

to the Khalif. When they reached *Sham* they shewed the box to the king, who ordered it into the seraglio, opening it in the presence of the daughters of *DA'HIR*, to whom he said, "Behold how absolute is my power, and how I treat such servants as *BIN KASSIM*." The women replied, "Oh king, just men ought not to be precipitate in great affairs, or be too hasty to act, either upon the representation of friends or foes." The king asked their meaning, they said, "We made this accusation against *BIN KASSIM* because of the hatred we bore him, seeing that he slew our father, and through him we lost all our property and possessions, and became exiles from our own country; but *BIN KASSIM* was like a father and brother to us, he looked not on us for any bad purpose, but when our object was revenge for the blood of our father, we accused him of this treachery: this end attained do with us as you will." The Khalif on hearing this, suffered great remorse: he ordered the two women to be tied to horses, and dragged to death, and they buried *BIN KASSIM* in the burial place at *Damascus*.

III.—*Note of a visit to the Nitt pass of the grand Himálayan chain.*

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[Extracted from a letter to, and communicated by, Captain P. T. CAUTLEY.]

Joshináth, 22nd Dec. 1837.

Having just returned from the *Spiti* pass, I think that an account of my expedition thither, however brief, will not fail to interest one whom I look upon, now that the admirable *FALCONER* is far away absent from India Proper, as the chief scientific authority of the Upper Provinces. You are entitled to the first tribute of information gleaned in my trip, because you have been ever ready to give the benefit of your instruction to your *pupils*; and secondly, because *FALCONER* and yourself have rendered the geological *School of Sháranpur* illustrious, by the well-deserved medals which you have won for its *professors*!

Above the junction of the *Dhau*li and *Alaknanda* branches of the Ganges at *Vishnúprág* a mile below *this* place, (which is the chief seat of the *BADRINA'TH RÁWAL* and his priests,) the glen of the *Dhau*li continues for 35 miles up to *Nitt* village. Near *Joshináth* and the whole way to the junction of the *Kíní* river, which comes from the north-west face of *Nandi Dévi*, this glen is characterised by the most exquisite scenery; the southern mountains sloping down to the river covered by forests of *Quercus semicarpifolia*, *Rosa webbiana* (wild red rose), yew,

horse chestnut, alder, poplars and elms, interspersed with pretty villages of which the chief ornament, at this season, are the fields of red *Marsa*, (the *Battá* of *Bissehr*) a species of amaranth, while the high craggy northern mountains and peaks, that form the separating ridge between *Badrináth* and *Nitt*, come down to the *Dhaulí* in the most terrific precipices. Above the *Rínt*, both sides of the glen assume the regular Himalayan features of wild sublimity, although villages are every where seen perched up on seemingly inaccessible heights. The river remains broad and deep, though often broken into cataracts. The road (a fine new one made by myself this year) is carried on *either* side of the river as most easy, and is crossed by fine *Sangas*. We soon enter *Bhote*; and flocks upon flocks of sheep carrying loads of grain, or salt and borax according as they are from *Bhote* or to *Bhote*, are met with at every step, guarded by the savage dogs of *Thibet* and the still more savage *Bhotias* among whom are also discerned a few most savage *Lámias*, or wandering beggars from *Tartary*. Of the latter the dress and appearance are most strange; the women are scarcely human, and both they and the men resemble the pictures given of the *Esquimaux*. The children are rosy-cheeked and sometimes pretty, but the small Chinese eyes buried in the face give a somewhat monkey-like look to their physiognomy. This latter observation applies equally to the *Bhotias* as to the *Lámias*. But I refer you to *TRAILL*'s report on *Bhote* for a description of the people and their customs, as well as of the trade between this province and *Thibet*, and the mode in which it is conducted. Let me rather tell you what *TRAILL* does not describe with accuracy, or at least with minuteness, viz., the rocks and the trees and the general geography. There is a very dreary glen without villages for ten or twelve miles separating *Upper* from *Lower Pynkanda*, or as they are sometimes, but improperly, called *Upper* and *Lower Nitt*. After leaving the oaks and elms, &c., the wood becomes entirely *cypress*, and from summit to base of the mountains no other tree is seen. The larger trees attain not unfrequently an enormous size, some of them having a girth of 27 feet. The smaller kind are, however, the prettiest, and even *appear* to be different from the larger in species; but on observing them attentively I perceived no difference whatever in reality between what some travellers call the *Arbor vitæ* and the large Himalayan *cypress*. At *Jáma*, *Upper Pynkanda* is entered, and then the scenery, retaining all its grandeur, also becomes exquisitely lovely. Villages of the true Swiss character are seen on every open spot, surrounded by *cedar* trees, and overhung by crags of the most stupendous character wooded up to the snow which shines on their summits,

with similar trees and birch, which latter as well as the sycamores have at this season the true autumnal tints contrasting finely with the dark branches of the deodar. The bridges now become very frequent; and the river, though still unfordable, becomes a torrent falling over rapids. *Malári* is next entered, a very large village in every respect similar to those seen in *Kanaur*. The crops when I arrived had just been cut, and it was somewhat strange at 10,250 feet above the sea to see the fields in the valley covered with harvest-sheaves, while the eternal snows were not more than 3000 feet distant overhead: and heavy frost was whitening the ground. Between *Malári* and *Melam* in the *Juwáhir* pass is a route practicable in August for about a fortnight every year, but like all the other routes within the *Himálaya* very high, snowy, and dangerous. It is in this intermediate range between the *Dhauri* and the *Gori* that silver is said to exist*. Lead mines are now worked on a high range not far above *Mulári*; but the situation renders all hopes of increased produce or new discoveries of this metal, almost vain in this direction. After leaving *Mulári*, we march up a glen of the most beautiful kind, the deodar trees (all of the spreading shape) coming down to the waters' edge, and now beginning to be mingled with chlá pines† (*pinus excelsa*, not unlike the chir at a distance), and Rágha firs (*abies webbiana*): a set of large villages is then entered. *Bampa*, *Gumsáli*, &c. all varying in elevation from the sea from 10,200 to 11,000 feet and upwards, the highest of which is *Nitt*. At *Bampa* the deodar pines end, and no other tree is seen save birch and *pinus excelsa*, but the ground is covered as well as the surrounding heights, with beds of ground cypress, gooseberries, currants, furze, (*astragalus*, ROYLE,) webb rose, sweetbriar and juniper. The furze is especially plentiful, but there is no heath as at *Badrínáth*. By heath I mean the *andromeda fastigiata* depicted in Royle. Up to *Gámsáli* the rocks have been quartz, mica, schist and gneiss, with granite blocks, in the river beds, fallen from the peaks, except in the neighbourhood of *Mulári* where argillaceous and

* N. B. All our snowy range galena ores have a good proportion of silver in them? Would this be worth extracting by chemical process? Could not you come and visit all our mines? [Capt. DRUMMOND and an experienced miner have since been deputed to the district.—Ed.]

† N. B. The Chlá pine grows up very near to the upper limit of birch. At *Nitt* it is found at 11,800 feet; the birch only goes to 12,200 feet. At *Badrínáth*, the limit of wood is lower, as the snow comes down lower. Both *Badrínáth* and *Nitt* are within the *Himálaya*, and have snowy peaks to their south: *Kedárnáth*, is on the contrary on the south base of the peaks and snow is met with at 10,000 feet. *Gangautrí* and *Badrínáth* are in the north of the peaks. *Jamnautrí* and *Kedárnáth*, on their south.

talcoose schist is the chief rock. At *Gumsúli* the granite is met with in *situ*, pervading gneiss and mica schist, exactly in the mode shewn by LYELL in his picture of *Cape Wrath* in *Scotland*. The breadth of the veins is sometimes very thin, but sometimes the granite spreads into great broad patches. It is a reddish variety in general, but a highly talcoose variety with large schorl (?) or tourmaline (?) crystals is very common. Just above *Gumsúli* the river runs through tremendous gneiss and granite precipices, and the road is carried along scaffoldings, now quite passable for a poney, *hamáre aqbál se*. After turning this corner and ascending to *Nítí* village the *Himálaya* peaks are all turned, not one is left to the north, though some of the northwest and northeastern heights are within perpetual snow limits. At *Nítí* limestone (not crystalline) and argillaceous schist, chiefly the latter, are the rocks. *Nítí* is 11,500 feet above the sea, and when I arrived no snow was to be seen even in the river bed. On the 10th October, I left the *Nítí*ans cutting their barley and pháphar harvest, and proceeded on to the junction of the *Gunés* with the *Dhaulí*. I met with the first snow near *Gildúng*, more than 14,500 feet high, and this snow was merely a snow-cave in the river, the leavings of last winter. A few masses of gneiss and granite were still to be seen in the bed of the *Dhaulí*, the debris of some of the southern precipices through which I could see the granite veins running along; but argillaceous schist and quartz were the rocks of the surrounding hills. There is one very bad gorge between *Gothing* and *Gildúng* pastures, where I shall have some trouble in making my road, but after *Gildúng* the hills are round and smooth up to the pass. They were covered with grass and saussúre flowers, the grass of very peculiar kinds and noted for its goodness. The pastures were covered with yáks (chowra-gaies) and jubboos, the *mule* breed. These animals retreat of their own accord to the villages on the setting in of the winter just before the villagers depart for the southern parganas. I carried up firewood and other loads on the backs of yáks, and my servants rode on others. Very few are white, except at the tail.

The rivers *Gunés* and *Dhaulí* are mere streams, and were half frozen above *Gildúng* at their junction, but between *Gothing*, the *Ryilkanda* joins the main river with a large body of water, arising at this season from a glacier, and up to this point the *Dhaulí* may be said to be unfordable, except at one or two rocky points near *Nítí*. The *Gunés* may be said to arise from a snow-bed, for I saw *snow-caves* towards its source, but the *Dhaulí* or furthest branch of the Ganges certainly rises from a spring at the southern face of the pass where on the 11th Oct. there was not even a *speck* of snow. My camp on the 10th, was at

er up. Wedged in the blue limestone in the ascent back to the crest of the pass, I observed a large bed of thinly laminated and contorted argillaceous schist. The round quartz stones are every where scattered.

I see no difference whatever either in the geological character of the hills or the form of the ranges, between one side of the pass and the other. *Tartary is in fact entered very soon after leaving Niti village, and the peaks seen so grandly towering in the south are the real beginning of the Himáláya mountains, and not the crest of the pass.* Pray come and see whether I am not right in conjecturing that fossil ammonites can be found on the south face of the Niti pass, which is in my idea, only the highest portion of the Tartaric plain, running up to the Himáláya peaks. Even at Niti, there are peaks 23,000 feet high *due south*; and *there* as well as at the pass itself the spectator wonders how one is to thread one's way into Hindustán through them, no gorge or glen being visible, that seems to be like an introit or exit. Behind *Malári* the hills become round and Tartaric also, as well as behind *Niti*, but being higher and within the limit of perpetual snow, they are difficult to cross, and the pass following a river bed is preferred. The time to visit Niti is from the 20th Sept. to the 10th Oct. In May, *Malári* even is hardly reachable, and the snow does not melt in any part of *Upper Pynkanda* till the end of that month. The pass is not open till July, and it shuts now. On the evening of the day (11th Oct.) on which I visited the pass, the first snow fell. All night it snowed heavily and next day I could hardly reach Niti! Such are the vicissitudes at this season. At 3 P. M. when the wind got up, the thermometer was 30° in the shade and 42° in the sun at the crest of the pass. On the morning of the 12th, in my camp at 14,500 feet, the thermometer was 16° in the air and 22° at my bedside!

I shall wait till I get back to send you specimens. I have a good many fossil bones brought from the interior of *Thibet*, and from the *Mána* pass. They are however very broken and small.

P. S. The Hindu pilgrims who visit *Manasarovara Lake* go up by the *Mána* pass, which is merely the continuance of the glen of the *Saraswati* above *Badrináth*, (as the *Niti* pass is of the *Dhaulí* river,) and they return by the *Nilang* pass behind *Gangaotri* or by *Niti*. These two last are the easiest of all the passes, *Nilang* being without much ascent and being the course of the *Jhannábi* river, which rises on the *Thibet* side. The *Juwáhir* pass is the most difficult, but being near *Almora* the greatest traffic, nevertheless, is carried on in that pass. The *Neipál* passes are all easy. The pilgrims leave *Mana* in July, and return to this side in the beginning of October.