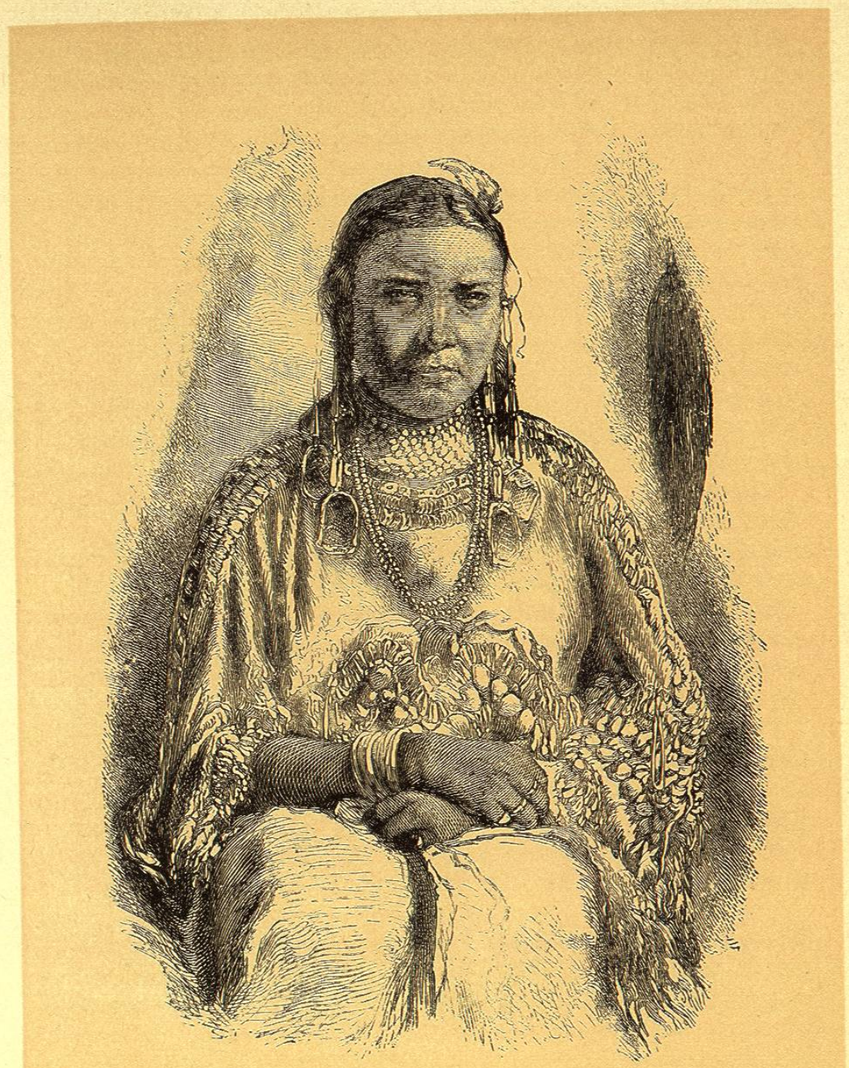
A few days after our visit to the village, one of the chiefs came to the fort, bringing with him a pretty girl of about eighteen, handsomely dressed after the manner I have described. Accompanied by her and the interpreter, he came to the room opening on the court where we were employed over our sketch-books and maps, and formally offered her to Mr. Nicollet as a wife for him. This placed our chief for a moment in an embarrassing position. But, with ready and crafty tact he explained to the chief that he already had one, and that the Great Father would not permit him to have two. At the same time suggesting that the younger chief, designating me, had none. This put me in a worse situation. But being at bay, I promptly replied that I was going far away and not coming back, and did not like to take the girl away from her people; that it might bring bad luck; but that I was greatly pleased with the offer, and to show that I was so, would give the girl a suitable present. Accordingly, an attractive package of scarlet and blue cloths, beads, a mirror, and other trifles was made up, and they left us; the girl quite satisfied with her trousseau, and he with other suitable presents made him. Meantime we had been interested by the composure of the girl's manner, who during the proceedings had been quietly leaning against the door-post, apparently not ill-pleased with the matrimonial conference.

All was now ready. The rating of the chronometers had been verified. Our observations had placed Fort Pierre in latitude, 44°23′28″, longitude, 100°12′30″, and elevation above the sea 1456 feet. Horses, carts, and provisions had been obtained at the fort and six men added to the party; Mr. May, of Kentucky, and a young man from Pembinah had joined us. They were on their way to the British Colony of the Red River of the North. William Dixon and Louison Frenière had been engaged as interpreters and guides. Both of these were half-breeds, well known as fine horsemen and famous hunters, as well as most experienced guides. The party now consisted of nineteen persons, thirty-three horses, and ten carts. With Mr. Nicollet, Mr. Geyer, who was again our botanist, and myself, was an officer of the French army, Captain Belligny, who wished to use so good an occasion to see the Indian country. We reached the eastern shore with all our equipage in good order, and made camp for the night at the foot of the river hills opposite the fort. The hills leading to the prairie plateau, about five hundred feet above the river, were rough and broken into ravines. We had barely reached the upland when the hunters came galloping in, and the shout of *la vache! la vache!* rang through the camp, everyone repeating it, and everyone excited.

A herd of buffalo had been discovered, coming down to water. In a few moments the buffalo horses were saddled and the hunters mounted, each with a smooth-bore, single or double-barrelled gun, a handkerchief



CHEYENNE BELLE.

bound fillet-like around the head, and all in the scantiest clothing. Conspicuous among them were Dixon and Louison. To this latter I then, and thereafter, attached myself.

My horse was a good one, an American, but grass-fed and prairie-bred. Whether he had gained his experience among the whites or Indians I do not know, but he was a good hunter and knew about buffalo, and badger holes as well, and when he did get his foot into one it was not his fault.

Now I was to see the buffalo. This was an event on which my imagination had been dwelling. I was about to realize the tales the mere telling of which was enough to warm the taciturn Renville into enthusiastic expression, and to rouse all the hunter in the excitable Frenière.

The prairie over which we rode was rolling, and we were able to keep well to leeward and out of sight of the herd. Riding silently up a short slope, we came directly upon them. Not a hundred yards below us was the great, compact mass of animals, moving slowly along, feeding as they went, and making the loud incessant grunting noise peculiar to them. There they were.

The moment's pause that we made on the summit of the slope was enough to put the herd in motion. Instantly as we rose the hill, they saw us. There was a sudden halt, a confused wavering movement, and then a headlong rout; the hunters in their midst. How I got down that short hillside I never knew. From the moment I saw the herd I never saw the ground again until all was over. I remember, as the charge was made, seeing the bulls in the rear turn, then take a few bounds forward, and then, turning for a last look, join the headlong flight.

As they broke into the herd the hunters separated. For some instants I saw them as they showed through the clouds of dust, but I scarcely noticed them. I was finding out what it was to be a prairie hunter. We were only some few miles from the river, hardly clear of the breaks of the hills, and in places the ground still rough. But the only things visible to me in our flying course were the buffalo and the dust, and there was tumult in my breast as well as around me. I made repeated ineffectual attempts to steady myself for a shot at a cow after a hard struggle to get up with her, and each time barely escaped a fall. In such work a man must be able to forget his horse, but my horsemanship was not yet equal to such a proof. At the outset, when the hunters had searched over the herd and singled out each his fattest cow, and made his dash upon her, the herd broke into bands which spread over the plain. I clung to that where I found myself, unwilling to give up, until I found that neither horse nor man could bear the strain longer. Our furious speed had carried us far out over the prairies. Only some straggling groups were in sight, loping slowly off, seemingly conscious that the chase was over. I

dismounted and reloaded, and sat down on the grass for a while to give us both rest. I could nowhere see any of my companions, and, except that it lay somewhere to the south of where I was, I had no idea where to look for the camp. The sun was getting low, and I decided to ride directly west, thinking that I might reach the river hills above the fort while there was light enough for me to find our trail of the morning. In this way I could not miss the camp, but for the time being I was lost.

My horse was tired and I rode slowly. He was to be my companion and reliance in a long journey, and I would not press him. The sun went down, and there was no sign that the river was near. While it was still light an antelope came circling round me, but I would not fire at him. His appearance and strange conduct seemed uncanny but companionable, and the echo to my gun might not be a pleasant one. Long after dark I struck upon a great number of paths, deeply worn, and running along together in a broad roadway. They were leading directly toward the river, and I supposed, to the fort. With my anxieties all relieved I was walking contentedly along, when I suddenly recognized that these were buffalo-trails leading to some accustomed great watering-place. The discovery was something of a shock, but I gathered myself together and walked on. I had been for some time leading my horse. Toward midnight I reached the breaks of the river hills at a wooded ravine, and just then I saw a rocket shoot up into the sky, far away to the south. That was camp, but apparently some fifteen miles distant, impossible for me to reach by the rough way in the night around the ravines. So I led my horse to the brink of the ravine, and going down I found water, which, *à plusieurs reprises*, I brought up to him, using my straw hat for a bucket. Taking off his saddle and bridle, and fastening him by his long lariat to one of the stirrups, I made a pillow of the saddle and slept soundly until morning. He did not disturb me much, giving an occasional jerk to my pillow, just enough to let me see that all was right.

At the first streak of dawn I saddled up. I had laid my gun by my side in the direction where I had seen the rocket, and riding along that way, the morning was not far advanced when I saw three men riding toward me at speed. They did not slacken their pace until they came directly up against me, when the foremost touched me. It was Louison Frenière. A reward had been promised by Mr. Nicollet to the first who should touch me, and Louison won it. And this was the end of my first buffalo hunt.

The camp gathered around all glad to see me. To be lost on the prairie in an Indian country is a serious accident, involving many chances, and no one was disposed to treat it lightly. Our party was made up of men experienced in prairie and in mountain travel, exposed always to unforeseen incidents.

When Frenière left the camp in search of me he had no hesitation about where to look. In the rolling country over which the hunt lay it would have been merely an accident to find either camp or water. He knew I would not venture the chance, but would strike directly for the river; and so in leaving camp he kept the open ground along the heads of the ravines, confident that he would either find me or my trail. He was sure I would remain on the open ground at the first water I found. He knew, too, as I did not, that from the Fort the valley of the river trended to the northwest, by this increasing the distance I had to travel; still farther increased by a large bend in which the river sweeps off to the westward. On the maps in common use it was nearly north and south, and had it really been so in fact I should have reached the breaks while it was still light enough for me to see the Fort or recognize our crossing-place, and perhaps to find my way to the camp. All the same I had made an experience and it had ended well.

The camp equipage being carried in carts, and not packed upon mules, the gearing up was quickly done; but meanwhile I had time for a fine piece of fat buffalo-meat standing already roasted on a stick before the fire, and a tin cup of good coffee. My horse and I did a fair share of walking on this day's march, and at every unusually good spot of grass I took the bit from his mouth and let him have the chance to recruit from the night before.

We were now on the upland of the *Coteau du Missouri*, here 1,960 feet above the sea. Travelling to the northeastward our camp for the night was made by a fork of the Medicine Bow River, the last running water our line would cross until we should reach the waters of the *Rivière à Jacques* on the eastern slopes of the plateau. On the open plains water is found only in ponds; not always permanent, and not frequent.

From the top of the hill which gives its name to the stream where we had encamped the view was over great stretches of level prairie, fading into the distant horizon, and unbroken except by the many herds of buffalo which made on it dark spots that looked like groves of timber; here and there puffs of dust rising from where the bulls were rolling or fighting. On these high plains the buffalo feed contentedly, and good buffalo grass usually marks the range where they are found. The occasional ponds give them water, and, for them, the rivers are never far away.

This was the Fourth of July. I doubt if any boy in the country found more joy in his fireworks than I did in my midnight rocket with its silent message. Water and wood to-night were abundant, and with plenty in camp and buffalo all around we celebrated our independence of the outside world.

Some days were now occupied in making the crossing of the plateau; our line being fixed by astronomical positions, and the level prairie required no sketching. I spent these days with Frenière among the buffalo. Sometimes when we had gotten too far ahead of our caravan it was an enjoyment to lie in careless ease on the grass by a pond and be refreshed by the breeze which carried with it the fragrance of the prairie. Edged with grasses growing into the clear water, and making a fresh border around them, these resting-spots are rather lakelets than ponds.

The grand simplicity of the prairie is its peculiar beauty, and its occurring events are peculiar and of their own kind. The uniformity is never sameness, and in his exhilaration the voyager feels even the occasional field of red grass waving in the breeze pleasant to his eye. And whatever the object may be—whether horseman, or antelope, or buffalo—that breaks the distant outline of the prairie, the surrounding circumstances are of necessity always such as to give it a special interest. The horseman may prove to be enemy or friend, but the always existing uncertainty has its charm of excitement in the one case, and the joy of the chase in the other. There is always the suspense of the interval needed to verify the strange object; and, long before the common man decides anything, the practised eye has reached certainty. This was the kind of lore in which Frenière was skilled, and with him my prairie education was continued under a master. He was a reckless rider. Never troubling himself about impediments, if the shortest way after his buffalo led through a pond through it he plunged. Going after a band on one of these days we came upon a long stretch of shallow pond that we had not seen, and which was thickly sown with boulders half hidden in tall grass and water. As I started to go around he shouted, "In there—in! *Tout droit! faut pas craindre le cheval.*" And in we went, floundering through, happily without breaking bones of ourselves or our horses. It was not the horse that I was afraid of; I did not like that bed of rocks and water.

Crossing the summit level of the plateau we came in sight of the beautiful valley, here about seventy miles broad, of the *Rivière à Jacques*, its scattered wooded line stretching as far as the eye could reach. Descending the slope we saw in the distance ahead moving objects, soon recognized as horsemen; and before these could reach us a clump of lodges came into view. They proved to be the encampment of about a hundred Indians, to whom Dixon and Frenière were known as traders of the Fur Company. After an exchange of friendly greetings our camp was pitched near by. Such a rare meeting is an exciting break in the uneventful Indian life; and the making of presents gave a lively expression to the good feeling with which they received us, and was followed by the usual Indian rejoicing. After a conference in which our line of travel was in-

LOST ON THE PRAIRIE.

dicated, the chief offered Mr. Nicollet an escort, the country being uncertain, but the offer was declined. The rendezvous for our expected reinforcement was not far away, and Indians with us might only prove the occasion for an attack in the event of meeting an unfriendly band. They had plenty of good buffalo-meat, and the squaws had gathered in a quantity of the *pommes des prairies*, or prairie turnips (*Psoralia esculenta*), which is their chief vegetable food, and abundant on the prairie. They slice and dry this for ordinary and winter use.

Travelling down the slope of the coteau, in a descent of 750 feet we reached the lake of "The Scattered Small Wood," a handsome but deceptive bit of water, agreeable to the eye, but with an unpleasant brackish taste.

About two years ago I received a letter, making of me some inquiries concerning this beautiful lake country of the Northwest. In writing now of the region over which I had travelled, I propose to speak of it as I had seen it, preserving as far as possible its local coloring of the time; shutting out what I may have seen or learned of the changes years have wrought. But, since the time of which I am writing, I have not seen this country. Looking over it, in the solitude where I left it, its broad valleys and great plains untenanted as I saw and describe them, I think that the curiosity and interest with which I read this letter, will also be felt by any who accompany me along these pages. Under this impression, and because the writer of the letter had followed our trail to this point—the "*Lake of the Scattered Small Wood*"—I give it here:

"IOWA CITY, IA., February 13, 1884.

. . . . "This I write feeling that as you have devoted your life to engineering and scientific pursuits, it will be at least a gratification to receive a letter upon such subjects as are connected with what you have done. It has been my fortune to locate and construct railway lines for the Chicago & Northwestern Railway in Minnesota and Dakota, in doing which I have surveyed not less than three thousand miles of line, and in so doing have passed over a very large extent of the surface of that region. While doing this work I have been led to inquire into the climate of that remarkable region. I visited many places which you in 1838 discovered and named. Among these are Lakes Benton and Hendricks, the first about twenty miles north of the famous 'Red Pipe Stone Quarry,' a very fine sheet of water, along the south shore of which I located the railroad, and there has sprung up a fine town called Lake Benton. West of this, in Dakota, and on the west side of the Big Sioux River, is a lake region, to many of the lakes in which you gave names, and it is to this locality that I wish to particularly call your attention. These lakes bear

the names of Thompson, Whitewood, Preston, Te-tonka-ha, Abert (now changed to Albert), Poinsett, and Kampeska. The last named is at the head of the Big Sioux, and Poinsett a few miles to the southward.

"When I constructed the Dakota Central Railway in 1879–80, all these lakes excepting Thompson, Poinsett, and Kampeska, were dry; and it took me a long time and no small research to ascertain when they last held water. They had been known to be dry for the twenty-five years preceding 1879, or at least persons who had lived there or in the vicinity for twenty-five years said that the lakes were dry when they came into the locality, and had, with numerous smaller ones, been dry ever since; and all who knew about them had a theory that they had dried up long since, and that they never would fill again; but I found old Frenchmen who had seen these lakes full of water in 1843–46, and I, in studying over the matter, found that you had seen and named them in 1836–38, and I would thank you very much if you will take the time and trouble to describe them to me as you saw them then.

"I came very near locating the railroad line through Lake Preston, for the head men of the railroad company believed that it had dried up for all time; but on my presenting the testimony of certain reliable voyageurs, they allowed me to go around it. It was well that they did, for the winter of 1880-81 gave a snow-fall such as had not been seen since the years 1843–44, and in the spring of 1881 all these lakes filled up, bank full, and have continued so ever since. I had the pleasure of comparing my engineer's levels for elevation above the sea with your barometer determination at Fort Pierre on the Missouri River. Your altitude was 1,450 feet, mine was 1,437, the difference 13 feet. My determination is within the limits of ± 6 feet. The distance over which my levels were taken was 680 miles, and were well checked. I also followed up your trail as you marched from Fort Pierre northeasterly to the '*Scattered Small Wood Lake.*' I was so successful as to verify your barometer readings in several instances by checking with mine, and in no case found over 15 feet difference between us; and that always in the same relation as at Fort Pierre. Hoping that you will excuse this long letter, and that you may be able to tell me if those lakes were dry when you saw them, or otherwise, and add any other information you see fit,

"I am, truly yours,

"C. W. IRISH, C. E."

The next day we reached the Rivière à Jacques, at the *Talle de Chênes*, a clump of oaks which was the rendezvous where our expected reinforcement was to meet us. The river valley here is about seventy miles wide. Observations made during the four days that we remained at the Talle de

Chênes place it in latitude 45° 16′ 34″, longitude 98° 7″ 45, and the elevation above the sea 1,341 feet. At the end of this time, no one appearing, the party again took up the line of march, and, following the right bank, on the evening of the 14th encamped near the mouth of Elm River. This river and its forks are well timbered, and for the reason that they furnish firewood and shelter, Indian hunting parties make it their winter crossing-place on the way westward after buffalo on the Missouri plateau.

On the high plains the winter storms are dangerous. Many tales are told of hunters caught out in a *poudrerie* with no timber near, when it is impossible to see one's way, and every landmark is obliterated or hidden by the driving snow. At such times the hunter has no other resource than to dig for himself a hole in the snow, leaving only a breathing-place above his head, and to remain in it wrapped in his blankets until the storm passes over; when, putting on the dry socks and moccasins which he always carries, he makes for the nearest wood.

The buffalo herds, when caught in such storms and no timber in sight, huddle together in compact masses, all on the outside crowding and fighting to get to the inside; and so, kept warm by the struggling, incessant motion, the snow meanwhile being stamped away under their feet, protect themselves from the fiercest storms.

For several days we travelled up the valley of the *Jacques*, making astronomical stations, and collecting material for Mr. Nicollet's map. Occasionally, to the same end, I was detached, with Dixon or Frenière, on topographical excursions, which gave me a good general knowledge of the country along the route. At the *Butte aux Os* (Bone Hill), in latitude 46° 27′ 37″, longitude 98° 8′ elevation above the sea 1,400 feet, we left the *Rivière à Jacques*, or *Chan-sansan*, its valley extending apparently far in a course to west of north, and in a few miles we reached the height of land which separates it from the Shayen River. This is a tributary to the Red River of the North, and was formerly the home of the Shayens, to-day written Cheyennes. In the incessant wars between the various tribes of this region the Shayens were driven from their country over the Missouri River south to where they now are.

The summit of the plateau was only 1,460 feet above the sea. Here we regained the great prairie plains, and here we saw in their magnificent multitudes the grand buffalo herds on their chief range. They were moving southwestwardly, apparently toward the plains of the upper Missouri. For three days we were in their midst, travelling through them by day and surrounded by them at night. We could not avoid them. Evidently some disturbing cause had set them in motion from the north. It was necessary to hobble some of our animals and picket them all, and keep them close in to prevent any of them from making off with the buffalo, when they would