LETTERS FROM CUBA....NO. II.

Caves and Stalactiles, Petrifactions, Indigenous Fruit Trees and Roots, Cultivated Fruits, Sugar, Coffee, Forest Trees, Bombax, Palm Meal, and Agave, Opuntai Major, Wild Fig.

As the coasts of Cuba are indented with bays and harbors, so is the interior interspersed with caverns, rocks and caves. Some of these caves are equal to those of Kentucky in magnitude, and would have as many wonders connected with them, were they as much visited. But where the people have little curiosity, there will be but little of the marvellous to relate. Even the Cave of Yumin, said by those who have explored it to have a subterranean passage of two miles in length, has not produced so much as a witch, a ghost, or a hobgoblin. The principal cavity is divided into two apartments, having (I am told, for I have not seen it) fine white sand floors and crystalline walls. These two rooms are connected by a narrow passage, and are by many who have visited it, mistaken for the whole cavern. But a gentleman, upon whose report I could rely, assured me that he had himself passed through a long narrow cavity, in which he could seldom walk erect, and finally emerged again into open day upon the opposite side of the hill, and in view of the sea; having, as he believed, wandered at least two full miles in the windings of this dark passage. The spot where he emerged, was more than a mile in a direct line from the entrance.

There is now a respectable and rich family, who, when they began their plantation in Canimar, lived eighteen years in a cave, and their mayoral and his family still live in it. The water is constantly percolating from the stalactiles, which they have conducted into a reservoir, to supply their wants. I have been into this residence, and found it indeed sufficiently romantic to suit any lass or swain; but not quite dry enough, if they should happen to be troubled with a cough. Near to my own house there are several very beautiful caverns, the walls of which are of spar, and the roof hung with stalactiles of all sizes, from an inch to several feet in length. The dampness of these subterranean abodes, together with the warmth of the atmosphere, soon obscures the natural brilliancy of these crystallizations; but when we have scraped off this mould from the surface, they are exceedingly beautiful, and present to the eye as brilliant and sparkling a substance as can be conceived of. When broken, the different colors they exhibit would almost lead one to imagine they were com-

posed of all the various precious stones that custom has stamped such great value upon. You would fancy that you could descry the topaz, the ruby, the emerald, and above all, the diamond. Some pieces are so apparently perfect, that I could hardly convince myself they could not be wrought. I observed that the small stalactiles, which had but just began to form, were not unlike in substance to common clay, and were tubular like the stem of a clay pipe, and not larger. The water which issued from these small ones, was *salt*, but that from the larger ones was perfectly fresh and agreeable to the taste. In one of the rooms, which was about ten feet square, and as high, there was a perpetual spring supplied by this water. How large the excavations once were, is not easy to conjecture, since masses of this rock are constantly forming, and the remaining cavities are in the midst of large beds of rock. The opening is at the top, and we descend by stone steps into a pleasant little room; out of which there is an aperture that leads further than any one has yet ventured to explore. From the *sea sand* which composes the floor of this one, it must at some former period have been accessible to the bay of Matanzas. But there is now a mile between them, and hilly, rocky land. Several circumstances lead me to believe that the shores of this island were once far from their present limits. It is evident that the present magnitude has been acquired by degrees, and that the island has been formed from the ocean and not disjoined from the continent, as seems to be the general opinion. I am more inclined to believe that the West India Isles *will* join the continent at some future period, than I am to think they have made part of it in times past. But this I suppose would be laughed at for as vague a notion as Symmes' theory. By the by, *I* do not think his theory, if I understand it rightly, *is* so visionary as most people appear to. I really think the man ought to be enabled to make the experiment. If he should not find his anticipated nation, he may find others equally unknown to us. Columbus, though he missed the East Indians, found other *indians* as good; and although we have since that time discovered a great deal, yet there is more yet to discover, as every year proves. Yes, I am for having Mr. Symmes rigged out immediately, and think Mr. Adams cannot do better than immortalize his reign through this discoverer.

But to come from Mr. Symmes' world back to stones. This climate, like all rainy ones, produces abundance of petrifactions, opaque as well as semi-transparent. Sticks, plants, sponge, bees wax, honey comb, and even honey itself, is found here in a state of petrifaction. I once saw a bee's nest in every stage from the solid stone to the liquid fluid. But I have noticed that similar substances, apparently thoroughly petrified, are not so *heavy*

as those of the same material and size found on the Ohio river. Our native rocks are not so heavy; neither is the soil. A bushel of yankee earth would weigh some pounds more than ours. But I have never found any crystallizations or dark petrifactions *above* ground any thing so beautiful as some that were found in digging a well in my neighborhood, seventy feet below the surface. The first was a star fish, adhering to a shell of the horse shoe fish. This was dark, but in every respect perfect. The next were large muscles, perfect also—even the smallest lines were distinct. There were also some of a larger kind, but being no ichthyologist or conchologist, I cannot class them; but they were *bivalve*, and in the finest preservation—no diamonds were ever more *brilliant*. They were beautiful, and taken from what appeared a bed of soft rock. There were also what appeared branches of white coral, taken from the same bed, and various other articles. I tried to get them for the cabinet of minerals at Cambridge; but a gentleman (who was one that requested me to send the coco and soil) got the start of me; and he was so offended that no notice was taken of our request, that he would not consent Cambridge should have them, but sent them, I believe, to the professor of mineralogy in the college of Maryland. I saw nothing in the collection at Cambridge like them.

Of natural curiosities we have little to boast. The aspect of the country is lovely; the landscape is soft, pleasing and delightful. The fine, full, deep, green foliage, and the innumerable variety of flowering trees, and flowering vines that run over the trees, give to the fields charms that soothe the mind of the beholder. But there is nothing *grand*, nothing terribly majestic, nothing stupendous or magnificent in nature's works; she has sought to please, to diversify and to polish, but not to astound us by her wonderful works. There *could* be no Oronokes, no Mississippis, no Lake Superiors, no Alleghanies, upon our little world; and there *are* no burning springs nor burning mountains. The great and astonishing efforts of nature have been displayed where you are; her beneficent designs are seen here—here where even the forest is laden with fruits sufficient to keep and preserve even the desolate wanderer with food.

The island produces many indigenous fruits, esculent roots and vegetables. Among the first are the lauras, of which two species, or rather varieties, called the Avocada pear, are among the most palatable. This fruit is in shape like that large variety of your pear, commonly called the pound pear, and is sometimes as large, though not so heavy, as it is hollow. This fruit is eaten as a salad, and is the richest vegetable ever tasted, with the exception of akee. It is sometimes called vegetable marrow, and very appropriately, for it is much like that.

There are also two species of annona, viz: the sour and sweet top, both of which are very pleasant. The Sapodella, the Seville and China oranges and limes grow in our forests. Two species of mammee, the bread nut, the guaver papayas, and grapes of a fine flavor are also found in the woods; and no doubt there are many others which I do not know or do not recollect at this moment. Esculent roots, such as the wild yuea, yam, potatoe, &c., are likewise indigenous, so that no man would starve in our forests, if he found water also. It was this natural abundance, no doubt, that contributed to the natural indolence of the natives, whether aborigines or Spanish creoles, for the *last* are as indolent as the others could have been. It is said that there is a species of the plantain tree indigenous to the island, and I have no doubt there is, but have never met with it.

I wish that, with a soil capable to produce almost every kind of vegetable and fruit, and a climate congenial to so many, I could give a better list of the *cultivated* productions. But if nature has been bountiful to Cuba, man has been negligent enough, and with all his advantages, can hardly show the variety which industry has made the barren rocks of the Bahamas display. Of northern fruits we have scarcely one. There are a few apple trees upon the plantation of Mr. Fellows. Peaches have also been introduced, but either from want of skill, or some other cause, they do not thrive well. Figs probably would, if well attended to, for they grow well in Louisiana; but we have few of them. Pears and plums might be engrafted upon our indigenous trees, for among these I forgot two species of large plum, one of which is often sold with you for sweetmeat, under the name of acacas. But there is not in the island a man who understands *grafting* trees; at least so they told me at the botanic garden in Havana. People will tell you that this nor that fruit will grow in our climate, but the truth is they never tried it. Those exotics which have been hitherto cultivated, are mostly natives of the East Indies and other warm latitudes. Of these, the artocarpus, or celebrated bread fruit, is one. It is a most beautiful tree, but the fruit, which must be cooked to be eaten, is not equal to the *plantain*, which last supersedes the *necessity* of our cultivating it for food; but as an ornament, every man of taste must desire to see it in his grounds. The pomegranite, star apple, rose apple, several species of the orange, cocoa nut, tamarinds, cashew apple, mango, and pine apples, are all common to us. The pine apple, which persons have supposed was the product of a *tree*, is an annual plant, with no other than the radical leaves. These plants bear a single berry, the apple you receive; but young suckers are constantly coming out from the parent stock, so that when once a field is planted, part of the new plants

require rather to be removed than others to be put in. The tuft or crown of leaves which come out upon the top of the fruit, will grow if you plant it in the ground as soon as it is cut off; but the cions are preferred. With care and watering during the dry seasons, we might have these apples through the year, though their *season* is in autumn. The poorest soil is best for pines.

What we call mango, is the fruit of a beautiful tree of the size of your cherry trees. The fruit is uniform, with a smooth skin and a large spongy shell nut. The flavor is much like that of the apricot, and the size that of a very large pear; but the flesh adheres to the nut like the cling stone peach. Green, it is not only a substitute for, but is preferable to apples, for tarts and sweetmeat. The kernel of the nut is valued as a medicine, and so is the bark of the tree. Four years will give a tree in bearing from a seed; some say three years will. The cashew is another fruit which might supply the place of apples for *cider*. We do nothing *here;* but in Jamaica it is raised for wine, which is made in the same manner you make cider, by expressing the juice, with which the cashew abounds much more than the common apple. This tree, which is smaller than the mango, bears fruit in two years from the seed. What is peculiar in this fruit is that the seed, a hard shell nut, of the size of a large olive, appears before the apple, covering the apex upon the *outer side*. This contains, in the shell, a remarkably caustic oil, which causes blisters upon the skin, and it is difficult to extract the kernel without some of the oil upon it. But by roasting these nuts in hot embers, this oil is burned up, and the nut is then more palatable than even the almond. We have a species of the *cactus*, called Barbadoes, or Otahiete gooseberry, which is a very tolerable substitute for the English gooseberry. These berries are rather larger than the English, and of an orange color, with beautiful little green leaves upon all sides of the fruit itself. It is a climber, and very handsome one too, with clusters of milk white blossoms and satin leaves. But all these, with many others, are accurately delineated and colored according to nature, in my "Specimens of the Plants of Cuba," where, if it ever should be published, you may also find a very minute history of each.

In speaking of our indigenous fruits, I might have observed, that I have never found a single species of those we commonly call *berries*, in this country, that was good to eat—no whortleberries, raspberries, blackberries, nor any one kind that was palatable; nor, with the exception of the gooseberry mentioned, have we any cultivated ones. Olives are cultivated, and one planter has date trees; but ignorant of botany, he was not aware that the male and female blossoms grew upon distinct trees, and wondered how it happened that when they bloomed so abundant-

ly, they produced no dates, whereas his trees were only of one gender!

But of all our fruits, whether native or exotic, the most valuable, and at the same time the most common, is the plantain. This may well be said to be the staff of life to a great proportion of the Cubians, who take no other bread for months together. And what a stranger would hardly believe, those foreigners who, when they arrive, cannot make a meal without wheat bread, soon come to give the unripe, roasted plantain, the preference; and also to consider it much more wholesome. We have so many substitutes for bread, that we have come to hold that article in little repute, thinking it dry, tasteless and insipid—so greatly does our physical taste change with change of diet. The plantain, of which there are four species, is raised from a *piece* of the root, having an herbaceous trunk ten or twelve inches in diameter, and so full of juice that some planters keep a patch solely for accidental *fires*, as it is found nothing will extinguish them quicker than throwing on plaintain trees. They grow in a good soil, eighteen or twenty feet high, with leaves five or six feet long, and from two to three broad. Some writers imagine this to be the fruit which tempted our first parents to transgress the Divine command; and others, that these were the leaves they sewed together. But the leaves are so large they would not require to be sewed to others; and so tender, the most expert sempstress could not sew them. They come out from the centre, rolled up, and erect like a spike, and grow so rapidly, that it is confidently stated in the Hortus Jamaciensis, they increase an inch in an hour. Like the pine apple, the same plant produces but once. When the raceme of fruit is plucked, the tree that bore it should be cut in pieces, and strewed around the cluster of young plants which have already appeared, to manure them. A large raceme of plantains will weigh fifty or sixty pounds. The banana, which differs only in the size and flavor of the first, is the most delicate, and the only one good to eat raw. This is very excellent to eat in its natural state; and serves for pies, sweetmeats, &c., and is often dried to carry to sea. They are about three inches long, and an inch and a half in diameter. I know no fruit, the flavor of which is more rich; but it is not thought so valuable as either of the other kinds, which serve both for meat and bread to many. Before they are quite ripe, they are best to roast, and in this state are used as bread. Fried, boiled, stewed, baked, and friccaseed, they are eaten as vegetables. They must be ripe for these; and when baked with sugar, and eaten with milk, are much superior to your sweet apples. Invalids, troubled with long complaints, find this a favorite diet. One half of the living of the negroes and lower class, may be said to consist of plan-

tains, in some form or other. They never tire of it, but are sure to complain if plantains are denied, let them have what they will beside.

The tree bears ripe fruit in about fifteen months from the time of planting; and new ones spring up so rapidly, that some must be removed in two or three years, or the field becomes too crowded. They require to be kept clear of weeds, but need no other care, except pruning the dry leaves. Hence, wherever there is a hut, there are also plantains around it. The leaves are used for thatching; and in some of the islands, a sort of hemp is manufactured from the fibres of this plant. It was considered of so much importance in Jamaica, that their assembly gave a premium of two hundred pounds to the best specimens of hemp from the plantain. But that has not been done in this place. We have, it is true, an agricultural society, but its chief business is to *write* dissertations, not to put any of their theories into practice, or to encourage practical improvements.

The Franciscans dedicate the plantain to the muses; hence the Generic name of Musa.

Among our cultivated roots, are the yam, two kinds; the sweet potatoe, several kinds; the malangas, several kinds; the sweet cassada, and the arrow root. This last is valuable only for the faculæ—the others, as esculent roots. Beets, carrots, turnips, onions, raddishes, cabbages, cauliflowers, &c., also grow well, if we can keep the bibi aguas from them. But the creoles know no difference between a cauliflower and a Dutch cabbage, and sell them for the same price. Twice the servant brought home as fine a cauliflower as I ever saw, when he had asked for a cabbage. Indeed, I had been told no cauliflowers were cultivated in the island, nor had I seen any until one was brought me from the market for a ninepence. Peas, asparagus, lettuce, cellery, squashes, melons, &c. are carried into the vegetable market at Havana, and are beginning to be seen in that of Matanzas; but when I first came to the island, in 1819, none but the coarser kind of vegetables could be had. Such as cost little care and little labor, were plenty; but green peas, and such like delicacies, were beyond Spanish epicureanism. Horticulture is still shamefully neglected. The poor are too indolent to attend to it, and the more wealthy are intent upon sugar and coffee, or what, in their estimation, is more important than making gardens. There are, moreover, no scientific gardeners in the place—even in the botanic garden, the master gardener is not fit to grow potatoes; and I have told you, knows not how to bud a tree, or graft one. The two grand objects with agriculturalists, are sugar and coffee. Formerly, tobacco was one; but the cultivation of this, if it do not decline, does not increase in proportion to the other two.

To encourage the cultivation of the sugar cane, the government enacted several laws favorable to the sugar planter. As a fortune would be required to purchase a large sugar estate with all the necessary works, no one could commence this business without going more or less into debt, which often exposed him to ruin, when unable to meet his engagements. Hence the crown passed an act prohibiting the seizure of the negroes upon a sugar estate, or any other property than the crops. This law, which was both necessary and judicious, has been so abused, that planters find it operates against them, as well as in their favor; for men have become shy of lending to persons thus secured, and who have too often found means to keep the crop as well as negroes from their creditors. Much greater capital is required to commence a sugar plantation, than one for coffee; and for these reasons, coffee estates have increased twice as fast as sugar estates; yet both the soil and climate are favorable. As we never know frost, the cane is permitted to stand some weeks longer in the field than it is in Louisiana, and it grows nearly a third higher; while the same quantity of its juice has a larger proportion of saccharine. An acre of cane here, yields three thousand pounds of sugar; but it yields it with one half the labor that is bestowed upon an acre in Jamaica, and without manuring the soil. Not more than half the number of hands are employed by a creole planter in Cuba, for the same result of sugar, as in Jamaica; and the American planters have still fewer. All the mills are, I believe, wrought with mules, horses, or oxen, excepting one or two, where the machinery is worked by water.

The Spaniards mostly make the clayed sugars; while the foreigners choose to make the muscovado. Each probably understand the art of making his own kind, better than the other. It is seldom a creole planter gives to his sugar that fine grain and bright color observable in the New Orleans sugars. When clayed, this is of no importance; and the process of claying is very simple. Vessels of a pyramidal form, are made of a coarse clay, with a small aperture at the top, to let out the molasses. These are fixed in a floor, or frame, with the large end upwards—they are then filled with sugar, and covered with a layer of clay. This clay requires to be exchanged for fresh, once or twice. But nothing more is required to make brown sugar as white as snow. The smaller the vessel, the sooner the contents will bleach. A gentleman sent me some *loaves*, of an ounce or two in weight, which were as white, and as hard and firm, as it is possible sugar could be made by any process whatever, which he had refined in this manner. The creoles are not neat about their sugars; and if people *saw* how they managed their manufacture, they would never want to buy from them. It depends upon the price of these articles, which shall be most lucrative a sugar or coffee

estate, in proportion to the capital employed. But I am inclined to believe the latter is the most profitable, and is certainly attended with less hazard.

It is strange whence arose that singular error that *sugar* was unwholesome, and that children should not be allowed to eat raw sugar upon this principle. This notion never prevailed where sugar is made. On the contrary, yearly experience proves that the negroes are always in best health while the cane is ripe, when they are continually sucking it, and eating as much sugar and molasses as they choose. They always grow *fat* at sugar boiling, although they then work harder than at any other period of the year. Feeble, sickly children, both white and black, often become healthy by eating sugar. Indeed we consider it as a purifier of the blood from bad humors, and as a remedy against eruptions, and all sorts of cutaneous diseases. Some physicians have *proved* the juice of cane a certain cure for pulmonary complaints. *I* have not found it so, you know; yet I have a high opinion of its efficacy in many cases, and of its general nutritive and wholesome properties.

The coffee tree is a native of Africa, where it is not treated in the same manner that we treat it. We first plant the ripe berries in a nursery that is in a manner shaded, to prevent the young plants from being scorched. The seeds are sowed in rows, at sufficient distance to admit hoeing, as they must be kept free from weeds. They should remain three years in their seminary; they are then drawn, and the tops cut off within three or four inches of the root. Holes are previously dug in the field that is to receive them, fifteen or eighteen inches deep, six feet apart; in these the young plants are set, so firmly as not to be pulled up by a strong man. In three years they produce a small crop; in four a full one. If permitted to reach their natural height, the coffee tree would grow from fifteen to eighteen feet; but we do not allow them to exceed five, both to facilitate the gathering of the berries, and to increase the quantity, as that nutriment which would be conveyed to a tree of sixteen feet being confined to five, naturally expends in the fruit what would have gone to the branches of a larger plant. The trunk is small; the branches long, slender and horizontal, coming out in alternate pairs, or, in scientific phrase, are decussate. The leaves are large, lucid, waving, of a beautiful deep glossy green; while the lower branches being longest, gradually shortening towards the top, the whole plant appears like a pyramid of green foliage, with white flowers or red fruit. They blossom in February, and continue in bloom two months, or more. The flowers are white, much like the jessamine in appearance, and something like it in perfume, only less odoriferous. At this period, what in the vegetable world *can*

look more lovely than a field of coffee trees? The beautiful green leaves, contrasted with innumerable white blossoms, is a charming sight. The fields too, are laid out in regular squares, the borders of which are adorned with mango, orange, avocado, and other fruit trees, together with the æschynomene, the leas-alpinæ, and other flowering trees and shrubs, add much to the beauty of the scene. Did you meet no living objects to contradict the idea, you would fancy a well ordered coffee field to be a second garden of Eden; or you would imagine the ancients would not have placed Elysium on any island but this, had they but known Cuba. A very brief walk will destroy this illusion, however, and convince you the curse has fallen here as elsewhere.

The average quantity of coffee to each tree per annum, is one pound. When the berries are ripe, as they begin to be in September, they are picked off by hand, laid into heaps for two or three days, until the pulp begins to ferment; they are then spread upon sicadéros to dry, being raked up and covered at night, or on the approach of a shower. When thoroughly dry, they are hulled in a mill that is worked by a mule. The coffee is then winnowed; then again picked over by hand to clear it from gravel or dirt; then put into bags; then sent to our market; then shipped to yours; then bought and sold as many times as need be; then it is roasted; then ground; then *boiled* by you, for the Americans do not know how to make coffee when they get it. All this tedious process must be gone over before we can get a cup of coffee; yet the French seem to be the only people among christians who either prepare the beverage well, or duly appreciate it when it is prepared; and yet their manner of preparing it is the most simple. The great art lies in making it as strong as it can be, and then diluting it with boiling milk.

This valuable berry, now so universally used all over the world, was not known even at Constantinople, where it constitutes at this period, half the sustenance of the people, until so lately as 1554. During the Turkish lent, coffee is not allowed to be used. The first known in England was in 1652, and was introduced by a Mr. Edwards, who not only brought home coffee from Turkey, but also a servant who understood roasting and preparing it. This same servant, who was a free man, was the first who sold coffee, or rather established the first coffee house, which was in a shed.

It was first carried into France in 1645, by *Thevenot*, the eastern traveller, but was not much used until 1660, when some bales were brought into Marseilles. Some of the eastern nations use it in substance, mixed with oil, and say that a ball of this mixture, of the size of a tennis ball, is equal to a loaf of bread, or a meal of meat.

The trees, in good soil, will continue to bear half a century, and one negro can take care of twenty five hundred trees; but he cannot pick all their berries in season. In gathering these, a field must be gone over a number of times, as all are not ripe at the same period. The size and color of the ripe fruit is much like *cranberries;* but in formation it is a *stone fruit*, like the cherry, two of those seeds you receive being found in each. In new, rich soil, there are sometimes *three*, and in old trees, in dry soil, only one. In Arabia the trees grow to their natural size, and consequently produce a much less quantity, and also much smaller fruit. Hence is it that the Mocha coffee is so superior to ours. We endeavor to raise as much, and as *large* coffee as possible, because this sells the best in your market. Yet it is by no means so fine flavored as the small white coffee that is hardly saleable. I always chose for my own use, what was called refuse, and found it far superior to green coffee. The poorer the soil, and the worse the trees look, the finer flavored is the seed; but in this case they bear but a small quantity, and that would not sell.

Age has a good effect on coffee. If kept in a dry place, the flavor will improve every year; and many gentlemen in England keep always a stock for seven years on hand. But it must be kept from the vicinity of any article that could taint it, for there is nothing imbibes the taste or smell of other bodies so quick or so powerfully as coffee. Whole cargoes of it have been ruined by being placed too near to casks of rum, sugar, spice, &c.; nor is it possible, by any process whatever, to renew it when once tainted. Coffee ought to be kept by dealers, in a room by itself, and in a very dry place; instead of which, they are apt to select as damp a one as will not wholly ruin it, in order to make it weigh heavier. Coffee might be cultivated in some parts of Louisiana; but perhaps not enough to make the introduction of it an object of profit.

From this coffee plantation we will now return to the forests of Cuba, from which Dr. Roberson has told us canoes were made by the Indians, large enough to contain one hundred and fifty men. There are no such canoes here at this time; but the bombax or silk cotton tree, from which they were made, grows to the height of fifty or sixty feet without any limbs putting off, and often has a circumference of twenty feet. I measured one that was thirty. These immense trunks are hollow, having not more than two or three inches of wood, so that nature almost made the boats, as well as furnished the materials. This wood is light, and at the same time strong and durable in the water. They bloom once in seven years, and produce a fine, soft, silky cotton, of a short staple, which is wrought into cloth in the East

Indies, and might be in the West. I suspect the stuff called *pongee* has a mixture of this cotton in it. We use it for pillows and mattresses; but it is too elastic to be approved by the *doctors* for the latter. It is of a brownish color, and has more the feeling of silk than of the gossypium or common cotton. This is the *largest* tree our forests produce; but their *pride*, the belle of the forest, is the royal palm tree. Every body has heard of this tree; for every writer of the East or West Indies has spoken of it; yet no person who has not *seen* it, can form an idea of its beauty or of its appearance. I remember Miss Edgeworth, in one of her novels, seats her heroine under the shade of a spreading palm tree. She might just as well have placed an umbrella upon the top of a liberty pole, and placed her beneath that, as to any shade she was to enjoy. Why, the naked shaft of a palm tree is often, is commonly, a hundred and forty feet; at the top of this come out the *leaves*—for it has no branches—which, to be sure, are twenty feet long, and hang over just as a milliner would wish to have the plumes upon a bonnet; but their *shade* must be sought for at a distance from the trunk. Where the leaves come out, the trunk properly ends, as the rest part is covered with a beautiful glossy green cuticle; beneath which is situated that vegetable substance called cabbage, and from which this tree is often called the cabbage tree by the English, but by the Spaniards, more appropriately, the royal palm. This vegetable is white, and finely flavored; but both in taste and appearance, more resembles the receptacle of the Dutch artichoke. But we cannot obtain this without destroying the tree, which dies as soon as it is removed, and it is both too fine an ornament and too valuable to be sacrificed to an additional dish of vegetables. Like the bombax, the trunk is hollow, having so thin a wood that nails will drive through, and thus it serves for boards to cover buildings, while its fronds or leaves make the very best thatch we have. From two or three palm trees, a man may build himself a comfortable house, with a few nails, without other expense. The leaves are often obtained without cutting down the tree. By means of a rope, practised climbers will ascend the tallest trees with surprising agility, and having cut off the leaves, descend without injury. The very smoothness of the bark facilitates their ascent with the rope; but then this is an art, and must be learned by practice, so that M. de Humboldt was a little unreasonable to rate the boys so roundly because they would not climb the palm tree to get him the flowers, which are up to the leaves. In some instances they grow to two hundred feet in height, but are seldom more than six or seven in circumference at the base, gradually lessening towards the top.

Our forests likewise afford good timber, and much wood, suit-

able for cabinet work—such as mahogany, iron wood, geoffroya, manchisnel, and prince wood; and these all take a fine polish. What we call cedar, is also much used for furniture. But the want of sawing mills, makes it impossible to convert our trees to boards, but at a greater expense than we could buy them imported.

Even Florida can hardly have a greater variety of flowering trees and shrubs than Cuba, which, together with the innumerable varieties of flowering vines that run over the woods, lead a wanderer to think the time had arrived when the "wilderness should blossom as the rose." The collection I have made, but ill denotes the abundance of our flowers, some of which are extremely handsome.

The Agave Americana grows here upon the rocky shores of the bay, to the height of thirty feet, with its lovely orange blossoms laden with honey, and diffusing sweetness to the surrounding atmosphere. This is the same species of the aloe that was transported from place to place in your country, as a curiosity; and I presume that Miss Edgeworth, who appears mighty fond of plants she knows nothing of, placed, at the expense of fifty guineas, and more fraud, upon a lady's supper table. It is in truth the most elegant plant I ever saw; but methinks any plant, of five and twenty feet in circumference, thirty in height, and weighing at least five hundred pounds, must have been, however lovely, an *inconvenient* ornament to a supper table. But this was of a piece with the notion of its blooming only at the end of an hundred years. I find from M. de Humboldt that it blooms in *eight* years, and that is the period I had allotted, judging from the growth of one now three years old, which I had planted.

But this is not the species from which the medicinal drug is extracted. That grows in two years fit to cut, and the medicine is brought to the consistency in which it is sold, by inspissating the juice by heat, in the same manner sugar is made. This is obtained from the Barbadoes aloe; but the Americana is not without its valuable properties. The leaves roasted in the fire, serve in that state for soap, to wash blankets and coarse linen; while pure soap may be made from the juice. A gentleman in Jamaica received a premium for manufacturing this vegetable soap. In South America it furnishes ardent spirit by distillation, and the fibres of the leaves are converted into ropes and coarse cloth. They yield very strong hemp. The juice is much used as a preservative against worms, and all kinds of insects. Vessels that have had their hulls painted with a compound of this drug, will never be worm-eaten: and it is much used for this purpose in some places. Either species of the aloes might be raised in Florida, or wherever the climate be warm enough; for they

grow best upon rocks, and with so little soil, that it is only their weight prevents the wind from blowing them over. Barham says, this plant forms the Hogarthian line of beauty. It blooms in March; but never but once. The parent stock then decays; but not until the embryo plants are formed upon it. Even their little leaves expand before they quit the stem where they blossomed. But when sufficiently formed and strengthened to sustain themselves, they fall upon the ground, take root, and flourish; while the old plant decays, and dying, nurtures her young with her ashes. The Egyptians and Mahometans dedicate this plant to religion, and believe it will keep off spirits and apparitions.

But there is another plant common here, that I wish I had influence enough to bring into notice in the United States. It grows there spontaneously in some places—particularly at the bay of St. Louis, in Mississippi. It is that species of the cactus called opuntia major, and known also by the names of Indian fig and prickly pear. This plant yields a beautiful dye, in every respect equal, in some superior, to the cochineal insect, which it is evident is indebted to this fruit for the color it possesses. Mr. Shetz of Jamaica inspissated the purple juice of this fruit, by more than sixty different processes; and sent the result of the most favorable ones to the dyers in and about London. These dyers assured him that the same quantity of this inspissated juice would color three times the cloth that the cochineal would, and that the color was as brilliant and as permanent. The government, however, appeared to entertain an idea that the encouragement of this manufacture would injure the revenue, by destroying the cochineal trade with Spanish America. However politic this reasoning may be in Britain, it would not apply to the United States, whose reigning policy seems to be to establish an entire independence of all foreign powers, by raising and making every thing within their own dominions. I can assure them that they may make their own *cochineal* from this prickly pear, for I have made it myself. The plate of the cactus in my botanic collection, is colored with the juice of the fig itself. It will grow almost in pure sand. The creoles are very fond of the fruit, and will rob every plant they meet with, even before it is ripe. A leaf set with the stem in the ground, will produce a plant, as each leaf grows out of another, and so on, till it becomes quite a tree. The flowers come out of the edge, and also out of the disk of the leaves.

Among all our plants, there is not perhaps a more singular one than the wild fig, which, from a climber that cannot support itself, comes to be a tree nearly equal in size to the bombax. These plants lay hold on the first object for support; and having

attained a few feet, send out little branches that shoot downwards and take root, sending forth others again. In time these oppress and destroy the body that supported them, and uniting into one trunk, form a large tree. I have seen one of these fig trees, that for six or seven feet from the ground, had destroyed the original tree, around which they had formerly clung for support. On the road from Matanzas to St. Ann, there is one of these figs, with a fine flourishing palm tree growing on the centre of its trunk. The sycophant could not make out to kill the palm, and therefore formed its own trunk around it; and when it had attained its natural height of fifty or sixty feet, sent out its wide spreading branches on all sides, and ceased to struggle; while the palm, protecting the shelter of its enemy, raises its towering head at least fifty feet above that of the fig. I have seen no greater curiosity in the vegetable kingdom than this. The most inattentive observer of nature cannot but notice this singular phenomenon.

The fruit of this fig is small, and not very pleasant. It is this plant that breeds the *gnat*, by means of which the garden is made to yield double fruit, and also to mature its *seeds*, so that other plants may be raised from them; whereas, without the aid of this insect, they can only be propagated by scions and cuttings.

Upon our forest trees are found a numerous class of plants, known only in warm climates, and distinguished, of whatever genera, by the appellations of *parasitical*. The misletoe and tillandrice, Spanish beard, are the only ones I recollect finding on the Mississippi; but I have here found several other genera, and many species, some of which are extremely beautiful.

Among our cultivated articles, cotton does not thrive well. It has not yet experienced that fell disease so common in Mississippi and Georgia, called the rot; but it does not yield, I am told by persons who planted it in both countries, more than half the quantity it does on the continent. Most planters who have tried it, have given it up for coffee. Rice is raised in some parts of the island in considerable quantities; but not sufficient for the consumption of the island. It is found to do best, where never overflowed. Tobacco continues to be cultivated; but the cultivation does not increase in proportion to the increase of planters. Maize or Indian corn thrives very well, as I believe I have already mentioned.