depend from a single bough. Submerged by every tide, they are well nourished and exceedingly palatable, and, although so small, well worth the trouble of opening. English snipe, plover, teal, heron, and pelican are abundant about here at certain seasons.

About a mile farther on, to the left of a spur of high land, through which the railway passes by a deep long cut, is seen the tall forest of Mount Hope, upon which is located the general cemetery of Aspinwall. A pleasant winding path through the thick undergrowth soon brings you upon the spot. Dense foliage surrounds it on every side. This place was selected for a burial-ground shortly after the commencement of the road, and many victims to the hardships of the work and the virulence of the climate were then buried here; but those days of trial have passed, and the long grass waving over their graves tells of the years since then. A few are recent, and marked by simple monuments; among them will be noticed several of the officers of the United States Home Squadron. The lamented Strain (whose suffering and heroism as the leader of the illfated Darien expedition are still fresh in the memory of his countrymen) lies buried here. The surrounding woods, especially toward evening and in the early morning, are vocal with the notes of numerous birds. The sweet and sonorous whistle of the turpiale and the cooing of the turtle-dove mingle with the harsh cries of the parrot tribe and the still harsher note of the toucan. Frequent opportunities occur of procuring these different varieties of birds from the natives, as they are more or less numerous along the entire line of the road, and become domesticated with little trouble. The turpiale, which is about the size of a robin, with deep black and bright yellow plumage, is quite equal to the magpie in intelligence and cunning, and is one of the finest whistlers known. The toucan, a dark scarlet-breasted bird, about the size of a pigeon, with a heavy serrated bill six or

seven inches in length, is one of the ornithological curiosities of this region; picking up its food on the point of its huge beak, by a sudden jerk it tosses it up half a yard, and as it falls catches it deep in its throat; it also makes extraordinary motions over the water when attempting to drink. The habits of the toucan in this respect were noticed by the early Spanish-American priests, who, averring that this bird, in drinking, made the sign of the cross over the water, called it "Dios te de" (God gives it thee). Considerable land in the vicinity of Mount Hope has been cleared, and cultivated with success and profit. Proceeding along the track beyond Mount Hope, you begin to bring more fully into view the wondrous wealth of the Isthmian forest. For a space of fifty feet on either side of the solid track embankment the original growth has been swept away and replaced by a rich display of aquatic plants, through whose broad shining leaves myriads of callas and long, slim-petaled pondlilies struggle out to fill the air with their delicious perfume. This low and recent vegetation is walled in by a primeval growth of a variety and luxuriance that almost defies description. Palm-trees, slender and tall, from under whose crowns hang long scarlet and yellow tassels; palms, low and huge, with trunks scarce lifted above the slimy ooze, sending out graceful pinnate leaves half a dozen yards in length; great cedro and espabe trees, towering up like giants for a hundred feet, then sending out strong arms that almost clasp each other across the clearing, their trunks covered with thick vines and parasites. These and many other varieties are so closely set and interwoven together that the eye fails to penetrate into the depths of the forest. The great number and variety of parasitic growths can not fail to attract constant attention. Almost every tree and shrub supports more or less of these treacherous leeches, in form and size ranging from the simple tuft of grass to the enormous growths whose branches equal in magnitude those

of the largest trees, and frequently exceed those of the poor victim from which their strength is drawn. Some are seen which had originally taken root upon the trunks of large and thrifty trees, which, under their exhausting demands and vice-like embrace, have died and rotted out, leaving the well-conditioned leech, though a mere shell, upright, and so like the original tree that, except for occasional apertures which discloses the hollowness within, their villainy might at a little distance escape detection. Many bear beautiful and fragrant flowers. A curious and exceedingly common variety springs from seeds deposited in the ordure of birds upon the highest trees, sending long fibrous tendrils, without a single branching twig, down to the earth, when it again takes root, and increases in size until it frequently attains a diameter of five or six inches. Often trees, so decayed that otherwise they must have fallen, are by these supports retained in their upright position for many years. The smaller ones, combining pliability with great strength, are much used as cordage by the natives. Trailing vines and blossoming creepers are on every side in great profusion and luxuriance, enwrapping the trees and hanging in variegated festoons from the branches. As you proceed, every moment new, and, if possible, richer varieties of vegetation pass in quick review, until you are almost lost in wonder and admiration. At about three miles from the terminus a bend is cut off in the small sluggish stream, called the Mindee, whose waters are half concealed by the overhanging verdure; along its banks the tall and graceful bamboo, that giant of the grasses, adds a new beauty to the scene. The waters of the Mindee, which empties into Navy Bay about a mile and a half from Aspinwall, abound with alligators, often of great size, which afford plenty of exciting sport to parties from the city, who make occasional incursions upon them, and to the natives, who value them greatly for their oil, which is used for medication, and their teeth,

which are worn as potent charms. Not unfrequently these ugly beasts crawl out into the pools along the railway track, where they may be seen basking in the sun, scarcely deigning to lift their unwieldy heads as the train thunders by.

In the immediate vicinity of the Mindee some of the lands are dry enough to be susceptible of tillage. Native huts may here and there be seen near the road surrounded by patches of plantains, bananas, Indian-corn, and sugar-Beyond this the forest vegetation is varied and enriched by a species of the palm, from the fruit of which the palm-oil of commerce is extracted. It differs little in form from the tasseled variety which has been previously no-ticed, except that it attains a greater size, and, instead of the gaudy tassel, bears immense clusters of scarlet nuts about as large as a lime; the clusters, shooting out from the trunk of the tree just underneath its foliage, hang by a single stem, and are often two or three feet in length, contrasting vividly with the surrounding verdure. The palmtree, that prince of the vegetable kingdom, which is so characteristic of tropical vegetation, is nowhere more abundant in variety and beauty than upon the Isthmus, no less than twenty-one varieties having already been found and classified here. Conspicuous among them for their practical use to the natives of the country are the "wine palm," from the sap of which is distilled a sweet and intoxicating beverage; the "motombo," or sago palm, which furnishes the sago; the "ivory palm," producing the vegetable ivorynut of commerce; the "glove palm," which furnishes, by the covering of its spatha, ready-made bags, capable of holding grain, etc., to the amount of nearly half a bushel; the "cabbage palm," the tender shoots upon the summit of which resemble in appearance and nutritiousness the ordinary cabbage; others also there are from which they manufacture flax, sugar, various domestic utensils, weapons, and





food; besides this, the habitations of the people are framed of their trunks and roofed with their leaves.

Passing the seventh mile-post, you emerge from the swamp, and come to the Gatun Station, located upon the eastern bank of the Rio Chagres, which is at this point about fifty yards in width, and here makes a great bend, opening beautiful vistas through the dense forests up and down its course. This bank of the river is formed by a ridge of low hills, across the foot of which the railway runs. A few yards from the road, on the high ground to the left, are the buildings of the station. A large, two-story framed building, about forty feet in length by thirty in breadth, surrounded by piazzas and balustrades, is the residence of the local superintendent and the foreign workmen employed on this section. Suitable out-buildings are situated in the rear, and a little garden in front, where the roses and peonies, the pinks and pansies of our northern clime, challenge comparison with the orchids, fuchsias, and passifloras of the tropics; and there are radishes, cucumbers, and lettuce contrasting curiously with the native products of the place. With a few unimportant exceptions, this establishment is similar to that of all the stations, which are situated about four miles distant from each other along the entire length of the road. The duty of the local superintendent is not only to keep the track along his section in perfect repair, but to give his personal attention to all matters which can in any way impede the safety or dispatch of the regular trains; and to this ample service, in a great measure, is due the immunity from accident which has characterized the running of the Panama Railroad from its first establishment to the present day. On the opposite shore of the river stands the ancient native town of Gatun, which is composed of forty or fifty huts of cane and palm, and situated on the edge of a broad savanna that extends back to a range of hills a mile or two distant. This place is worthy of mention as a point where, in the days by-gone, the bongo-loads of California travelers used to stop for refreshment on their way up the river; where "eggs were then sold four for a dollar, and the rent for a hammock was two dollars a night."

From Gatun the course of the road lies along the base of an irregular line of high lands that rise up from the eastern side of the valley of the Rio Chagres, and a few hundred yards brings you to the Rio Gatun, a tributary of the Chagres, which is crossed by an iron truss-girder bridge of ninety-seven feet span. The dense swamp-growth looms up on either side like a wall, while rising out of it, close on the left, are two fine conical peaks, called "Lion" and "Tiger" hills, which attract attention by the regularity of their outlines and the dense and gorgeous forests with which they are covered. These hills received their titles from the immense numbers of howling monkeys which inhabited this district previous to and during the construction of the road, and whose frequent roaring made the night hideous, and were often mistaken by the uninitiated for the formidable animals which their cries closely resembled. These, as well as several smaller varieties, still abound in the neighborhood, and their howlings at nightfall are frequently heard, but the progress of improvement has driven them from the immediate vicinity of the road.

Passing the Lion Hill Station, which has a fine cultivated clearing on the high ground behind it, the vegetation becomes less dense, and more decidedly aquatic in its character; large patches of cane-brake, huge tree-ferns, low palms in great variety, and scrubby mangroves, rise out of the dark pools in the swamps by the road-side. Along this section is found that rare variety of the Orchid family, the *Peristera elata*, known as the "Espiritu Santo." Its blossom, of alabaster whiteness, approaches the tulip in form, and

gives forth a powerful perfume not unlike that of the magnolia; but it is neither for its beauty of shape, its purity of color, nor its fragrance that it is chiefly esteemed. Resting within the cup of the flower, so marvelously formed that no human skill, be it never so cunning, could excel the resemblance, lies the prone image of a dove. Its exquisitely moulded pinions hang lifeless from its sides, the head bends gently forward, the tiny bill, tipped with a delicate carmine, almost touches its snow-white breast, while the expression of the entire image (and it requires no stretch of the imagination to see the expression) seems the very incarnation of meekness and ethereal innocence. who has seen it can wonder that the early Spanish Catholic, ever on the alert for some phenomenon upon which to fasten the idea of a miraculous origin, should have bowed down before this matchless flower, and named it "Flor del Espiritu Santo," or "the Flower of the Holy Ghost," nor that the still more superstitious Indian should have accepted the imposing title, and ever after have gazed upon it with awe and devotional reverence, ascribing a peculiar sanctity even to the ground upon which it blossoms, and to the very air which it ladens with its delicious fragrance. It is found most frequently in low and marshy grounds, springing from decayed logs and crevices in the rocks. Some of the most vigorous plants attain a height of six or seven feet; the leaf-stalks are jointed, and throw out broad lanceolate leaves by pairs; the flower-stalks spring from the bulb, and are wholly destitute of leaves, often bearing a cluster of not less than a dozen or fifteen flowers. It is an annual, blooming in July, August, and September, and has in several instances been successfully cultivated in the conservatories of foreign lands. In former times bulbs of the plant could rarely be obtained, and then only with much labor and difficulty; but since their localities have become familiar to the less reverential Anglo-Saxon, great numbers

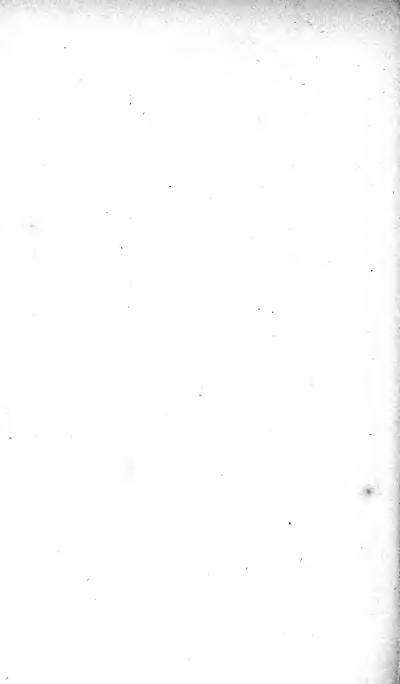
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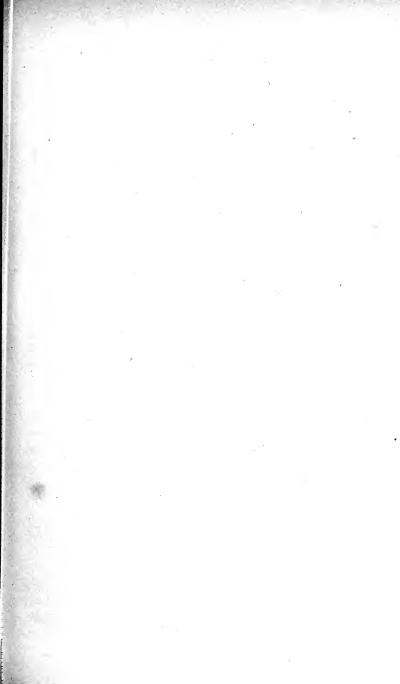
have been gathered and distributed throughout different parts of the world, though their habits and necessities have been so little appreciated that efforts to bring them to flower usually prove ineffectual; if, however, they are procured in May or June, after the flower-stalk has started, when sufficient appropriate nutriment resides in the bulb to develop the perfect flowers, they can be safely transplanted, and will flower under the ordinary treatment adapted to the bulbous plants of colder climates. The bulbs, dried or growing, may be procured either at Aspinwall or Panama at from two to five dollars per dozen.

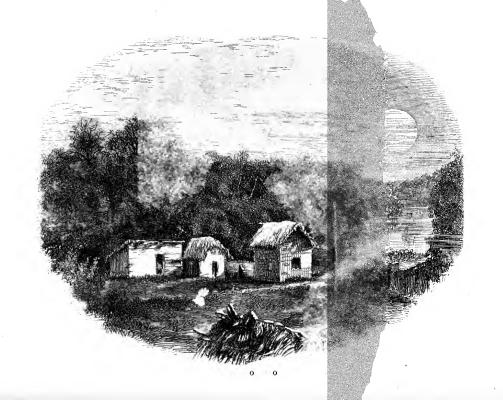
The next station is called "Ahorca Lagarto," "to hang the lizard," deriving its name from a landing-place on the Chagres near by; this, again, named from having, years back, been pitched upon as an encampment by a body of government troops, who suspended from a tree their banner, on which was a lizard, the insignia of the Order of Santiago. The land around this station, though low and level, is covered with a noble forest-growth, among which is found the huge cedro-tree, from which the native hollows out his canoe, sometimes of fifteen or twenty tons burthen; its broad, plane-shaped roots extend out on every side like buttresses, and its trunk towers up, without a branch, for a hundred feet, supporting a canopy of foliage often fifty yards in diameter. A short distance from the station, close to the left side of the track, is one called "Stephens's Tree," not less than five or six yards in diameter at its base. A luxuriant growth of vines decorates its trunk, and, winding out upon its branches, hangs down like a thickly-woven curtain to the lesser growth beneath. trunk is studded with parasites, and usually fine specimens of the Orchidaceæ may be seen blooming among its foliage. Several varieties of mahogany are also found here, and occasionally the lignum-vitæ-tree; the most of the trees, however, are only known by local names, which can convey



STEPHENS'S TREE.



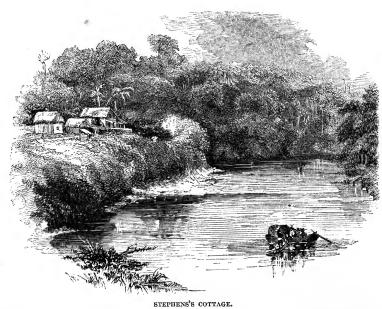




to the traveler but little idea of their character. Along the track may be seen the sensitive plant, with its feathery pink blossoms growing in wild profusion. The wild pine-apple, a species of Agave, is also abundant. plant is similar in form and growth to the cultivated pineapple, except that the leaves are often eight or ten feet in length, and afford a vegetable fibre which makes excellent cloth; the fruit, which is edible and not unpleasant, is of the most brilliant scarlet, and forms a beautiful contrast with the surrounding foliage. A mile or so farther on the forest becomes less lofty, and the traveler soon passes what may easily be mistaken for the overgrown ruins of some ancient city: walls, watch-towers, tall columns, and Gothic arches are on either hand, and it will be difficult to realize that Nature alone, with a lavish and fantastic hand, has shaped this curious scene out of myriads of convolvuli; whole clumps of trees are covered in by them, so that they appear like the remains of huge fortifications; tall stumps of palm look like broken columns overgrown with verdure; and when they lean together, as in several instances is the case, great Gothic arches are formed. So dense is this enshrouding web of creepers that scarce a tree or branch can be recognized through it over a space of several acres, and the whole of this wondrous display is, at certain seasons, decorated with bright blue trumpet-shaped flowers.

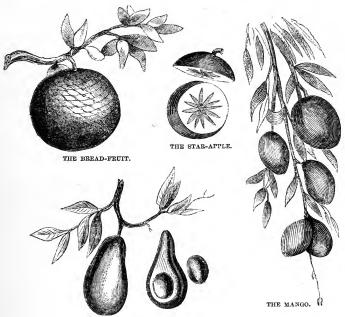
Leaving behind this city of verdure, a chain of high and densely-wooded hills on the left is brought into view, and, winding along its base, another station, called "Bujio Soldado," or "Buyo Soldado" ("the Soldier's Home"), is passed. Here opens, on the right, a fine view up the Rio Chagres. A mile farther on is an excellent quarry of freestone alongside the track, from which large quantities of building and ballasting material have been quarried by the Company. A little farther on, upon the edge of the steep river bank, is the site of a cottage, notable as having been the favorite

residence of the late J. L. Stephens, the celebrated author and traveler, who spent much of his later life in developing this great railway enterprise; but little now remains ex-cept its ruins, and the stately palm that long ago threw its shadow over his once beautiful garden. From this point beautiful views up and down the river are visible, while across, the high opposing bank stretches back in a broad plateau, covered with low foliage, from among which occasional tall trees shoot up, until it meets a range of distant hills. Continuing your course, with an occasional view of the river, which winds like a great serpent along this tortuous valley, you soon come to the native town of "Bueno Vistita" ("beautiful little view"). This is a collection of thirty or forty rude palm huts, skirting the track, and occupied by the families of native laborers along the road. A few native women, bareheaded, in long, heavily-flounced muslin dresses, off at the shoulder, and usually a naked "picaninny" astride the hip, forms the chief feature of the population, while the balance is made up of dogs, pigs, chickens, and children, in a charming state of affiliation. Very few of the aborigines of the country are found on this portion of the Isthmus, the inhabitants being, for the most part, a mixture of Spaniard and Indian. There are, however, many Africans and half-breeds, descended from the old Spanish slaves of this province, or imported from Carthagena and Jamaica. The former, usually peaceable and in dustrious, cultivate little patches of land, and occasionally raise a few cattle; but the latter are a restless, turbulent set, requiring a strong hand to keep them in subjection; being, however, hardy and athletic, they have been much employed as laborers on the road. A glance into the huts of these people and at their surroundings will give an idea of the manner of living of the greatest portion of the native inhabitants of the country. The body of the dwelling is composed of bamboo; the roof is thatched with leaves of the





palm; the floor is the bare earth; occasionally there is a loft, which is reached by an upright post, with deep notches cut on either side answering for stairs. Hammocks of vegetable fibre or cotton cloth are the usual beds, which also constitute the favorite lounging-place during the day. Besides these, a rude bench or two, a kettle, half a dozen earthen platters and water-jars, and a few gourds for water, complete the furniture of the native hut. Sun-dried and fresh beef, and pork, eggs, and fowls, are cheap and plenty. Their food, however, is mostly vegetable, the yam and plantain holding the chief place. The bread-fruit is plentiful, and grows spontaneously. Rice is raised, and consumed to a considerable extent; and a large variety of tropical fruits



are abundant. Besides the pine-apple, orange, lemon, lime, and banana, which arrive at great perfection here, there

THE AVOCADO PEAR

are many kinds of fruit seldom seen out of the tropics, which are delicious and wholesome; the bread-fruit, the avocado or alligator pear, the papaya, the Mamei and star-apples, the chirimoya, the mango, the zapote, the granadilla (fruit of the passion-vine), and many others, growing spontaneously or with the most careless cultivation.

The Spanish language is universally spoken by the natives, greatly corrupted, however, by provincialisms. In disposition the native is usually peaceable and inoffensive. The Roman Catholic religion is universally professed, but their ideas of it, beyond a superstitious appreciation of the power and influence of the priests, and the efficacy of holy relics and tokens, are exceedingly limited.

Squatter sovereignty obtains here on a very liberal scale, each citizen being entitled to claim, occupy, and hold "all that lot, piece, or parcel of land" that can be distinctly seen from any given point thereon, of the unoccupied lands of the government. The Spaniard and half-breed frequently avail themselves of this privilege, carrying on cattle-raising to a considerable extent, besides occasionally producing a little sugar, rice, etc., for market. The general class of natives, however, are gregariously inclined, and seldom covet more than enough for a little hut and garden-patch which supplies the necessities of life.

Passing a couple of miles more of forest, intersected by one or two small tributaries of the Chagres River, you arrive at the Frijoli Station; here, during the dry season, may be seen the gorgeous scarlet passion-flower, as well as the purple variety, in great abundance. Occasionally small gangs of natives are seen engaged in clearing away the recent growths along the track with their machetas. The machete is a sort of hilless broadsword, from two to three feet in length, heavy, straight, and pointed, with a handle of wood or bone, and is the universal companion of the native of this country; with it he cuts his path through the tangled

forest, clears his little plantation, builds his hut; with it, too, he plants his crops and reaps them; it is usually his only weapon of offense and defense; and from the half-grown boy to the gray-headed patriarch, you seldom find one, waking or sleeping, without his cherished machete. This section is rich in its variety of the birds, beasts, reptiles, and insects peculiar to intertropical America. Here are found frequent colonies of the oriole, or hanging-bird, whose beautifullywoven nests, often two or three feet long, may be seen depending by scores from the trees. Several richly-colored varieties of parrots and toucans, trogons, tangers, hummingbirds, etc., abound. Grouse and the crested wild turkey are found on the higher grounds of the interior. The tapir is occasionally found in the river and marshy grounds adjoining. Monkeys in variety, the opossum, the ant-eater, the pec-cary, or wild hog, the sloth, the deer, bear, cougar, and two or three varieties of the tiger-cat, are native here. Among the many varieties of the lizard tribe which abound is the iguana, which grows to a large size, viz., from three to six feet in length, and is eagerly sought for by the natives for its flesh, which is tender and delicate as a chicken, and also for its eggs. Females of this species are sometimes captured, cut open, the eggs removed, the animal permitted to escape, and the natives aver that after this barbarous proceeding they uniformly recover. The eggs are about the size of a marble, yellow and shriveled, and may be seen hanging in bunches for sale in any native market, and are by no means unpalatable. Land-crabs abound in great numbers, and are esteemed a delicate article of food. The most common variety is of a pale blue color, and as large as half a cocoanut. Stories are told of their rapacity and carnivorous tastes that almost surpass belief. It is said that the largest animals, dead or wounded past resistance, are frequently reduced by them to whitened skeletons in a single night. There are several other smaller varieties, some

of which are beautifully colored. Among the venomous insects, the tarantula, the centipede, and the scorpion are frequently met. Among the troublesome insects are white, red, and black ants, musquitoes, sand-flies, fleas, garapatos, or wood-ticks, and the chigoe, or jigger, which last not only bites, but burrows under the skin, and there deposits its eggs, which, if not speedily removed, will hatch out a troublesome nest of minute worms, producing great inflammatory disturbance in the part. As, however, they are at first very superficial, and inclosed in a little membranous sac, this is easily removed entire with a needle, and no farther trouble ensues; they are fortunately not common here, and seldom annoy any but the barefooted native. snakes, though occasionally seen, are not common. boa constrictor is native here, and sometimes is found from twelve to eighteen feet in length; it is, however, exceedingly rare to hear of any serious injury having been done by any of them. The alligator, which is found more or less plentifully in all parts of the Chagres and its tributaries, and the adjacent streams and swamps, frequently attacks and destroys dogs and cattle, and occasional instances have occurred where the natives, imprudently venturing into the waters infested with them, have fallen a prey to their rapacity.

Leaving Frijoli, fine fields of Indian-corn may be seen here and there nestled under the hills; dense groves of palms and superb displays of convolvuli are also found along this section for a couple of miles, when you approach the lofty banks of the Chagres at Barbacoas, and cross the river by a huge wrought-iron bridge six hundred and twenty-five feet in length, eighteen in breadth, and standing forty feet above the surface of the water, and said to be one of the longest and finest iron bridges in the world. After crossing the Chagres at this point, instead of low grounds and virgin forests, a beautiful stretch of meadow-