CHAPTER IV.

My first Expedition—Personnel of Party—Meet Kit Carson—Enormous Herds of Buffalo—Incidents of Journey—Meet Bridger—His late Fight with Sioux—Fort Laramie—South Pass Reached—Ascent of the loftiest Peak of Wind River Chain—American Flag Planted—The Pioneer Bee—Object of Expedition so far Successful—Homeward Journey—Running the Cañons, etc., etc.

ALL was now ready. I left Washington for the West on May 2d, Mrs. Frémont remaining at home with her family during my absence.

Arriving at St. Louis, I was received at her home with cordial hospitality by Mrs. Sarah Benton Brant, the favorite niece of Mr. Benton and wife of an old friend and army officer. In all my journeys from St. Louis, and in my visits to it in later years, I have been always welcomed by her with an affectionate regard which I have reciprocated and cherished to the present hour as among the most satisfactory of my recollections.

This expedition, directed as it was toward the opening of the western territory, was pleasing to the people of St. Louis, who furthered my preparations with prompt and willing aid.

For this journey, which would be exposed to serious contingencies, good men and fitting animals were a first necessity. The getting these together—the necessary equipment which it needs experienced foresight to provide—required time; but at the end of several weeks this had been done, and a party of valuable and experienced men selected. Among these I had engaged as hunter Lucien Maxwell, a son-in-law of one of the principal merchants in New Mexico, Mr. Beaubien, and brother-in-law of Christopher Carson, better known as "Kit Carson," who also had his home in Taos. Maxwell was about twenty-eight years of age, about five feet ten inches in height, and strongly built. He was personally known, by trading among them, to the tribes who ranged the country toward New Mexico, accustomed to the life of the prairies, and a resolute man and good hunter. Carson and he were close friends.

My journey from St. Louis was by steamboat up the Missouri to a point near the mouth of the Kansas River, where a few houses were the nucleus of a future town, but then called "Chouteau's" or Kansas Landing.

On the boat I met Kit Carson. He was returning from putting his little daughter in a convent-school at St. Louis. I was pleased with him and his manner of address at this first meeting. He was a man of medium height, broad-shouldered and deep-chested, with a clear steady blue eye and frank speech and address; quiet and unassuming.

It will be anticipating to speak here of Carson in connection with afterevents, but I give one incident to illustrate the simple honesty of his character.

He had gone to Washington with despatches from me in 1847, and was staying at the house of Senator Benton, welcomed there as my friend. Mr. Benton was in the West, but Carson's modesty and gentleness quickly made him a place in the regard of the family, to whom he gave back a lasting attachment. At one time during his stay he was seen to be troubled in mind, and our young friend, Midshipman Beale, being asked to find what had quenched Carson's good spirits, ascertained that he felt it was wrong to be among such ladies when they might not like to associate with him if they knew he had had an Indian wife. "She was a good wife to me. I never came in from hunting that she did not have the warm water ready for my feet." She had died long since, and he was now married to a daughter of Beaubien. But his straightforward nature would not let him rest while there was anything concealed which he thought ought to be known to the family who were receiving him as a friend. It was the child of his Indian wife that he had just placed in the shelter of the St. Louis convent-school when we first met.

I had expected to engage as guide an old mountaineer, Captain Drips, but I was so much pleased with Carson that when he asked to go with me I was glad to take him.

Now, he has become so familiarly known that I will let the narrative tell of the life we had together, out of which grew our enduring friendship.

From the Landing I went ten miles up the Kansas River to the tradingpost of Mr. Cyprian Chouteau, where we were already on Indian ground.
This was one of the friendly contributions by the St. Louis Chouteaus,
which were to come in aid on this and future journeys. We were delayed
here some twenty days in fitting men and animals, arms and equipment,
into place and good order; but the time used in this was regained in the
strength of the animals, as the spring grass was improving with every day.

This was now to be their only food; and in a measure regulated the travel, which depended on their condition.

At length we set out. It was like a ship leaving the shore for a long voyage, and carrying with her provision against all needs in her isolation on the ocean.

Bad weather, which interfered with astronomical observations, delayed us several days in the early part of June at this post, which is on the right bank of the Kansas River, about ten miles above the mouth, and six beyond the western boundary of Missouri. The sky cleared off at length, and we were enabled to determine our position—in longitude 94° 25′ 46″, and latitude 39° 5′ 57″. The elevation above the sea is about seven hundred feet. Our camp, in the meantime, presented an animated and bustling scene. All were busily occupied in completing the necessary arrangements for our campaign in the wilderness, and profiting by this short delay on the verge of civilization to provide ourselves with all the little essentials to comfort in the nomadic life we were to lead for the ensuing summer months. Gradually, however, everything—the *matériel* of the camp, men, horses, and even mules—settled into its place, and by the 10th we were ready to depart; but, before we mount our horses, I will give a short description of the party with which I performed this service.

I had collected in the neighborhood of St. Louis twenty-one men, principally Creole and Canadian voyageurs, who had become familiar with prairie life in the service of the fur companies in the Indian country. Mr. Charles Preuss, a native of Germany, was my assistant in the topographical part of the survey. Maxwell, as has already been said, had been engaged as hunter; Carson was our guide. The persons engaged in St. Louis were:

Clément Lambert, J. B. L'Esperance, J. B. Lefèvre, Benjamin Potra, Louis Gouin, J. B. Dumés, Basil Lajeunesse, François Tessier, Benjamin Cadotte, Joseph Clément, Daniel Simonds, Leonard Benoit, Michel Morly, Baptiste Bernier, Honoré Ayot, François Latulippe, François Badeau, Louis Ménard, Joseph Ruelle, Moïse Chardonnais, Auguste Janisse, Raphael Proue.

In addition to these, Henry Brant, son of Colonel J. B. Brant, of St Louis, a young man nineteen years of age, and Randolph, a lively boy of twelve, son of Mr. Benton, accompanied me, for the development of mind and body which such an expedition would give. We were all well armed; and mounted, with the exception of eight men, who conducted as many carts, in which were packed our stores, with the baggage and instruments, and which were each drawn by two mules. A few loose horses, and four oxen which had been added to our stock of provisions, completed the train. We set out on the morning of the 10th, which happened to be Friday—a circumstance which our men did not fail to remember and recall during the hardships and vexations of the ensuing journey. Mr. Cyprian Chouteau, to whose kindness during our stay at his house we were much indebted, accompanied us several miles on our way, until we met an Indian whom he had engaged to conduct us on the

first thirty or forty miles, where he was to consign us to the ocean of prairie, which, we were told, stretched without interruption almost to the base of the Rocky Mountains.

From the belt of wood which borders the Kansas, in which we had passed several good-looking Indian farms, we suddenly emerged on the prairies, which received us at the outset with some of their striking characteristics; for here and there rode an Indian, and but a few miles distant heavy clouds of smoke were rolling before the fire. In about ten miles we reached the Santa Fé road, along which we continued for a short time and encamped early on a small stream; having travelled about eleven miles. During our journey, it was the customary practice to encamp an hour or two before sunset, when the carts were disposed so as to form a sort of barricade around a circle some eighty yards in diameter. The tents were pitched, and the horses hobbled and turned loose to graze; and but a few minutes elapsed before the cooks of the messes, of which there were four, were busily engaged in preparing the evening meal. At nightfall the horses, mules, and oxen were driven in, and picketed—that is, secured by a halter, of which one end was tied to a small steel-shod picket, and driven into the ground; the halter being twenty or thirty feet long, which enabled them to obtain a little food during the night. When we had reached a part of the country where such a precaution became necessary, the carts being regularly arranged for defending the camp, guard was mounted at eight o'clock, consisting of three men, who were relieved every two hours; the morning watch being horse-guard for the day. At daybreak the camp was roused, the animals turned loose to graze, and breakfast generally over between six and seven o'clock, when we resumed our march, making regularly a halt at noon for one or two hours. Such was usually the order of the day, except when accident of country forced a variation; which, however, happened but rarely. We travelled the next day along the Sante Fé road, which we left in the afternoon, and encamped late in the evening on a small creek, called by the Indians Mishmagwi. Just as we arrived at camp, one of the horses set off at full speed on his return, and was followed by others. Several men were sent in pursuit, and returned with the fugitives about midnight, with the exception of one man, who did not make his appearance until morning. He had lost his way in the darkness of the night, and slept on the prairie. Shortly after midnight it began to rain heavily, and, as our tents were of light and thin cloth, they offered but little obstruction to rain; we were all well soaked, and glad when morning came. We had a rainy march on the 12th, but the weather grew fine as the day advanced. We encamped in a remarkably beautiful situation on the Kansas bluffs, which commanded a fine view of the river valley, here from three to four miles wide. The

central portion was occupied by a broad belt of heavy timber, and nearer the hills the prairies were of the richest verdure. One of the oxen was killed here for food.

We reached the ford of the Kansas late in the afternoon of the 14th, where the river was two hundred and thirty yards wide, and commenced immediately preparations for crossing. I had expected to find the river fordable; but it had been swollen by the late rains, and was sweeping by with an angry current, yellow and turbid as the Missouri. Up to this point, the road we had travelled was a remarkably fine one, well beaten, and level—the usual road of a prairie country. By our route, the ford was one hundred miles from the mouth of the Kansas River. Several mounted men led the way into the stream, to swim across. The animals were driven in after them, and in a few minutes all had reached the opposite bank in safety, with the exception of the oxen, which swam some distance down the river, and, returning to the right bank, were not got over until the next morning. In the meantime, the carts had been unloaded and dismantled, and an india-rubber boat, which I had brought with me for the survey of the Platte River, placed in the water. The boat was twenty feet long and five broad, and on it were placed the body and wheels of a cart, with the load belonging to it, and three men with paddles.

difficult to be managed, Basil Lajeunesse, one of our best swimmers, took in his teeth a line attached to the boat, and swam ahead in order to reach a footing as soon as possible, and assist in drawing her over. In this manner, six passages had been successfully made, and as many carts with their contents, and a greater portion of the party deposited on the left bank; but night was drawing near, and, in our anxiety to have all over before the darkness closed in, I put upon the boat the remaining two carts, with their accompanying load. The man at the helm was timid on water, and, in his alarm, capsized the boat. Carts, barrels, boxes, and bales were in a moment floating down the current; but all the men who were on the

The velocity of the current, and the inconvenient freight, rendering it

shore jumped into the water, without stopping to think if they could swim, and almost everything—even heavy articles, such as guns and lead—was

recovered.

Two of the men, who could not swim, came nigh being drowned, and all the sugar belonging to one of the messes wasted its sweets on the muddy waters; but our heaviest loss was a bag of coffee, which contained nearly all our provision. It was a loss which none but a traveller in a strange and inhospitable country can appreciate; and often afterward, when excessive toil and long marching had overcome us with fatigue and weariness, we remembered and mourned over our loss in the Kansas. Carson and Maxwell had been much in the water yesterday, and both, in consequence, were taken ill. The former continuing so, I remained in camp. A number of Kansas Indians visited us to-day. Going up to one of the groups who were scattered among the trees, I found one sitting on the ground, among some of the men, gravely and fluently speaking French, with as much facility and as little embarrassment as any of my own party, who were nearly all of French origin.

On all sides was heard the strange language of his own people, wild, and harmonizing well with their appearance. I listened to him for some time with feelings of strange curiosity and interest. He was now apparently thirty-five years of age; and, on inquiry, I learned that he had been at St. Louis when a boy, and there had learned the French language. From one of the Indian women I obtained a fine cow and calf in exchange for a yoke of oxen. Several of them brought us vegetables, pumpkins, onions, beans, and lettuce. One of them brought butter, and from a half-breed near the river I had the good fortune to obtain some twenty or thirty pounds of coffee. The dense timber in which we had encamped interfered with astronomical observations, and our wet and damaged stores required exposure to the sun. Accordingly the tents were struck early the next morning, and, leaving camp at six o'clock, we moved about seven miles up the river, to a handsome, open prairie, some twenty feet above the water, where the fine grass afforded a luxurious repast to our horses.

During the day we occupied ourselves in making astronomical observations, in order to lay down the country to this place; it being our custom to keep up our map regularly in the field, which we found attended with many advantages. The men were kept busy in drying the provisions, painting the cart-covers, and otherwise completing our equipage, until the afternoon, when powder was distributed to them, and they spent some hours in firing at a mark. We were now fairly in the Indian country, and it began to be time to prepare for the chances of the wilderness.

Friday, June 17th.—The weather yesterday had not permitted us to make the observations I was desirous to obtain here, and I therefore did not move to-day. The people continue their target-firing. In the steep bank of the river here were nests of innumerable swallows, into one of which a large prairie-snake had got about half his body, and was occupied in eating the young birds. The old ones were flying about in great distress, darting at him, and vainly endeavoring to drive him off. A shot wounded him, and, being killed, he was cut open, and eighteen young swallows were found in his body. A sudden storm that burst upon us in the afternoon, cleared away in a brilliant sunset, followed by a clear night, which enabled us to determine our position, in longitude 95° 38′ 05″, and in latitude 39° 06′ 40″.

A party of emigrants to the Columbia River, under the charge of Dr.

White, an agent of the Government in Oregon Territory, were about three weeks in advance of us. They consisted of men, women, and children. There were sixty-four men, and sixteen or seventeen families. They had a considerable number of cattle, and were transporting their household furniture in large heavy wagons. I understood that there had been much sickness among them, and that they had lost several children. One of the party, who had lost his child, and whose wife was very ill, had left them about one hundred miles hence on the prairies; and as a hunter, who had accompanied them, visited our camp this evening, we availed ourselves of his return to the States to write to our friends.

The morning of the 18th was very unpleasant. A fine rain was falling, with cold wind from the north, and mists made the river-hills look dark and gloomy. We left our camp at seven, journeying along the foot of the hills which border the Kansas Valley, generally about three miles wide, and extremely rich. We halted for dinner, after a march of about thirteen miles, on the banks of one of the many little tributaries to the Kansas, which look like trenches in the prairie, and are usually well timbered. After crossing this stream, I rode off some miles to the left, attracted by the appearance of a cluster of huts near the mouth of the Vermilion. It was a large but deserted Kansas village, scattered in an open wood, along the margin of the stream, on a spot chosen with the customary Indian fondness for beauty of scenery. The Pawnees had attacked it in the early spring. Some of the houses were burnt, and others blackened with smoke, and weeds were already getting possession of the cleared places. Riding up the Vermilion River, I reached the ford in time to meet the carts, and, crossing, encamped on its western side. The weather continued cool, the thermometer being this evening as low as 49°; but the night was sufficiently clear for astronomical observations, which placed us in longitude 96° 04' 07", and latitude 39° 15' 19". At sunset the barometer was at 28.845, thermometer 64°.

We breakfasted the next morning at half-past five, and left our encampment early. The morning was cool, the thermometer being at 45°. Quitting the river bottom, the road ran along the uplands, over a rolling country, generally in view of the Kansas, from eight to twelve miles distant. Many large boulders, of a very compact sandstone, of various shades of red, some of them four or five tons in weight, were scattered along the hills; and many beautiful plants in flower, among which the Amorpha canescens was a characteristic, enlivened the green of the prairie. At the heads of the ravines I remarked, occasionally, thickets of Salix longifolia, the most common willow of the country. We travelled nineteen miles, and pitched our tents at evening on the head-waters of a small creek, now nearly dry, but having in its bed several fine springs. The barometer in-

dicated a considerable rise in the country—here about fourteen hundred feet above the sea—and the increased elevation appeared already to have some slight influence upon the vegetation. The night was cold, with a heavy dew; the thermometer at 10 P.M. standing at 46°, barometer 28.483. Our position was in longitude 96° 14′ 49″, and latitude 39° 30′ 40″.

The morning of the twentieth was fine, with a southerly breeze, and a bright sky; and at seven o'clock we were on the march. The country today was rather more broken, rising still, and covered everywhere with fragments of siliceous limestone, particularly on the summits, where they were small, and thickly strewed as pebbles on the shore of the sea. In these exposed situations grew but few plants; though whenever the soil was good and protected from the winds, in the creek bottoms and ravines and on the slopes, they flourished abundantly; among them the amorpha still retaining its characteristic place. We crossed, at 10 A.M., the Big Vermilion, which has a rich bottom of about one mile in breadth, one-third of which is occupied by timber. Making our usual halt at noon, after a day's march of twenty-four miles, we reached the Big Blue, and encamped on the uplands of the western side, near a small creek, where was a fine large spring of very cold water. This is a clear and handsome stream, about one hundred and twenty feet wide, running, with a rapid current, through a well-timbered valley. To-day antelope were seen running over the hills, and at evening Carson brought us a fine deer. Longitude of the camp 96° 32' 35", latitude 39° 45' 08". Thermometer at sunset 75°. A pleasant southerly breeze and fine morning had given place to a gale, with indications of bad weather; when, after a march of ten miles, we halted to noon on a small creek, where the water stood in deep pools. In the bank of the creek limestone made its appearance in a stratum about one foot thick. In the afternoon, the people seemed to suffer for want of water. The road led along a high dry ridge; dark lines of timber indicated the heads of streams in the plains below; but there was no water near, and the day was very oppressive, with a hot wind, and the thermometer at 90°. Along our route the amorpha has been in very abundant but variable bloom—in some places, bending beneath the weight of purple clusters; in others, without a flower. It seems to love best the sunny slopes, with a dark soil and southern exposure. Everywhere the rose is met with, and reminds us of cultivated gardens and civilization. It is scattered over the prairies in small bosquets, and, when glittering in the dews and waving in the pleasant breeze of the early morning, is the most beautiful of the prairie flowers. The artemisia, absinthe, or prairie sage, as it is variously called, is increasing in size, and glitters like silver, as the southern breeze turns up its leaves to the sun. All these plants have their insect habitants, variously colored; taking generally the hue of the flower on which they live. The artemisia has its small fly accompanying it through every change of elevation and latitude; and wherever I have seen the Asclepias tuberosa, I have always remarked, too, on the flower a large butterfly, so nearly resembling it in color, as to be distinguishable at a little distance only by the motion of its wings. Travelling on the fresh traces of the Oregon emigrants relieves a little the loneliness of the road; and to-night, after a march of twenty-two miles, we halted on a small creek which had been one of their encampments. As we advance westward, the soil appears to be getting more sandy, and the surface-rock, an erratic deposit of sand and gravel, rests here on a bed of coarse yellow and gray and very friable sandstone. Evening closed over with rain and its usual attendant, hordes of mosquitoes, with which we were annoyed for the first time.

June 22d.—We enjoyed at breakfast this morning a luxury, very unusual in this country, in a cup of excellent coffee, with cream from our cow. Being milked at night, cream was thus had in the morning. Our mid-day halt was at Wyeth's Creek, in the bed of which were numerous boulders of dark ferruginous sandstone, mingled with others of the red sandstone already mentioned. Here a pack of cards, lying loose on the grass, marked an encampment of our Oregon emigrants; and it was at the close of the day when we made our bivouac in the midst of some welltimbered ravines near the Little Blue, twenty-four miles from our camp of the preceding night. Crossing the next morning a number of handsome creeks, with clear water and sandy beds, we reached at 10 A.M. a very beautiful wooded stream, about thirty-five feet wide, called Sandy Creek, and sometimes, as the Ottoes frequently winter there, the Ottoe Fork. The country has become very sandy, and the plants less varied and abundant, with the exception of the amorpha, which rivals the grass in quantity, though not so forward as it has been found to the east-

At the Big Trees, where we had intended to noon, no water was to be found. The bed of the little creek was perfectly dry, and on the adjacent sandy bottom cacti, for the first time, made their appearance. We made here a short delay in search of water; and, after a hard day's march of twenty-eight miles, encamped at five o'clock on the Little Blue, where our arrival made a scene of the Arabian desert. As fast as they arrived, men and horses rushed into the stream, where they bathed and drank together in common enjoyment. We were now in the range of the Pawnees, who were accustomed to infest this part of the country, stealing horses from companies on their way to the mountains, and, when in sufficient force, openly attacking and plundering them, and subjecting them to various kinds of insult. For the first time, therefore, guard was mounted to-night. Our route the next morning lay up the valley, which,

bordered by hills with graceful slopes, looked uncommonly green and beautiful. The stream was about fifty feet wide, and three or four deep, fringed by cotton-wood and willow, with frequent groves of oak tenanted by flocks of turkeys. Game here, too, made its appearance in greater plenty. Elk were frequently seen on the hills, and now and then an antelope bounded across our path, or a deer broke from the groves. The road in the afternoon was over the upper prairies, several miles from the river, and we encamped at sunset on one of its small tributaries, where an abundance of prêle (equisetum) afforded fine forage to our tired animals. We had travelled thirty-one miles. A heavy bank of black clouds in the west came on us in a storm between nine and ten, preceded by a violent wind. The rain fell in such torrents that it was difficult to breathe facing the wind, the thunder rolled incessantly, and the whole sky was tremulous with lightning; now and then illuminated by a blinding flash, succeeded by pitchy darkness. Carson had the watch from ten to midnight, and to him had been assigned our young compagnons de voyage Messrs. Brant and R. Benton. This was their first night on guard, and such an introduction did not augur very auspiciously of the pleasures of the expedition. Many things conspired to render their situation uncomfortable; stories of desperate and bloody Indian fights were rife in the camp; our position was badly chosen, surrounded on all sides by timbered hollows, and occupying an area of several hundred feet, so that necessarily the guards were far apart; and now and then I could hear Randolph, as if relieved by the sound of a voice in the darkness, calling out to the sergeant of the guard to direct his attention to some imaginary alarm; but they stood it out, and took their turn regularly afterward.

The next morning we had a specimen of the false alarms to which all parties in these wild regions are subject. Proceeding up the valley, objects were seen on the opposite hills, which disappeared before a glass could be brought to bear upon them. A man who was a short distance in the rear came spurring up in great haste, shouting, "Indians! Indians!" He had been near enough to see and count them, according to his report, and had made out twenty-seven. I immediately halted, arms were examined and put in order; the usual preparations made; and Kit Carson, springing upon one of the hunting horses, crossed the river, and galloped off into the opposite prairies, to obtain some certain intelligence of their movements.

Mounted on a fine horse, without a saddle, and scouring bareheaded over the prairies, Kit was one of the finest pictures of a horseman I have ever seen. A short time enabled him to discover that the Indian warparty of twenty-seven consisted of six elk, which had been gazing curiously at our caravan as it passed by, and were now scampering off at full speed.

This was our first alarm, and its excitement broke agreeably on the monotony of the day. At our noon halt, the men were exercised at a target; and in the evening we pitched our tents at a Pawnee encampment of last July. They had apparently killed buffalo here, as many bones were lying about, and the frames where the hides had been stretched were yet standing. The road of the day had kept the valley, which is sometimes rich and well timbered, though the country is generally sandy. Mingled with the usual plants, a thistle (Carduus leucógraphus) had for the last day or two made its appearance; and along the river bottom, tradescantia virginica and milk plant (Asclepias syriaca*), in considerable quantities.

Our march to-day had been twenty-one miles, and the astronomical observations gave us a chronometric longitude of 98° 22′ 12″, and latitude 40° 26′ 50″. We were moving forward at seven in the morning, and in about five miles reached a fork of the Blue, where the road leaves that river, and crosses over to the Platte. No water was to be found on the dividing ridge, and the casks were filled, and the animals here allowed a short repose. The road led across a high and level prairie ridge, where were but few plants, and those principally thistle (Carduus leucógraphus), and a kind of dwarf artemisia. Antelope were seen frequently during the morning, which was very stormy. Squalls of rain, with thunder and lightning, were around us in every direction; and while we were enveloped in one of them, a flash, which seemed to scorch our eyes as it passed, struck in the prairie within a few hundred feet, sending up a column of dust.

Crossing on the way several Pawnee roads to the Arkansas, we reached, in about twenty-one miles from our halt on the Blue, what is called the coast of the Nebraska, or Platte, River. This had seemed in the distance a range of high and broken hills; but on a nearer approach were found to be elevations of forty to sixty feet, into which the wind had worked the sand. They were covered with the usual fine grasses of the country, and bordered the eastern side of the ridge on a breadth of about two miles. Change of soil and country appeared here to have produced some change in the vegetation. *Cacti* were numerous, and all the plants of the region appeared to flourish among the warm hills. Among them the *amorpha*, in full bloom, was remarkable for its large and luxuriant purple clusters. From the foot of the coast, a distance of two miles across the level bottom brought us to our encampment on the shore of the river, about twenty

The Sioux Indians of the Upper Platte ear the young pods of this plant, boiling them with the meat of the buffalo.

^{* &}quot;This plant is very odoriferous, and in Canada charms the traveller, especially when passing through woods in the evening. The French there eat the tender shoots in the spring, as we do asparagus. The natives make a sugar of the flowers, gathering them in the morning when they are covered with dew, and collect the cotton from the pods to fill their beds. On account of the silkiness of this cotton, Parkinson calls the plant Virginian silk."—Loudon's Encyclopedia of Plants.