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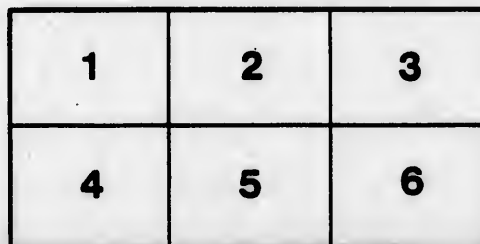
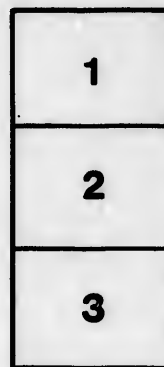
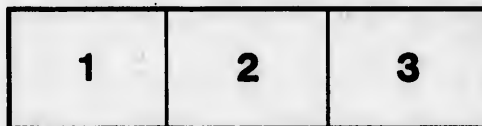
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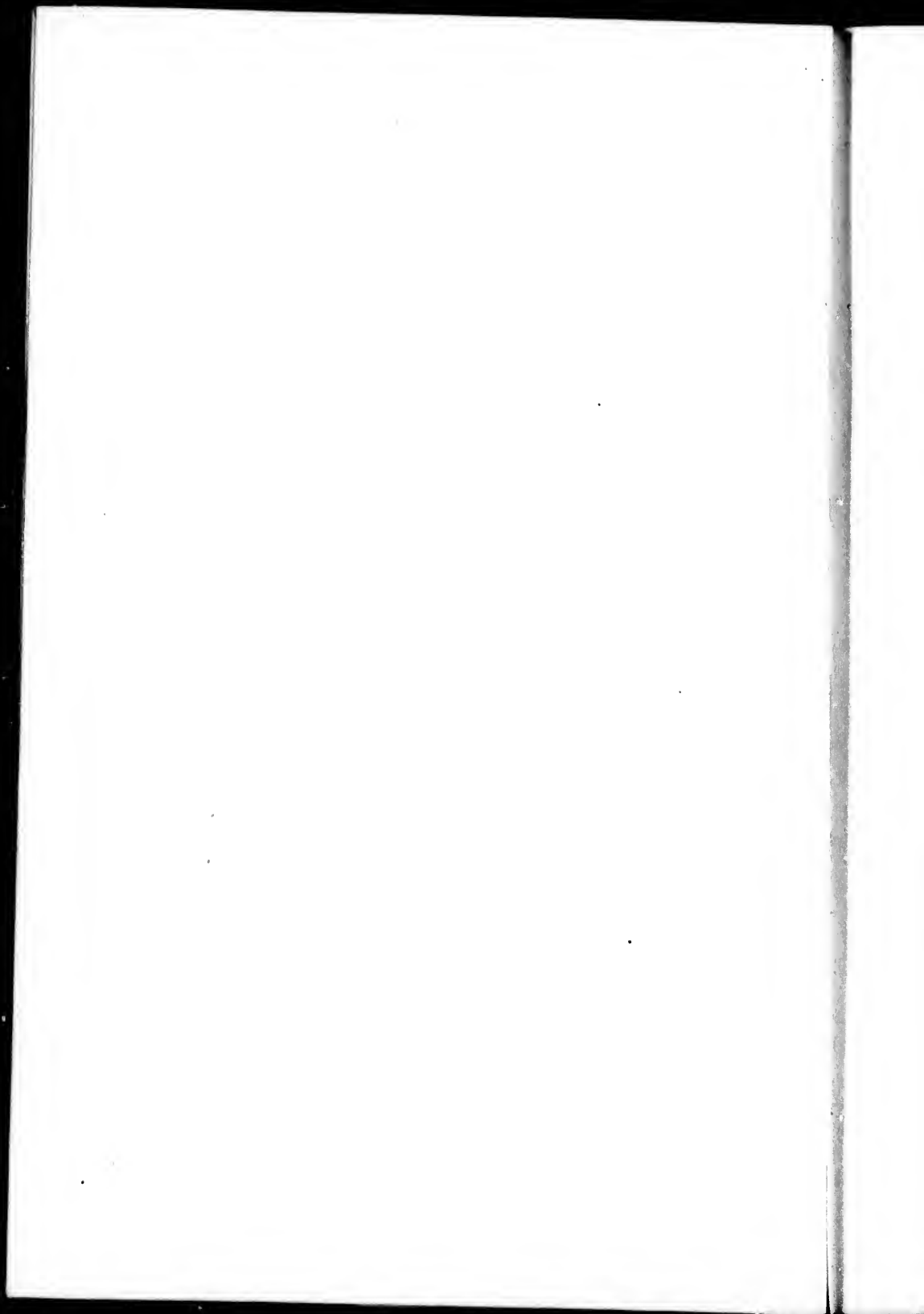
AN EXPEDITION
ACROSS THE
ROCKY MOUNTAINS
INTO
BRITISH COLUMBIA,
BY THE
YELLOW HEAD OR LEATHER PASS.

BY
VISCOUNT MILTON, F.R.G.S., F.E.S.L., F.A.S.L.,
AND
W. B. CHEADLE, B.A., M.B. CANTAB., F.R.G.S.

READ BEFORE THE BRITISH ASSOCIATION AT BATH, SEPT. 17, 1864, AND
BEFORE THE ROYAL GEOGRAPHICAL SOCIETY OF LONDON, DEC. 28, 1864.

Printed for Private Circulation.

LONDON:
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LUDGATE HILL, E.C.



AN EXPEDITION ACROSS THE ROCKY MOUNTAINS.

THE rapidly-increasing importance of British Columbia, dependent upon the discovery of gold, has drawn attention to our means of communication with that colony. The only direct road at present existing between the shores of the Atlantic and Pacific, passes through the territory of the United States; and it has often been thought desirable to open a route through our own dominions. In the spring of 1862 I resolved to investigate for myself the nature of the country between the Red River Settlement and the Rocky Mountains; and to penetrate, if possible, by the shortest route to the gold regions of Cariboo—an enterprise hitherto unattempted. Dr. Hector, indeed, first endeavoured to reach the head-waters of the Thompson River, but was unsuccessful. To quote his own words in a letter addressed to Sir Roderick Murchison:—"I failed to get through—not owing to any insuperable rocky barriers, but merely to my having encountered a forest growth so dense, and so encumbered with fallen timber, that I had neither time, men, nor provisions to cope with it. As it was, the escape from this region of the mountains was so tedious that we were nearly caught in the snows of the early mountain winter, and at one time I thought we should have to abandon most, if not all, our horses."

The Leather Pass, which lies in the same latitude as Cariboo, had, in former years, been used by the *voyageurs* of the Hudson's Bay Company, but merely as a portage from the Athabasca River to the Fraser; and the route was abandoned on account of the dangerous character of the latter river, and the many casualties which resulted from its navigation. As this pass offered the most direct road, and as the region with

which it communicated on the western side of the mountains had never been explored, I selected it as the most suitable field for investigation. As my companion in this expedition I was fortunate enough to obtain the assistance of my friend, Dr. Cheadle, of Caius College, Cambridge; to whose energy and perseverance the success of the enterprise is mainly to be attributed.

Having rapidly completed our preparations, we sailed from Liverpool, on the 19th of June, for Quebec; and, passing as quickly as possible through Canada and the North-western States, we reached Georgetown, a small port on Red River at the extreme west border of Minnesota, on the 18th of July. Here we purchased canoes, and descended Red River alone as far as Fort Garry—about 500 miles—just in time to escape the dangers of the Sioux outbreak, which commenced a fortnight later in Minnesota, when nearly the whole of the white population were massacred.

We arrived at Fort Garry on the 7th of August, and, after purchasing horses, carts, and supplies, and engaging a guide and three other half-breeds, set out for Carlton, a Hudson Bay Company's post on the Saskatchewan, which we reached without meeting with any adventure of importance, on the 26th. As it was now too late to attempt crossing the mountains until the following summer, we made a short excursion on to the plains, where we hunted buffalo, and visited the Crees, and other Indians of the prairies.

Returning to Carlton on the 8th of October, we sent two of our men back to Red River, in charge of the most valuable horses, and with the remaining two men and the rest of the horses, travelled to the border of the endless forest, which commences about eighty miles to the north of the north branch of the Saskatchewan. At a beautiful place called La Belle Prairie, we built a small log hut of the roughest description, from which we made short expeditions to trap in the woods, or stalk buffalo on the edge of the plains. During the winter the snow fell to the depth of three feet, and

the cold was very severe, the thermometer occasionally falling to 35° below zero. During this season of intense cold, we frequently observed the phenomenon of showers of snow falling in minute particles, when the sun was shining brightly, and not a cloud to be seen in the heavens. We had now some foretaste of the hardships we afterwards suffered on our journey across the mountains. As we were unable to obtain supplies of provisions from the fort, the stores there not containing sufficient for the necessities of their own people, we were compelled, at the beginning of December, to send our two men with dogsleighs to Red River Settlement, 600 miles distant, to obtain flour and tea. During the three months they were absent on this journey, we had only an Indian and his boy for our attendants; and most faithful and useful servants they proved. We had to be almost incessantly on the move, travelling to the plains through the deep snow in snow shoes, in order to kill buffalo for our subsistence, which we transported to our winter quarters on dogsleighs. The meat was speedily consumed, by the help of starving Indians around us; and another toilsome journey, with its attendant disagreeables of camping in the open air in the snow and bitter cold, and driving trains of refractory dogs, became almost immediately necessary. Occasionally we were driven to satisfy our hunger by eating exceedingly nauseous food, such as musk-rats, marten minks, fishers, and otters. On the 11th of March our men returned, much exhausted by their hard travelling, bringing but little flour, having been compelled, by the scarcity of provisions on the way, to live principally upon it themselves, and also feed the dogs with it for a considerable part of the time.

The first week in April the thaw set in; and we forthwith abandoned our log hut, and returned to Carlton, and thence proceeded westward, along the North Saskatchewan by Fort Pitt to Edmonton. Before proceeding further with the account of our journey, I must allude very briefly to the magnificent country which extends from Red River almost to the base of the Rocky Mountains. It has been well described by Captain

Palliser and Dr. Hector, and I would add my testimony to the fertility of its soil and the extent of its resources. It is peculiarly well adapted for settlement, rich prairies which are ready for the plough, being interspersed with woods, which would furnish timber for building and fencing. The climate is the climate of Canada; the spring, however, according to Dr. Hector, setting in a month earlier than it does on the shores of Lake Superior. Grain of all kinds grows here with the greatest luxuriance, and the root crops are certainly finer than any I have ever seen in England. The pasturage is almost endless in extent, and so nourishing, that the horses we turned out in the snow at the commencement of the winter, and then thin and in wretched condition, when brought up in the following spring, were exceedingly fat, and fit to set out at once on the journey before them.

Coal beds of large size exist on the Saskatchewan, Battle, and Pembina Rivers. Clay-ironstone, in large quantities, was discovered by Dr. Hector; and miners were engaged in washing gold in the river above Edmonton during our stay there. Yet this glorious country—estimated, I believe, by Dr. Hector at 40,000,000 of acres of the richest soil—is, from its isolated position, and the obstructions put in the way of settlement by the governing power hitherto, left utterly neglected and useless, except for the support of a few Indians and the *employés* of the Hudson's Bay Company. Could communication be established with Canada and British Columbia, this district would I imagine become one of the most valuable portions of the British possessions. The latter country—rich in mineral wealth—would draw thence the supplies of cattle and grain which she is now compelled to obtain from California; and the unfortunate farmer, who has been misled by erroneous representations into struggling against the sterile and unkindly soil, almost universal on the western side of the mountains, would find to the east of them the real land of Goshen he had been taught to expect elsewhere. At Edmonton we remained three weeks, in order to rest our horses and make final preparations

for crossing the mountains. The fort (the principal post of the Hudson's Bay Company in this district) is situated on the left bank of the north branch of the Saskatchewan River, some 300 miles to the east of the mountains. This was the last place at which we could obtain supplies or assistance until we reached British Columbia. The little post of Jasper House, at the entrance into the Rocky Mountains, is merely occasionally tenanted by the Company's men, who, during the summer, live a wandering life, depending for food upon the moose, reindeer, and big-horns, and being frequently reduced to kill their horses for winter provisions. We were, therefore, without much prospect of seeing white men again for two or three months. At this fort we were treated with the greatest kindness by Mr. Hardisty, who gave us every information and assistance in his power, but tried most earnestly to persuade us to abandon the idea of crossing by the Leather Pass, which, he informed us, would be very difficult, from the swollen state of the rivers at this season, and the country on the western side, according to Indian reports, an impenetrable region of closely-packed mountains and dense forest. We were able to obtain but little reliable information about this portion of the road, even from the guide who, the preceding summer, had conducted a large party of Canadian emigrants to the head-waters of the Thompson River by the same pass. Whether they intended to reach Cariboo direct, or follow by river to Kamloops, we could not ascertain. Of their fate nothing was known; but we determined to follow their track as far as might seem advisable, and then trust to the sagacity of our men and our imperfect maps to enable us to reach Cariboo or Kamloops. The road beyond Edmonton being—except for the first fifty miles—merely a pack-trail, we abandoned our carts here, taking forward twelve horses, six of which carried amongst them four bags of pemmican of 90lbs. each, two sacks of flour of 100lbs., and our other luggage, which was exceedingly small, it being necessary to sacrifice as much as possible in order to increase the quantity of food. Our party was, perhaps, as extraordinary and hetero-

geneous a body as ever undertook an enterprise so difficult and dangerous as ours seemed likely to be. In addition to my friend, Dr. Choadle, and myself, were five others, viz., Baptiste Supernat, a half-breed, whom we had engaged as guide, on the strength of his own representations that he knew the country perfectly as far as Tête Jaune's Cache; Louis Battenotte, commonly called "The Assiniboine," with his wife and son, the latter a boy of thirteen. We had been very reluctant to take the woman and boy, thinking that they would be almost useless encumbrances, consuming provisions, and adding considerably to our embarrassment in a country affording little means of subsistence, should the supplies we carried with us fall short; but the Assiniboine refused to accompany us on any other condition, and, being exceedingly desirous to secure the services of so accomplished a *voyageur* and hunter, we at length consented, although with many misgivings as to the wisdom of the proceeding. This, however, I am convinced eventually proved our salvation; there being little doubt that he would have followed the example of Baptiste, who deserted, and left us to our fate, had he not been encumbered with his family, and thus compelled to follow the provisions and our fortunes. And lastly, Mr. O'B——, an Irish gentleman of considerable classical attainments, but of marvellous timidity and helplessness; throughout the journey unhappy during the day from a continual fear of losing his way, or being devoured by grisly bears; unable to sleep at night for fear the horses should trample on him, or Indians or wild beasts attack the camp. Afraid to touch a horse and unable to handle an axe, his sole employment consisted in bewailing the hardships of his position and prophesying greater evils for the future, comforting himself by the perusal of Paley's "Evidences of Christianity," which he never failed to study diligently three times a day during the eighty-seven which our journey lasted.

On the 3rd of June we bade farewell to our kind friends at Edmonton, and, after being delayed a day at St. Albans, a Roman Catholic mission, nine miles beyond, exchanging horses,

we reached Lake St. Ann's on the 7th. Here is a small Hudson's Bay post, and another Roman Catholic mission and settlement of half-breeds, consisting of twenty or thirty little wooden houses and a church. The lake is a fine sheet of water several miles in length, and furnishing abundance of the magnificent white fish which forms the principal food of the inhabitants in all parts of this country at any great distance from the plains. Mr. Colin Fraser, the officer in charge, treated us with the greatest kindness, and from him we obtained much valuable information about the mountains, he having spent seventeen years at the solitary little post of Jasper House.

On the 9th we again set forward, the trail leading immediately into the thick forest, through swamps and boggy ground beset with fallen timber which had been very imperfectly cleared away from the path, the travellers in this region never stopping to cut away any obstruction the horses can possibly be made to struggle over. The track passing almost entirely through the densest forest, is only cut of sufficient width to allow one horse with his pack to pass, and the mossy crust broken through by the repeated trampling of the Hudson's Bay Company's annual train between Jasper House and Edmonton for years and years, the unfortunate animals sink up to the hocks in the boggy substratum, the thick wall of timber on either side preventing any escape. A day's journey on the road to Jasper House generally consisted of a continual floundering through bogs, varied by plunges and jumps over the timber lying strewn, crossed, and interlaced over the path and on every side. Between Lake St. Ann's and the foot of the mountains the forest is almost unbroken—a distance of nearly 300 miles. Here and there little patches of open, generally marshy, ground, afford sufficient pasturage for horses; and the stages of the journey are regulated, not by the distance accomplished, but by the recurrence of feeding ground for the animals. One feature of this dismal region is sufficiently curious to merit particular notice. The whole character of the country has been changed through the agency of the beaver, who formerly existed here in

enormous numbers. The shallow valleys of this slightly undulating country were formerly traversed by rivers and chains of lakes, which, dammed up along their course at numerous points by the works of these animals, have become a series of marshes in various stages of consolidation. In some cases the water had entirely disappeared; in others, a chain of pools, joined by a long channel of stagnant water resembling an ancient moat, marked what had been the deepest portion of the river formerly existing there. So complete has this change been, that hardly a stream is found in this part, with the exception of the large rivers, the Pembina, McLeod, and Athabasca.

Almost the only patches of pasture we met with were where streams had run in ages gone by, now narrow marshy meadows, with scattered mounds and banks across. These were old beaver dams and houses, long since deserted, now grassed over, but showing plainly the direction in which the river had run, and how the animals had destroyed by their own labour the streams necessary to their existence.

On the 11th we struck the Pembina River, passing through on this and the preceding day the most open country we met with until reaching the mountains—small patches of grass amongst extensive stretches of young poplars, principally in the vicinity of a lake, some eight or ten miles in length, apparently well stocked with fish, which we saw basking in the shallows, and hardly moving away as the horses approached. The Pembina River, a tributary of the Athabasca, is a clear, shallow stream, flowing here nearly due north between perpendicular banks, which show on either side the section of a magnificent coal bed, from fifteen to twenty feet thick; blocks of this are strewn along the bed of the stream, some of which we collected and burnt. This coal had rather an earthy fracture, burning with considerable smoke, and yielding a dark-grey ash. The specimen was, however, very unfit to serve as a fair test, having been soaked in the stream, and lying amongst sand and mud probably for a very considerable time. We were unable to obtain any directly from the bed, which lays high above reach.

In this river we also found traces of gold, but had no time to make more than a very cursory examination. Crossing the Pembina by fording, we proceeded nearly due north through a most difficult country, harassing to the horses, the fallen timber being very thick and large, and the ground almost universally boggy. We journeyed the whole of one day through one large "muskeg," or pine-swamp, which must have been at least fifteen miles across.

On the 16th we reached McLeod's River—another tributary of the Athabasca—a fine stream about one hundred yards wide, flowing between high banks thickly covered with pines, aspens, and birch. It was low, and easily fordable, although subject to great floods at certain seasons, as evidenced by the large boulders and trees strewn high along the shore, and the masses of drift-wood accumulated at different points and turns of the river. On this stream also we discovered traces of gold. Crossing without difficulty, we followed the left bank for the next two days, when the track turned off, to avoid a great bend which the river makes to the south, striking it again on the following day. At this point, on the 20th of June, Baptiste Supernat, our guide, who had shown symptoms of discontent for some days, deserted us, taking with him one of our best horses. It was useless attempting to follow him, and we promoted the Assiniboine to his position and emoluments, and although he was quite ignorant of the road, we trusted to his skill to follow the Canadians' track, and firmly resolved to go forward, although we should have now very hard work to pack and drive twelve horses through such a country. Baptiste had also stolen the large axe, a most necessary article, leaving us only two small trapping axes for the heavy chopping required for raft timber and to clear the path.

Continuing for a couple of days to follow the McLeod, after we reached it the second time, the trail frequently ran along the bed of the river, and was in many places very indistinct, but we followed it at first with considerable confidence, seeing the mark of a cloven hoof, and knowing that the

Canadians had taken several oxen with them. As it became fainter and fainter, the Assiniboine began to suspect we were following some hunters' or miners' track, and had unwittingly turned off from the main one to Jasper House. We therefore pulled up in a dense forest of young pines, in order that the man might make a circuit in search of the proper road. Here we had a somewhat narrow escape, if not of losing our lives, certainly of losing our horses, provisions, and property. The day was intensely hot, and the mosquitoes and gad-flies so numerous and fierce, that we were obliged (as was frequently the case) to light a fire for the horses, the smoke of which gives them some protection from their tormentors. The woman and boy had gone some distance to wash clothes in the river, and the Doctor, O'B——, and myself were quietly seated round our own small camp-fire, cooking our provisions, and awaiting the Assiniboine's return, when the louder crackling and roaring of the other fire attracted our notice, and on looking round, we saw, to our horror, that some of the trees surrounding the little clearing we had made had caught fire, the horses in their pushing and struggling to supplant each other in the thickest of the smoke having kicked some of the blazing logs among the closely-set pines, which, although green, burn more furiously than timber dead and dry. The moment was critical enough. The Doctor, seizing an axe, rushed to the place, and felled tree after tree, to isolate those already fired from the rest; whilst I with a small bucket fetched water as rapidly as possible from a little pool, which was fortunately close at hand, and poured it upon the thick dry moss, through which the fire was rapidly spreading along the surface of the ground. The horses now became frightened, and one, dreadfully burnt about the legs, rolled himself, in his agony, into the very middle of the fire; it was only by beating the unfortunate beast most savagely about the head, that we succeeded in driving him out of his frightful position. We were by this time nearly surrounded by blazing trees, and the flames flared and leaped up from branch to branch in the most appalling manner. Fortu-

nately the pines, though so closely packed, were not of large size, and a few blows of the axe sufficed to cut them down. A considerable portion of the circle had been already isolated by our first exertions, or the delay in rescuing the horse might have been fatal. As we again rushed desperately to work with axe and bucket, it occurred to us that Mr. O'B—— had given us no help so far, and we shouted to him, for God's sake, to assist in bringing water. He was still sitting where we left him, tugging faintly at a boot which he had taken off to rest his feet. Roused by the fierce objurgations of the Doctor and myself, he ran up, trembling and bewildered, bringing a tardy and ineffectual assistance to the quenching of the fire in the shape of half-pints of water in his little tin mug. The fire was at length quite got under, and Assiniboine returning with the news that he had discovered the right trail, we retraced our steps, camping for the night at the part of the road which had escaped our notice on the previous evening.

On the morning of the 25th we struck the Athabasca River, and from an open space upon the eastern banks had our first view of the Rocky Mountains—a glorious and exhilarating sight to us who had been so long in level country, for the last fortnight buried in dense forest which shut out every prospect, and almost the light of day. This view of the mountains is more magnificent than anything I recollect to have seen, either in Iceland or Switzerland. A succession of towering peaks, many conical, others resembling church spires or Norman towers, covered at the base with thickly clustering pines, above which was a grove of brilliant green shrubs and herbage; higher still, terraced rocks, crowned at their pointed summits by eternal ice and snow. The trail now ran along the right bank of the Athabasca, and led us through thick forest beset with fallen timber and numerous muskegs, or pine-swamps, which our horses struggled through with the greatest difficulty, frequently sinking in up to their girths, unable to extricate themselves, and obliging us to cut off

their packs, and haul them out by their tails, and ropes put round their necks. This occurring sometimes three or four times in the course of a day, greatly retarded our progress, and as we were so very short-handed, was extremely harassing. The weather, fortunately, continued almost uniformly fine. The nights were frosty, and water left standing in our tin cups was covered in the morning with ice an eighth of an inch thick. The river was tremendously swollen and muddy, being fed by the mountain snows, and forming a marked contrast to the clear and shallower streams of the Pembina and McLeod; and from this I should infer that the latter take their rise in the level lands at the eastern side of the mountains, and do not, like the former, receive the swollen and turbid torrents of the dividing ridge. The current was exceedingly rapid, and we observed numerous large trees, of five or six feet diameter, carried along like so many straws. It seemed as if it would be impossible to cross it with safety on a raft; and we were relieved to find that the trail followed the eastern bank, and, on the 29th, leaving the bottom of the valley, led us up the mountain-side, passing along narrow ledges of rock, frequently hardly wide enough to afford footing for the horses, and overhanging a sheer descent of 500 or 600 feet into the river below. Ascending higher and higher still, and almost in the clouds, we had the satisfaction of seeing, like a mere speck in the valley below us, the little wooden house which we had been so anxiously expecting to reach for some days past; and until it lay actually before us, we had been very uncertain that we were really following the road to Jasper House, and not some mere hunter's track into the mountains. Descending again into the valley by a similar path, we encamped on a little sandy plain opposite the fort, which was seemingly without inhabitant at the time.

We were now fairly in the Rocky Mountains. The Athabasca, emerging from the heart of the mountains through a narrow gorge into the wider valley, spreads out into a lake several miles in length; then again narrowing, and flowing amid numerous wooded islands for 700 miles, opens out into a second,

smaller than the first. On the western bank, between the two lakes, is Jasper House. The scene was one of the most beautiful it has ever been my fortune to behold. Around on every side, the most magnificent snow-capped mountains; at our feet the torrent of the Athabasca, on the opposite bank of which was the little white building, surrounded by a neat pallisade, and situated in a perfect garden of wild flowers, forming a rich sheet of varied and brilliant colours, edged along the mountain-slopes with brightest green. Here grow, in greatest profusion, cinerarias of all shades of blue, the gay *Gallardia picta*, and an immense variety of *Compositæ*, the large white and purple vetch, and a flower like the lychnis, with sepals of brilliant scarlet. We had little time, however, to enjoy the scenery, but set to work forthwith to cut timber for a raft, which consumed the whole day, large trees being not easily conquered by our tiny axes; but before we were able to cross, a half-breed rode into our camp, informing us he was one of Mr. Macaulay's party out from the fort, and expected to meet his master, who was returning by a different route, that day or the next. He advised us not to attempt to cross at so dangerous a place, but some miles above the upper lake, where was a deep and quiet place, and by which proceeding we should also avoid the river Maligne, a most dangerous stream at this season. Under his direction we therefore moved camp a few miles up river, where there was good pasturage for the horses, leaving on the way two mouths of a stream flowing from the south-east, very swollen and rapid, Mr. O'B——, who perversely attempted to cross on foot, being nearly carried off, and only saved by the timely help of our new acquaintance.

At this point we stayed for a couple of days, awaiting Mr. Macaulay's arrival; during which time two Shushwaps came in, and supplied us with some white fish in exchange for a little ammunition. These were the first specimens we had seen of the Shushwap tribe. They were well-made men, of middle size, clothed only in a marmot-skin and body cloth, wearing nothing on their heads, legs, or feet. Their heads were well-shaped,

their features very regular and finely-cut, the face oval, and without any marked prominence of the cheek-bones, and the expression exceedingly intelligent. These Indians, which inhabit the mountains in the neighbourhood of Jasper House, and as far as Tête Jaune's Cache, are a small branch, consisting only of a few families, of the great Shushwap nation, who inhabit the region around the Shushwap Lake on the south branch of the Thompson, and the main fork of that river near Fort Kamloops in British Columbia. Separated from the main body of their tribe by 300 miles of almost impenetrable country, they have but little communication with them. Of those we met, but one had ever seen Kamloops—an old woman born there, married to a Rocky Mountain Shushwap, who had gone over to obtain a wife, and she had never re-visited the home of her youth. We subsequently found the dead body of an Indian, who had apparently died of starvation in endeavouring to reach Kamloops, probably on a similar errand. These hardy mountaineers formerly numbered thirty or forty families, but are now reduced to as many individuals. They live by hunting the mountain sheep and goats, which they seek, even throughout the winter, amongst the crags and glaciers. Every year many who set out never return; some of whom are found dashed to pieces at the foot of the almost inaccessible heights to which they have followed their game; of others no trace is found. When first discovered by the pioneers of the Hudson's Bay Company, the only clothing used by this singular people was a small robe of the skin of the mountain marmot; and, in spite of the sharp rocks which pave the mountain tracks, and the severity of the northern winter, they had no mocassins or other covering to their feet. When camping for the night, they were in the habit of selecting the most open spot, instead of seeking the protection of the woods. In the centre of this they made only a small fire, sleeping around it, like the radii of a circle, and lying in the snow, each wrapped in his marmot robe—the wife apart from her husband, the child from its mother. They possess neither horses nor dogs, carrying all their property upon their

backs when moving from one place to another—have no tents, erecting rude sheds of bark, or matting, when they encamp in one spot for any length of time. The graves of their dead they enclose with scrupulous care by a paling of light strips of wood, made, with considerable labour, by means of their only tools, an axe and knife. Their language is most discordant and ludicrous to hear, consisting of a mixture of stammering, gurgling, choking, and spluttering, uttered with great gesticulation and emphasis. They are perfectly honest, and of peaceable disposition.

On the 3rd of July Mr. Macaulay arrived in our camp. He was unable to supply us with more provisions, living entirely from hand to mouth by the produce of hunting, and having the greatest difficulty to keep his own party properly supplied. From him we learnt that three miners had passed a fortnight before, on their way to British Columbia, having prospected the sources of the North Saskatchewan, without finding anything more than traces of gold. He also gave us much information concerning the pass, and engaged for us an old Iroquois as guide to Tête Jaune's Cache; and, on the following day, accompanied us to the place at which we were to traverse the Athabasca, bringing with him two of his men to assist in cutting wood and constructing a raft. This portion of our journey lay along mountain-sides, and through several lakes and streams, high with the summer floods.

On the 5th we bade good-bye to Mr. Macaulay, and crossed the river without mishap, leaving behind, however, one of our little axes, which we did not re-cross the river to regain—an omission we much repented afterwards. Under the guidance of the Iroquois, we now left the Athabasca, and followed the valley of the Myette—a small, but deep and rapid stream, running down a narrow, rocky ravine from the north-west. On the second day we crossed it six times; in the first instance by raft, and afterwards by fording. The latter was dangerous enough, the river forming there a perfect cataract, passing over enormous rocks, and as we crossed, the water rushed over our

horses' shoulders, who stemmed the current with the greatest difficulty; several of them were actually borne away, and with difficulty reached shore some distance farther down. Our progress over this part was exceedingly slow, the path being beset with great rocks, and burnt and fallen timber to such a degree, that we advanced only a few yards before fresh obstructions required removal.

On the 8th we finally crossed the Myette by raft; and, leaving it now to the south, crossed one of its tributaries called Pipe Stone River, flowing from the north-west. This was the last stream running to the eastward; and on the morning of the 9th we crossed several small streams flowing the other way, having unconsciously passed the height of land, the ascent from Jasper House being so extremely gradual, and the height we reached apparently so inconsiderable, that we could hardly believe we had gained the watershed of the Pacific. Directly after crossing the height of land, we observed a marked change in the vegetation. The appearance of the cedar and silver pine, the great prickly trailer, and several varieties of the raspberry, marked the western slope. Passing along the bank of a river running nearly due west, we reached Buffalo Dung Lake, a pretty sheet of water about two or three miles in length, with good pasturage on its banks, and evidently much frequented by the Shushwaps, several of whose bark slants we observed during the day. Here we selected two fine, snow-clad peaks—one on the north and the other on the south side of the lake, which our Iroquois assured us should, from that time forth, be known in that region as the Doctor's Mountain and My Lord's Mountain.

On the 10th of July we struck the Fraser River, already a stream of considerable size, sweeping round from the south-south-west through a narrow gorge. It was tremendously swollen, and had overflowed its banks up to the almost perpendicular sides of the narrow valley in which we were shut in. This portion of our journey was the most harassing we had yet experienced. The path lay almost entirely through water up

to the horses' girths, the only change being to muskegs, embarrassed with fallen timber of very large size. When we reached Moose Lake, an expansion of the Fraser, about fifteen miles long and two or three wide, our difficulties increased. The trail along the beach was now under water, and we were frequently obliged to ascend the steep mountain-side where accumulations of driftwood barred the passage along the shore. Numerous mishaps occurred, the horses perversely going out into the deep water and floating about, to the great detriment of flour and pemmican. Two rolled down the mountain-side and had to be unpacked, and their loads carried up, to enable them to re-ascend. We found no place to rest during the day; and when night came on we had not reached the end of the lake, and were obliged to camp in a bare sandspit, without any feeding-ground for our weary animals, who ranged restlessly to and fro until the morning. The road continued almost as difficult all along the valley of the Fraser, and at one point was merely a narrow ledge of a few inches along the face of a cliff of crumbling slate, rising perpendicularly a tremendous height above us, and a sheer descent of above 200 feet into the river below. Here a large rock had slipped down from the cliff above, and rested upon the ledge by which we had to pass, rendering it impassable for horses. After working away a long time with levers made of young pine-trees, we at length succeeded in dislodging it, and it rolled, with a single bound and sullen plunge, into the deep water, 200 feet below us. We were then enabled to lead our horses past, singly and with the greatest caution. The descent on the western slope was very rapid. We were still surrounded by snowy mountains, and on the 14th we crossed a great number of streams, many, probably, mouths of Moose River, an important tributary of the Fraser, flowing from the north. This grand fork of the Fraser is at the foot of a very high mountain, which has received the name of Robson's Peak, and is the original Tête Jaune's Cache, so named from being the spot chosen by an Iroquois trapper—known by the *sobri*

quet of "Tête Jaune"—to hide the furs he obtained on the western side. This mountain, the highest we had yet seen, is a conical peak, capped with snow, and towering high above the other snow-clad mountains visible in every direction. When first seen by us it was shrouded in mist; but presently this rolled away, and we saw its upper portion, partially dimmed by a necklace of light feathery clouds, beyond which its pointed apex of ice shot up far into the blue heaven above. A glorious sight, and one which the Shushwaps assured us had rarely been seen by human eye, the summit being generally hidden by clouds.

On the 17th we reached the place at present called Tête Jaune's Cache, about a long day's journey from the peak. At this juncture we met with a very serious loss. The path along which we were passing was overflowed, and two of the pack-horses strayed over the bank into the stream, which here rushed along with tremendous rapidity, and were borne off in a moment. One was rescued about three miles down the stream by the intrepidity of the Assiniboine, who had followed at full speed, and, as the horse neared the shore, passing down a most fearful rapid, he leaped in, threw his arms round the horse's neck, who neighed gratefully when he saw his deliverer come to the rescue, and the two, mutually supporting each other, gained the shore. The other horse was lost, and with him all our spare clothes, our instruments, all our papers (except the journals, which were carried by the horse which was saved), the Doctor's collection of plants, all our tea, salt, tobacco, and ammunition, except what we carried about us; but we were thankful that the flour and pemmican were safe, although much had been spoiled, and the whole of our desiccated vegetables ruined by the frequent wettings of the last few days.

The modern Tête Jaune's Cache is situated fairly on the western side of the highest side of the Rocky Mountain chain, and where the valley of the Fraser opens out for ten or fifteen miles to the southward. A few miles below, a tributary joins the Fraser from the south-east, and still further, according to

the Indians' report, a larger from the north-west. Here were two families of Shushwaps, who transported us to the left bank of the river in canoes. At this place we were compelled to rest nearly two days, on account of heavy rains—the first, except one thunderstorm, since leaving Edmonton. The Shushwaps, two young men, informed us that their fathers had gone down to Fort George with the three miners of whom we had heard at Jasper House, and whose trail we had seen on our way here. They arrived nine days before us, and had left only three days ago in canoes. They could give us no information as to the course followed by the emigrants the preceding summer, whether they intended to steer for Cariboo or Kamloops; nor could they tell us much about the country before us. One old woman had been at Kamloops in her youth, and drew a rough map, which proved very incorrect, especially as to distance, and her estimate of time required to reach Kamloops—viz. eight or nine days—exceedingly delusive. The Indians also informed us that five Canadians who attempted to go by canoe to Fort George the preceding summer, were all lost. They refused to accompany us either to Fort George, Cariboo, or Kamloops—not, indeed, knowing the way, and unable to leave their families. The scene from the Cache, looking westward, is, I apprehend, one of the most wonderful in the world: away as far as the eye can reach, north, south, and west, are mountains closely packed together, separated only by the narrowest valleys, most of them capped with snow, and stretching away apparently to the Pacific. From the Bald Mountain, in Cariboo, the exact reverse of this view may be seen; and I was assured by Mr. Donald Fraser, of Victoria, who had visited the Andes and Himalayas, that nothing there could compare with those hundreds of miles of mountains in British Columbia. Our Iroquois left us here to return to Jasper House, taking with him Mr. O'B——'s horses, which he managed to carry off unobserved, and on the 20th of July we also left the Cache, following the emigrants' trail, which led for the first day through a sandy, undulating tract, covered with small spruce. At this point we crossed a

source of the Fraser from the south-east, and on the following day struck Canoe River, a tributary of the Columbia flowing to the south-east. In crossing this river by raft, we had a narrow escape of losing all our provisions, and two of us our lives.

The river, as usual at this season, was exceedingly swollen, the current very rapid, and the banks much beset with fallen and overhanging timber and driftwood. In trying to avoid Scylla we fell into Charybdis; for in poling away from some rocks and driftwood on the side we started from, through which the water rushed with great violence, and which we narrowly escaped, we were swept across in an instant to the opposite side of the river, and carried straight for an enormous pine growing horizontally out of the bank, and closely overhanging the water, in which the lower branches were submerged. As we neared the side, the Doctor and the Assiniboine leaped ashore, and whipped the ropes attached to the raft round trees; but these, rotten from frequent wettings, snapped like thread, the raft was sucked under water beneath the tree, and the woman and myself brushed off like flies. Mr. O'B——, in some incomprehensible manner, managed to stick to the raft, and reappeared above water farther down, sailing apparently to destruction at a fearful pace. The raft, however, bringing up for a moment against another overhanging tree, was secured by Assiniboine, and Mr. O'B—— and the provisions saved. Meantime, the woman and myself were clinging to the branches of the tree, every moment expecting to be washed off by the violence of the stream, when the Doctor fortunately observed us, and clambering along the trunk, drew me out, and we together rescued the woman, but with much difficulty, and not till she was benumbed and almost senseless. The man and his family by this disaster lost all their little property; but, by good fortune again, no provisions were swept off. We had great difficulty in getting a fire, the tinder being wet, and all our matches lost previously in the Fraser.

The trail now turned to the right, round the base of a range of mountains, which divides the watershed of the Thompson from

that of the Columbia, and gaining a narrow, rocky valley, shut in by lofty mountains on either side, followed it almost due south, passing one origin of the Thompson in a large marsh several miles in length. From this flows a little stream to the south, augmented by another from the north-west, and rapidly increased by numerous other small additions, attains considerable size before joined by the main branch, which comes also from the north-west.

In six days after leaving the Cache, travelling along a trail less obstructed than much of the previous road, and having crossed the northern division of the river, we found ourselves at the angle formed by its junction with the main one. In this region the timber was of enormous size. We saw two cedars growing together, one of which measured $6\frac{1}{2}$ embraces or 39 feet in circumference; the other 5 embraces, or 30 feet, giving diameters of 13 feet and 10 feet. The pines were much larger and higher than some I saw at New Westminster, whose height was ascertained to be over 300 feet. The day before our arrival at this point, we had passed by the foot of a magnificent mountain covered with glaciers, and seeming to block up the valley before us.* At this fork of the Thompson, we found abundant evidences of the emigrants' camp; and numerous large trees cut down around, told us they had rafted across, and not attempted to cut their way along the left bank of the north-west branch to Cariboo. Written in pencil on one of the trees was a notice that at this point their guide from Edmonton left them; but no other information. The Assiniboine crossed the northern branch on a little raft of two logs, but could discover no signs of the trail on that side. During this expedition of the Assiniboine, we remained behind and washed for gold, but found no traces of it. The sand of the river bank was full of innumerable shining particles of talc, and the Assiniboine, believing it to be gold, pointed it out as strong evidence that we were approaching our destination. We also observed that up to mid-day the river fell six inches, rising again to its former level at dark—the alternate effect of the

* Named Mount Milton.

night frosts and the heat of the sun on the mountain snows. We now set to work with our one small axe and cut down large trees, which took us a day and a half, and on a raft of considerable size succeeded in transporting ourselves and baggage to what we supposed to be the west bank of the main river without any mishap, in spite of the presentiment of evil which oppressed Mr. O'B——. When we further investigated our position here, we found that we were on a small island, and had to delay another day before we were able to find the emigrants' track. Assiniboine at length discovered it on the right bank of the north-western branch, up which they had cut their way in a westerly direction, apparently making for Cariboo; but after about a mile they appeared to have found the country too difficult, and abandoned the idea, turning south to follow the main river in the direction of Kamloops. With our weakened forces and short supplies, it was impossible for us to make our way to the gold-fields through a country so impenetrable, and we therefore determined to follow the trail and seek Kamloops. Transporting our baggage with much labour on our backs across a natural bridge from the island to the western bank, formed by the accumulation of drift-wood against an old beaver dam, we drove our horses across, and re-packed them on the further side. The trail we now followed had evidently never been used by Indians, but had been freshly cut by the Canadians; and on the 29th, the second day after leaving the fork, came to an end at a place where had been two large camps, in which were strewn pack-saddles and harness. A notice on one of the trees informed us this was the emigrants' "Slaughter Camp."

Numbers of large trees were cut down on every side, and although we searched in every direction, no trail forward could be discovered. The truth, serious enough, now plainly forced itself upon our minds, that the whole band of emigrants had given up in despair the idea of cutting a way through forests so dense and encumbered, and had built large rafts in order to drop down the river to Kamloops. We were in a very disheartening position. Before crossing the Fraser, a

fortnight before, we had lost all our tea, salt, and tobacco, our clothes and ammunition, except what we had on our persons at the time. Our provisions were now reduced to about fifteen pounds of pemmican, and the same of flour, or not three days' full rations for the six persons. Game of all kinds was exceedingly scarce, and our ammunition almost exhausted. Our clothes were already in rags, and we were reduced to patching our mocassins with pieces of the saddle-bags. The horses were weak, and in wretched condition, having had little proper pasture since leaving Edmonton, and for the last fortnight subsisting entirely upon scanty patches of marsh grass and equisetum. We had only one small Indian axe, and knew not how long or difficult the road before us might be. The Canadians—a party of fifty or sixty strong able-bodied men, with good axes, and expert in the use of them—had, after a few days' trial, failed to make any satisfactory progress through the obstructions which beset them, and had evaded the difficulty by braving the dangers of rafting down an unknown river, full of rocks and rapids.* We were a weak party, the most able man of the number having but one hand. Even along the partially cleared trail that we had followed thus far, the work of making it passable had been very heavy, our progress slow and laborious, and delayed continually by the horses miring in muskegs, entangling themselves amongst fallen timber, rolling down precipices, or straying aside into the thick woods. On the other hand, to make a proper raft with our small means and strength, would occupy several days, and necessitate the abandonment of the horses, our last resource for food. In an ordinarily tranquil stream we were very incompetent to manage that most unmanageable of all transports, a large raft. In a stream swollen, rocky, and rapid as the Thompson, the experiment was almost certain to be disastrous; and we had been solemnly and earnestly warned by the Shushwaps at the Cache against such an attempt, as it was impracticable for a

* We learnt subsequently, on arriving at Kamloops, that they had lost several men in the Grand Rapid.

raft, and very hazardous even for canoes. The Doctor set out and explored the country some distance ahead, but returned with the unwelcome report that it seemed perfectly impossible for the horses to get through such a mass of *débris*, and along such precipitous banks. In the evening we held grave council over our camp fire, at which it was decided that the Assiniboine should investigate the country on the morrow, and if he thought it practicable, we would endeavour to cut our way through. We were much relieved when he returned on the following day, bearing a small black bear on his shoulders, and reported that we could get through, although our advance would be very slow and toilsome. From the top of the hill at the foot of which we were encamped he had seen far to the south mountains packed behind mountains, the everlasting pine-forest extending in every direction, and no appearance of any open country; the only favourable circumstance he observed being that the hills appeared to become lower, and fewer of them capped with snow.

On the 31st of July we again set out, on a dreary wet morning, and were speedily soaked through, forcing our way through the thick underwood, and scrambling over slippery trunks of trees, which, green or dead, and in every stage of decay, lay piled around, frequently forming barriers six or seven feet high on every side. No one who has not seen a primeval forest, where trees of gigantic size have grown and fallen undisturbed for ages, can form any idea of the collection of timber, or the impenetrable character of such a region. The ground was thickly covered in some parts with American dog-wood, or more generally with a large broad-leaved trailer, growing often as high our shoulders, covered on both stem and leaves by sharp spines, which pierced through our clothes, and made the legs and hands of the pioneers scarlet from the inflammation of myriads of punctures. The horses had continual disasters, and our labour in extricating them from their difficulties almost continual, and trying to the most even temper, for they had become so spiritless and worn out, and so injured

about the legs, by falling amongst the timber and rocks, that they would make no effort to help themselves, except under the stimulus of repeated blows. Ranges of hills running up to the river at short intervals, obliged us to scramble along their steep sides, the distances between them being generally of boggy and treacherous ground. On several occasions, working hard the whole day, and not even resting to dine, we did not advance more than a single mile; and, although it is difficult to estimate distances, I am convinced that five or six miles was above the average distance we accomplished. We reduced our meals to two a day, and these consisted of merely a piece of pemmican, the size of one's fist, boiled in a large quantity of water, and thickened with a single handful of flour. This we eked out occasionally with partridges, squirrels, skunks, martens, and a few trout which we caught with night lines. The valley continued to run nearly due south, and ranges of mountains closely packed, and with narrow ravines between, ran down from the north-east and north-west up to it on each side, at an angle of 45° .

On the 1st of August we were somewhat cheered by passing to our right a glacier-covered mountain,* which, like the one we had seen before, seemed to block up the valley before us, and which we hoped might be the second one which the old Indian woman had told us we must pass near the fort.

On the 2nd we made an attempt to escape out of the narrow valley in which we were confined, in the hope of finding more open ground above, but the mountain-sides were too steep for the horses, and after ascending a considerable height they rolled down, one after the other, amongst the fallen timber, and we were unwillingly compelled to imitate the example of the King of France, and come down again, once more to resume our wearisome march along the valley.

On the 3rd the valley opened out a little, and we reached a marsh about 300 yards in length, scantily covered with timber, the first open space we had seen for ten days, and the change from

* Named Mount Cheadle.

the deep gloom of the forest to the bright sunlight, made our eyes blink indeed, but produced a most cheering effect on the spirits of ourselves and horses, which here found plenty of pasture, although of poor quality.

After this we again entered the woods, and with the exception of some small beaver-swamps, where grew dense fern, and bracken higher than our heads, mingled with willows and dog-wood, we were buried in forest, similar to that we had met with before, and equally beset with obstructions, until the 7th, when we crossed a river running into the Thompson from the west, a clear, shallow stream, evidently not fed from mountain snows ; and beyond, found an expanse of the valley of about a mile square, part of which was timbered, part burnt, and the rest open marsh. On this evening our provisions came entirely to an end, and our supper consisted of a handful of pemmican made into broth, and slightly thickened by the scrapings of the flour-bag which was somewhat eaked from repeated wettings.

On the morrow we rested, and stayed our stomachs with bilberries and raspberries, which grew here in considerable quantities, and were of large size and delicious flavour, whilst the Doctor and Assiniboine went out to hunt—bear tracks being numerous. The only game killed, however, was a marten by the Assiniboine, which served with some berries for our supper ; and we resolved to kill one of the horses the following day, for we were becoming so weak and emaciated, as to be unfit for any exertion. Our spirits, already rather low from physical weakness, and the gloominess of our position, were further depressed by the sight of the dead body of an Indian, discovered by the Assiniboine near our camp. The body was considerably decomposed, the skin being like parchment ; but the clothes, consisting of woollen shirt and leggings, with a blanket, still hung round the shrunken framework. It was in a sitting posture, with arms and legs crossed, and bending forward over the remains of a small fire ; but most singular to relate, his head had disappeared, and although we searched everywhere, could discover no traces of it. Near the body were axe, firebag, and

tin kettle, and at its side a heap of bones chipped into small fragments, showing that the unfortunate man had probably died of starvation, and prolonged existence as far as possible by sucking every particle of moisture out of the broken-up pieces of a horse's head—for such, from some teeth and larger fragments, we discovered it to be. We left him there undisturbed, taking only his little axe, which would be of great service to us, a fishing-line of cedar bark, and some curious hooks, made of a stick and pointed wire, as mementoes of this strange event.

On the following morning we killed a horse, and spent that day in drying the meat in thin flakes over a fire, and feasting to repletion on such as we could not carry with us.

On the 10th we started again, into a dense forest of enormous timber; but on the 11th the character of the country changed, and we entered upon a region rocky and barren, the surface covered only by snow and a few small lilies, with occasional patches of the large bilberry. The trees were smaller and stunted, but growing extremely close, and the fallen trunks lying as thickly and entangled as the spiculae in the children's game of spelicans. We had literally to force our way by inches, and were continually brought to a complete standstill by the almost perpendicular sides of the valley, which here narrowed to a mere ravine, and the river, confined in a channel not more than sixty or seventy yards in width, rushes over huge boulders and masses of rock, a fierce and turbulent rapid. Along the steep banks of this ravine we toiled along, the horses subsisting entirely upon moss and lily leaves, although tumbling about all day amongst timber and rocks, and frequently rolling over precipices. One animal fell some twenty-five feet into the river, but was rescued unhurt; and another rolled down at least a hundred feet, crashing over the fallen trunks, and then dropped thirty or forty feet over a perpendicular rock on to a fallen tree which was propped up horizontally about six feet above the ground. On this we discovered him astride lengthwise, his legs hanging down on each side without touch-

ing the ground. He was uninjured, and scrambled up by an easier path to resume his packs on more level ground. The Assiniboine now became much disheartened, and declared it was quite impossible to escape from our embarrassments, and on one occasion sat down, declining to work any more at such a hopeless task. Shortly after, his hand became so swollen and painful from the injuries received from the thorns of the trailers, that he was unable to use an axe; and his foot, cut to the bone by the sharp rocks amongst which he walked nearly barefoot, caused him the greatest pain. His place was taken by his wife, who, with the Doctor, chopped away with untiring perseverance.

On the 14th the ravine narrowed suddenly to about fifty feet, with high straight-cut rocks on either side, through which, for about fifty yards, almost at a right angle and down a swift descent, the waters raged and boiled so frightfully about the great rocks which stood out in the stream, that it was instantly named by the Assiniboine, the *Porte d'Enfer*, or Gate of Hell. No raft or canoe could have lived there for a moment, and we had much cause to congratulate ourselves that we had decided to come by land.

On the next day we came to the end of this grand rapid (four days' journey in length at our rate of travelling), and met with the first traces of man we had seen for sixteen days. These were old stumps of trees, which bore marks of having been cut down with an axe, but a great many years ago, they being all decayed and mossed over; nor could we find any more recent sign. But it was cheering to see any evidence whatever that man had once visited this wild and unpromising region.

On the 16th our stock of dried horse-flesh came to an end, and we were compelled to pull up in a dreary beaver swamp to kill another wretched animal. The meat we ate with the greatest avidity, our scanty diet of dry meat and water for the last ten days neither satisfying hunger nor imparting much strength to our weary and weakened bodies.

On the morning of the 18th we were greatly encouraged by

seeing a crow, a sure sign of more open country being at hand ; and during our day's journey were further inspirited by observing at intervals a few branches cut, as if to make way for a man to pass through the thick bushes by the river-side, and evidently as recent as the preceding spring ; and although the road continued as difficult as ever, we worked away with renewed energy and hope. The valley now began to widen out at intervals into small swampy flats, on some of which little timber grew, but they were covered with wild raspberries, bilberries, gooseberries, and ground mulberries, on which we stayed and dined.

On the 21st we observed the tracks of several horses, and at night camped on the edge of a marsh where these tracks were very numerous. Here we also found a large cedar felled, and surrounded by heaps of chips, showing a portion of it had been hewn out to form a canoe ; and also a notice in pencil on a tree, which we were unable to decipher.

The following morning we hit upon a faintly-marked trail, where the trees had been blazed a long time ago, and old marten traps at intervals convinced us that we had at length struck upon the extreme end of an Indian trapping-path from the fort. The valley began rapidly to expand, the hills became lower, the track continued to become more and more marked, and, on the 22nd, we fairly shouted for joy as we emerged from the gloom in which we had so long been imprisoned, on to a most beautiful little prairie, and saw before us a rich park-like undulating country, diversified with rounded hills and stretches of woodland. Here we pulled up to allow our horses to feast on the rich prairie grass, whilst we reclined on the turf and gazed with delight on the beautiful landscape around us. The trail from this point was well worn and cleared, so that we were able to proceed at a great pace—the horses, as inspirited as ourselves by the pleasing change, breaking occasionally into a trot, although, from their skeleton-like appearance, we almost expected the shaking would cause them to tumble to pieces. The country had now assumed quite a Californian aspect. Rounded

hills and bluffs, covered with the bunch-grass, and sparsely timbered with yellow pine, with here and there in the valleys little stretches of plain covered with prairie grass, resembling that of the eastern side. On the higher sandy ground we found patches of bilberries growing in great profusion, as fine and as delicious as grapes.

On the 23rd we met an old Indian, with his wife and two children—the first human beings we had seen since leaving the Cache on the 20th of July. We were able to understand but little from his signs, except that we should meet more Indians shortly. The next day our provisions again gave out; but before evening we fortunately met two more Indian families, who sold us a couple of rabbits and a plentiful supply of the berries of a kind of lily, on which they appeared in a great measure to be subsisting, but which affected the Doctor and myself with violent nausea and vomiting. From these Indians we made out that we should reach Kamloops in five days, where we should find plentiful supplies of every kind. They kept repeating, “aiyou salmon,” “aiyou tea,” “aiyou tobacco,” “Kamloops,” and the name of Mr. Mackay. They raised camp and accompanied us to the Clearwater River, across which they transported us in their canoes the same day.

On the 25th we crossed to the eastern bank of the Thompson, and followed it until arriving opposite the fort on the night of the 28th. The trail was tolerably good, except at one or two points where it passes by zig-zags over high rocky bluffs; and we encountered several small parties of Indians, from whom we bought a few potatoes with some of the ragged remains of our clothing. We got into the hut of St. Paul, an old Indian chief, in a very exhausted and wretched condition, our diet of potatoes and berries having greatly disagreed with our weakened stomachs; but we thankfully devoured a mess of bacon and cabbage, with some delicious cakes, which he set before us. On the following morning we crossed over to the fort, where we were received with all

kindness and hospitality by Mr. Mackay, and supplied with clothing and other necessaries, and, in the luxury of complete idleness and sufficient food, forgot the hardships we had just before experienced.

Although unwilling to enter into any description of Cariboo and the rest of British Columbia, which we afterwards visited, I am anxious to draw the attention of geologists to some very peculiar features of the Thompson and Fraser River valleys, which have not, to my knowledge, previously been mentioned by travellers who have visited those regions, although they are of so striking a character, that it is difficult to believe that they should altogether have escaped their notice. On the north fork of the Thompson; on the main river, below the junction of the south-west branch at Kamloops, up to its junction with the Fraser, a distance of above 100 miles; and along the Fraser for probably double that distance, occur a remarkable series of what are called benches in that district. These are terraces, perfectly level, and of exactly the same height on each side of the river. Of these there are three tiers, each tier corresponding with one on the opposite side of the valley. The lowest of the three, when the valley expands, presents a perfectly flat surface of a great many acres in extent, raised above the level of the river-bank some thirty or forty feet. Higher still, the second tier is generally cut out of the mountain-side, seldom more than a hundred yards in width, and raised about fifty or sixty feet above the lower one; whilst, packed at an inaccessible height along the face of the bluffs which run down to the river, and probably 400 or 500 feet above it, is the third tier.

These benches are perfectly uniform, and of even surface, entirely free from the large rocks and boulders so numerous in the present bed of the river; and composed entirely of sand, gravel, and shale, the detritus of the neighbouring mountains; the whole clothed with bunch-grass and wild sage, and in some parts a few scattered pines relieve the brown bareness which is so characteristic of the district. The explanation of

this extraordinary formation is, I think, to be found lower down the Fraser River, where it pierces the lofty chain of mountains known as the Cascade Range, a few miles above the little town of Yale. At this point, known by the name of the Canons, the river, hemmed in on either side by perpendicular, rocky bluffs, rushes through the narrow gorge, a fierce and boiling torrent, only some fifty or sixty yards in width. In several places huge rocks stand towering up in the middle of the stream, almost damming up the channel, the waters escaping by a constricted passage on each side. In some places the rocks on opposite sides of the ravine correspond in a most remarkable manner, so that they appear as if they would accurately fit each other if placed in apposition, suggesting forcibly that they had been portions of the same solid mass violently rent asunder. At one period, I imagine, the valleys of the Fraser and the Thompson have been entirely occupied by a succession of lakes, the Cascade range of mountains being the barriers which dammed in the enormous volume of water, and the highest tier of terraces marking the level to which it rose. The tops only of these mountains at this time appeared as rounded islands upon the surface. By some means, perhaps some grand convulsion of Nature, the embankment of this huge reservoir broke down, the waters partially escaped, and the lakes were drained down to the level of the middle tier of benches. Twice more must a similar catastrophe have occurred before the waters were lowered into their present narrow and rocky channel. Each of these accidents must have been separated from the preceding one by an immense lapse of time, during which the enormous quantity of detritus accumulated to form the extensive level plateaux which I have described.

There is yet one more feature of these two rivers, the Thompson and the Fraser, which is deserving of a passing notice. Although the Fraser, several hundred miles before receiving the addition of the Thompson and numerous other smaller tributaries, is above a quarter of a mile in breadth ;

and the north branch of the Thompson frequently spreads out into an even greater size, and after being joined by the southwestern branch, an equally large stream, and a great number of other rivers of considerable importance, empties itself into the Fraser at Lytton; the latter below the junction, being the only outlet for the enormous volume of water thus collected, becomes an apparently insignificant stream of not more than fifty or sixty yards wide; and this is so very striking that it has attracted the notice of the Indians, who explain it by supposing that the water percolates through the bed of the river. It is, however, I imagine, sufficiently accounted for by the increased depth of water and rapidity of the current.

In conclusion, I must venture a few general observations upon the nature of the country through which we passed, from Fort Edmonton on the eastern side, to Kamloops on the west of the mountains. With regard to the practicability of a road or railway being taken across by that route—our party being, I believe, the only one which has passed through this region entirely by land—the testimony has some value, as being all that is known of a very considerable portion of the distance. In the first place, then, I may safely state that, with the exception of one or two rocky and precipitous bluffs—few and trifling obstructions compared with those which have already been so successfully overcome in making the road along the Fraser River—there are no engineering difficulties of any importance. On the other hand, however, for almost the whole distance, the road would require to be *made*, there being no open country until reaching the lower portion of the valley of the North Thompson. From Edmonton to Jasper House the surface is slightly undulating; the lower ground universally swampy, and everywhere covered with thick forest. From Jasper House to Tête Jaune's Cache—the pass through the main ridge of the Rocky Mountains—the valley is for the most part wide and unobstructed, except by timber, which is generally of large size; the rivers small and mostly fordable, even at their highest. The ascent to the height of land is very gradual, and, indeed,

almost imperceptible; and the descent, although much more rapid, neither steep nor difficult. From the Cache to the first opening out of the valley of the Thompson, about eighty miles north of Kamloops, the only route lies along that river, running through a succession of narrow gorges, shut in on each side by lofty and inaccessible mountains. The whole of this portion is obstructed by growing and fallen timber of the largest size; but the fact of our being able to bring horses through without any previous track being cut open, proves sufficiently that there are no serious obstacles in the way of an engineer. No great ascents or descents occur, the bottom of the ravine being generally level, except where the transverse ranges of hills come down close to the water's edge. Many of these are indeed rocky, but consist generally of broken fragments of no great size; no bluffs of solid rock appear until the last forty miles, where the country is generally open, and otherwise little obstructed. The flooding of the river by the melted snows of the mountains, does not interfere with the passage along the valley, we having traversed it in the middle of the summer, when the waters were at the highest. A road might, possibly, be made more direct to Cariboo than by continuing on to Kamloops, by following the north-west branch of the North River, which comes in about sixty miles south of Tête Jaune's Cache, or the Cance River, some fifteen miles below that place; but, from the rugged nature of the country to the west, such a road could only be made by great labour and outlay. An easier line would, I apprehend, be from the junction of a small river which flows into the Thompson about twenty miles north of the Clearwater, or about eighty north of Kamloops. This stream, the Indians informed us, came from the Cariboo Lake, and passes through a tolerably open region. The most serious difficulty to the adoption of a route by Jasper House, would be the want of pasturage for cattle. The patches of open are few on the eastern side, rather larger and more numerous within the mountains, but, after leaving the Cache, on the western side the forest is unbroken

for above a hundred miles ; and in no portion of the whole 600 or 700 miles, from Edmonton to the Clearwater—except at Jasper House—is there sufficient food for any large number of animals. The advantages of this route would be—first, that it lies far removed from the boundary line, well within British territory ; secondly, that it passes entirely through a country inhabited only by friendly and peaceable Indians ; thirdly, that it offers the most direct communication from Canada to the Gold Regions of British Columbia, and from it the Shushwap and Okanagan districts, as well as the road on the Fraser, are easily accessible.

These considerations are, I think, of sufficient importance to require that the question whether this more northern pass does not, from its directness and the security which it offers, possess more solid advantages than those lying farther south, should be carefully and fairly weighed. The more southern passes, lying within the British lines, are far more steep and difficult than the one by Jasper House, and are in unsafe proximity to the American border. The only advantages to be claimed for them appear to be that they communicate with more open country on either side, that pasturage is plentiful along the road, and that from their more southerly latitude they are likely to be blocked up by snow for a shorter period. But, whichever be the one selected, I would urge most strongly the necessity for immediate action in the matter, and I hope—though not with confidence—that the New Hudson's Bay Company will cast off the prejudices, and lay aside the obstructiveness, which degraded the policy of the old one, and promote, to the utmost of their power, that scheme which is of such vital importance to the advancement of all the British possessions in North America.

