Just before sunset we reached a small opening between the mountain ranges, covered with a dense growth of willows, wild currants, and wild rose-bushes. The mountain-sides presented clumps of hawthorn, and a few diminutive and scattering cedars. Here we encamped in the small openings among the willows and other shrubbery, where we found grass and water sufficient for our animals. Distance 35 miles.

CHAPTER XI.

More extreme cold weather—Ogden's Hole—Utah Indians—Weber River—Cañons—Indian visiters—Disgusting practice—Great fires in the mountains—First view of the great Salt Lake—Salmon-trout—Great Salt Lake—A sunset on the lake—Broke my thermometer—Indian chase—Warm sulphur springs—More Indian visiters—Indian fruit-cake—Grasshopper jam—Mode of taking grasshoppers by the Indians.

JULY 23.—Ice froze in our buckets and basins one-fourth of an inch in thickness. On the surface of the small shallow brook which runs through the valley, the congelation was of the thickness of window-glass. At home, in the low and humid regions of the Mississippi valley, at this stage of the thermometer we should suffer from sleeping in the open air. But here the atmosphere is so elastic, dry, and bracing, that we experience no inconvenience.

Continuing our march down the narrow defile in a southwest course, generally along the side of the mountain, (the bottom being choked up with willows, vines, briers, and rose-bushes,) we crossed the channels at their mouths, of two small streams emptying into the branch upon which we are travelling. These streams flow through narrow mountain defiles which, as far as we could discern, were timbered with cedars and poplars. One of these gorges presents a most savage and gloomy aspect. It is so narrow and deep that the rays of the sun never penetrate to its bottom. Mr. Hudspeth thinks this is what is called by the hunters, "Ogden's Hole." It derives

this name from the circumstance that a trapper by the name of Ogden concealed himself here from a body of pursuing and hostile Indians, and perhaps perished. I am not sufficiently acquainted with the facts to relate them with accuracy. The romantic interest of the story is doubtless much enhanced by a view of the wild and forbidding spot where its incidents and catastrophe occurred.

The ranges of mountains, as we proceeded down the gorge, became more and more elevated, but less precipitous. I noticed, at a height of six or eight hundred feet above the level of the stream, numberless small white fossil shells, from half an inch to an inch in diameter. In places bare of vegetation, the ground was white with these crustaceous remains. About eleven o'clock, we passed through a grove of small poplars, at the upper end of a triangular valley. The stream down which we have been travelling, here runs through a perpendicular *cañon* of great elevation, and empties into the main Weber river, which flows into the Great Salt Lake, running in a nearly west course. Ascertaining by examination that we could not pass this *cañon*, without following a considerable distance the rocky channel of the stream, we crossed some low hills, or a gap in the mountains at the northeast corner of the valley. While marching over these hills, we were overtaken by five or six Indians mounted on horses. The Indians rode up and saluted us with much apparent friendship and cordiality. They were a small party encamped in the valley that we had just left, whose animals and lodges we had seen at a distance in the brush skirting the stream. After riding two miles, we entered a fertile valley several miles in length and breadth, covered with luxuriant grass, through which flows Weber river; but tracing the channel down to where it enters the mountains, we found a *cañon* more difficult to pass than the one we had just left. Observing at a distance a party of Indians, whose encampment was some two miles up the valley, coming towards us, we determined to halt for an hour or two, and gather from them such information as we could in reference to the route to the Salt Lake.

The first Indians that came up were two men and a small boy. One of the men called himself a Utah, the other a Soshonee or Snake. The Utah appeared to be overjoyed to see us. He was not satisfied with shaking hands, but he must embrace us, which, although not an agreeable ceremony, was submitted to by several of our party. This ceremony being over, he laughed merrily, and danced about as if in an ecstasy of delight in consequence of our appearance. He examined with great curiosity all of our baggage; tried on, over his naked shoulders, several of our blankets, in which costume he seemed to regard himself with great satisfaction. He was, for an Indian, very comical in his deportment and very merry. The number of Indians about our camp soon accumulated to fifteen or twenty, all of whom were Utahs, except the one Snake mentioned, who had married a Utah squaw. A hasty dinner was prepared, and we distributed very sparingly among them (for our stock of provisions is becoming low) something from each dish, with which display of hospitality they appeared to be gratified. Most of these Indians were armed with bows and arrows. There were among them a miserable rifle and musket, which they had evidently procured from Mexican trappers or traders, as, when I inquired of the owner of one of them its name, he pronounced the word *carabina*. Those who had these guns were desirous that we should wait until they could ride some distance and bring dressed deer or elkskins, which they wished to trade for powder and balls. They were all miserably clothed, some wearing a filthy, ragged blanket, others a shirt and gaiters made of skins, and others simply a breech-cloth of skins. Their countenances, however, were sprightly and intelligent, and several of them were powerfully formed.

The result of our inquiries in reference to the route was not satisfactory. The merry old fellow we first met, advised us by signs to go southwest a distance until we struck water, and then go northwest. Another advised us to return to the small valley, and from thence to pass through the mountains parallel with Weber river. We determined on the latter route, it appearing to be the shortest.

Saddling up, we retraced our trail into the small valley, where we were overtaken by the Indians, desirous of trading skins for powder and balls. Several trades were made, generally at the rate of twelve charges of powder, and as many ounce-bullets, for a large elk or deer skin well dressed. We ascended from the valley through a winding and difficult ravine, to the summit of the range of mountains on the west, from which we could see nothing but mountain after mountain, one rising behind another, in the course we designed taking. A halt was called, and Mr. Hudspeth and myself, leaving our party, entered a ravine and followed it down steep declivities, (our mules frequently sliding ten or fifteen feet over bare and precipitous rocks,) with a view of ascertaining the practicability of passing along the bank of the river. Forcing our way, after our descent, through the thick brush and brambles, and over dead and fallen timber, we finally reached the stream and crossed it. The result of our observations was that the route was impracticable, without the aid of axes to clear away the brush and dead and fallen timber, unless we took the rocky bed of the river for a road, wading water generally three feet deep, and in places, probably of swimming depth to our animals. We returned after considerable difficulty to our party, and countermarching, encamped just as the sun was setting, in the small valley so often referred to.

There are two Indian lodges near our camp. We visited them, and made exchanges of small articles with the women for parched and pulverized sunflower and grass seeds. Its taste was much like that of parched corn, and agreeable. All the men, women, and children, some eight or ten in number, visited us during the preparation and discussion of our supper, watching with much curiosity and interest the culinary operations and other movements. They were good-natured and sociable, so far as there can be sociability between persons making known their thoughts by vague signs. Our supper to-night, with the exception of bread and coffee, consisted of a stew made of antelope flesh, which, as it happened, was very highly seasoned with pepper. I distributed several plates of this stew among the Indians. They tasted of it, and immediately made most lud-

crous grimaces, blowing out and drawing in their breath, as if they had been burnt. They handed back the plates without eating their contents. To satisfy them that we were playing no tricks upon them, which they seemed to suspect, I ate from the same dishes; but they could not be prevailed upon to eat the stew. Coffee, bread, and a small lump of sugar to each was distributed among them, with which they seemed much pleased. The sugar delighted them beyond measure, and they evidently had never seen or tasted of it before. During the visit of these Indians, I noticed the females hunting for the vermin in the heads and on the bodies of their children; finding which, they ate the animals with an apparent relish. I had often heard of this disgusting practice, but this is the first instance of it I have seen. They retired to their lodges about nine o'clock, and so much confidence did we feel in their friendship, that no watch was set for the night. Distance from our last camp, seven miles.

July 24.—Crossing for the third time the low gap at the southeastern corner of the small valley, we entered the large, level, and fertile bottom, on the edge of which we had halted yesterday. Fording the river, we took a south course over this bottom, which is about three miles in breadth, covered with tall grass, the bloom upon which shows that, when ripe, it must be heavily seeded and nutritious. From the valley we ascended gradually five or six miles to the summit of a ridge of hills, from which, descending about the same distance in a southwest course, we struck another branch of Weber's river, flowing in a northwest course. Following the stream about a mile, much to our disappointment we found another impassable *cañon*. This *cañon* resembles a gate, about six or eight feet in width, the arch and superstructure of which have fallen in immense masses, rendering a passage by the channel of the stream impossible. The mountains on either side raise their perpendicular walls of red sandstone to a great elevation.

Looking up the side of the mountain on our right, we saw a small Indian trail winding under and over the projecting and impending cliffs. This evidence that the Indians had passed this way, satisfied us that we could do the same; although to

the eye, when standing in the valley and looking upwards, it seemed impossible. We commenced the ascent, mules and men following each other along the narrow and dangerous path in single file. After much labor we reached the summit of the ascent. This first difficulty being over, we travelled about two miles along the side of the mountain, in a path so narrow that a slight jostle would have cast us over a precipice to the bottom of a gulf a thousand feet in depth. Continuing down the stream five miles, our progress being obstructed by many difficulties, we at length, much to our gratification, reached an opening between the mountains, displaying an extensive valley covered with grass, and the meanderings of the stream upon which we were travelling by the line of dark green shrubbery and herbage upon its banks. We reached the junction of this stream with Weber river between four and five o'clock, and encamped for the day.

A number of Utah Indians accompanied us several miles this morning. Among them was the pleasant and comical old fellow, who amused us so much yesterday. They all appeared to be much gratified by our visit, and were very pressing in their invitations to us to stop and trade with them. Near the last *cañon* there was a solitary lodge, from which the inhabitants, with the exception of an old man and woman, fled as soon as they saw us, driving before them their horses. The old man and woman, being unable to run, hid themselves under the bank of the stream. I noticed in one of the ravines to-day, the scrub-oak, or what is commonly called *black-jack*, also a few small maple-trees. The trunks of none of these are more than two inches in diameter. Distance 24 miles.

July 25.—We determined to remain encamped to-day, to rest and recruit our mules, the grass and water being good. The valley in which our camp is situated is about fifteen miles in length, and varies from one to three miles in breadth. The mountains on both sides rise in benches one above another, to an elevation of several thousand feet above the level of the valley. The summits of this range, on the west, exhibit snow. It is scarcely possible to imagine a landscape blending more va-

riety, beauty, and sublimity, than is here presented. The quiet, secluded valley, with its luxuriant grass waving in the breeze; the gentle streamlet winding through it, skirted with clumps of willows and the wild rose in bloom; the wild currant, laden with ripe fruit; the aspen poplar, with its silvery, tremulous foliage; the low, sloping hills, rising at first by gentle ascents, and becoming gradually more and more elevated and rugged, until their barren and snowy summits seem almost to cleave the sky, compose a combination of scenery not often witnessed.

I noticed this morning, about ten o'clock, a column of smoke rising from the mountains to the west. The fire which produced it continued to increase with an almost frightful rapidity, and the wind, blowing from that quarter, has driven the smoke into the valley, darkening the sun, and imparting to every thing around a lurid and dismal coloring.

Jacob, Buchanan, and Brown started early this morning, with the intention of ascending one of the snowy mountain peaks. They returned about four o'clock, P. M., overcome with the fatigue of their walk, and without having accomplished their design, being prevented by distance, and the tangled brush in the hollows and ravines. Mr. Hudspeth rode down the valley to explore Weber's river to the Salt Lake. He returned in the afternoon, having passed through the next *cañon*. I noticed several magpies, and other small birds, in the valley during the day.

July 26.—The fires in the mountains were burning with great fury all night, threatening, although probably at a distance of twenty miles, to reach us before we decamped. Burnt leaves and ashes, driven by the winds, whirled through the atmosphere, and fell around us in the valley. Mr. Hudspeth and two of the men with him left us here, to explore the *cañon* above, and ascertain the practicability of wagons passing through it. Resuming our march, we proceeded down the valley about ten miles, passing through, at its lower end, a grove of poplars, in which a fire had been burning, and some of the fallen trees were yet blazing. Entering between the walls of the mountains forming the *cañon*, after laborious exertions for several hours, we passed

through it without any serious accident. The *cañon* is four or five miles through, and we were compelled, as heretofore, to climb along the side of the precipitous mountains, frequently passing under, and sometimes scaling, immense overhanging masses and projections of rock. To be thus safely enlarged from this natural prison-house, locked at every point, was an agreeable, if not an important event in the history of our journey.

At four o'clock, P. M., we encamped on the bank of the Weber river, just below the *cañon*. The stream, at this point, is about thirty feet in breadth, with a limpid and rapid current, and a rocky channel. The grass along its margin is dry and dead, but well seeded, and consequently nutritious to our animals. A few small poplars, generally from two to three inches in diameter at the trunk, skirt the stream.

I ascended the range of hills bordering the valley of the river to the south, from which I had a most extensive and interesting view of the Great Salt Lake. My position was about ten miles distant from the lake, but my elevation was such that I could discern its surface from the north to the south, a distance which I estimated at sixty or eighty miles. The shore next to me, as far as I could see it, was white. Numerous mountainous islands, dark and apparently barren, sometimes in ranges of fifteen or twenty miles, sometimes in solitary peaks, rise to a considerable elevation above its surface; but the waters surrounding these insulations could be traced between them as far as the eye could reach. The evening was calm, and not a ripple disturbed the tranquil bosom of the lake. As the sun was sinking behind the far distant elevations to the west, the glassy surface of this vast inland ocean was illuminated by its red rays, and for a few minutes it appeared like a sea of molten fire. The plain or valley of the lake, to the right, is some eight or ten miles in width, and fertile. The Weber river winds through it, emptying into the lake some ten miles to the north of our camp. A few trees fringe its margin. I could smell a strong and offensive fetor wafted from the shore of the lake.

Returning to camp, Miller, who had employed his leisure in angling, exhibited a piscatory spectacle worthy the admiration

of the most epicurean ichthyophagist. He had taken with his hook about a dozen salmon-trout, from eight to eighteen inches in length; and the longest weighing four or five pounds. A delicacy such as this, and so abundant, we determined to enjoy, and from the results of Miller's sport we feasted this evening upon a viand which epicures would give much to obtain; but they nor my "Tonglythian" friends, Higgins and Frazer, would scarcely undergo the fatigues and privations to which we had been subjected for its acquisition. Distance 16 miles.

July 27.—By an arrangement with Mr. Hudspeth, we remained encamped, awaiting his return from his exploring trip through the upper *cañon* of Weber river. Fishing apparatus was in great demand this morning; and most of the party, as soon as breakfast was over, were enjoying the Waltonian sport, in angling for the delicious salmon-trout with which the stream abounds. Our bait is the large insect resembling the cricket, heretofore described, myriads of which are creeping and hopping among the grass, and other vegetation of the valley. Every angler was more or less successful, according to his luck or skill. A quantity of fish, weighing each from two to five pounds, was taken,—more than sufficient for our wants, although our appetites at this time are not easily satisfied. The fires noticed day before yesterday, and yesterday, have continued to burn; and this afternoon they seemed to have found fresh fuel. The wind changing to the southeast, and blowing a gale, just before sunset, dense clouds of smoke and ashes were driven down upon us.

July 28.—Some of the party went into the hills to gather service-berries. (I do not know that this orthography is correct. It is in accordance with the orthoepy.) The service-berry is produced by a shrub, generally from four to six feet in height. It is of a dark color, larger than the whortleberry, and not very unlike it in flavor. This fruit is abundant here.

July 29.—Mr. Hudspeth and two young men came into camp early this morning, having bivouacked last night a short distance from us, on the opposite side of the river. They had forced their way through the upper *cañon*, and proceeded six miles

further up Weber river, where they met a train of about forty emigrant wagons under the guidance of Mr. Hastings, which left Fort Bridger the same day that we did. The difficulties to be encountered by these emigrants by the new route will commence at that point; and they will, I fear, be serious. Mr. Hudspeth thinks that the passage through the *cañon* is practicable, by making a road in the bed of the stream at short distances, and cutting out the timber and brush in other places.

Resuming our march, we took a south course over the low hills bordering the valley in which we have been encamped; thence along the base of a range of elevated mountains which slope down to the marshy plain of the lake. This plain varies in width from fifteen to two miles, becoming narrower as we approach what is called the "Utah Outlet," the channel through which the Utah Lake empties its waters into the Salt Lake.

The Great Salt Lake has never been accurately surveyed. It is situated between 40 and 42 degrees of north latitude, and between 35 and 36 degrees of longitude west from Washington. Its length is variously stated by the hunters and trappers who have travelled along its shores, at from one hundred and fifty to one hundred and eighty miles. But in this estimate, the numerous large bays and other irregularities are included. Its extreme length in a straight line is probably one hundred miles, and its extreme breadth between forty and sixty miles. At this season the shore, as we pass along it, is white with a crust of the muriate and carbonate of soda combined. The muriate of soda predominates, but the alkali combined with it is sufficient to render the salt bitter and unfit for use in its natural state. When the wind blows from the lake, the stench arising from the stagnant water next to the shore is highly offensive to the smell. The surface of the lake does not present that rippling and sparkling appearance when the sudden breeze passes over it, so frequently seen on fresh-water lakes, and on the ocean. The waters undoubtedly are thoroughly saturated with saline matter, and hence, from their weight, when they move at all, it is with a lazy and sluggish undulatory motion. It is stated that

no fish exist in the lake. I have already mentioned that there are numerous mountainous islands in the lake. There are also several large bays indenting its shores. The plain or valley along which we have travelled to-day is in some places argillaceous, in others sandy and gravelly. Where there is a soil, it is covered with a growth of luxuriant vegetation,—grass, a species of cane, rushes, and a variety of small shrubs and flowering plants. A few scrub-oaksands tunted cedars can be seen on the mountain-sides, and along the ravines. There are many small streams of pure cold water flowing from the mountains.

The heat of the sun during our march this afternoon was excessive. My bridle reins were frequently so hot that it was painful to hold them in my hands. The road has been difficult, and our progress slow. We encamped about three o'clock for the day, on a small spring branch. The sunset scene this evening was splendid. The surface of the lake appeared like a sheet of fire, varying in tint from crimson to a pale scarlet. This flame-like ocean was bordered as far as we could see to the north and south of us, with a field of salt, presenting all the appearances of freshly fallen snow.

When I took out the thermometer this evening, much to my regret I discovered that the bulb was broken. I hung the frame and glass tube on a willow for the observation of the Indians. It will be some time before they will venture to touch it. They stand in great awe of the mysterious instruments which science has invented, and never handle them except with due caution. Distance 18 miles.

July 30.—At sunrise, clear and calm, with an agreeable temperature. The morning scene was beautifully grand. Our camp being in the shadow of the mountains, the face of the sun was invisible to us, long after his golden rays had tipped, one after another, the summits of the far-distant islands in the lake. By degrees the vast expanse of waters became illuminated, reflecting the bright beams of the god of day with dazzling effulgence.

Our route to-day continued south, near the base of the range of mountains on our left. We frequently crossed deep ravines

and piles of granite debris, with which the slope of the mountains in places is covered. Travelling about ten miles we reached the southern extremity of one of the bays of the Salt Lake. Beyond this there is a basin of water some three or four miles in circumference, surrounded by a smooth sandy beach. An immense number of ducks were walking and flying over this beach and playing in the basin. Approaching the shore of the pond, a solitary Indian rose from the weeds or grass near the water, and discovering us, he started immediately and ran with considerable speed towards a point of the mountains on our left. Several of us pursued and overtook him. He appeared much alarmed at first, but after shaking hands with us, and discovering that we had no hostile intentions, he soon forgot his fright. He carried in his hand a miserably lean duck, which he had just killed with an arrow. A quiver slung across his bare and tawny shoulders, was well supplied with this weapon. He was naked, with the exception of a small covering around his loins, and his skin was as dark as a dark mulatto. Learning from him that he was a Utah, we endeavored to make him comprehend that we wished to trade with his tribe for elk-meat. He shook his head, and appearing desirous of leaving us, we dismissed him. He was soon out of sight, hurrying away with long and rapid strides.

Proceeding about two miles and turning the point of the mountain, we came to seven warm springs, so strongly impregnated with sulphur as to have left a deposite of this mineral in some places several feet in depth. These springs gush out near the foot of a high precipice, composed of conglomerate rock and a bluish sandstone. The precipice seems to have been uplifted by some subterraneous convulsion. The temperature of the water in the basins was about 90°. The water of most of them was bitter and nauseous.

From these springs we crossed a level plain, on which we encamped at 11 o'clock, A. M., near a small stream of cold water flowing from the mountains, which is skirted with a few poplars and small willows. The grass immediately around our camp is fresh and green, but a short distance from us it is brown, dry, and crisp.

After dinner we were visited by three Indians, one of whom was the man with the duck we saw this morning. The eldest of the three signified that he wished a friendly smoke and a "talk." A pipe was produced and filled with tobacco. Lighting it, I drew two or three puffs and handed it to the old man, and it passed from him to his comrades until the tobacco was consumed. They appeared to enjoy the fumes of the smoke highly. We informed them of our wish to trade for meat. They signified that they had none. Three females of middle age, miserably clad and ugly, soon made their appearance, bringing baskets containing a substance, which, upon examination, we ascertained to be service-berries, crushed to a *jam* and mixed with pulverized grasshoppers. This composition being dried in the sun until it becomes hard, is what may be called the "fruit-cake" of these poor children of the desert. No doubt these women regarded it as one of the most acceptable offerings they could make to us. We purchased all they brought with them, paying them in darning-needles and other small articles, with which they were much pleased. The prejudice against the grasshopper "fruit-cake" was strong at first, but it soon wore off, and none of the delicacy was thrown away or lost.

Two of our party mounted their mules and rode to the Indian encampment to ascertain if there were not more Indians, and some from whom meat could be obtained. As soon as the men and women in our camp saw them riding in the direction of their lodges, they hastened away with great speed and in much alarm. Returning from the Indian encampment, Jacob and Brookey reported that there were no more Indians, and that no meat could be obtained. They saw a large quantity of grasshoppers, or crickets, (the insect I have before described,) which were being prepared for pulverization.

The Indians of this region, in order to capture this insect with greater facility, dig a pit in the ground. They then make what hunters, for brevity of expression, call a *surround*;—that is, they form a circle at a distance around this pit, and drive the grasshoppers or crickets into it, when they are easily secured and taken. After being killed, they are baked before

the fire or dried in the sun, and then pulverized between smooth stones. Prejudice aside, I have tasted what are called delicacies, less agreeable to the palate. Although the Utahs are a powerful and warlike tribe, these Indians appeared to be wretchedly destitute.

A fire was raging on the mountain-side all night, and spread down into the valley, consuming the brown vegetation. The water of the small stream was made bitter with the ashes. Our camp-ground, we conjecture, is the same that was occupied by Captain Fremont last year. Distance 15 miles.

CHAPTER XII.

Utah Outlet and Lake—Enter the desert—Utah language—Col. Russell's nine-shooter—Digger Indians—Utter sterility.

JULY 31.—Morning clear, with a delightful temperature, and a light breeze blowing from the west. Our route to-day runs in a west course across the valley of the "Utah Outlet," about ten miles south from the bay or arm of the Salt Lake upon which we have been travelling. The waters of the Utah Lake are emptied into the Salt Lake through this channel. The Utah Lake is a body of fresh water between sixty and eighty miles in circumference, situated about twenty miles south of the Salt Lake. The shape of the extensive plain of this lake was made apparent to us by the mountains surrounding it. The plain of the lake is said to be fertile, but of the extent of its fertility I have no certain knowledge. The eastern side of the valley of the "Outlet" is well watered by small streams running from the mountains, and the grass and other herbage on the upland are abundant, but there is no timber visible from our position.*

Descending from the upland slope on which we encamped yesterday, we crossed a marsh about two miles in width, covered

* In 1847 the Mormons made a settlement between the Utah and the Salt Lake.

with grass so dense and matted that our animals could scarcely make their way through it. This grass is generally from five to eight feet in height. A species of rush called *tule* is produced on the marsh. It grows to the height of eight and ten feet. The ground is very soft and tremulous, and is covered for the most part with water to the depth of two or three inches. But our mules were prevented from sinking into it by the forest of herbage which they prostrated under their feet as they advanced. From the marsh we ascended a few feet upon hard, dry ground, producing a coarse grass with an ear resembling our small grains, wheat or barley, and some few flowers, with bunches of wild sage. The colors of the flowers were generally yellow and scarlet.

We reached the Utah Outlet after travelling four miles, and forded it without difficulty. The channel is about twenty yards in breadth, and the water in the deepest places about three feet. The bed of the channel is composed of compact bluish clay. The plain or valley, from the western bank of the "Outlet" to the base of the range of hills to the west, is level and smooth, and in places white with a saline deposite or efflorescence. There is but little vegetation upon it, and this is chiefly the wild sage, indicative of aridity, and poverty of soil. From this plain we struck the shore of another bay of the Salt Lake, bordered by a range of mountains running parallel with it. The shore, next to the white crust of salt, is covered with a debris precipitated from the rocky summits of the mountains.

Our route for several hours described nearly a semicircle, when there was a break in the range of mountains, and we entered upon another plain. About three o'clock, P. M., we passed several remarkable rocks rising in tower-like shapes from the plain, to the height of sixty or eighty feet. Beyond these we crossed two small streams bitter with saline and alkaline impregnation. The plain presents a sterile appearance, but little vegetation appearing upon it, and that stunted and withered. At seven o'clock, P. M., we reached a spring branch descending from a mountain ravine, and fringed with small willows, the water of which is comparatively fresh and cool.

Here we encamped after a march without halting, of twelve hours. There is a variety of vegetation along the stream—grass, weeds, some few flowers, briers, and rose-bushes.

Soon after we encamped, three Utah Indians visited us. They were mounted on horses, rather lean, and sore-backed from hard usage. The men appeared to be of a better class and more intelligent than those we had before met with. They were young and manifested much sprightliness, and an inquisitive curiosity, which they took no pains to conceal. We invited them to sup with us, and they partook of our simple viands with a high relish. A renewal of our overtures to trade for meat met with no better success than before. They had no meat to dispose of. They were dressed in buckskin shirts, gaiters, and moccasins; and armed with bows and arrows. Two of these men, the most intelligent, concluded to encamp with us for the night. The principal of these, a young man of about twenty-five, with an amiable but sprightly expression of countenance, was so earnest and eager in his inquiries respecting every thing appertaining to us, and into our language, that I sat conversing with him until a late hour of the night. From him I learned the names of many things in the Utah dialect. I give some of these below. The orthography is in strict accordance with the sound.

ENGLISH.	UTAH.
Tobacco	Pah.
Fire	Coutouch.
Grass	Shawnip.
Hair	Pamp.
Sun	Tarp.
Powder-horn	Naup.
Spur	Tannegan.
Mule	Moodah.
Bullet	Navak.
Knife	Weitch.
Horse	Punk.
Finger	Mushevan.
Foot	Mamp.
Bear's Claw	Musheta.
Saddle	Middenah.

ENGLISH.	UTAH.
Water	Poh.
Eye	Pooh.
Ear	Nank.
Nose	Tamoucher.
Hand	Moh.
Flint	Tuck.
Wood	Schnip.
Blanket	Tochewanup.
Pipe	Toh.
Teeth	Tamp.
Bear	Padewap.
Rifle	Wokeat.
Powder	Noketouch.
Pantaloons	Wannacouch.

These are some of the words of the Utah language which I wrote down, from his pronunciation, by the light of our camp-fire. Furnishing him and his companion some skins, we requested them to retire for the night, which they seemed to do with reluctance. Distance 40 miles.

August 1.—Morning clear, with a delightfully soft breeze from the south. I purchased, this morning, of one of the Utahs, a dressed grisly bear-skin, for which I gave him twenty charges of powder and twenty bullets. Several other small trades were made with them by our party. Having determined to cross a range of mountains, instead of following to avoid it, the shore of another cove or bay of the Salt Lake,—by doing which we should lose in distance twenty-five or thirty miles,—we laid our course nearly west, towards the lowest gap we could discover in the range.

After we had proceeded two or three miles up the sloping plain, towards the base of the mountains, Colonel Russell recollected that he had left his rifle at the camp—a "nine-shooter." Accompanied by Miller, he returned back to recover it. I was very well satisfied that the Indians would have discovered it, and, considering it a valuable prize, would not wait for the return of the loser. According to their code of morals, it is not dishonest to take what is left in camp, and they never fail to do it. I halted for an hour, and long after our party had disappeared in a gorge of the mountains, for the return of Colonel Russell and Miller. I could see, from my elevated position, the dust raised by the horses of the retreating Indians on the plain, at a distance of six or eight miles from the camp. Becoming impatient, I commenced a countermarch, and while moving on, I saw, at a distance of a mile and a half, a solitary horseman, urging his animal with great speed towards me. There being but one instead of two, I felt considerable anxiety, not knowing but some disaster might have occurred. I moved faster towards the horseman, and, at the distance of a quarter of a mile, discovered that it was Colonel Russell. Riding towards him, I inquired what had become of Miller? He did not know. He had lost him in hunting through the willows and ravines. My

anxiety was much increased at this report, and I started to return to the camp, when Miller, proceeding at a slow gait, appeared on one of the distant elevations. The result of the search for the "nine-shooting" rifle was fruitless. The Indians had carried it away with them. The only consolation I could offer to Colonel Russell for his loss was, that a more useless burden was never carried on the shoulders of man or mule. It was a weight upon the beast, and an incumbrance to the rider, and of no practical utility on this journey. This consolation, however, was not very soothing.

[I will state here, that this rifle was recovered by Mr. Hudspeth, brought into California, and returned to Colonel Russell. The Indian who took it from our camp, after he had returned to the village of his tribe, was much elated by his prize. But in discharging it, the ball, instead of making its passage through the barrel, took another direction, and wounded him in the leg. An instrument so mysterious and eccentric it was considered dangerous to retain, and the chief ordered its restoration to the emigrant parties following us. It was recognised by Mr. Hudspeth, and returned to its owner, as above stated.]

Following the trail of our party, we entered the narrow mountain-gorge, or valley, where I saw them disappear. Proceeding up this valley, we passed several temporary wigwams, erected by the Indians along the side of the small stream which flows through it from the summit of the mountain. These wigwams were all deserted; but fires were burning in front of them, dogs were barking, and willow-baskets, some of which contained service-berries, were standing about. A few poplar and pine trees, service-bushes, willows, and a variety of small shrubbery, with an occasional sunflower, ornament this narrow and romantic gorge. As we ascended, the sides of the mountain presented ledges of variegated marble, and a debris of the same was strewn in our path. We overtook our party when they were about halfway up the steep ascent to the crest of the range. Mules and men were strung out a mile, toiling and climbing up the almost insurmountable acclivity.

The inhabitants of the wigwams, who had fled and concealed

themselves until we had passed, now commenced whooping far below us, and we could see several of them following our trail. After much difficulty in urging our animals forward, and great fatigue to ourselves and them, we reached the summit of the ridge. Here we halted to take breath. Several of the Indians, whose whoops we had heard, came up to us. They were naked, and the most emaciated and wretched human objects I had ever seen. We shook hands, however, and greeted them kindly. The descent on the western side of the mountain, although steep, is not difficult, there being but few obstructions. Four miles from the summit brought us to a gentle slope, and to a faint stream which flows from the hills and sinks in the sands just below. Here we encamped for the day. Near us, on the slope, there is a grove of small cedars, the deep verdure of which is some relief to the brown and dead aspect of vegetable nature surrounding us. Distance 15 miles.

August 2.—Morning clear, with a soft breeze from the south. We were visited early by three miserable Digger Indians, calling themselves Soshonees. They were naked, with the exception of a few filthy, ragged skins, fastened around their loins. They brought with them a mixture composed of parched sunflower seed and grasshoppers, which they wished to exchange with us for some articles we possessed. We declined trading with them. One of them signified, that he knew where there was water over the next ridge of mountains. Water at the western base of the next range would diminish the long march without this necessary element, over the great Salt Plain, some ten or twelve miles. For a compensation in shirts and pantaloons, he consented to accompany and guide us to the water; but when we started, he declined his engagement.

Descending into the plain or valley before us, we took a northwest course across it, striking Capt. Fremont's trail of last year after we had commenced the ascent of the slope on the western side. The breadth of this valley at this point, from the base of one range of mountains to the other, is about twenty miles. Large portion sof it are covered with a saline efflorescence of a snowy whiteness. The only vegetation is the wild sage; and

this is parched and shrivelled by the extreme drought. Not a solitary flower or green plant has exhibited itself. In our march we crossed and passed several deep ravines and chasms, plowed by the waters from the mountains during the melting of the snows, or hollowed out by the action of the winds. Not a living object, animal, reptile, or insect, has been seen during our day's march.

We encamped at two o'clock, P. M. There are a few dwarf cedars in our vicinity, and scattered bunches of dead grass. In a ravine near us the sand is moist; and by making an excavation, we obtained a scant supply of water, impregnated with salt and sulphur. A dense smoky vapor fills the valley and conceals the summits of the distant mountains. The sun shining through this, dispenses a lurid light, coloring the brown and barren desert with a more dismal and gloomy hue. As soon as our afternoon meal had been prepared and discussed, we commenced preparations for the march over the Salt Desert to-morrow. which employment occupied us until a late hour of the night. Distance 20 miles.

CHAPTER XIII.

March over the great Salt Desert—Preparations—Singular illusion—Volcanic debris—Distant view of the great Salt Plain—Utter desolation—The mirage—Gigantic phantoms—Fata Morgana—Spectral army—Tempest on the Salt Plain—Clouds of salt—Instinct of mules—Mule-race—Excessive thirst—Arrival at oasis, and spring—Buchanan's well.

August 3.—I rose from my bivouac this morning at half-past one o'clock. The moon appearing like a ball of fire, and shining with a dim and baleful light, seemed struggling downwards through the thick bank of smoky vapor that overhung and curtained the high ridge of mountains to the west of us. This ridge, stretching far to the north and the south as the eye can reach, forms the western wall (if I may so call it) of the desert