"In the northwest the Hudson's Bay Company purchase from the Indians but a very small number—their only market being Canada, to which the cost of transportation nearly equals the produce of the furs; and it is only within a very recent period that they have received buffalo-robes in trade; and out of the great number of buffalo annually killed throughout the extensive regions inhabited by the Comanches and other kindred tribes no robes whatever are furnished for trade. During only four months of the year (from November until March) the skins are good for dressing, those obtained in the remaining eight months being valueless to traders; and the hides of bulls are never taken off or dressed as robes at any season. Probably not more than one-third of the skins are taken from the animals killed, even when they are in good season, the labor of preparing and dressing the robes being very great; and it is seldom that a lodge trades more than twenty skins in a year. It is during the summer months, and in the early part of autumn, that the greatest number of buffalo are killed, and yet at this time a skin is never taken for the purpose of trade."

From these data, which are certainly limited, and decidedly within bounds, the reader is left to draw his own inference of the immense number annually killed.

In 1842 I found the Sioux Indians of the Upper Platte *démontés*, as their French traders expressed it, with the failure of the buffalo; and in the following year large villages from the Upper Missouri came over to the mountains at the heads of the Platte in search of them. The rapidly progressive failure of their principal, and almost their only means of subsistence, has created great alarm among them; and at this time there are only two modes presented to them by which they see a good prospect for escaping starvation: one of these is to rob the settlements along the frontier of the States; and the other is to form a league between the various tribes of the Sioux nation, the Cheyennes, and Arapahoes, and make war against the Crow nation, in order to take from them their country, which is now the best buffalo country in the West. This plan they now have in consideration; and it would probably be a war of extermination, as the Crows have long been advised of this state of affairs, and say that they are perfectly prepared. These are the best warriors in the Rocky Mountains, and are now allied with the Snake Indians; and it is probable that their combination would extend itself to the Utahs, who have long been engaged in war against the Sioux. It is in this section of country that my observation formerly led me to recommend the establishment of a military post.

The further course of our narrative will give fuller and more detailed information of the present disposition of the buffalo in the country we visited.

Among the roots we obtained here I could distinguish only five or six different kinds; and the supply of the Indians whom we met consisted principally of yampah (*Anethum graveolens*), tobacco root (*Valeriana*), and a large root of a species of thistle (*Circium Virginianum*), which now is occasionally abundant, and is a very agreeably flavored vegetable.

We had been detained so long at the village that in the afternoon we made only five miles, and encamped on the same river after a day's journey of nineteen miles. The Indians informed us that we should reach the big salt water after having slept twice and travelling in a southerly direction. The stream had here entered a nearly level plain or valley, of good soil, eight or ten miles broad, to which no termination was to be seen, and lying between ranges of mountains which, on the right, were grassy and smooth, unbroken by rock, and lower than on the left, where they were rocky and bald, increasing in height to the southward.

On the creek were fringes of young willows, older trees being rarely found on the plains, where the Indians burn the surface to produce better grass. Several magpies (*Pica Hudsonica*) were seen on the creek this afternoon; and a rattlesnake was killed here, the first which had been seen since leaving the eastern plains. Our camp to-night had such a hungry appearance that I suffered the little cow to be killed, and divided the roots and berries among the people. A number of Indians from the village encamped near.

The weather the next morning was clear, the thermometer at sunrise at 44.5°, and, continuing down the valley, in about five miles we followed the little creek of our encampment to its junction with a larger stream, called *Roseaux*, or Reed River. Immediately opposite, on the right, the range was gathered into its highest peak, sloping gradually low, and running off to a point apparently some forty or fifty miles below. Between this (now become the valley stream) and the foot of the mountains we journeyed along a handsome sloping level, which frequent springs from the hills made occasionally miry, and halted to noon at a swampy spring, where there were good grass and abundant rushes. Here the river was forty feet wide, with a considerable current; and the valley a mile and a half in breadth; the soil being generally good, of a dark color, and apparently well adapted to cultivation.

The day had become bright and pleasant, with the thermometer at 71°. By observation our latitude was 41° 59′ 31″, and the elevation above the sea four thousand six hundred and seventy feet. On our left, this afternoon, the range at long intervals formed itself into peaks, appearing to terminate about forty miles below, in a rocky cape; beyond which several others were faintly visible; and we were disappointed when at every little rise we did not see the lake. Toward evening our way was somewhat

obstructed by fields of artemisia, which began to make their appearance here, and we encamped on the Roseaux, the water of which had acquired a decidedly salt taste, nearly opposite to a cañon gap in the mountains, through which the Bear River enters this valley.

As we encamped, the night set in dark and cold, with heavy rain; and the artemisia, which was here our only wood, was so wet that it would not burn. A poor, nearly starved dog, with a wound in his side from a ball, came to the camp, and remained with us until the winter, when he met a very unexpected fate.

September 1st.—The morning was squally and cold; the sky scattered over with clouds; and the night had been so uncomfortable that we were not on the road until eight o'clock. Travelling between Roseaux and Bear Rivers, we continued to descend the valley, which gradually expanded, as we advanced, into a level plain of good soil, about twenty-five miles in breadth, between mountains three thousand and four thousand feet high, rising suddenly to the clouds, which all day rested upon the peaks. These gleamed out in the occasional sunlight, mantled with the snow which had fallen upon them, while it rained on us in the valley below, of which the elevation here was about four thousand five hundred feet above the sea.

The country before us plainly indicated that we were approaching the lake, though as the ground where we were travelling afforded no elevated point, nothing of it as yet could be seen; and at a great distance ahead were several isolated mountains, resembling islands, which they were afterward found to be. On this upper plain the grass was everywhere dead; and among the shrubs with which it was almost exclusively occupied (artemisia being the most abundant) frequently occurred handsome clusters of several species of *dieteria* in bloom. *Purshia tridentata* was among the frequent shrubs.

Descending to the bottoms of Bear River we found good grass for the animals, and encamped about three hundred yards above the mouth of Roseaux, which here makes its junction, without communicating any of its salty taste to the main stream, of which the water remains perfectly pure. On the river are only willow thickets (*Salix longifolia*), and in the bottoms the abundant plants are canes, solidago, and helianthi, and along the banks of Roseaux are fields of *Malva rotundifolia*. At sunset the thermometer was at 54.5°, and the evening clear and calm; but I deferred making any use of it until one o'clock in the morning, when I endeavored to obtain an emersion of the first satellite; but it was lost in a bank of clouds, which also rendered our usual observations indifferent.

Among the useful things which formed a portion of our equipage was an India-rubber boat, eighteen feet long, made somewhat in the form of a bark canoe of the northern lakes. The sides were formed by two air-tight cylinders, eighteen inches in diameter, connected with others forming the bow and stern. To lessen the danger from accidents to the boat, these were divided into four different compartments, and the interior space was sufficiently large to contain five or six persons, and a considerable weight of baggage. The Roseaux being too deep to be forded, our boat was filled with air, and in about one hour all the equipage of the camp, carriage and gun included, ferried across.

Thinking that perhaps in the course of the day we might reach the outlet at the lake, I got into the boat with Basil Lajeunesse, and paddled down Bear River, intending at night to rejoin the party, which in the meantime proceeded on its way. The river was from sixty to one hundred yards broad, and the water so deep that, even on the comparatively shallow points, we could not reach the bottom within fifteen feet. On either side were alternately low bottoms and willow points, with an occasional high prairie; and for five or six hours we followed slowly the winding course of the river, which crept along with a sluggish current among frequent *détours* several miles around, sometimes running for a considerable distance directly up the valley.

As we were stealing quietly down the stream, trying in vain to get a shot at a strange large bird that was numerous among the willows, but very shy, we came unexpectedly upon several families of *Root Diggers*, who were encamped among the rushes on the shore, and appeared very busy about several weirs or nets which had been rudely made of canes and rushes for the purpose of catching fish. They were very much startled at our appearance, but we soon established an acquaintance; and finding that they had some roots, I promised to send some men with goods to trade with them. They had the usual very large heads, remarkable among the Digger tribe, with matted hair, and were almost entirely naked; looking very poor and miserable, as if their lives had been spent in the rushes where they were, beyond which they seemed to have very little knowledge of anything. From the few words we could comprehend their language was that of the Snake Indians.

Our boat moved so heavily, that we had made very little progress; and, finding that it would be impossible to overtake the camp, as soon as we were sufficiently far below the Indians, we put to the shore near a high prairie bank, hauled up the boat, and *cached* our effects in the willows. Ascending the bank, we found that our desultory labor had brought us only a few miles in a direct line; and, going out into the prairie, after a search we found the trail of the camp, which was now nowhere in sight, but had followed the general course of the river in a large circular sweep which it makes at this place. The sun was about three hours high when

we found the trail; and as our people had passed early in the day, we had the prospect of a vigorous walk before us.

Immediately where we landed, the high arable plain on which we had been travelling for several days past, terminated in extensive low flats, very generally occupied by salt marshes, or beds of shallow lakes, whence the water had in most places evaporated, leaving their hard surface encrusted with a shining white residuum, and absolutely covered with very small *univalve* shells. As we advanced, the whole country around us assumed this appearance; and there was no other vegetation than the shrubby chenopodiaceous and other apparently saline plants, which were confined to the rising grounds.

Here and there on the river bank, which was raised like a levee above the flats through which it ran, was a narrow border of grass, and short, black-burned willows; the stream being very deep and sluggish, and sometimes six hundred to eight hundred feet wide. After a rapid walk of about fifteen miles, we caught sight of the camp-fires among clumps of willows just as the sun had sunk behind the mountains on the west side of the valley, filling the clear sky with a golden yellow. These last rays, to us so precious, could not have revealed a more welcome sight. To the traveller, and the hunter, a camp fire in the lonely wilderness is always cheering; and to ourselves, in our present situation, after a hard march in a region of novelty, approaching the *debouches* of a river, in a lake of almost fabulous reputation, it was doubly so.

A plentiful supper of aquatic birds, and the interest of the scene, soon dissipated fatigue; and I obtained during the night emersions of the second, third, and fourth satellites of Jupiter, with observations for time and latitude.

UTAH INDIAN.