VISIT TO A VOLCANO ON THE SANDWICH ISLANDS.

[Extracts from the Journal of Elder Geo. Q. Cannon.]

In May, 1854, I had occasion to visit the conferences on the island of Hawaii (the Owhyhee of Captain Cook), and while there, together with several of the elders, both white and native, went to view the far-famed volcano of Kilauea. On account of our numbers, we found it most convenient to go on foot, our opportunities not being very good for obtaining animals. The district of Hilo, through which our road principally lay, is very fertile and productive, in consequence of the quantity of rain which falls almost daily.

We left Waiakea (or, as it called by the whites, Byron's Bay), for the mountain, early in the morning. Our road was tolerably good; in many places the roots of ferns, which grow in great profusion all through this district, were laid crosswise—corduroy fashion—making it pretty good walking.

It is a singular looking country along here for some miles; its surface is undulating, and appears as though it had been formed by the frequent deposits of lava flowing from the crater. The soil is very rich in places, and covered with *ki*, fern, and occasional patches of timber. The latter part of the road, however, was *pahoehoe* or lava, whose scanty covering of soil was worn off by the constant travel of man and beast. In places, this lava was very smooth and slippery; and cooling as it ran, it had formed itself into fantastic shapes of every form and variety.

We passed through several small villages where they raise kalo—their principal article of food—in tolerable abundance, and for which they find ready sale at the bay. Our appearance was generally hailed by the cry of "the white men," and troops of boys and girls, as well as grown up natives, rushed to the road side to scrutinize us, and ask questions, which gave us a good opportunity to lay our principles, to some small extent, before them, which were productive of some good, for, when we returned from the crater a few days afterwards, we had the pleasure of baptizing several and organizing a small branch. We reached the half way house at a place called Olaa, about the middle of the afternoon, and stopped for the night.

The next morning, after breakfast, we resumed our journey—the man with whom we stopped accompanying us as guide, to show us the wonders of Kilauea.

The country resembled in some respects that through which we passed yesterday, but uninhabited. After a toilsome walk of some seventeen or eighteen miles, we arrived at the crater a little before three o'clock p.m. We saw nothing to indicate our near approach to it; no truncated top as we see in pictures of other volcanoes, nor elevated summit to be distinguished in the distance, but an immense chasm or pit with perpendicular sides, about 12 miles in circumference and 1000 feet deep.

We became aware of our proximity to the object of our journey by the steam which we saw issuing from the numerous fissures and pits scattered around on the surface of the ground, in the vicinity of the edge of the crater. In the distance Mauna Loa loomed up with its regular and dome-like summit, from which there was a very violent eruption in February, 1852, which caused some apprehensions to be felt for the safety of the town of Waiakea, on Byron's Bay—the principal place on the island.

As the main part of the company had not come up, we deferred our descent until morning, and employed ourselves in visiting the pits and seams, whence the steam issued. In some of these places the heat was sufficiently great to cook potatoes; and in one ravine we found banana trees and a few sweet potatoes growing. There is a sulphur bank or mound a short distance from the brink of the crater, called by the natives the *kiona*, where there are a great many chimnies, out of which a strong sulphurous steam was issuing, and so hot as to almost instantly scald the hand.

We ascended the mound, and examined the different apertures, the sides of which were covered with fine crystals of a yellow color. The vapor which is emitted from these holes is almost overpowering, and the footing is so very precarious that nothing but a strong curiosity could have induced us to approach the edges of these chimnies. We collected some very fine specimens of crystalized sulphur, but owing to the want of facilities to carry them without spoiling, we were only able to preserve a few.

The whole of the surrounding country bears the impress of the agency of great internal fires which are constantly at work, and which causes the whole of the island occasionally to tremble.

We found a spring of water near the edge of the precipice, which, our guide informed us, was formed by the condensation of the steam on the surrounding bushes. *Ohelos*—the Hawaiian whortleberry—grow quite plentifully, but many of the natives, I understood, are so superstitious that they will not touch them, as they say it will be sure to rain, and they will be apt to perish with cold.

Towards four or five o'clock the natives had all arrived; they brought up a large calabash of *poi*—a paste made by pounding the *kalo* root—on a pole between two of them; also a hog that had been killed and cooked in the ground* by the orders of bro. Napela, who was caterer for the party; every one of the natives had also brought along a small bundle of *pai ai* (*kalo* pounded and wrapped in *ki* leaves.)

We stopped for the night in a grass house which had been built on the brink of the precipice for the accommodation of visitors, and in the evening we had a splendid view of the lurid fires of the volcano; their reflection on the moving clouds of smoke required but little stretch of the imagination to people the bottom of the crater with living beings. It was easy to account for an imaginative and superstitious people, as the Hawaiians are, believing that these fantastic forms of clouds were the spirits of the departed, they were so truly life-like.

In consequence of the altitude, we found it quite cold in the night and had to keep a good fire in the house; there being no chimney, the smoke annoyed us considerably.—In the morning we were up and stirring betimes, and, without stopping to eat breakfast, commenced to descend, accompanied by our guide. By the aid of a good stout staff, which we found of great benefit, we accomplished the descent in safety, and soon found ourselves at the edge of what has been appropriately called the black ledge.

This was an immense field of lava which ran all round the pit, and was the effect of some former eruption. The appearance of this lava was singular indeed, resembling in many respects the sea, in its wave-like appearance, or a field of shore ice from which the water had receded, leaving it shattered and cracked. In fact, I cannot compare it to anything better than a frozen sea, black as coal; some portions of it resembling the sea in a state of rest, other portions as it would appear in a violent storm; in some places the waves had combed one over another, as in the ocean, and in this position they had cooled.—Great care had to be observed in crossing over these combing waves, as the crust was thin, and there was danger of breaking through. How awfully grand must the sight have been when this whole mass of lava was in motion—a sea of liquid fire—and how insufficient language is to convey to the mind of man anything like the effect the sight of it would have produced!

In cooling, it had cracked, leaving large seams from which steam and heat issued, and in many places we had to use caution in crossing them on account of the intensity of heat. These fissures varied from two to six feet in width.

The upper crust of the lava is cellular, something like honeycomb, and very light and porous, and crackled under the feet like coal cinders. We felt our way carefully with our poles, like men passing over a frozen lake.—There were several ridges of rock thrown up, and as we approached the vicinity of the fire, we came to a hill resembling a limekiln, which emitted a thick, large body of smoke and steam. It was composed of a variety of earths and rock, and seemed to be the chimney stack of the crater. I climbed up, and looked down a hole from which a sulphurous smoke and vapor arose, the inhalation of which involved considerable danger. The sides of this chimney, like those we visited at the *Kiona* close to the brink of the precipice the previous evening, were covered with crystals of a yellow color. We tried to ascertain its depth by throwing stones down, but we could not hear them strike the bottom. Within a few feet of this was another very large chimney, out of which a dense smoke issued, so dense as to preclude a view of the interior; it was a dangerous experiment peeping into this chimney, owing to the precarious nature of the footing; one false step would have proved fatal to the explorer. This, we were told by the guide, was all included, a few years ago, in the pit or crater that was constantly active; of late years it has decreased to its present size, and only occasionally breaks forth in any other place.

Leaving this, the guide led us over places that looked dangerous and very risky, and I felt that we were indeed treading on a volcano and we had to be careful where we stepped. A feeling of awe very naturally crept over me and I felt how very insignificant man is, and how little he knows of the works and operations of his Maker.

While going from, what I call, the chimney stack of the crater towards the pit or caldron, we had great difficulty in breathing, on account of the strong sulphurous smoke which the former emitted, and which the wind carried in the direction we were going. When we came to the edge of the pit, a sight met my eyes which I think I shall never forget, and which surpassed, in sublimity and grandeur, anything I had ever witnessed or imagined; language is too faint to convey any of my feelings; I could not repress my exclamations of delight and admiration, it so far exceeded what I had read in written descriptions, or what I expected to see. I felt amply repaid for all my toil in beholding this awfully grand and stupendous work of the Creator.

The pit we judged to be about fifty or sixty feet deep, with perpendicular sides, nearly round, and about, as near as we could judge, one hundred yards across. The strongest heat seemed to be round the edges; and in one side there were two large holes, very close together, which looked more like the mouths of two very large furnaces than anything else I ever saw. Here the melted lava or matter was in constant motion, a perfect mass of liquid fire, surging and heaving like the waves of the sea, with a noise which the paddles of a steam vessel sailing in the ocean slightly resembled—it was truly a magnificent sight. Before we reached the caldron, the sound of the spouting and surging matter resembled the booming of heavy artillery at a distance.

The surface of the matter while quiescent, was black, with beautiful red veins here and there through it; it had a movement—sometimes flowing quickly, other times slowly—from the north east to south west, to the places where it was raging so violently. It was surprising to see with what ease it would melt this stony mass and convert it again into a fluid, throwing it out sometimes with great force. Occasionally it would roll up in other parts of this vast caldron, red and fiery, with a slow, heavy movement, twisting and curling in all manner of shapes, and again relapsing into its former position. Where it was black, a stone would indent it, but not sink out of sight.

We found great quantities of capillary glass, or as the natives call it Pele's hair, believing it to be the goddess' hair—but, owing to the want of facilities for preserving it, we brought but little away.

A party of natives had been here, so we were told, a few days before, throwing the bones of a relative into the volcano, with hogs, fowls, &c.—sacrifices to propitiate Madam "Pele". The pit is called by the natives *ka lua o Pele*, (the pit of Pele.) "Pele" was formerly, and is now by many believed, to be a goddess, younger sister of Papa, the woman that brought forth the islands, according to the old legend; the first-born being Hawaii, and the last Kauai and Niihau.

Pele, it is said, came from *Kahiki*, (foreign lands,) with her brothers and sisters, and lived first at Kauai, from thence to Oahu, thence to Molokai, thence to Maui, and finally, took up her residence on this island, Hawaii, where she still continues to maintain it. The quiescent craters on all these islands give evidence of the existence of active volcanoes on them in ages past.

The Hawaiians formerly believed in a plurality of gods, and "Pele" was worshipped in conjunction with the rest, and had her devotees and priests as well as the rest: her place of residence or *lua*, was believed to be the place where all the spirits of good chiefs and men went to dwell; the bad ones going to the *po* or place of darkness in the centre of the earth—the dominions of Milu, the Pluto of the Hawaiians.

The practice of throwing the bones of dead relatives into the volcano, used to be, and is quite common among the worshippers of this goddess. Their idea is, that if "Pele" is pleased with the sacrifice she will consume the bones, and the spirit of the deceased will be permitted to return as a familiar spirit, and be with one of the family; if the sacrifice is not acceptable the bones are thrown out of the caldron.

We stood on the brink of the caldron watching it bubbling and hissing, and it seemed, in looking at the liquid mass, as though the popular theory of a central fire was somewhat plausible. I thought I should never be tired looking at it, but as we had a journey of eighteen miles before us, we were reminded to be stirring.

In returning, the guide led us back another way over a lower portion of the pit or sea of lava; it seemed to be very little above the level of the burning matter in the caldron. He pointed out to us several places where there had been recent eruptions, leaving large craters or pits, the bottoms of which presented a similar appearance to that portion of the field over which we were walking, having cooled and preserved its wave-like appearance.

* The process of cooking in the ground, so common among the Pacific islanders, is as follows:—They make a round hole in the ground, varying in size according to the quantity of food to be cooked, and then build a fire in it; they then pile a large quantity of stones on the fire; when they are thoroughly heated, they are spread evenly on the bottom and sides of the hole. If kalo (a root which they cultivate and use as their common staff of life) is to be cooked, it is piled on these in a conical heap, and then covered thickly with leaves; on the leaves there is a coat of dirt thrown up of sufficient thickness to prevent the escape of heat or steam, and just before closing it up entirely with dirt, there is a bucket or two of water poured in at the top to be converted into steam by the heat of the stones; and this cooks the food. In this manner meat is also cooked, with the exception of not pouring water in as with the kalo; if a hog, it is filled with heated stones, pockets being made in the shoulders for the insertion of hot stones; water is then poured into it to create steam, and it is laid on the heated stones in the hole, leaves being first laid to keep it from sticking to the stones or burning, and it is then covered as the kalo.

HOME CORRESPONDENCE.

G. S. L. CITY, March 31, 1855.

DEAR CARRINGTON:—On Thursday, the 22nd, I left this city in Mr. Daley's mail stage, which was heavily loaded. The U. S. Marshal, the Clerk of the Supreme and First District Courts, Mr. Bauvier, a merchant at Provo, and Mr. Lyman Wood, the Indian interpreter at Springville, were my fellow passengers. The roads were bad from the effect of the late storms. Mr. Booth, the driver, in compliance with the U. S. mail contract with Mr. Daley, having to stop at all the post-offices within five miles of the road, our progress was necessarily slow. It was laughable to see the persevering and untiring Booth packing the mail bags filled with newspapers and other mail matter on his back half a mile from the road to find a post office. Marshal Heywood's health being very poor, he was under the necessity of leaving our company at Pleasant Grove. We arrived at Provo 9 1-2, p.m.

It being court week, a grand jury had been in session since Monday, waiting the arrival of the Hon. Leonidas Shaver to administer their oath, and give them the solemn charge required by law and "time honored custom;" but learning that the Judge was sick, the jury dispersed as soon as Marshal Heywood arrived and settled their fees. I had like to have said it was lucky that the court was not much needed, only an appeal case that I have heard of, and it in no hurry; law must take its time. Next spring term will do as well, perhaps, if not better; in fact, the people had not time to attend court, unless there was something very exciting on hand, as the season is advanced, fences to repair, wheat fields to sow, new fields to enclose, city wall to build, streets to repair, water ditches to clean out and bridge; so much on hand that a court of two weeks would have been thousands of dollars damage by hindering the people from their work.

I set out in my garden some peach and apple trees, planted out current bushes and grape vines, and repaired the fence; and received calls from a couple of dozen of my friends who came for counsel.

Saturday, went down to examine the fence that encloses my meadow, direct the making of repairs thereon, the burning of old grass to prepare the ground for the new crop, and to make arrangements for the construction of another string of fence. In the afternoon, the mail arrived in Provo from California; in the evening I went to a play of the Dramatic Association, at the Music Hall, called "the Rent Day," and followed by a farce, the "Sketches in India;" the house crowded, stars shone bright. Messrs. P. M. Westwood, the two Nuttalls, and Wm. Allen, are hard to beat on a stage. In fact, the play showed a display of talent that was interesting, as was manifest in those who had little experience. Mrs. Kelting, Miss Clarkson, and the other ladies, did extremely well.

Sunday, sleepy in the morning, from being late at the play. Went to the meeting hall at 10 1-2 a.m., found it crowded, Elder J. Terry was preaching; when he closed, I followed with an address of one hour, on the necessity of union and perfect oneness among the Saints. In the afternoon a general council of the Seventies, composed of delegates from every settlement in the county, met in the meeting hall: they meet once a month to report the condition of the quorums and the branches, also the standing of the Seventies and other business. After their business was over, I addressed the Seventies on the subject of exerting themselves to enlarge the subscription list of the Deseret News, and upon the necessity of the young elders observing "the Word of Wisdom;" recommended the elders, as far as consistent, to dispense with the use of tea coffee, tobacco, and spirituous liquors entirely. At 6 1-2 p.m. I addressed the Saints for an hour and a half on the subject of "celestial marriage." The meeting was crowded, and although the house would contain 400 people, as many went home as got in the room. The brethren in Provo will have to wake up and build their meeting-house, as the only chance to secure a comfortable seat to hear the instructions of the elders.

Monday evening, attended a council with the elders in the new council room at Lake City, 19 ft. by 22, comfortably finished, and neatly furnished. We dedicated the room to the Lord, as it had been recently built by the subscriptions of Bishop Harrington and a few of the elders, and furnished by the sisters in good style for the purposes of a council and prayer room.

Tuesday, by the politeness of Mr. Robert Neslin, I rode with him in his carriage, and arrived in this city at a quarter after 4.

GEO. A. SMITH.

[The readers of the "News" would doubtless be much pleased with reports from the monthly meetings of the Seventies in Utah County. Will the clerk of those meetings report for the paper as often as time and circumstances will permit?—ED.]

Horticultural—The Valley Gardener.—Culture of the Pea.

EDITOR OF THE DESERET NEWS:—Having many enquiries by new comers, and those unacquainted with raising garden vegetables in Utah, I take the liberty to offer a few remarks on the culture of the Pea, derived from six years' experience in cultivating upwards of thirty varieties which have come to hand, brought from different parts by various persons.

All the varieties of peas thrive well, and are adapted to our soil. A moderate rich soil is the best for most varieties, and all the better if of a light sandy nature. The time of sowing depends on circumstances; any variety may be safely sown, if the ground is in good condition, from the first of March to the first of May. The plan I have generally adopted is to sow three or four varieties, for a general crop, about the 10th or 15th of March, and if properly selected, they will follow one another in succession for the table.

The following list is the best I am acquainted with for general culture:

Early June, 2 feet high, will be ready 1st of June.
Prince Albert, 2 feet 6 inches high, will be ready 10th of June.
Blue Surprise, 3 feet high, will be ready 20 of June.
Blue Imperial, 2 feet high, [for a general crop,) will be ready from the 25th to 30th June.
Woodford's Green Marrow, 1 foot 6 inches high, will be ready from 1st to 10th July.

[The matchless Marrowfat, brought from Boston by G. B. Wallace, is by far the largest and best pea for general garden culture than we have yet seen.—Ed.]

VARIETIES.

There are few garden vegetables that have so many nominal varieties, and sub-varieties, as the pea; although the true varieties are comparatively few. To swell the list, and to please the factitious epicure, Horticulturists have created a host of new names, to keep pace with the times. The old English early frame pea, the best variety of its kind, has a new name for almost every place where it finds its way. In Philadelphia this old favorite has been a little improved under the name of "Landreth's Extra Early." This pea I brought into the valley 6 years ago, and finding that it came to perfection for the table early in June, have sold it under the name of "Early June Pea;" but it has here obtained another more pointed name, viz: "The May Pea," which it does not merit, and never will, because it is not fit for table before the 1st of June, unless it is eaten like the skinless pea, pods and all. The "Bishop's Early Dwarf," and "Early Emperor," are only sub-varieties of this old standard pea, obtained by selecting some early dwarf seeds from the true kind. Indeed, all the extraordinary early peas are simply the offsprings of a meagre precocity, or early, unnatural maturity caused by decay, or disease of the natural habit of the plant.

The Charlton is the next true early variety of pea, and is fit for the table abont 10 days after the "Early Frame." The original of this pea is however rarely to be seen, although we have many sub-varieties of it. The pea called "The Poor Man's Friend" is one, and is a very prolific pea; but the best sub-variety that I have seen is the "Prince Albert," an excellent kind to succeed the "Early June," and well adapted to Utah.

The "Marrowfat." of which the old white Marrowfat forms the type, has of late years been made to produce almost everything desirable, from the "Dwarf Green Marrowfat," 1 1-2 feet high, to "Knight's tall Marrows," which on good ground grows from 5 to 7 feet high. It would far exceed my prescribed limits to enumerate the many varieties of this class that have come to hand.—For general culture the old white Marrowfat is a favorite with me; it always bears a good crop, the pods are large, and the peas of an excellent flavor. For field cvlture the black-eye Marrowfat is an excellent variety, being very hardy, and producing good crops. There are several varieties of Green Marrow, most of them of fine flavor, but have more claim on the epicure than the general cultivator. Woodford's Dwarf Green Marrow is well worthy of culture for a late pea; it is of excellent flavor, and comes into use after any other variety of the same sowing.

The Blue Pea.—The "Blue Prussian" appears to be the original of this class; it is however at present but little grown, being far inferior to the "Blue Imperial," which is one of the best peas we have. This dwarf variety is an excellent bearer, and the peas are excelled by none in flavor and appearance. The "Cimetar" and "Blue Surprise" are good varieties, the latter is free bearing, and comes to perfection about the middle of June.

The Grey Pea" is readily known by its red blossom, and there are many varieties of it none of them worth cultivating for the table. As it is one of the worst kinds of pea to mingle with and spoil good varieties, it should never be allowed to grow in the neighborhood.

"Skinless, or Eat pod Peas" are hybrids from almost every variety, and are esteemed by those who prefer to eat the pods with the peas.

In closing this article, I would recommend a more general culture of peas both in the garden and field, for in no other country, I believe, is the soil or climate better adapted to this excellent vegetable. I would recommend the dwarf varieties, as they do not require any sticks to support the vines, and generally produce better crops than the tall growing. To the farmer I would say, cultivate peas, for besides being useful as an excellent vegetable in their season, they are capital feed for swine, especially if ground with wheat or barley. But the greatest claim the pea has on the farmer is, it will produce a crop on poor, light sandy soil, where wheat is uncertain. They may be sown early in the spring, and will be ripe early enough to escape the drought, insects, and other common casualties detrimental to crops.

Yours &c.,
E. SAYERS.

[We will cheerfully endeavor to give timely publication to all useful agricultural, horticultural, and other kindred articles, that Mr. Sayers and others may be so kind as to furnish. In such articles, would it not be well to state how far apart drills should be, and the distance and depth of seeds in the drills?—Ed.

☞ It was Napoleon who said, "Strange as it may appear, when I want any good head work done, I choose a man, provided his education has been suitable, with a long nose. His breathing is bold and free, and his brain, as well as his lungs and heart, cool and free. In my observations of men, I have almost invariably found a long nose and head go together."