

Genesee Valley, Plumas County
September 20, 1863

Monday morning, August 31, I was up at half-past two and took stage, and was far down the foothills before sunrise, breathing clouds of dust. You can have no idea of the dust of these roads in the dry season. I took breakfast at Auburn, then staged six miles farther, where I took the cars.

It was a delight to travel by rail again, the first time since I left the states. At Sacramento I took steamer, and meeting an old friend, had a pleasant trip. On the way down two young men came up to me, asked if my name was Brewer, and introduced themselves as two young fellows just graduated last year in the Scientific School at Yale College, who this summer have crossed the plains. Their names are Gardner and King. Of course I was glad to see them; King I have taken with me on this trip. 

We were late in the city, from a curious detention. The alarm was given, "a man overboard!" The steamer was stopped after much delay, backed, a boat sent out, when it was found that a man who lived in a cabin on the river had jumped overboard to swim home, which he did before the boat reached him. It made much excitement and detained us half an hour.

Next day I met many old friends. All the Survey had come back to the city from different directions--our first meeting all together since last February. Professor Whitney and I talked plans; and much miscellaneous business had to be attended to. In the afternoon I met the celebrated traveler, J. Ross Browne. He appears a quiet fellow, not at all the one to visit so many distant lands and write such genial accounts of what he sees.

Wednesday, September 2, was Election Day, an important day in the history of California. I cast my first vote in nine years--for the "Independent Union Ticket." In the city there were three tickets: Regular Democratic, Regular Union, Independent Union--the first with too much of a sprinkling of Secesh; the second a politicians' ticket; the last, a truly people's ticket, was successful. The state Union ticket was largely elected, for the state is soundly loyal. And here let me say that the so-called "Democratic" ticket was by no means loyal. The mass of Democrats are unquestionably loyal men, but in this state the leaders of the party are many of them southern men, avowedly Secesh. The most active stump orator of the party in this canvass, Judge Robinson, who has a son in the Rebel Army, cannot practice law in this state because he will not take the oath of allegiance. Weller is open Secesh, Bigler nearly as bad. All these men have tried hard to be arrested and be made martyrs, in Vallandigham style, have publicly said everything they could against the government to bring about such an end, but have not succeeded. Downey, the candidate for governor, was governor when we arrived here three years ago. He is an Irishman who was down on us (the Survey) because Professor Whitney would not use his official influence as State Geologist to aid him in mining speculations; he is not full-blooded Secesh; but about half-and-half.

The candidate for state printer is Secesh, etc. Luckily for the state and country this set of broken-down politicians, some of them full-fledged scoundrels, did not get into power. The election was quiet everywhere.

A friend tells an election anecdote, which he says is true--true or not, it is good. Two Irishmen meet at the polls, one accosts the other:

No. 1. "Mike--hev yer vowed?"

No. 2. "Yes".

No. 1. "Vowt agin fur Downey, for the dommed Yankees are staleing the counthry away from us."

The next two days were spent in various matters in the office--plans for operations were decided on--very busy, yet not much done. I got a letter from Schmidt, our kind German cook last year--he is safely in his home in Hambury, in Germany. I resolved to take King with me; Gabb goes on a trip to Oregon, Hoffman and Whitney to the Sierra, Cooper to Lake Bigler.

Saturday, September 5, in the afternoon we took steamer for Sacramento. All the time I was in the city the weather was cool--fog came in from the sea every night--but on getting away from the coast it changed entirely. At Sacramento I sent King to Grass Valley, where we got an extra horse for him, while I rode to Forest Hill, where I had left John and the animals. It is striking to pass inland from the sea at this season. From fog and cool air to a cloudless sky, heat, and dust.

At Forest Hill I found all right. I settled bills, and September 7 we packed up and came on. I had two barometers to carry. We passed several mining towns, and crossed the very deep canyon of the North Fork of the American River; but a horse got sick and we had to stop at Iowa Hill a long row of neat houses perched on the apex of a very sharp ridge, with placer diggings all around. This was once a very important town, but now is much smaller, its placers being mostly worked out.

September 8 we came on to Grass Valley, a pretty place of three thousand inhabitants. We crossed the canyon of Bear River and passed several mining towns--the air hot and the roads dusty in the extreme. There we spent one day. I wanted to establish a barometrical station, so left the instrument with a friend, Mr. Blake, who has a quartz mill near.

This is a rich region and quartz mills abound. The gold-bearing quartz runs in veins from a few inches to several feet thick. The quartz is mined, the same as any other mineral, then crushed to a very fine powder by mills. This powder then runs in water in shallow troughs, over quicksilver, which takes up the gold. Sometimes, instead of quicksilver, it runs over blankets, the fibers of which catch the gold; the blankets are washed out every ten or fifteen minutes in a tank of water which has quicksilver at the bottom. Hundreds of men have been ruined by unprofitable quartz mining, and others have become immensely rich very easily.

Here is the famous Allison Ranch. The owners were ignorant Irishmen

who could neither read nor write. They spent their money as such men will. One at one time went to San Francisco and bought sets of diamond jewelry to the amount of \$12,000, which he presented to the women in a house of ill fame in a noted part of the city. He drank himself to death last year.

Here also is the Rocky Bar Ledge. Two poor men, brothers, common laborers, discovered it and in eighteen months made, clear of all expenses \$750,000. They are not spending their money very profusely in fast horses and similar luxuries.

Walter Frear lives here, the pastor of a small congregation. I called and found him very pleasantly situated. He has a rather pretty wife and two children. Strange enough, I met here a lady, a widow, now Mrs. Baker, whom I knew twelve years ago in Lancaster, New York, as a Miss Mills. She had entirely passed from my mind, but brought back old memories again.

I found King and the horse all right, so September 10 we started on our way--first to Nevada, a few miles, a fine town in a rich mining region, then to San Juan North (there are several other San Juans in the state), then to Camptonville, a miserable, dilapidated town, but very picturesquely located, with immense hydraulic diggings about. The amount of soil sluiced away in this way seems incredible. Bluff's sixty to a hundred feet thick have been washed away for HUNDREDS OF ACRES TOGETHER. But they were not rich, the gold has "stopped," the town is dilapidated--but we had to pay big prices nevertheless.

September 11 we passed Galena Hill, with extensive hydraulic diggings; then a deep canyon of the North Yuba, to Brandy City, with TREMENDOUS hydraulic diggings; then up a long volcanic ridge, ten miles, to Eureka. At places we attained an elevation of over five thousand feet and commanded wide views of the Sierra, the great tables of lava in the south, the rugged Downieville Buttes in the east, Pilot Peak, Table Mountain, etc.

At Eureka we came upon the slates again, with gold--a mining town. Then a vile trail nine miles VERY rough, across canyons and ridges, with high peaks with patches of snow. We at last sank into a very deep canyon perhaps two thousand feet deep, to Poker Flat, a miserable hole--but what we lacked in accommodations was made up in prices. Ten white men and two Chinamen slept in a little garret of the "hotel." Our horses fared but little better, and our bill was the modest little sum of fifteen dollars.

September 12 we were off early, passed several little mining towns, Whiskey Diggings, Potosi, Rowland Flat, etc. We had a very rough trail, being in the very heart of the Sierra, which here sinks to an altitude of six thousand to eight thousand feet. We crossed a high ridge by Pilot Peak, stopped, unsaddled our horses, and went up it, as we were within five hundred feet of the top. It is a little over seven thousand feet high, and commands a grand view from the top. Lassen's Butte in the northwest is a truly grand object. On the northeast is a rough region, cut by very deep canyons; on the southeast are the rugged peaks between us and Downieville.

We then descended into a tremendous canyon, over three thousand feet deep, of the Middle Feather River, at Nelson's Point. It was nearly sundown,

but it was such a miserable hole, and as it was Saturday night we resolved to push on to Quincy, ten miles farther--a trail much better than we had had for some time. Nelson's Point is very picturesque--the deep, steep canyon and the rockyslates standing on edge, are peculiar. It was long after dark when we got to Quincy, where we struck a good hotel and rested over Sunday--first for three weeks.

Quincy is a pretty place, in a most charming valley, has nice houses, a pretty courthouse, etc., but no church. I heard that there is not a church or schoolhouse in the county, which has a population represented by over fifteen hundred voters.

Our expenses for one week had been over \$150 in getting through these mining towns; we now struck a cheaper region.

IN CAMP, AT LASSEN'S PEAK
September 28

Monday morning, September 14, I laid in supplies and went to Genesee Valley about twenty-three miles northeast. We crossed the lovely American Valley, then a high range of hills about ten miles wide, then sank into Indian Valley, one of the loveliest valleys in the State. It is a basin, elevated about 3,500 feet above the sea, entirely surrounded by mountains, which rise several thousand feet higher, sheltered from winds--in fact, containing all the elements of beauty. It is about ten miles long and three or four wide, and covered with fine farms.

From this we passed up the canyon of Genesee Creek, which after a few miles opens out into another pretty basin, but smaller and less fertile than Indian Valley. It is also higher and colder. My object in coming here was to look for fossils said to occur here in the auriferous slates. We found them, a most important matter geologically.

This was my birthday--I am thirty-five--half my "three-score years and ten" are past. As I lay in my blankets that night, long I reflected on it as I watched the stars in the cloudless sky.

We stopped there three days, examining the region, looking at some copper mines just found there, and collecting fossils. We camped on the ranch of a Mr. Gifford. I found that he was from Aurora, New York, and knew many of my old acquaintances, and we revived old memories by spending an evening talking about them.

One meets here people apparently out of their station. I met a Mr. Wilson--evidently a man of intelligence--dressed in dirty duck pants, dirty gray shirt, with shoes and hat to match. Yet he was once in the navy, a graduate of the Naval Academy at Annapolis, was on General Somebody's staff, had spent three years in the Mediterranean, had seen much of the world, had resigned and had gone into railroad making. He became rich, but lost all in unfortunate speculation, and is now here, in this out-of-the-way place, among uncongenial companions, away from family and old associations, prospecting for copper and hoping to retrieve his fallen fortunes.

We were here four nights and each night it froze--the temperatures were 27°, 27°, 21°, and 22°.

September 18 we moved down the valley about five miles and camped at Mormon Station, where I found more fossils. They were in a rough rugged, canon. I had several miles to walk. Both King and John were unwell, so I had it all to do. The next day I collected more, killed a rattlesnake, and packed my specimens. It clouded over and sprinkled some. We turned in early and were hardly well in our blankets when it began to rain. You cannot imagine how cheerless and uncomfortable it is to lie out in the rain--how one looks up at the black sky, lets the rain patter on his face, saturate his hair and beard, as he thinks of home and its cheerful fireside and luxurious comforts. Happily it did not rain much, not enough to wet our blankets through. Sunday, September 20, we spent quietly in camp, and I wrote my last letter home. It was clear and cool.

September 21 we packed up and came on to the Big Meadows, twenty-four miles. We went back to Indian Valley and followed down that for ten miles, then over low hills for ten more, when we sank into the valley of Big Meadows. As we struck this we came in sight of Lassen's Peak, rising gloriously, scarcely forty miles distant, a grand object indeed. We camped by the Feather River, here a large, cold stream, abounding in trout. The night was intensely clear, and the temperature sank to 20°. There is a store here and we laid in more provisions, for it is the last we shall find for many a weary mile.

September 22, we came on toward Lassen's Peak, some twenty-two miles farther. First, for fifteen miles, we followed up the valley, the Big Meadows, a level valley with high mountains on all sides; but THE grand feature is Lassen's Peak, rising beyond the head of the valley. In front, the level meadow; then the dark forests along the base of the mountain; while beyond, and above all, rises the bare and desolate peak of snow and rocks, against the blue sky, which is streaked here and there with thin clouds.

We struck the road that runs between Red Bluff and Honey Lake, followed up it for some miles and camped at a little grassy flat. Soon some teamsters came along and camped with us, and made the evening merry with their jokes and songs. The night was clear, and the thermometer sank to 19°.

September 23 we came on but about two miles, to the end of our trails or roads, to the tent of an old hunter named Loveless, who knows all about the Region, and of whom we hoped to get information as to how we could reach the peak. Here we found camped some men from the Sacramento Valley, who had come to escape from the heat of the valley, to hunt and have a good time. Judge Walsh, a very wealthy ranchero, and his family, were the main ones. He greeted us warmly, and gave us a quarter of venison. We camped near them, and I spent the rest of the day in writing up my notes. We dined with them and had a pleasant time. Mrs. Walsh, a Scotch lady, was lively and was enjoying the gipsy life. They were well provided with tents, a cook, servant, etc. Here King met an old friend who had crossed the plains with him, and they had a jolly reunion. I slept cold that night, for the thermometer sank to 12°.

September 24 our friends showed us some hot springs and other curiosities of the region. We rode through the woods and chaparral for some miles. First came the Boiling Lake, a lake of about four acres of hot water, boiling furiously in many places, and clouds of steam rising from it. Around it the steam issued from hundreds of jets. The rocks have been decomposed by these agencies, and the bed of the lake is of thin, fine clay, which bubbles and sputters like some titanic mush kettle.

Two miles from these are the Steamboat Springs, where steam and hot water issue from hundreds of places. There is a pool of boiling water in the canyon, about two rods across, in which there is a mass of water and steam arising, in jets, often six to eight feet high, splashing and roaring incessantly, while clouds of steam roll away up the canyon. Wherever you climb over the boulders around this you feel hot steam puffing out around you and hear the hissing and gurgling everywhere beneath your feet. We had been in a volcanic region for some days and these springs show that it is not entirely cooled underneath it.

Thence we went to Willow Lake, a pretty little sheet of water embosomed in the hills. It abounds in trout. The rest had come there in the morning and had caught near two hundred of them. We stopped a little while and I caught my FIRST TROUT. We returned from our rough ride, tired and hungry, and dined again at the camp of our friends. We made great havoc in the trout and venison, then spent a lively evening around their bright camp fire of huge logs. We returned to our camp, and the thermometer sank that night to 15°.

September 25 we were up early and off. We had prevailed on our friends to pilot us to the base of the last cone and make the ascent with us. So Mr. Walsh, Keating, and Eastman, with a pack horse, came with us. We rode about sixteen miles and camped here, where we are yet, at the base of the last peak, at the highest grass, at an altitude of about eight thousand feet. We had no trail, but went through woods and chaparral, across canyons and through swamps. We passed another cluster of boiling springs, even more extensive than those of the previous day. Hot water, steam, gases, and sulphur come up over a region of several hundred acres. Some of the crystallizations of sulphur around the steam vents were exceedingly beautiful, delicate as snow, frosting the rocks with brilliant yellow. We had some grand views of the peak. Although we were higher than our last camp it was not so cold, but it froze some that night.

Fort Crook

October 5.

September 26 we made our first ascent of Lassen's Peak--King and I and the three friends who had come with us from their camp. We were up and off early, were on the summit before ten o'clock, and spent five hours there.

We have anticipated a grand view, the finest in the state, and it fully equalled our expectations, but the peak is not so high as we estimated, being only about 11,000. The day was not entirely favorable--a fierce wind, raw, and chilly, swept over the summit, making our very bones shiver. Clouds hung over a part of the landscape. Mount Shasta, eighty miles distant, rose clear and sharp against a blue sky, the top for six thousand feet

rising above a stratum of clouds that hid the base. It was grand. Most of the clouds lay below us at the north. The great valley was very indistinct in the haze at the south, but the northern part was very clear.

We were back early, and had a hearty dinner of hot coffee, venison and trout, pork and beans--the former for a change, but the latter as a standby for fatigues and climbing. All were delighted with their trip.

We had a cold, windy, and cloudy night, and the next day, Sunday, September 27; a snowstorm set in, and our friends left us for the warmer climate of a lower altitude. During the forenoon we had fierce snow squalls, which whitened the ground. Without tent or other shelter than the trees, it was cold and cheerless. But in the afternoon it cleared up, and we had the freshest of air and the bluest of sky. The firs above us were silvered with snow, and the rugged peak whitened. It was too cold to write, so I read BLEAK HOUSE, and finished it by the camp fire at evening.

September 28 the thermometer stood at 17° in the morning; it was cold and nearly clear. I had lain awake half the night to get up early and climb the peak again, but clouds deterred us; so King went down the valley to sketch the mountain, while I took a long tramp around the east side of the peak. We made our preparations for an ascent the next morning, should it be clear.

Tuesday, September 29, we were up at half-past one, had an early breakfast by the light of the bright moon, now two days past its full, and at 2:45 were on our way.

The description that follows I wrote on top of the mountain. It has the merit of rigid truthfulness in every particular.

First up a canyon for a thousand feet, then among the rocks and over snow, crisp in the cold air, glittering in the bright moonlight. At four we are on the last slope, a steep ridge, now on loose boulders and sliding gravel, now on firmer footing. We avoid the snow slopes--they are too steep to climb without cutting our way by steps. We are on the south side of the peak, and the vast region in the southeast lies dim in the soft light of the moon--valleys asleep in beds of vapor, mountains dark and shadowy

At 4:30 appears the first faint line of red in the east, which gradually widens and becomes a livid arch as we toil up the last steep slope.

We reach the first ummit, and the northern scene comes in view. The snows of Mount Shasta are still indistinct in the dusky dawn. We cross a snow field, climb up boulders, and are soon on the highest pinnacle of rock. It is still, cold, and intensely clear. The temperature rises to 25°--it has been 18°.

The arch of dawn rises and spreads along the distant eastern horizon. Its rosy light gilds the cone of red cinders across the crater from where we are. Mount Shasta comes out clear and well defined; the gray twilight bathing the dark mountains below grows warmer and lighter, the moon and stars fade, the shadowy mountain forms rapidly assume distinct shapes, and day comes in apace.

As we gaze in rapture, the sun comes on the scene, and as it rises, its disk flattened by atmospheric refraction, it gilds the peaks one after another, and at this moment the field of view is wider than at any time later in the day. The Marysville Buttes rise from the vapory plain, islands in a distant ocean of smoke, while far beyond appear the dim outlines of Mount Diablo and Mount Hamilton, the latter 240 miles distant.

North of the Bay of San Francisco the Coast Range is clear and distinct, from Napa north to the Salmon Mountains near the Klamath River. Mount St. Helena, Mount St. John, Yallo-balley, Bullet Chup, and all its other prominent peaks are in distinct view, rising in altitude as we look north.

But rising high above all is the conical shadow of the peak we are on, projected in the air, a distinct form of cobalt blue on a ground of lighter haze, its top as sharp and outlines as well defined as are those of the peak itself--a gigantic spectral mountain, projected so high in the air that it seems far higher than the original mountain itself--but, as the sun rises, the mountain sinks into the valley, and, like a ghost, fades away at the sight of the sun.

The snows of the Salmon Mountains glitter in the morning sun, a hundred miles distant. But the great feature is the sublime form of Mount Shasta towering above its neighboring mountains--truly a monarch of the hills. It has received some snow in the late storms, and the "snow line" is as sharply defined and as level as if the surface of an ocean had cut it against the mountain side.

Through the gaps we catch glimpses of the Siskiyou Mountains, and east of Mount Shasta, the mere summits of some of the higher snow mountains in Oregon.

In the northeast is the beautiful valley of Pit River, with several sharp volcanic cones rising from it; while chain appears beyond chain in the dim distance, whose locality I cannot say, for we have no maps of that region.

In the east, valley and mountain chain alternate until all becomes indistinct in the blue distance. The peaks about Pyramid Lake are plainly seen. Honey Lake glistens in the morning sun--it seems quite near.

In the southeast we look along the line of the Sierra, peak beyond peak, until those near Lake Bigler form the horizon. The mere summit of Pyramid Peak is visible, but the Yuba Buttes, Pilot Peak, and a legion of lesser heights are very distinct. The valleys between these peaks are bathed in smoke.

Nearer, in this direction, are several beautiful valleys--Indian Valley, the Big Meadows, Mountain Meadows, and others--but all are dry and brown.

Like many philanthropists, in looking at the distant view I have almost forgotten that nearer home, just about the peak itself. Great tables of lava form the characteristic features; for Lassen's Peak, like Mount Shasta, is an

extinct volcano. The remains of a crater exist, a hollow in the center, with three or four peaks, or cones, rising around it. The one we are on is the highest. The west cone has many red cinders, and looks red and scorched. A few miles north of the peak are four cones, the highest above nine thousand feet high, entirely destitute of all vegetation, scorched and broken. The highest is said to have been active in 1857.

The lava tables beneath are covered with dark pine forests, here and there furrowed into deep canyons or rising into mountains, with pretty valleys hidden between.

Several lower peaks about us are spotted with fields of snow, still clean and white, sometimes or rose color with the red microscopic plant, as in the arctic regions.

Little lakes bask in the sunlight here and there, as blue as the sky above them. Twelve are in sight. And the Boiling Lake is in view, with clouds of white steam rising through the trees in the clear, cold, mountain air.

Here and there from the dark forest of pines that forms the carpet of the hills curls the smoke from some hunter's camp or Indian's fire.

Many volcanic cones rise, sharp and steep, some with craters in their tops, into which we can see-circular hollows, like great nests of fabulous birds.

On the west, the volcanic tables slope to the great central valley. The northern part of this, from Tehama to Shasta City, is very distinct and clear, with its forests and farms and orchards and villages, a line of willows marking the course of the Sacramento River. Farther south, smoke and haze obscure the plain.

But in all this wide view there appear no green pastures or lovely green herbage. Dark green forests, almost black, lie beneath us; desolate slopes, with snow and scattered trees, lie around us, and all the valleys are dry and sere. All is as unlike the mountains of the eastern states, or the Alps, as it is possible for one mountain scene to be unlike another.

As the sun rises it is truly wonderful how distinct Mount Shasta is. Its every ridge and canyon and snow field look so plain that one can scarcely believe that it lies eighty miles distant in air line--a weary way and much farther by any road or trail.

The valleys become more smoky, and the distant Sierra more indistinct, dark and jagged lines rising above the haze.

Until 10 A.M. not a cloud obscures the sky, then graceful cirri creep over from the Pacific, light and feathery.

The day wears on. The sun is warm and the air balmy. Silence broods

OVER the peaks--no sound falls on the ear, save occasionally, when a rock, loosed by last night's frost and freed by the day's thaw, rumbles down the steep slope, and all is silent again.

Now and then a butterfly or bird (of arctic species) flits over the summit and among the rocks, but both are silent.

Before 2 P.M. the smoke increases in the valleys, until the great central valley looks like an indistinct ocean, without surface or shores. Mountain valleys become depths of smoke that the sight cannot penetrate. The distant views fade away in haze, and the landscape looks dreamy.

We remained on the top until nearly three--over nine hours--then returned. We enjoyed a slide down a steep slope of snow. I "timed" King on it--he descended a slope four hundred or five hundred feet in fifty-seven seconds. The only mishap of the day was King getting his ears frostbitten.

September 30 King and I took a long walk around to the recent cones on the north of the main peak. It was a tedious walk to reach them, over rocks and ridges and slopes of soft volcanic sand, but more tedious to get over the cone itself. There are four of these cones, the highest over nine thousand feet, with its top red and burned. This is the one said to have been active in 1857. We examined by one of these--all have their bases blended, only their tops are distinct. This one was perhaps 8,500 feet, the top about two miles across in either way, and entirely of broken rocks, mostly loose, but here and there a pinnacle of rock two or three hundred feet above the main mass. These rocks are angular boulders, of all sizes up to fifty feet or more in diameter, thrown together in the wildest confusion. Lassen's Peak looks sharper from this side than any other, and views seen from among these pinnacles and rocks are some of the most picturesque imaginable. A series of photographs would be treasures indeed.

The place was of great scientific interest. These mountains have been THRUST UP from beneath, and the rocks crushed by the gigantic natural forces. In some places masses of rock two hundred feet high, or more, are all cracked and crushed into fragments, but the fragments are still in place. There were other points that made it especially interesting. Glaciers once streaming from Lassen's Peak, down on every side. The rocks are furrowed and polished by them, canyons show their traces everywhere, but all have passed away.

CAMP 153

October 6.

We finished our work at Lassen's Peak the last day of September and made our preparations for leaving. I felt anxious enough about the next three day's ride. We were to pass through a desolate region and among Indians reputed to be bad. I could get no definite information about them. Some thought them safe if one were careful and well armed, others thought it dangerous to go through with so small a party. If I could strike a road near Pit River and get to Fort Crook it would save two hundred miles of travel, but we expected that it would take us three days in the "hostile Indian country." Nevertheless, I resolved to try it, although we had no gun and only two work-

ing revolvers. We made every preparation, even put on a pistol that would not go off, as a "dummy," put notebooks in pockets, so that if the worst came we might save them, etc.

October 1 we started on our route of supposed peril, and I will anticipate the trip by saying that of the terrible Hat Creek Indians we saw but two poor fellows gathering grasshoppers for food! Thus vanished the perils and dangers of such a trip.

Well, we started over the ridge, went up among the snow, and struck the headwaters of Hat Creek. We went among rocks, down canyons, along ridges across treacherous swamps, through chaparral, and at last struck an old emigrant road that looked as if it had not been used for years. We followed along this for some miles and at last struck the Hat Creek road from Battle Creek to Honey Lake, having come through the woods from the Red Bluff road about thirty miles. We struck a band of teamsters passing through to Red Bluff. They told us about the roads, and we had to return some miles to find feed for camp. That night was very cold.

October 2 we were up before four o'clock; the moon was bright and the thermometer down to 20°. We ate our breakfast by moonlight, in the cold morning air, and were off in the twilight. Soon the sun-gilded Lassen's Peak. This valley is a surface of lava flow, its top of porous rock, raised in great "blisters"--sort of domes rising from the general surface. In one place there was a cavern where the lava had cooled on the top and the melted interior had run out from beneath the crust, then the top had fallen in.

From Hat Creek (Canoe Creek on your maps) we rose on another lava flow, a table eight hundred feet above Hat Creek, and struck north on this for twenty or twenty-five miles--a dry, rocky slope, no water, and with thin soil. As we sank into the valley of Pit River we had most grand views of Mount Shasta; it looked very sharp and steep and towered up an immense height--it is truly the grandest mountain I have ever seen.

We struck Pit River at the junction of Fall River, and stopped until the next noon. A man named Kaler, a Kentuckian, lives here, and keeps a ferry. He lives alone, and a lonely life he must lead. Bats flitted around his cabin, and spiders crept over the wall.

October 3 we went on to Fort Crook. This lies on Fall River, eight miles north of Pit, on the plain in an open pine forest. We stopped there for two days and three nights. I have to send down the valley and get horses hosed--my horse had lost a shoe so long ago that he was getting quite lame. We had a dirty, miserable camp, dusty, without shade, and I felt decidedly rheumatic after my long and cold sojourn at Lassen's Peak. Indians swarmed around our camp, men and women and children, in every style of dress and every state of degradation. We traded old clothes and worn-out blankets for salmon, trout, and bows and arrows. I have a fine bow and a lot of arrows that I shall take home.

Lieutenant Davis, in charge of the post, was very kind and gave us hay for our horses. Except for ten or a dozen men the troops are all away now, fighting Indians. It must be a lazy life, indeed, in such a place.

The valley of Pit River is nearly twenty miles wide at the Fort. It is a lava table, about 3,500 feet above the sea, and has but few settlers. It is pretty, and over portions the soil is fertile; but nights are cold, and it is too far from the rest of the world to be of value yet.