

of our greatest privations. The poor dog which had been found in the Bear River Valley, and which had been a *compagnon de voyage* ever since, had now become fat, and the mess to which it belonged requested permission to kill it. Leave was granted. Spread out on the snow, the meat looked very good; and it made a strengthening meal for the greater part of the camp. Indians brought in two or three rabbits during the day, which were purchased from them.

The river was forty to seventy feet wide, and now entirely frozen over. It was wooded with large cotton-wood, willow, and *grains de bœuf*. By observation, the latitude of this encampment was $38^{\circ} 37' 18''$.

February 2d.—It had ceased snowing, and this morning the lower air was clear and frosty; and six or seven thousand feet above, the peaks of the Sierra now and then appeared among the rolling clouds, which were rapidly dispersing before the sun. Our Indian shook his head as he pointed to the icy pinnacles shooting high up into the sky, and seeming almost immediately above us. Crossing the river on the ice, and leaving it immediately, we commenced the ascent of the mountain along the valley of a tributary stream. The people were unusually silent; for every man knew that our enterprise was hazardous, and the issue doubtful.

The snow deepened rapidly, and it soon became necessary to break a road. For this service, a party of ten was formed, mounted on the strongest horses; each man in succession opening the road on foot, or on horse-back, until himself and his horse became fatigued, when he stepped aside; and, the remaining number passing ahead, he took his station in the rear. Leaving this stream, and pursuing a very direct course, we passed over an intervening ridge to the river we had left.

On the way we passed two low huts entirely covered with snow, which might very easily have escaped observation. A family was living in each; and the only trail I saw in the neighborhood was from the door hole to a nut-pine tree near, which supplied them with food and fuel. We found two similar huts on the creek where we next arrived; and, travelling a little higher up, encamped on its banks in about four feet depth of snow. Carson found near, an open hill-side, where the wind and the sun had melted the snow, leaving exposed sufficient bunch-grass for the animals to-night.

The nut-pines were now giving way to heavy timber, and there were some immense pines on the bottom, around the roots of which the sun had melted away the snow; and here we made our camps and built huge fires. To-day we had travelled sixteen miles, and our elevation above the sea was six thousand seven hundred and sixty feet.

February 3d.—Turning our faces directly toward the main chain, we ascended an open hollow along a small tributary to the river, which, ac-

ording to the Indians, issues from a mountain to the south. The snow was so deep in the hollow, that we were obliged to travel along the steep hill-sides, and over spurs, where wind and sun had in places lessened the snow, and where the grass, which appeared to be in good quality along the sides of the mountains, was exposed.

We opened our road in the same way as yesterday, but made only seven miles; and encamped by some springs at the foot of a high and steep hill, by which the hollow ascended to another basin in the mountain. The little stream below was entirely buried in snow. The springs were shaded by the boughs of a lofty cedar, which here made its first appearance; the usual height was one hundred and twenty to one hundred and thirty feet, and one that was measured near by was six feet in diameter.

There being no grass exposed here, the horses were sent back to that which we had seen a few miles below. We occupied the remainder of the day in beating down a road to the foot of the hill, a mile or two distant; the snow being beaten down when moist, in the warm part of the day, and then hard frozen at night, made a foundation that would bear the weight of the animals the next morning. During the day several Indians joined us on snow-shoes. These were made of a circular hoop, about a foot in diameter, the interior space being filled with an open network of bark.

February 4th.—I went ahead early with two or three men, each with a led horse, to break the road. We were obliged to abandon the hollow entirely, and work along the mountain-side, which was very steep, and the snow covered with an icy crust. We cut a footing as we advanced, and trampled a road through for the animals; but occasionally one plunged outside the trail, and slid along the field to the bottom, a hundred yards below.

Late in the day we reached another bench in the hollow, where in summer the stream passed over a small precipice. Here was a short distance of dividing ground between the two ridges, and beyond an open basin, some ten miles across, whose bottom presented a field of snow. At the further or western side rose the middle crest of the mountain, a dark-looking ridge of volcanic rock.

The summit line presented a range of naked peaks, apparently destitute of snow and vegetation; but below, the face of the whole country was covered with timber of extraordinary size. The view given of this ridge is from a camp on the western side of the basin.

Toward a pass which the guide indicated here, we attempted in the afternoon to force a road; but after a laborious plunging through two or three hundred yards, our best horses gave out, entirely refusing to make any further effort; and, for the time, we were brought to a stand. The guide informed us that we were entering the deep snow, and here began

the difficulties of the mountain; and to him, and almost to all, our enterprise seemed hopeless. I returned a short distance back, to the break in the hollow, where I met Mr. Fitzpatrick.

The camp had been all the day occupied in endeavoring to ascend the hill, but only the best horses had succeeded. The animals, generally, not having sufficient strength to bring themselves up without the packs; and all the line of road between this and the springs was strewn with camp stores and equipage, and horses floundering in snow.

I therefore immediately encamped on the ground with my own mess, which was in advance, and directed Mr. Fitzpatrick to encamp at the springs, and send all the animals in charge of Tabeau, with a strong guard, back to the place where they had been pastured the night before. Here was a small spot of level ground, protected on one side by the mountain, and on the other sheltered by a little ridge of rock. It was an open grove of pines, which assimilated in size to the grandeur of the mountain, being frequently six feet in diameter.

To-night we had no shelter, but we made a large fire around the trunk of one of the huge pines; and covering the snow with small boughs, on which we spread our blankets, soon made ourselves comfortable. The night was very bright and clear, and though the thermometer was only down to 10°, a strong wind which sprang up at sundown, made it intensely cold; and this was one of the bitterest nights during the journey.

Two Indians joined our party here; and one of them, an old man, immediately began to harangue us, saying that ourselves and animals would perish in the snow, and that if we would go back, he would show us another and a better way across the mountain. He spoke in a very loud voice, and there was a singular repetition of phrases and arrangement of words which rendered his speech striking and not unmusical.

We had now begun to understand some words, and, with the aid of signs, easily comprehended the old man's simple ideas. "Rock upon rock—rock upon rock—snow upon snow—snow upon snow," said he; "even if you get over the snow, you will not be able to get down from the mountains." He made us the sign of precipices, and showed us how the feet of the horses would slip, and throw them off from the narrow trails which led along their sides.

Our Chinook, who comprehended even more readily than ourselves, and believed our situation hopeless, covered his head with his blanket, and began to weep and lament. "I wanted to see the whites," said he; "I came away from my own people to see the whites, and I wouldn't care to die among them; but here"—and he looked around into the cold night and gloomy forest, and, drawing his blanket over his head, began again to lament.

Seated around the tree, the fire illuminating the rocks and the tall bolls of the pines round about, and the old Indian haranguing, we presented a group of very serious faces.

February 5th.—The night had been too cold to sleep, and we were up very early. Our guide was standing by the fire with all his finery on; and seeing him shiver in the cold, I threw on his shoulders one of my blankets. We missed him a few minutes afterward, and never saw him again. He had deserted. His bad faith and treachery were in perfect keeping with the estimate of Indian character which a long intercourse with this people had gradually forced upon my mind.

While a portion of the camp were occupied in bringing up the baggage to this point, the remainder were busied in making sledges and snow-shoes. I had determined to explore the mountain ahead, and the sledges were to be used in transporting the baggage.

The mountains here consisted wholly of a white micaceous granite.

The day was perfectly clear, and while the sun was in the sky, warm and pleasant.

By observation, our latitude was 38° 42' 26"; and elevation, by the boiling-point, seven thousand four hundred feet.

February 6th.—Accompanied by Mr. Fitzpatrick, I set out to-day with a reconnoitring party, on snow-shoes. We marched all in single file, trampling the snow as heavily as we could. Crossing the open basin, in a march of about ten miles we reached the top of one of the peaks, to the left of the pass indicated by our guide.

Far below us, dimmed by the distance, was a large snowless valley, bounded on the western side, at the distance of about a hundred miles, by a low range of mountains, which Carson recognized with delight as the mountains bordering the coast. "There," said he, "is the little mountain—it is fifteen years ago since I saw it; but I am just as sure as if I had seen it yesterday." Between us, then, and this low coast range, was the Valley of the Sacramento; and no one who had not accompanied us through the incidents of our life for the last few months, could realize the delight with which at last we looked down upon it. At the distance of apparently thirty miles beyond us were distinguished spots of prairie; and a dark line, which could be traced with the glass, was imagined to be the course of the river; but we were evidently at a great height above the valley, and between us and the plains extended miles of snowy fields, and broken ridges of pine-covered mountains.

It was late in the day when we turned toward the camp; and it grew rapidly cold as it drew toward night. One of the men, Fallon, became fatigued, and his feet began to freeze, and building a fire in the trunk of a dry old cedar, Mr. Fitzpatrick remained with him until his clothes could

be dried, and he was in a condition to come on. After a day's march of twenty miles, we straggled into camp, one after another, at nightfall; the greater number excessively fatigued, only two of the party having ever travelled on snow-shoes before.

All our energies were now directed to getting our animals across the snow; and it was supposed that, after all the baggage had been drawn with the sleighs over the trail we had made, it would be sufficiently hard to bear our animals. At several places between this point and the ridge we had discovered some grassy spots, where the wind and sun had dispersed the snow from the sides of the hills, and these were to form resting-places to support the animals for a night in their passage across. On our way across we had set on fire several broken stumps, and dried trees, to melt holes in the snow for the camps. Its general depth was five feet; but we passed over places where it was twenty feet deep, as shown by the trees.

With one party drawing sleighs loaded with baggage, I advanced to-day about four miles along the trail, and encamped at the first grassy spot where we expected to bring our horses. Mr. Fitzpatrick, with another party, remained behind, to form an intermediate station between us and the animals.

February 8th.—The night had been extremely cold but perfectly still and beautifully clear. Before the sun appeared this morning the thermometer was 3° below zero; 1° higher, when his rays struck the lofty peaks; and 0° when they reached our camp.

Scenery and weather combined, must render these mountains beautiful in summer; the purity and deep-blue color of the sky are singularly beautiful; the days are sunny and bright, and even warm in the noon hours; and if we could be free from the many anxieties that oppress us, even now we would be delighted here; but our provisions are getting fearfully scant. Sleighs arrived with baggage about ten o'clock; and leaving a portion of it here, we continued on for a mile and a half, and encamped at the foot of a long hill on this side of the open bottom.

Bernier and Godey, who yesterday morning had been sent to ascend a higher peak, got in, hungry and fatigued. They confirmed what we had already seen. Two other sleighs arrived in the afternoon; and the men being fatigued, I gave them all tea and sugar. Snow-clouds began to rise in the south-southwest; and, apprehensive of a storm, which would destroy our road, I sent the people back to Mr. Fitzpatrick, with directions to send for the animals in the morning. With me remained Mr. Preuss, Mr. Talbot, and Carson, with Jacob.

Elevation of the camp, by the boiling-point, is seven thousand nine hundred and twenty feet.

February 9th.—During the night the weather changed, the wind rising to a gale, and commencing to snow before daylight; before morning the trail was covered. We remained quiet in camp all day, in the course of which the weather improved. Four sleighs arrived toward evening, with the bedding of the men. We suffer much from the want of salt; and all the men are becoming weak from insufficient food.

February 10th.—Taplin was sent back with a few men to assist Mr. Fitzpatrick; and continuing on with three sleighs carrying a part of the baggage, we had the satisfaction to encamp within two and a half miles of the head of the hollow, and at the foot of the last mountain ridge. Here two large trees had been set on fire, and in the holes, where the snow had been melted away, we found a comfortable camp.

The wind kept the air filled with snow during the day; the sky was very dark in the southwest, though elsewhere very clear. The forest here has a noble appearance: the tall cedar is abundant; its greatest height being one hundred and thirty feet, and circumference twenty, three or four feet above the ground; and here I see for the first time the white pine, of which there are some magnificent trees. Hemlock spruce is among the timber, occasionally as large as eight feet in diameter four feet above the ground; but, in ascending, it tapers rapidly to less than one foot at the height of eighty feet. I have not seen any higher than one hundred and thirty feet, and the slight upper part is frequently broken off by the wind. The white spruce is frequent; and the red pine (*Pinus colorado* of the Mexicans) which constitutes the beautiful forest along the flanks of the Sierra Nevada to the northward, is here the principal tree, not attaining a greater height than one hundred and forty feet, though with sometimes a diameter of ten. Most of these trees appeared to differ slightly from those of the same kind on the other side of the continent.

The elevation of the camp, by the boiling-point, is eight thousand and fifty feet. We are now one thousand feet above the level of the South Pass in the Rocky Mountains; and still we are not done ascending. The top of a flat ridge near was bare of snow, and very well sprinkled with bunch grass, sufficient to pasture the animals two or three days; and this was to be their main point of support. This ridge is composed of a compact trap, or basalt, of a columnar structure; over the surface are scattered large boulders of porous trap. The hills are in many places entirely covered with small fragments of volcanic rock.

Putting on our snow-shoes, we spent the afternoon in exploring a road ahead. The glare of the snow, combined with great fatigue, had rendered many of the people nearly blind; but we were fortunate in having some black silk handkerchiefs, which, worn as veils, very much relieved the eyes.

February 11th.—High wind continued, and our trail this morning was nearly invisible—here and there indicated by a little ridge of snow. Our situation became tiresome and dreary, requiring a strong exercise of patience and resolution.

In the evening I received a message from Mr. Fitzpatrick, acquainting me with the utter failure of his attempt to get our mules and horses over the snow—the half-hidden trail had proved entirely too slight to support them, and they had broken through, and were plunging about or lying half-buried in snow. He was occupied in endeavoring to get them back to his camp; and in the meantime sent to me for further instructions. I wrote to him to send the animals immediately back to their old pastures; and, after having made mauls and shovels, turn in all the strength of his party to open and beat a road through the snow, strengthening it with branches and boughs of the pines.

February 12th.—We made mauls, and worked hard at our end of the road all the day. The wind was high, but the sun bright, and the snow thawing. We worked down the face of the hill, to meet the people at the other end. Toward sundown it began to grow cold, and we shouldered our mauls, and trudged back to camp.

February 13th.—We continued to labor on the road; and in the course of the day had the satisfaction to see the people working down the face of the opposite hill, about three miles distant. During the morning we had the pleasure of a visit from Mr. Fitzpatrick, with the information that all was going on well. A party of Indians had passed on snow-shoes, who said they were going to the western side of the mountain after fish. This was an indication that the salmon were coming up the streams; and we could hardly restrain our impatience as we thought of them, and worked with increased vigor.

The meat train did not arrive this evening, and I gave Godey leave to kill our little dog (Tlamath) which he prepared in Indian fashion—scorching off the hair, and washing the skin with soap and snow, and then cutting it up into pieces, which were laid on the snow. Shortly afterward the sleigh arrived with a supply of horse meat; and we had to-night an extraordinary dinner—pea-soup, mule, and dog.

February 14th.—Opposite is given a view of the dividing ridge of the Sierra, taken from this encampment. With Mr. Preuss, I ascended to-day the highest peak to the right; from which we had a beautiful view of a mountain lake at our feet, about fifteen miles in length, and so entirely surrounded by mountains that we could not discover an outlet. We had taken with us a glass; but, though we enjoyed an extended view, the valley was half hidden in mist, as when we had seen it before. Snow could be distinguished on the higher parts of the coast mountains; eastward, as far as the eye

could extend, it ranged over a terrible mass of broken snowy mountains, fading off blue in the distance.

The rock composing the summit consists of a very coarse dark volcanic conglomerate; the lower parts appeared to be of a slaty structure. The highest trees were a few scattering cedars and aspens. From the immediate foot of the peak, we were two hours in reaching the summit, and one hour and a quarter in descending. The day had been very bright, still, and clear, and spring seems to be advancing rapidly. While the sun is in the sky, the snow melts rapidly, and gushing springs cover the face of the mountain in all the exposed places; but their surface freezes instantly with the disappearance of the sun.

I obtained to-night some observations; and the result from these, and others made during our stay, gives for the latitude $38^{\circ} 41' 57''$, longitude $120^{\circ} 25' 57''$, and rate of the chronometer $25.82''$.

February 16th.—We had succeeded in getting our animals safely to the first grassy hill; and this morning I started with Jacob on a reconnoitring expedition beyond the mountain. We travelled along the crests of narrow ridges, extending down from the mountain in the direction of the valley, from which the snow was fast melting away. On the open spots was tolerably good grass; and I judged we should succeed in getting the camp down by way of these. Toward sundown we discovered some icy spots in a deep hollow; and, descending the mountain, we encamped on the head-water of a little creek, where at last the water found its way to the Pacific.

The night was clear and very long. We heard the cries of some wild animals, which had been attracted by our fire, and a flock of geese passed over during the night. Even these strange sounds had something pleasant to our senses in this region of silence and desolation.

We started again early in the morning. The creek acquired a regular breadth of about twenty feet, and we soon began to hear the rushing of the water below the icy surface, over which we travelled to avoid the snow; a few miles below we broke through, where the water was several feet deep, and halted to make a fire and dry our clothes. We continued a few miles farther, walking being very laborious without snow-shoes.

I was now perfectly satisfied that we had struck the stream on which Mr. Sutter lived; and, turning about, made a hard push and reached the camp at dark. Here we had the pleasure to find all the remaining animals, fifty-seven in number, safely arrived at the grassy hill near the camp; and here, also, we were agreeably surprised with the sight of an abundance of salt. Some of the horse-guard had gone to a neighboring hut for pine nuts, and discovered unexpectedly a large cake of very white, fine-grained salt, which the Indians told them they had brought from the other side of