

## CHAPTER VII.

In the Vicinity of Salt Lake—Weber's Fork—Living on Roots—The Unknown Sea—Fried Worms for Food—Meet Mr. Fitzpatrick—Three Buttes—A Melancholy and Strange Looking Country—Mr. Payette's Hospitality—Cayuse Indians—A Perilous Search for Water—Big Trees—The Devil's Hole—Submerged Forests.

*September 3d.*—The morning was clear, with a light air from the north, and the thermometer at sunrise at  $45.5^{\circ}$ . At three in the morning Basil was sent back with several men and horses for the boat, which, in a direct course across the flats, was not ten miles distant; and in the meantime there was a pretty spot of grass here for the animals. The ground was so low that we could not get high enough to see across the river on account of the willows; but we were evidently in the vicinity of the lake, and the water-fowl made this morning a noise like thunder. A pelican (*Pelecanus onocrotalus*) was killed as he passed by, and many geese and ducks flew over the camp. On the dry salt marsh here is scarce any other plant than *Salicornia herbacea*.

In the afternoon the men returned with the boat, bringing with them a small quantity of roots, and some meat, which the Indians had told them was bear-meat.

Descending the river for about three miles in the afternoon, we found a bar to any further travelling in that direction—the stream being spread out in several branches and covering the low grounds with water, where the miry nature of the bottom did not permit any further advance. We were evidently on the border of the lake, although the rushes and canes which covered the marshes prevented any view; and we accordingly encamped at the little delta which forms the mouth of Bear River, a long arm of the lake stretching up to the north between us and the opposite mountains. The river was bordered with a fringe of willows and canes, among which were interspersed a few plants; and scattered about on the marsh was a species of *uniola*, closely allied to *U. spicata* of our sea-coast. The whole morass was animated with multitudes of water-fowl, which appeared to be very wild—rising for the space of a mile round about at the sound of a gun, with a noise like distant thunder. Several of the people waded out into the marshes, and we had to-night a delicious supper of ducks, geese, and plover.

Although the moon was bright the night was otherwise favorable; and



I obtained this evening an emersion of the first satellite, with the usual observations. A mean result, depending on various observations made during our stay in the neighborhood, places the mouth of the river in longitude  $112^{\circ} 19' 30''$  west from Greenwich; latitude  $41^{\circ} 30' 22''$ ; and, according to the barometer, in elevation four thousand two hundred feet above the Gulf of Mexico. The night was clear, with considerable dew, which I had remarked every night since September first.

The next morning, while we were preparing to start, Carson rode into the camp with flour and a few other articles of light provision, sufficient for two or three days—a scanty but very acceptable supply. Mr. Fitzpatrick had not yet arrived, and provisions were very scarce and difficult to be had at Fort Hall, which had been entirely exhausted by the necessities of the emigrants. He brought me also a letter from Mr. Dwight, who, in company with several emigrants, had reached that place in advance of Mr. Fitzpatrick, and was about continuing his journey to Vancouver.

Returning about five miles up the river, we were occupied until nearly sunset in crossing to the left bank—the stream, which in the last five or six miles of its course is very much narrower than above, being very deep immediately at the banks, and we had great difficulty in getting our animals over. The people with the baggage were easily crossed in the boat, and we encamped on the left bank where we crossed the river. At sunset the thermometer was at  $75^{\circ}$ , and there was some rain during the night, with a thunder-storm at a distance.

*September 5th.*—Before us was evidently the bed of the lake, being a great salt marsh perfectly level and bare, whitened in places by saline efflorescences, with here and there a pool of water, and having the appearance of a very level sea-shore at low tide. Immediately along the river was a very narrow strip of vegetation, consisting of willows, helianthi, roses, flowering vines, and grass; bordered on the verge of the great marsh by a fringe of singular plants which appear to be a shrubby salicornia, or a genus allied to it.

About twelve miles to the southward was one of those isolated mountains, now appearing to be a kind of peninsula; and toward this we accordingly directed our course, as it probably afforded a good view of the lake; but the deepening mud as we advanced forced us to return toward the river and gain the higher ground at the foot of the eastern mountains. Here we halted for a few minutes at noon, on a beautiful little stream of pure and remarkably clear water, with a bed of rock *in situ*, on which was an abundant water-plant with a white blossom. There was good grass in the bottoms; and, amid a rather luxuriant growth, its banks were bordered with a large showy plant (*Eupatorium purpureum*), which I here saw for the first time. We named the stream *Clear Creek*.

We continued our way along the mountain, having found here a broad plainly beaten trail, over what was apparently the shore of the lake in the spring; the ground being high and firm, and the soil excellent and covered with vegetation, among which a leguminous plant (*Glycyrrhiza lepidota*) was a characteristic. The ridge here rises abruptly to the height of about four thousand feet, its face being very prominently marked with a massive stratum of rose-colored granular quartz, which is evidently an altered sedimentary rock—the lines of deposition being very distinct. It is rocky and steep, divided into several mountains, and the rain in the valley appears to be always snow on their summits at this season. Near a remarkable rocky point of the mountain, at a large spring of pure water, were several hackberry trees (*celtis*), probably a new species, the berries still green; and a short distance farther, thickets of sumach (*rhus*).

On the plain here I noticed blackbirds and grouse. In about seven miles from Clear Creek the trail brought us to a place at the foot of the mountain where there issued, with considerable force, ten or twelve hot springs, highly impregnated with salt. In one of these the thermometer stood at  $136^{\circ}$ , and in another at  $132.5^{\circ}$ ; and the water, which spread in pools over the low ground, was colored red.

At this place the trail we had been following turned to the left, apparently with the view of entering a gorge in the mountain, from which issued the principal fork of a large and comparatively well-timbered stream, called Weber's Fork. We accordingly turned off toward the lake and encamped on this river, which was one hundred to one hundred and fifty feet wide, with high banks, and very clear, pure water, without the slightest indication of salt.

*September 6th.*—Leaving the encampment early, we again directed our course for the peninsular *butte*, across a low shrubby plain, crossing in the way a slough-like creek with miry banks, and wooded with thickets of thorn (*cratægus*) which were loaded with berries. This time we reached the *butte* without any difficulty, and, ascending to the summit, immediately at our feet beheld the object of our anxious search—the waters of the inland Sea stretching in still and solitary grandeur far beyond the limit of our

\* An analysis of the red earthy matter deposited in the bed of the stream from the springs gives the following result:

Peroxide of iron.....	33.50
Carbonate of magnesia.....	2.40
Carbonate of lime.....	50.43
Sulphate of lime.....	2.00
Chloride of sodium.....	3.45
Silica and alumina.....	3.00
Water and loss.....	5.22
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	100.00



vision. It was one of the great points of the exploration; and as we looked eagerly over the lake in the first emotions of excited pleasure, I am doubtful if the followers of Balboa felt more enthusiasm when, from the heights of the Andes, they saw for the first time the great Western Ocean. It was certainly a magnificent object, and a noble *terminus* to this part of our expedition; and to travellers so long shut up among mountain ranges a sudden view over the expanse of silent waters had in it something sublime. Several large islands raised their high rocky heads out of the waves; but whether or not they were timbered was still left to our imagination, as the distance was too great to determine if the dark hues upon them were woodland or naked rock.

During the day the clouds had been gathering black over the mountains to the westward, and while we were looking a storm burst down with sudden fury upon the lake and entirely hid the islands from our view. So far as we could see, along the shores there was not a solitary tree, and but little appearance of grass; and on Weber's Fork, a few miles below our last encampment, the timber was gathered into groves, and then disappeared entirely. As this appeared to be the nearest point to the lake where a suitable camp could be found, we directed our course to one of the groves, where we found a handsome encampment, with good grass and an abundance of rushes (*Equisetum hyemale*). At sunset the thermometer was at 55°; the evening clear and calm, with some cumuli.

*September 7th.*—The morning was calm and clear, with a temperature at sunrise of 39.5°. The day was spent in active preparation for our intended voyage on the lake. On the edge of the stream a favorable spot was selected in a grove, and, felling the timber, we made a strong *corral*, or horse-pen, for the animals, and a little fort for the people who were to remain. We were now probably in the country of the Utah Indians, though none reside upon the lake. The india-rubber boat was repaired with prepared cloth and gum, and filled with air, in readiness for the next day.

The provisions which Carson had brought with him being now exhausted, and our stock reduced to a small quantity of roots, I determined to retain with me only a sufficient number of men for the execution of our design; and accordingly seven were sent to Fort Hall under the guidance of François Lajeunesse, who, having been for many years a trapper in the country, was considered an experienced mountaineer. Though they were provided with good horses, and the road was a remarkably plain one of only four days' journey for a horseman, they became bewildered (as we afterward learned), and, losing their way, wandered about the country in parties of one or two, reaching the fort about a week afterward. Some straggled in of themselves and the others were brought in by Indians who had picked them up on Snake River, about sixty miles below

the fort, travelling along the emigrant road in full march for the Lower Columbia. The leader of this adventurous party was François.

Hourly barometrical observations were made during the day, and, after departure of the party for Fort Hall, we occupied ourselves in continuing our little preparations and in becoming acquainted with the country in the vicinity. The bottoms along the river were timbered with several kinds of willow, hawthorn, and fine cotton-wood trees (*Populus canadensis*) with remarkably large leaves, and sixty feet in height by measurement.

We formed now but a small family. With Mr. Preuss and myself, Carson, Bernier, and Basil Lajeunesse had been selected for the boat expedition—the first ever attempted on this interior sea; and Badeau, with Derosier and Jacob (the colored man), were to be left in charge of the camp. We were favored with most delightful weather.

To-night there was a brilliant sunset of golden orange and green, which left the western sky clear and beautifully pure; but clouds in the east made me lose an occultation. The summer frogs were singing around us, and the evening was very pleasant, with a temperature of 60°—a night of a more southern autumn. For our supper we had *yampah*, the most agreeably flavored of the roots, seasoned by a small fat duck which had come in the way of Jacob's rifle. Around our fire to-night were many speculations on what to-morrow would bring forth, and in our busy conjectures we fancied that we should find everyone of the large islands a tangled wilderness of trees and shrubbery, teeming with game of every description that the neighboring region afforded and which the foot of a white man or Indian had never violated.

Frequently, during the day, clouds had rested on the summits of their lofty mountains, and we believed that we should find clear streams and springs of fresh water; and we indulged in anticipations of the luxurious repasts with which we were to indemnify ourselves for past privations. Neither, in our discussions, were the whirlpool and other mysterious dangers forgotten which Indian and hunters' stories attributed to this unexplored lake.

The men had discovered that, instead of being strongly sewed (like that of the preceding year, which so triumphantly rode the cañons of the Upper Great Platte), our present boat was only pasted together in a very insecure manner, the maker having been allowed so little time in the construction that he was obliged to crowd the labor of two months into several days. The insecurity of the boat was sensibly felt by us; and, mingled with the enthusiasm and excitement that we all felt at the prospect of an undertaking which had never before been accomplished, was a certain impression of danger, sufficient to give a serious character to our conversation.



The momentary view which had been had of the lake the day before, its great extent and rugged islands, dimly seen amidst the dark waters in the obscurity of the sudden storm, were well calculated to heighten the idea of undefined danger with which the lake was generally associated.

*September 8th.*—A calm, clear day, with a sunrise temperature of  $41^{\circ}$ . In view of our present enterprise, a part of the equipment of the boat had been made to consist in three air-tight bags, about three feet long, and capable each of containing five gallons. These had been filled with water the night before, and were now placed in the boat, with our blankets and instruments, consisting of a sextant, telescope, spy-glass, thermometer, and barometer.

We left the camp at sunrise, and had a very pleasant voyage down the river, in which there was generally eight or ten feet of water, deepening as we neared the mouth in the latter part of the day. In the course of the morning we discovered that two of the cylinders leaked so much as to require one man constantly at the bellows to keep them sufficiently full of air to support the boat.

Although we had made a very early start, we loitered so much on the way—stopping every now and then, and floating silently along to get a shot at a goose or a duck—that it was late in the day when we reached the outlet. The river here divided into several branches, filled with fluviols, and so very shallow that it was with difficulty we could get the boat along, being obliged to get out and wade. We encamped on a low point among rushes and young willows, where there was a quantity of drift-wood which served for our fires.

The evening was mild and clear; we made a pleasant bed of the young willows; and geese and ducks enough had been killed for an abundant supper at night, and for breakfast next morning. The stillness of the night was enlivened by millions of water-fowl. Latitude (by observation)  $41^{\circ} 11' 26''$ ; and longitude  $112^{\circ} 11' 30''$ .

*September 9th.*—The day was clear and calm; the thermometer at sunrise at  $49^{\circ}$ . As is usual with the trappers on the eve of any enterprise, our people had made dreams, and theirs happened to be a bad one—one which always preceded evil—and consequently they looked very gloomy this morning; but we hurried through our breakfast, in order to make an early start and have all the day before us for our adventure.

The channel in a short distance became so shallow that our navigation was at an end, being merely a sheet of soft mud, with a few inches of water, and sometimes none at all, forming the low-water shore of the lake. All this place was absolutely covered with flocks of screaming plover. We took off our clothes, and, getting overboard, commenced dragging the boat—making, by this operation, a very curious trail, and a very disagree-

able smell in stirring up the mud, as we sank above the knee at every step. The water here was still fresh, with only an insipid and disagreeable taste, probably derived from the bed of fetid mud. After proceeding in this way about a mile we came to a small black ridge on the bottom, beyond which the water became suddenly salt, beginning gradually to deepen, and the bottom was sandy and firm. It was a remarkable division, separating the fresh water of the rivers from the briny water of the lake, which was entirely saturated with common salt. Pushing our little vessel across the narrow boundary, we sprang on board, and at length were afloat on the waters of the unknown sea.

We did not steer for the mountainous islands, but directed our course toward a lower one which it had been decided we should first visit, the summit of which was formed like the crater at the upper end of Bear River Valley. So long as we could touch the bottom with our paddles, we were very gay; but gradually, as the water deepened, we became more still in our frail bateau of gum cloth distended with air, and with pasted seams. Although the day was very calm, there was a considerable swell on the lake; and there were white patches of foam on the surface, which were slowly moving to the southward, indicating the set of a current in that direction and recalling the recollection of the whirlpool stories. The water continued to deepen as we advanced; the lake becoming almost transparently clear, of an extremely beautiful bright-green color; and the spray, which was thrown into the boat and over our clothes, was directly converted into a crust of common salt, which covered also our hands and arms.

"Captain," said Carson, who for some time had been looking suspiciously at some whitening appearances outside the nearest islands, "what are those yonder?—won't you just take a look with the glass?" We ceased paddling for a moment, and found them to be the caps of the waves that were beginning to break under the force of a strong breeze that was coming up the lake. The form of the boat seemed to be an admirable one, and it rode on the waves like a water bird; but, at the same time, it was extremely slow in its progress. When we were a little more than half-way across the reach, two of the divisions between the cylinders gave way, and it required the constant use of the bellows to keep in a sufficient quantity of air. For a long time we scarcely seemed to approach our island, but gradually we worked across the rougher sea of the open channel into the smoother water under the lee of the island, and began to discover that what we took for a long row of pelicans ranged on the beach, were only low cliffs whitened with salt by the spray of the waves; and about noon we reached the shore, the transparency of the water enabling us to see the bottom at a considerable depth.