thousand eight hundred feet in a distance of three hundred and sixteen miles, to its junction with the North Fork of the Platte. In this estimate the elevation of the junction is assumed as given by our barometrical observations in 1842.

On the easternmost branch, up which we took our way, we first came among the pines growing on the top of a very high bank, and where we halted on it to noon; quaking asp (*Populus tremuloides*) was mixed with the cotton-wood, and there were excellent grass and rushes for the animals.

During the morning we came across many beautiful flowers, which we had not hitherto met. Among them, the common blue flowering flax made its first appearance; and a tall and handsome species of *gilia*, with slender scarlet flowers, which appeared yesterday for the first time, was very frequent to-day.

We had found very little game since leaving the fort, and provisions began to get unpleasantly scant, as we had no meat for several days; but toward sundown, when we had already made up our minds to sleep another night without supper, Lajeunesse had the good fortune to kill a fine deer, which he found feeding in a hollow near by; and as the rain began to fall, threatening an unpleasant night, we hurried to secure a comfortable camp in the timber.

To-night the camp fires, girdled with *appolas* of fine venison, looked cheerful in spite of the stormy weather.

Fuly 9th.—On account of the low state of our provisions and the scarcity of game, I determined to vary our route, and proceed several camps to the eastward, in the hope of falling in with the buffalo. This route along the dividing grounds between the South Fork of the Platte and the Arkansas, would also afford some additional geographical information. This morning, therefore, we turned to the eastward, along the upper waters of the stream on which we had encamped, entering a country of picturesque and varied scenery; broken into rocky hills of singular shapes; little valleys, with pure crystal water, here leaping swiftly along, and there losing itself in the sands; green spots of luxuriant grass, flowers of all colors, and timber of different kinds—everything to give it a varied beauty, except game.

To one of these remarkably shaped hills, having on the summit a circular flat rock, two or three hundred yards in circumference, some one gave the name of Pound-cake rock, which it has been permitted to retain, as our hungry people seemed to think it a very agreeable comparison. In the afternoon a buffalo bull was killed, and we encamped on a small stream, near the road which runs from St. Vrain's fort to the Arkansas.

July 10th.—Snow fell heavily on the mountains during the night, and Pike's Peak this morning is luminous and grand, covered from the summit,

as low down as we can see, with glittering white. Leaving the encampment at six o'clock, we continued our easterly course over a rolling country, near to the high ridges, which are generally rough and rocky with a coarse conglomerate displayed in masses, and covered with pines. This rock is very friable, and it is undoubtedly from its decomposition that the prairies derive their sandy and gravelly formation.

In six miles we crossed a head-water of the Kioway River, on which we found a strong fort and *corrál* that had been built in the spring, and halted to noon on the principal branch of the river. During the morning our route led over a dark vegetable mould mixed with sand and gravel, the characteristic plant being *esparcette* (*Onobrychis sativa*), a species of clover which is much used in certain parts of Germany for pasturage of stock—principally hogs. It is sown on rocky, waste ground, which would otherwise be useless, and grows very luxuriantly, requiring only a renewal of the seed about once in fifteen years. Its abundance here greatly adds to the pastoral value of this region.

A species of antennaria in flower was very common along the line of road, and the creeks were timbered with willow and pine. We encamped on Bijou's fork, the water of which, unlike the clear streams we had previously crossed, is of a whitish color, and the soil of the bottom a very hard, tough clay. There was a prairie-dog village on the bottom, and, in the endeavor to unearth one of the little animals, we labored ineffectually in the tough clay until dark. After descending with a slight inclination, until it had gone the depth of two feet, the hole suddenly turned at a sharp angle in another direction for one more foot in depth, when it again turned, taking an ascending direction to the next nearest hole. I have no doubt that all their little habitations communicate with each other.

The greater part of the people were sick to-day, and I was inclined to attribute their indisposition to the meat of the bull which had been killed the previous day.

Fuly 11th.—There were no indications of buffalo having been recently in the neighborhood; and, unwilling to travel farther eastward, I turned this morning to the southward, up the valley of Bijou. Esparcette occurred universally, and among the plants on the river I noticed, for the first time during this journey, a few small bushes of the absinthe of the voyageurs, which is commonly used for fire-wood (Artemisia tridentata).

Yesterday and to-day the road has been ornamented with the showy bloom of a beautiful *lupinus*, a characteristic in many parts of the mountain region, on which were generally great numbers of an insect with very bright colors (*Litta vesicatoria*).

As we were riding quietly along, eagerly searching every hollow in search of game, we discovered, at a little distance in the prairie, a large

grizzly bear so busily engaged in digging roots that he did not perceive us until we were galloping down a little hill fifty yards from him, when he charged upon us with such sudden energy that several of us came near losing our saddles. Being wounded, he commenced retreating to a rocky piny ridge near by, from which we were not able to cut him off, and we entered the timber with him. The way was very much blocked up with fallen timber; and we kept up a running fight for some time, animated by the bear charging among the horses. He did not fall until after he had received six rifle balls. He was miserably poor, and added nothing to our stock of provisions.

We followed the stream to its head in a broken ridge, which, according to the barometer, was about seven thousand five hundred feet above the sea. This is a piny elevation into which the prairies are gathered, and from which the waters flow in almost every direction to the Arkansas, Platte, and Kansas Rivers; the latter stream having here its remotest sources. Although somewhat rocky and broken, and covered with pines, in comparison with the neighboring mountains it scarcely forms an interruption to the great prairie plains which sweep up to their bases.

The annexed view of Pike's Peak from this camp, at the distance of forty miles, represents very correctly the manner in which this mountain barrier presents itself to travellers on the plains, which sweep almost directly to its bases; an immense and comparatively smooth and grassy prairie, in very strong contrast with the black masses of timber, and the glittering snow above them. This is the picture which has been left upon my mind, and its general features are given in the accompanying view.

With occasional exceptions, comparatively so very small as not to require mention, these prairies are everywhere covered with a close and vigorous growth of a great variety of grasses, among which the most abundant is the buffalo-grass (Sesleria dactyloides.) Between the Platte and Arkansas Rivers, that part of this region which forms the basin drained by the waters of the Kansas, with which our operations made us more particularly acquainted, is based upon a formation of calcareous rocks.

The soil of all this country is excellent, admirably adapted to agricultural purposes, and would support a large agricultural and pastoral population. The plain is watered by many streams. Throughout its western half these are shallow with sandy beds, becoming deeper as they reach the richer lands approaching the Missouri River; they generally have bottom lands bordered by bluffs varying from fifty to five hundred feet in height. In all this region the timber is entirely confined to the streams. In the eastern half, where the soil is a deep, rich vegetable mould, retentive of rain and moisture, it is of vigorous growth, and of many different kinds; and throughout the western half it consists entirely of various



VIEW OF PIKE'S PEAK

species of cotton-wood, which deserves to be called the tree of the desert—growing in sandy soils, where no other tree will grow; pointing out the existence of water, and furnishing to the traveller fuel, and food for his animals. Add to this that the western border of the plain is occupied by the Sioux, Arapaho, and Cheyenne nations, and its eastern limits by the Pawnees and other half-civilized tribes for whom the intermediate country is a war ground; and a tolerably correct idea can be formed of the appearance and condition of the country.

Descending a somewhat precipitous and rocky hill-side among the pines, which rarely appear elsewhere than on the ridge, we encamped at its foot, where there were several springs, which make one of the extreme sources of the Smoky Hill Fork of the Kansas. From this place the view extended over the Arkansas Valley, and the Spanish peaks in the south beyond.

As the greater part of the men continued sick, I encamped here for the day, and ascertained conclusively, from experiments on myself, that their illness was caused by the meat of the buffalo bull.

On the summit of the ridge, near the camp, were several rock-built forts, which in front were very difficult of approach, and in the rear were protected by a precipice entirely beyond the reach of a rifle ball. The evening was tolerably clear, with a temperature at sunset of 63°. Elevation of the camp, seven thousand three hundred feet.

Turning the next day to the southwest, we reached, in the course of the morning, the wagon road to the settlements on the Arkansas River, and encamped in the afternoon on the Fontaine-qui-bouit (or Boiling Spring) River, where it was fifty feet wide, with a swift current. I afterward found that the spring and river owe their names to the bubbling of the effervescing gas in the former, and not to the temperature of the water which is cold. During the morning a tall species of gilia, with a slender white flower, was characteristic; and in the latter part of the day, another variety of esparcette (wild clover), having the flower white, was equally so. We had a fine sunset of golden brown; and in the evening, a very bright moon, with the near mountains, made a beautiful scene. Thermometer, at sunset, was 69°, and our elevation above the sea five thousand eight hundred feet.

Fuly 13th.—The morning was clear, with a northwesterly breeze, and the thermometer at sunrise at 46°. There were no clouds along the mountains, and the morning sun showed very clearly their rugged character.

We resumed our journey very early down the river, following an extremely good lodge-trail, which issues by the head of this stream from the bayou Salade, a high mountain valley behind Pike's Peak. The soil along the road was sandy and gravelly, and the river well timbered.

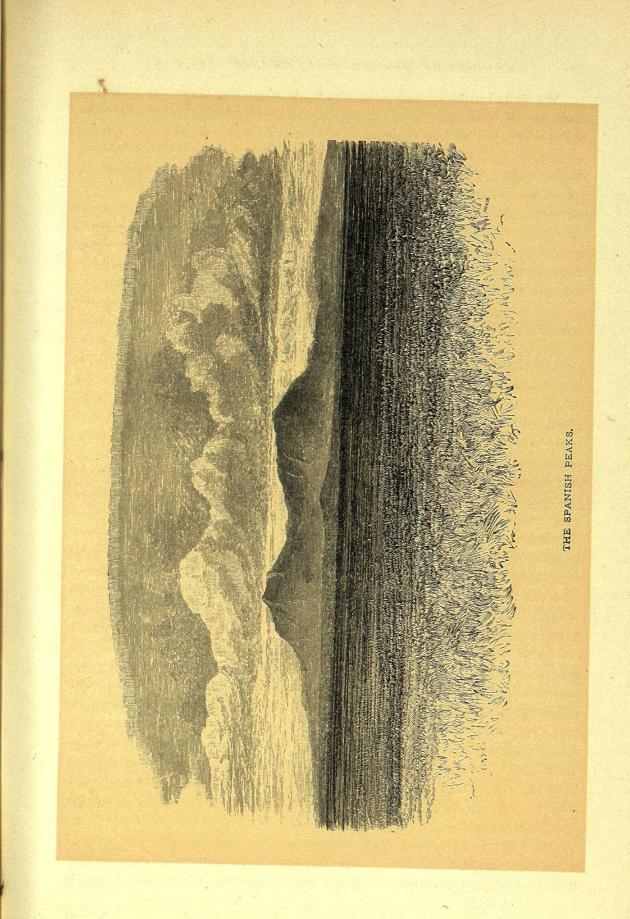
We halted at noon under the shade of some fine large cotton-woods, our animals luxuriating on rushes (*Equisetum hyemale*), which, along this river, were remarkably abundant. A variety of cactus made its appearance, and among several strange plants were numerous and beautiful clusters of a plant resembling *mirabilis jalapa*, with a handsome convolvulus I had not hitherto seen (*calystegia*).

In the afternoon we passed near the encampment of a hunter named Maurice, who had been out on the plains in pursuit of buffalo calves, a number of which I saw among some domestic cattle near his lodge. Shortly afterward, a party of mountaineers galloped up to us—fine-looking and hardy men, dressed in skins and mounted on good, fat horses; among them were several Connecticut men, a portion of Wyeth's party, whom I had seen the year before, and others were men from the western States.

Continuing down the river, we encamped at noon on the 14th at its mouth, on the Arkansas River. A short distance above our encampment, on the left bank of the Arkansas, is a pueblo (as the Mexicans call their civilized Indian villages), where a number of mountaineers, who had married Spanish women in the valley of Taos, had collected together and occupied themselves in farming, carrying on at the same time a desultory Indian trade. They were principally Americans, and treated us with all the rude hospitality their situation admitted; but as all commercial intercourse with New Mexico was now interrupted, in consequence of Mexican decrees to that effect, there was nothing to be had in the way of provisions. They had, however, a fine stock of cattle, and furnished us an abundance of excellent milk. I learned here that Maxwell, in company with two other men, had started for Taos on the morning of the 9th, but that he would probably fall into the hands of the Utah Indians, commonly called Spanish Utes.

As Maxwell had no knowledge of their being in the vicinity when he crossed the Arkansas, his chance of escape was very doubtful; but I did not entertain much apprehension for his life, having great confidence in his prudence and courage. I was further informed that there had been a popular tumult among the *pueblos*, or civilized Indians residing near Taos, against the "foreigners" of that place, in which they had plundered their houses and ill-treated their families. Among those whose property had been destroyed was Mr. Beaubien, father-in-law of Maxwell, from whom I had expected to obtain supplies, and who had been obliged to make his escape to Santa Fé.

By this position of affairs our expectation of obtaining supplies from Taos was cut off. I had here the satisfaction to meet our good buffalo hunter of 1842, Christopher Carson, whose services I considered myself



fortunate to secure again; and as a reinforcement of mules was absolutely necessary, I despatched him immediately, with an account of our necessities, to Mr. Charles Bent, whose principal post is on the Arkansas River, about seventy-five miles below Fontaine-qui-bouit.

He was directed to proceed from that post by the nearest route across the country, and meet me with what animals he should be able to obtain at St. Vrain's Fort. I also admitted into the party Charles Towns—a native of St. Louis, a serviceable man, with many of the qualities of a good voyageur.

According to our observations the latitude of the mouth of the river is 38° 15′ 23″; its longitude 104° 58′ 30″; and its elevation above the sea four thousand eight hundred and eighty feet.

On the morning of the 16th, the time for Maxwell's arrival having expired, we resumed our journey, leaving for him a note in which it was stated that I would wait for him at St. Vrain's Fort until the morning of the 26th, in the event that he should succeed in his commission. Our direction was up the Boiling Spring River, it being my intention to visit the celebrated springs from which the river takes its name, and which are on its upper waters at the foot of Pike's Peak.

Our animals fared well while we were on this stream, there being everywhere a great abundance of prêle. Ipomea leptophylla, in bloom, was a characteristic plant along the river, generally in large bunches, with two to five flowers on each. Beautiful clusters of the plant resembling Mirabilis jalapa were numerous, and Glycyrrhiza lepidota was a characteristic of the bottoms. Currants, nearly ripe, were abundant, and among the shrubs which covered the bottom was a very luxuriant growth of chenopodiaceous shrubs four to six feet high.

On the afternoon of the 17th we entered among the broken ridges at the foot of the mountains, where the river made several forks. Leaving the camp to follow slowly, I rode ahead in the afternoon in search of the springs. In the meantime the clouds, which had been gathered all the afternoon over the mountains, began to roll down their sides; and a storm so violent burst upon me that it appeared I had entered the storehouse of the thunder-storms.

I continued, however, to ride along up the river until about sunset, and was beginning to be doubtful of finding the springs before the next day, when I came suddenly upon a large, smooth rock, about twenty yards in diameter, where the water from several springs was bubbling and boiling up in the midst of a white incrustation with which it had covered a portion of the rock. As this did not correspond with a description given me by the hunters, I did not stop to taste the water, but, dismounting, walked a little way up the river, and, passing through a narrow thicket of shrubbery