayo to alter his route and go through Kulu Valley, November, 1871.

When the late Sir R. Murchison asked me some years ago if I intended to publish the account of my travels in Africa, I replied that I did not think what I had *seen* would be sufficiently interesting. His remark was, "But there's great scope there for what you have *not* seen." Dr. Livingstone's book had not then appeared; but Gordon Cumming's *had*. My object in compiling this book has been as far as possible to describe by pen and pencil the beauties and interests of Kulu with *truth* if not with skill.

The nomenclature of places in India is perplexing

even to those familiar with the country and language. Thus one official calls it "Kooloo," which I prefer, but I have followed the Trigonometrical Survey Map, where it is marked as Kulu.

I had become somewhat acquainted with the mineral wealth of the Himalayahs when employed by Government some years ago to search for coal in Cashmere, but the Maharajah of Cashmere and the authorities of Chumba, also an adjoining independent State, discouraged the discovery of minerals, or virtually threw obstacles in the way of the mines being worked, the Resident of Chumba asking Rs. 40,000 to work an unopened lode.

The name of "Vazeeri Rupi" in British Kulu means "the silver country of the Vazeers," and the silver mines at Manikarn have long appeared in the maps. This excited my attention, and after some disputes about the right of search or prospecting, the Government very handsomely waived their claim to the mineral rights provided the Rajah would make terms, which with some difficulty was at last effected.

Government also granted a lease of the famous Shigri Mine, which has never yet been worked. The lode is antimony, from 15 to 20 feet wide of solid ore, capable of yielding 45*l.* per ton clear profit.

The mineral lodes in Vazeeri Rupi consist of silver-bearing lead, and copper lodes, and one or two of each were no doubt opened upon hundreds of years ago, but were built up and planted over to hide them from the Sikhs, and it has occupied over two years to trace out a few of the old workings and many more virgin lodes.

The Map is reduced from the Government Survey, with some trifling alterations and additions from actual survey.

The Illustrations, with one or two exceptions, are from my own pencil on the spot, the others from photographs by Bourne and Shephard, reproduced here by a special artist.

My thanks are especially due to T. D. Forsyth, Esq., for his encouragement at first, and to Col. Cox and other officials of the district for their support.

I am indebted also to Dr. Oldham, Chief Superintendent of the Geological Survey of India, and his assistants, for verifying my discoveries of the precious metals by chemical analysis, especially in the numerous lodes of silver-bearing lead.

These latter will form the richest mines that will be worked by the Company now forming.

From the time when Job declared "Surely there is a vein for the silver," and "The earth hath dust

of gold," the same rocks bear the same treasures, the same labour gives the same result, and the same perseverance brings the like reward.

The late Sir Roderick Murchison assures us in his 'Siluria,' "that, looking to the world at large, the auriferous veinstones in the lower Silurian rocks contained the greatest quantity of gold," and that "though gold is the more restricted (in its native distribution) of the precious metals, argentiferous lead, on the contrary, expands so largely downwards into the bowels of the rocks as to lead us to believe that it must yield enormous quantities of silver for ages to come."

J. CALVERT.

KULU, PUNJAB.

OPINIONS OF THE PRESS

TO THE FIRST EDITION.

"In good time for the many who are now setting their houses in order and preparing for two months in the hills, comes Mr. Calvert's work on Kulu, its beauties, antiquities, and mineral riches. Mr. Calvert has already come before the public as the author of occasional papers on the mineral wealth of India, which have been published in 'The Englishman' and in this journal. He is well known to be an enthusiast with reference to the capabilities of the country still undeveloped, and has, we may say, devoted the remainder of his life to working out the problem which he advocates. Calm officials, without a care for the future, content to write their dockets and draw their salaries, gaze with astonishment on such men as Mr. Calvert. He is incomprehensible to them. They speak of him as an adventurer, and shake their heads doubtfully over him and his projects. In India the spirit that led our forefathers through the forests of the west, and the bush of the south, is sadly wanting, but we do occasionally find it here and there represented. We find a few persevering men settled in the lovely hill valleys fighting with red-tape obstructions, native passiveness, and extraordinary natural difficulties. In the higher

valleys we find one or two men like Mr. Calvert fighting against the aforesaid red tape, still greater native stolidity and ignorance, and tenfold physical obstacles, yet confidently casting their lot there for good or evil. They may be ruined or perish, but the work of progress goes on; we are only slow to recognize the pioneers of its advance. What would Kangra have been were it not for the planters? In a few years we shall be able to say, what would Kulu have been were it not for the miners? But in spite of the general dreariness and sterility which is engendered in the strict slaves of routine, there is still enough of the old roving spirit in Anglo-Indians to drive them when on leave to break their trammels and betake themselves in a wild search for freedom to the mountain path, the glacier slide, or the jungle shade. Setting aside all commercial questions, Mr. Calvert's book on Kulu will be to that latter class a most acceptable contribution. But a few days ago we undertook to get for a friend bound for the hills information of the chief routes and works descriptive of the various hill districts. But after tapping every source we found we were still sadly deficient. We found that not a few travellers had written works on Cashmere all more or less excellent, but regarding the hills between Cashmere and Simla we found little or nothing. In another column, this very day, appears a letter from an officer wishing to know of these Kulu, Lahoul and Chumba routes, and

we think it would be a public service if such travellers as he would send to the local papers accounts of the various stages of their journeys and the chief difficulties to be overcome. It is not so much general descriptions of the beauties of a locality that are wanted for travellers. Men travel as often as not to overcome difficulty and relieve the weary mind rather than simply to admire mountain scenery, and, at any rate, everyone can judge of the beauties for himself; but we want to know the length of stages, the provision required, the accommodation and labour attainable, the mountain difficulties, and relative advantages of rival routes. Mr. Calvert's work comes in good time to supplement our limited knowledge of Kulu. He describes with the utmost minuteness the routes to Sultanpore both from Simla, and from Jullundur *viâ* Kangra, giving the length of the stages, the description of the road, the places of interest to be looked at, the accommodation attainable. From Sultanpore he gives the same minute account of the routes over the Rohtang and Hamta passes. It is of course beyond the scope of a short article to give an idea of either the routes themselves or the scenes of interest through which they lie. Nor have we room for the enthusiastic description given of the untold wealth of ore and gems these almost inaccessible rocks contain. But the usefulness of the book is, we fancy, so apparent that no traveller will think of visiting Kulu without providing himself with a copy.

The author has a pleasing chatty style, he is full of local information, and is evidently of a very observing turn of mind. We trust he will succeed in the undertaking he has started, and we trust also that the light he throws on this little-known valley may be the means of opening up good roads to it, and encouraging and guiding future travellers."—'*The Indian Public Opinion and Panjab Times.*'

KULU:

ITS BEAUTIES, ANTIQUITIES, AND SILVER MINES.

EN easy "marches," or about 115 miles north of Simla—the celebrated and delightful Sanitarium of the privileged Indian Officials during the summer months —and in the same longitude, 77° 22′ East, is the capital and valley of Kulu or Kooloo, wherein are the sources of the "Blue Beas River" and its tributary sister the "Parbutti."

Kulu Valley is noted for much beautiful scenery which even Cashmere cannot equal, and for *variety* it certainly bears the palm.

There are several approaches or entrances to Kulu Valley, that by way of Kangra and the "Bubu Pass".

being the easiest as far as the road being wide and of gradual ascent, to which is added the convenience of rest-houses at every stage, those in Mundi territory being of a superior kind; but the British are almost always leaky, dirty, and badly attended. The Bubu Pass is over 10,000 feet high, and is impassable during four months every winter on account of the snow and ice, in which case the tourist must enter by the Bajara Pass, 7000 feet high. This is sometimes called "Tihir" Pass, from the village of that name on the Mundi side.

Moorcroft calls the river that runs down from the upper part to Bajara the "Ruperari," probably from the village of Ropur on its left side. This route is two marches longer than by the way of the "Bubu," and passes the Salt Mines and the city of Mundi; but there are no rest-houses between Jitringee, where the road turns off, and Bajara.

From the summit of this Bajara Pass is the first view of Kulu from Mundi boundary. At the end of the khud is seen Kot Kandi Mountain and the Temple and village of Dyar on the southern end. Behind this are immense forests of dark-leaved pines, which make a fine contrast in the winter to the snow-covered background of Giraub Mountain, 12,670 feet high.

There is another entrance from the south of the valley, and as it is often adopted by tourists from Simla on their way to Cashmere, and seems rather a

favourite route, we propose to follow that, and point out the easiest way of visiting the most interesting spots and objects in the valley and adjacent country.

Starting from Simla by the route named in the Appendix at the end, and passing through some delightful scenery in the intermediate valleys, we reach Largi Rest-house, which is south of the "Saing" River and north of the "Chata;" we cross the river by a bridge, when it is not broken or carried away, by no means an unusual occurrence, in which case—without intending a pun — divers expedients are adopted to cross man and beast, which, though accompanied at times by some danger, but more fright, is seldom accompanied by worse results.

These wooden bridges are very picturesque, safe, and cheap; unlike bridges of masonry, or even iron, they can be built without the use of a boat or scaffolding, and even the abutments without mortar. The length of span which the principal timbers afford, at times 150 feet, and the height they are placed above the water, render them little liable to be injured by the timber and trees which are floated down the river during the occasional floods. The abutments, however, would be stronger if they were built at an angle of 45° to the stream, instead of at right angles, so as to turn off the huge masses of timber, which at times are carried down against them.

These bridges should be always hand-railed, but the incessant deflection of them, especially when

cattle pass over, renders that puzzling to a native workman. A rope put through uprights would answer very well.

The boarding should also be nailed securely down, as I remember a friend of mine tilting one up and falling between the main beams, which supported his arms till I came to pull him up. With the few passengers usually passing he might, at another time, have had to practise his skill in gymnastics; but a man in that position, with his legs kicking about below the bridge, is rather a comical sight.

When over this bridge, called Largi Bridge, we are in "Vazeeri Rupi," the silver country of the Vazeers, part of Kulu. That mountain above is called Rungal, and is 9067 feet above the level of the sea at the top. If you were to climb up here you would probably see the quarry of precious serpentine, also called "verd antique," "ophite," "Moona Marble," &c., being very common off the Lizards in Cornwall. It is a silicate of magnesia, whence its medicinal properties, a lovely sea-green stone used for ornamental purposes, and according to tradition being eaten for liver complaint. The late Lord Mayo was anxious for me to get a piece for him, 4 feet by 2, to have turned and carved into a vase at Agra, where they are clever at that kind of work.

We will, however, continue the road, leaving the energetic proprietor of the quarry above to make his fortune by it.

BRIDGE OVER THE SAING RIVER FROM [illegible]ARGI TO KULU.

On turning the corner we find the "Blue Beas" to our left, and are entering the Kulu Valley. At present it has rather the appearance of a deep khud or ravine, but it soon opens on the view as we stop to light a cheroot under that pepul tree on the road. Below this some hundred feet is a spring of salt water, or "brine," that would supply all the country round with that necessary of life, salt. By the evaporation of this liquid in large open troughs or tanks, or by letting it run from a height over sprigs or bushes, the salt is precipitated and crystallized, and water evaporated, the result being table salt. Now we must move on, as Government will not allow that to be worked without a duty of Rs. 3 per maund, lest it should oppose the sale of their salt, of which the Government keep the monopoly — a policy we condemn in the Maharajah of Cashmere, but practise ourselves. The Rajah of Mundi has large salt quarries 30 miles from here, which supply all the valley, but pays no duty to the British Government, though it was lately proposed he should. It is expected the duty will be remitted off this, as the sale of it would only injure the sale of the Mundi salt, which is very impure stuff, and pays no duty to the British Government.

We must move on, as the next rest-house is 13 miles from Largi.

Now the valley begins to open, although this side is somewhat precipitous for a mile or two farther.

The other side is the territory of the Rajah of Mundi, and that high mountain on the left is Tong, 9060 feet high.

The Rajah of Mundi is an independent prince, if a prince can be called independent who pays Rs. 10,000 a year to the Government, and has the privilege of a British official residing with him, not only to watch all he does, but all he does *not* do. I can, however, personally attest to his urbanity and attention to everyone favouring his capital with a visit, and I expect he is indebted for his considerate thoughtfulness to his late tutor and councillor, Mr. Clarke, the loss of whose presence and advice he must much regret. But we shall have more to say of Mundi hereafter, which is but two easy stages from the next rest-house at Bajara.

This little village to the right is Dilasni, not so large a village, I expect, as it was 300 years ago, when the miners from the copper mines above used to bring all the copper here to smelt till that Devil "Choke Damp" frightened them all away. However, if you go up the adjoining khud you can pick up plenty of copper ore, which to the uninitiated shows itself in a lustrous green or a bright gold-coloured metallic crystal, that has, like a golden Eve, lured more than one man to ruin and starvation, imagining he had found gold. It is said that Major Hay reported gold in Kulu on finding a quantity of "iron pyrites," and it is certain he is

not the last who made the fatal error. Gold may be always detected by this simple means,—it is malleable; no other yellow metal is so found but goes to powder when struck. Up above this khud, which exhibits the geological formation in a most interesting and distinct manner, is the village of Chisani, and above that numerous copper mines or indications, the green exudations from which show themselves for hundreds of yards, and bunches of ore have been worked out in many places to some little depth hundreds of years ago; the discovery of these old workings originated in finding pieces of ore in the khud below.

When these mines were worked the labour was compulsory, and was therefore thrown off the moment opportunity occurred, such as the incursion of antagonistic tribes, or may be the smelting was stopped for want of timber, which a few hundred years have amply made amends for now, or what is most probable, as with the Danes in Great Britain, the natives here never like to drive in farther than the sun shines, consequently the immense lode that can be traced for miles in the mountain above has been scarcely touched but in a few holes. These are called the Bilan Mines, being in the Bilan Kothi in Vazeeri Rupi, and have only lately been re-discovered. Specimens sent to the Exhibition at Lahore, 1863, are quoted as coming from "Bilan in Rupi."

There is no access to them up this khud, but there

is a path from Dilasni, and another from Badool farther on through the village of Chisani.

The green exudations can be seen from a great distance on the Mundi side opposite.

Come on. The road is wide and safe enough to canter, and the valley open to the left over the river, which soon becomes again deep below the road. Notice the limestone formation and those large blocks at the turning of the road just past this nullah. What fossils are these? a mass of oysters, or what? Break off some and send them to Dr. Oldham, and he'll put them on a shelf to bother some one else. Warington Smyth, Esq., kindly had a specimen I brought him cut and polished at Jermyn Street. He pronounced it *not* a fossil. The rock is composed of a mass of laminated formations about the size and shape of a breakfast-cup. One might fancy them a mass of petrified jelly-fish.

Go on, and the valley still widens; occasionally you will get a glimpse of the geological formation, which is very interesting if you bear in mind that the part below is limestone conglomerate, of pieces of a similar rock to that above.

That mountain to your right high above is "Jamere," 8973 feet, and I can say "beaucoup j'admire," for it is full of copper; but you can't get at it from this side.

Over the river, on the left, the mountains are thickly wooded, and, beside game, abound with wild

FERRY MEN IN KULU WITH INFLATED BUFFALO SKINS.

hog. Above, on the right, you will see a stratum of fine limestone conglomerate lying unconformably on limestone shale, which dips at an angle of 45° S.

Now we come to the ferry below Badool village. The natives here adopt the method of lashing a charpoy on two inflated buffalo skins, and convey you and all your belongings over with the greatest ease, if not pleasantness. But be you careful while collecting specimens of that conglomerate limestone that overhangs the ferry, which is surpassingly interesting, if not unique, that some of those hundreds of monkeys that hang about above the projecting rock do not, by accident or design, roll stones down on your head or toes, or, swinging carelessly from a branch, *pukero* your topie or your wife's chignon, for such things have been done. It is not only cruel but dangerous to shoot them, or even pelt them, for they can, and do, retaliate, sometimes with fatal results. They are, however, the pests of the orchard and the cornfield, where they commit great devastation.

I was completely nonplussed when I sent some of the *red* rock from here to Calcutta to be assured it was "veritable bricks and mortar." I don't believe it yet.

Come now, get on the charpoy, call the dogs, and over we go. See how deep the blue water is, and so clear you can see the white sand and every stone below, and see the image of that monkey swinging

from the tree above by his tail, the elasticity of his limbs enabling him to supply his daily wants without curtailing his gambols.

These monkeys may be seen about here and elsewhere in hundreds, some hugging their pretty little ones as if they really loved them.

Now we are in Mundi territory for a while, passing the village of Nagoad. The nullah from which this stream runs that we cross by this bridge leads to a fine shooting ground for pheasant, chikor, &c.: and they tell me, on those mountains are a peculiar deer like small oxen, but without horns. There are also large iron mines, which are worked by the Rajah of Mundi's people. The ore is iron sand.

At the farms up here some fine gram-fed sheep can be purchased at Rs. 8 each—sheep equal, I am told, to English.

We now ascend the road above one of the most beautiful turns in the Blue Beas, whose deep water below the road, cut in the precipitous and overhanging limestone rock, ever reflects that exquisite blue for which it is famous.

Descending to the banks of the Beas again many interesting stones may be *picked up*, though they don't pay to carry. The limestones here are peculiar in colour, and in some places impregnated with mineral, in which I found bismuth, a valuable metal, as well as manganese. This little rest-house at Thirri was built by the kind Rajah of Mundi for

the use of travellers delayed by the floods from crossing the ferry. There is no charge for this shelter, but there is at all those we are coming to in British territory. In this consideration the Rajah of Mundi sets a noble example, compared to the accommodation and charges of our own Government, that needs copying. It is a disgrace to the Government to charge for some of the "cattle sheds" they call rest-houses in Kulu, to wit, Manali, Pulchan, and Rolla; there is no rest-house at Dobie.

If you examine the overhanging limestone rocks to the left of this rest-house, there is a small lode of bismuth and manganese ore in the pink limestone matrix, which will afford a very unusual cabinet specimen, although too small to work at a profit.

We must leave that and the black marble too, for here ends the limestone formation, and hasten on towards Bajara Rest-house, about two short miles. High up on the left is a quarry of white micaceous decomposed slate, which is quarried to use as white-wash, and lower down the hill the white beacons show the boundary of the Mundi territory, which we pass at this stone wall and are again in Kulu; to the left is the tea-house and remains of what was intended for a tea-plantation, but proved a failure in tea, though the tea-making house above is still used occasionally.

We now descend into the old bed of the Bajara Khud and wheel round to the rest-house, which forms

a comfortable shelter, considering it is said to have been built for nothing, or next to it.

Take care of your dogs here, for I have seen a leopard attack a dog in the verandah during dinner time.

You must remain a day at least here, for you are in the widest if not the prettiest part of the valley. So see for yourself, or follow my descriptive guide.

There is a very nice walk for a mile or two up the khud here before breakfast, and you can even get a dip there under the rocks in a retired place, but never go without a stick at least, for some of the guddees, or shepherds' hill dogs, are sometimes in charge here over the flocks, and will boldly attack you; and some are so fierce, I have had to defend myself with my sword and kill, because I could not drive them off.

Some of these hill people reside during the winter in the caves excavated high up on the right—which hold not only families but *flocks* of sheep or goats—and return to their country during the summer months. These caves have, I expect, been dug out for some metallic mineral or the red clay that is found in this clayslate or sandstone shale formation. There are plenty of lodes of carbonate of iron in these hills, and some signs of lead.

There is an agent for the Tea Plantation Company resides at Bajara, who, if he fails in his tea, does not

Kell Bros lith.

ANCIENT FORT, BAJARA, AND TEA PLANTER'S HOUSE.

in his hospitality, where the generosity of the hostess is so amiably bestowed by the fair daughter; it would be impossible to omit the testimony which everyone bears to the kindness of the only European family resident at present in Kulu.

Here are the remains of the old fort of Bajara, which a horrid Vandalism has doomed to destruction for the sake of a few stones and rotten sticks of wood for fuel.

No doubt this interesting ruin of bygone days was much injured by the last siege of the Sikhs; but one would have thought anyone *purchasing it* would not have grudged a few rupees to have saved the only remaining fort of the kind in India from falling to decay.

It is probably the most perfect building of the kind extant, and should never have been sold by Government.

Centuries ago this fort must have bristled with the appurtenances of war, repelling the attacks of rapacious neighbours, or later still of such ruthless invaders as Runjeet Singh, who, it is said, at one time levied "black mail" on this place to the amount of two lacs of silver, the frail walls not being able to withstand his artillery, which

"Bellowed its deluge of immortal smash."

No doubt, however, many a native has there shown his great prowess in arms, fighting with sword in

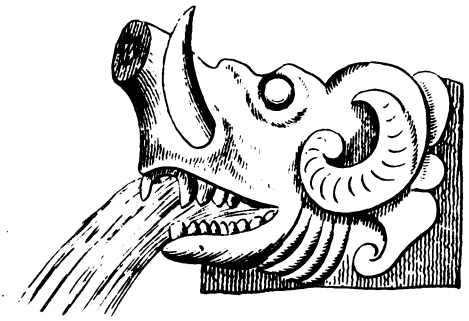
hand "for hearth and home," till made to "bite the dust."

No useless monument surmounts his grave, but for the sake of those who fought and bled, let the old stones stand.

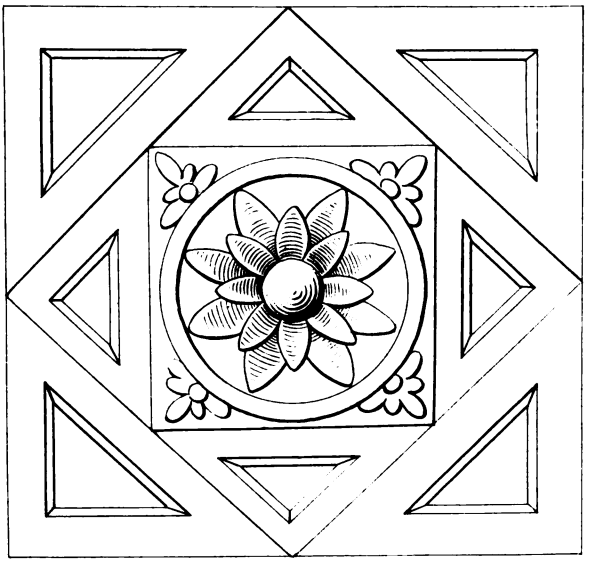
In those days this fort no doubt gave good shelter to its defenders, till modern artillery brought by Runjeet Singh and the bold warrior Sikhs left no alternative but to submit, *and pay*.

Some parts of this fort must have been well constructed and well adorned, as will be seen by a stone used as a step to the tea agent's bungalow, not the only stone by many, I expect, used in the construction of this and other adjacent village buildings. The few that are left show no want of skill in workmanship or design in the rich carvings that cover them.

Not to be despised in either sense is an ancient "gurgoil," or water-spout, now used at the entrance of a Bunjah's store on the hill above the bridge, carved in solid mica schist. It forms an interesting specimen of carving and design worthy a modern sculptor, although reported to be more than 800 years old; whether this formed a "gurgoil" for carrying the water off a roof is perhaps dubious, though it follows many a similar design in English, and especially Norman cathedrals and other buildings in Europe; or whether it formed, as is more probable, the conduit from a spring or water-course where the early maiden drew her morning draught, or the more



GURGOIL, CARVED IN MICA SCHIST STONE
FROM OLD FORT BAJARA, KULU.



STONE CEILING, BAJARA TEMPLE.

CARVED STONE 17"×12", FROM BAJAURA TEMPLE KULU.

J. Calvert
Nell Bros Lith London

tired traveller his refreshing bath, it is a very interesting relic of bygone ages in Kulu, and deserves a better position and protection than being thus "degraded, cast carelessly away."

Here no doubt dwelt the Negee, or chosen head man of the district or "Kohti," whose rights included certain authority over the unmarried daughters, as well as claim to certain "buckshees" and "dustoories," which increased the emulation for the important position.

But there are two other interesting memorials of antiquity, if not of superstition, close by. One is a temple and numerous detached carvings in the adjacent village. It was at one time reported there was a large amount of gold buried near this temple, and much digging ensued in search thereof, but with no avail, as may be supposed. It is impossible to say whether all the curiously carved stones originally formed one building, though now so scattered, or were part of some temple or building attached to the fort; they are well worth inspecting, although some of them are much mutilated and begrimed with filth. Most of the adjacent buildings seem to have been constructed out of stones belonging to some other building or temple.

The most perfect object, however, is a small temple of carved stone in an isolated spot to the east of the rest-house among the fields. This is comparatively perfect, considering it is supposed to be eight or nine

hundred years old; the injuries to the carvings are not the result of time, but the wantonness of the Mahomedans, who from religious prejudice destroy all sculptured figures. Moorcroft relates (p. 169) that these sculptures were mutilated by the soldiers of the grandfather of Sandsar Chand when he invaded Kulu.

Bajara Temple is of a square plan inside.

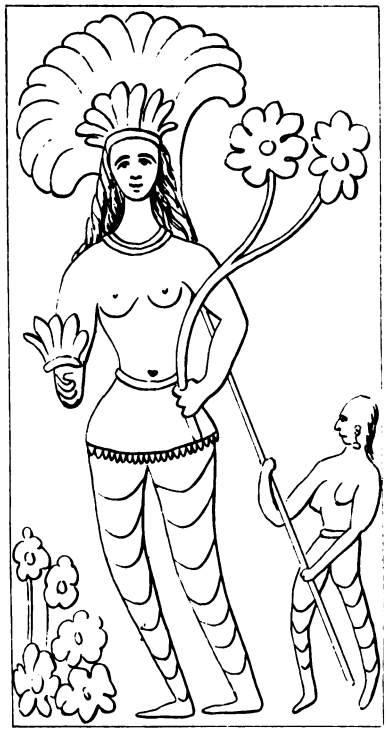
The door and entrance porch is to the east side, and there are recesses on each of the three other sides in which are bas-reliefs. In the southern recess is the Elephant God, in the western the Goddess "Bowanne atpoojee" with her eight arms.

The figure to the north holds a long sword in her left hand, and a sort of rosette in her right; at her feet small devils are fighting.

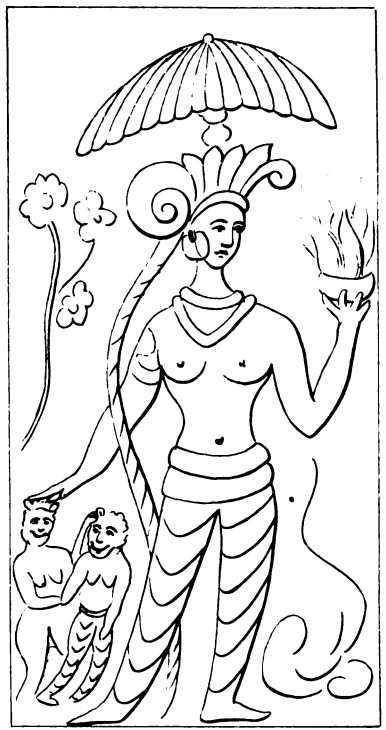
On the entrance door jambs are figures whose legs are in plate armour; they have umbrellas over their heads, held in one instance by a small figure in armour; the other has more small devils fighting at her feet. They are all sadly defaced from mere wantonness.

The inscriptions on the door jambs *may* be more recent than the building, and merely note the visit of some person on pilgrimage who considered himself important; the style is like Sanscrit.

I have made a number of drawings of various carved stones in this temple, some of the figures being 4 feet high; and have copied some of the inscription,



DOORWAY BAJAURA TEMPLE.



DOORWAY BAJAURA TEMPLE.

BAS RELEIF, HEIGHT 5 FEET.

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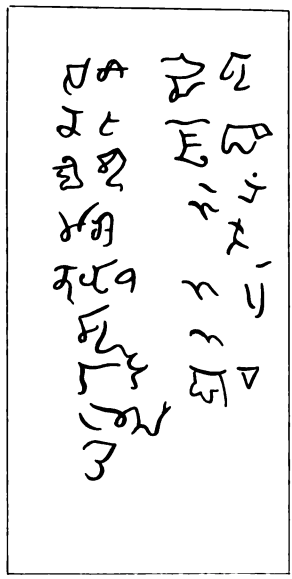

PART OF AN INSCRIPTION IN TEMPLE BAJARA KULU

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LARGER TEMPLE, JUGGET SOOKHT KULU

SUNK ORNAMENT BELOW BUNGALOW

Page 65.

Kell Bro[s] Lith London

which no doubt can be deciphered by the learned; at least I remember Mr. Fergusson telling me at the Geological Society's meeting in London, that there were no inscriptions in India that could not be deciphered. This and similar buildings are constructed without mortar between the stones, but every stone has "dressed" faces, joints and "bed" fitting in its assigned place with great accuracy throughout—there being no "filling in" of rubbish so common with the P. W. Department, which evidently had no existence in those times. Nor were the architects who designed these enduring examples of their skill sent adrift on the world as unfit for further work at forty years of age, as in India now. No architect can earn a living in India, all buildings are designed by military men.*

The carving on one of the stones represents "Barachq," a figure half angel, half bird; I have seen similar effigies or figures beautifully executed in Delhi, at the Mohurrum festival.

It is related that "a French gentleman endeavoured to purchase this temple, with a view to having it removed;" but it would not be an impossibility to take casts of some of the carvings, though much defaced and covered with lichens.

Excepting the profiles of the three-faced Hindu triad, Brahma, Vishnu and Siva, which appears on

* See Fergusson's 'Architecture,' Section "India." Since this was written an Order in Council forbids the appointment of anyone above twenty-five years of age in the uncovenanted service.

each side, as also in front of the temple at Jugget Sookht, I have not seen similar carvings anywhere else. Whereas in Mundi territory and lower South, the temples are nearly all built after the same model.

At the Holy Lake in Riwalsir,* below Mundi city, I found some masons quarrying the rocks and building a temple very much like one I saw on the banks of the Beas below Nadoun. I inquired if the head mason had any drawing from which he executed the work; his reply was "No, we build on the same plan, and carve the same ornaments and designs as our fathers did before us; each man knows his duty and the work consigned to him:" a kind of practical Freemasonry that is said to have prevailed in Europe when the buildings, such as our early cathedrals, were erected, especially Salisbury Cathedral.

This temple has suffered much from lightning and earthquake, which has severed one section from the main building about six inches all the way down, the stones remaining, however, unbroken and still "toothed" into each other.

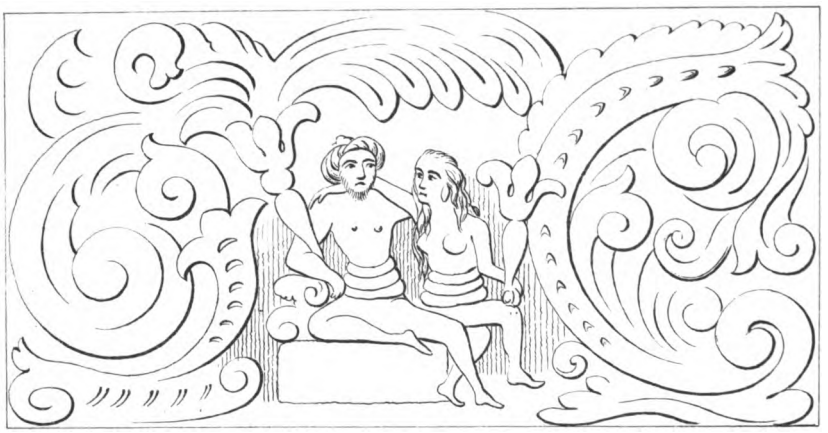
Hereon also "the mower whets his scythe," heedless of the execrations of the antiquary and archæologist, and thus wantonly defaces the most prominent stones.

The greatest injury, however, has been caused by lightning striking the iron rod fixed on the top. A

* These temples and the sacred lake of fish are probably a remnant of the fish-worship so prevalent throughout Syria, where temples and shrines were erected in honour of the fish goddess "Ducita."

ANCIENT TEMPLE AT BAJARA.

ANGELS ON STONE 17 × 12, BARACHQ
OUTSIDE BAJARA TEMPLE.



CARVED STONE FROM BAJAURA FORT, KULU.

CARVED STONE OUTSIDE BAJAURA TEMPLE, KULU. 8 × 20.

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J. Calvert

Keil Bro: Lith. London

severe earthquake is on record which occurred here not a great while since, and will account for this and other similar phenomena.

At Jugget Sookht Temple higher up the valley, the largest stone, three or four feet wide, has shifted about ten inches to the north, no other stone being displaced.

Sir H. De la Beche mentions similar occurrences, and I remember noticing the mullions of the windows of Kanturk Castle, Co. Cork, Ireland, have been turned a quarter of the way round without affecting the transoms or sills.

The altar inside is provided with gutters for the blood, but at present the sacrifices seem limited to some unfortunate mouse caught in the corn bin, or at other times of a few simple flowers from the field. At times, however, as we shall see hereafter, blood can flow freely enough.

There is a good view both up and down the valley from the adjacent high land.

The view to the east of Kot Kandi across the river is not without interest; the summit is about 7000 feet. But if seen from about a mile and a half up "Bajara Khud" it is better still, especially in the cold season, when the dark forests contrast so well with the more distant snowy heights of the Girault Mountain (12,070). On the right end of the ridge is the temple and village of Duyar above the limestone rock, which ceases here; below Kot Kandi are nume-

rous large villages, and several rich lodes of copper, iron, and manganese, never yet worked; there is also good slate. The jungle and grass on this hill looks, of course, red and parched up in winter, but is beautifully green after the rains; there is, however, a great want of water on account of the geological strata dipping down in the opposite direction.

Looking across more southerly, is the Harla Khud, and on the other side of it the before-mentioned Jamere; there is a fair road up this khud, which abounds in copper ore from the Narole and other mines here; there are also fine white marble slabs or tiles in abundance from the limestone shales. This khud leads up to Kasal, 11,795, and is said to abound with game.

The Beas River is fordable in several places about here according to the season, offering facilities for crossing to the other side; during the heat and floods, however, some alteration takes place in the position where the ferrymen ply.

We will now leave Bajara, keeping on the road, as there is not much sport in the hills to the west, or left, unless you venture up to Kokan, 8520 feet, and its neighbouring forests, for pheasant and chikor. No shooting, however, is allowed here out of season.

Three miles from Bajara to the left of the road is a small hut temple under a tree, interesting so far only as being the deposit of numerous tombs or stones erected in memory of certain good and faithful

wives who underwent Suttee with their beloved husbands' corpses years ago; there are many more at Nugger, but all are very inferior in execution to any carvings at the other temples like Bajara, which are of great merit both in artistic design as well as execution. Some of the scroll-work might do credit even in present days to a school of design; these, however, are apparently chopped out of sand-stone by a village mason only, and usually represent the Rajah on horse, and as many figures below or above as were sacrificed at his death. There are no attempts at any inscription whatever.

Farther on is the village of Shumshee, which is so poor that there is no roof over the temple altar in the middle of the road.

In the river near here gold is washed for at certain seasons, but the abundance of large rocks in the bed prevents the sand being reached, and makes the success very small.

There is no doubt experienced gold-washers could obtain enough gold from this river to provide an ample living, but they ask too much for it when they get it,—never under Rs. 15 per tolah, impurities and all.

It is a certain fact that all the rivers in the Punjab, excepting the Ravee, produce gold; the Indus in particular.

"Twenty-seven kos. north of Sultanpur in Kulu, over the Chang Chinmo Pass, lies the Aksai chin,

or, as the term implies, the great Chinese white desert or plain. It extends into Chinese Tartary. There are several lakes and gold mines in it. The gold mine of Ichidi, in the direction of Karia, one of the principal towns of Khotan, is one of the largest, where 1500 men (Khutanés) are constantly working for six months in the year, — June to November.

"Each man has to pay a tax of 1 'ser' or 3 tolahs of gold yearly for the Emperor of China.

"It is stated that the people in the mountainous districts to the north adopt the following ingenious method of collecting gold dust in the otherwise inaccessible precipices and ravines:—

"Previous to driving their flocks and herds of goats and sheep out to graze daily, they cover their feet with some gummy or other glutinous matter, especially between the hoofs, and on their being collected in the evening, wash it off every one; and from the dirt so collected they actually derive some little amount of gold dust collected from places where it is impossible for human foot to climb.

"These people, living on a little grain which their sheep carry for them in bags on their backs, and the milk of their herd for drink, traverse over vast mountainous regions of the Himalayahs unexplored by anyone else, and affording during the summer months sufficient pasturage to supply their flocks, while the lower lands are parched up, until the

returning snow compels them to descend to the freshly-watered and more verdant plains.

"This gold is, no doubt, produced by the disintegration of auriferous veins in the rocks, which are for many months in the year subjected to heavy avalanches of snow and 'piteous storms'; and their little store of gold affords them some small ornament for the ears or noses of their females, or is kept as a last resource for time of want,—if such people ever can want, who find their meat, drink, and clothing provided for them by their flocks, and a home in the mountain cave."*

There is usually a ferry at work over the river about here.

Opposite here is the entrance to the Parbutti, which is reached by crossing at this ferry; and the high mountain to the north of it is Bijli, on the summit of which, 8070 feet high, is a temple to the goddess of lightning. It is easily accessible from Sultanpur by crossing the bridge there, and the view will amply repay for the trouble.

After passing along a pleasant avenue of trees, and following the river bank, we cross the Maol Khud; here immense blocks of copper lodes have been brought down from *somewhere* ages ago. Continuing along the river bed we begin to ascend with the road high above it, and after passing a spring of water under some large trees, the road is cut in the

* *Vide* 'Notes on the Mineral Wealth of India,' by John Calvert, F.G.S.

solid sandstone, and though precipitous and high above the river is quite safe.

From here may be seen the celebrated Sona-pani Glacier in Lahoul, and two mountains 21,000 and 22,000 feet high.

Nearer, and looking very picturesque, at the foot of the spur of the facing mountain, is Sultanpur, the present capital of Kulu, and a place of some commerce every autumn. It is also the residence of Rae Dhulep Singh, the present Rae, who is a minor son of the late Rae Jyan Singh, who died from an accident in 1870.

The Maidan south of the city has a fine appearance, and is kept free from buildings or cultivation for the especial convenience of the Devil Gods, Munders, Juggernauts, or Davis, of which it is said there are at least 150 in the valley, the lands with which they are endowed forming no inconsiderable portion of the gross area under cultivation.

They are maintained under the special protection of a benignant and liberal Christian Government, who will not permit a Christian to sacrifice his beef at Christmas, lest the Juggernauts should take offence!

Before reaching this, we pass Rile Khud to the left, where, high up, are large lodes of copper ore cropping out from the projecting rock.

Continuing the road, on each side of which are peach and apricot trees in abundance, we pass over

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VIEW OF SULTANPUR, KULU.

the Maidan, and in the left out-of-the-way corner find the rest-house of Sultanpur.

Here, it is reported, you may "get anything," that is, provided you submit to the Assistant-Commissioner's prices, which are most exorbitant, at least were so in 1869–70. When the late Assistant-Commissioner was not residing the natives were more ready and willing to let us have all we wanted at moderate charges, although the tariff both for labour and provisions has been raised unnecessarily.

Opposite the rest-house is the Tehseel, near which is a small garden, "used to utilize the labour of the prisoners," by planting garlic and shucking peas for the Tehseel baboos. This was the official excuse given me for refusing to sell it me after it had been promised by the Assistant-Commissioner.

Those who have dogs must take care of them here, as leopards abound. I witnessed a fight between two on the hill at the back of the rest-house, which lasted for nearly twenty minutes, when they lost footing, and rolled down the mountain and separated.

At another time our party consisted of two ladies and two gentlemen; we had walked up the adjoining khud for more than a mile, and were close home, the dogs having hastened in advance for their evening meal, and the servants and weapons being all far in front except one dog, which we saw quite close above the road fighting with an old brown leopard, that I at first took for a small cow. The dog was on his

hind legs, and evidently had hold of the leopard by the ear or lip. On our shouting out—for we could do nothing else—the leopard climbed up the mountain, and the dog, who seemed bereft of reason with fright, was found to have a longitudinal gash down his throat, no doubt caused by the leopard's claw. He lived, however, to be effectually chawed up the next fight.

Leopards commonly prowl about the city at night for dogs and *babies;* and it is not till the natives have lost a cow or calf, which they value more than a baby I believe, that they will combine to attack them.

The leopards, however, have a partiality for dogs, which are not safe in the verandah even at night.

Near the before-mentioned fruit garden will be seen a quantity of boulders placed in circles or kraals, apparently for the protection of cattle at night. Here was encamped the army of Runjeet Singh when he came to claim black mail, but it is evident they existed and in that form long before his time, as the lichens with which they are covered would attest, and might have been erected and used by the Lahoul people and others who seek this valley all the winter months, before there was accommodation in the bazaar to the north of the town as now.

The appearance of the surfaces of hundreds of the boulders here are a convincing proof that many thousand "curries" have been ground on them, and

THE DEVIL GOD IS TAKEN OUT WITH TRUMPETS AND SHAWMS.

many small round holes have been bored to serve the purpose of lamps.

There is, to the north of the rest-house, and at the corner of the road leading up the khud, a block of sandstone covered with a long inscription, which, could we decipher, might interest us much if not instruct. The round holes drilled in it are, I presume, to burn a wick in for light; probably it may tell of some great battle fought on that Maidan ages ago.

Twice a year the Maidan is covered with the Munders, or Devil Gods, who come from all parts of Kulu and the adjacent country for three days' fair or feast, and muster above a hundred, all accompanied by "tumtums," "trumpets, and shawms," some of which are of solid silver in the shape of the letter S joining in the middle, so that the mouth-piece end packs into the larger end when not in use; added to these is a species of "pibroch" with a cold, making, as Sydney Smith said of the St. Paul's organist, "a noise like a whipt whining cur."

Hour after hour this awful din continues until each god has paid his respects to the other village gods, and they separate into batches for the night in various parts of the Maidan.

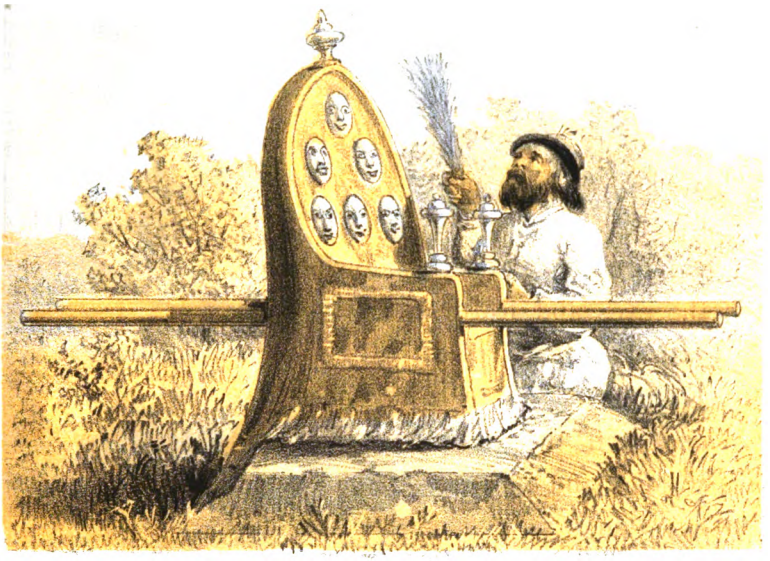
The construction of the "Davi," or Devil God, in Kulu is in this way:—A kind of ornamental chair is supported on four men's shoulders by long bamboos; the chair is covered with rich silk or shawls, usually of red colour, with deep fringes of silver or gold,

and where the back cushion is usually placed in our chairs are fixed from three to ten or more silver masks or faces of various sizes, according to the wealth of the village to which it belongs, and the value of its landed endowments; the masks have the eyes and features rudely painted on the silver, and do not do credit at all to the silversmiths of Kulu, who can turn out most excellent work, especially in the silver necklaces and tiaras for the women, and the blue enamel medals worn by almost every man.

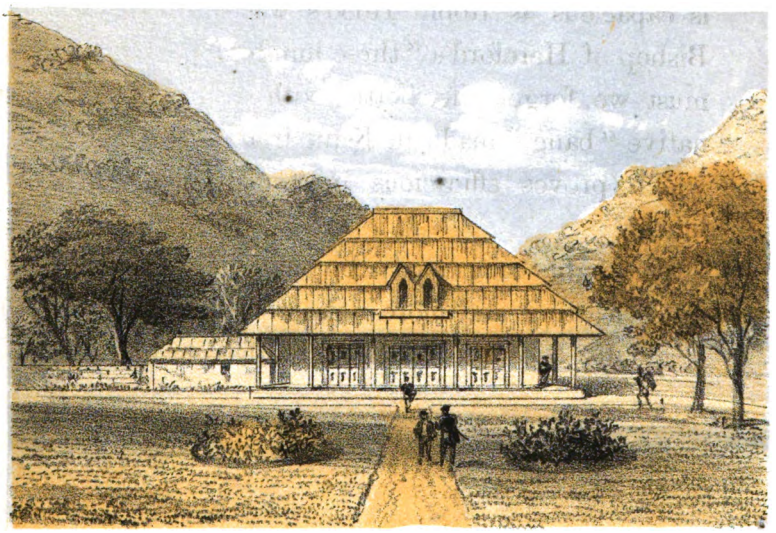
Below this chair, it must be noted, is a large receptacle or bag, hid by the ornamental valance or hangings, in which the donations to the devil and the prog of the priests and followers are carried. This is capacious as Robin Hood's wallet, that held the Bishop of Hereford's "three hundred pounds." Nor must we forget the bottle with a "wee drop" of native "bang," made in Kulu from a common herb, which proves efficacious in "stealing away men's brains."

At night each party bivouacs out, there being much feasting and more noise round a fire; the din gradually becomes less and the debauchery greater, being only comparable to a small "Barthelemy Fair." It is a great pity this "religious meeting" could not be transferred for three days to Exeter Hall.

The Devil's avocations are not, however, limited to these two great "Malees." He must keep the



THE DEVIL GOD



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RIESON TEA GARDEN.

"wallet" full at any cost. If it rains too much, or does not rain at all, he can find an excuse, and out the whole procession comes, climbing the mountain side, and turning out the farmer's wife something in this way: "No rain! who wonders at it? You had large crops last time, and never send Davi a bit of corn. Your sheep dropped plenty, but you never send the Devil one lamb. Now I want one rupee eight annas. Ah! it's of no use your saying you have only a rupee in the world; I'll soon turn up the pot underground with the money in it. I've spoken to the Devil, and he says it is such as you that keep the rain away. Speak again? Well, I will; but you must give me one of those new shawls for the cold weather, and ten seers of fine flour, and then I'll speak to the Devil for you about the weather." This is really the kind of thing that goes on, the villagers having the greatest terror of Davi and the priests, and yet it is no more than Captain Marryat describes, and I have heard preached by the illiterate negroes in the West Indies. "Aye, Mr. Butcher, you kill sheep twice a week, and neber send me one bit of 'libber.' Wha you tink you go to?"

That thing you see on wheels on the Maidan in front of the rest-house, is the car which carries the Kulu Devil or Juggernaut about on these occasions; but his holiness is not like the others, it is a gold box, or a gold image in a box. I have only seen the latter, and when this was brought up the hill from

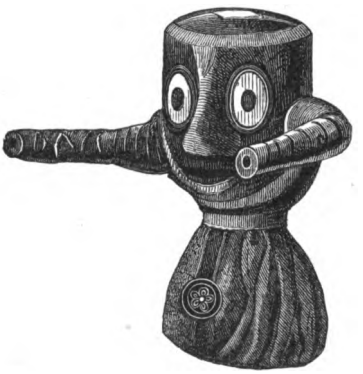
the temple in the city, and deposited in this carriage, which is all covered with crimson and gold, the late Rae made his obeisance to it, and presented some gold mohurs. It was then surrounded by the attendants and priests, and dragged by a number of Kulu people all over the Maidan, visiting the wealthy who were encamped in handsome tents, and no doubt had to "shell out" the pecuniary gratification for the ever-hungry Davi, who with all his influence, as they believe, with the clerk of the weather, cannot always prevent a shower of rain putting the whole community, which may at times be estimated at 6000 people, into one general *sauve qui peut* to get under shelter.

The appearance of the several processions leaving on the last day is very picturesque, as they wind up the mountain sides in all directions, drums beating, flags flying, and heads aching if not hearts.

The following account is from Fergusson's 'Picturesque Architecture of Hindostan,' page 25 :—

"The images of the gods (Jugganath at Puri) are placed on a throne in the dark chamber under the great tower, where, of course, they are not visible to Europeans; but they are brought out once a year, when all the world may feast their eyes on their hideousness, and it would perhaps be difficult to imagine a scene in which the ludicrous and absurd so completely overpowers the sublimity that must always accompany an earnest act of adoration on the part of

a hundred thousand human beings, who are usually congregated there on these occasions. The image of Jugganath is a single block of wood, 6 feet in length and about the same in girth, formed into a bust. As long as his progress is down the steps of the temple all goes on smoothly, but as the block is of some weight it is no such easy matter to get him through the deep mud of the level street. To effect this the lower part of the image is always somewhat rounded, and the attendants swing him backwards and forwards till the oscillatory motion is deemed sufficient, when those in front, who have hold on a rope which is tied round his waist, give a pull, those behind a push, and his godship is thus hitched on a few yards, when there is a pause to allow the chowrie-bearers to flap away the flies and the fan-bearers to cool the god after the exertion.



"Then another pull and a swing, a shove and a shout; and this is repeated again and again, till he is dragged up the inclined plane into his car. His chest, containing all his requisites for his journey, is then brought forth (in size and appearance very like a midshipman's sea-chest of the present day). In

this are not only his clothes and food, but his *hands* and *feet*, which *he* uses as we mortals do our boots and gloves,—to be put on only when wanted; and after being washed and dressed, he should of course proceed on his journey. The fates, however, were not propitious to the poor god, for the next morning his car had only advanced a few yards, and stuck fast in the mud on the spot where I sketched it on the following day. That night it ran up against a house, and as there are no means of turning the car, they were obliged to *pull the house down* and pass over the ruins; and as besides this the roads were heavy, the god was three days in reaching his country-house, the Goundicha Nour, at the distance of half a mile from the temple."

Kulu men are allowed more wives than one, and as the females do most of the field labour except ploughing, the more wives a man can provide for, the better he gets off. At the same time some women marry several husbands. When at Manali I was told of one who married three brothers; but the youngest soon destroyed himself from jealousy. Certain it is that the ladies are more notorious for their fine figures and faces than for their virtue; and more than one "officer on leave" has got a wigging for casting "sweet glances" at them, by the late censor of morals, the former Assistant-Commissioner of Kulu, which, however, was not entirely approved by Lord Mayo.

Kell, Bros Litu.

THE SILVER TIARA.—A NATIVE LADY.

The head-dress of the women is very picturesque, and the English fashion may be supposed to have been copied from the manner in which they wear the little round scarlet cap on the very front of their forehead over their eyes, a style universally adopted in England lately.

On the occasion of one Mela I was permitted to take sketches of some of those whose dress I considered the most characteristic or picturesque.

The men, as well as women, are often seen spinning even as they travel along the road, and their clothes are nicely made up by the women; they wear a crimson or black woollen skull-cap with a roll round the head, and usually some straw ornament or flower on the left side. Their thick woollen clothes are usually fastened by large silver pins, and nearly everyone wears a jewel of silver with a figure of a devil enamelled in blue on it, a style of work they are very clever in. Their faith seems to be, keep on good terms with the devil, God will never do you any harm.

They make snow-shoes of straw in a very ingenious way, and these are even preferred by Europeans when sporting on the snowy hills; but strong stockings or socks must be worn with them.

A good trade is done here at times, especially in the autumn, when the Yarkandee merchants arrive

with their goods to exchange for European. There is a great trade also in borax, some of which is purified in the lower bazaar before being sent to the plains; carpets, churus, and even gold is brought from the plains beyond Lahoul, where there are as many as 1500 persons employed at the diggings for six months in the year.

The appearance of the Yarkandees and Lahoul people is not prepossessing, the latter especially are most disgusting,—being filthy, dirty, and forward to impudence, as well as drunken; they hang about Kulu all the winter to the annoyance of everyone and the danger of movable commodities. I found it was not safe to pass through them without a fair shillaly at hand, or even something more effective, and was once nearly pulled from my pony while crossing the Sultanpur Maidan by a drunken lot of Lahouls, who escaped for want of something more than a fist to mark them with.

Leaving the rest-house at Sultanpur we proceed down the road into the lower bazaar and bed of the river: here are some very fine citron trees; and the view of the bridges, as we near the river, is very pretty.

The ascent to the town is not quite so bad as the descent on the other side; the Post Office is in a *hole* in the entrance gate, and the postmaster is obliged, by *virtue of his office* (?), to live in the room above, up a ladder.

THE LAHOUL BAZAAR BELOW SULTANPUR ON THE BEAS.

No stamps are sold at the Post Office, you must go to the Tehseel, where, like myself on more occasions than one, you may have to wait for days before anyone attends to sell them, or even to answer the door. I have known a tourist detained five days here before he could change a money-order; and I know for a fact that the poor Dak runners who have to pass over from Kulu to Palumpore every day, all weathers, had not received a pice of pay for six months when I left!

The Tehseel of Kulu comprises Kulu Proper and Vazeeri Rupi; contains 46,000 inhabitants, 3000 of which are in Vazeeri Rupi, and 1110 in the town of Sultanpur.

The inhabitants are quiet and peaceable, if not industrious; like many other natives, however, the presence of the Commissioner incites them to litigation, which, but for the opportunity, they would not indulge in. The Kutcherry to them is like the law court or the whisky shop to an Irishman: he cannot pass the one without having a "drop of potheen," and he is never happy unless he has some lawsuit on the tapis, especially about an inch of "land," for which it is notorious either of them would "sell his soul."

There is a fair school whose pupils learn cricket among other things; and in '69 there was an educational officer on Rs. 800 per mensem resident in the valley to look after the pupils.

A serai has lately been erected by Government

with the aid of *forced* labour! for the Yarkand people visiting Kulu; but it is very unhealthy, being down in a complete swamp, whose deadly malaria carries off the stray population every autumn after the rains; this might be drained at a trifling cost if the convicts were not so hard-worked at that garlic and green peas in the Tehseel garden.

Sultanpur is 4092 feet above sea level, Bijli 8070, and those high peaks over the river to the right, "Krinchall" or Milander Peak, 11,443; and the farther one, "Rumetu," 12,084.

The large tree on the summit of the ridge opposite Sultanpur can be seen from Karowne ten miles up the Sivbarri River or Bubu Khud, and on the opposite side from the Parbutti mountains and valley.

The right bank or west side of the river Beas is the most agreeable to travel the next stage, the road being wide and good, and for the most part offering a pleasant view, especially of the richly-wooded islands in the river and the opposite bank.

As we ascend the valley, the idea of its once having been a great glacier or lake becomes more apparent and decided.

Just as we are about to rise a second time from the edge of the river, and about six miles from Sultanpur, we see, peeping over the top of the hill on the left, the pretty cottage of Bundrole, built at great cost by a retired officer for his residence; the ascent is somewhat steep, but those who have his acquaintance are

amply compensated for the climb by the happiness of his agreeable society.

There was above his house, some height up, a landslip, of which the native tradition is as follows :—

One evening an old woman came to the village that was there two or three years ago only, and demanded shelter for the night; this was, however, refused her, and she cursed the village, and went to the hut of a Dagi, or low-caste man, in another village a little lower down the hill, who extended to her the hospitality she had in vain sought at the first village. On her asking for some milk the Dagi lamented that he had none to give her. The old woman then desired him to go and look in the stable; he did so, and there found a beautiful white cow that he had never seen before, and whose milk not only supplied the old woman, but also himself and his family, a very unusual thing in this land of small and but little milk-giving cattle.

In the morning the old woman and cow had both disappeared, and the village above had been destroyed by a landslip, of which the site is still visible. The natives say this woman was the "Spirit of the Mountain."

Three miles farther up the river, the next house is seen above a small and young tea plantation; this is Rieson, the property of the same tea proprietors whose success here is not better than at other places. The house is rather in a hole, and too much sur-

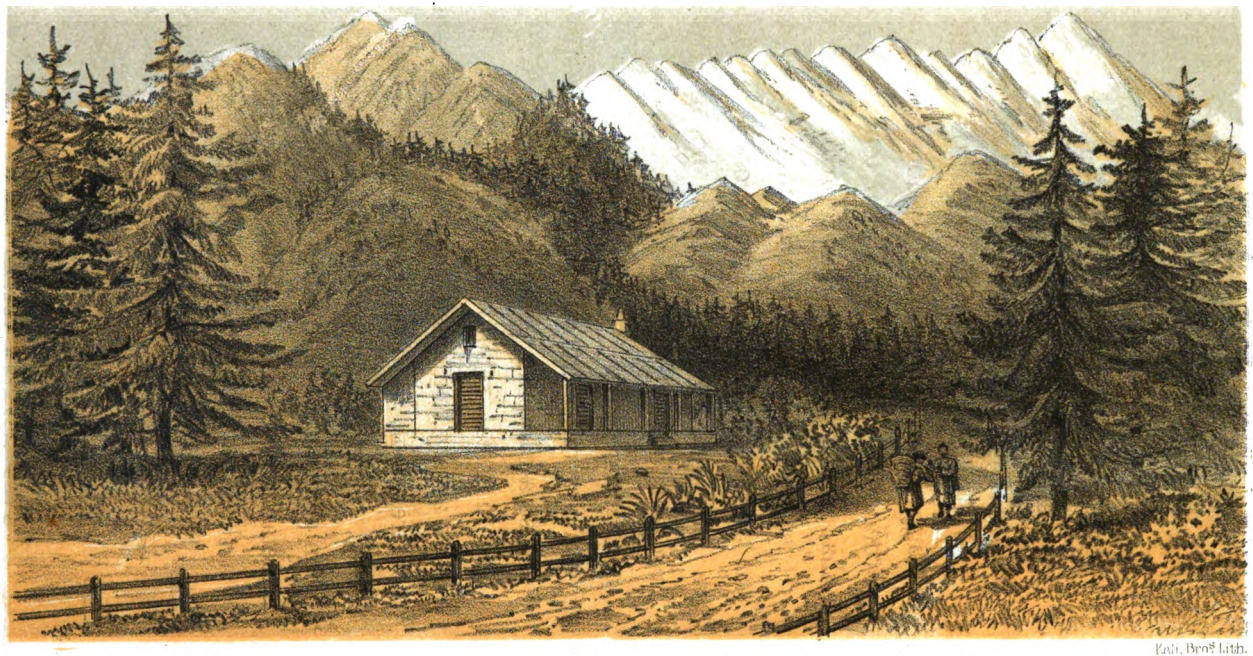
rounded by paddy fields, or it would be a desirable spot.

A little farther on, and close on the road, is "Dobie House," and the camping ground opposite. This house is usually let to some visitor every year.

Opposite is the bridge over the river, leading to Nugger, but there is no rest-house or accommodation other than space to pitch your tent there, and hardly that; but for tourists not returning down the valley it is better to take this road to Nugger, and to camp at Jugget Sookht, or even cross to Manali, but it is a long march,—but a much better road than our present one along the river, where the view is confined.

A few miles from Dobie are the hot springs, where is also a camping ground. These springs and baths are in great repute and use with the natives, but have a very foul smell, the water never being emptied entirely out, however many natives may use it in a day. The spring evidently emanates from the decomposition of sulphuret pyrites in the adjoining metamorphic rock. There are others at Bahist farther on, which we shall refer to.

The road now continues along the river banks, shaded by numberless trees, but is neither too wide nor too smooth. After passing a temporary bridge across, the river from Jugget Sookht runs into the Beas with great force, and on to a sloping bed; and the effect of the thickly-wooded bank and the foaming



Kell, Bros Lith.

REST HOUSE AT MANALI, KULU

water rushing down the rocky bed is something really charming. It is a great pity Bourne and Shephard, when they were in this valley taking views, had no one to point out to them this and similar beauties of Nature to copy, whereas some of those they did photograph are places of little or no beauty or interest.

We still continue along this shady road by the river side, till a sudden rise brings you into the Deodar forest of Manali, which is gradually yielding to the axe of the Forest Department, as it did years ago to that of the Sikhs.

Here is a modest little rest-house, which, however, is not available if the Assistant-Commissioner is residing in the valley, for, though he has Nugger Castle, all the rest-houses are claimed by him also for offices.

In the forest on the adjacent hill-side, hid in a mass of huge Deodar pines, is the Temple of Dungree, of which I have made a sketch on the occasion of a large festival and sacrifice in 1869, when a buffalo and 150 sheep and goats were sacrificed in front to the Davi or Juggernath, or Devil God.

This building is almost entirely of Deodar timber, and is erected over a huge naturally projecting rock, which is often the case; but there is nothing inside worth seeing.

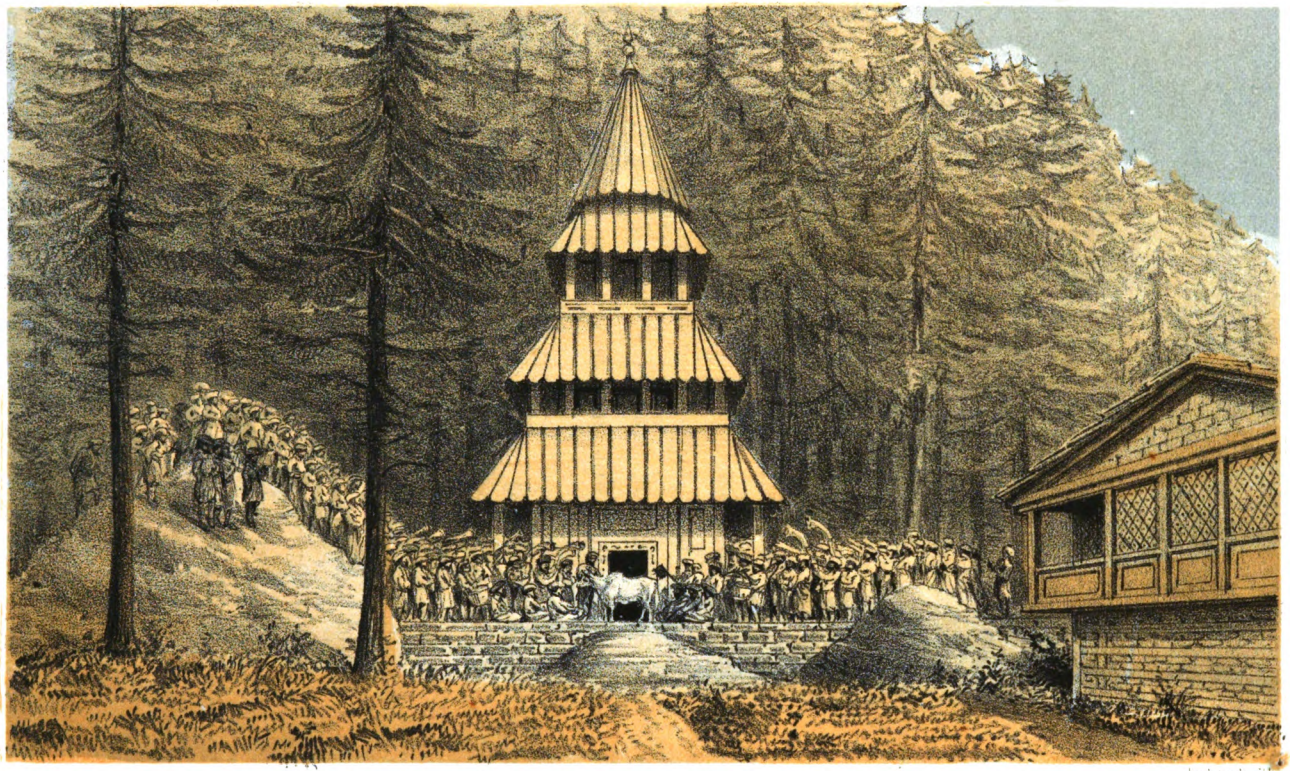
The temple is said to be over 600 years old. The front is elaborately carved, but some of the subjects

are so grossly indecent they could not be copied. This filthy indecency and many others are particularly protected by a special clause in the Penal Code that permits the public exhibition of statues, carving, or pictures, of the most libidinous kind, provided they are connected with some religious temple or worship.

The sacrifice in this instance took place under the patronage of a European, but not an Englishman.

The people having assembled from all parts of the valley and adjacent villages, dressed in their handsomest dresses and jewels, some of which are of no mean value, the headmen and priests assembled in front of the temple amid the shouts of the people, the bellowing of trumpets and horns, the shrill screech of the pipe, and the beating of drums and cymbals.

Having cleared half a circle round the door, on the left of which sat our German patron, the priests sat down on the stone-paved ground, and began chanting and jabbering some invocation to the Devil God that I could not understand. To increase their excitement, a dish—always provided and carried before the god—was brought, and fire put in it; on the fire a quantity of some wild herb was thrown, which produced volumes of smoke, over which the performers held their heads till the blood came into their eyes and an intoxicated excitement overcame them. Suddenly they all let their long hair fall loose and shook it over their faces, and swung their heads round and



SACRIFICE AT DUNGREE TEMPLE.

round, giving them a most demoniacal expression. Presently the buffalo was brought up, and I left the place. As I descended the hill I heard the repeated *thuds* of the heavy cutlass and other weapons on the devoted buffalo, who was eventually "hacked to pieces"; the shrieks of the females, compelled to look on, the noise of drums, and shouting were deafening, and I am told by a Eurasian, who was there, that he nearly fainted from the sickness at the sight before he could manage to extricate himself from the crowd, the whole place flowing with blood.

At the Vindhyachal Fair, Mirzapore, "hundreds of goats and bullocks were sacrificed" (see *Pioneer*, 8th March, 1871). In what way has a Christian Government done its duty, to leave these people in a state of semi-barbarism thus?

Yet I was threatened with the vengeance of Government if I dare to kill a beef at Christmas!

After the sacrifice, the whole people removed farther up the hill, where, still under the delightful shade of the forest, they indulged in racing, wrestling, scrambling, and jumping.

The gay attire of the females, who sat on a raised dais or amphitheatre of stone—a sort of private or "dress circle"—was nicely contrasted against the dark foliage of the trees behind, and the gay drapery and silver ornaments of the visiting Davis added to the brilliancy of the scene. At short distances in the more retired parts of the forest were placed the

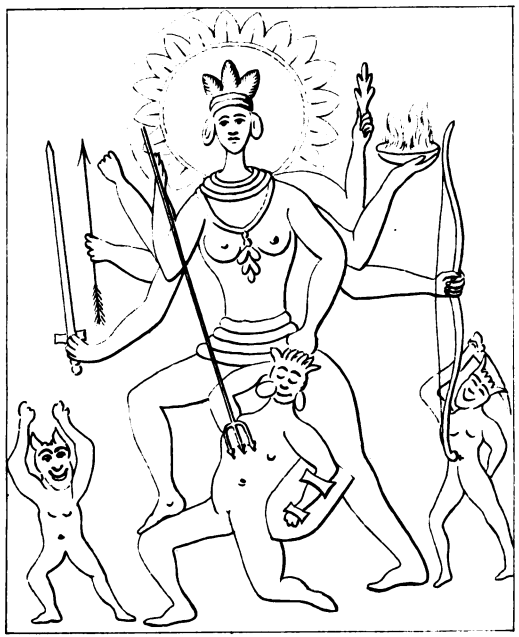
"Toddy" shops, for the sale of bang or other intoxicating liquors, and worse purposes.

I was much struck with the head-dresses in particular of some of the females and the good looks of the greater part, had they not all suffered from so much exposure in the air. One old lady I sat behind was wrinkled like a tortoise, and seemed about eighty years of age, not having apparently a tooth in her head. On her loosening the silver pin of her shawl to accept some sweets offered her, you may imagine my surprise at seeing she was suckling a young baby, and at her side her young married daughter, about fourteen, was doing the same natural office for her child.

The boys enjoyed the sport, but the girls could not be induced to join in any, further than holding up their hands to catch any of the copper coins thrown for a scramble, and altogether generally the females showed great modesty and sobriety during the day: but some were much puzzled to get their tipsy husbands safe home. The nights, I am told, were a scene of debauchery with those who stayed to "keep it up." All this took place within a short distance of the Assistant-Commissioner's camp.

The carving round the balcony of the adjoining "Ranee's old palace" is amusing; particularly one panel representing the Luchme Narayon.

Luchme Narayon, an avatar or incarnation of Vishnu, in which he descended to punish one of

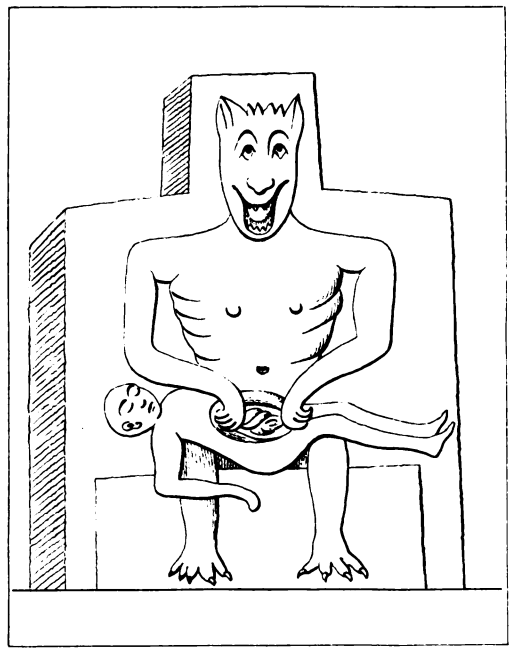


GODDESS BOWANNE ATPOOGEE.

BAS-RELIEF IN MICACEOUS SLATE IN RECESS BAJAURA TEMPLE, KULU.

Page 16.

J. Calvert



LUCHME NARAYON.

CARVED IN WOOD, DUNJREE.

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the kings of Rajasthan. The king defied Vishnu's power, and was about to put his own son to death for remonstrating, when Vishnu appeared as Luchme Narayon in the form of a tiger out of one of the pillars of the palace and chawed up the impious king.

The village of Manali is higher up north at the mouth of the khud where are the ruins of the old fort, destroyed probably during the first invasion of Kulu some two hundred and seventy years ago, at least so the late Rae Jyan Singh told me. This, and the fort at Bajaura, and the old Tehseel and garden at Sultanpur, and some three thousand acres of the best land in Kulu, are the property of General Sir Arthur Cunnynghame, and his partners in the "Kulu Tea Estate."

The view of the snow-covered mountains north of this shows the regular stratification of their formation, and contrasts well with the rich dark tints of the splendid Deodar forests beneath, the prime of which are being annually cut down and launched into the river to float down to the plains for the constant demand for railway sleepers.

This is the most northerly slide for timber in Kulu, as it will not pass the river higher up.

Continuing on this pleasant ride still in the forest we cross the bridge over Manali Khud, and in a short time will be observed and for some time—high up on the perpendicular mountains to the right—several beautiful waterfalls that ever and anon disappear in

a crevice to start forth lower down with increased volume and more foaming spray.

The next stage is to Rolla, but there is a rest-house at Pulchan, which is not, however, a desirable resting place—the flies being as bad as a pestilence from the number of Lahoul sheep and goats that encamp here on their way up and down the valley.

Here and at Manali ice can be had with ease, and with the wild strawberries make delicious ices.

The immense number of granite and gneiss boulders here excite attention, and the fine specimens of black tourmalins in some of them; they are much water-worn, and some of immense dimensions. There is a magnificent forest up a khud which joins the Sahari Khud at Pulchan, where one would suspect these stones to have come from, yet, strange to say, the hills above are all of a different "formation."

At Pulchan I had the pleasure of meeting the son of Longfellow the poet, whose shattered frame told of that bitter struggle in the Southern States. He was on his way to Cashmere, with many others. About 150 visitors pass through Kulu every year.

Over this river is Solang, the most northerly village in Kulu. In the forest near here was a Deodar tree 150 feet long and 18 feet girth.

Here also are much iron pyrites, reported to Government as gold, and the ruin of many a one who has resigned all his certain prospects in life for a heap of glittering rubbish and want!!

KULU WOMEN AT MANALI FAIR.—A LIKENESS.

The village over the river opposite the rest-house is Pulchan, but the other just over the bridge is "Rewa."

Here I used to indulge daily in strawberry ices. The fruit grows wild as well as in gardens, and the snow ice can be had quite close up the shady khud.

A little beyond this village, where the road is cut in the solid rock, is an excavation used as the last habitation in Kulu, on the highway, and one that the authorities should suppress, being the lowest kind of grog shop where the passing Lahoulies are enticed to drink to excess, and I have seen them when leaving within an inch of being precipitated down the perpendicular precipice below, there being no wall or fence to save them, and I was told more than one had met the fate of being dashed to pieces in the torrent below.

Crossing the bridge at Pulchan we commence a short, but the best stage for scenery in Kulu, between this and Rolla; the rock over the bridge is remarkable for the zigzag appearance of its stratification, which is the same all over it from top to bottom. After reaching the top or level of this road, there is at a small distance a very interesting gorge or mere crevice in the rock below, in which all the water of the river passes; and farther on the waterfalls and scenery are admired by all.

Near here, of course, are the sources of the Beas River, some of which fall with picturesque effect from a considerable height.

Rotang Mountain is 15,206 feet above sea level.

The ascent of Rotang Pass, 13,330, is tedious but not difficult, but many tourists go no farther, though many others continue on that way to Cashmere. It was crossing here, and re-crossing the same day, that affected Lord Elgin to his death.

His Lordship had to pass over the river to Kokser in a basket suspended on a rope of twigs; since then a timber bridge has been built, which is certainly far better, bad as it is.

There is a road from the Rotang Pass to Spiti and Shigri on the east, along the Chundra Valley, but as it is out of repair we will propose returning, unless that desolate country Lahoul, which you see before you, tempts you to pass over.

We will therefore retrace our steps to Pulchan for the night and enjoy some ice-creams, and contemplate how these miles of large boulders were deposited here, and from where they came.

That large glacier over the river in front of the Pass is the "Sona-pani."

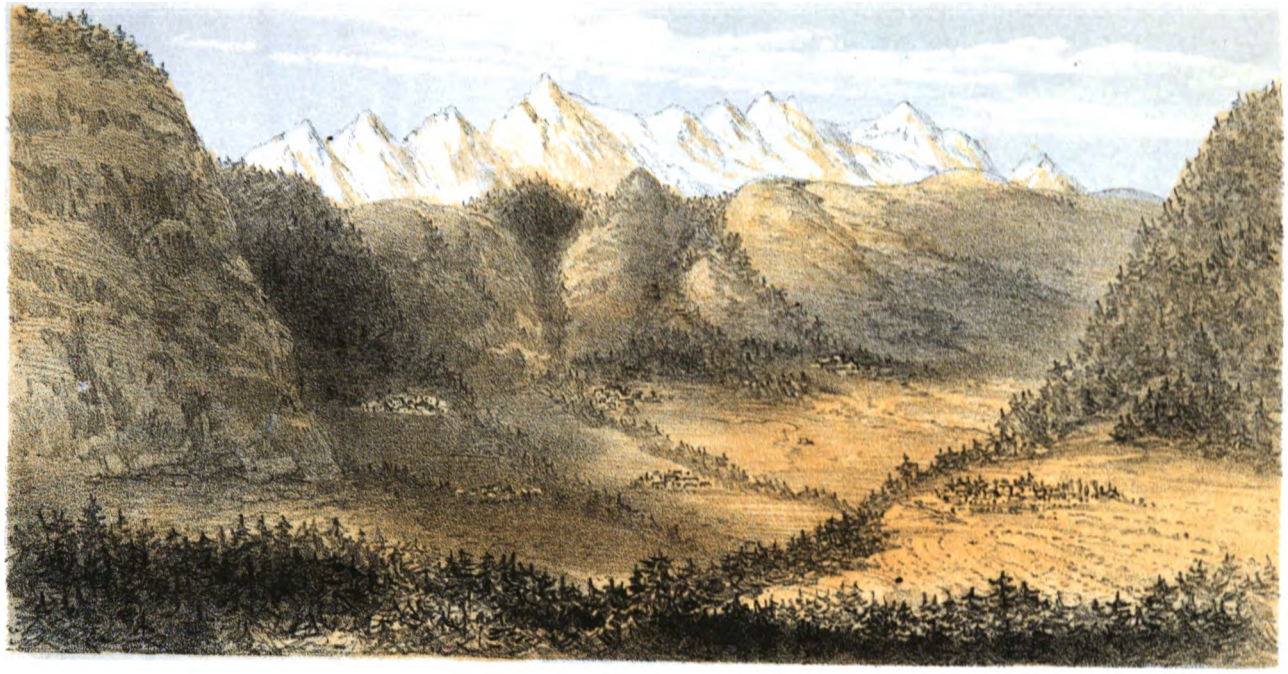
I previously made an inquiring allusion to the suggestion of this valley having at one time been a large glacier like those on the surrounding mountains, and as the climate has altered, which has evidently been the case, the ice has melted into a lake of water. Travellers now alive remember lakes in the mountains here now dried up. In this state it must have received that deep deposit of boulders

which can be seen more than one hundred feet deep from Bajara upwards as far as Manali, but how or where these boulders came from — all of hard rocks worn round as we are apt to say by attrition—is a question that has puzzled many, who content themselves with the remark, "they were deposited during *the glacial period*"—a period supposed by some to have marked the close of the last "tertiary age" previous to the creation of Historic Man. The forces that must have been employed for ages to grind these masses of the hardest rocks into their rounded shapes were something far more powerful and of longer endurance than the mere journey from the top of a modern glacier. For instance, see the rocks up the Shigri Glacier, some lying on the surface of the ice not far from the top, which is not far from 20,000 feet high, are already round, but the masses that are now day by day descending in that enormous stream of ice, which is over 200 feet thick and a mile or more across,—these are not round, but the greatest portion of them as square or sharp as when they separated from their parent mountain. That the stream of ice continues in motion I *proved by careful observation*, but there seemed no motion in any portion of such glacier—on which I spent many hours on several occasions—to account for the great attrition necessary to produce such rounding results. Even in the case of the rocks decomposing, they usually do so according to their sedimentary

deposit or formation; even granite will decompose more in one direction than another, especially as the climate or conditions affect the potass in the component parts, the feldspar, and the mica. Besides, huge rounded boulders of gneiss are met with at the top of Hamta Pass above the clayslate and sandstone, with which they have no affinity or connection, and may be found on the summits of still higher mountains close by. That they have been ejected from volcanoes is a favourite theory, but in theory we do not find the ejections from volcanoes to be rounded rocks, but rather the reverse, sharp-pointed fragments of all shapes and sizes, except lavas, &c.; but gneiss boulders could not have been ejected in a lava or molten state, and still retain the original stratification of its ingredients. Besides, there are immense masses of metamorphic rocks scattered about, which are still harder of texture, and though they seem to have been affected by the like corrosion to a certain degree, are seldom seen so round.

To those who have seen the moon through the most powerful telescopes in the world, it is apparent that the surface of that luminary is covered with them of all sizes, as was, in all probability, this world, when in a *similar* condition at the epoch of the second day's creation.

There can be little doubt, in my opinion, that the water or ice, or both, were confined, in distant ages, close to Largi at the bottom of the valley, if not as



Kell, Bros. Lith. London.

DOWN KULU VALLEY FROM MANALI FOREST.

well as Jhirri, from whence the waters may have overrun into the lower lake, the bottom of which appears to be a conglomerate of various limestones similar to that which forms the upper part of the rocks adjacent. On bursting of these "bunds" the floods have actually cut a river through this conglomerate more than a hundred and fifty feet deep below Badool in Bilan Koti, near the new bridge or ferry, and in the upper part through the boulders and loose conglomerate seen on either side all up the valley.

That the climate has altered in comparatively modern times is plain, as snow is never known to lie now in nullahs which bear the marks of being worn by destructive glaciers and torrents that carried enormous blocks of stone before them with the greatest ease.

We now propose to retrace our steps to Manali at least, but if we can, to cross over to Bahist to the hot springs and baths. If not, we must cross at Manali and return to them. There is space at Bahist to camp out, and ladies sometimes indulge in a few days' bathing here, but as they are, to a certain degree, sulphur springs, no one should use them without medical advice. The heat of the water is 120°, but is cooler in the centre of the bath, which is of stone, and when I visited them they were clean, and could be enclosed private.

The road was but in bad condition at that time, but the distance is small.

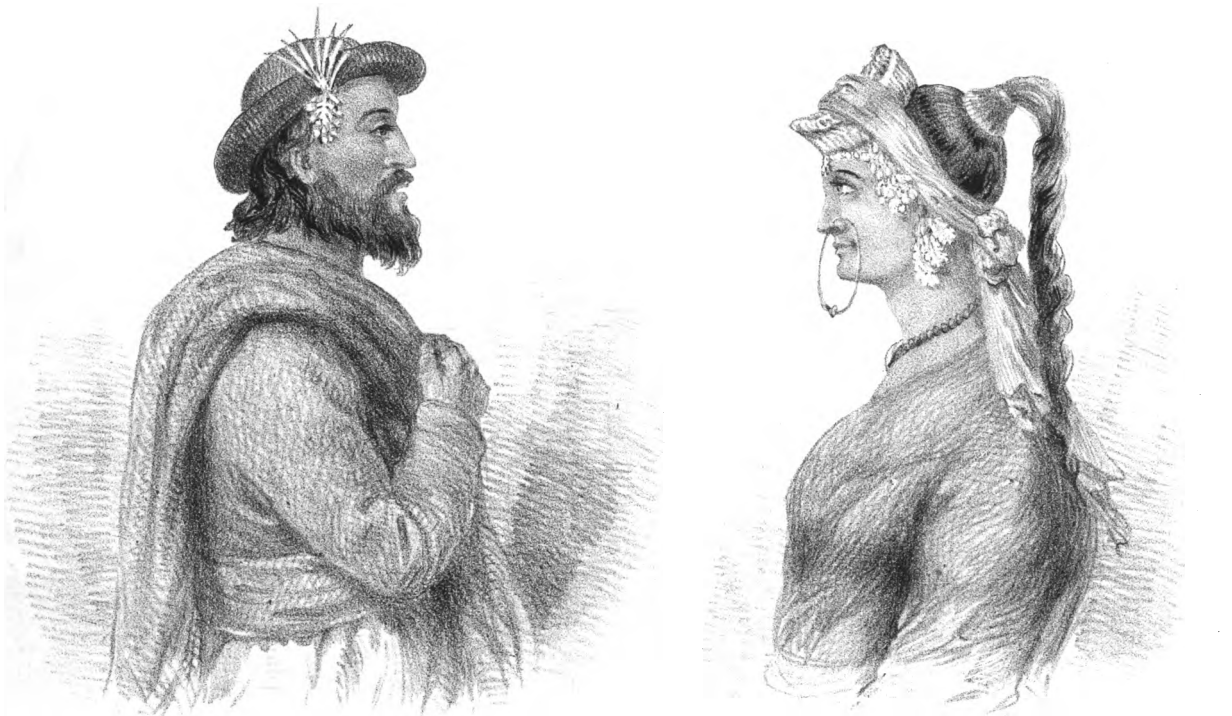
There are plenty of bears about Manali in the day time; they come for the fruit, especially those blue plums; there are also leopards at night. In the hills are chikor and the famous Minal pheasant, as well as others. Fine fish are also netted here.

To gentlemen who have time, a trip to the Hamta Pass will amply repay, especially in July and August, when they can witness a sight of flowers unequalled anywhere, though very fine on the Rotang Pass.

From Manali, crossing the Beas by the bridge below, the village of Prini is about two miles; the ascent is by a zigzag road through the forest on the spur of a hill between two khuds, one of which to the left is the Raini Khud, the other on the right is of minor importance, called the Phari Khud.

There is a temple under some large banyan trees half-way up, which I regret I did not examine, but the remainder of the road leads you first into one khud and then into the other, till the village at the top is reached, and this is called Hamta; this is near the top or rather the level, and is the last habitable place in this direction on account of the winter snow. Just above, the traveller is delighted to find a delicious spring of water, and I could suggest any liberal person who goes that way, may immortalize himself by erecting a roof over the same and be blessed by every passer-by.

The ascent now ceases; there is no more climbing, and you may progress easily on horse or foot, for the



Kell, Bros lith.

MANALI PEASANTS.

road is good to Cheeken ten miles or less; but you must turn round and look, before the valley of Kulu is hid from your view. Notice how each delta, or junction of the tributary streams on either side of the Beas, is thick with trees, the seeds brought down from the khuds and here propagated; the whole valley to Sultanpur is here exhibited in one fair view that is delightful to behold.

On the left the snow-topped mountains exhibit a somewhat regular slope, showing the dip of the formation, which is mostly sandstone, the villages occasionally dotting their sides, peeping out of the rich forests that cover the valley sides; while the varied colours of the produce of the fields contrast with harmony. The red rice, the white opium, the yellow corn, and the red poppy, with here and there the verdant grass, or new-ploughed earth, show the industry of the inhabitant, and the richness of the soil.

One cannot, however, but miss the hedge that should define each field; yet you do not see cattle straying, probably more from fear of their hides, than honesty of desire, for they are mostly like skeletons, so poorly are cattle cared for by the natives in India.

But to return to our journey from Prini to the Raini Khud.

Now we enter forests of immense pine-trees, and see the gorgeous blaze of numberless flowers that

cover the ground for miles, as if we were entering some fairy gardens.

What a site for a residence and a park, but six months' snow render it uninhabitable.

Here I feel my ignorance, but the botanist would revel amid the numberless indigenous flowers of every hue, the sunflower, the balsam, alike six feet high or more, and a thousand others, each vieing with the other to be the tallest and the loveliest.

Sunflowers grow to an enormous size in Kulu, and are said to purify the air and make it healthy. It is fine feeding for poultry when in seed, and yields 15 per cent. of oil and 15 cwt. of seed per acre. Yet it is not cultivated.

The river is out of sight, if not hearing, low down in the khud, on the north side of which the proud rock stands erect for miles, as if guardian of the privacy of this lovely valley.

Once or twice small streams are crossed by bridges.

At the upper part of the valley are the birch-trees, from the bark of which is separated the papyrus used so much about this part for paper and packing, and by the ancients and some isolated people for books and writing; this is never found lower than 5000 feet above the sea. Most of the trees here are bent low down by the weight of the snow on them in the winter.

Now a long narrow bridge or plank crosses the Raini stream, and we come upon that pretty water-

fall at Cheeken, and the large loose rocks that form the only shelter to the poor passing shepherds, who bring their flocks this way to pasture during the hot weather between this and the mountains of Spiti.

And here the fuel is cut to smelt the ores from the Shigri Mines in Chundra Valley.

You can either camp here or three miles farther on, but this is decidedly the best place if the ground is cleared.

Now we have to pass that jumble of rocks called by me "the Gorge," where the rush of water between and over the enormous blocks of detached stone would make a splendid photograph or painting. On account of the shade covering the stream here the ice is never entirely melted, but the water finds its way through underneath.

The footpath is but indifferent here for horses, which should in fact be left here, or sent to Prini, for several reasons.

Here you must collect fuel for the rest of your trip and provisions for all who accompany you, as nothing but milk and occasionally a goat or sheep can be obtained till you get to Spiti, and for that you must give notice some time before at Jugget Sookht or to the Assistant-Commissioner at Nugger Castle.

The distant view of "snowy peak pillar" and the peaks above the Hamta Pass are seen from here to great advantage.

When camping out here, my attention was called

to some object moving the foliage beneath a large boulder close to my tent. At first I expected to find a snake, but, after driving in every direction, a small pair of conies came out; they were about five or six inches long, but unlike any I have seen before. On my return I found them dead, apparently from the rain, for it was not cold.

The upper Raini Valley contains much of interest, and in several places the remains of the winter glaciers may be seen occasionally, with large rocks resting on the top of the unmelted mass of ice and gravel brought down from above, and still twenty or thirty feet thick; at times may be seen one large boulder mounted on a pillar of ice, which is gradually getting smaller and smaller as the mid-day sun shines on it, while on its summit a mass of smaller stones and gravel show, when imbedded in the glacier now melted, the water carried a debris over its top.

Here may be found some valuable gems, if you know where to seek them, and are provided with proper tools—and *patience*—to cut them out of their stone matrix.

I have found sapphires there worth Rs. 2500 each, besides other gems.

It is best to ascend the Hamta Pass, 14,500, as early as you can, as the approaches are less wet, and the ice, if any, on the upper part less soft. This Pass is slightly below the perpetual snow line. The shingle and small streams of water are not favourable

Kell, Bros lith. London.

DEOBITA 20,000 FT — NORTH SIDE HAMTA PASS. 14,700 FT

to boots of any but the thickest kind, but it requires no very great exertion to reach the summit. It is advisable to have a guide with you and at times holding on, for I have seen one or two unexpected descents to the bottom in a rapid slide on the back after having spent half an hour in getting up. The sheep and goat track is the safest, and if you should meet a flock, always let them pass first, for they run with such determined force, especially if loaded, that you are easily carried off your legs if you come in contact with them.

When near the summit of this Pass, the path lies over the solid ice and snow, and it requires great care to prevent slipping, as the ascent is a steep slope. On my return this way, one of my natives slipped and slid down a great distance, and narrowly escaped going down a narrow crevice, which he would have found difficult to get out of.

Here I would advise the tourist about to ascend a height not to take spirits, a few cocoa nibs are the finest things for the breath, and are habitually used by the South Americans and Mexicans when climbing any considerable steep. On the summit, previous to descending, a peg may not do harm.

The Coca.—This is a very remarkable plant in its effects upon the human constitution. The natives in several parts of Peru chew its leaves as Europeans do tobacco, particularly in the mining districts, when at work in the mines or travelling; and such is the

sustenance derived from them, that they frequently take no food for four or five days.

I have often been assured by them that while they have a good supply of coca, they feel neither hunger, thirst, nor fatigue; and, without impairing their health, they can remain eight or ten days and nights without sleep.

The leaves are almost insipid; but when a small quantity of lime is mixed with them, they have an agreeable sweet taste. The natives generally carry with them a leather pouch of coca and a small calabash holding lime, or the ashes of the molle, to mix with them.

The view from the top of the "Hamta Pass" down the Hamta Valley, and of the "Kazaling" Glacier and snowy peaks in Lahoul, is surpassing grand, and repays one the little exertion, for it is of easy ascent this way compared with the other side, which is a stiff pull from the Chundra River, now far below what can be seen in the distance. Here you have "all the world before you" and a great deal below you. Bourne and Shephard have a splendid photograph of this wild scene, No. 1445.

To the left, but at present out of sight, are two very steep glaciers of ice, at least I never heard of them being entirely melted, down which occasionally large rocks slide or roll with wonderful celerity, and it is well to keep one's eye looking up as you pass them, and dig your boots and alpenstock well in at every step.

The second time I passed, I preferred to do so by going down to the bed of the river: and this is the path that yaks and ponies take, especially when ascending.

The road then comes very easy for some distance, and there are places where you can camp out or get temporary shelter under the rocks, as the "Guddees" do while pasturing their sheep.

At last you begin to descend rapidly, and have to cross a frail bridge over a deep torrent to the right bank of the stream, and a continued descent brings you in half an hour to Chutrâ, another camping place among the rocks; there is, however, room for a tent among the beds of flowers that blaze a violet blue. I found no other colour here.

The Chundra River is now at your feet, and Lahoul as near as you desire *that* part to be.

This is the usual camping place; and now we are "beyond the rainy season," they say it never rains here, if not I will be bound it *snows* occasionally.

From here to Shigri is a day's good march, but there are resting grounds about four miles, and at Futta Rine* on this side of the Burra Shigri River, another over the Shigri River, and a fourth three miles farther at the Shigri Mines on this side the great Shigri Glacier. It is well to note these places, which are known to the men and guides.

Soon after leaving Chutrâ you descend to the

* Or "Footeh Rhoon," the cleft rock.

banks of the river, but ascend again to cross the stream that comes from the melting of the "glacier" above, and the higher you ascend to cross, the easier you get over, and the nearer view you get of the interesting mass of ice above.

It must be remarked that the streams from this glacier fall down so steep an incline that they bring with them heaps of stones; these form the bed which constantly increases in height, that the stream eventually is carried in a trough of stones much higher than the adjacent ground, and is comparatively confined in a narrow channel, but lower down this is burst open and scattered, and the stream divides into many branches of far greater width than depth, and when reaching the sand at the bottom it is dangerous, being "quick." Your foot once set on that sinks with a surer fatality than in water, and closes over you without hope in a few seconds.

You then proceed along the bed of the river for some distance, gradually turning to the right up the bed of another torrent from the "Sackchum Glacier," which fortunately is easily passed by a natural bridge of the rocks, amongst which the water rushes with great fury from a large glacier above; on ascending the opposite bank you may contemplate the gigantic blocks of stone that lie tumbled about as if they had been mere logs of wood. One of these both by shape and size appears like a good-sized two-roomed cottage with a gable at each end.

On the summits of the largest of these you will usually see small stones or flags of rag placed by the first natives who have passed in the season, though I can imagine that some of these relics endure the effects of a winter's snow without being removed.

Here is a lovely little Maidan to camp on, nice water, and pretty flowers worth taking back.

I never saw much shooting in this valley, indeed a place so devoid of vegetation and so truly lonely one seldom sees in any country, as these few miles, but there is something awfully grand as you look back on the Hamta Pass from here.

From here we again descend to the river bed, but if a road could—and I am convinced it is possible—be made a moderate way up the side of the hill, the very worst part of the journey would be escaped, for the clambering over the loose boulders and rocks may be, and evidently is, easy enough for goats, sheep, and yaks, but for bipeds it keeps one's feet and legs in considerable jeopardy, to say nothing of one's head,—and tail. I shall never forget my pony clattering over and in between them so much to the distress of his shins, that he asked not to be brought again.

At last you reach Futta Rine,* which is distinguished by only one or two very large stones over twenty feet high, which form a natural kitchen, and are useful as a shelter. If you camp here you can get to the mines in about three hours easily.

* Mr. A. G. Young calls it Footeh Rhoon, or the "cleft rock."

But if you do not mean to stay at the mines, but cross the great glacier, try and get on—or anyhow let the crossing the glacier be the first task of a day, as it is an awful "grind."

On the left of Futta Rine the mountains in Lahoul have a most grotesque appearance. On the right or facing is the Burra Shigri River and khud. The usual bridge, two frail planks, but by sanding the soles of the feet you get a good and safe footing across. And here we are in "Shigri" camping ground, but it's no use staying—move on, and in two hours we are at another little grass plot surrounded with huge boulders, and a nice flat table stone in the centre. Here we make a grand stand and take a hearty breakfast, but look all round, and at the map. On calling for my pony here one day I was greatly astonished at seeing the syce and him emerge from a deep hole among the closely adjacent rocks, where I found he had roomy quarters, and almost enough for two.

It had been known for many years, and especially by the natives that travelled this way, that large lumps of antimony were found on and near the road farther on and about here, but the actual lode from whence these were carried periodically by the winter's ice and snow had never been ascertained.

To discover this was the object of my journey, and accompanied only by a few natives to carry my camp, I started on what my friends called a "wild-goose

chase." With pick and gad and a few drills I searched the steep mountain side for some time in vain, but experience in such work, and the determination to take root on the spot rather than not succeed, prevented even a thought of failure, and ensured success.

Having enlisted a herd of Lahoul people, we ascended the hill the first day without more success than collecting a large quantity of loose pieces of ore, some of which were too large for our combined forces to move till broken up by sledge hammers. Next day, higher up, I found indications, which eventually led me to the exposed face of a lode of solid ore from ten to twenty feet wide. This I soon opened, and every "kilter" was rapidly filled, and as much again over and over thrown down hill to the road, where it was collected, the refuse being abandoned, and only the pure ores taken away,* namely, the stibnite or sulphuret of antimony and the red and yellow ores. This, when reduced to *Regulus*, can be shipped home for 32*l.* per ton, including every cost, and sells there for 76*l.* per ton: after eighteen months' delay the Government granted a lease on very liberal terms, and it is hoped, by means of capitalists at home, to commence working these mines very shortly. The Government generously forgave the usual stamp on this lease, it being the first mineral (metallic) lease ever granted in India.

* There is another lode I am sure, but more to the east and high up.

Since this was in type, Mr. A. G. Young has verified the above,* and found a lode of black antimony, or stibnite, to the east higher up, a little to the left, and assures me there are marks of where the lode was blasted. This was done by order of Major Hay about eighteen years ago, and accounts for the quantity of loose ore found on the hill-side. Mr. Young describes the new lode which I opened as forty feet wide, the lode of solid metallic ore in the centre being at least twenty feet wide. This lode can be easily quarried without any blasting, being in laminated beds easily separated by bars and wedges. The scoriæ, or froth, at the top of the lode is remarkable, consisting of the oxide (cervantite), a yellow mineral, and the bright red (kermesite), with some little iron. It has all the appearance of being the result of igneous action.

This lode is peculiar, as exhibiting little or no gneiss rock blended with the ore, whereas the other lode of black radiating stibnite abounds in places with sulphuret of iron and crystals of zinc-blende, the whole penetrating the rock in places to a great depth, showing they must all have been, at a time, in a molten state.

To any adventurous shikaree, who desires to immortalize himself, there is a capital opportunity afforded by finding a path from Burra Shigri or Futta Rine to the Malauna Khud and on to the "Holy City of Manikarn." This could only be

* September, 1872.

Kell, Bros Lith. London.

VIEW OF LAHOUL FROM KANSAM PASS — 14,931 FT

done, I expect, about August and September, or even October. It does not look inviting, but it is said that some Guddees have *done* the road once, and if the pasturage would tempt *them*, surely the ibex and other game should tempt the English sportsman.

There is not much to be said respecting the road farther on to Chota Shigri, Kansam Pass, and Spiti. After crossing the glacier which occupies two or three hours' jumping and climbing, the road is, with one or two exceptions, easier than the one we have come; and the top of Kansam Pass is a large level covered with thousands of mementos raised by travellers that have passed, some of which must have cost much time and labour to have built up. The natives consider this practice as in some way meritorious.

The road through Spiti and round back to Simla is interesting, to the geologist in particular, some of the formations being more than remarkable. But porterage, fuel, and food, even for coolies, can scarcely be obtained, and only by providing it beforehand, by relays of coolies, sent on in advance by order of some Government official.

The view from Kansam Pass is very grand, looking down the valley over to Lahoul; the mountains on the right are 20,556 and 19,949 feet high, and from the glacier between them the snow is at times blown with cutting severity right across to this Pass. Here I was snowed up two nights and a day; my forty

natives, having no shelter, sat in a heap together all night, trying in vain to keep a little fire alight to boil the brick-tea I had given them.

When the snow lies a foot thick no one can travel, as the paths cannot be seen, and one false step might be fatal.

Bourne and Shephard's views in this part of the world are very fine, and I regret I cannot attach copies of all these photographs to these pages that relate to the spot.

We will now presume we have returned to Cheeken and to Prini, where we do not halt, but trot on to Jugget Sookht, a mile or two farther, where we get rid of our coolie porters, pay them, and hire a new set.

There is a neat bungalow here belonging to General Cunnynghame, but in this case there is no tea plantation; being situated at the end of a khud, the cold winds make the winter here very bitter.

A fine large elm tree shades the camping ground, which is very small for tents.

At one side of the camping ground is a small Hindu temple of carved stone in a very perfect condition, but covered with lichens, of which I have made a sketch. There is the peculiarity about it before mentioned, that the mass of carving in front, which is all in one piece of stone, has been shifted about ten inches to the left without further injury to the temple, which is in no wise out of plumb, or the level.

Kell, Bros Lith London.

MR KNOX'S HOUSE, JUGGET SOOKHT.

Another larger wooden temple seems to have been built on the ruins of an older stone one, and numerous altars and blocks of richly-carved stone are found all round. Moorcroft mentions the invasion of Kulu as having been undertaken by the grandfather of Sandsar Chand, and attributes the demolition and injuries to the temples, especially at Bajaura, to his soldiers. This must have been long prior to Runjeet Singh's raids.* The site of the bungalow (which is private and never let, or seldom used) is that of an old fort, or temple. Every year the natives ascend to the top step, which they worship or venerate. There were a few carved stones up there also, but they have been either broken up or built into walls and outhouses, as may be seen.

Behind the wooden temple are the remains of a form, or seat of clayslate, the seat being tenoned through the side standards, which are after the pattern of an old Gothic seat in an English country church. There is part of a similar one below the Tehseel at Sultanpur, but it is not so perfect.

There is another small temple in the village with the Davi enthroned inside, but it has no unusual interest.

Down the khud, and over the bridge, puts us on the road to Nugger Castle. This is now the residence of the Assistant-Commissioner. Moorcroft states this was once the capital of Kulu under another name.

* See Moorcroft, p. 170.

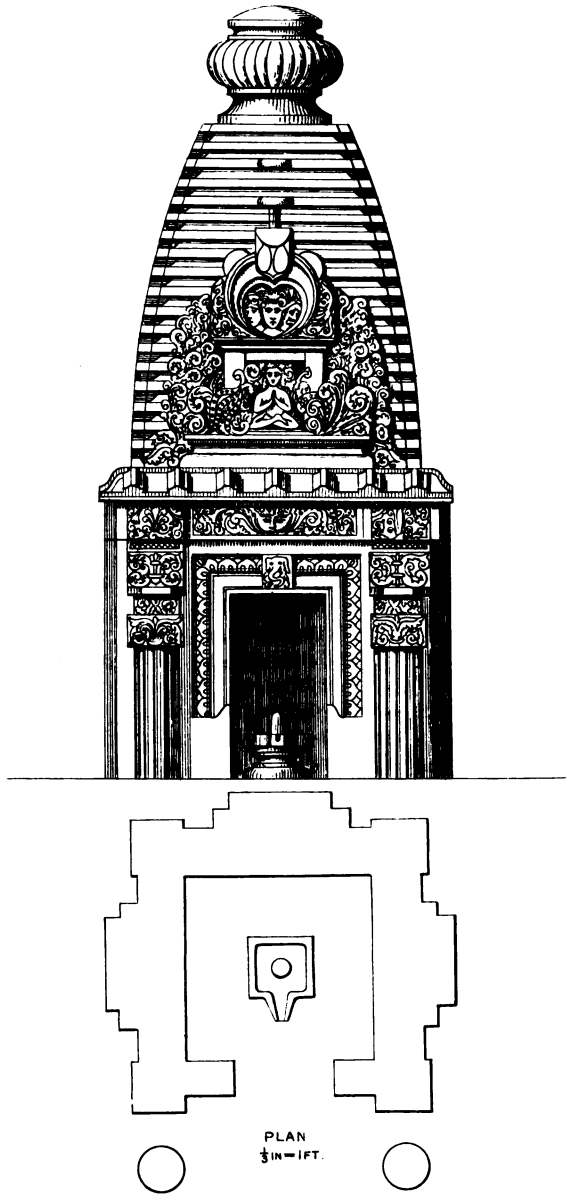
It would be interesting to know the facts how this ancient palace and fort got into the hands of private persons. Government have, however, lately insisted on purchasing it for the Assistant-Commissioner's residence at *his* request, at which no "Naboth" dare complain.

From its elevated position, and what we see of the ancient part, this building must originally have had a very imposing effect, but its glories have long since departed: the first floor has been cut away to make the ground floor higher, and huge *sash* windows placed in the whole height of the two rooms; and a species of Jacob's ladder erected outside, exposed to all weathers, forms the means of access to the upper floors to prevent the necessity of using the original rather imposing entrance and stairs, which one would have thought would answer every purpose; but a wretched Vandalism has converted the whole native palace and fort into a nondescript half tea warehouse, half bungalow, half stable, the cattle being kept in the Zenana at the top.

The view from Nugger is very fine, and at a little distance on the hill below, are the stones erected to the women of the Rajahs who suffered Suttee at their decease.

If we judge from the stones the wives were numerous, and indeed the family, as there are over a hundred, but no inscriptions on any of them.

From Nugger there is a path up to Malauna, and



TEMPLE JUGGET SOOKHT

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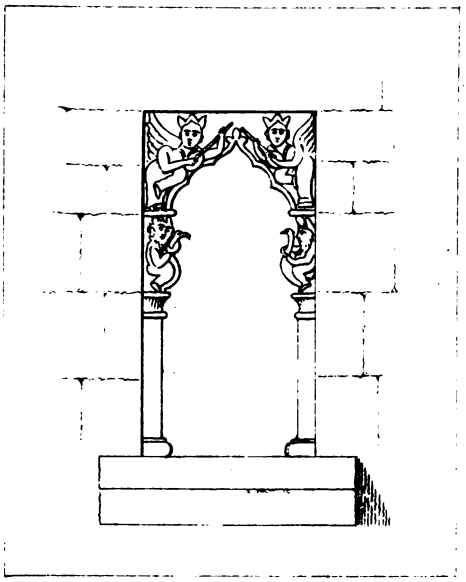
Calvert

Kell B. & Lith



DOORWAY OF TEMPLE AT RIWALSIR.

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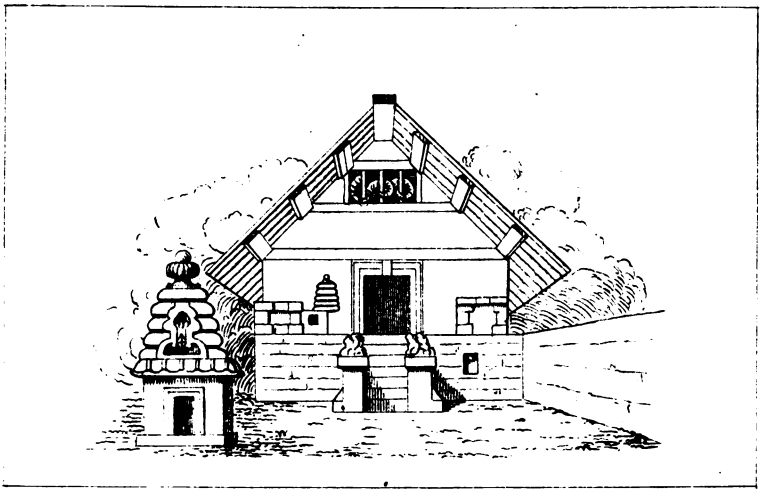

LARGER TEMPLE AT JUGGET SOOKHI.

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J. Calvert.

Kell Bro^{s} Lith

by way of Kashole to Manikarn, but it is very precipitous, and few persons attempt it. There is a copper and a lead mine there, but never worked, though the lead is rich in silver. The people of Malauna do not speak the same language as the Kulu people, or any others in India, and it is a question of interest where they could have originally come from. Their village is so isolated, they seldom communicate with the other part or Valley of Kulu, but live almost entirely to themselves.

Our best road now is to return by crossing the river to Dobie, and it is only a "long" march (13 miles) to Sultanpur. From here we can ascend to Bijli, and down the other side to Chamaun, and next day along Parbutti Valley; but it will be better, if we are returning by the Bubu Pass to Kangra or Cashmere hereafter, to go from Sultanpur to Shumshee, crossing the river there by ferry to Buin camping ground. Here we again enter "Vazeeri Rupi."

There is a path over Sultanpur Bridge and along the side of Bijli, but it is not a good one to ride or even walk; it brings you to Jia at the foot of Bijli, from whence you cross the new bridge to the camping ground at Buin.

Few Europeans have ever been in the village of Buin, but the camping ground under the trees on the river side is very delightful, except for the noise of the rushing stream.

The mountain above "Kot Kandi" is very rich in

mineral, principally copper, which shows in numerous places, as also manganese and iron, and on the other side sulphur is found.

Previous to turning the corner of the Parbutti River, on the right hand of the road and a little above the foot of the hill, may be distinctly seen a huge mass of a copper lode covered with the brilliant green exudation, which ordinarily follows long exposure of rocks containing copper ore.

I have seen such stains a mile long in South Africa. Although copper may be found in several places up the mountain side, yet there can be no doubt, on comparing them, this piece of rock came from a huge lode high up over the top of that mountain at the back of the village of Saond, but by what means it got into its present position is a problem indeed, as no volcanic action has been at work there to have hurled it such a distance over the ridge; had it merely been removed down a slope we could have imagined the ice and snow to have been the means, as we can see every day in the mountains above during the snow.

The village at the foot of Bijli Mountain across the Parbutti River, to the left, is Jia, the former capital of Kulu; it was here the remains of the late Rae were brought for cremation. At one time there was an interesting temple there, but I hear the last stone was lately used to build a new bridge with here. The scenery from the turn of the road round this

corner is very picturesque, and the road has been greatly improved of late. On reaching the highest part the road is covered with very fine specimens of ripple-marked, altered sandstone, almost purely white. Some distance farther the road nears the stream, where some large rocks are in the centre. One of these fell only three years ago from the higher part of the mountain above south, making fearful devastation in its course, carrying away the entire road it fell on.

At the corner is rather a *cranky* bit of road cut in the solid rock, and not a desirable place to ride over, as well as very awkward for a heavy dholie. The road is better when you get to the bridge over the Chiol Khud. Up here, again, the copper shows very strong, but has never been mined or worked on : and farther on, near Barogi village, the mountain is said to be all rock salt. The road up the khud is rather rough and not at all tempting.

The road now begins to ascend a very steep incline, but on the top it is better : from either place you can see the winding road in advance cut into the solid rock, and overhanging at the distant corner we have to pass round shortly after, you have to step over another copper lode which shows out in the road and below.

The road now becomes narrow for a little, but quite safe, being cut in the perpendicular rock, though some people fear to look down upon the foaming stream rushing far below. There is something very interest-

ing in those pretty farm-houses on the other side: their very isolation seems to have a charm, yet it must be a climb to get at them or away from them, and the happy owner must have learnt to concentrate all his wants into the few necessaries he can obtain there without going daily to "the bazaar."

We now reach a cool and welcome spring and shady trees. This place is called Gula Pani, and though the water is good, the place is always filthy from the cattle watering there. In the hill above is a lead and silver vein, which no doubt, if traced, would prove larger farther on.

A little farther on, round the corner, and the worst part of the road, is one of the prettiest sights in all Kulu: on a projecting ridge of clayslate stands the old fort of Chong on the south side, many hundred feet nearly perpendicular above the bed of the stream; but the other side is a gradual cultivated slope. It must be about 2000 feet above the river, and will be seen in a different height a mile or two farther on. A lady is said to have fallen from the top of this, and yet to have lived; it must certainly depend on which side of the mountain she fell. Above the village of Chong, which has a nice camping ground, but is a bad place for supplies, is the richest silver mine in the valley, near Chitrani. It was built up to hide it from the Sikhs, and has not yet been re-worked. Copper is also reported here in its native state—not as a sulphuret.

Kell Bro^{s} Lith.

CHONG FORT _ PARBUTTI VALLEY _ CHAMAUN OPPOSITE.

The houses in the forest, with their red roofs, look very picturesque, and the ridge on which the old fort stands will be seen to run up the whole side of the valley, and is very distinctly seen from the opposite side.

From here the large tree on the opposite ridge can be see again as a landmark.

The road farther on, after one little bad piece, is very good, and you can canter along a few miles with comfort, but do not forget to turn round to look at Chong from the different positions. A sudden turn on the bared clayslate rock brings you to "Ramunkote," where is a neat-cut temple and fountain of beautiful water; the road beyond is disgustingly narrow, through walls of loose stone, till a sudden turn brings you to the top of a steep descent. This in wet weather is dangerously slippery; the adjacent woods abound with game, especially partridge and chikor. Another turn to the right brings you into Shatghur, the water from which is of excellent purity and clearness, that every stone in its bed can be distinctly seen at all times. Here also are more lodes of copper hitherto unworked. Crossing the bridge the new road leads up a steep, after which a mile of level road leads to a nice spring, under some shady trees, where tiffin is acceptable. The rocks here are worthy of observation, and there is no hiding that serious-looking flight of steps in the solid rock by which you have to ascend over 200 feet.

This pinky white or peachy coloured metamorphic sandstone is very crystalline, and is similar to the celebrated Kansas stone, of which the Americans make their noted whetstones, which sell at a great price.

At the summit the road betters again, and an easy ride brings us to a sharp corner; before turning this, let us step a few paces to the left under the tree on this projecting point. What a lovely sight is here! Over the river on the left is the village of Choki, and at the back the entrance of the Malauna Khud, approachable by a bridge far below. On the right among the clump of walnut trees is Jerri, the camping ground being under the trees. Above are immense forests, which supply the railways with sleepers by the thousand; the trees are felled and cut into lengths here, each log over nine feet, with the date of the year it was felled; these are all slid down the mountain side into the river, where they take their chance till they reach the wide but shallow water of Nadoun, where they are stopped and placed in the Government depôt; but a large number are stolen, they say, in their transit down to there. The villages to the right are Mateara, Buhar, and others above the Kanor Khud, where the silver mines are, and up the valley we see part of our road to the holy hot springs at Manikarn.

At Jerri you get supplies and bearers, if needed, Manikarn being the next stage.

Kell Bro^{s} Lith.

CHONG FROM THE NORTH — BIJLI TEMPLE (8,076 Ft) OPPOSITE.

The road from Jerri for about a mile abounds in mineral veins—silver, lead, and copper having been dug out in many places. On reaching Kanor Khud, about a mile down on the right-hand side, there are many old workings about the bed of the river, but the rich silver mines are up this khud; here was the only mine which the natives disclosed to the Sikhs when they occupied the country, and which they blew up the entrance to on leaving. Some of the ore from this mine is said to have produced 1 in 16 parts of silver.

What was taken out by myself from the rubbish at the entrance was kindly assayed by Dr. Oldham, and produced "99 ounces of silver, a large percentage of copper, and some gold."

So entirely has the existence of silver in this country been forgotten, that we find the following in Cunnynghame's Ladak:—"The sands of the Indus have long been celebrated for the production of gold. Pliny says: '*Fertilisiru sunt auri Dardæ*,' and this is the case to the present day, for the sands of the Indus in the Dardœ country are said to be more prolific than those of any part of the river (Lib. vi., c. 19). The conclusion of the passage is curious and suggestive: 'Setœ vero argenti,' that is, the country of the Dardœ produced most gold, but that of the Setœ most silver."

"As we know," remarks Major Cunnynghame (p. 232), "that *silver is not found in India*, the Setœ

can be no other than the seths or bankers, in whose hands the wealth of India has been for ages."

Surely Major C. must have heard of Vezeeri Rupi, "the silver country of the Vazeers," in Kulu, covering 677 miles, and abounding in silver ores; for such an authority to say there is *no silver in India* is astonishing.

When ascending this khud some distance up, my attention was attracted by an appearance of mineral indication in the rock above. Determined to examine the spot more closely, I attempted to cross the stream to the opposite bank, which was nearly perpendicular, but my foot slipped, and to save myself from falling into the stream I seized the root of a fig-tree growing in the perpendicular rock close at hand, where the soil gave way, and with the portion of the root came out, to my amazement, a large lode of rich silver lead as thick as my leg.

This led to further discoveries of other rich veins, and I afterwards heard there is a rich mine about here, but it was planted over to hide it from the Sikhs. There is also a lode of "native copper" up this khud. Indeed the number of veins and indications of mineral wealth about here is beyond credence, and days and days may be spent in the discovery and collecting specimens: but this is not permitted.

The view from the miners' camp, on the spur of the hill, amply repays for the ascent, especially the

Kell Bro's Lith.

SILVER MINE, KANOR KHUD AND VILLAGE OF CHOKI _ PARBUTTI VALLEY.

village of Choki and the Krunchall Mountain we saw from Sultanpur at the other side.

The view from the "camp" forms one of the engravings. On the steppes of the mountain opposite are extensive pine forests, which at a distance only exhibit a dark shade, but are thick groves. The prominent tree on the extreme right is a juniper cedar of great age and beauty. The silver mine is close to the tree on the left, in the foreground, and the village of Mateara is above.

This is a favourite place for the monkeys to gambol about daily.

Below the road and farther on are dozens more lodes and indication of copper and silver, lead, &c. Numerous entrances may be seen below, but most of them fallen in, or purposely filled up and planted over with thorns.

There is an apparent "working" on the other side of the stream—not easily accessible. On turning up to the right a peculiar formation diverts the road—a slip of decomposed clayslate spoils the road, and we descend over the steps of metamorphic sandstone down towards the bed of the river. Here a large amount of timber has been cut, but the water is too shallow to carry it down. In the quartzose rock about here, and indeed for miles on, is much emerald-green oxide of chrome, which looks very beautiful, but is hard to detach; also micaceous iron, which has been taken for black-lead. The road con-

tinues very picturesque till we come to Kasole, up which khud is another mine, and here we cross the "Parbutti" by a long wooden bridge.

I once passed this bridge and looked back for a friend who was travelling with me, but for some time could not see anything of him. After I had got some distance I turned back and saw him crossing the bridge *on his hands and knees*,—his long beard hanging down gave him more the appearance of a goat than a human being. A few days' chaff soon cured him of his fears, however, and he now crosses on his feet only. About three miles' pleasant walk brings us to Manikarn, the very *stink* of which is considered sacred, and "one journey here in a life ensures admittance to heaven."

There is a great deal in the idea of this, if one could only believe it as sincerely as thousands of natives do. What can be their idea of heaven, if such is the road to it?

There is a temple at Manikarn said to be 1800 years old, where the debris from the mountain above and other causes have raised the land around it so much that the natives fancy the temple has sunk from its extreme age—like many of the cathedrals in England, especially York Minster. The digging of numberless graves round had so raised the churchyard many feet, that the Minster seems to have sunk, and it is quite common to see them entered by steps down.

Kell Bro^{s} Lith

STONE HOUSE AT MANIKARN - PARBUTTI VALLEY.

The house of one of the headmen lately built there is the prettiest specimen of Kulu building extant, every stone is "dressed," and is said to have been dug from the ruin of an ancient temple there, and the carving of the woodwork is really most commendable. The lower part is used as a granary, and the upper part a nice dwelling.

The boiling water rises from the ground, or in some places gushes out from a crevice in the metamorphic rocks which rise perpendicular many hundred feet above, as in the Andes, while the hot puddles and refuse streams astonish the incautious *dog* who "puts his foot in it."

Beyond Manikarn, about three miles, at Uchiech, are the celebrated Manikarn "Silver Mines," and again at Pulga—which is almost as far as any European has gone in that almost uninhabited land, but there is no reason why there should not be boundless sources of wealth farther west.

Some ore from the silver mines at Uchiech was exhibited in the Lahore Museum, 1863; but it appears there are several lodes about Manikarn, galena, arsenical and iron pyrites; but the access is rather precipitous for natives to incline to reach them, though they have long been known, and are prominently defined in the trigonometrical survey maps of India.

One of the Manikarn mines is galena, another is principally arsenical pyrites. Dr. Stolitska gave me

an uninviting description of his visit to one of them, being let down by a rope round his waist, &c. It seems a wonder to me the learned geologist should have taken so much pains to see this, and yet to have literally walked over a dozen others, and never noted them. He informed me, however, that the weather was so bad during his excursion there, that he had little or no opportunity of seeing the country fairly. This was a great pity, as a gentleman of his known ability would have been able to give more information than I possibly can.

There are one or two stone baths at Manikarn supplied with the "native liquor"; and, judging from the appearance of the many who enter after their pilgrimage of many weeks' travel, I should say it was rather a desideratum. But there are no means of changing the water, and the smell became so very *strong* that I packed up my ores from the mine, and was rather glad to leave Manikarn, especially as the headman assured me I was "certain to go to heaven now" for having visited the Holy Baths—which is rather consolatory, considering the many opportunities I have had of breaking my neck since.

"According to the legend, the goddess Parbati having laid her jewels upon the bank whilst she was bathing with Mahadeva in the river, her ear-rings (Manikarnika) were stolen and carried off to Patala, the regions below the earth, by the serpent Sesha.

"At the probable consequences of the Mahadeva's

wrath the gods discovered the thief, and urgently pressed the Naga to restore the plunder. Sesha refused, claiming the ear-rings as his own property, but as he snorted with indignation the subject of dispute issued from his nostrils, in which it had been concealed, and flew back to the goddess.

"Through the openings made by its passage to the surface of the earth, boiled water has ever since continued to flow."

I think I copied this from Moorcroft; anyhow there can be no doubt it's all *true*.

The way back from Manikarn can be varied by going to Jerri again, and down the steps to Shatghur; but after crossing the bridge, keep the bank of the river to the right, instead of going up the slippery hill to the left. After passing some more mineral lodes in the rocks, continue *down* the stream,—the road being all comparatively level, till you come out below the foot of Chong, where there is another of those picturesque bridges. At certain seasons you can "camp out" here pleasantly under large walnut trees before crossing the bridge. On the opposite side, also up the steep ascent, is another silver-lead lode, but difficult of access. The road now is a continual rise for some hours of 4000 feet. There is a very small resting ground at Chamoun, from whence you get a beautiful view of Chong Fort and all the road we passed going up the Parbutti.

From Chamoun the road is partly through a forest,

where *if it be wet* the clay is inconceivably inconvenient to climb; and, whatever the inclination may be, the probability is you will leave *one* boot behind. There is another shorter road, under that large tree at the summit, by the large tree at Kot Kassie, instead of going up to Bijli, but the Bijli is the easier route, and can be *done* on horse most if not all of the way. On the summit of Bijli there is a temple to the goddess of lightning, and ponds of water to supply the cattle. The view from here up the Maol Khud and down the Kulu Valley, and of all the mountains round, amply repays for any exertion in reaching the top.

The descent is easy, the road being safe all the way; and the distance from Chamoun to Sultanpur about five hours' walk; this finds us again at Sultanpur Rest-house.

FROM KULU TO KANGRA.

The route back by the Bubu Pass, although entailing a long climb the second day, is nevertheless a favourite trip, the scenery being more than interesting all the way to the plains, and the road beyond Kangra in particular a good cart-road; there is also the convenience of rest-houses at every stage. The river is called the "Sivbarry."

The first stage up the Sultanpur or Sivbarry Khud, is a most agreeable walk, the road being fair all the

way to Karowne, which I measured as being 6384 feet, or about 2300 above Sultanpur. There is a large slate quarry over the river about three miles up, if you can call it slate from being so commonly used throughout the valley to "slate" houses, it being a garnetiferous strongly micaceous schist.

These slates are sold in quantities at Sultanpur.

The rest-house at Karowne is pleasant if in repair; from it may be seen the stone tower of "Kot Kassie" on the Bijli ridge, which is not visible from Sultanpur, and the large tree before mentioned as being so conspicuous.

This is the last British rest-house; there is also a very neat native serai below it. We now leave for Bubu Pass, Mundi territory.

Leaving this we follow the stream and continue gradually to rise, soon getting into an eternal zig-zag among the fine forest of trees which prove a grateful shade; while the ferns, which are in abundance and great variety, begin now to be conspicuous all the way.

The occasional views from here looking back are transitory but beautiful, for the clouds of mist flit by vexatiously; just as you get a lovely view, and begin to appreciate how lovely such a village is on the summit of such a hill, a cloud passes over it, and it gradually disappears.

The cutting at the top is always wet, there being a fine spring of water, which however damages the

road seriously; there is also a fine peachy "flukan lode, which is assuredly metallic below—I should say copper.

If the weather is fine, the view from the summit is very grand on both sides, but you may wait for hours to get a glimpse through the flitting clouds, that seem determined to drench you through, or hasten you down the other side, which being in Mundi territory, is generally in a very bad condition, being cut up by the streams from above.

The Rajah of Mundi has, however, spent enormous sums of money to make and keep these roads passable.

The descent is rough and tedious, and it seems a great pity a tunnel was not cut some two thousand feet below the pass, and so much distance and labour saved.

Budwanee is the next stage, and a nice bungalow it is, though supplies are usually scarce here. The house cannot be seen till you turn up from the precipitous road and round the corner; its position is then found commanding a splendid view, including two miles of the next road gradually ascending the other side; the slate on this bungalow was all brought from near Palumpore, I am told. I was very glad to spend a few days here, especially as there had been heavy rains, and the road was very much damaged indeed,—nearly impassable. This is probably the worst bit in the whole journey; in some places the

road has entirely slipped down, leaving about six inches, and the rock above overhanging. We managed, however, dholie and horse and all, to get over it safe, and soon reached the cutting or pass at the top of the opposite rise,—the rock being a decomposed black slate, no doubt repaired since then, as Lord Mayo passed through, November, 1871.

The road then becomes wide and pretty level, but incessantly winding in and out; there is a fine view also, if not cloudy, as you jog along under the shady trees; the rock is mostly gneiss decomposed and sandstone shale, the mountains being very steep, and the forests of timbers all useless for want of carriage.

Suddenly, but by no means too soon, Jitringee Rest-house comes in sight: this is rather a damp, uncomfortable house, and was lately much out of repair. I found it 5997 feet above sea level, and there is a very fine view from here of the lower country, when the weather is fair.

There is a path from the back of this place that leads to Mundi, and is used by those going to Kulu *viâ* "Rupereri" or Bajara Khud, when the Bubu is closed by snow, which is the case from November to March.

From here the descent becomes sudden and continuous for some time, winding through the forest, when you emerge on a more level road that still winds in and out round the spurs of the mountains,

crossing streams which have no bridges, and are sometimes deep.

The first one, which is just past the village of "Gamel," surprises you by the pink colour of the water, which is caused by its running from a mine of salt in a decomposed calcareous sandstone. This mine is not at present worked, the rubbish having accumulated so extensively; but there are other similar salt mines in Mundi that bring the Rajah several lacs of rupees revenue annually.

A little farther on there is another torrent to cross, but not salt. It is much to be regretted this and several others are not bridged, being at times dangerous to ford.

We now pass over a gentle rise whereon is an old small Hindu temple, and on the right hand we get a sight of Harabagh, a bungalow presented by the Rajah of Mundi to his former tutor, Mr. Clarke, but not always occupied. Another small stream is forded, but we have yet still another, the bridge over which has been carried away, and a rope and basket has been rigged up for the dâk runner, in case the river is in flood, for one man has already been drowned trying to pass. There are usually extra men there waiting to earn a few pice, and we put the dholie on the men's heads, but the water is up to their armpits, and the horse must swim. This is not always the case, but there is no place on the whole route where a bridge is more

required, and by diverting the road a little lower down the stream, a plank or two would effect a crossing both short and safe: on rising up the incline we now see the nice rest-house at Dhailoo. This is a new and comfortable bungalow in a delightful spot, and offering a grand view of the Kangra Valley. Above the bungalow are the remains of a large fort and palace, which are only approachable from the other side. It is called Curunpore, and is said to have been the residence of the ancient Rajahs of Mundi, "being 1700 years old." Here was also the original capital of Mundi territory till removed to the more retired place where it is now. The ruin is very interesting, but so overgrown with jungle inside, that I found it impossible to get over it even to take the ground plan.

Here I had the misfortune to break my thermometer, so could not ascertain the height we were at.

Next journey we pass through the tea plantation belonging to the Rajah of Mundi. We pass also several old castles, some of very great extent, but they are out of the road, though I have no doubt well worth examination, as they are all constructed in a superior manner to anything erected in our days. It is plain there was no "Public Works Department" (the disgrace of India) in the days they were built.

From the top of a hill, which commands a view of all the valley of Kangra, we descend rapidly to the interesting village of Bijnath. Here are some ela-

borately carved old Hindu temples, and actually a post-office! The village is in a dense mass of vegetation, and is muddy and damp. Monkeys congregate in hundreds, and seem much *interested in the arrival of strangers.* The rest-house is capacious, but badly built and worse cared for. The view of the river below and the mountains above would make a good photograph, but better painting; it is full of detail, with an elegant temple by the river side in the left foreground. Down the steep bank and over a good stone bridge, we soon get on the plains and pass through repeated tea plantations on the long spurs of the hill, and during rainy weather the descent of these repeated ridges is almost dangerous, the soil being a greasy red clay. A small but inconvenient stream, which is not bridged, runs across the approach to Palumpore. Palumpore is in fact a nice *street* on the spur of a hill; the Rajah of Mundi has built a school there, and the Government a good dâk bungalow: there is a common bazaar and the beginning of a stone church. The European inhabitants being limited to two or three families of tea planters at a distance, the chaplain from Dhurumsala will attend occasionally to perform service. There is a fair held here every November, which, but for some *croquet playing*, is said to be a failure; the ground undulates all round, and is covered with fir trees, under which the Yarkandees and others visiting the fair can camp, and the whole is no doubt very picturesque. There

are a few shawl weavers in the bazaar, but it appeared to me the place was a failure.

It lacks sadly a large Maidan like Kulu, and its approaches want improving and bridging. If the roads were bettered, bridges built, and ridges tunnelled, Kulu would be a much better market than Palumpore.

To Dhurumsala is a double stage, there being a rest-house at Dadh, which is about half way or more.

Dhurumsala is a very scattered and certainly a *hill* station, for the post-office and church are miles apart from each other, and the dâk bungalow, which is, or I hope only *was*, the most dilapidated, dirty, leaky, smelling place I have yet seen in India under the name, is several miles from both.

The Commissioner's house is 9205 feet above sea level, 3106 feet above the dâk bungalow.

To Kangra, which is worth looking at, especially the splendid old fort, and on to the plains, is a route scarcely worth describing, being so well known; the road is good all the way for horses, camels, carts, or almost a buggy, but by dholie you may be at Hosheyarpore in a few hours, and two hours and a half after in the train for Calcutta or Lahore.

Mr. G. Barnes, in his settlement report, says of Kangra Valley: "I know no spot in the Himalayas which for beauty or grandeur can compete with the Kangra Valley and these overshadowing hills.

"No scenery presents such sublime and delightful

contrasts. Below lies the plain, a picture of rural loveliness and repose. The surface is covered with the richest cultivation, irrigated by streams which descend from perennial snows, and interspersed with homesteads buried in the midst of groves and fruit trees. Turning from this scene of peaceful beauty the stern and majestic hills confront us.

"Their sides are furrowed with precipitous water-courses, forests of oak clothe their flanks, and higher up give place to gloomy and funeral pines. Above all are wastes of snow, on pyramidal masses of granite too perpendicular for the snow to rest upon."

To this Major Paske, in his late memorandum, adds:—"Beautiful as is the Kangra Valley, thus so well described, it is even surpassed by the loveliness of the scenery in the Kooloo Valley, one of the sub-divisions of the district."

I am at a loss to understand why the Government draw the attention of settlers so strenuously to Kangra and Kulu, as I believe there is no possibility of anyone, even of moderate influence, obtaining land in either place; and as to tea, as yet only one plantation makes enough to pay the delectable—Income-tax.

The productions of Kulu are Indian corn, wheat, barley, peas, beans, rapeseed, millet, cotton, tobacco, great quantities of which are exported, poppy, opium (this pays no duty), endless varieties of rice and very fine potatoes; there is some tea, but the "agent"

informed me that it does not succeed in Kulu, and his attention is now directed to purchasing up every bit of land he can for his employers, who already have the entire monopoly to themselves, and renting it out to the natives for half the crops.

The cultivation in Kulu depends mainly upon irrigation; this is supplied from the mountain streams direct, or raised from them by the many methods used throughout India.

The bed of the entire valley is a loose conglomerate, through which the water percolates from the surface, leaving it hard and dry, thus rendering irrigation absolutely necessary.

The numerous mills for grinding corn are ingenious and effective, though constructed in the rudest manner possible; they are turbines. Near the lower end of an axle which is fixed so as to revolve upright, are fixed eight or ten fans of wood, at an angle of 45° with the axle. To the top of this axle is fixed the upper millstone. A stream of water is then conducted so as to fall at an angle on the fans of the wheel which turns the mill. With but a moderate stream the whole power of the water is made effective. No iron is used in any part, so that the owner can easily keep it in repair. Hundreds of these mills cover the valley, and the miller is paid by taking a share of the grain brought to be ground.

Fruit abounds in Kulu; the walnuts being very fine. Apricots and peaches grow for miles on each

side of the road and in every garden and hedge, but are not cultivated, and for the most part plucked and eaten by the youthful population long before they are ripe, thus giving work to the native doctor at the Dispensary, or conducing to lessen the rising population. Peas, strawberries, raspberries, french beans, artichokes of both kinds, cauliflowers, &c., thrive, and there are wild strawberries in many places, of a small size but pleasant flavour. Grapes are found here and there, but are not properly attended to, or might, I am sure, be made profitable. There is a small blue wild plum grows in great abundance in summer, and tempts the bears down during the daytime.

The potatoes are regularly cultivated by the natives, and are very fine. They are sold at the rate of a maund for a rupee cash, but at a higher rate in bartering.

Figs, citrons, limes, and grape-fruits thrive in abundance, and rot on the ground for want of gathering.

The tops of the mountains which incline to the north are covered with "deodar," or pitch-pines, and other inferior kinds of fir; they nowhere favour the south aspect. Below are elms of fine proportions, and plenty of oak. The oaks are mostly kept pollarded, the foliage being cut off every winter as food for goats and sheep, and are therefore stinted in growth.

Some Government official was handsomely rewarded for finding a tree of box in Kulu, yet it may

be seen lying about the farmyards as not unusually scarce or valuable; for it would not pay to transport it to the plains.

I found yew trees and juniper cedars (but got no reward). There is a fine wild plum tree which works up into handsome furniture. I also discovered during my sojourn there the following metallic ores and minerals:—Gold; the ores of silver, lead, copper, and iron in abundance; bismuth, manganese, and tin. There is also antimony, but not in so large a lode as at Shigri in Lahoul.

Iron is smelted and worked by the natives in large quantities in the neighbouring States, and at the annual fair brought to Kulu. A favourite article is a saucepan beaten out of solid iron; they also manufacture large boilers for sugar, &c.; and I am informed the secret of preparing the fine steel for swords, &c., is the use of charcoal made from the root of a euphorbia which bears a pod of silken fibre and is common throughout India, and the manufacture being conducted with stone hammers and anvil.

The iron is smelted with limestone flux and the use of a goat-skin bellows.

Copper ore is smelted without coal or wood in some places. This is effected by breaking the ore up fine and mixing it with cakes of gobar (or cattle dung), which, being placed in a heap and fired, the copper ore runs out at the bottom.

The minerals are as follows:—Rock crystal, tourmalin, kyanite, hornblende, green oxide of chrome, micaceous iron, spathic iron, carbonate of iron, or siderose, mispikel, or arsenical pyrites, pyrolusite, galena, stibnite, kermesite, or red antimony (a very rare mineral), cervantite, carbonate of lime, zinc-blende, copper pyrites, sulphate of copper, or blue-stone, carbonate of baryta, feldspar, mica, serpentine, with thin seams of white, asbestus, salt, limestones, garnets, sapphires, rubies, sulphur, gypsum, borax, and epidote.

There is much gypsum and borax in Spiti also and Lahoul, from whence large quantities are brought down on mules to the plains, the latter selling at about Rs. 6 per maund (equal to 12*s.* for 80 lbs.). It is purified by boiling and crystallizing at the bazaar Sultanpur. From gypsum the plaster of Paris is made. The finest rock crystal is useful for making into optical glasses, like "Brazilian pebbles," and when "brilliant cut" have been mistaken for diamonds. Quantities of good-sized crystals have been found on the north side of Kanor Khud, opposite the Silver Mine.

The rocks comprise a coarse feldspathic gneiss, metamorphic sandstones, clayslate, sandstone shales, limestone rocks of great variety, limestone conglomerates and micaceous sandstones, shales, schists, and slates, and good building sandstone.

The mine in Shigri is leased for twenty years from

Kell, Bro^s lith.

VILLAGE OF CHATE ON ROAD TO KULU FROM SIMLA.

Government; the mineral rights of Vazeeri Rupi, which covers 677 square miles and has a population of between three and four thousand, do not belong to Government, but are private property. It is proposed to raise a company to work the whole.

Rewards are given for the bodies of all bears, leopards, and other destructive wild animals, which are then skinned and the skins sold to travellers, or residents by the Tehseeldar at Sultanpur; but there is sometimes a great trouble to get a sight of them, and they remain locked up in an outhouse by dozens until they are entirely eaten up by vermin.

Sheep are scarce, but sold at Rs. 2 8 annas, or 4*s.* to 8*s.* each, according to size, and the price fixed by Assistant-Commissioner; poultry 4 or 5 for a rupee, and eggs 30 for a rupee, but the fixed price is 16 for a rupee, which is exorbitant, being 1½*d.* each.

The temperature of Kulu is moderate, but of course varies according to the part of the valley you reside in.

Sultanpur is more open than Dobie or Manali, but farther north than Bajara, where I have known the glass at 100° Fahr. in verandah the day before the rains commenced, invariably the hottest time in India. In the winter I never saw it below 32°. The snow never lies on the ground after 7 or 8 A.M., and the air is clear and bracing.

At Sultanpur I never found it hotter than 96° inside the tent and 82° inside the rest-house in summer, or below 30° in winter.

During March the weather is very windy and wet. The wind is also very severe just before the rainy season, but on the whole the climate is much like the South of England, and very healthy.

There is a peculiarity in the currency at Kulu that is not recognized in the plains. The natives will not take British copper money; the reason is this: sixteen British copper annas are not worth more than about twelve annas of silver, or eighteen-pence instead of two shillings. I could not ascertain where the copper money they use was coined, but it is half the diameter and three times the thickness; three usually count for an anna, or forty-eight for a silver rupee; but the price varies continually according to the value of copper in the market, sheet copper there being sold at 112*l.* to 120*l.* per ton.

The Bunyahs here as elsewhere deal in change, and charge for changing copper to silver or silver to copper alike.

There is a gold yarkand piece often for sale in Kulu; the value in gold is ten shillings English, but they ask six rupees for them.

APPENDIX.

ROUTES TO KULU FROM THE PLAINS.

DIRECT route from the railway at Umballa is only sixteen marches or less, but has the disadvantage of being rough and only fit for coolies to travel; besides which, it passes principally through the independent territories of Belaspore, Suket, and Mundi, there being few if any resting-places for Europeans.

Route direct from Umballa to Kulu :—

UMBALLA.—1. . 2. Chut Bunnor. 3. . 4. Kerull. 5. Keralee. 6. Ropur. 7. Kunolee. 8. Mongowar. 9. Kondloo. 10. Satghur. 11. Belaspore. 12. Dheir. 13. Sukyt or Suket. 14. Mundi. 15. Komand. 16. Bajara, Kulu Valley.

The Mail route to Kulu from Jullunder on the Lahore and Delhi Railway is as follows:—

From Jullunder to Hosheyarpore, 20 miles.—This is usually performed in about two hours by horse dâk.

From Hosheyarpore to Gugrate, 15½ miles on a good cart-road.—There is a serai or rest-house at Nari Pass, but it is better to go on to Gugrate, where the accommodation is excellent, and supplies can be had. The view of the Lower Snowy Himalayahs from here is very interesting, and in the valley in front may be found any amount of black buck.

From Gugrate to Purwain, 13 miles.—After a little rough road crossing the river bed the road winds through the forest, eventually reaching a very nice rest-house—or rather dâk bungalow, for here you can get supplies—on the summit of small hill, from whence the view is fine.

From Purwain to Deyrah, 15 miles.—This is a long winding route, and eventually leads to a large river, which has to be crossed in flats kept for hire, the rest-house being very near the other side.

From Deyrah to Ranetalah, 10 miles.—A bad rest-house, with no attendance. It is better to go on a double march.

From Ranetalah to Kangra, 11 miles, where there is a fine dâk bungalow on a very high eminence commanding a view of all the country round.—The view of the ancient and formidable Castle and Fort

Kell, Bro^{s}. Lith.

NEAR RUSALA.

of Kangra, as seen when approaching from the opposite side of the river, is exceedingly grand.

From Kangra to Dhurumsala, 12 miles, is a good road till you approach the range.—There is a dâk bungalow here, but the principal houses are scattered over the hills. From here passengers go to Dalhousie and Chumba, and on to Cashmere.

From Dhurumsala to Palumpore, 19 miles.—Since I passed I believe there is a half-stage over the river at Dadh, but it is very small. At Palumpore is a handsome dâk bungalow.

From Palumpore to Byjnath, 10 miles.—Large rest-house.

From Byjnath to Dhailoo, in Mundi, 10 miles.—A beautifully clean rest-house in a lovely spot.

From Dhailoo to Jitringee, 12 miles.—This road cannot be used by carts on account of the many streams. There is a rest-house, but it is rather damp. From here the road turns to Mundi city. When the Bubu Pass is closed in winter it is three stages.

From Jitringee to Budwanee, 15 miles.—A long winding road under the pleasant shade of trees, and very level all the way till we approach the pleasant newly-built bungalow, which may be seen miles off from this side.

From Budwanee to Karowne, 12 miles.—A British rest-house in Kulu.

From Karowne to Sultanpur, the capital of Kulu, 10 miles.—Kulu Valley.

The first six of the above marches can be performed in a day and night by Palkie Dak.

At most of the stages in this route where out of British control the porters or coolies are engaged through a head man, who receives a portion of the money himself for the trouble of collecting them, and the traveller pays them the remainder. The usual charge is 3 annas per 10-mile stage.

Kulu Valley is also ten marches north of Simla, and this route is often made part of the route to Cashmere, but there are only a few rest-houses between Simla and Kulu, so that a tent is requisite.

The stages are as follows:—1. Simla to Fagu, 12 miles. 2. Fagu to Theog, 8 miles. 3. Theog to Narkundah, 10 miles. 4. Narkundah to Dilachee ("a hard grind"), 16 miles. 5. Dilachee to Choie, 8 miles. 6. Choie to Kote, 11 miles. 7. Kote to Jerhee, 12 miles. 8. Jerhee to Plach, 8 miles; rest-house. 9. Plach to Largi, 12 miles; rest-house. 10. Largi to Bajaura in Kulu, 13 miles; good rest-house.

There is a driving road from Umballa to Simla.

There is another route to Kulu, which, however, is not frequently used by Europeans, chiefly because there are few if any rest-houses on the line, and parts of the road are so rough and precipitous that mules cannot go with luggage all the way, though it is somewhat shorter, and never closed by snow.

THE CHATA RIVER BETWEEN SIMLA AND KULU.

The route is as follows:—Jullunder to Hosheyarpore, Hosheyarpore to Gugrate. From here we cross the valley and river bed, which abounds with black buck, in nearly a northerly direction, passing through the pleasant gardens of Umb, a private snuggery of the Great Mogul. From there, after enjoying some luscious fruit, presented by the natives in charge, we followed the bed of a long, winding, deep nullah, whose perpendicular sides were from 50 to 100 feet high, of conglomerate, and in many places infested with monkeys.

The ascent at the end was severe and very sudden, but the view from the ridge at the top was extensive.

The descent at the other side was as steep, but through a pleasant wood, and at the bottom in the valley we encamped near an ancient bazaar, called Kulohule. Around here we saw plenty of pheasants and chikor, and got supplies, but it is a filthy place, and full of dirty people.

From Kulohule the road is very picturesque all the way to the southern bank of the Beas River, which comes on the view suddenly as we surmount an elevated ridge. The long-haired goats I met about here attracted my attention, partly by their silken coats and partly from the beautiful and graceful curve of their horns.

Close to the bank of the river, but above it, shaded by a cooling tope of trees, is a well-built stone temple, the carvings on which are finely executed,

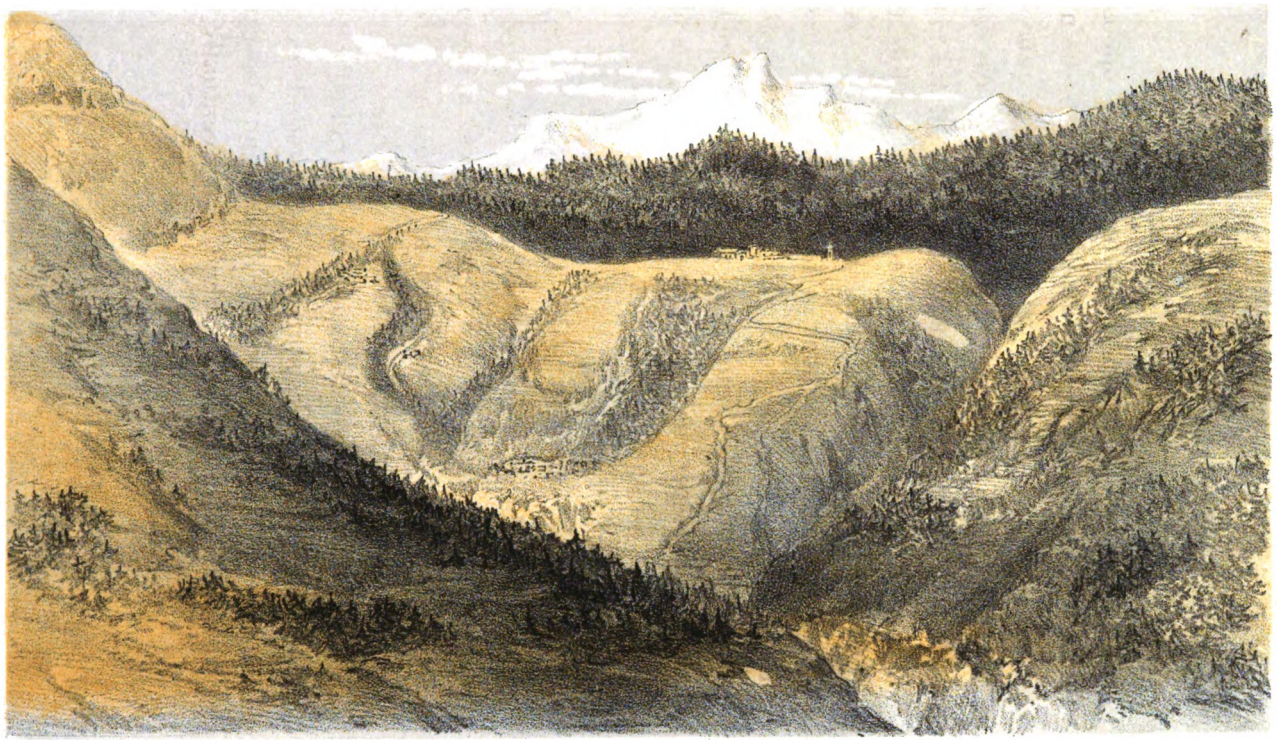
and, for a wonder, scarcely injured. In the centre of the floor is a four-headed figure, as far down as the shoulders, and larger than life, each face opposite an entrance, so that only three faces can be seen at once, as intended. The spandrils of the entrance—for there are no doors—are filled up by neat carvings of a man riding a swan,* and above is a figure playing on a "banjo." We stayed here to tiffin, and then marched on about three miles to Nadaon, and here we encamped under a tree below the town. Here they wash for gold, the river being shallow and wide, but free from large rocks. Fine pebbles, onyx, and jasper may be picked up here. It is also the depôt for the timber cut and floated down by Government from Kulu.

Nadaon is about 19 miles from the next stage, which has the convenience of a rest-house, and is called Humeerpore. From here we cross a by-road to Simla, merely a bridle path, and crossing a bold stream, we encamped north of it at Kullore.

From Kullore we descended very gradually to a river, where our mules stumbled, and wetted all our luggage and valuable books. The Ayah also came to grief by falling down a khud, but eventually we got a fine camping ground under the trees, part way up the hill at Gopalpore.

Gopalpore is "Thanna" of the maps. The ascent here is great and precipitous, there being four-tenths

* The swan is the usual vehicle of Brahma, the creator of the universe.



Kell Bros Lith.

KOT KANDI & VILLAGE OF DIYAR FROM RUPARARI KHUD.

of an inch difference in the barometer on the summit. It puzzled me how the men carried the ladies' dholie and all our luggage up this path, for we had to leave mules now for human labour.

On these mountains are large lakes of fish and plenty of pheasant shooting.

The descent increases steepness, and becomes very abrupt as soon as we approach the Holy Valley and Lake of Riwalsir. Here is a "sacred lake" and "moving island," and several beautifully-carved temples near the bank. There are also wide stone steps and baths for women, enclosed on the banks by a carved stone screen. The fishes come in millions to be fed by the hundreds of pilgrims who come here for thousands of miles distance. Two finely-carved stone bulls ornament the village, and several richly-carved stone temples, similar and in some parts alike the temple we visited before coming to Nadaon.

We have now entered the Rajah of Mundi's territory.

From Riwalsir we ascend out of the natural basin, and follow an interesting but rough road to Mundi city. The last mile had been almost carried away, and we had to cross the river close to Mundi by torchlight, which, though fearful with its rush and roar at night, was barely two feet deep in any part.

At Mundi camping ground we found the Rajah had kindly prepared two suits of handsome tents for

our reception, and he kindly sent invitations to attend Durbar the next day. He is a fine young man, and speaks English fluently.

From Mundi we crossed another river in a flat, and encamped at Kumaund.

From there we took a short march to Dulce, encamping on the spur of the hill to enjoy some pheasant shooting.

From Dulce we ascended through a pine forest to the ridge of mountains, at the summit or pass of which we had a fine view of Kulu, and Vazeeri Rupi in particular, and by mid-day we were at Bajara rest-house.

THE END.

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